SAMPLE ID	DF	FILE	DATE	TIME	ANALYST
CCV	1.0000	HLE29A	5/29/2018	11:45	AMJ
CCB	1.0000	HLE29A	5/29/2018	11:47	AMJ
SL4481-001	1.0000	HLE29A	5/29/2018	11:50	AMJ
SL4481-002	1.0000	HLE29A	5/29/2018	11:52	AMJ
SL4481-003	1.0000	HLE29A	5/29/2018	11:54	AMJ
SL4481-004	1.0000	HLE29A	5/29/2018	11:56	AMJ
SL4481-005	1.0000	HLE29A	5/29/2018	11:58	AMJ
SL4481-006	1.0000	HLE29A	5/29/2018	12:00	AMJ
SL4481-007	1.0000	HLE29A	5/29/2018	12:03	AMJ
SL4481-007L	5.0000	HLE29A	5/29/2018	12:05	AMJ
SL4481-007A	1.0000	HLE29A	5/29/2018	12:07	AMJ
SL4481-007S	1.0000	HLE29A	5/29/2018	12:09	AMJ
CCV	1.0000	HLE29A	5/29/2018	12:11	AMJ
CCB	1.0000	HLE29A	5/29/2018	12:13	AMJ
SL4481-007P	1.0000	HLE29A	5/29/2018	12:16	AMJ
SL4557-001	1.0000	HLE29A	5/29/2018	12:18	AMJ
SL4557-002	1.0000	HLE29A	5/29/2018	12:20	AMJ
SL4557-003	1.0000	HLE29A	5/29/2018	12:22	AMJ
SL4557-004	1.0000	HLE29A	5/29/2018	12:24	AMJ
SL4557-005	1.0000	HLE29A	5/29/2018	12:26	AMJ
SL4557-006	1.0000	HLE29A	5/29/2018	12:29	AMJ
SL4557-007	1.0000	HLE29A	5/29/2018	12:31	AMJ
SL4557-008	1.0000	HLE29A	5/29/2018	12:33	AMJ
SL4557-010	1.0000	HLE29A	5/29/2018	12:35	AMJ
CCV	1.0000	HLE29A	5/29/2018	12:37	AMJ
CCB	1.0000	HLE29A	5/29/2018	12:39	AMJ
SL4557-011	1.0000	HLE29A	5/29/2018	12:42	AMJ
SL4557-012	1.0000	HLE29A	5/29/2018	12:44	AMJ
SL4557-013	1.0000	HLE29A	5/29/2018	12:46	AMJ
SL4557-014	1.0000	HLE29A	5/29/2018	12:48	AMJ
PBWLE29HGW2	1.0000	HLE29A	5/29/2018	12:50	AMJ
LCSWLE29HGW2	1.0000	HLE29A	5/29/2018	12:52	AMJ
SL4542-001	1.0000	HLE29A	5/29/2018	12:55	AMJ
SL4542-002	1.0000	HLE29A	5/29/2018	12:57	AMJ
SL4542-003	1.0000	HLE29A	5/29/2018	12:59	AMJ
SL4542-004	1.0000	HLE29A	5/29/2018	13:01	AMJ
CCV	1.0000	HLE29A	5/29/2018	13:03	AMJ
CCB	1.0000	HLE29A	5/29/2018	13:05	AMJ
SL4542-005	1.0000	HLE29A	5/29/2018	13:08	AMJ
SL4542-006	1.0000	HLE29A	5/29/2018	13:10	AMJ
SL4542-007	1.0000	HLE29A	5/29/2018	13:12	AMJ
SL4542-008	1.0000	HLE29A	5/29/2018	13:14	AMJ
SL4542-009	1.0000	HLE29A	5/29/2018	13:16	AMJ
SL4542-010	1.0000	HLE29A	5/29/2018	13:18	AMJ
SL4542-010L	5.0000	HLE29A	5/29/2018	13:20	AMJ
SL4542-010A	1.0000	HLE29A	5/29/2018	13:23	AMJ
SL4542-010S	1.0000	HLE29A	5/29/2018	13:25	AMJ

SAMPLE ID	DF	FILE	DATE	TIME	ANALYST
SL4542-010P	1.0000	HLE29A	5/29/2018	13:27	AMJ
CCV	1.0000	HLE29A	5/29/2018	13:29	AMJ
CCB	1.0000	HLE29A	5/29/2018	13:31	AMJ
SL4542-011	1.0000	HLE29A	5/29/2018	13:33	AMJ
SL4542-012	1.0000	HLE29A	5/29/2018	13:51	AMJ
SL4542-013	1.0000	HLE29A	5/29/2018	13:53	AMJ
SL4542-014	1.0000	HLE29A	5/29/2018	13:55	AMJ
SL4542-015	1.0000	HLE29A	5/29/2018	13:57	AMJ
PBWLE29HGW1	1.0000	HLE29A	5/29/2018	13:59	AMJ
LCSWLE29HGW1	1.0000	HLE29A	5/29/2018	14:01	AMJ
SL4600-002	1.0000	HLE29A	5/29/2018	14:03	AMJ
SL4600-003	1.0000	HLE29A	5/29/2018	14:06	AMJ
SL4600-003L	5.0000	HLE29A	5/29/2018	14:08	AMJ
CCV	1.0000	HLE29A	5/29/2018	14:10	AMJ
CCB	1.0000	HLE29A	5/29/2018	14:12	AMJ
SL4600-003A	1.0000	HLE29A	5/29/2018	14:14	AMJ
SL4600-003S	1.0000	HLE29A	5/29/2018	14:16	AMJ
SL4600-003P	1.0000	HLE29A	5/29/2018	14:18	AMJ
SL4600-004	1.0000	HLE29A	5/29/2018	14:21	AMJ
SL4600-005	1.0000	HLE29A	5/29/2018	14:23	AMJ
SL4600-006	1.0000	HLE29A	5/29/2018	14:25	AMJ
SL4601-001	1.0000	HLE29A	5/29/2018	14:27	AMJ
SL4601-002	1.0000	HLE29A	5/29/2018	14:29	AMJ
SL4601-003	1.0000	HLE29A	5/29/2018	14:31	AMJ
SL4601-003L	5.0000	HLE29A	5/29/2018	14:34	AMJ
CCV	1.0000	HLE29A	5/29/2018	14:36	AMJ
CCB	1.0000	HLE29A	5/29/2018	14:38	AMJ
SL4601-003A	1.0000	HLE29A	5/29/2018	14:40	AMJ
SL4601-003S	1.0000	HLE29A	5/29/2018	14:42	AMJ
SL4601-003P	1.0000	HLE29A	5/29/2018	14:44	AMJ
SL4601-004	1.0000	HLE29A	5/29/2018	14:46	AMJ
SL4601-005	1.0000	HLE29A	5/29/2018	14:49	AMJ
SL4601-006	1.0000	HLE29A	5/29/2018	14:51	AMJ
SL4601-007	1.0000	HLE29A	5/29/2018	14:53	AMJ
SL4601-008	1.0000	HLE29A	5/29/2018	14:55	AMJ
SL4601-010	1.0000	HLE29A	5/29/2018	14:57	AMJ
SL4601-011	1.0000	HLE29A	5/29/2018	14:59	AMJ
CCV	1.0000	HLE29A	5/29/2018	15:02	AMJ
CCB	1.0000	HLE29A	5/29/2018	15:04	AMJ
SL4601-012	1.0000	HLE29A	5/29/2018	15:06	AMJ
SL4601-013	1.0000	HLE29A	5/29/2018	15:08	AMJ
SL4601-009	1.0000	HLE29A	5/29/2018	15:10	AMJ
CCV	1.0000	HLE29A	5/29/2018	15:12	AMJ
CCB	1.0000	HLE29A	5/29/2018	15:14	AMJ

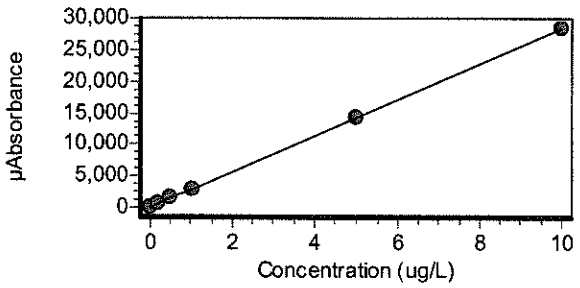
Report Generated By CETAC QuickTrace
Analyst: kasgc
Worksheet file: C:\Program Files\QuickTrace\Worksheets\HLE29A.wsz
Date Started: 5/29/2018 9:49:16 AM
Comment:

Results

Sample Name				Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
Calibration Blank				STD	05/29/18 10:11:43 am	0.000	13	290.76		1.00
Replicates	-37.0	21.8	50.8	14.8						
Standard #1 (0.2 ppb)				STD	05/29/18 10:13:50 am	0.200	578	2.99		1.00
Replicates	570.4	557.6	593.8	591.3						
Standard #2 (0.5 ppb)				STD	05/29/18 10:15:57 am	0.500	1465	1.50		1.00
Replicates	1497.9	1454.8	1453.5	1453.6						
Standard #3 (1.0 ppb)				STD	05/29/18 10:18:05 am	1.000	2930	1.26		1.00
Replicates	2938.9	2899.2	2902.4	2978.1						
Standard #4 (5.0 ppb)				STD	05/29/18 10:20:13 am	5.000	14375	1.09		1.00
Replicates	14251.6	14270.4	14384.4	14591.7						
Standard #5 (10.0 ppb)				STD	05/29/18 10:22:22 am	10.000	28433	0.18		1.00
Replicates	28502.1	28415.1	28384.0	28431.3						

Calibration

Equation: A = 50.321 + 2843.784C
R2: 0.99997
SEE: 68.0412
Flags:



ICV				ICV	05/29/18 10:24:32 am	6.003	17122	0.19		1.00
Replicates	17121.9	17117.5	17084.7	17165.5						
% Recovery	100.06									
ICB				ICB	05/29/18 10:26:38 am	-0.019	-4	811.18		1.00
Replicates	12.7	34.0	-26.2	-36.7						

Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
PQL					CRDL	05/29/18 10:28:44 am	0.190	591	2.68		1.00
	Replicates	603.3	573.1	605.2	582.1						
	% Recovery	95.05									
CCV					CCV	05/29/18 10:30:53 am	5.147	14689	0.64		1.00
	Replicates	14591.8	14632.0	14733.0	14797.5						
	% Recovery	102.95									
CCB					CCB	05/29/18 10:32:59 am	-0.036	-52	55.30		1.00
	Replicates	-40.9	-93.5	-30.0	-41.7						
PBWLE25HGW1					PBK	05/29/18 10:35:07 am	0.015	94	32.89		1.00
	Replicates	69.5	65.2	124.5	116.3						
LCSWLE25HGW1					LCS	05/29/18 10:37:14 am	4.727	13492	0.16		1.00
	Replicates	13498.5	13478.1	13471.1	13520.0						
	% Recovery	94.53									
SL4526-001					UNK	05/29/18 10:39:22 am	0.037	156	7.47		1.00
	Replicates	156.0	170.4	155.2	141.9						
SL4529-001					UNK	05/29/18 10:41:30 am	0.068	243	8.84		1.00
	Replicates	237.4	222.8	273.1	237.1						
SL4536-003					UNK	05/29/18 10:43:39 am	0.063	229	2.93		1.00
	Replicates	223.0	235.3	223.3	234.3						
SL4536-004					UNK	05/29/18 10:45:46 am	0.028	129	32.29		1.00
	Replicates	119.0	165.0	74.1	157.0						
SL4536-005					UNK	05/29/18 10:47:54 am	0.042	170	17.32		1.00
	Replicates	181.9	203.1	133.4	163.6						
SL4553-001					UNK	05/29/18 10:50:02 am	-0.015	7	208.01		1.00
	Replicates	-3.6	-5.3	10.7	26.7						
SL4553-002					UNK	05/29/18 10:52:11 am	-0.017	3	981.44		1.00
	Replicates	11.1	11.5	-39.3	28.5						

Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
CCV					CCV	05/29/18 10:54:19 am	5.172	14758	0.53		1.00
	Replicates	14684.7	14713.5	14772.5	14862.0						
	% Recovery	103.44									
CCB					CCB	05/29/18 10:56:26 am	-0.032	-41	79.23		1.00
	Replicates	-73.6	-64.0	-22.8	-5.0						
SL4553-003					UNK	05/29/18 10:58:34 am	-0.011	20	35.40		1.00
	Replicates	29.8	12.7	17.7	21.4						
SL4553-004					UNK	05/29/18 11:00:42 am	-0.014	11	192.18		1.00
	Replicates	-6.0	-8.4	34.3	25.3						
SL4553-005					UNK	05/29/18 11:02:51 am	0.031	138	13.57		1.00
	Replicates	122.5	128.5	165.0	137.3						
SL4604-001					UNK	05/29/18 11:04:59 am	-0.010	21	135.30		1.00
	Replicates	-1.0	19.3	4.3	62.8						
SL4604-002					UNK	05/29/18 11:07:08 am	0.036	153	24.56		1.00
	Replicates	205.1	121.5	153.2	130.5						
PBWLE25HGW2					PBK	05/29/18 11:09:17 am	0.001	53	36.70		1.00
	Replicates	34.2	40.6	77.1	58.6						
LCSWLE25HGW2					LCS	05/29/18 11:11:25 am	4.852	13848	0.29		1.00
	Replicates	13876.2	13886.1	13799.6	13828.7						
	% Recovery	97.04									
PBT1456A					UNK	05/29/18 11:13:34 am	-0.027	-26	79.47		1.00
	Replicates	-13.8	-22.5	-12.2	-57.2						
SL4448-001					UNK	05/29/18 11:15:43 am	-0.021	-10	54.28		1.00
	Replicates	-2.5	-9.8	-14.7	-13.8						
SL4502-002					UNK	05/29/18 11:17:52 am	-0.013	12	305.83		1.00
	Replicates	53.8	-2.1	29.0	-32.0						

Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
CCV					CCV	05/29/18 11:20:00 am	5.100	14553	0.24		1.00
	Replicates	14592.5	14544.1	14510.4	14564.1						
	% Recovery	101.99									
CCB					CCB	05/29/18 11:22:07 am	-0.024	-17	125.41		1.00
	Replicates	-1.0	-27.4	-41.6	2.4						
SL4502-002L					UNK	05/29/18 11:24:16 am	-0.171	-47	41.42		5.00
	Replicates	-36.0	-25.5	-65.8	-61.5						
SL4502-002A					UNK	05/29/18 11:26:25 am	1.185	3420	1.25		1.00
	Replicates	3367.4	3413.2	3429.0	3470.8						
SL4502-002S					UNK	05/29/18 11:28:34 am	2.152	6169	0.79		1.00
	Replicates	6105.6	6161.1	6191.4	6218.7						
SL4502-002P					UNK	05/29/18 11:30:43 am	2.227	6383	0.78		1.00
	Replicates	6345.2	6351.0	6384.0	6453.4						
SL4519-001					UNK	05/29/18 11:32:52 am	-0.017	2	266.99		1.00
	Replicates	-15.2	-19.7	53.8	-12.7						
SL4519-002					UNK	05/29/18 11:35:02 am	-0.014	9	194.53		1.00
	Replicates	13.5	-14.9	9.6	29.1						
SL4561-001					UNK	05/29/18 11:37:11 am	-0.023	-16	132.67		1.00
	Replicates	-17.0	12.5	-37.7	-20.7						
PBWLE25HGW3					PBK	05/29/18 11:39:20 am	-0.002	46	32.22		1.00
	Replicates	51.0	49.9	58.3	24.4						
LCSWLE25HGW3					LCS	05/29/18 11:41:30 am	5.227	14916	0.33		1.00
	Replicates	14943.3	14960.3	14910.1	14849.5						
	% Recovery	104.55									
LC2WLE25HGW3					LCS	05/29/18 11:43:40 am	4.891	13958	0.26		1.00
	Replicates	13944.0	13949.3	13927.8	14010.6						
	% Recovery	97.81									

Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
CCV					CCV	05/29/18 11:45:48 am	5.253	14988	1.48		1.00
	Replicates	15267.4	15055.4	14856.6	14771.1						
	% Recovery	105.05									
CCB					CCB	05/29/18 11:47:54 am	-0.033	-44	77.54		1.00
	Replicates	6.6	-55.3	-59.1	-67.5						
SL4481-001					UNK	05/29/18 11:50:05 am	-0.006	34	45.46		1.00
	Replicates	43.8	45.6	12.5	32.3						
SL4481-002					UNK	05/29/18 11:52:14 am	-0.016	5	373.89		1.00
	Replicates	19.8	-20.2	14.8	4.6						
SL4481-003					UNK	05/29/18 11:54:23 am	-0.030	-35	51.33		1.00
	Replicates	-39.3	-25.5	-16.5	-57.3						
SL4481-004					UNK	05/29/18 11:56:33 am	-0.004	39	68.29		1.00
	Replicates	32.4	10.8	38.5	75.3						
SL4481-005					UNK	05/29/18 11:58:43 am	-0.009	25	156.53		1.00
	Replicates	83.0	15.7	-3.3	5.1						
SL4481-006					UNK	05/29/18 12:00:54 pm	-0.021	-9	268.26		1.00
	Replicates	-11.1	-40.1	17.4	-1.9						
SL4481-007					UNK	05/29/18 12:03:03 pm	0.043	174	11.62		1.00
	Replicates	184.0	167.2	149.2	195.5						
SL4481-007L					UNK	05/29/18 12:05:13 pm	-0.026	35	42.88		5.00
	Replicates	46.2	50.7	22.2	22.5						
SL4481-007A					UNK	05/29/18 12:07:24 pm	1.026	2967	0.74		1.00
	Replicates	2953.1	2952.4	2998.9	2963.7						
SL4481-007S					UNK	05/29/18 12:09:34 pm	1.003	2903	1.92		1.00
	Replicates	2883.6	2900.2	2847.9	2980.1						

Sample Name				Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
CCV				CCV	05/29/18 12:11:43 pm	5.208	14862	0.42		1.00
Replicates	14942.2	14881.1	14812.4	14811.1						
% Recovery	104.17									
CCB				CCB	05/29/18 12:13:49 pm	-0.027	-25	121.68		1.00
Replicates	-1.3	-36.0	-64.4	0.1						
SL4481-007P				UNK	05/29/18 12:16:00 pm	1.013	2931	1.12		1.00
Replicates	2946.0	2919.9	2891.2	2967.4						
SL4557-001				UNK	05/29/18 12:18:10 pm	-0.009	25	127.08		1.00
Replicates	4.1	-5.1	36.1	63.4						
SL4557-002				UNK	05/29/18 12:20:20 pm	-0.021	-10	277.53		1.00
Replicates	7.5	-45.6	17.6	-20.6						
SL4557-003				UNK	05/29/18 12:22:31 pm	0.001	55	35.82		1.00
Replicates	61.9	25.4	64.4	66.5						
SL4557-004				UNK	05/29/18 12:24:42 pm	-0.004	40	56.33		1.00
Replicates	29.8	62.0	13.2	53.8						
SL4557-005				UNK	05/29/18 12:26:53 pm	-0.014	10	245.77		1.00
Replicates	28.1	31.9	-23.3	4.7						
SL4557-006				UNK	05/29/18 12:29:03 pm	-0.003	42	52.21		1.00
Replicates	13.5	58.2	59.5	35.5						
SL4557-007				UNK	05/29/18 12:31:14 pm	-0.014	9	192.95		1.00
Replicates	34.4	8.2	-4.5	-1.5						
SL4557-008				UNK	05/29/18 12:33:25 pm	-0.019	-4	472.91		1.00
Replicates	-1.0	-8.3	-25.1	19.0						
SL4557-010				UNK	05/29/18 12:35:36 pm	-0.008	29	17.85		1.00
Replicates	33.4	30.9	21.5	28.5						

Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
CCV					CCV	05/29/18 12:37:44 pm	5.214	14879	1.11		1.00
	Replicates	14675.7	15033.0	14993.0	14813.7						
	% Recovery	104.29									
CCB					CCB	05/29/18 12:39:51 pm	-0.013	13	346.52		1.00
	Replicates	-7.8	53.9	-40.6	46.4						
SL4557-011					UNK	05/29/18 12:42:02 pm	0.064	233	11.75		1.00
	Replicates	252.7	248.0	236.6	192.8						
SL4557-012					UNK	05/29/18 12:44:13 pm	-0.012	15	134.14		1.00
	Replicates	-6.3	3.7	38.0	24.0						
SL4557-013					UNK	05/29/18 12:46:24 pm	0.003	59	63.01		1.00
	Replicates	50.7	83.7	9.9	91.2						
SL4557-014					UNK	05/29/18 12:48:35 pm	-0.009	25	29.48		1.00
	Replicates	35.8	24.1	23.9	17.9						
PBWLE29HGW2					PBK	05/29/18 12:50:47 pm	-0.030	-34	50.36		1.00
	Replicates	-15.7	-35.4	-56.8	-28.6						
LCSWLE29HGW2					LCS	05/29/18 12:52:59 pm	5.072	14474	0.37		1.00
	Replicates	14471.7	14418.5	14457.4	14547.4						
	% Recovery	101.44									
SL4542-001					UNK	05/29/18 12:55:10 pm	-0.017	2	337.85		1.00
	Replicates	58.6	-6.3	-19.5	-26.1						
SL4542-002					UNK	05/29/18 12:57:21 pm	-0.009	25	91.80		1.00
	Replicates	12.9	59.5	8.1	21.1						
SL4542-003					UNK	05/29/18 12:59:32 pm	-0.011	18	134.62		1.00
	Replicates	-14.3	39.1	34.7	13.1						
SL4542-004					UNK	05/29/18 01:01:44 pm	-0.019	-4	549.69		1.00
	Replicates	-7.4	1.2	-30.1	20.9						

Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
CCV					CCV	05/29/18 01:03:53 pm	5.138	14661	0.19		1.00
	Replicates	14699.8	14657.1	14634.1	14653.2						
	% Recovery	102.76									
CCB					CCB	05/29/18 01:05:59 pm	-0.028	-28	98.32		1.00
	Replicates	-2.2	-60.1	-8.2	-41.1						
SL4542-005					UNK	05/29/18 01:08:11 pm	-0.011	18	75.76		1.00
	Replicates	17.9	8.1	37.8	9.0						
SL4542-006					UNK	05/29/18 01:10:18 pm	-0.018	1	542.79		1.00
	Replicates	19.2	12.3	-21.0	-8.4						
SL4542-007					UNK	05/29/18 01:12:26 pm	-0.017	3	973.39		1.00
	Replicates	-2.4	-24.2	35.1	1.6						
SL4542-008					UNK	05/29/18 01:14:34 pm	-0.023	-14	283.74		1.00
	Replicates	-36.3	24.9	-60.1	14.3						
SL4542-009					UNK	05/29/18 01:16:42 pm	-0.021	-11	64.81		1.00
	Replicates	-3.2	-7.1	-18.9	-13.9						
SL4542-010					UNK	05/29/18 01:18:50 pm	-0.017	3	754.18		1.00
	Replicates	-9.6	-11.7	36.1	-2.9						
SL4542-010L					UNK	05/29/18 01:20:58 pm	-0.055	19	104.45		5.00
	Replicates	17.7	-1.5	46.2	13.8						
SL4542-010A					UNK	05/29/18 01:23:06 pm	0.943	2732	1.12		1.00
	Replicates	2732.3	2694.4	2734.0	2769.0						
SL4542-010S					UNK	05/29/18 01:25:14 pm	1.028	2974	1.03		1.00
	Replicates	2987.1	3010.1	2960.6	2940.1						
SL4542-010P					UNK	05/29/18 01:27:23 pm	0.998	2889	1.14		1.00
	Replicates	2874.3	2868.3	2874.2	2938.0						

Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
CCV					CCV	05/29/18 01:29:31 pm	5.154	14708	0.38		1.00
	Replicates	14785.9	14700.1	14656.8	14687.6						
	% Recovery	103.08									
CCB					CCB	05/29/18 01:31:37 pm	-0.021	-9	132.36		1.00
	Replicates	7.2	-17.5	-7.5	-18.1						
SL4542-011					UNK	05/29/18 01:33:46 pm	-0.014	10	200.52		1.00
	Replicates	22.9	-11.1	-2.7	31.1						
SL4542-012					UNK	05/29/18 01:51:05 pm	-0.021	-9	163.97		1.00
	Replicates	7.8	-26.9	-8.5	-7.0						
SL4542-013					UNK	05/29/18 01:53:13 pm	-0.014	11	72.44		1.00
	Replicates	20.9	5.7	12.4	3.7						
SL4542-014					UNK	05/29/18 01:55:22 pm	-0.020	-7	686.41		1.00
	Replicates	-19.0	-49.0	66.2	-27.7						
SL4542-015					UNK	05/29/18 01:57:31 pm	-0.030	-34	88.19		1.00
	Replicates	-5.1	-23.0	-31.5	-75.0						
PBWLE29HGW1					PBK	05/29/18 01:59:40 pm	-0.015	7	311.82		1.00
	Replicates	8.1	16.8	26.8	-23.7						
LCSWLE29HGW1					LCS	05/29/18 02:01:48 pm	5.118	14606	0.23		1.00
	Replicates	14636.0	14633.7	14583.3	14571.7						
	% Recovery	102.37									
SL4600-002					UNK	05/29/18 02:03:57 pm	-0.019	-3	606.44		1.00
	Replicates	4.6	-9.1	-20.4	14.7						
SL4600-003					UNK	05/29/18 02:06:06 pm	-0.043	-71	24.56		1.00
	Replicates	-69.0	-89.1	-78.1	-48.0						
SL4600-003L					UNK	05/29/18 02:08:15 pm	-0.085	2	043.98		5.00
	Replicates	-3.0	30.7	-20.3	0.7						

Sample Name				Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
CCV				CCV	05/29/18 02:10:23 pm	5.195	14824	0.18		1.00
Replicates	14848.9	14785.9	14830.4	14831.4						
% Recovery	103.90									
CCB				CCB	05/29/18 02:12:30 pm	-0.028	-29	84.05		1.00
Replicates	-60.6	-5.0	-16.5	-32.5						
SL4600-003A				UNK	05/29/18 02:14:39 pm	0.957	2770	1.16		1.00
Replicates	2726.8	2765.5	2790.8	2798.3						
SL4600-003S				UNK	05/29/18 02:16:48 pm	0.975	2822	0.75		1.00
Replicates	2837.0	2802.0	2805.3	2843.1						
SL4600-003P				UNK	05/29/18 02:18:57 pm	0.980	2838	0.78		1.00
Replicates	2838.2	2807.1	2859.1	2845.8						
SL4600-004				UNK	05/29/18 02:21:06 pm	-0.014	11	228.44		1.00
Replicates	-7.0	23.0	38.2	-12.1						
SL4600-005				UNK	05/29/18 02:23:15 pm	-0.012	15	128.44		1.00
Replicates	19.1	1.6	-1.2	41.1						
SL4600-006				UNK	05/29/18 02:25:25 pm	-0.011	18	221.20		1.00
Replicates	73.6	23.9	-8.4	-15.6						
SL4601-001				UNK	05/29/18 02:27:34 pm	-0.015	8	424.61		1.00
Replicates	-19.5	36.3	-20.7	34.0						
SL4601-002				UNK	05/29/18 02:29:43 pm	-0.028	-30	97.62		1.00
Replicates	-20.5	-67.4	1.9	-32.6						
SL4601-003				UNK	05/29/18 02:31:53 pm	-0.017	3	908.03		1.00
Replicates	-28.1	1.4	44.1	-4.1						
SL4601-003L				UNK	05/29/18 02:34:03 pm	-0.078	6	729.94		5.00
Replicates	36.1	-0.9	-53.4	42.3						

Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
CCV					CCV	05/29/18 02:36:11 pm	5.211	14870	0.21		1.00
	Replicates	14914.5	14843.6	14871.8	14851.3						
	% Recovery	104.23									
CCB					CCB	05/29/18 02:38:18 pm	-0.017	1	869.95		1.00
	Replicates	18.4	0.9	-8.8	-7.8						
SL4601-003A					UNK	05/29/18 02:40:28 pm	0.947	2744	1.40		1.00
	Replicates	2742.3	2689.9	2771.4	2771.0						
SL4601-003S					UNK	05/29/18 02:42:37 pm	1.020	2951	0.34		1.00
	Replicates	2943.8	2964.7	2954.3	2943.2						
SL4601-003P					UNK	05/29/18 02:44:47 pm	1.018	2945	0.59		1.00
	Replicates	2924.4	2965.4	2939.1	2949.8						
SL4601-004					UNK	05/29/18 02:46:57 pm	-0.010	22	145.84		1.00
	Replicates	-9.9	2.4	34.2	60.5						
SL4601-005					UNK	05/29/18 02:49:07 pm	-0.003	43	69.94		1.00
	Replicates	82.7	12.7	28.5	49.0						
SL4601-006					UNK	05/29/18 02:51:17 pm	-0.007	31	135.79		1.00
	Replicates	49.2	-13.4	79.8	7.5						
SL4601-007					UNK	05/29/18 02:53:27 pm	-0.006	33	27.59		1.00
	Replicates	42.5	37.0	21.7	29.7						
SL4601-008					UNK	05/29/18 02:55:37 pm	-0.020	-7	255.64		1.00
	Replicates	-10.2	5.6	7.8	-31.9						
SL4601-010					UNK	05/29/18 02:57:47 pm	-0.028	-30	64.18		1.00
	Replicates	-14.0	-47.8	-46.7	-13.0						
SL4601-011					UNK	05/29/18 02:59:58 pm	-0.035	-50	37.80		1.00
	Replicates	-57.4	-50.9	-23.6	-67.8						

Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
CCV					CCV	05/29/18 03:02:06 pm	5.219	14891	0.33		1.00
	Replicates	14959.1	14888.8	14842.2	14872.8						
	% Recovery	104.37									
CCB					CCB	05/29/18 03:04:12 pm	-0.030	-35	97.64		1.00
	Replicates	0.5	-39.2	-21.5	-80.9						
SL4601-012					UNK	05/29/18 03:06:23 pm	-0.014	10	263.54		1.00
	Replicates	2.9	-23.5	33.0	26.4						
SL4601-013					UNK	05/29/18 03:08:33 pm	0.009	75	26.29		1.00
	Replicates	90.8	53.0	64.3	93.2						
SL4601-009					UNK	05/29/18 03:10:43 pm	-0.004	40	64.14		1.00
	Replicates	27.2	74.6	42.6	15.5						
CCV					CCV	05/29/18 03:12:52 pm	5.212	14872	0.28		1.00
	Replicates	14869.1	14837.2	14849.5	14932.2						
	% Recovery	104.24									
CCB					CCB	05/29/18 03:14:58 pm	-0.020	-6	236.24		1.00
	Replicates	5.2	-14.2	7.0	-22.7						

KATAHDIN ANALYTICAL SERVICES, LLC
METALS ANALYSIS RUN INFORMATION SHEET

INSTR. ID: Cetac M6100 (H) **ANALYST**: AMJ **ANALYSIS DATE**: 06/12/2018

FILE NAME: HLF12A **METHOD: CVAA**

☑ 245.1
☑ 7470
☐ 7471
☑ DoD
☐ _____

REVIEWED
JS 6.13.18
KATAHDIN ANALYTICAL
METALS SECTION

Analyte : Mercury

$SnCl_2$ Lot : MR2033

STANDARDS USED:

Standard Name	Prep. Date	Expiration Date	Standard Conc.
Cal. Blank / ICB / CCB	06/12/2018	06/23/2018	0.00 ug/L
Standard #1 / PQL	06/12/2018	06/23/2018	0.20 ug/L
Standard #2	06/12/2018	06/23/2018	0.50 ug/L
Standard #3	06/12/2018	06/23/2018	1.00 ug/L
Standard #4 / CCV	06/12/2018	06/23/2018	5.00 ug/L
Standard #5	06/12/2018	06/23/2018	10.00 ug/L
ICV	06/12/2018	07/01/2018	6.00 ug/L

Additional Comments and Notes:

JSG 13.18

Post Spike (245.1/7470): 0.005 mL MW17789 (pipet M17) into 8.0mL (pipet M12) of sample

Post Spike (7471): 0.008 mL MW17789 (pipet M17) into 8.0mL (pipet M12) of sample

5x Dilution: 1.6mL (pipet M13) of sample + 6.4mL (pipet M13) of Cal. Blank

O flag: Sample concentration over calibration, re-analyzed at dilution

Q flag: Analytical run QC outside laboratory limits

INSTRUMENT RUNLOG

Instrument: CETAC M6100

SAMPLE ID	DF	FILE	DATE	TIME	ANALYST
Calibration Blank	1.0000	HLF12A	6/12/2018	11:57	AMJ
Standard #1 (0.2 ppb)	1.0000	HLF12A	6/12/2018	11:59	AMJ
Standard #2 (0.5 ppb)	1.0000	HLF12A	6/12/2018	12:01	AMJ
Standard #3 (1.0 ppb)	1.0000	HLF12A	6/12/2018	12:03	AMJ
Standard #4 (5.0 ppb)	1.0000	HLF12A	6/12/2018	12:05	AMJ
Standard #5 (10.0 ppb)	1.0000	HLF12A	6/12/2018	12:07	AMJ
ICV	1.0000	HLF12A	6/12/2018	12:09	AMJ
ICB	1.0000	HLF12A	6/12/2018	12:12	AMJ
PQL	1.0000	HLF12A	6/12/2018	12:14	AMJ
CCV	1.0000	HLF12A	6/12/2018	12:16	AMJ
CCB	1.0000	HLF12A	6/12/2018	12:18	AMJ
PBWLF12HGW1	1.0000	HLF12A	6/12/2018	12:20	AMJ
LCSWLF12HGW1	1.0000	HLF12A	6/12/2018	12:22	AMJ
SL5039-001	1.0000	HLF12A	6/12/2018	12:24	AMJ
SL5040-001	1.0000	HLF12A	6/12/2018	12:26	AMJ
SL5062-001	1.0000	HLF12A	6/12/2018	12:29	AMJ
SL5082-004	1.0000	HLF12A	6/12/2018	12:31	AMJ
SL5082-005	1.0000	HLF12A	6/12/2018	12:33	AMJ
SL5082-006	1.0000	HLF12A	6/12/2018	12:35	AMJ
SL5082-007	1.0000	HLF12A	6/12/2018	12:37	AMJ
CCV	1.0000	HLF12A	6/12/2018	12:39	AMJ
CCB	1.0000	HLF12A	6/12/2018	12:41	AMJ
SL5082-008	1.0000	HLF12A	6/12/2018	12:44	AMJ
SL5099-001	1.0000	HLF12A	6/12/2018	12:47	AMJ
PBWLF12HGW3	1.0000	HLF12A	6/12/2018	12:49	AMJ
LCSWLF12HGW3	1.0000	HLF12A	6/12/2018	12:51	AMJ
SL4925-005	1.0000	HLF12A	6/12/2018	12:53	AMJ
SL4925-006	1.0000	HLF12A	6/12/2018	12:56	AMJ
SL4925-008	1.0000	HLF12A	6/12/2018	12:58	AMJ
SL4925-008L	5.0000	HLF12A	6/12/2018	13:00	AMJ
SL4925-008A	1.0000	HLF12A	6/12/2018	13:02	AMJ
SL4925-008S	1.0000	HLF12A	6/12/2018	13:05	AMJ
CCV	1.0000	HLF12A	6/12/2018	13:07	AMJ
CCB	1.0000	HLF12A	6/12/2018	13:09	AMJ
SL4925-008P	1.0000	HLF12A	6/12/2018	13:11	AMJ
SL4925-009	1.0000	HLF12A	6/12/2018	13:13	AMJ
SL4925-009L	5.0000	HLF12A	6/12/2018	13:15	AMJ
SL4925-009A	1.0000	HLF12A	6/12/2018	13:17	AMJ
SL4925-009S	1.0000	HLF12A	6/12/2018	13:20	AMJ
SL4925-009P	1.0000	HLF12A	6/12/2018	13:22	AMJ
SL4925-010	1.0000	HLF12A	6/12/2018	13:24	AMJ
SL4925-011	1.0000	HLF12A	6/12/2018	13:26	AMJ
SL4925-015	1.0000	HLF12A	6/12/2018	13:28	AMJ
SL4925-016	1.0000	HLF12A	6/12/2018	13:30	AMJ

SAMPLE ID	DF	FILE	DATE	TIME	ANALYST
CCV	1.0000	HLF12A	6/12/2018	13:33	AMJ
CCB	1.0000	HLF12A	6/12/2018	13:35	AMJ
SL4984-001	1.0000	HLF12A	6/12/2018	13:37	AMJ
PBWLF12HGW4	1.0000	HLF12A	6/12/2018	13:39	AMJ
LCSWLF12HGW4	1.0000	HLF12A	6/12/2018	13:41	AMJ
SL5038-007	1.0000	HLF12A	6/12/2018	13:43	AMJ
SL5038-008	1.0000	HLF12A	6/12/2018	13:45	AMJ
SL5038-009	1.0000	HLF12A	6/12/2018	13:48	AMJ
SL5038-010	1.0000	HLF12A	6/12/2018	13:50	AMJ
SL5038-011	1.0000	HLF12A	6/12/2018	13:52	AMJ
SL5038-012	1.0000	HLF12A	6/12/2018	13:54	AMJ
SL5038-013	1.0000	HLF12A	6/12/2018	13:56	AMJ
CCV	1.0000	HLF12A	6/12/2018	13:58	AMJ
CCB	1.0000	HLF12A	6/12/2018	14:01	AMJ
SL5038-013L	5.0000	HLF12A	6/12/2018	14:03	AMJ
SL5038-013A	1.0000	HLF12A	6/12/2018	14:05	AMJ
SL5038-013S	1.0000	HLF12A	6/12/2018	14:07	AMJ
SL5038-013P	1.0000	HLF12A	6/12/2018	14:09	AMJ
SL5038-014	1.0000	HLF12A	6/12/2018	14:11	AMJ
SL5038-015	1.0000	HLF12A	6/12/2018	14:14	AMJ
SL5038-016	1.0000	HLF12A	6/12/2018	14:16	AMJ
SL5038-017	1.0000	HLF12A	6/12/2018	14:18	AMJ
SL5038-018	1.0000	HLF12A	6/12/2018	14:20	AMJ
SL5038-019	1.0000	HLF12A	6/12/2018	14:22	AMJ
CCV	1.0000	HLF12A	6/12/2018	14:24	AMJ
CCB	1.0000	HLF12A	6/12/2018	14:27	AMJ
SL5038-020	1.0000	HLF12A	6/12/2018	14:29	AMJ
SL5038-021	1.0000	HLF12A	6/12/2018	14:31	AMJ
SL5038-022	1.0000	HLF12A	6/12/2018	14:33	AMJ
SL5038-023	1.0000	HLF12A	6/12/2018	14:35	AMJ
SL5038-024	1.0000	HLF12A	6/12/2018	14:38	AMJ
SL5164-001	1.0000	HLF12A	6/12/2018	14:40	AMJ
SL5082-008	5.0000	HLF12A	6/12/2018	14:42	AMJ
CCV	1.0000	HLF12A	6/12/2018	14:44	AMJ
CCB	1.0000	HLF12A	6/12/2018	14:46	AMJ

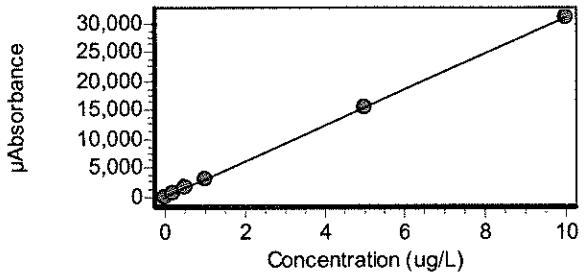
Report Generated By CETAC QuickTrace
Analyst: kasgc
Worksheet file: C:\Program Files\QuickTrace\Worksheets\HLF12A.wsz
Date Started: 6/12/2018 11:15:00 AM
Comment:

Results

Sample Name				Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
Calibration Blank				STD	06/12/18 11:57:10 am	0.000	-5	470.92		1.00
Replicates	2.2	-0.4	-36.4	15.6						
Standard #1 (0.2 ppb)				STD	06/12/18 11:59:17 am	0.200	661	3.99		1.00
Replicates	649.5	630.2	678.8	687.3						
Standard #2 (0.5 ppb)				STD	06/12/18 12:01:24 pm	0.500	1566	0.52		1.00
Replicates	1561.2	1577.6	1563.8	1559.6						
Standard #3 (1.0 ppb)				STD	06/12/18 12:03:32 pm	1.000	3131	1.31		1.00
Replicates	3093.3	3098.7	3163.9	3169.7						
Standard #4 (5.0 ppb)				STD	06/12/18 12:05:40 pm	5.000	15569	0.85		1.00
Replicates	15484.3	15462.4	15574.2	15753.4						
Standard #5 (10.0 ppb)				STD	06/12/18 12:07:50 pm	10.000	30817	4.69		1.00
Replicates	28799.9	30750.1	31803.1	31916.1						

Calibration

Equation: A = 42.079 + 3083.061C
R2: 0.99998
SEE: 67.0531
Flags:



ICV				ICV	06/12/18 12:09:59 pm	5.943	18363	0.93		1.00
Replicates	18365.1	18181.3	18313.8	18593.2						
% Recovery	99.04									
ICB				ICB	06/12/18 12:12:06 pm	-0.031	-52	38.89		1.00
Replicates	-30.9	-40.0	-64.8	-74.3						

Katahdin Analytical Services 4000080

Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
PQL					CRDL	06/12/18 12:14:13 pm	0.171	568	11.40		1.00
	Replicates	479.1	559.9	618.7	613.1						
	% Recovery	85.25									
CCV					CCV	06/12/18 12:16:21 pm	5.047	15602	0.66		1.00
	Replicates	15542.7	15493.3	15655.9	15716.4						
	% Recovery	100.94									
CCB					CCB	06/12/18 12:18:27 pm	-0.027	-41	63.16		1.00
	Replicates	-41.9	-57.2	-60.2	-4.1						
PBWLF12HGW1					PBK	06/12/18 12:20:35 pm	-0.006	23	71.43		1.00
	Replicates	14.0	46.5	9.1	23.1						
LCSWLF12HGW1					LCS	06/12/18 12:22:42 pm	4.999	15454	0.33		1.00
	Replicates	15465.0	15488.4	15380.3	15483.8						
	% Recovery	99.98									
SL5039-001					UNK	06/12/18 12:24:50 pm	-0.024	-33	124.18		1.00
	Replicates	8.8	-5.2	-76.2	-61.0						
SL5040-001					UNK	06/12/18 12:26:58 pm	-0.017	-10	329.17		1.00
	Replicates	39.5	-26.6	-20.5	-33.1						
SL5062-001					UNK	06/12/18 12:29:07 pm	-0.009	16	100.66		1.00
	Replicates	3.7	2.7	20.2	36.0						
SL5082-004					UNK	06/12/18 12:31:14 pm	0.021	107	26.61		1.00
	Replicates	146.1	94.5	79.8	107.0						
SL5082-005					UNK	06/12/18 12:33:22 pm	0.020	103	24.17		1.00
	Replicates	123.6	107.7	67.2	115.2						
SL5082-006					UNK	06/12/18 12:35:31 pm	0.071	262	8.89		1.00
	Replicates	290.0	233.2	260.0	263.0						
SL5082-007					UNK	06/12/18 12:37:39 pm	0.046	185	15.56		1.00
	Replicates	165.3	192.4	221.9	159.1						

Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
CCV					CCV	06/12/18 12:39:48 pm	5.004	15471	0.48		1.00
	Replicates	15488.0	15371.2	15474.7	15548.9						
	% Recovery	100.09									
CCB					CCB	06/12/18 12:41:54 pm	-0.022	-25	104.63		1.00
	Replicates	-43.3	-51.1	-9.8	3.7						
SL5082-008					UNK	06/12/18 12:44:03 pm	25.980	80130	0.48	O	1.00
	Replicates	80677.9	79840.3	79871.8	80129.7						
SL5099-001					UNK	06/12/18 12:47:15 pm	0.006	60	15.50		1.00
	Replicates	73.1	55.8	51.6	60.0						
PBWLF12HGW3					PBK	06/12/18 12:49:23 pm	-0.003	32	125.28		1.00
	Replicates	91.8	17.0	7.8	11.3						
LCSWLF12HGW3					LCS	06/12/18 12:51:31 pm	4.899	15146	0.43		1.00
	Replicates	15136.7	15065.2	15160.7	15223.2						
	% Recovery	97.98									
SL4925-005					UNK	06/12/18 12:53:40 pm	0.029	132	22.60		1.00
	Replicates	137.9	163.2	135.7	91.4						
SL4925-006					UNK	06/12/18 12:56:31 pm	-0.006	24	147.14		1.00
	Replicates	-7.3	53.2	54.1	-5.6						
SL4925-008					UNK	06/12/18 12:58:39 pm	-0.020	-21	41.61		1.00
	Replicates	-24.4	-30.9	-13.4	-13.7						
SL4925-008L					UNK	06/12/18 01:00:48 pm	-0.109	-25	106.02		5.00
	Replicates	-48.7	-47.0	-3.8	-0.3						
SL4925-008A					UNK	06/12/18 01:02:56 pm	0.945	2957	1.33		1.00
	Replicates	2971.9	2957.2	2902.7	2995.2						
SL4925-008S					UNK	06/12/18 01:05:06 pm	0.966	3020	0.93		1.00
	Replicates	3045.2	2982.8	3013.5	3037.6						

Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
CCV					CCV	06/12/18 01:07:14 pm	5.108	15791	0.33		1.00
	Replicates	15865.1	15747.0	15761.5	15790.3						
	% Recovery	102.16									
CCB					CCB	06/12/18 01:09:20 pm	-0.014	-2	794.10		1.00
	Replicates	32.4	-13.0	-36.2	10.3						
SL4925-008P					UNK	06/12/18 01:11:30 pm	0.970	3033	0.84		1.00
	Replicates	3053.5	3003.2	3054.9	3020.2						
SL4925-009					UNK	06/12/18 01:13:38 pm	-0.014	0	507.29		1.00
	Replicates	-3.3	15.7	10.9	-24.9						
SL4925-009L					UNK	06/12/18 01:15:47 pm	-0.100	-20	85.47		5.00
	Replicates	-15.3	-22.6	-40.9	-0.3						
SL4925-009A					UNK	06/12/18 01:17:57 pm	0.905	2832	1.40		1.00
	Replicates	2837.3	2830.0	2782.2	2879.2						
SL4925-009S					UNK	06/12/18 01:20:06 pm	0.962	3009	0.79		1.00
	Replicates	3028.2	2974.9	3022.2	3011.5						
SL4925-009P					UNK	06/12/18 01:22:16 pm	0.952	2976	1.11		1.00
	Replicates	2988.8	2927.1	3001.2	2985.7						
SL4925-010					UNK	06/12/18 01:24:25 pm	-0.009	13	189.25		1.00
	Replicates	40.8	19.1	-18.7	10.8						
SL4925-011					UNK	06/12/18 01:26:34 pm	-0.004	28	65.05		1.00
	Replicates	39.1	2.1	42.8	29.0						
SL4925-015					UNK	06/12/18 01:28:44 pm	-0.002	37	61.16		1.00
	Replicates	3.0	48.0	48.8	47.0						
SL4925-016					UNK	06/12/18 01:30:54 pm	-0.028	-43	20.37		1.00
	Replicates	-53.6	-37.6	-34.4	-47.1						

Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
CCV					CCV	06/12/18 01:33:02 pm	5.059	15639	0.41		1.00
	Replicates	15658.0	15550.4	15642.4	15705.2						
	% Recovery	101.18									
CCB					CCB	06/12/18 01:35:08 pm	-0.020	-21	115.16		1.00
	Replicates	3.4	-43.2	-39.4	-3.9						
SL4984-001					UNK	06/12/18 01:37:19 pm	-0.018	-15	113.07		1.00
	Replicates	-23.9	9.0	-28.0	-15.8						
PBWLF12HGW4					PBK	06/12/18 01:39:28 pm	-0.010	13	279.47		1.00
	Replicates	-25.3	34.7	-8.3	49.0						
LCSWLF12HGW4					LCS	06/12/18 01:41:38 pm	4.991	15428	0.46		1.00
	Replicates	15507.8	15343.4	15404.4	15458.4						
	% Recovery	99.81									
SL5038-007					UNK	06/12/18 01:43:48 pm	0.000	41	46.80		1.00
	Replicates	49.6	16.4	61.1	36.6						
SL5038-008					UNK	06/12/18 01:45:58 pm	0.017	95	19.60		1.00
	Replicates	95.1	120.5	78.2	85.0						
SL5038-009					UNK	06/12/18 01:48:08 pm	0.010	74	40.90		1.00
	Replicates	41.0	93.5	104.0	55.5						
SL5038-010					UNK	06/12/18 01:50:18 pm	-0.005	27	73.21		1.00
	Replicates	20.8	35.9	2.6	48.1						
SL5038-011					UNK	06/12/18 01:52:28 pm	0.011	75	36.65		1.00
	Replicates	78.5	111.1	46.8	63.0						
SL5038-012					UNK	06/12/18 01:54:38 pm	-0.006	24	99.34		1.00
	Replicates	45.6	36.2	22.7	-8.8						
SL5038-013					UNK	06/12/18 01:56:49 pm	-0.008	18	125.46		1.00
	Replicates	36.8	13.8	35.1	-12.4						

Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
CCV					CCV	06/12/18 01:58:57 pm	5.091	15738	0.38		1.00
	Replicates	15759.0	15699.3	15682.6	15811.8						
	% Recovery	101.82									
CCB					CCB	06/12/18 02:01:04 pm	-0.004	30	146.39		1.00
	Replicates	26.6	-14.3	17.5	91.3						
SL5038-013L					UNK	06/12/18 02:03:15 pm	-0.110	-26	60.28		5.00
	Replicates	-39.6	-3.5	-28.8	-31.8						
SL5038-013A					UNK	06/12/18 02:05:25 pm	0.974	3044	1.00		1.00
	Replicates	3076.9	3007.0	3032.0	3058.3						
SL5038-013S					UNK	06/12/18 02:07:35 pm	1.008	3150	0.94		1.00
	Replicates	3158.8	3115.7	3139.2	3185.9						
SL5038-013P					UNK	06/12/18 02:09:46 pm	0.980	3062	0.68		1.00
	Replicates	3091.3	3063.9	3047.7	3046.4						
SL5038-014					UNK	06/12/18 02:11:57 pm	-0.003	34	87.09		1.00
	Replicates	67.1	20.3	0.1	49.8						
SL5038-015					UNK	06/12/18 02:14:08 pm	0.001	46	63.25		1.00
	Replicates	77.3	36.7	60.5	10.2						
SL5038-016					UNK	06/12/18 02:16:18 pm	-0.006	23	110.29		1.00
	Replicates	44.3	45.0	0.1	2.0						
SL5038-017					UNK	06/12/18 02:18:29 pm	-0.006	25	101.11		1.00
	Replicates	42.1	30.7	-12.0	37.3						
SL5038-018					UNK	06/12/18 02:20:40 pm	-0.012	5	009.09		1.00
	Replicates	-3.7	-60.8	73.1	13.2						
SL5038-019					UNK	06/12/18 02:22:51 pm	-0.012	6	555.81		1.00
	Replicates	-12.4	49.7	-20.3	5.5						

Katahdin Analytical Services 4000085

Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
CCV					CCV	06/12/18 02:24:59 pm	5.068	15668	0.24		1.00
	Replicates	15702.9	15621.2	15653.2	15693.5						
	% Recovery	101.36									
CCB					CCB	06/12/18 02:27:06 pm	-0.013	1	203.57		1.00
	Replicates	-2.7	-18.5	6.6	20.0						
SL5038-020					UNK	06/12/18 02:29:17 pm	-0.026	-38	35.76		1.00
	Replicates	-30.2	-23.1	-51.9	-46.8						
SL5038-021					UNK	06/12/18 02:31:28 pm	0.006	60	31.53		1.00
	Replicates	78.8	66.6	34.1	59.8						
SL5038-022					UNK	06/12/18 02:33:39 pm	-0.018	-13	180.34		1.00
	Replicates	-0.8	-0.8	-46.5	-2.1						
SL5038-023					UNK	06/12/18 02:35:50 pm	-0.031	-54	50.26		1.00
	Replicates	-89.0	-34.6	-63.4	-30.6						
SL5038-024					UNK	06/12/18 02:38:02 pm	-0.023	-30	84.31		1.00
	Replicates	-40.2	-60.5	-4.5	-14.8						
SL5164-001					UNK	06/12/18 02:40:13 pm	-0.015	-4	405.27		1.00
	Replicates	-15.6	-4.0	-15.7	19.1						
SL5082-008					UNK	06/12/18 02:42:22 pm	28.950	17892	0.56		5.00
	Replicates	17790.3	17824.0	17954.7	17998.7						
CCV					CCV	06/12/18 02:44:31 pm	5.070	15673	1.06		1.00
	Replicates	15538.8	15539.9	15732.5	15881.5						
	% Recovery	101.40									
CCB					CCB	06/12/18 02:46:37 pm	-0.015	-5	244.27		1.00
	Replicates	-3.6	-16.9	-10.9	11.4						

KATAHDIN ANALYTICAL SERVICES, LLC
METALS ANALYSIS RUN INFORMATION SHEET

INSTR. ID: I (Thermo iCAP 6500) **ANALYST**: JS **ANALYSIS DATE**: 05/25/2018

FILE NAME: ILE25B

METHOD: ICP
- ☑ 200.7
- ☑ 6010
- ☑ DOD
- ☐ _____

REVIEWED
MD 5/29/18
KATAHDIN ANALYTICAL
METALS SECTION

The pHs of all samples that were tested by direct analysis in this analytical run were checked just prior to analysis and confirmed to be <2. The time of preservation of these samples was checked in the "Measured Turbidity and Preservation of Incoming Samples" logbook to verify that they had been preserved at least 16 hours prior to analysis. These verifications were performed by _____ (initals) on _____ (date).

STANDARDS USED:

Standard Name	Standard ID	Prep Date	Expiration Date	Standard Conc.
Cal. Blk/ICB/CCB	MW17728	05/02/2018	05/02/2019	0 ug/L
Standard 1	MW17766	05/14/2018	07/13/2018	Varies by Element
ICV	MW17746	04/08/2018	08/08/2018	Varies by Element
PQL	MW17769	05/15/2018	07/13/2018	Varies by Element
LRS1	MW17788	05/22/2018	07/13/2018	Varies by Element
LRS2	MW17770	05/15/2018	08/14/2018	Varies by Element
ICSA	MW17747	05/08/2018	08/08/2018	Varies by Element
ICSAB	MW17787	05/21/2018	07/23/2018	Varies by Element
CCV	MW17800	05/25/2018	07/13/2018	Varies by Element
Internal Standard	MW17777	05/17/2018	08/17/2018	5.0 mg/L Yttrium

Additional Comments and Notes:

No report axial high reads for CCB analyzed at 23:09; deleted repeat reads and accepted sample results w/in passing run QC

MD 5/29/18

Dilutions: Some samples were diluted based on history or due to interfering element concentrations.

Dilution preparations are as follows:

5x diln.: 1.6mL of sample (pipet M18) + 6.4mL of MW17728 (pipet M18)

Post Spike: 0.04mL of MS2085,MS2089(pipet M16),0.08mL of MS2111 (pipet M16),0.004mL of MS2109(pipet M17) to 8mL of sample (pipet M18) (Unless otherwise specified)

INSTRUMENT RUNLOG

Instrument: ICAP 6500

SAMPLE ID	DF	FILE	DATE	TIME	ANALYST
Blank	1.000	ILE25B	5/25/2018	20:25	JS
Std 1	1.000	ILE25B	5/25/2018	20:30	JS
ICV	1.000	ILE25B	5/25/2018	20:34	JS
ICB	1.000	ILE25B	5/25/2018	20:38	JS
PQL	1.000	ILE25B	5/25/2018	20:43	JS
ICSA	1.000	ILE25B	5/25/2018	20:47	JS
ICSAB	1.000	ILE25B	5/25/2018	20:52	JS
CCV	1.000	ILE25B	5/25/2018	20:58	JS
CCB	1.000	ILE25B	5/25/2018	21:02	JS
LRS1	1.000	ILE25B	5/25/2018	21:06	JS
LRS2	1.000	ILE25B	5/25/2018	21:12	JS
CCV	1.000	ILE25B	5/25/2018	21:18	JS
CCB	1.000	ILE25B	5/25/2018	21:22	JS
PBWLE25ICW1	1.000	ILE25B	5/25/2018	21:26	JS
LCSWLE25ICW1	1.000	ILE25B	5/25/2018	21:31	JS
LC2WLE25ICW1	1.000	ILE25B	5/25/2018	21:35	JS
SL4557-001	1.000	ILE25B	5/25/2018	21:39	JS
SL4557-002	1.000	ILE25B	5/25/2018	21:44	JS
SL4557-003	1.000	ILE25B	5/25/2018	21:48	JS
SL4557-004	1.000	ILE25B	5/25/2018	21:52	JS
SL4557-005	1.000	ILE25B	5/25/2018	21:57	JS
SL4557-006	1.000	ILE25B	5/25/2018	22:01	JS
SL4557-007	1.000	ILE25B	5/25/2018	22:06	JS
CCV	1.000	ILE25B	5/25/2018	22:11	JS
CCB	1.000	ILE25B	5/25/2018	22:15	JS
SL4557-008	1.000	ILE25B	5/25/2018	22:19	JS
SL4557-010	1.000	ILE25B	5/25/2018	22:23	JS
SL4557-011	1.000	ILE25B	5/25/2018	22:28	JS
SL4557-012	1.000	ILE25B	5/25/2018	22:33	JS
SL4557-013	1.000	ILE25B	5/25/2018	22:37	JS
SL4557-014	1.000	ILE25B	5/25/2018	22:42	JS
PBWLE25ICW2	1.000	ILE25B	5/25/2018	22:46	JS
LCSWLE25ICW2	1.000	ILE25B	5/25/2018	22:51	JS
PBT1456A	1.000	ILE25B	5/25/2018	22:55	JS
SL4502-002	1.000	ILE25B	5/25/2018	23:00	JS
CCV	1.000	ILE25B	5/25/2018	23:05	JS
CCB	1.000	ILE25B	5/25/2018	23:09	JS
SL4502-002L	5.000	ILE25B	5/25/2018	23:14	JS
SL4502-002A	1.000	ILE25B	5/25/2018	23:18	JS
SL4502-002S	1.000	ILE25B	5/25/2018	23:23	JS
SL4502-002P	1.000	ILE25B	5/25/2018	23:28	JS
SL4506-001	1.000	ILE25B	5/25/2018	23:33	JS
SL4506-002	1.000	ILE25B	5/25/2018	23:39	JS
SL4506-005	1.000	ILE25B	5/25/2018	23:44	JS

SAMPLE ID	DF	FILE	DATE	TIME	ANALYST
SL4509-001	1.000	ILE25B	5/25/2018	23:49	JS
SL4509-002	1.000	ILE25B	5/25/2018	23:54	JS
SL4509-003	1.000	ILE25B	5/25/2018	23:59	JS
CCV	1.000	ILE25B	5/26/2018	0:03	JS
CCB	1.000	ILE25B	5/26/2018	0:07	JS
SL4509-004	1.000	ILE25B	5/26/2018	0:12	JS
SL4519-001	1.000	ILE25B	5/26/2018	0:16	JS
SL4519-002	1.000	ILE25B	5/26/2018	0:21	JS
SL4561-001	1.000	ILE25B	5/26/2018	0:25	JS
SL4572-004	1.000	ILE25B	5/26/2018	0:30	JS
SL4572-006	1.000	ILE25B	5/26/2018	0:36	JS
SL4572-009	1.000	ILE25B	5/26/2018	0:41	JS
SL4572-011	1.000	ILE25B	5/26/2018	0:46	JS
SL4572-012	1.000	ILE25B	5/26/2018	0:51	JS
PBWLE25ICW3	1.000	ILE25B	5/26/2018	0:57	JS
CCV	1.000	ILE25B	5/26/2018	1:01	JS
CCB	1.000	ILE25B	5/26/2018	1:05	JS
LCSWLE25ICW3	1.000	ILE25B	5/26/2018	1:09	JS
SL4513-001	1.000	ILE25B	5/26/2018	1:14	JS
SL4513-002	1.000	ILE25B	5/26/2018	1:18	JS
SL4513-003	1.000	ILE25B	5/26/2018	1:23	JS
SL4513-004	1.000	ILE25B	5/26/2018	1:27	JS
SL4513-005	1.000	ILE25B	5/26/2018	1:31	JS
SL4513-006	1.000	ILE25B	5/26/2018	1:36	JS
SL4513-007	1.000	ILE25B	5/26/2018	1:40	JS
SL4513-008	1.000	ILE25B	5/26/2018	1:44	JS
SL4513-009	1.000	ILE25B	5/26/2018	1:49	JS
CCV	1.000	ILE25B	5/26/2018	1:53	JS
CCB	1.000	ILE25B	5/26/2018	1:57	JS
SL4617-001	1.000	ILE25B	5/26/2018	2:02	JS
SL4617-001L	5.000	ILE25B	5/26/2018	2:06	JS
SL4617-001S	1.000	ILE25B	5/26/2018	2:11	JS
SL4617-001P	1.000	ILE25B	5/26/2018	2:15	JS
CCV	1.000	ILE25B	5/26/2018	2:19	JS
CCB	1.000	ILE25B	5/26/2018	2:23	JS
PQL	1.000	ILE25B	5/26/2018	2:28	JS
ICSA	1.000	ILE25B	5/26/2018	2:32	JS
ICSAB	1.000	ILE25B	5/26/2018	2:38	JS
CCV	1.000	ILE25B	5/26/2018	2:43	JS
CCB	1.000	ILE25B	5/26/2018	2:47	JS

Intensity Report

Author:

Published: 5/29/2018 8:13:07AM

Notes:

Blank

Method Name: FAST-2016_NO_AU Method Revision: 449

Analyst Name: JS

Acquire Date: 5/25/2018 8:25:53PM Sample Type: Standard

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		-0.0001190	Cts/S	0.000002000	2.031	-21.29
Al3961_R		-0.0002610	Cts/S	0.0001780	68.16	-3.992
As1891_A		-0.0001780	Cts/S	0.00001700	9.616	-1.456
B_2089_A		0.0003350	Cts/S	0.00004400	13.04	2.745
Ba4554_R		0.001127	Cts/S	0.0004450	39.50	17.37
Be3130_R		0.0001220	Cts/S	0.00009700	79.56	1.881
Ca3158_R		-0.001328	Cts/S	0.0003730	28.09	-20.38
Cd2265_A		-0.0003750	Cts/S	0.000001000	0.1652	-3.065
Co2286_A		0.0003350	Cts/S	0.000007000	1.985	2.736
Cr2677_A		0.00003500	Cts/S	0.00001700	50.14	6.223
Cu3273_A		-0.00002000	Cts/S	0.00003100	155.3	-3.557
Fe2599_R		0.0002420	Cts/S	0.00003900	16.26	3.715
K_7664_R		-0.004293	Cts/S	0.0002850	6.633	-65.98
Li6707_R		0.0003530	Cts/S	0.0001380	38.99	5.437
Mg2025_A		-0.00001400	Cts/S	0.000009000	67.51	-0.1125
Mn2576_R		-0.0001440	Cts/S	0.0002970	205.7	-2.245
Mo2020_A		0.0001810	Cts/S	0.000007000	4.070	1.479
Na5895_R		0.002959	Cts/S	0.0004800	16.24	45.45
Ni2316_A		-0.0001590	Cts/S	0.00005100	32.28	-1.300
Pb2203_A		-0.00009400	Cts/S	0.00005700	60.58	-0.7737
Sb2068_A		0.000009000	Cts/S	0.00006000	676.8	0.07464
Se1960_A		0.0002690	Cts/S	0.00001200	4.386	2.199
Si2516_R		0.001760	Cts/S	0.0001240	7.065	27.07
Sn1899_A		0.00008700	Cts/S	0.000003000	2.984	0.7086
Sr4215_R		-0.0003080	Cts/S	0.0001030	33.56	-4.747
Ti3349_A		-0.00009800	Cts/S	0.000009000	9.485	-17.54
Tl1908_A		-0.0001330	Cts/S	0.00002900	21.89	-1.088
V_2924_A		-0.00006300	Cts/S	0.000008000	12.12	-11.32
Zn2062_A		0.0003450	Cts/S	0.00005500	15.94	2.822
Y_3600_R		15,374	Cts/S	177.08	1.1518	15,374
Y_2243_A		8,178.2	Cts/S	61.812	0.75581	8,178.2
Y_3600_A		179,490	Cts/S	235.83	0.13139	179,490

Std 1

Method Name: FAST-2016_NO_AU Method Revision: 449

Analyst Name: JS

Acquire Date: 5/25/2018 8:30:19PM Sample Type: Standard

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.1444	Cts/S	0.0003230	0.2240	23,740
Al3961_R		1.579	Cts/S	0.007317	0.4634	22,950
As1891_A		0.05791	Cts/S	0.001930	3.333	451.8
B_2089_A		0.2098	Cts/S	0.006687	3.187	1,637
Ba4554_R		3.735	Cts/S	0.009126	0.2443	54,280
Be3130_R		5.270	Cts/S	0.04957	0.9406	76,600
Ca3158_R		1.779	Cts/S	0.003636	0.2044	25,860
Cd2265_A		1.863	Cts/S	0.06098	3.273	14,540
Co2286_A		0.5281	Cts/S	0.01799	3.406	4,120
Cr2677_A		0.07803	Cts/S	0.0002090	0.2674	12,830
Cu3273_A		0.09475	Cts/S	0.0004890	0.5161	15,580
Fe2599_R		2.716	Cts/S	0.006010	0.2213	39,470
K_7664_R		0.9355	Cts/S	0.001649	0.1763	13,600
Li6707_R		0.7966	Cts/S	0.002134	0.2679	11,580

Std 1

Method Name: FAST-2016_NO_AU Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 8:30:19PM Sample Type: Standard

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Mg2025_A		1.597	Cts/S	0.05587	3.498	12,460
Mn2576_R		0.6694	Cts/S	0.003802	0.5679	9,730
Mo2020_A		0.4943	Cts/S	0.01701	3.440	3,856
Na5895_R		3.094	Cts/S	0.02265	0.7321	44,960
Ni2316_A		0.2824	Cts/S	0.009028	3.197	2,203
Pb2203_A		0.1396	Cts/S	0.004204	3.012	1,089
Sb2068_A		0.08606	Cts/S	0.002934	3.410	671.3
Se1960_A		0.04279	Cts/S	0.001512	3.532	333.8
Si2516_R		0.8519	Cts/S	0.0005050	0.05930	12,380
Sn1899_A		0.08774	Cts/S	0.002814	3.207	684.5
Sr4215_R		4.446	Cts/S	0.01905	0.4285	64,620
Ti3349_A		0.1983	Cts/S	0.0006710	0.3384	32,600
Tl1908_A		0.1017	Cts/S	0.003264	3.210	793.4
V_2924_A		0.07889	Cts/S	0.0004200	0.5325	12,970
Zn2062_A		0.4263	Cts/S	0.01373	3.220	3,326
Y_3600_R		14,534	Cts/S	35.975	0.24751	14,534
Y_2243_A		7,804.5	Cts/S	191.50	2.4537	7,804.5
Y_3600_A		164,400	Cts/S	337.09	0.20504	164,400

ICV

Method Name: FAST-2016_NO_AU Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 8:34:27PM Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		383.1	ug/L	3.794	0.9905	9,640
Al3961_R		9,645	ug/L	52.53	0.5446	9,209
As1891_A		391.2	ug/L	4.189	1.071	180.4
B_2089_A		399.8	ug/L	3.471	0.8682	673.0
Ba4554_R		388.5	ug/L	1.793	0.4614	21,950
Be3130_R		387.7	ug/L	3.503	0.9035	30,900
Ca3158_R		9,672	ug/L	24.23	0.2506	10,390
Cd2265_A		402.6	ug/L	4.485	1.114	6,001
Co2286_A		406.5	ug/L	3.709	0.9126	1,719
Cr2677_A		382.5	ug/L	3.080	0.8054	5,213
Cu3273_A		387.7	ug/L	2.814	0.7258	6,408
Fe2599_R		9,745	ug/L	0.4772	0.004897	16,010
K_7664_R		13,080	ug/L	68.51	0.5237	7,371
Li6707_R		386.9	ug/L	2.204	0.5695	4,664
Mg2025_A		9,846	ug/L	99.37	1.009	5,034
Mn2576_R		393.6	ug/L	1.376	0.3497	3,983
Mo2020_A		401.6	ug/L	4.365	1.087	1,589
Na5895_R		9,692	ug/L	105.8	1.092	18,160
Ni2316_A		407.5	ug/L	5.385	1.322	920.1
Pb2203_A		404.7	ug/L	4.512	1.115	451.7
Sb2068_A		398.0	ug/L	4.004	1.006	274.0
Se1960_A		394.5	ug/L	4.996	1.266	136.4
Si2516_R	W	9,399	ug/L	13.34	0.1419	4,860
Sn1899_A		397.9	ug/L	4.402	1.106	279.8
Sr4215_R		384.8	ug/L	3.226	0.8384	25,860
Ti3349_A		384.4	ug/L	4.275	1.112	13,290
Tl1908_A		404.5	ug/L	3.757	0.9290	328.7
V_2924_A		382.2	ug/L	2.788	0.7295	5,253
Zn2062_A		402.8	ug/L	5.338	1.325	1,376
Y_3600_R		15,121	Cts/S	82.724	0.54710	15,121
Y_2243_A		8,003.2	Cts/S	51.247	0.64034	8,003.2
Y_3600_A		174,520	Cts/S	1,107.8	0.63477	174,520

ICB

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 8:38:36PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		-0.04035	ug/L	0.06316	156.5	-21.74
Al3961_R		3.773	ug/L	5.045	133.7	-0.3032
As1891_A		0.5004	ug/L	0.4592	91.77	-1.216
B_2089_A		0.8417	ug/L	0.004702	0.5587	4.155
Ba4554_R		-0.04924	ug/L	0.01132	22.98	14.22
Be3130_R		-0.005702	ug/L	0.05054	886.4	1.345
Ca3158_R		-2.528	ug/L	1.470	58.14	-22.72
Cd2265_A		-0.03165	ug/L	0.01900	60.03	-3.540
Co2286_A		0.04266	ug/L	0.1209	283.3	2.918
Cr2677_A		-0.2083	ug/L	0.1417	68.05	3.231
Cu3273_A		-0.007807	ug/L	0.1020	1,307	-3.584
Fe2599_R		-0.7352	ug/L	0.4589	62.42	2.446
K_7664_R		7.832	ug/L	2.188	27.94	-60.26
Li6707_R		-0.06097	ug/L	0.09411	154.4	4.593
Mg2025_A		-2.086	ug/L	0.7175	34.39	-1.191
Mn2576_R		0.09075	ug/L	0.2806	309.2	-1.244
Mo2020_A		0.3770	ug/L	0.09124	24.20	2.997
Na5895_R		-9.352	ug/L	1.104	11.80	27.16
Ni2316_A		-0.03554	ug/L	0.1751	492.8	-1.379
Pb2203_A		-0.7600	ug/L	0.1859	24.46	-1.640
Sb2068_A		0.4879	ug/L	0.1479	30.31	0.4133
Se1960_A		0.3702	ug/L	1.538	415.5	2.324
Si2516_R		8.103	ug/L	12.31	151.9	30.64
Sn1899_A		0.3186	ug/L	0.3550	111.4	0.9348
Sr4215_R		0.05549	ug/L	0.06976	125.7	-0.9537
Ti3349_A		0.2819	ug/L	0.01206	4.279	-7.305
Tl1908_A		0.3897	ug/L	0.2390	61.33	-0.7619
V_2924_A		0.3572	ug/L	0.1755	49.14	-6.092
Zn2062_A		0.6573	ug/L	0.1080	16.43	5.104
Y_3600_R		15,072	Cts/S	172.79	1.1465	15,072
Y_2243_A		8,163.7	Cts/S	26.956	0.33019	8,163.7
Y_3600_A		174,730	Cts/S	2,141.4	1.2255	174,730

PQL

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 8:43:00PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		9.861	ug/L	0.1312	1.330	233.3
Al3961_R		284.6	ug/L	2.601	0.9138	272.0
As1891_A		7.792	ug/L	0.1619	2.078	2.269
B_2089_A		47.43	ug/L	0.3814	0.8040	82.93
Ba4554_R		4.759	ug/L	0.1240	2.606	290.2
Be3130_R		4.781	ug/L	0.06871	1.437	388.3
Ca3158_R		88.77	ug/L	1.104	1.243	76.71
Cd2265_A		4.915	ug/L	0.04820	0.9807	72.45
Co2286_A		10.14	ug/L	0.04812	0.4746	46.95
Cr2677_A		9.754	ug/L	0.2958	3.033	141.3
Cu3273_A		24.73	ug/L	0.2836	1.147	412.8
Fe2599_R		98.46	ug/L	1.339	1.360	167.9
K_7664_R		969.9	ug/L	4.449	0.4587	494.0
Li6707_R		100.2	ug/L	2.435	2.432	1,230
Mg2025_A		95.16	ug/L	1.209	1.271	50.27
Mn2576_R		5.123	ug/L	0.1818	3.548	50.43
Mo2020_A		9.851	ug/L	0.03785	0.3842	41.66
Na5895_R		978.9	ug/L	11.52	1.177	1,904
Ni2316_A		10.04	ug/L	0.1920	1.913	22.09

PQL

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 8:43:00PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A		4.919	ug/L	0.6914	14.06	4.864
Sb2068_A		8.410	ug/L	1.037	12.33	5.526
Se1960_A		11.52	ug/L	1.782	15.46	6.260
Si2516_R		184.3	ug/L	6.656	3.611	123.3
Sn1899_A		98.90	ug/L	1.404	1.419	72.24
Sr4215_R		9.682	ug/L	0.1265	1.307	656.3
Ti3349_A		14.55	ug/L	0.07298	0.5016	495.3
Tl1908_A		15.46	ug/L	0.9533	6.167	11.91
V_2924_A		9.773	ug/L	0.09082	0.9293	125.9
Zn2062_A		19.61	ug/L	0.02732	0.1393	71.83
Y_3600_R		15,358	Cts/S	149.89	0.97601	15,358
Y_2243_A		8,251.6	Cts/S	50.315	0.60976	8,251.6
Y_3600_A		177,630	Cts/S	796.93	0.44864	177,630

ICSA

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 8:47:23PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		-1.245	ug/L	1.177	94.54	-1,309
Al3961_R		471,800	ug/L	367.8	0.07797	435,100
As1891_A		-0.8349	ug/L	0.09507	11.39	-4.486
B_2089_A		0.5926	ug/L	0.02588	4.368	3.153
Ba4554_R		0.001734	ug/L	0.1517	8,750	16.55
Be3130_R		-0.09468	ug/L	0.008532	9.011	-5.588
Ca3158_R		443,000	ug/L	448.6	0.1013	461,100
Cd2265_A		0.7275	ug/L	0.009853	1.354	224.5
Co2286_A		-3.669	ug/L	0.2066	5.631	5.650
Cr2677_A		0.2432	ug/L	0.1996	82.07	23.40
Cu3273_A		-0.3707	ug/L	0.02321	6.259	0.00004493
Fe2599_R		174,400	ug/L	765.5	0.4390	276,900
K_7664_R		-11.91	ug/L	20.18	169.5	-69.36
Li6707_R		6.989	ug/L	0.1723	2.465	86.54
Mg2025_A		435,600	ug/L	499.9	0.1148	195,200
Mn2576_R		-1.085	ug/L	0.2965	27.32	-4.670
Mo2020_A		-1.297	ug/L	0.2729	21.05	-3.234
Na5895_R		9.154	ug/L	0.8385	9.159	59.82
Ni2316_A		-3.426	ug/L	0.08588	2.507	-11.68
Pb2203_A		-3.563	ug/L	0.2949	8.276	-35.76
Sb2068_A		-0.2171	ug/L	0.8418	387.7	4.546
Se1960_A		3.201	ug/L	1.052	32.88	8.853
Si2516_R		10.64	ug/L	7.039	66.16	19.37
Sn1899_A		6.021	ug/L	1.240	20.60	4.320
Sr4215_R	W	4.722	ug/L	0.2600	5.506	302.6
Ti3349_A		1.146	ug/L	0.09299	8.115	19.72
Tl1908_A		0.6330	ug/L	1.454	229.7	0.4990
V_2924_A		-0.2017	ug/L	0.1188	58.88	12.71
Zn2062_A		1.289	ug/L	0.1211	9.397	6.290
Y_3600_R		14,622	Cts/S	101.65	0.69515	14,622
Y_2243_A		7,031.5	Cts/S	0.93292	0.013268	7,031.5
Y_3600_A		152,370	Cts/S	1,100.5	0.72226	152,370

ICSAB

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 8:52:53PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

ICSAB

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 8:52:53PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		211.3	ug/L	1.761	0.8335	3,237
Al3961_R		505,400	ug/L	7,523	1.488	442,800
As1891_A		101.4	ug/L	0.2804	0.2766	37.07
B_2089_A		489.0	ug/L	6.257	1.280	718.2
Ba4554_R		498.5	ug/L	2.131	0.4276	25,860
Be3130_R		493.7	ug/L	0.1673	0.03388	36,140
Ca3158_R		467,300	ug/L	2,665	0.5702	462,100
Cd2265_A		933.3	ug/L	9.124	0.9776	12,350
Co2286_A		459.3	ug/L	3.851	0.8386	1,713
Cr2677_A		472.2	ug/L	4.480	0.9486	5,468
Cu3273_A		515.4	ug/L	2.761	0.5356	7,231
Fe2599_R		184,800	ug/L	2,151	1.164	278,800
K_7664_R		20,850	ug/L	34.84	0.1671	10,830
Li6707_R		525.3	ug/L	3.483	0.6630	5,814
Mg2025_A		433,800	ug/L	3,927	0.9052	193,200
Mn2576_R		472.8	ug/L	3.008	0.6361	4,396
Mo2020_A		486.2	ug/L	6.397	1.316	1,680
Na5895_R		21,060	ug/L	0.2799	0.001329	36,200
Ni2316_A		905.3	ug/L	8.343	0.9215	1,780
Pb2203_A		44.58	ug/L	1.243	2.787	8.710
Sb2068_A		610.9	ug/L	5.525	0.9045	372.2
Se1960_A		53.12	ug/L	3.882	7.307	24.11
Si2516_R		1,983	ug/L	23.07	1.163	950.9
Sn1899_A		461.1	ug/L	2.968	0.6438	283.0
Sr4215_R		499.4	ug/L	0.8659	0.1734	30,840
Ti3349_A		482.8	ug/L	2.573	0.5329	14,150
Tl1908_A		88.77	ug/L	1.164	1.311	62.13
V_2924_A		476.1	ug/L	1.225	0.2573	5,574
Zn2062_A		917.7	ug/L	8.791	0.9580	2,736
Y_3600_R		13,890	Cts/S	59.998	0.43197	13,890
Y_2243_A		6,989.2	Cts/S	52.551	0.75189	6,989.2
Y_3600_A		147,910	Cts/S	226.92	0.15342	147,910

CCV

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 8:58:14PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		486.8	ug/L	0.3593	0.07380	12,070
Al3961_R		12,340	ug/L	63.14	0.5116	11,680
As1891_A		494.8	ug/L	2.300	0.4649	228.2
B_2089_A		495.9	ug/L	5.116	1.032	832.6
Ba4554_R		489.5	ug/L	0.6539	0.1336	27,400
Be3130_R		491.6	ug/L	1.041	0.2118	38,830
Ca3158_R		12,370	ug/L	71.48	0.5776	13,180
Cd2265_A		497.9	ug/L	4.842	0.9726	7,407
Co2286_A		502.9	ug/L	4.326	0.8603	2,122
Cr2677_A		488.6	ug/L	0.1714	0.03508	6,553
Cu3273_A		491.7	ug/L	0.3761	0.07649	8,002
Fe2599_R		12,270	ug/L	107.6	0.8773	19,970
K_7664_R		12,340	ug/L	3.013	0.02442	6,886
Li6707_R		490.3	ug/L	0.6237	0.1272	5,855
Mg2025_A		12,480	ug/L	141.4	1.132	6,371
Mn2576_R		492.7	ug/L	4.824	0.9792	4,940
Mo2020_A		498.8	ug/L	4.609	0.9240	1,970
Na5895_R		12,350	ug/L	62.85	0.5088	22,920
Ni2316_A		503.7	ug/L	3.995	0.7932	1,136

CCV

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 8:58:14PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A		502.2	ug/L	3.994	0.7952	559.6
Sb2068_A		494.9	ug/L	4.735	0.9569	340.1
Se1960_A		494.4	ug/L	6.266	1.268	170.1
Si2516_R		12,370	ug/L	14.38	0.1163	6,328
Sn1899_A		500.2	ug/L	3.870	0.7738	350.9
Sr4215_R		495.2	ug/L	1.186	0.2394	32,980
Ti3349_A		486.3	ug/L	0.3591	0.07385	16,550
Tl1908_A		505.0	ug/L	4.437	0.8786	409.8
V_2924_A		480.9	ug/L	0.7777	0.1617	6,511
Zn2062_A		497.8	ug/L	3.986	0.8008	1,697
Y_3600_R		14,984	Cts/S	78.046	0.52087	14,984
Y_2243_A		7,987.7	Cts/S	51.618	0.64622	7,987.7
Y_3600_A		171,800	Cts/S	64.400	0.037486	171,800

CCB

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 9:02:21PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.1246	ug/L	0.2462	197.6	-18.04
Al3961_R		4.476	ug/L	3.108	69.44	0.3469
As1891_A		0.7400	ug/L	0.7062	95.42	-1.099
B_2089_A		0.5700	ug/L	0.06787	11.91	3.700
Ba4554_R		-0.03263	ug/L	0.02742	84.03	15.26
Be3130_R		-0.01317	ug/L	0.03571	271.2	0.7757
Ca3158_R		0.1949	ug/L	2.068	1,061	-19.95
Cd2265_A		0.05852	ug/L	0.01084	18.53	-2.166
Co2286_A		0.1729	ug/L	0.2981	172.4	3.477
Cr2677_A		-0.01105	ug/L	0.3144	2,846	6.052
Cu3273_A		0.2082	ug/L	0.1933	92.83	-0.02428
Fe2599_R		2.094	ug/L	0.08278	3.953	7.123
K_7664_R		10.73	ug/L	27.72	258.4	-59.06
Li6707_R		0.6410	ug/L	0.1446	22.56	13.10
Mg2025_A		2.463	ug/L	0.6158	25.00	1.174
Mn2576_R		0.1940	ug/L	0.08255	42.56	-0.2180
Mo2020_A		0.3998	ug/L	0.2023	50.60	3.088
Na5895_R		-11.44	ug/L	11.75	102.7	23.49
Ni2316_A		0.2339	ug/L	0.1062	45.38	-0.7562
Pb2203_A		-1.136	ug/L	0.1086	9.565	-2.066
Sb2068_A		0.1734	ug/L	0.5294	305.4	0.1910
Se1960_A		0.4003	ug/L	0.6871	171.7	2.331
Si2516_R		8.903	ug/L	1.539	17.28	31.30
Sn1899_A		0.1871	ug/L	0.05467	29.23	0.8396
Sr4215_R		0.02820	ug/L	0.08602	305.0	-2.764
Ti3349_A		0.2807	ug/L	0.1182	42.09	-7.542
Tl1908_A		0.08757	ug/L	0.6536	746.4	-1.010
V_2924_A		0.3762	ug/L	0.07645	20.32	-5.976
Zn2062_A		0.04962	ug/L	0.1070	215.6	2.985
Y_3600_R		15,178	Cts/S	53.055	0.34956	15,178
Y_2243_A		8,150.8	Cts/S	70.256	0.86195	8,150.8
Y_3600_A		179,310	Cts/S	753.33	0.42014	179,310

LRS1

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 9:06:48PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

LRS1

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 9:06:48PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		1,983	ug/L	2.106	0.1062	48,020
Al3961_R		-15.85	ug/L	11.68	73.69	161.2
As1891_A		20,460	ug/L	0.8667	0.004236	9,063
B_2089_A		20,640	ug/L	15.75	0.07631	32,250
Ba4554_R		19,460	ug/L	268.1	1.378	1,097,000
Be3130_R		19,390	ug/L	59.21	0.3053	1,544,000
Ca3158_R		-95.50	ug/L	3.137	3.284	-10.33
Cd2265_A		19,820	ug/L	3.238	0.01633	280,800
Co2286_A		20,740	ug/L	3.263	0.01573	83,330
Cr2677_A		19,840	ug/L	399.1	2.011	257,600
Cu3273_A		20,440	ug/L	465.5	2.277	322,500
Fe2599_R		-0.4330	ug/L	2.274	525.1	2.938
K_7664_R		4.691	ug/L	11.22	239.2	-62.20
Li6707_R		19,420	ug/L	173.1	0.8912	233,600
Mg2025_A		539.5	ug/L	5.297	0.9819	776.8
Mn2576_R		19,390	ug/L	104.0	0.5362	196,300
Mo2020_A		5,207	ug/L	2.142	0.04113	19,600
Na5895_R		-0.4488	ug/L	3.014	671.7	43.85
Ni2316_A		20,500	ug/L	15.97	0.07792	44,010
Pb2203_A		21,290	ug/L	5.042	0.02368	22,700
Sb2068_A		20,700	ug/L	27.00	0.1304	13,580
Se1960_A		20,430	ug/L	14.27	0.06984	6,614
Si2516_R		46.39	ug/L	50.63	109.1	119.7
Sn1899_A		20,050	ug/L	26.45	0.1320	13,390
Sr4215_R		18,960	ug/L	25.93	0.1368	1,273,000
Ti3349_A		19,440	ug/L	56.14	0.2889	641,600
Tl1908_A		20,400	ug/L	0.1053	0.0005160	15,830
V_2924_A		19,660	ug/L	6.788	0.03453	259,400
Zn2062_A		19,970	ug/L	1.570	0.007858	64,840
Y_3600_R		15,108	Cts/S	45.736	0.30273	15,108
Y_2243_A		7,619.4	Cts/S	7.3442	0.096388	7,619.4
Y_3600_A		166,450	Cts/S	765.68	0.46000	166,450

LRS2

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 9:12:44PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		2.627	ug/L	1.016	38.68	-1,639
Al3961_R		499,200	ug/L	1,959	0.3925	439,700
As1891_A		0.6937	ug/L	0.5007	72.18	-5.370
B_2089_A		22.90	ug/L	3.712	16.21	35.17
Ba4554_R		0.6628	ug/L	0.03495	5.273	50.30
Be3130_R		0.2873	ug/L	0.07367	25.64	22.62
Ca3158_R		478,000	ug/L	2,295	0.4801	475,200
Cd2265_A		-1.005	ug/L	0.1734	17.26	278.9
Co2286_A		-5.290	ug/L	0.2621	4.955	5.639
Cr2677_A		-1.709	ug/L	0.1516	8.868	5.485
Cu3273_A		1.094	ug/L	0.4440	40.59	13.46
Fe2599_R		235,800	ug/L	1,141	0.4838	357,700
K_7664_R		304,900	ug/L	844.9	0.2772	160,000
Li6707_R		9.527	ug/L	0.3283	3.446	110.8
Mg2025_A		186,400	ug/L	620.7	0.3330	83,590
Mn2576_R		17.48	ug/L	0.3835	2.194	76.20
Mo2020_A		0.1569	ug/L	0.1437	91.55	1.823
Na5895_R		203,400	ug/L	1,292	0.6349	351,200
Ni2316_A		-3.302	ug/L	0.1153	3.491	-12.77

LRS2

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 9:12:44PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A		-3.717	ug/L	0.4576	12.31	-35.81
Sb2068_A		2.536	ug/L	1.265	49.89	7.335
Se1960_A		4.721	ug/L	3.033	64.26	9.702
Si2516_R		49,260	ug/L	98.45	0.1999	23,400
Sn1899_A		7.076	ug/L	0.7431	10.50	4.974
Sr4215_R		17.49	ug/L	0.02143	0.1226	1,081
Ti3349_A		4.817	ug/L	0.1190	2.471	128.3
Tl1908_A		0.4137	ug/L	0.6637	160.4	0.2538
V_2924_A		0.2600	ug/L	0.2360	90.76	26.47
Zn2062_A		2.022	ug/L	0.4321	21.37	8.494
Y_3600_R		13,964	Cts/S	83.327	0.59673	13,964
Y_2243_A		7,037.9	Cts/S	13.172	0.18716	7,037.9
Y_3600_A		149,620	Cts/S	1,460.6	0.97616	149,620

CCV

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 9:18:20PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		489.2	ug/L	2.598	0.5310	12,100
Al3961_R		12,200	ug/L	155.9	1.278	11,730
As1891_A		493.5	ug/L	4.079	0.8266	228.3
B_2089_A		504.8	ug/L	2.437	0.4828	849.9
Ba4554_R		489.3	ug/L	2.283	0.4666	27,830
Be3130_R		484.9	ug/L	7.887	1.627	38,910
Ca3158_R		12,190	ug/L	73.83	0.6055	13,200
Cd2265_A		496.5	ug/L	1.899	0.3824	7,413
Co2286_A		501.2	ug/L	3.560	0.7103	2,122
Cr2677_A		491.6	ug/L	1.428	0.2904	6,579
Cu3273_A		491.7	ug/L	3.169	0.6445	7,984
Fe2599_R		12,240	ug/L	42.93	0.3507	20,240
K_7664_R		12,280	ug/L	131.4	1.070	6,961
Li6707_R		494.1	ug/L	4.043	0.8183	5,995
Mg2025_A		12,470	ug/L	67.02	0.5376	6,383
Mn2576_R		487.4	ug/L	5.103	1.047	4,967
Mo2020_A		496.5	ug/L	3.660	0.7372	1,968
Na5895_R		12,280	ug/L	197.6	1.609	23,160
Ni2316_A		502.2	ug/L	2.342	0.4663	1,136
Pb2203_A		502.7	ug/L	1.673	0.3328	562.1
Sb2068_A		493.4	ug/L	1.702	0.3449	340.3
Se1960_A		494.0	ug/L	4.415	0.8937	170.5
Si2516_R		12,220	ug/L	57.87	0.4734	6,356
Sn1899_A		498.5	ug/L	0.2883	0.05783	350.9
Sr4215_R		487.5	ug/L	6.882	1.412	32,990
Ti3349_A		488.4	ug/L	3.072	0.6290	16,590
Tl1908_A		504.9	ug/L	2.617	0.5183	411.1
V_2924_A		485.9	ug/L	3.672	0.7557	6,565
Zn2062_A		497.4	ug/L	2.204	0.4431	1,701
Y_3600_R		15,224	Cts/S	19.195	0.12608	15,224
Y_2243_A		8,015.3	Cts/S	34.546	0.43101	8,015.3
Y_3600_A		171,430	Cts/S	409.04	0.23861	171,430

CCB

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 9:22:28PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

CCB

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 9:22:28PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.03138	ug/L	0.04855	154.7	-20.36
Al3961_R		-1.275	ug/L	1.959	153.6	-5.173
As1891_A		-0.2669	ug/L	0.1718	64.35	-1.609
B_2089_A		6.725	ug/L	0.6035	8.974	14.20
Ba4554_R		-0.06228	ug/L	0.06278	100.8	13.63
Be3130_R		0.03269	ug/L	0.05412	165.6	4.464
Ca3158_R		-3.219	ug/L	1.590	49.40	-23.71
Cd2265_A		0.1965	ug/L	0.02938	14.95	-0.07459
Co2286_A		0.1220	ug/L	0.05419	44.43	3.320
Cr2677_A		-0.1385	ug/L	0.2898	209.1	4.247
Cu3273_A		0.1184	ug/L	0.3431	289.8	-1.522
Fe2599_R		1.816	ug/L	0.8220	45.26	6.689
K_7664_R		42.93	ug/L	8.209	19.12	-40.80
Li6707_R		2.008	ug/L	0.6963	34.68	29.72
Mg2025_A		3.242	ug/L	1.066	32.88	1.612
Mn2576_R		0.3898	ug/L	0.1172	30.06	1.779
Mo2020_A		0.6521	ug/L	0.2239	34.33	4.180
Na5895_R		4.242	ug/L	4.539	107.0	53.05
Ni2316_A		0.2589	ug/L	0.2270	87.69	-0.7139
Pb2203_A		0.1152	ug/L	0.07116	61.77	-0.6511
Sb2068_A		0.3314	ug/L	0.5645	170.3	0.3034
Se1960_A		1.839	ug/L	0.02683	1.459	2.885
Si2516_R		7.301	ug/L	8.282	113.4	30.58
Sn1899_A		0.8918	ug/L	0.1288	14.44	1.371
Sr4215_R		0.002693	ug/L	0.04986	1,851	-4.511
Ti3349_A		0.3222	ug/L	0.09268	28.76	-6.016
Tl1908_A		0.06567	ug/L	0.2307	351.4	-1.053
V_2924_A		0.4810	ug/L	0.2664	55.38	-4.478
Zn2062_A		0.3000	ug/L	0.02497	8.326	3.932
Y_3600_R		15,230	Cts/S	4.7267	0.031036	15,230
Y_2243_A		8,315.4	Cts/S	64.602	0.77689	8,315.4
Y_3600_A		178,310	Cts/S	800.97	0.44919	178,310

PBWLE25ICW1

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 9:26:53PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		-0.1187	ug/L	0.3143	264.8	-24.35
Al3961_R		7.450	ug/L	3.837	51.50	3.217
As1891_A		-0.2216	ug/L	0.4435	200.1	-1.566
B_2089_A		4.260	ug/L	0.6057	14.22	9.869
Ba4554_R		-0.004997	ug/L	0.1540	3,082	17.03
Be3130_R		0.01852	ug/L	0.001037	5.598	3.367
Ca3158_R		-5.369	ug/L	1.025	19.09	-26.31
Cd2265_A		0.01862	ug/L	0.001015	5.448	-2.787
Co2286_A		-0.03805	ug/L	0.03449	90.63	2.580
Cr2677_A		0.1131	ug/L	0.05506	48.67	7.789
Cu3273_A		0.3540	ug/L	0.02183	6.165	2.459
Fe2599_R		0.6950	ug/L	2.095	301.5	4.893
K_7664_R		14.62	ug/L	4.576	31.30	-57.60
Li6707_R		0.6606	ug/L	0.9492	143.7	13.56
Mg2025_A		10.38	ug/L	2.116	20.39	5.306
Mn2576_R		-0.1721	ug/L	0.02041	11.86	-3.991
Mo2020_A		0.3253	ug/L	0.06377	19.60	2.799
Na5895_R		-3.887	ug/L	3.184	81.90	38.11
Ni2316_A		0.1410	ug/L	0.06309	44.74	-0.9770

PBWLE25ICW1

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 9:26:53PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A		-0.8779	ug/L	0.3716	42.33	-1.781
Sb2068_A		0.7661	ug/L	0.4665	60.90	0.6128
Se1960_A		-0.3103	ug/L	0.4388	141.4	2.096
Si2516_R		4.365	ug/L	5.750	131.7	29.37
Sn1899_A		0.2329	ug/L	0.4770	204.8	0.8784
Sr4215_R		0.08454	ug/L	0.06114	72.32	1.029
Ti3349_A		0.1886	ug/L	0.007645	4.052	-10.80
Tl1908_A		0.2721	ug/L	0.9998	367.5	-0.8601
V_2924_A		0.2759	ug/L	0.1024	37.13	-7.398
Zn2062_A		0.3458	ug/L	0.1704	49.29	4.033
Y_3600_R		15,385	Cts/S	90.237	0.58652	15,385
Y_2243_A		8,195.9	Cts/S	49.594	0.60511	8,195.9
Y_3600_A		179,140	Cts/S	115.49	0.064469	179,140

LCSWLE25ICW1

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 9:31:18PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		50.81	ug/L	0.3937	0.7749	1,262
Al3961_R		2,098	ug/L	11.22	0.5350	1,996
As1891_A		101.4	ug/L	0.3514	0.3466	46.69
B_2089_A		497.1	ug/L	4.230	0.8510	834.2
Ba4554_R		2,099	ug/L	0.3721	0.01773	118,300
Be3130_R		51.84	ug/L	0.4305	0.8304	4,101
Ca3158_R		2,565	ug/L	23.12	0.9013	2,738
Cd2265_A		257.3	ug/L	1.898	0.7374	3,905
Co2286_A		539.1	ug/L	3.810	0.7068	2,324
Cr2677_A		207.6	ug/L	0.3334	0.1606	2,834
Cu3273_A		263.1	ug/L	0.9733	0.3700	4,350
Fe2599_R		1,061	ug/L	3.725	0.3511	1,743
K_7664_R		10,110	ug/L	65.06	0.6437	5,668
Li6707_R		511.7	ug/L	3.676	0.7184	6,153
Mg2025_A		5,024	ug/L	38.58	0.7678	2,628
Mn2576_R		525.5	ug/L	3.034	0.5773	5,310
Mo2020_A		104.5	ug/L	0.8037	0.7691	423.0
Na5895_R		7,703	ug/L	34.76	0.4513	14,410
Ni2316_A		538.9	ug/L	4.279	0.7942	1,239
Pb2203_A		105.8	ug/L	1.578	1.491	119.9
Sb2068_A		103.0	ug/L	0.9729	0.9447	70.20
Se1960_A		100.9	ug/L	0.4358	0.4320	37.30
Si2516_R		1,023	ug/L	13.27	1.298	553.1
Sn1899_A		513.0	ug/L	2.815	0.5487	367.9
Sr4215_R		505.2	ug/L	3.041	0.6019	33,890
Ti3349_A		506.7	ug/L	0.8454	0.1668	17,530
Tl1908_A		107.0	ug/L	0.5673	0.5301	86.55
V_2924_A		513.7	ug/L	0.2924	0.05692	7,115
Zn2062_A		526.4	ug/L	2.348	0.4460	1,835
Y_3600_R		15,089	Cts/S	169.96	1.1264	15,089
Y_2243_A		8,166.6	Cts/S	40.128	0.49137	8,166.6
Y_3600_A		174,610	Cts/S	235.61	0.13494	174,610

LC2WLE25ICW1

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 9:35:31PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

LC2WLE25ICW1

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 9:35:31PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		48.84	ug/L	0.3810	0.7802	1,210
Al3961_R		1,973	ug/L	20.45	1.036	1,916
As1891_A		94.80	ug/L	2.115	2.231	43.95
B_2089_A		467.3	ug/L	10.04	2.148	791.2
Ba4554_R		1,983	ug/L	20.44	1.031	114,000
Be3130_R		48.77	ug/L	0.3361	0.6891	3,938
Ca3158_R		2,405	ug/L	30.00	1.248	2,618
Cd2265_A		243.1	ug/L	5.085	2.091	3,722
Co2286_A		510.4	ug/L	11.90	2.331	2,220
Cr2677_A		198.9	ug/L	2.727	1.371	2,712
Cu3273_A		251.5	ug/L	3.157	1.255	4,153
Fe2599_R		1,001	ug/L	15.04	1.502	1,678
K_7664_R		9,485	ug/L	75.61	0.7972	5,424
Li6707_R		481.0	ug/L	8.082	1.680	5,903
Mg2025_A		4,761	ug/L	128.2	2.692	2,512
Mn2576_R		491.1	ug/L	4.194	0.8540	5,063
Mo2020_A		98.07	ug/L	2.475	2.524	400.6
Na5895_R		7,198	ug/L	76.07	1.057	13,750
Ni2316_A		509.4	ug/L	10.98	2.155	1,181
Pb2203_A		99.85	ug/L	1.893	1.896	114.1
Sb2068_A		96.24	ug/L	2.322	2.412	66.17
Se1960_A		95.45	ug/L	1.178	1.234	35.73
Si2516_R		928.6	ug/L	4.182	0.4503	515.0
Sn1899_A		485.4	ug/L	10.15	2.092	351.2
Sr4215_R		473.6	ug/L	4.003	0.8454	32,410
Ti3349_A		482.9	ug/L	5.006	1.037	16,680
Tl1908_A		101.6	ug/L	2.033	2.001	82.82
V_2924_A		492.0	ug/L	5.534	1.125	6,804
Zn2062_A		500.0	ug/L	10.44	2.089	1,759
Y_3600_R		15,399	Cts/S	89.269	0.57972	15,399
Y_2243_A		8,240.3	Cts/S	134.58	1.6332	8,240.3
Y_3600_A		174,340	Cts/S	1,923.0	1.1030	174,340

SL4557-001

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 9:39:45PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		-0.02783	ug/L	0.06423	230.8	-20.86
Al3961_R		159.2	ug/L	9.352	5.875	158.7
As1891_A		0.8675	ug/L	0.3484	40.15	-1.036
B_2089_A		70.23	ug/L	0.6816	0.9704	118.6
Ba4554_R		30.63	ug/L	2.684	8.763	1,802
Be3130_R		0.2226	ug/L	0.004746	2.132	20.29
Ca3158_R	W	25,250	ug/L	1,941	7.689	28,040
Cd2265_A		0.04348	ug/L	0.02187	50.30	-2.282
Co2286_A		0.09788	ug/L	0.03820	39.02	3.136
Cr2677_A		0.1450	ug/L	0.1333	91.94	7.610
Cu3273_A		0.7673	ug/L	0.01496	1.950	8.782
Fe2599_R		71.38	ug/L	6.797	9.523	124.7
K_7664_R		3,192	ug/L	232.1	7.271	1,806
Li6707_R		0.7233	ug/L	1.160	160.4	14.99
Mg2025_A		5,348	ug/L	49.03	0.9168	2,762
Mn2576_R		17.82	ug/L	1.100	6.172	185.9
Mo2020_A		0.1628	ug/L	0.05107	31.36	2.124
Na5895_R		17,850	ug/L	1,467	8.221	34,480
Ni2316_A		0.4193	ug/L	0.2040	48.64	-0.3325

SL4557-001

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 9:39:45PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A		-1.107	ug/L	0.3671	33.16	-2.035
Sb2068_A		0.1685	ug/L	0.5221	309.8	0.1872
Se1960_A		1.274	ug/L	0.3227	25.32	2.623
Si2516_R		4,967	ug/L	388.6	7.825	2,664
Sn1899_A		0.7016	ug/L	0.4959	70.68	1.202
Sr4215_R		135.7	ug/L	10.47	7.721	9,410
Ti3349_A		-0.04382	ug/L	0.09393	214.3	-17.55
Tl1908_A		0.2596	ug/L	0.1625	62.61	-0.8860
V_2924_A		0.2292	ug/L	0.1438	62.76	-7.558
Zn2062_A		6.248	ug/L	0.03854	0.6169	24.40
Y_3600_R		15,648	Cts/S	980.25	6.2644	15,648
Y_2243_A		8,107.1	Cts/S	54.536	0.67270	8,107.1
Y_3600_A		165,860	Cts/S	10,006	6.0325	165,860

SL4557-002

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 9:44:08PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		1.111	ug/L	0.01769	1.593	-443.3
Al3961_R		91.40	ug/L	5.548	6.070	102.8
As1891_A		5.601	ug/L	1.710	30.54	-0.4859
B_2089_A		469.4	ug/L	3.684	0.7848	757.6
Ba4554_R	W	3,964	ug/L	19.84	0.5005	221,000
Be3130_R		0.1003	ug/L	0.04255	42.44	9.694
Ca3158_R	W	91,060	ug/L	478.9	0.5259	96,770
Cd2265_A		-0.6829	ug/L	0.04214	6.170	66.32
Co2286_A		-0.4550	ug/L	0.04238	9.314	6.903
Cr2677_A		0.1894	ug/L	0.05379	28.40	14.45
Cu3273_A		0.1214	ug/L	0.01895	15.61	-10.93
Fe2599_R	W	56,550	ug/L	361.3	0.6389	91,710
K_7664_R		17,020	ug/L	93.37	0.5485	9,489
Li6707_R		9.810	ug/L	0.3453	3.520	121.9
Mg2025_A		16,350	ug/L	108.8	0.6657	8,232
Mn2576_R		416.4	ug/L	1.565	0.3759	4,151
Mo2020_A		0.7638	ug/L	0.08640	11.31	4.547
Na5895_R	W	36,570	ug/L	53.77	0.1470	67,550
Ni2316_A		1.197	ug/L	0.05328	4.450	0.03781
Pb2203_A		-0.7629	ug/L	0.7175	94.05	0.8456
Sb2068_A		0.04320	ug/L	0.5128	1,187	1.151
Se1960_A		2.069	ug/L	0.9155	44.24	2.916
Si2516_R		13,830	ug/L	61.83	0.4470	7,043
Sn1899_A		1.578	ug/L	0.1766	11.19	1.777
Sr4215_R		939.1	ug/L	2.018	0.2149	62,330
Ti3349_A		0.7898	ug/L	0.1127	14.26	9.879
Tl1908_A		-0.8217	ug/L	0.2116	25.75	-2.383
V_2924_A		1.482	ug/L	0.4689	31.64	16.61
Zn2062_A		17.41	ug/L	0.04333	0.2489	61.39
Y_3600_R		14,930	Cts/S	149.71	1.0027	14,930
Y_2243_A		7,900.6	Cts/S	42.956	0.54370	7,900.6
Y_3600_A		167,470	Cts/S	467.23	0.27899	167,470

SL4557-003

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 9:48:28PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

SL4557-003

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 9:48:28PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		1.718	ug/L	0.2355	13.71	-460.8
Al3961_R		63.72	ug/L	1.474	2.314	67.04
As1891_A		2.797	ug/L	0.2023	7.233	-1.889
B_2089_A		74.23	ug/L	1.218	1.641	122.0
Ba4554_R		79.96	ug/L	0.1043	0.1305	4,491
Be3130_R		0.1901	ug/L	0.08613	45.30	16.81
Ca3158_R	W	46,830	ug/L	583.4	1.246	49,950
Cd2265_A		-0.7895	ug/L	0.1097	13.90	70.25
Co2286_A		-0.9310	ug/L	0.05326	5.720	5.346
Cr2677_A		0.02962	ug/L	0.05537	186.9	18.65
Cu3273_A		-0.1510	ug/L	0.3718	246.2	-15.95
Fe2599_R	W	60,530	ug/L	612.0	1.011	98,530
K_7664_R		5,675	ug/L	46.62	0.8215	3,133
Li6707_R		3.217	ug/L	0.1915	5.954	43.66
Mg2025_A		10,040	ug/L	127.7	1.272	5,050
Mn2576_R	W	3,720	ug/L	40.16	1.079	37,330
Mo2020_A		1.902	ug/L	0.02428	1.276	10.06
Na5895_R	W	44,770	ug/L	342.1	0.7642	82,990
Ni2316_A		-1.008	ug/L	0.07656	7.594	-4.948
Pb2203_A		-0.6797	ug/L	0.3326	48.94	1.110
Sb2068_A		0.06065	ug/L	0.1437	236.9	1.235
Se1960_A		1.094	ug/L	0.3981	36.38	3.005
Si2516_R		8,112	ug/L	60.70	0.7483	4,155
Sn1899_A		1.539	ug/L	0.5052	32.83	1.747
Sr4215_R		262.1	ug/L	0.9557	0.3646	17,460
Ti3349_A		0.2632	ug/L	0.09326	35.44	-7.616
Tl1908_A		1.499	ug/L	0.1669	11.13	-4.598
V_2924_A		1.533	ug/L	0.3048	19.89	7.416
Zn2062_A		2.813	ug/L	0.03213	1.142	12.19
Y_3600_R		14,986	Cts/S	170.56	1.1381	14,986
Y_2243_A		7,891.4	Cts/S	61.518	0.77955	7,891.4
Y_3600_A		167,730	Cts/S	562.65	0.33545	167,730

SL4557-004

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 9:52:49PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		1.432	ug/L	0.09106	6.359	-505.8
Al3961_R		75.68	ug/L	4.770	6.303	81.53
As1891_A		0.8415	ug/L	1.652	196.3	-2.945
B_2089_A		131.4	ug/L	1.012	0.7699	218.2
Ba4554_R		57.21	ug/L	0.6137	1.073	3,258
Be3130_R		5.755	ug/L	0.02971	0.5163	462.3
Ca3158_R	W	56,710	ug/L	142.3	0.2510	61,230
Cd2265_A		-0.8322	ug/L	0.05213	6.264	75.99
Co2286_A		-1.841	ug/L	0.05577	3.029	1.982
Cr2677_A		-0.03372	ug/L	0.1553	460.7	16.48
Cu3273_A		0.05997	ug/L	0.1218	203.1	-13.45
Fe2599_R	W	63,960	ug/L	328.5	0.5136	105,400
K_7664_R		4,628	ug/L	26.65	0.5758	2,574
Li6707_R		37.89	ug/L	1.010	2.667	463.1
Mg2025_A		18,200	ug/L	138.2	0.7597	9,341
Mn2576_R	W	2,590	ug/L	3.976	0.1535	26,310
Mo2020_A		-0.2220	ug/L	0.2184	98.38	1.437
Na5895_R	W	32,340	ug/L	24.77	0.07657	60,710
Ni2316_A		-0.9880	ug/L	0.4081	41.30	-5.107

SL4557-004

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 9:52:49PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A		0.07330	ug/L	0.1083	147.8	2.137
Sb2068_A		0.04430	ug/L	0.4135	933.5	1.317
Se1960_A		1.129	ug/L	0.6902	61.12	2.936
Si2516_R		17,050	ug/L	53.06	0.3112	8,819
Sn1899_A		1.678	ug/L	0.2531	15.09	1.883
Sr4215_R		304.0	ug/L	1.211	0.3982	20,500
Ti3349_A		0.5523	ug/L	0.1767	32.00	2.019
Tl1908_A		0.9824	ug/L	0.6120	62.29	-3.707
V_2924_A		2.179	ug/L	0.07292	3.346	20.76
Zn2062_A		0.9688	ug/L	0.02261	2.334	6.107
Y_3600_R		15,171	Cts/S	63.567	0.41901	15,171
Y_2243_A		8,056.0	Cts/S	43.672	0.54210	8,056.0
Y_3600_A		171,310	Cts/S	173.83	0.10147	171,310

SL4557-005

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 9:57:09PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		1.964	ug/L	1.213	61.77	-242.1
Al3961_R		96.84	ug/L	3.854	3.980	93.43
As1891_A		0.06459	ug/L	0.1855	287.3	-2.377
B_2089_A		69.64	ug/L	0.3034	0.4356	116.0
Ba4554_R		76.20	ug/L	9.694	12.72	3,994
Be3130_R		0.1487	ug/L	0.03081	20.72	12.62
Ca3158_R	W	53,300	ug/L	6,854	12.86	53,040
Cd2265_A		-0.5031	ug/L	0.3662	72.80	36.68
Co2286_A		0.5307	ug/L	0.08894	16.76	8.568
Cr2677_A		0.4018	ug/L	0.1080	26.87	20.31
Cu3273_A		0.07846	ug/L	0.3279	417.9	-7.850
Fe2599_R	W	33,240	ug/L	4,172	12.55	50,500
K_7664_R		5,615	ug/L	705.4	12.56	2,892
Li6707_R		5.708	ug/L	0.03219	0.5640	68.91
Mg2025_A		7,401	ug/L	33.10	0.4473	3,770
Mn2576_R	W	3,153	ug/L	391.2	12.41	29,530
Mo2020_A		-0.2389	ug/L	0.05191	21.73	1.543
Na5895_R		8,637	ug/L	1,029	11.92	14,980
Ni2316_A		18.84	ug/L	0.08329	0.4422	40.29
Pb2203_A		-0.5183	ug/L	0.5135	99.08	0.1164
Sb2068_A		0.1922	ug/L	0.04796	24.96	0.8217
Se1960_A		0.4024	ug/L	0.09021	22.42	2.717
Si2516_R		6,396	ug/L	825.6	12.91	3,064
Sn1899_A		0.5879	ug/L	0.1074	18.26	1.105
Sr4215_R		287.7	ug/L	35.01	12.17	17,890
Ti3349_A		0.3604	ug/L	0.03242	8.995	-4.495
Tl1908_A		1.024	ug/L	0.1989	19.42	-4.261
V_2924_A		1.218	ug/L	0.05836	4.791	0.9270
Zn2062_A		34.03	ug/L	0.2022	0.5941	118.8
Y_3600_R		14,074	Cts/S	1,410.0	10.018	14,074
Y_2243_A		7,994.3	Cts/S	16.334	0.20432	7,994.3
Y_3600_A		171,310	Cts/S	97.604	0.056974	171,310

SL4557-006

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 10:01:30PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

SL4557-006

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 10:01:30PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		2.967	ug/L	0.1895	6.387	-88.11
Al3961_R		135.1	ug/L	6.233	4.613	140.4
As1891_A		-2.172	ug/L	0.7966	36.67	-2.999
B_2089_A		52.91	ug/L	0.1487	0.2810	90.83
Ba4554_R		36.47	ug/L	0.09667	0.2651	2,103
Be3130_R		2.800	ug/L	0.03031	1.082	228.1
Ca3158_R	W	58,310	ug/L	138.0	0.2366	63,580
Cd2265_A		-0.1169	ug/L	0.05498	47.04	20.19
Co2286_A		4.504	ug/L	0.005627	0.1249	23.97
Cr2677_A		0.3705	ug/L	0.005223	1.410	56.74
Cu3273_A		0.7393	ug/L	0.2837	38.38	5.710
Fe2599_R		17,300	ug/L	97.20	0.5619	28,790
K_7664_R		4,817	ug/L	22.06	0.4579	2,709
Li6707_R		13.09	ug/L	0.7252	5.539	165.1
Mg2025_A		10,710	ug/L	48.25	0.4505	5,561
Mn2576_R	F	23,940	ug/L	85.19	0.3558	245,700
Mo2020_A		6.548	ug/L	0.1419	2.166	35.90
Na5895_R		19,490	ug/L	22.74	0.1167	36,950
Ni2316_A		4.629	ug/L	0.2513	5.429	8.951
Pb2203_A		0.7820	ug/L	0.2838	36.29	0.8737
Sb2068_A		-0.5096	ug/L	0.6582	129.2	0.04003
Se1960_A		2.552	ug/L	2.190	85.83	6.213
Si2516_R		11,030	ug/L	63.29	0.5740	5,769
Sn1899_A		0.6421	ug/L	0.1323	20.60	1.165
Sr4215_R		290.3	ug/L	1.267	0.4366	19,770
Ti3349_A		0.1863	ug/L	0.1220	65.51	-10.47
Tl1908_A		9.540	ug/L	0.2861	2.999	-23.71
V_2924_A		2.525	ug/L	0.1318	5.219	-51.92
Zn2062_A		176.0	ug/L	1.627	0.9240	614.6
Y_3600_R		15,320	Cts/S	12.141	0.079247	15,320
Y_2243_A		8,149.0	Cts/S	16.088	0.19743	8,149.0
Y_3600_A		173,080	Cts/S	358.95	0.20739	173,080

SL4557-007

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 10:06:39PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		-0.1909	ug/L	0.2095	109.7	-26.84
Al3961_R		520.2	ug/L	28.03	5.388	504.0
As1891_A		0.5010	ug/L	0.5618	112.1	-1.271
B_2089_A		18.39	ug/L	0.01464	0.07964	34.84
Ba4554_R		71.70	ug/L	3.335	4.652	4,152
Be3130_R		1.329	ug/L	0.07152	5.382	110.1
Ca3158_R		5,567	ug/L	254.3	4.567	6,102
Cd2265_A		0.2546	ug/L	0.03206	12.59	0.8539
Co2286_A		-0.1694	ug/L	0.04615	27.24	2.098
Cr2677_A		0.4079	ug/L	0.2546	62.41	12.27
Cu3273_A		1.124	ug/L	0.06773	6.026	15.89
Fe2599_R		8.524	ug/L	2.231	26.18	17.99
K_7664_R		4,191	ug/L	186.2	4.442	2,367
Li6707_R		1.216	ug/L	0.1315	10.81	20.40
Mg2025_A		1,742	ug/L	4.972	0.2853	948.2
Mn2576_R		62.80	ug/L	2.535	4.037	648.0
Mo2020_A		0.1274	ug/L	0.1084	85.09	2.105
Na5895_R	W	35,400	ug/L	1,462	4.129	67,660
Ni2316_A		0.5766	ug/L	0.08157	14.15	0.02736

SL4557-007

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 10:06:39PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A		-0.6474	ug/L	0.5623	86.85	-1.631
Sb2068_A		0.7270	ug/L	0.2234	30.72	0.6128
Se1960_A		0.09744	ug/L	1.074	1,102	2.349
Si2516_R		3,983	ug/L	181.7	4.561	2,119
Sn1899_A		0.6821	ug/L	0.02855	4.185	1.251
Sr4215_R		37.84	ug/L	1.802	4.764	2,594
Ti3349_A		0.02833	ug/L	0.01129	39.85	-16.83
Tl1908_A		-0.5250	ug/L	0.09326	17.76	-1.678
V_2924_A		0.2738	ug/L	0.06415	23.43	-7.789
Zn2062_A		31.12	ug/L	0.05912	0.1900	116.3
Y_3600_R		15,458	Cts/S	461.91	2.9882	15,458
Y_2243_A		8,542.0	Cts/S	11.559	0.13532	8,542.0
Y_3600_A		182,750	Cts/S	176.44	0.096549	182,750

CCV

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 10:11:01PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		497.5	ug/L	0.3628	0.07293	12,190
Al3961_R		12,520	ug/L	23.75	0.1898	11,760
As1891_A		503.4	ug/L	0.3529	0.07011	230.1
B_2089_A		505.6	ug/L	0.8263	0.1634	841.6
Ba4554_R		504.2	ug/L	3.620	0.7181	28,030
Be3130_R		494.7	ug/L	3.279	0.6629	38,800
Ca3158_R		12,650	ug/L	92.34	0.7301	13,380
Cd2265_A		509.0	ug/L	0.7246	0.1424	7,508
Co2286_A		512.0	ug/L	0.08412	0.01643	2,142
Cr2677_A		497.1	ug/L	1.739	0.3499	6,592
Cu3273_A		493.7	ug/L	0.2478	0.05020	7,944
Fe2599_R		12,770	ug/L	5.516	0.04318	20,650
K_7664_R		12,390	ug/L	14.79	0.1194	6,867
Li6707_R		504.6	ug/L	2.348	0.4654	5,983
Mg2025_A		12,750	ug/L	20.35	0.1597	6,448
Mn2576_R		504.4	ug/L	1.886	0.3739	5,023
Mo2020_A		506.7	ug/L	0.5452	0.1076	1,984
Na5895_R		12,380	ug/L	10.28	0.08303	22,820
Ni2316_A		514.0	ug/L	1.684	0.3277	1,149
Pb2203_A		513.9	ug/L	0.4487	0.08731	567.7
Sb2068_A		503.4	ug/L	1.185	0.2354	343.0
Se1960_A		500.9	ug/L	1.004	0.2003	170.8
Si2516_R		12,580	ug/L	10.11	0.08036	6,390
Sn1899_A		512.8	ug/L	0.2309	0.04503	356.6
Sr4215_R		495.5	ug/L	0.2029	0.04095	32,780
Ti3349_A		496.1	ug/L	1.387	0.2796	16,700
Tl1908_A		516.3	ug/L	1.551	0.3005	415.3
V_2924_A		499.5	ug/L	1.344	0.2691	6,688
Zn2062_A		511.4	ug/L	1.013	0.1980	1,728
Y_3600_R		14,879	Cts/S	108.70	0.73058	14,879
Y_2243_A		7,918.3	Cts/S	1.2694	0.016031	7,918.3
Y_3600_A		169,870	Cts/S	285.57	0.16811	169,870

CCB

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 10:15:09PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

CCB

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 10:15:09PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.1276	ug/L	0.08828	69.20	-17.96
Al3961_R		3.621	ug/L	3.951	109.1	-0.4832
As1891_A		0.4772	ug/L	0.9283	194.5	-1.226
B_2089_A		0.8379	ug/L	0.09765	11.65	4.137
Ba4554_R		-0.03017	ug/L	0.08787	291.3	15.42
Be3130_R		0.04683	ug/L	0.04939	105.5	5.597
Ca3158_R		-1.284	ug/L	0.3270	25.46	-21.56
Cd2265_A		0.1098	ug/L	0.01881	17.14	-1.390
Co2286_A		0.1674	ug/L	0.02678	16.00	3.444
Cr2677_A		-0.004870	ug/L	0.1931	3,964	6.150
Cu3273_A		0.07105	ug/L	0.09361	131.8	-2.348
Fe2599_R		1.076	ug/L	1.596	148.4	5.447
K_7664_R		2.418	ug/L	12.51	517.5	-63.82
Li6707_R		0.8333	ug/L	0.5629	67.55	15.44
Mg2025_A		1.029	ug/L	0.4725	45.91	0.4290
Mn2576_R		0.06834	ug/L	0.2861	418.6	-1.496
Mo2020_A		0.3177	ug/L	0.03495	11.00	2.752
Na5895_R		-6.209	ug/L	0.3671	5.912	33.28
Ni2316_A		0.1114	ug/L	0.3820	343.0	-1.036
Pb2203_A		-1.222	ug/L	0.08492	6.949	-2.163
Sb2068_A		0.8537	ug/L	0.2990	35.03	0.6697
Se1960_A		0.8106	ug/L	0.06188	7.634	2.470
Si2516_R		12.47	ug/L	17.54	140.6	33.18
Sn1899_A		0.3276	ug/L	0.4317	131.8	0.9384
Sr4215_R		0.06993	ug/L	0.1631	233.3	0.04924
Ti3349_A		0.1723	ug/L	0.1199	69.60	-11.40
Tl1908_A		0.5004	ug/L	0.1816	36.29	-0.6671
V_2924_A		0.4424	ug/L	0.1370	30.97	-5.026
Zn2062_A		0.1409	ug/L	0.1533	108.8	3.296
Y_3600_R		15,190	Cts/S	21.644	0.14249	15,190
Y_2243_A		8,144.1	Cts/S	50.229	0.61676	8,144.1
Y_3600_A		179,430	Cts/S	237.09	0.13213	179,430

SL4557-008

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 10:19:35PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		1.914	ug/L	0.2864	14.96	-448.0
Al3961_R		66.75	ug/L	4.199	6.291	69.57
As1891_A		1.691	ug/L	1.631	96.45	-2.361
B_2089_A		68.60	ug/L	1.571	2.290	113.5
Ba4554_R		75.77	ug/L	0.4746	0.6264	4,269
Be3130_R		0.1909	ug/L	0.03717	19.47	16.94
Ca3158_R	W	44,480	ug/L	353.3	0.7945	47,570
Cd2265_A		-0.6678	ug/L	0.04352	6.517	69.83
Co2286_A		-1.145	ug/L	0.002553	0.2231	4.284
Cr2677_A		0.1127	ug/L	0.1435	127.3	19.38
Cu3273_A		-0.4406	ug/L	0.1937	43.96	-20.55
Fe2599_R	W	58,700	ug/L	482.3	0.8217	95,820
K_7664_R		5,500	ug/L	42.95	0.7809	3,043
Li6707_R		1.870	ug/L	0.5976	31.96	27.66
Mg2025_A		9,331	ug/L	190.8	2.045	4,717
Mn2576_R	W	3,459	ug/L	25.25	0.7300	34,810
Mo2020_A		2.107	ug/L	0.1409	6.687	10.83
Na5895_R	W	44,160	ug/L	369.7	0.8371	82,090
Ni2316_A		-1.228	ug/L	0.1670	13.60	-5.422

SL4557-008

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 10:19:35PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A		-0.5519	ug/L	1.260	228.3	1.169
Sb2068_A		0.001839	ug/L	0.3049	16,580	1.169
Se1960_A		0.8657	ug/L	0.7681	88.73	2.912
Si2516_R		7,749	ug/L	43.30	0.5588	3,982
Sn1899_A		1.010	ug/L	0.004326	0.4284	1.390
Sr4215_R		252.3	ug/L	2.801	1.110	16,850
Ti3349_A		0.3469	ug/L	0.001080	0.3114	-4.905
Tl1908_A		1.266	ug/L	0.07914	6.250	-4.482
V_2924_A		1.548	ug/L	0.03912	2.528	8.252
Zn2062_A		1.797	ug/L	0.02843	1.582	8.817
Y_3600_R		15,029	Cts/S	93.284	0.62072	15,029
Y_2243_A		7,933.4	Cts/S	105.72	1.3326	7,933.4
Y_3600_A		170,220	Cts/S	661.76	0.38876	170,220

SL4557-010

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 10:23:57PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		-0.06759	ug/L	0.1860	275.2	-26.02
Al3961_R		147.7	ug/L	3.173	2.148	140.0
As1891_A		-0.4567	ug/L	1.150	251.9	-1.693
B_2089_A		7.011	ug/L	0.004775	0.06810	14.49
Ba4554_R		8.098	ug/L	0.03219	0.3975	481.4
Be3130_R		0.5954	ug/L	0.01088	1.827	50.04
Ca3158_R		4,444	ug/L	42.84	0.9640	4,836
Cd2265_A		0.1980	ug/L	0.03251	16.42	0.4922
Co2286_A		0.1902	ug/L	0.1373	72.19	3.619
Cr2677_A		0.3117	ug/L	0.1557	49.96	11.07
Cu3273_A		-0.08417	ug/L	0.1408	167.3	-5.005
Fe2599_R		374.2	ug/L	5.452	1.457	627.5
K_7664_R		4,020	ug/L	22.17	0.5514	2,254
Li6707_R		0.7482	ug/L	0.8433	112.7	14.61
Mg2025_A		703.3	ug/L	11.45	1.628	367.8
Mn2576_R		286.1	ug/L	2.380	0.8319	2,939
Mo2020_A		0.4203	ug/L	0.05189	12.35	3.286
Na5895_R		4,806	ug/L	5.693	0.1185	9,166
Ni2316_A		0.5084	ug/L	0.1194	23.48	-0.1389
Pb2203_A		-0.8049	ug/L	0.3073	38.18	-1.700
Sb2068_A		0.7346	ug/L	0.3123	42.51	0.5990
Se1960_A		1.308	ug/L	0.04392	3.357	2.704
Si2516_R		4,859	ug/L	54.58	1.123	2,563
Sn1899_A		0.8437	ug/L	0.06285	7.449	1.318
Sr4215_R		39.52	ug/L	0.1115	0.2822	2,692
Ti3349_A		0.5158	ug/L	0.2011	38.98	0.8240
Tl1908_A		-0.6306	ug/L	0.2818	44.69	-1.990
V_2924_A		0.4312	ug/L	0.01808	4.193	-6.057
Zn2062_A		17.43	ug/L	0.2482	1.424	63.86
Y_3600_R		15,350	Cts/S	153.14	0.99764	15,350
Y_2243_A		8,210.5	Cts/S	73.156	0.89101	8,210.5
Y_3600_A		177,910	Cts/S	208.98	0.11746	177,910

SL4557-011

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 10:28:20PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

SL4557-011

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 10:28:20PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		2.982	ug/L	0.3163	10.60	-1,601
Al3961_R		9,572	ug/L	0.4757	0.004970	9,742
As1891_A		6.107	ug/L	0.5739	9.398	-4.367
B_2089_A		18.91	ug/L	0.3129	1.655	35.19
Ba4554_R		182.5	ug/L	0.1442	0.07902	11,010
Be3130_R		10.09	ug/L	0.01750	0.1734	850.8
Ca3158_R		16,810	ug/L	6.941	0.04130	19,290
Cd2265_A		0.4703	ug/L	0.2975	63.25	286.0
Co2286_A		10.81	ug/L	0.2063	1.908	73.75
Cr2677_A		3.716	ug/L	0.09716	2.614	86.04
Cu3273_A		13.64	ug/L	0.01260	0.09243	196.7
Fe2599_R	W	191,100	ug/L	1,659	0.8681	335,100
K_7664_R		3,193	ug/L	22.61	0.7080	1,868
Li6707_R		3.956	ug/L	0.7764	19.63	56.51
Mg2025_A		3,317	ug/L	16.50	0.4974	1,762
Mn2576_R	W	3,555	ug/L	12.91	0.3631	38,370
Mo2020_A		8.604	ug/L	0.009782	0.1137	38.02
Na5895_R		19,930	ug/L	60.78	0.3049	39,820
Ni2316_A		59.60	ug/L	66.84	112.1	132.3
Pb2203_A		43.16	ug/L	0.1795	0.4160	57.17
Sb2068_A		1.246	ug/L	0.3525	28.30	4.715
Se1960_A		2.603	ug/L	0.1550	5.956	3.920
Si2516_R		9,919	ug/L	62.73	0.6324	5,458
Sn1899_A		5.384	ug/L	0.4785	8.887	4.638
Sr4215_R		125.2	ug/L	0.1221	0.09747	8,981
Ti3349_A		165.8	ug/L	0.6282	0.3790	5,976
Tl1908_A		-0.5982	ug/L	0.4763	79.61	-6.892
V_2924_A		24.51	ug/L	0.1301	0.5308	365.0
Zn2062_A		244.0	ug/L	24.90	10.21	866.9
Y_3600_R		16,138	Cts/S	53.284	0.33017	16,138
Y_2243_A		8,307.6	Cts/S	98.795	1.1892	8,307.6
Y_3600_A		182,340	Cts/S	338.01	0.18538	182,340

SL4557-012

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 10:33:35PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.2883	ug/L	0.1354	46.98	-59.99
Al3961_R		52.51	ug/L	5.255	10.01	55.59
As1891_A		0.9794	ug/L	0.2215	22.61	-1.148
B_2089_A		159.3	ug/L	1.313	0.8243	265.0
Ba4554_R		412.7	ug/L	0.8586	0.2080	23,360
Be3130_R		-0.01185	ug/L	0.05070	427.8	0.9102
Ca3158_R	W	40,550	ug/L	27.80	0.06855	43,710
Cd2265_A		-0.06361	ug/L	0.01191	18.73	4.134
Co2286_A		1.282	ug/L	0.2294	17.89	8.792
Cr2677_A		0.5332	ug/L	0.2071	38.84	15.79
Cu3273_A		0.8172	ug/L	0.1111	13.60	9.014
Fe2599_R		5,659	ug/L	19.30	0.3410	9,315
K_7664_R		5,403	ug/L	48.12	0.8907	3,012
Li6707_R		0.8282	ug/L	0.03122	3.770	15.34
Mg2025_A		6,969	ug/L	47.48	0.6812	3,590
Mn2576_R	W	1,082	ug/L	3.249	0.3001	10,980
Mo2020_A		0.3492	ug/L	0.01221	3.496	3.220
Na5895_R		15,990	ug/L	48.81	0.3053	29,990
Ni2316_A		1.355	ug/L	0.06120	4.516	1.659

SL4557-012

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 10:33:35PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A		-0.3339	ug/L	0.3020	90.46	-0.8947
Sb2068_A		-0.3695	ug/L	0.3217	87.06	-0.08159
Se1960_A		-0.1421	ug/L	0.2626	184.8	2.270
Si2516_R		5,066	ug/L	9.292	0.1834	2,636
Sn1899_A		0.8655	ug/L	0.2723	31.46	1.315
Sr4215_R		340.1	ug/L	2.014	0.5922	22,900
Ti3349_A		0.06756	ug/L	0.1578	233.6	-14.62
Tl1908_A		-0.2060	ug/L	0.06348	30.82	-2.629
V_2924_A		0.3490	ug/L	0.2383	68.28	-8.799
Zn2062_A		4.997	ug/L	0.06883	1.377	20.02
Y_3600_R		15,150	Cts/S	102.48	0.67646	15,150
Y_2243_A		8,085.9	Cts/S	54.129	0.66943	8,085.9
Y_3600_A		173,510	Cts/S	91.147	0.052531	173,510

SL4557-013

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 10:37:56PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.1580	ug/L	0.2257	142.8	-50.85
Al3961_R		274.6	ug/L	1.190	0.4333	264.0
As1891_A		1.160	ug/L	0.5645	48.67	-1.024
B_2089_A		22.49	ug/L	0.08753	0.3891	40.15
Ba4554_R		40.34	ug/L	0.2169	0.5376	2,320
Be3130_R		0.4621	ug/L	0.01496	3.238	39.08
Ca3158_R		13,630	ug/L	58.27	0.4274	14,820
Cd2265_A		0.03345	ug/L	0.03767	112.6	3.249
Co2286_A		0.1819	ug/L	0.1334	73.33	3.974
Cr2677_A		0.2036	ug/L	0.06339	31.13	9.890
Cu3273_A		0.8238	ug/L	0.2252	27.33	9.658
Fe2599_R		4,001	ug/L	18.33	0.4581	6,649
K_7664_R		3,271	ug/L	10.27	0.3139	1,815
Li6707_R		1.221	ug/L	1.208	98.92	20.30
Mg2025_A		2,435	ug/L	1.999	0.08211	1,268
Mn2576_R		261.5	ug/L	0.4626	0.1769	2,676
Mo2020_A		-0.09891	ug/L	0.1148	116.0	1.167
Na5895_R	W	25,260	ug/L	60.75	0.2405	47,790
Ni2316_A		0.6088	ug/L	0.09731	15.98	-0.002158
Pb2203_A		0.2404	ug/L	0.4426	184.1	-0.3432
Sb2068_A		-0.3575	ug/L	0.3828	107.1	-0.1031
Se1960_A		0.7199	ug/L	1.521	211.3	2.489
Si2516_R		4,556	ug/L	8.393	0.1842	2,396
Sn1899_A		0.5919	ug/L	0.03114	5.261	1.132
Sr4215_R		75.07	ug/L	0.09683	0.1290	5,099
Ti3349_A		0.7990	ug/L	0.07532	9.427	10.81
Tl1908_A		0.08890	ug/L	0.9295	1,046	-1.358
V_2924_A		0.5323	ug/L	0.1024	19.24	-3.893
Zn2062_A		22.13	ug/L	0.01733	0.07831	79.93
Y_3600_R		15,291	Cts/S	95.956	0.62754	15,291
Y_2243_A		8,171.7	Cts/S	7.9726	0.097564	8,171.7
Y_3600_A		177,820	Cts/S	457.75	0.25743	177,820

SL4557-014

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 10:42:17PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

SL4557-014

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 10:42:17PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.1085	ug/L	0.1162	107.1	-19.31
Al3961_R		469.5	ug/L	0.4058	0.08644	445.0
As1891_A		-0.07059	ug/L	0.1336	189.2	-1.501
B_2089_A		21.65	ug/L	0.1329	0.6141	38.99
Ba4554_R		33.87	ug/L	0.07021	0.2073	1,926
Be3130_R		0.5634	ug/L	0.01228	2.180	46.57
Ca3158_R		8,266	ug/L	16.67	0.2017	8,867
Cd2265_A		0.09315	ug/L	0.01629	17.49	-1.438
Co2286_A		0.1980	ug/L	0.04773	24.11	3.654
Cr2677_A		0.02367	ug/L	0.01882	79.51	6.572
Cu3273_A		2.937	ug/L	0.06407	2.181	45.38
Fe2599_R		150.5	ug/L	0.5987	0.3978	250.5
K_7664_R		3,399	ug/L	29.85	0.8782	1,865
Li6707_R		0.2381	ug/L	1.189	499.2	8.215
Mg2025_A		1,838	ug/L	7.813	0.4250	963.0
Mn2576_R		80.06	ug/L	0.4846	0.6053	808.1
Mo2020_A		0.07755	ug/L	0.03288	42.39	1.829
Na5895_R		24,020	ug/L	13.99	0.05826	44,880
Ni2316_A		0.9744	ug/L	0.1420	14.57	0.9427
Pb2203_A		0.2779	ug/L	0.09207	33.13	-0.4941
Sb2068_A		-0.06214	ug/L	0.1147	184.7	0.03134
Se1960_A		0.8399	ug/L	0.6959	82.85	2.521
Si2516_R		3,776	ug/L	6.682	0.1769	1,966
Sn1899_A		0.4788	ug/L	0.7126	148.8	1.057
Sr4215_R		56.31	ug/L	0.1020	0.1812	3,776
Ti3349_A		2.641	ug/L	0.1478	5.597	74.76
Tl1908_A		-0.1144	ug/L	0.08489	74.19	-1.295
V_2924_A		0.7043	ug/L	0.09740	13.83	-1.456
Zn2062_A		37.19	ug/L	0.1532	0.4119	133.3
Y_3600_R		15,101	Cts/S	49.531	0.32800	15,101
Y_2243_A		8,222.1	Cts/S	10.136	0.12328	8,222.1
Y_3600_A		175,490	Cts/S	314.85	0.17941	175,490

PBWLE25ICW2

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 10:46:41PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.1440	ug/L	0.1679	116.5	-17.76
Al3961_R		6.078	ug/L	3.891	64.01	1.886
As1891_A		0.3127	ug/L	1.857	593.9	-1.347
B_2089_A		0.07156	ug/L	0.07815	109.2	2.944
Ba4554_R		0.01531	ug/L	0.08903	581.7	18.33
Be3130_R		-0.03924	ug/L	0.01399	35.67	-1.334
Ca3158_R		-5.468	ug/L	0.4296	7.857	-26.60
Cd2265_A		-0.03937	ug/L	0.04042	102.6	-3.731
Co2286_A		0.08933	ug/L	0.1251	140.1	3.218
Cr2677_A		0.2087	ug/L	0.2484	119.0	9.113
Cu3273_A		-0.08690	ug/L	0.01041	11.99	-5.040
Fe2599_R		26.54	ug/L	3.025	11.40	48.39
K_7664_R		9.335	ug/L	28.17	301.8	-61.10
Li6707_R		0.9803	ug/L	0.9426	96.15	17.59
Mg2025_A		8.360	ug/L	0.4953	5.924	4.371
Mn2576_R		0.4119	ug/L	0.3703	89.89	2.022
Mo2020_A		-0.04646	ug/L	0.03199	68.85	1.330
Na5895_R		-13.20	ug/L	2.353	17.83	20.55
Ni2316_A		-0.009414	ug/L	0.1157	1,229	-1.364

PBWLE25ICW2

Method Name: FAST-2016_NO_AU Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 10:46:41PM Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A		-0.3410	ug/L	0.2513	73.70	-1.196
Sb2068_A		0.6938	ug/L	0.3005	43.32	0.5794
Se1960_A		0.3395	ug/L	0.8044	236.9	2.385
Si2516_R		0.3529	ug/L	6.989	1,980	27.43
Sn1899_A		0.2680	ug/L	0.7948	296.6	0.9272
Sr4215_R		0.04415	ug/L	0.03327	75.35	-1.739
Ti3349_A		0.2261	ug/L	0.1431	63.30	-9.443
Tl1908_A		-0.6389	ug/L	0.04173	6.531	-1.670
V_2924_A		0.1617	ug/L	0.1045	64.64	-8.994
Zn2062_A		0.1361	ug/L	0.1407	103.4	3.391
Y_3600_R		15,490	Cts/S	80.681	0.52086	15,490
Y_2243_A		8,418.9	Cts/S	2.8640	0.034018	8,418.9
Y_3600_A		179,320	Cts/S	2,495.9	1.3919	179,320

LCSWLE25ICW2

Method Name: FAST-2016_NO_AU Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 10:51:07PM Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		48.21	ug/L	0.03244	0.06728	1,205
Al3961_R		2,007	ug/L	7.298	0.3636	1,918
As1891_A		97.88	ug/L	1.066	1.089	45.02
B_2089_A		488.7	ug/L	1.998	0.4088	820.0
Ba4554_R		2,014	ug/L	8.724	0.4332	114,000
Be3130_R		49.73	ug/L	0.03001	0.06035	3,950
Ca3158_R		2,475	ug/L	5.374	0.2171	2,652
Cd2265_A		249.6	ug/L	1.300	0.5209	3,788
Co2286_A		521.2	ug/L	3.433	0.6587	2,247
Cr2677_A		198.2	ug/L	0.3446	0.1739	2,726
Cu3273_A		251.0	ug/L	0.7903	0.3149	4,181
Fe2599_R		1,017	ug/L	9.401	0.9239	1,678
K_7664_R		9,729	ug/L	51.78	0.5322	5,477
Li6707_R		500.3	ug/L	1.922	0.3841	6,042
Mg2025_A		4,889	ug/L	35.11	0.7182	2,557
Mn2576_R		502.1	ug/L	1.628	0.3243	5,094
Mo2020_A		103.2	ug/L	0.5707	0.5529	417.8
Na5895_R		7,344	ug/L	4.496	0.06122	13,800
Ni2316_A		520.3	ug/L	2.982	0.5732	1,196
Pb2203_A		102.5	ug/L	0.3177	0.3098	116.2
Sb2068_A		99.79	ug/L	0.3978	0.3986	67.93
Se1960_A		98.36	ug/L	0.7786	0.7915	36.42
Si2516_R		998.5	ug/L	6.215	0.6224	542.8
Sn1899_A		509.1	ug/L	3.304	0.6490	365.1
Sr4215_R		494.9	ug/L	1.557	0.3145	33,330
Ti3349_A		494.6	ug/L	1.335	0.2700	17,240
Tl1908_A		103.6	ug/L	0.7586	0.7320	83.80
V_2924_A		491.1	ug/L	0.1879	0.03825	6,852
Zn2062_A		510.2	ug/L	2.550	0.4998	1,779
Y_3600_R		15,152	Cts/S	123.07	0.81222	15,152
Y_2243_A		8,165.7	Cts/S	40.891	0.50077	8,165.7
Y_3600_A		175,920	Cts/S	503.10	0.28598	175,920

PBT1456A

Method Name: FAST-2016_NO_AU Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 10:55:21PM Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

PBT1456A

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 10:55:21PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		-0.09094	ug/L	0.08715	95.84	-23.19
Al3961_R		11.38	ug/L	2.643	23.23	6.833
As1891_A		-0.01037	ug/L	0.2388	2,303	-1.403
B_2089_A		2.255	ug/L	0.07247	3.214	6.216
Ba4554_R		8.280	ug/L	0.05719	0.6907	479.1
Be3130_R		-0.02696	ug/L	0.01849	68.58	-0.3123
Ca3158_R		11.52	ug/L	1.812	15.73	-7.588
Cd2265_A		-0.01807	ug/L	0.001859	10.29	-2.928
Co2286_A		0.1058	ug/L	0.02555	24.15	3.073
Cr2677_A		1.235	ug/L	0.04197	3.398	21.56
Cu3273_A		1.739	ug/L	0.1211	6.962	23.82
Fe2599_R		192.1	ug/L	1.753	0.9121	315.7
K_7664_R		36.19	ug/L	1.330	3.676	-43.85
Li6707_R		0.8957	ug/L	0.6624	73.95	15.94
Mg2025_A		7.555	ug/L	0.4764	6.306	3.666
Mn2576_R		2.977	ug/L	0.06237	2.095	27.60
Mo2020_A		0.06358	ug/L	0.06477	101.9	1.660
Na5895_R	F	302,700	ug/L	398.3	0.1316	559,500
Ni2316_A		1.066	ug/L	0.1525	14.31	1.100
Pb2203_A		-0.9550	ug/L	0.3617	37.88	-1.774
Sb2068_A		-0.1846	ug/L	0.3771	204.3	-0.04885
Se1960_A		-0.7500	ug/L	0.6619	88.24	1.856
Si2516_R		12.33	ug/L	10.67	86.52	32.57
Sn1899_A		0.7674	ug/L	0.01350	1.758	1.203
Sr4215_R		0.4918	ug/L	0.01217	2.473	28.09
Ti3349_A		0.1678	ug/L	0.07973	47.51	-10.58
Tl1908_A		-0.4325	ug/L	0.3347	77.38	-1.389
V_2924_A		0.3493	ug/L	0.003536	1.012	-5.831
Zn2062_A		6.975	ug/L	0.2857	4.096	25.95
Y_3600_R		14,952	Cts/S	3.0404	0.020335	14,952
Y_2243_A		7,820.2	Cts/S	94.415	1.2073	7,820.2
Y_3600_A		164,450	Cts/S	407.18	0.24761	164,450

SL4502-002

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 11:00:10PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		-0.1338	ug/L	0.06880	51.42	-22.21
Al3961_R		114.9	ug/L	2.968	2.583	130.0
As1891_A		0.9346	ug/L	0.09106	9.743	-0.9396
B_2089_A		41.72	ug/L	0.05839	0.1400	67.00
Ba4554_R		17.79	ug/L	0.03355	0.1886	985.0
Be3130_R		-0.02624	ug/L	0.02901	110.6	-0.2262
Ca3158_R	W	126,600	ug/L	1,579	1.247	131,400
Cd2265_A		-0.03412	ug/L	0.1043	305.7	-3.268
Co2286_A		1.418	ug/L	0.01887	1.330	8.204
Cr2677_A		0.7847	ug/L	0.3408	43.43	15.39
Cu3273_A		0.8467	ug/L	0.2245	26.52	9.576
Fe2599_R		43.37	ug/L	1.964	4.529	72.24
K_7664_R		2,344	ug/L	21.18	0.9036	1,222
Li6707_R		5.169	ug/L	0.1182	2.287	65.18
Mg2025_A		5,100	ug/L	28.33	0.5554	2,465
Mn2576_R		121.4	ug/L	1.428	1.176	1,185
Mo2020_A		0.3842	ug/L	0.03670	9.553	2.851
Na5895_R	F	308,100	ug/L	790.1	0.2564	555,600
Ni2316_A		5.298	ug/L	0.1292	2.439	10.11

SL4502-002

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 11:00:10PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A		0.1108	ug/L	0.3477	313.7	-0.6071
Sb2068_A		0.5242	ug/L	1.143	218.0	0.4036
Se1960_A		0.5372	ug/L	0.7151	133.1	2.230
Si2516_R		316.5	ug/L	7.242	2.288	182.6
Sn1899_A		1.270	ug/L	0.9071	71.41	1.501
Sr4215_R		766.9	ug/L	4.798	0.6256	49,720
Ti3349_A		-0.03203	ug/L	0.09338	291.6	-16.48
Tl1908_A		-1.189	ug/L	0.05336	4.486	-2.074
V_2924_A		0.2471	ug/L	0.03414	13.82	-7.291
Zn2062_A		23.15	ug/L	0.002883	0.01245	77.52
Y_3600_R		14,585	Cts/S	161.55	1.1077	14,585
Y_2243_A		7,587.2	Cts/S	40.586	0.53493	7,587.2
Y_3600_A		158,430	Cts/S	94.544	0.059675	158,430

CCV

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 11:05:30PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		485.0	ug/L	0.0000	0.0000	12,140
Al3961_R		11,880	ug/L	0.0000	0.0000	11,640
As1891_A		494.9	ug/L	0.0000	0.0000	229.8
B_2089_A		493.8	ug/L	0.0000	0.0000	835.2
Ba4554_R		476.6	ug/L	0.0000	0.0000	27,640
Be3130_R	W	471.6	ug/L	0.0000	0.0000	38,580
Ca3158_R		12,010	ug/L	0.0000	0.0000	13,250
Cd2265_A		498.6	ug/L	0.0000	0.0000	7,472
Co2286_A		503.7	ug/L	0.0000	0.0000	2,141
Cr2677_A		488.5	ug/L	0.0000	0.0000	6,612
Cu3273_A		481.0	ug/L	0.0000	0.0000	7,899
Fe2599_R		11,990	ug/L	0.0000	0.0000	20,220
K_7664_R		11,920	ug/L	0.0000	0.0000	6,887
Li6707_R		478.1	ug/L	0.0000	0.0000	5,914
Mg2025_A		12,520	ug/L	0.0000	0.0000	6,432
Mn2576_R		476.0	ug/L	0.0000	0.0000	4,945
Mo2020_A		498.6	ug/L	0.0000	0.0000	1,983
Na5895_R		11,830	ug/L	0.0000	0.0000	22,750
Ni2316_A		503.4	ug/L	0.0000	0.0000	1,143
Pb2203_A		503.0	ug/L	0.0000	0.0000	564.5
Sb2068_A		494.7	ug/L	0.0000	0.0000	342.4
Se1960_A		496.3	ug/L	0.0000	0.0000	171.9
Si2516_R		11,970	ug/L	0.0000	0.0000	6,343
Sn1899_A		500.9	ug/L	0.0000	0.0000	353.9
Sr4215_R		474.3	ug/L	0.0000	0.0000	32,720
Ti3349_A		484.6	ug/L	0.0000	0.0000	16,650
Tl1908_A		506.1	ug/L	0.0000	0.0000	413.7
V_2924_A		483.5	ug/L	0.0000	0.0000	6,606
Zn2062_A		501.4	ug/L	0.0000	0.0000	1,721
Y_3600_R		15,521	Cts/S	0.00000	0.00000	15,521
Y_2243_A		8,044.9	Cts/S	0.00000	0.00000	8,044.9
Y_3600_A		173,380	Cts/S	0.00000	0.00000	173,380

CCB

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 11:09:38PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

CCB

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 11:09:38PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.07502	ug/L	0.2847	379.5	-19.63
Al3961_R		7.420	ug/L	1.326	17.87	3.239
As1891_A		1.193	ug/L	0.3548	29.73	-0.8971
B_2089_A		0.4417	ug/L	0.002601	0.5888	3.526
Ba4554_R		0.06410	ug/L	0.02705	42.20	21.36
Be3130_R		0.07074	ug/L	0.02403	33.97	7.741
Ca3158_R		-1.832	ug/L	2.922	159.4	-22.77
Cd2265_A		0.1208	ug/L	0.03331	27.56	-1.235
Co2286_A		0.1912	ug/L	0.06901	36.09	3.594
Cr2677_A		-0.02689	ug/L	0.3262	1,213	6.082
Cu3273_A		0.08981	ug/L	0.1773	197.5	-2.147
Fe2599_R		2.419	ug/L	0.3392	14.02	7.899
K_7664_R		30.81	ug/L	15.67	50.86	-49.12
Li6707_R		0.2338	ug/L	0.6279	268.6	8.512
Mg2025_A		2.429	ug/L	0.6387	26.29	1.172
Mn2576_R		0.06028	ug/L	0.04579	75.95	-1.622
Mo2020_A		0.3398	ug/L	0.05658	16.65	2.878
Na5895_R		18.36	ug/L	1.851	10.08	81.74
Ni2316_A		0.2707	ug/L	0.2497	92.27	-0.6817
Pb2203_A		-0.7039	ug/L	0.5718	81.24	-1.593
Sb2068_A		0.7297	ug/L	0.6176	84.64	0.5907
Se1960_A		0.6566	ug/L	0.003622	0.5516	2.449
Si2516_R		7.777	ug/L	12.83	165.0	31.73
Sn1899_A		0.2727	ug/L	0.2681	98.32	0.9121
Sr4215_R		0.1174	ug/L	0.01643	13.99	3.357
Ti3349_A		0.3611	ug/L	0.05101	14.13	-4.829
Tl1908_A		-0.01945	ug/L	0.3533	1,817	-1.115
V_2924_A		0.3620	ug/L	0.04424	12.22	-6.332
Zn2062_A		0.1253	ug/L	0.09060	72.33	3.286
Y_3600_R		15,640	Cts/S	331.35	2.1186	15,640
Y_2243_A		8,251.0	Cts/S	4.1810	0.050673	8,251.0
Y_3600_A		183,600	Cts/S	8,040.4	4.3793	183,600

SL4502-002L

Method Name: FAST-2016_NO_AU
Method Revision: 449
Analyst Name: JS
Acquire Date: 5/25/2018 11:14:03PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.6044	ug/L	0.05891	9.746	-17.26
Al3961_R		152.0	ug/L	39.85	26.22	30.80
As1891_A		2.004	ug/L	1.862	92.89	-1.231
B_2089_A		43.44	ug/L	1.414	3.255	16.74
Ba4554_R		19.74	ug/L	0.4203	2.129	238.3
Be3130_R		-0.2346	ug/L	0.1868	79.61	-1.915
Ca3158_R	W	128,800	ug/L	265.0	0.2057	27,520
Cd2265_A		0.1369	ug/L	0.1818	132.8	-2.564
Co2286_A		2.271	ug/L	0.6149	27.07	4.564
Cr2677_A		1.183	ug/L	1.068	90.30	9.082
Cu3273_A		-0.6322	ug/L	0.8408	133.0	-5.417
Fe2599_R		43.88	ug/L	1.274	2.902	17.95
K_7664_R		2,353	ug/L	55.30	2.350	201.2
Li6707_R		7.351	ug/L	2.561	34.84	22.84
Mg2025_A		5,445	ug/L	43.28	0.7949	551.7
Mn2576_R		126.3	ug/L	3.942	3.122	252.1
Mo2020_A		0.4546	ug/L	0.2089	45.95	1.804
Na5895_R	W	308,300	ug/L	1,155	0.3745	114,500
Ni2316_A		5.167	ug/L	0.6931	13.42	1.047

KATAHDIN ANALYTICAL SERVICES, LLC
METALS ANALYSIS RUN INFORMATION SHEET

INSTR. ID: I (Thermo iCAP 6500) **ANALYST:** MD **ANALYSIS DATE:** 06/12/2018

FILE NAME: ILF12A

METHOD: ICP

- ☑ 200.7
- ☑ 6010
- ☑ DOD
- ☐ _____

REVIEWED
JSG-13-18
KATAHDIN ANALYTICAL
METALS SECTION

The pHs of all samples that were tested by direct analysis in this analytical run were checked just prior to analysis and confirmed to be <2. The time of preservation of these samples was checked in the "Measured Turbidity and Preservation of Incoming Samples" logbook to verify that they had been preserved at least 16 hours prior to analysis. These verifications were performed by _____ (initals) on _____ (date).

STANDARDS USED:

Standard Name	Standard ID	Prep Date	Expiration Date	Standard Conc.
Cal. Blk/ICB/CCB	MW17803	05/29/2018	05/29/2019	0 ug/L
Standard 1	MW17837	06/11/2018	07/13/2018	Varies by Element
ICV	MW17825	06/05/2018	08/30/2018	Varies by Element
PQL	MW17769	05/15/2018	07/13/2018	Varies by Element
LRS1	MW17788	05/22/2018	07/13/2018	Varies by Element
LRS2	MW17805	05/30/2018	08/21/2018	Varies by Element
ICSA	MW17747	05/08/2018	08/08/2018	Varies by Element
ICSAB	MW17787	05/21/2018	07/23/2018	Varies by Element
CCV	MW17838	06/11/2018	07/13/2018	Varies by Element
Internal Standard	MW17818	06/05/2018	09/05/2018	5.0 mg/L Yttrium

Additional Comments and Notes:

JSG-13-18

Dilutions: Some samples were diluted based on history or due to interfering element concentrations.

Dilution preparations are as follows:

2x diln.: 3.0mL of sample (pipet M18) + 3.0mL of MW17803 (pipet M18)

5x diln.: 1.6mL of sample (pipet M18) + 6.4mL of MW17803 (pipet M18)

Post Spike: 0.03mL of MS2085, MS2089 (pipet M16), 0.06mL of MS2111 (pipet M16), 0.003mL of MS2109(pipet M17) to 6mL of sample (pipet M18) (Unless otherwise specified)

INSTRUMENT RUNLOG

Instrument: ICAP 6500

SAMPLE ID	DF	FILE	DATE	TIME	ANALYST
Blank	1.000	ILF12A	6/12/2018	14:28	MD
Std 1	1.000	ILF12A	6/12/2018	14:32	MD
ICV	1.000	ILF12A	6/12/2018	14:36	MD
ICB	1.000	ILF12A	6/12/2018	14:41	MD
PQL	1.000	ILF12A	6/12/2018	14:45	MD
ICSA	1.000	ILF12A	6/12/2018	14:49	MD
ICSAB	1.000	ILF12A	6/12/2018	14:55	MD
CCV	1.000	ILF12A	6/12/2018	15:00	MD
CCB	1.000	ILF12A	6/12/2018	15:04	MD
LRS1	1.000	ILF12A	6/12/2018	15:09	MD
LRS2	1.000	ILF12A	6/12/2018	15:14	MD
CCV	1.000	ILF12A	6/12/2018	15:20	MD
CCB	1.000	ILF12A	6/12/2018	15:24	MD
PBWLF12ICW1	1.000	ILF12A	6/12/2018	15:28	MD
LCSWLF12ICW1	1.000	ILF12A	6/12/2018	15:33	MD
SL4984-001	1.000	ILF12A	6/12/2018	15:37	MD
PBWLF12ICW2	1.000	ILF12A	6/12/2018	15:42	MD
LCSWLF12ICW2	1.000	ILF12A	6/12/2018	15:46	MD
SL5070-001	1.000	ILF12A	6/12/2018	15:50	MD
SL5164-001	1.000	ILF12A	6/12/2018	15:55	MD
PBSLF12ICS1	1.000	ILF12A	6/12/2018	16:00	MD
LCSOLF12ICS1	1.000	ILF12A	6/12/2018	16:04	MD
SL4955-001	1.000	ILF12A	6/12/2018	16:08	MD
CCV	1.000	ILF12A	6/12/2018	16:14	MD
CCB	1.000	ILF12A	6/12/2018	16:18	MD
SL4955-002	1.000	ILF12A	6/12/2018	16:22	MD
SL4955-003	1.000	ILF12A	6/12/2018	16:27	MD
SL5030-001	1.000	ILF12A	6/12/2018	16:32	MD
SL5111-001	1.000	ILF12A	6/12/2018	16:38	MD
SL5147-001	1.000	ILF12A	6/12/2018	16:42	MD
SL5177-001	1.000	ILF12A	6/12/2018	16:47	MD
PBSLF12ICS2	1.000	ILF12A	6/12/2018	16:51	MD
LCSOLF12ICS2	1.000	ILF12A	6/12/2018	16:56	MD
SL5117-001	1.000	ILF12A	6/12/2018	17:00	MD
SL5153-001	1.000	ILF12A	6/12/2018	17:05	MD
CCV	1.000	ILF12A	6/12/2018	17:09	MD
CCB	1.000	ILF12A	6/12/2018	17:14	MD
SL5153-003	1.000	ILF12A	6/12/2018	17:18	MD
SL5153-005	1.000	ILF12A	6/12/2018	17:22	MD
SL5169-005	1.000	ILF12A	6/12/2018	17:26	MD
SL4955-002	2.000	ILF12A	6/12/2018	17:31	MD
SL4955-002	5.000	ILF12A	6/12/2018	17:36	MD
SL5147-001	2.000	ILF12A	6/12/2018	17:40	MD
CCV	1.000	ILF12A	6/12/2018	17:44	MD

SAMPLE ID	DF	FILE	DATE	TIME	ANALYST
CCB	1.000	ILF12A	6/12/2018	17:49	MD
PQL	1.000	ILF12A	6/12/2018	17:53	MD
ICSA	1.000	ILF12A	6/12/2018	17:57	MD
ICSAB	1.000	ILF12A	6/12/2018	18:03	MD
CCV	1.000	ILF12A	6/12/2018	18:08	MD
CCB	1.000	ILF12A	6/12/2018	18:12	MD

Intensity Report

Author:

Published: 6/13/2018 7:27:08AM

Notes:

Blank

Method Name: FAST-2016_NO_AU Method Revision: 465

Analyst Name: MD

Acquire Date: 6/12/2018 2:28:24PM Sample Type: Standard

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		-0.0001830	Cts/S	0.000009000	4.871	-32.34
Al3961_R		-0.00005700	Cts/S	0.0002190	381.0	-1.068
As1891_A		-0.0001960	Cts/S	0.00001300	6.807	-1.723
B_2089_A		0.0002010	Cts/S	0.000005000	2.601	1.774
Ba4554_R		0.001592	Cts/S	0.0001440	9.041	28.72
Be3130_R		0.0002180	Cts/S	0.0003560	163.0	3.987
Ca3158_R		-0.002166	Cts/S	0.0001370	6.340	-39.12
Cd2265_A		-0.0003070	Cts/S	0.00005600	18.21	-2.704
Co2286_A		0.0002870	Cts/S	0.000007000	2.444	2.533
Cr2677_A		0.00003500	Cts/S	0.00002100	59.33	6.178
Cu3273_A		0.00005000	Cts/S	0.00002600	51.59	8.833
Fe2599_R		-0.00001800	Cts/S	0.00001900	104.5	-0.3201
K_7664_R		-0.002147	Cts/S	0.0003910	18.22	-38.82
Li6707_R		-0.0002660	Cts/S	0.0002730	102.6	-4.762
Mg2025_A		-0.0001920	Cts/S	0.00001000	5.251	-1.693
Mn2576_R		0.0001900	Cts/S	0.000002000	1.160	3.430
Mo2020_A		0.00007400	Cts/S	0.000003000	3.917	0.6552
Na5895_R		-0.0003880	Cts/S	0.0006130	158.0	-6.922
Ni2316_A		-0.0001060	Cts/S	0.000005000	4.665	-0.9306
Pb2203_A		-0.0002490	Cts/S	0.00001800	7.410	-2.191
Sb2068_A		0.000007000	Cts/S	0.000008000	117.5	-0.06190
Se1960_A		0.0001630	Cts/S	0.00001400	8.351	1.436
Si2516_R		0.001099	Cts/S	0.0002360	21.49	19.87
Sn1899_A		0.0002140	Cts/S	0.00005500	25.75	1.890
Sr4215_R		-0.0001530	Cts/S	0.0003270	213.7	-2.721
Ti3349_A		-0.00008800	Cts/S	0.00002500	28.39	-15.54
Tl1908_A		-0.0001790	Cts/S	0.00002200	12.07	-1.580
V_2924_A		-0.00003400	Cts/S	0.00001100	32.77	-6.004
Zn2062_A		0.00004900	Cts/S	0.00005300	108.9	0.4295
Y_3600_R		18,055	Cts/S	277.20	1.5353	18,055
Y_2243_A		8,812.1	Cts/S	10.778	0.12231	8,812.1
Y_3600_A		177,110	Cts/S	220.25	0.12436	177,110

Std 1

Method Name: FAST-2016_NO_AU Method Revision: 465

Analyst Name: MD

Acquire Date: 6/12/2018 2:32:47PM Sample Type: Standard

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.1360	Cts/S	0.004147	3.050	22,940
Al3961_R		1.752	Cts/S	0.02097	1.197	29,650
As1891_A		0.06274	Cts/S	0.0002820	0.4497	526.8
B_2089_A		0.2055	Cts/S	0.0005630	0.2741	1,725
Ba4554_R		4.037	Cts/S	0.06126	1.517	68,330
Be3130_R		5.849	Cts/S	0.08150	1.393	99,000
Ca3158_R		2.016	Cts/S	0.02109	1.046	34,120
Cd2265_A		1.917	Cts/S	0.01106	0.5768	16,100
Co2286_A		0.5620	Cts/S	0.003052	0.5431	4,719
Cr2677_A		0.09151	Cts/S	0.002339	2.556	15,440
Cu3273_A		0.09567	Cts/S	0.002702	2.824	16,140
Fe2599_R		3.225	Cts/S	0.04156	1.288	54,590
K_7664_R		1.119	Cts/S	0.01342	1.199	18,940
Li6707_R		0.8384	Cts/S	0.01304	1.556	14,190

Std 1

Method Name: FAST-2016_NO_AU
Method Revision: 465
Analyst Name: MD
Acquire Date: 6/12/2018 2:32:47PM
Sample Type: Standard

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Mg2025_A		1.538	Cts/S	0.004120	0.2679	12,910
Mn2576_R		0.7250	Cts/S	0.007315	1.009	12,270
Mo2020_A		0.5201	Cts/S	0.003148	0.6052	4,367
Na5895_R		3.427	Cts/S	0.03889	1.135	58,010
Ni2316_A		0.2831	Cts/S	0.001409	0.4978	2,377
Pb2203_A		0.1376	Cts/S	0.0005550	0.4031	1,155
Sb2068_A		0.08550	Cts/S	0.0004990	0.5830	717.9
Se1960_A		0.04596	Cts/S	0.0001030	0.2242	385.9
Si2516_R		0.9166	Cts/S	0.008737	0.9531	15,520
Sn1899_A		0.08443	Cts/S	0.0005210	0.6174	709.0
Sr4215_R		4.560	Cts/S	0.05781	1.268	77,180
Ti3349_A		0.2072	Cts/S	0.005998	2.895	34,950
Tl1908_A		0.1014	Cts/S	0.0004740	0.4673	851.0
V_2924_A		0.09172	Cts/S	0.002351	2.563	15,470
Zn2062_A		0.4393	Cts/S	0.003125	0.7113	3,689
Y_3600_R		16,927	Cts/S	148.01	0.87440	16,927
Y_2243_A		8,397.0	Cts/S	21.070	0.25092	8,397.0
Y_3600_A		168,740	Cts/S	3,962.1	2.3481	168,740

ICV

Method Name: FAST-2016_NO_AU
Method Revision: 465
Analyst Name: MD
Acquire Date: 6/12/2018 2:36:53PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		405.0	ug/L	0.9518	0.2350	9,352
Al3961_R		10,030	ug/L	34.21	0.3410	11,990
As1891_A		385.6	ug/L	0.03712	0.009626	208.7
B_2089_A		391.7	ug/L	0.9870	0.2520	699.3
Ba4554_R		401.4	ug/L	0.3532	0.08800	27,660
Be3130_R		404.0	ug/L	1.999	0.4948	40,310
Ca3158_R		10,150	ug/L	35.82	0.3529	13,940
Cd2265_A		396.3	ug/L	0.7262	0.1832	6,587
Co2286_A		400.8	ug/L	0.2429	0.06059	1,955
Cr2677_A		404.8	ug/L	2.827	0.6984	6,307
Cu3273_A		404.8	ug/L	1.661	0.4103	6,596
Fe2599_R		10,210	ug/L	28.14	0.2757	22,460
K_7664_R		13,690	ug/L	62.57	0.4572	10,430
Li6707_R		402.6	ug/L	0.8081	0.2007	5,754
Mg2025_A		9,690	ug/L	13.46	0.1389	5,168
Mn2576_R		406.9	ug/L	0.6013	0.1478	5,033
Mo2020_A		399.2	ug/L	0.5170	0.1295	1,801
Na5895_R		10,130	ug/L	10.82	0.1069	23,680
Ni2316_A		400.6	ug/L	0.3952	0.09865	982.9
Pb2203_A		398.2	ug/L	0.8752	0.2198	473.9
Sb2068_A		392.1	ug/L	0.1994	0.05085	290.7
Se1960_A		386.8	ug/L	0.4609	0.1192	155.0
Si2516_R		9,823	ug/L	1.525	0.01553	6,154
Sn1899_A		391.9	ug/L	0.1744	0.04451	288.1
Sr4215_R		401.8	ug/L	1.319	0.3283	31,250
Ti3349_A		407.1	ug/L	1.096	0.2693	14,340
Tl1908_A		392.8	ug/L	0.4725	0.1203	344.3
V_2924_A		404.3	ug/L	1.871	0.4628	6,307
Zn2062_A		396.7	ug/L	0.8746	0.2205	1,512
Y_3600_R		17,056	Cts/S	30.391	0.17819	17,056
Y_2243_A		8,671.9	Cts/S	23.693	0.27321	8,671.9
Y_3600_A		170,170	Cts/S	729.90	0.42892	170,170

ICB

Method Name: FAST-2016_NO_AU
Method Revision: 465
Analyst Name: MD
Acquire Date: 6/12/2018 2:41:01PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.04537	ug/L	0.1893	417.4	-30.98
Al3961_R		-4.227	ug/L	2.309	54.63	-6.301
As1891_A		-0.4902	ug/L	0.9158	186.8	-1.958
B_2089_A		1.334	ug/L	0.1864	13.97	4.072
Ba4554_R		0.04401	ug/L	0.03120	70.90	31.65
Be3130_R		0.0008860	ug/L	0.007561	853.3	3.984
Ca3158_R		-3.381	ug/L	0.8174	24.18	-43.62
Cd2265_A		-0.04001	ug/L	0.01857	46.42	-3.313
Co2286_A		0.1888	ug/L	0.002986	1.582	3.399
Cr2677_A		-0.03139	ug/L	0.007166	22.83	5.623
Cu3273_A		-0.1795	ug/L	0.3323	185.1	5.744
Fe2599_R		1.444	ug/L	0.7083	49.06	3.020
K_7664_R		-41.23	ug/L	6.006	14.57	-71.52
Li6707_R		-0.1066	ug/L	0.2124	199.3	-6.369
Mg2025_A		-1.051	ug/L	0.02406	2.288	-2.205
Mn2576_R		-0.4697	ug/L	0.2663	56.70	-2.709
Mo2020_A		0.6931	ug/L	0.1733	25.00	3.755
Na5895_R		-0.02738	ug/L	2.306	8,424	-6.986
Ni2316_A		-0.2102	ug/L	0.04448	21.16	-1.418
Pb2203_A		1.076	ug/L	0.7858	73.02	-0.8613
Sb2068_A		0.8831	ug/L	0.3403	38.53	0.5920
Se1960_A		1.250	ug/L	0.1843	14.75	1.902
Si2516_R		8.038	ug/L	7.529	93.68	24.94
Sn1899_A		0.3286	ug/L	0.6425	195.5	2.094
Sr4215_R		0.0008400	ug/L	0.06847	8,153	-2.648
Ti3349_A		0.09327	ug/L	0.03002	32.18	-12.01
Tl1908_A		0.6557	ug/L	0.4125	62.91	-0.9720
V_2924_A		-0.05513	ug/L	0.10000	181.4	-6.913
Zn2062_A		-0.01412	ug/L	0.1002	709.4	0.3668
Y_3600_R		17,891	Cts/S	153.55	0.85823	17,891
Y_2243_A		8,641.5	Cts/S	55.758	0.64524	8,641.5
Y_3600_A		175,610	Cts/S	34.122	0.019431	175,610

PQL

Method Name: FAST-2016_NO_AU
Method Revision: 465
Analyst Name: MD
Acquire Date: 6/12/2018 2:45:25PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		10.47	ug/L	0.3159	3.017	215.1
Al3961_R		311.1	ug/L	2.388	0.7675	379.2
As1891_A		8.456	ug/L	0.6894	8.152	2.922
B_2089_A		49.21	ug/L	0.1764	0.3585	87.29
Ba4554_R		5.115	ug/L	0.07832	1.531	387.8
Be3130_R		5.022	ug/L	0.04416	0.8793	515.5
Ca3158_R		118.3	ug/L	3.161	2.673	128.8
Cd2265_A		5.121	ug/L	0.02199	0.4295	82.37
Co2286_A		10.51	ug/L	0.007939	0.07556	53.68
Cr2677_A		10.40	ug/L	0.1926	1.853	169.6
Cu3273_A		26.17	ug/L	0.4445	1.699	439.0
Fe2599_R		107.0	ug/L	0.6573	0.6141	240.6
K_7664_R		973.7	ug/L	2.228	0.2288	724.3
Li6707_R		101.9	ug/L	0.2966	0.2910	1,486
Mg2025_A		109.7	ug/L	0.9589	0.8738	57.04
Mn2576_R		5.025	ug/L	0.1951	3.883	66.81
Mo2020_A		10.36	ug/L	0.02099	0.2026	47.33
Na5895_R		1,029	ug/L	7.712	0.7496	2,454
Ni2316_A		10.27	ug/L	0.02750	0.2677	24.29

PQL

Method Name: FAST-2016_NO_AU
Method Revision: 465
Analyst Name: MD
Acquire Date: 6/12/2018 2:45:25PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A		5.202	ug/L	0.3610	6.940	4.030
Sb2068_A		8.337	ug/L	0.6619	7.940	5.566
Se1960_A		9.825	ug/L	0.8622	8.776	5.310
Si2516_R		191.1	ug/L	3.565	1.866	141.3
Sn1899_A		100.9	ug/L	0.3371	0.3340	75.51
Sr4215_R		9.974	ug/L	0.07829	0.7850	790.7
Ti3349_A		15.40	ug/L	0.09065	0.5886	533.9
Tl1908_A		16.41	ug/L	0.7783	4.742	12.91
V_2924_A		10.16	ug/L	0.2550	2.509	154.5
Zn2062_A		21.29	ug/L	0.1216	0.5711	81.50
Y_3600_R		17,444	Cts/S	73.054	0.41880	17,444
Y_2243_A		8,663.3	Cts/S	18.123	0.20920	8,663.3
Y_3600_A		172,020	Cts/S	2,257.6	1.3124	172,020

ICSA

Method Name: FAST-2016_NO_AU
Method Revision: 465
Analyst Name: MD
Acquire Date: 6/12/2018 2:49:48PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		-0.3746	ug/L	0.7222	192.8	-1,452
Al3961_R		496,200	ug/L	7,013	1.413	573,000
As1891_A		0.2208	ug/L	0.8938	404.9	-6.202
B_2089_A		0.9242	ug/L	0.02704	2.926	2.801
Ba4554_R		-0.1127	ug/L	0.01476	13.09	18.77
Be3130_R		-0.006257	ug/L	0.01425	227.8	2.941
Ca3158_R		462,500	ug/L	2,654	0.5738	615,800
Cd2265_A		1.018	ug/L	0.4362	42.85	209.1
Co2286_A		-0.2033	ug/L	0.08433	41.48	5.815
Cr2677_A		0.3277	ug/L	0.1210	36.91	27.86
Cu3273_A		-0.3347	ug/L	0.1484	44.33	11.89
Fe2599_R		180,300	ug/L	1,367	0.7580	384,000
K_7664_R		-43.72	ug/L	5.273	12.06	-67.78
Li6707_R		4.492	ug/L	1.106	24.62	57.74
Mg2025_A		456,500	ug/L	7,682	1.683	207,500
Mn2576_R		-1.631	ug/L	0.2028	12.44	-2.675
Mo2020_A		-1.323	ug/L	0.1420	10.74	-4.542
Na5895_R		35.46	ug/L	3.921	11.06	73.86
Ni2316_A		-3.989	ug/L	0.3618	9.069	-11.23
Pb2203_A		-2.484	ug/L	0.2956	11.90	-39.24
Sb2068_A		1.877	ug/L	1.605	85.51	6.662
Se1960_A		-0.7346	ug/L	0.8338	113.5	6.959
Si2516_R		27.42	ug/L	1.711	6.241	13.50
Sn1899_A		10.90	ug/L	0.1524	1.398	8.393
Sr4215_R	W	4.780	ug/L	0.03957	0.8278	357.2
Ti3349_A		0.8337	ug/L	0.07183	8.615	12.72
Tl1908_A		0.1637	ug/L	1.126	687.9	0.2288
V_2924_A		-0.1130	ug/L	0.3052	270.2	28.63
Zn2062_A		2.033	ug/L	0.1044	5.135	6.987
Y_3600_R		16,503	Cts/S	99.340	0.60195	16,503
Y_2243_A		7,410.2	Cts/S	111.76	1.5082	7,410.2
Y_3600_A		149,760	Cts/S	374.79	0.25027	149,760

ICSAB

Method Name: FAST-2016_NO_AU
Method Revision: 465
Analyst Name: MD
Acquire Date: 6/12/2018 2:55:19PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

ICSAB

Method Name: FAST-2016_NO_AU
Method Revision: 465
Analyst Name: MD
Acquire Date: 6/12/2018 2:55:19PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		223.0	ug/L	1.554	0.6967	3,147
Al3961_R		488,000	ug/L	1,182	0.2422	563,700
As1891_A		107.0	ug/L	0.008950	0.008361	44.06
B_2089_A		506.5	ug/L	2.435	0.4808	775.2
Ba4554_R		491.5	ug/L	3.038	0.6181	32,770
Be3130_R		480.1	ug/L	0.1668	0.03474	46,360
Ca3158_R		454,500	ug/L	1,276	0.2807	605,500
Cd2265_A		958.2	ug/L	5.970	0.6230	13,850
Co2286_A		474.2	ug/L	2.721	0.5737	1,990
Cr2677_A		488.6	ug/L	1.468	0.3005	6,711
Cu3273_A		538.1	ug/L	2.968	0.5516	7,718
Fe2599_R		180,000	ug/L	576.7	0.3203	383,400
K_7664_R		20,570	ug/L	197.2	0.9584	15,200
Li6707_R		520.9	ug/L	4.258	0.8174	7,208
Mg2025_A		450,800	ug/L	1,374	0.3048	206,000
Mn2576_R		459.3	ug/L	1.127	0.2453	5,514
Mo2020_A		495.1	ug/L	3.482	0.7033	1,918
Na5895_R		20,600	ug/L	127.3	0.6181	46,620
Ni2316_A		930.0	ug/L	4.993	0.5369	1,955
Pb2203_A		42.51	ug/L	2.367	5.568	6.976
Sb2068_A		626.2	ug/L	1.769	0.2825	404.0
Se1960_A		51.69	ug/L	2.667	5.161	24.83
Si2516_R		1,934	ug/L	13.56	0.7011	1,168
Sn1899_A		481.6	ug/L	1.567	0.3253	303.6
Sr4215_R		487.9	ug/L	1.987	0.4072	36,730
Ti3349_A		500.8	ug/L	0.5139	0.1026	15,520
Tl1908_A		92.02	ug/L	0.4750	0.5162	68.38
V_2924_A		498.9	ug/L	0.08738	0.01751	6,879
Zn2062_A		942.2	ug/L	5.617	0.5962	3,084
Y_3600_R		16,508	Cts/S	185.18	1.1218	16,508
Y_2243_A		7,446.6	Cts/S	31.276	0.42001	7,446.6
Y_3600_A		149,670	Cts/S	196.52	0.13131	149,670

CCV

Method Name: FAST-2016_NO_AU
Method Revision: 465
Analyst Name: MD
Acquire Date: 6/12/2018 3:00:40PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		498.4	ug/L	3.956	0.7937	11,600
Al3961_R		12,240	ug/L	19.24	0.1571	14,980
As1891_A		477.2	ug/L	3.066	0.6424	263.9
B_2089_A		478.2	ug/L	4.557	0.9530	870.1
Ba4554_R		493.5	ug/L	3.285	0.6656	34,790
Be3130_R		490.6	ug/L	4.551	0.9276	50,090
Ca3158_R		12,290	ug/L	32.74	0.2664	17,280
Cd2265_A		480.6	ug/L	4.447	0.9254	8,147
Co2286_A		485.8	ug/L	4.022	0.8280	2,416
Cr2677_A		506.8	ug/L	2.134	0.4212	7,949
Cu3273_A		499.8	ug/L	2.795	0.5591	8,197
Fe2599_R		12,410	ug/L	52.80	0.4254	27,960
K_7664_R		12,250	ug/L	10.67	0.08710	9,553
Li6707_R		494.5	ug/L	4.882	0.9873	7,234
Mg2025_A		11,940	ug/L	137.8	1.154	6,498
Mn2576_R		490.9	ug/L	0.5516	0.1124	6,214
Mo2020_A		481.4	ug/L	3.681	0.7646	2,215
Na5895_R		12,210	ug/L	83.49	0.6838	29,220
Ni2316_A		484.9	ug/L	3.951	0.8149	1,214

CCV

Method Name: FAST-2016_NO_AU
Method Revision: 465
Analyst Name: MD
Acquire Date: 6/12/2018 3:00:40PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A		485.1	ug/L	5.456	1.125	589.2
Sb2068_A		476.3	ug/L	4.857	1.020	360.3
Se1960_A		478.8	ug/L	4.794	1.001	195.4
Si2516_R		12,230	ug/L	6.367	0.05205	7,839
Sn1899_A		483.1	ug/L	4.940	1.022	361.8
Sr4215_R		489.8	ug/L	3.628	0.7408	38,980
Ti3349_A		499.5	ug/L	3.614	0.7236	17,720
Tl1908_A		485.2	ug/L	4.383	0.9034	434.0
V_2924_A		504.4	ug/L	2.521	0.4998	7,926
Zn2062_A		482.2	ug/L	2.661	0.5519	1,874
Y_3600_R		17,456	Cts/S	78.389	0.44907	17,456
Y_2243_A		8,844.7	Cts/S	67.259	0.76045	8,844.7
Y_3600_A		171,330	Cts/S	655.03	0.38232	171,330

CCB

Method Name: FAST-2016_NO_AU
Method Revision: 465
Analyst Name: MD
Acquire Date: 6/12/2018 3:04:48PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.004225	ug/L	0.03085	730.1	-31.78
Al3961_R		3.524	ug/L	4.149	117.7	3.351
As1891_A		-0.3946	ug/L	0.3651	92.52	-1.923
B_2089_A		1.003	ug/L	0.5096	50.79	3.559
Ba4554_R		0.04686	ug/L	0.2158	460.4	30.63
Be3130_R		0.04129	ug/L	0.04575	110.8	8.003
Ca3158_R		-2.116	ug/L	2.197	103.8	-40.35
Cd2265_A		-0.01588	ug/L	0.02078	130.9	-2.940
Co2286_A		0.04690	ug/L	0.06639	141.6	2.735
Cr2677_A		0.08901	ug/L	0.1147	128.9	7.510
Cu3273_A		-0.2033	ug/L	0.4631	227.8	5.307
Fe2599_R		2.344	ug/L	0.1590	6.782	4.915
K_7664_R		-15.70	ug/L	30.81	196.2	-49.53
Li6707_R		0.3063	ug/L	0.04085	13.34	-0.1496
Mg2025_A		0.5345	ug/L	1.584	296.4	-1.370
Mn2576_R		-0.05072	ug/L	0.03496	68.94	2.651
Mo2020_A		0.7371	ug/L	0.06339	8.600	4.005
Na5895_R		4.557	ug/L	6.191	135.9	4.241
Ni2316_A		-0.1912	ug/L	0.001666	0.8715	-1.387
Pb2203_A		0.3135	ug/L	0.1463	46.66	-1.799
Sb2068_A		0.3988	ug/L	0.4786	120.0	0.2293
Se1960_A		1.293	ug/L	1.030	79.71	1.947
Si2516_R		1.189	ug/L	0.05703	4.796	19.74
Sn1899_A		0.4614	ug/L	0.4649	100.7	2.209
Sr4215_R		-0.01416	ug/L	0.04857	343.1	-3.803
Ti3349_A		-0.1260	ug/L	0.05434	43.13	-19.86
Tl1908_A		0.7550	ug/L	0.9599	127.1	-0.8814
V_2924_A		-0.03280	ug/L	0.2745	837.0	-6.518
Zn2062_A		0.09886	ug/L	0.02694	27.25	0.8074
Y_3600_R		17,284	Cts/S	355.77	2.0583	17,284
Y_2243_A		8,739.8	Cts/S	260.71	2.9830	8,739.8
Y_3600_A		174,480	Cts/S	282.21	0.16174	174,480

LRS1

Method Name: FAST-2016_NO_AU
Method Revision: 465
Analyst Name: MD
Acquire Date: 6/12/2018 3:09:12PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

LRS1

Method Name: FAST-2016_NO_AU
Method Revision: 465
Analyst Name: MD
Acquire Date: 6/12/2018 3:09:12PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		2,088	ug/L	28.86	1.382	47,070
Al3961_R		-8.074	ug/L	6.047	74.90	221.1
As1891_A		20,830	ug/L	103.4	0.4963	10,600
B_2089_A		21,120	ug/L	91.78	0.4345	34,280
Ba4554_R		20,220	ug/L	174.3	0.8623	1,409,000
Be3130_R		19,860	ug/L	254.6	1.282	2,005,000
Ca3158_R		-96.83	ug/L	2.895	2.990	-21.38
Cd2265_A		19,930	ug/L	321.4	1.613	308,100
Co2286_A		21,400	ug/L	113.8	0.5320	97,080
Cr2677_A		21,000	ug/L	302.5	1.440	315,500
Cu3273_A		21,470	ug/L	380.2	1.770	337,300
Fe2599_R		-2.350	ug/L	0.2926	12.45	-5.549
K_7664_R		6.524	ug/L	4.513	69.18	-32.00
Li6707_R		19,850	ug/L	122.9	0.6190	287,400
Mg2025_A		1,155	ug/L	15.17	1.313	1,112
Mn2576_R		19,880	ug/L	253.5	1.275	248,900
Mo2020_A		5,282	ug/L	26.25	0.4969	22,190
Na5895_R		45.72	ug/L	1.123	2.457	101.5
Ni2316_A		20,810	ug/L	112.2	0.5390	47,480
Pb2203_A		22,050	ug/L	114.9	0.5210	24,610
Sb2068_A		21,350	ug/L	70.42	0.3299	14,760
Se1960_A		21,160	ug/L	90.10	0.4258	7,822
Si2516_R		122.5	ug/L	27.39	22.35	185.5
Sn1899_A		20,460	ug/L	120.7	0.5898	13,920
Sr4215_R		19,670	ug/L	37.85	0.1924	1,549,000
Ti3349_A		20,330	ug/L	3.605	0.01774	692,000
Tl1908_A		20,940	ug/L	93.30	0.4457	17,170
V_2924_A		20,680	ug/L	379.2	1.834	313,000
Zn2062_A		20,190	ug/L	137.3	0.6803	71,640
Y_3600_R		17,265	Cts/S	230.32	1.3340	17,265
Y_2243_A		8,078.8	Cts/S	29.621	0.36666	8,078.8
Y_3600_A		164,290	Cts/S	2,100.5	1.2786	164,290

LRS2

Method Name: FAST-2016_NO_AU
Method Revision: 465
Analyst Name: MD
Acquire Date: 6/12/2018 3:14:47PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		-0.7166	ug/L	1.060	148.0	-1,800
Al3961_R		496,200	ug/L	6,163	1.242	572,800
As1891_A		2.974	ug/L	1.962	65.96	-6.461
B_2089_A		26.80	ug/L	3.302	12.32	41.83
Ba4554_R		0.7440	ug/L	0.01031	1.386	75.80
Be3130_R		0.2872	ug/L	0.06797	23.66	31.00
Ca3158_R		467,400	ug/L	7,215	1.544	622,100
Cd2265_A		0.5856	ug/L	0.3359	57.37	259.3
Co2286_A		-0.5913	ug/L	0.1401	23.69	5.539
Cr2677_A		19.09	ug/L	0.03433	0.1799	284.2
Cu3273_A		3.492	ug/L	0.1625	4.654	58.28
Fe2599_R		228,100	ug/L	568.8	0.2493	485,600
K_7664_R		305,300	ug/L	549.5	0.1800	225,900
Li6707_R		13.35	ug/L	0.1294	0.9695	180.3
Mg2025_A		191,800	ug/L	3,144	1.639	88,610
Mn2576_R		17.08	ug/L	0.4779	2.799	107.0
Mo2020_A		2.204	ug/L	0.3072	13.93	9.194
Na5895_R		199,400	ug/L	3,291	1.651	450,900
Ni2316_A		-2.595	ug/L	0.4351	16.77	-9.004

LRS2

Method Name: FAST-2016_NO_AU
Method Revision: 465
Analyst Name: MD
Acquire Date: 6/12/2018 3:14:47PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A		-2.179	ug/L	0.3601	16.52	-37.34
Sb2068_A		4.422	ug/L	0.3708	8.386	9.519
Se1960_A		-1.431	ug/L	5.582	390.0	6.870
Si2516_R		48,020	ug/L	59.83	0.1246	29,000
Sn1899_A		10.80	ug/L	1.157	10.71	8.462
Sr4215_R		17.22	ug/L	0.05944	0.3452	1,293
Ti3349_A		4.990	ug/L	0.2477	4.963	139.1
Tl1908_A		-0.7751	ug/L	0.9267	119.6	-0.6328
V_2924_A		1.105	ug/L	0.04896	4.430	52.77
Zn2062_A		6.112	ug/L	0.01490	0.2437	20.53
Y_3600_R		16,496	Cts/S	21.951	0.13306	16,496
Y_2243_A		7,529.8	Cts/S	95.522	1.2686	7,529.8
Y_3600_A		146,940	Cts/S	606.10	0.41247	146,940

CCV

Method Name: FAST-2016_NO_AU
Method Revision: 465
Analyst Name: MD
Acquire Date: 6/12/2018 3:20:23PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		503.7	ug/L	5.692	1.130	11,770
Al3961_R		12,140	ug/L	64.74	0.5334	14,850
As1891_A		492.0	ug/L	0.03915	0.007956	265.0
B_2089_A		505.1	ug/L	1.512	0.2993	894.1
Ba4554_R		484.2	ug/L	1.890	0.3904	34,130
Be3130_R		481.8	ug/L	0.9784	0.2031	49,200
Ca3158_R		12,230	ug/L	54.51	0.4457	17,190
Cd2265_A		495.6	ug/L	3.254	0.6566	8,179
Co2286_A		502.2	ug/L	2.279	0.4538	2,432
Cr2677_A		503.3	ug/L	2.369	0.4706	7,929
Cu3273_A		498.0	ug/L	6.197	1.244	8,204
Fe2599_R		12,220	ug/L	23.38	0.1913	27,520
K_7664_R		12,220	ug/L	101.8	0.8331	9,530
Li6707_R		486.6	ug/L	0.3070	0.06309	7,120
Mg2025_A		12,420	ug/L	52.29	0.4210	6,579
Mn2576_R		486.7	ug/L	1.263	0.2595	6,162
Mo2020_A		498.0	ug/L	1.577	0.3166	2,231
Na5895_R		12,090	ug/L	29.88	0.2472	28,920
Ni2316_A		500.5	ug/L	2.359	0.4712	1,220
Pb2203_A		500.4	ug/L	2.811	0.5618	591.8
Sb2068_A		493.8	ug/L	3.088	0.6252	363.6
Se1960_A		492.7	ug/L	0.07461	0.01514	195.7
Si2516_R		12,230	ug/L	88.15	0.7210	7,834
Sn1899_A		498.3	ug/L	2.853	0.5725	363.2
Sr4215_R		479.9	ug/L	0.7950	0.1657	38,190
Ti3349_A		500.4	ug/L	4.654	0.9300	17,840
Tl1908_A		501.6	ug/L	3.933	0.7841	437.0
V_2924_A		498.3	ug/L	3.808	0.7642	7,863
Zn2062_A		497.2	ug/L	3.633	0.7306	1,881
Y_3600_R		17,456	Cts/S	66.780	0.38256	17,456
Y_2243_A		8,611.5	Cts/S	39.802	0.46219	8,611.5
Y_3600_A		172,110	Cts/S	533.30	0.30987	172,110

CCB

Method Name: FAST-2016_NO_AU
Method Revision: 465
Analyst Name: MD
Acquire Date: 6/12/2018 3:24:30PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

CCB

Method Name: FAST-2016_NO_AU
Method Revision: 465
Analyst Name: MD
Acquire Date: 6/12/2018 3:24:30PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		-0.04230	ug/L	0.03882	91.78	-32.88
Al3961_R		-1.287	ug/L	0.3527	27.41	-2.563
As1891_A		0.4865	ug/L	0.01937	3.980	-1.442
B_2089_A		7.778	ug/L	0.8007	10.30	15.38
Ba4554_R		0.1066	ug/L	0.06982	65.48	35.85
Be3130_R		0.04508	ug/L	0.02275	50.45	8.518
Ca3158_R		-1.584	ug/L	1.901	120.0	-40.67
Cd2265_A		0.01353	ug/L	0.01072	79.23	-2.453
Co2286_A		0.1662	ug/L	0.1193	71.82	3.333
Cr2677_A		0.1030	ug/L	0.0001550	0.1508	7.729
Cu3273_A		0.09988	ug/L	0.08785	87.96	10.37
Fe2599_R		2.841	ug/L	0.5690	20.03	6.179
K_7664_R		39.82	ug/L	11.08	27.83	-6.373
Li6707_R		1.326	ug/L	0.3779	28.50	15.03
Mg2025_A		0.5491	ug/L	1.190	216.8	-1.366
Mn2576_R		0.09876	ug/L	0.2754	278.9	4.653
Mo2020_A		1.162	ug/L	0.1296	11.15	5.932
Na5895_R		22.89	ug/L	4.798	20.96	48.74
Ni2316_A		-0.2752	ug/L	0.1067	38.78	-1.590
Pb2203_A		0.6346	ug/L	0.6406	100.9	-1.412
Sb2068_A		0.6453	ug/L	0.3951	61.23	0.4183
Se1960_A		1.761	ug/L	0.8121	46.12	2.128
Si2516_R		0.06181	ug/L	4.913	7,948	19.51
Sn1899_A		0.4138	ug/L	0.1295	31.31	2.180
Sr4215_R		-0.03820	ug/L	0.08776	229.8	-5.835
Ti3349_A		0.2954	ug/L	0.08525	28.86	-4.621
Tl1908_A		0.8442	ug/L	0.04102	4.859	-0.8160
V_2924_A		0.09387	ug/L	0.03677	39.17	-4.512
Zn2062_A		0.1758	ug/L	0.02009	11.43	1.102
Y_3600_R		17,737	Cts/S	140.41	0.79164	17,737
Y_2243_A		8,744.8	Cts/S	63.908	0.73082	8,744.8
Y_3600_A		174,380	Cts/S	305.19	0.17501	174,380

PBWLF12ICW1

Method Name: FAST-2016_NO_AU
Method Revision: 465
Analyst Name: MD
Acquire Date: 6/12/2018 3:28:55PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		-0.05233	ug/L	0.03102	59.28	-33.14
Al3961_R		6.268	ug/L	2.054	32.76	6.671
As1891_A		-0.2145	ug/L	0.1636	76.27	-1.827
B_2089_A		4.897	ug/L	0.1005	2.052	10.32
Ba4554_R		0.07475	ug/L	0.05355	71.64	33.06
Be3130_R		0.003376	ug/L	0.02657	787.0	4.146
Ca3158_R		5.668	ug/L	6.653	117.4	-29.79
Cd2265_A		-0.05784	ug/L	0.005243	9.065	-3.645
Co2286_A		0.1302	ug/L	0.02209	16.97	3.148
Cr2677_A		-0.04426	ug/L	0.1552	350.6	5.377
Cu3273_A		-0.06333	ug/L	0.1634	258.1	7.657
Fe2599_R		2.855	ug/L	0.3701	12.96	6.116
K_7664_R		31.39	ug/L	1.233	3.927	-12.90
Li6707_R		0.9504	ug/L	0.1319	13.88	9.268
Mg2025_A		11.59	ug/L	0.5057	4.364	4.544
Mn2576_R		-0.05047	ug/L	0.02176	43.12	2.679
Mo2020_A		0.5570	ug/L	0.09025	16.20	3.180
Na5895_R		18.91	ug/L	1.534	8.109	38.49
Ni2316_A		-0.08804	ug/L	0.01922	21.83	-1.134

PBWLF12ICW1

Method Name: FAST-2016_NO_AU
Method Revision: 465
Analyst Name: MD
Acquire Date: 6/12/2018 3:28:55PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A		0.6056	ug/L	0.6397	105.6	-1.441
Sb2068_A		0.9048	ug/L	0.4411	48.75	0.6141
Se1960_A		1.712	ug/L	0.02440	1.425	2.108
Si2516_R		3.862	ug/L	4.895	126.8	21.64
Sn1899_A		0.2357	ug/L	0.1912	81.13	2.048
Sr4215_R		-0.02164	ug/L	0.09788	452.3	-4.382
Ti3349_A		0.01647	ug/L	0.0005230	3.175	-14.72
Tl1908_A		-0.02841	ug/L	0.3258	1,147	-1.592
V_2924_A		0.09135	ug/L	0.2305	252.3	-4.483
Zn2062_A		0.8660	ug/L	0.08612	9.945	3.753
Y_3600_R		17,452	Cts/S	60.840	0.34862	17,452
Y_2243_A		8,737.0	Cts/S	25.526	0.29216	8,737.0
Y_3600_A		174,500	Cts/S	930.29	0.53313	174,500

LCSWLF12ICW1

Method Name: FAST-2016_NO_AU
Method Revision: 465
Analyst Name: MD
Acquire Date: 6/12/2018 3:33:19PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		53.32	ug/L	0.6901	1.294	1,195
Al3961_R		2,101	ug/L	19.63	0.9341	2,523
As1891_A		101.6	ug/L	0.5778	0.5685	53.97
B_2089_A		501.0	ug/L	8.766	1.750	875.5
Ba4554_R		2,111	ug/L	9.764	0.4626	146,000
Be3130_R		52.23	ug/L	0.5334	1.021	5,207
Ca3158_R		2,668	ug/L	3.154	0.1182	3,654
Cd2265_A		259.1	ug/L	4.384	1.692	4,308
Co2286_A		528.4	ug/L	8.903	1.685	2,583
Cr2677_A		217.5	ug/L	0.05712	0.02626	3,365
Cu3273_A		272.5	ug/L	0.4193	0.1538	4,407
Fe2599_R		1,071	ug/L	9.741	0.9095	2,367
K_7664_R		10,490	ug/L	21.18	0.2020	8,024
Li6707_R		524.1	ug/L	2.128	0.4060	7,527
Mg2025_A		5,103	ug/L	77.67	1.522	2,734
Mn2576_R		523.8	ug/L	2.212	0.4223	6,512
Mo2020_A		104.9	ug/L	1.759	1.677	474.5
Na5895_R		7,926	ug/L	29.99	0.3783	18,610
Ni2316_A		525.8	ug/L	8.859	1.685	1,290
Pb2203_A		107.2	ug/L	1.615	1.506	126.3
Sb2068_A		104.2	ug/L	1.841	1.767	75.07
Se1960_A		103.3	ug/L	1.946	1.884	42.62
Si2516_R		1,027	ug/L	4.679	0.4555	665.6
Sn1899_A		515.7	ug/L	9.255	1.795	379.4
Sr4215_R		515.3	ug/L	2.829	0.5489	40,260
Ti3349_A		539.0	ug/L	0.6423	0.1192	18,840
Tl1908_A		109.1	ug/L	1.537	1.409	93.18
V_2924_A		534.7	ug/L	0.4250	0.07949	8,325
Zn2062_A		516.0	ug/L	9.314	1.805	1,972
Y_3600_R		17,135	Cts/S	114.13	0.66611	17,135
Y_2243_A		8,693.3	Cts/S	107.54	1.2370	8,693.3
Y_3600_A		168,780	Cts/S	8.2081	0.0048630	168,780

SL4984-001

Method Name: FAST-2016_NO_AU
Method Revision: 465
Analyst Name: MD
Acquire Date: 6/12/2018 3:37:31PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

SL4984-001

Method Name: FAST-2016_NO_AU
Method Revision: 465
Analyst Name: MD
Acquire Date: 6/12/2018 3:37:31PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		-0.04556	ug/L	0.1538	337.6	-30.30
Al3961_R		65.58	ug/L	8.220	12.53	98.69
As1891_A		1.187	ug/L	0.4815	40.57	-0.9995
B_2089_A		12.91	ug/L	0.4866	3.769	22.99
Ba4554_R		167.2	ug/L	0.4767	0.2851	11,690
Be3130_R		0.06605	ug/L	0.01409	21.33	10.49
Ca3158_R	W	69,800	ug/L	51.42	0.07367	97,310
Cd2265_A		0.4138	ug/L	0.01249	3.019	4.013
Co2286_A		0.3690	ug/L	0.1106	29.98	4.082
Cr2677_A		0.6167	ug/L	0.1715	27.81	15.03
Cu3273_A		0.9543	ug/L	0.2522	26.43	22.64
Fe2599_R		3.537	ug/L	1.244	35.17	7.581
K_7664_R		3,573	ug/L	33.44	0.9358	2,733
Li6707_R		5.952	ug/L	0.7277	12.23	81.68
Mg2025_A		9,034	ug/L	54.61	0.6045	4,583
Mn2576_R		197.3	ug/L	0.9014	0.4568	2,480
Mo2020_A		0.5697	ug/L	0.006312	1.108	3.137
Na5895_R	F	297,200	ug/L	209.7	0.07054	704,300
Ni2316_A		2.584	ug/L	0.1680	6.500	5.160
Pb2203_A		-0.2641	ug/L	0.2155	81.61	-2.365
Sb2068_A		-0.1577	ug/L	0.02114	13.41	-0.1768
Se1960_A		1.118	ug/L	0.8576	76.70	1.799
Si2516_R		933.4	ug/L	4.749	0.5088	609.8
Sn1899_A		1.337	ug/L	0.1587	11.87	2.706
Sr4215_R		158.5	ug/L	0.5242	0.3308	12,490
Ti3349_A		-0.4821	ug/L	0.1534	31.82	-30.07
Tl1908_A		-0.2325	ug/L	0.09461	40.69	-1.935
V_2924_A		0.6960	ug/L	0.2486	35.72	4.112
Zn2062_A		8.040	ug/L	0.007781	0.09678	29.65
Y_3600_R		17,285	Cts/S	23.047	0.13334	17,285
Y_2243_A		8,272.5	Cts/S	27.642	0.33414	8,272.5
Y_3600_A		160,290	Cts/S	38.670	0.024125	160,290

PBWLF12ICW2

Method Name: FAST-2016_NO_AU
Method Revision: 465
Analyst Name: MD
Acquire Date: 6/12/2018 3:42:13PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		-0.04716	ug/L	0.2767	586.7	-32.75
Al3961_R		9.331	ug/L	0.009111	0.09765	10.65
As1891_A		0.09237	ug/L	1.137	1,231	-1.672
B_2089_A		1.929	ug/L	0.4599	23.84	5.180
Ba4554_R		0.9468	ug/L	0.03321	3.508	96.62
Be3130_R		-0.007348	ug/L	0.01802	245.2	3.115
Ca3158_R		38.74	ug/L	1.318	3.402	17.15
Cd2265_A		-0.03336	ug/L	0.03319	99.48	-3.264
Co2286_A		0.1117	ug/L	0.08480	75.90	3.084
Cr2677_A		-0.04698	ug/L	0.08097	172.3	5.312
Cu3273_A		0.2469	ug/L	0.2705	109.5	12.77
Fe2599_R		2.285	ug/L	0.4715	20.64	4.946
K_7664_R		40.44	ug/L	21.19	52.39	-5.888
Li6707_R		2.582	ug/L	0.7933	30.72	33.87
Mg2025_A		12.54	ug/L	0.06725	0.5363	5.090
Mn2576_R		0.06520	ug/L	0.02302	35.31	4.236
Mo2020_A		0.3715	ug/L	0.04436	11.94	2.356
Na5895_R		62.69	ug/L	3.402	5.426	146.5
Ni2316_A		-0.05760	ug/L	0.2311	401.3	-1.068

PBWLF12ICW2

Method Name: FAST-2016_NO_AU
Method Revision: 465
Analyst Name: MD
Acquire Date: 6/12/2018 3:42:13PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A		1.133	ug/L	0.4146	36.60	-0.8138
Sb2068_A		0.7775	ug/L	0.6959	89.50	0.5250
Se1960_A		1.349	ug/L	0.3193	23.67	1.978
Si2516_R		7.320	ug/L	2.116	28.91	24.39
Sn1899_A		0.1516	ug/L	0.2435	160.6	2.002
Sr4215_R		-0.04671	ug/L	0.01156	24.75	-6.540
Ti3349_A		0.04985	ug/L	0.1927	386.5	-13.38
Tl1908_A		-0.2214	ug/L	0.3936	177.8	-1.779
V_2924_A		0.05445	ug/L	0.07746	142.2	-5.044
Zn2062_A		0.9849	ug/L	0.07012	7.120	4.245
Y_3600_R		17,849	Cts/S	133.04	0.74538	17,849
Y_2243_A		8,807.6	Cts/S	29.719	0.33742	8,807.6
Y_3600_A		173,310	Cts/S	2,142.7	1.2363	173,310

LCSWLF12ICW2

Method Name: FAST-2016_NO_AU
Method Revision: 465
Analyst Name: MD
Acquire Date: 6/12/2018 3:46:37PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		51.71	ug/L	0.06829	0.1321	1,197
Al3961_R		2,039	ug/L	2.533	0.1243	2,547
As1891_A		101.6	ug/L	2.019	1.988	54.68
B_2089_A		497.0	ug/L	7.593	1.528	880.8
Ba4554_R		2,054	ug/L	12.65	0.6157	147,800
Be3130_R		50.27	ug/L	0.3266	0.6497	5,214
Ca3158_R		2,572	ug/L	6.925	0.2692	3,665
Cd2265_A		257.6	ug/L	4.647	1.804	4,342
Co2286_A		525.3	ug/L	8.540	1.626	2,603
Cr2677_A		210.6	ug/L	1.036	0.4919	3,368
Cu3273_A		265.2	ug/L	1.713	0.6458	4,433
Fe2599_R		1,032	ug/L	3.434	0.3329	2,373
K_7664_R		10,190	ug/L	4.674	0.04587	8,109
Li6707_R		508.6	ug/L	1.409	0.2771	7,600
Mg2025_A		5,039	ug/L	70.17	1.392	2,738
Mn2576_R		504.4	ug/L	0.002239	0.0004440	6,525
Mo2020_A		104.4	ug/L	1.672	1.601	479.2
Na5895_R		7,661	ug/L	21.06	0.2749	18,720
Ni2316_A		521.0	ug/L	7.858	1.508	1,296
Pb2203_A		106.3	ug/L	1.161	1.091	127.0
Sb2068_A		103.3	ug/L	1.672	1.618	75.43
Se1960_A		102.0	ug/L	1.135	1.112	42.71
Si2516_R		979.0	ug/L	4.494	0.4591	660.9
Sn1899_A		512.9	ug/L	9.284	1.810	382.6
Sr4215_R		495.5	ug/L	2.861	0.5774	40,280
Ti3349_A		522.7	ug/L	2.537	0.4853	18,880
Tl1908_A		108.1	ug/L	1.944	1.798	93.69
V_2924_A		519.3	ug/L	3.754	0.7228	8,358
Zn2062_A		511.6	ug/L	9.883	1.932	1,982
Y_3600_R		17,828	Cts/S	12.549	0.070393	17,828
Y_2243_A		8,814.9	Cts/S	103.95	1.1793	8,814.9
Y_3600_A		174,480	Cts/S	104.99	0.060173	174,480

SL5070-001

Method Name: FAST-2016_NO_AU
Method Revision: 465
Analyst Name: MD
Acquire Date: 6/12/2018 3:50:49PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

SL5070-001

Method Name: FAST-2016_NO_AU
Method Revision: 465
Analyst Name: MD
Acquire Date: 6/12/2018 3:50:49PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.7913	ug/L	0.1222	15.44	-156.5
Al3961_R		340.2	ug/L	2.241	0.6587	425.6
As1891_A		7.998	ug/L	0.2258	2.824	2.023
B_2089_A		632.5	ug/L	10.93	1.728	1,050
Ba4554_R		22.25	ug/L	0.08246	0.3706	1,585
Be3130_R		0.09577	ug/L	0.006432	6.715	13.05
Ca3158_R	W	37,090	ug/L	349.0	0.9410	51,860
Cd2265_A		0.2085	ug/L	0.01462	7.014	20.57
Co2286_A		15.81	ug/L	0.2366	1.497	76.49
Cr2677_A		4.035	ug/L	0.01718	0.4258	71.16
Cu3273_A		11.35	ug/L	0.04472	0.3940	186.1
Fe2599_R		16,550	ug/L	72.12	0.4357	37,040
K_7664_R		18,560	ug/L	106.2	0.5721	14,400
Li6707_R		60.09	ug/L	0.3020	0.5025	869.4
Mg2025_A		18,950	ug/L	309.4	1.633	9,633
Mn2576_R	W	1,059	ug/L	9.375	0.8853	13,320
Mo2020_A		68.50	ug/L	1.146	1.674	296.2
Na5895_R	W	101,900	ug/L	192.4	0.1888	242,400
Ni2316_A		322.8	ug/L	4.605	1.427	754.0
Pb2203_A		24.08	ug/L	1.676	6.959	26.29
Sb2068_A		0.9734	ug/L	0.3144	32.30	0.7049
Se1960_A		3.923	ug/L	0.05245	1.337	3.012
Si2516_R		2,900	ug/L	25.04	0.8635	1,859
Sn1899_A		1.002	ug/L	0.07711	7.692	2.478
Sr4215_R		196.6	ug/L	0.04946	0.02515	15,550
Ti3349_A		12.19	ug/L	0.5932	4.864	405.5
Tl1908_A		0.6801	ug/L	0.4995	73.44	-2.477
V_2924_A		51.92	ug/L	0.3945	0.7598	785.3
Zn2062_A		122.7	ug/L	1.913	1.559	447.6
Y_3600_R		17,343	Cts/S	81.542	0.47017	17,343
Y_2243_A		8,287.8	Cts/S	109.33	1.3191	8,287.8
Y_3600_A		166,070	Cts/S	651.25	0.39216	166,070

SL5164-001

Method Name: FAST-2016_NO_AU
Method Revision: 465
Analyst Name: MD
Acquire Date: 6/12/2018 3:55:55PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.02597	ug/L	0.01052	40.50	-31.23
Al3961_R		84.13	ug/L	0.3153	0.3747	114.8
As1891_A		3.231	ug/L	0.6160	19.06	0.07000
B_2089_A		31.78	ug/L	0.5019	1.579	56.84
Ba4554_R		3.193	ug/L	0.05324	1.667	248.8
Be3130_R		-0.03214	ug/L	0.01473	45.81	0.5346
Ca3158_R	W	47,750	ug/L	44.04	0.09223	66,180
Cd2265_A		-0.1392	ug/L	0.01162	8.349	-4.739
Co2286_A		1.146	ug/L	0.08773	7.655	7.957
Cr2677_A		0.9375	ug/L	0.1540	16.43	20.40
Cu3273_A		2.289	ug/L	0.4093	17.89	45.07
Fe2599_R		136.3	ug/L	0.8992	0.6598	301.8
K_7664_R		6,522	ug/L	2.957	0.04534	4,990
Li6707_R		5.066	ug/L	0.1860	3.671	68.46
Mg2025_A		19,790	ug/L	24.50	0.1238	10,390
Mn2576_R		70.52	ug/L	0.2532	0.3591	889.6
Mo2020_A		17.50	ug/L	0.04699	0.2686	78.54
Na5895_R	W	37,570	ug/L	321.5	0.8557	88,500
Ni2316_A		2.753	ug/L	0.2548	9.255	5.913

SL5164-001

Method Name: FAST-2016_NO_AU
Method Revision: 465
Analyst Name: MD
Acquire Date: 6/12/2018 3:55:55PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A		-1.576	ug/L	0.1853	11.76	-4.017
Sb2068_A		0.2238	ug/L	0.7322	327.1	0.08127
Se1960_A		4.219	ug/L	0.7230	17.14	3.057
Si2516_R		3,108	ug/L	15.00	0.4827	1,975
Sn1899_A		0.8540	ug/L	0.3799	44.48	2.451
Sr4215_R		114.6	ug/L	1.176	1.026	8,976
Ti3349_A		-0.1659	ug/L	0.01468	8.848	-20.36
Tl1908_A		0.04085	ug/L	0.1544	377.9	-1.592
V_2924_A		0.1233	ug/L	0.1967	159.5	-5.669
Zn2062_A		1.243	ug/L	0.009900	0.7962	5.094
Y_3600_R		17,185	Cts/S	148.17	0.86223	17,185
Y_2243_A		8,558.9	Cts/S	7.7881	0.090994	8,558.9
Y_3600_A		167,730	Cts/S	65.541	0.039074	167,730

PBSLF12ICS1

Method Name: FAST-2016_NO_AU
Method Revision: 465
Analyst Name: MD
Acquire Date: 6/12/2018 4:00:17PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.2302	ug/L	0.03865	16.79	-26.13
Al3961_R		6.081	ug/L	3.894	64.03	6.489
As1891_A		-0.6341	ug/L	0.5692	89.77	-2.079
B_2089_A		2.929	ug/L	0.09478	3.236	6.956
Ba4554_R		0.02760	ug/L	0.06089	220.6	30.02
Be3130_R		-0.002303	ug/L	0.02851	1,238	3.580
Ca3158_R		25.71	ug/L	0.1256	0.4888	-1.605
Cd2265_A		-0.04036	ug/L	0.02783	68.96	-3.371
Co2286_A		0.1259	ug/L	0.03726	29.59	3.165
Cr2677_A		0.6589	ug/L	0.3865	58.66	16.34
Cu3273_A		0.3888	ug/L	0.1446	37.18	14.98
Fe2599_R		17.87	ug/L	0.1435	0.8032	40.28
K_7664_R		15.26	ug/L	31.46	206.2	-25.69
Li6707_R		1.213	ug/L	0.3752	30.93	13.25
Mg2025_A		9.738	ug/L	0.4736	4.863	3.588
Mn2576_R		0.04348	ug/L	0.01605	36.91	3.898
Mo2020_A		0.3490	ug/L	0.03888	11.14	2.260
Na5895_R		35.62	ug/L	4.016	11.27	79.21
Ni2316_A		0.03487	ug/L	0.2313	663.4	-0.8443
Pb2203_A		0.7385	ug/L	0.3199	43.32	-1.296
Sb2068_A		0.9276	ug/L	0.4896	52.79	0.4219
Se1960_A		0.3119	ug/L	0.4437	142.2	1.564
Si2516_R		3.857	ug/L	4.232	109.7	21.83
Sn1899_A		36.32	ug/L	0.5667	1.560	28.91
Sr4215_R		-0.001810	ug/L	0.03872	2,139	-2.834
Ti3349_A		0.1974	ug/L	0.03146	15.94	-8.059
Tl1908_A		-0.09813	ug/L	0.4411	449.5	-1.671
V_2924_A		-0.03904	ug/L	0.1076	275.7	-6.517
Zn2062_A		0.7145	ug/L	0.01307	1.830	3.203
Y_3600_R		17,612	Cts/S	107.58	0.61080	17,612
Y_2243_A		8,831.7	Cts/S	55.129	0.62422	8,831.7
Y_3600_A		171,990	Cts/S	1,389.3	0.80776	171,990

LCSWLF12ICS1

Method Name: FAST-2016_NO_AU
Method Revision: 465
Analyst Name: MD
Acquire Date: 6/12/2018 4:04:42PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

LCSWLF12ICS1

Method Name: FAST-2016_NO_AU
Method Revision: 465
Analyst Name: MD
Acquire Date: 6/12/2018 4:04:42PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		51.12	ug/L	0.4290	0.8392	1,138
Al3961_R		2,000	ug/L	42.86	2.143	2,437
As1891_A		100.1	ug/L	1.664	1.663	52.20
B_2089_A		477.9	ug/L	12.21	2.554	821.2
Ba4554_R		2,008	ug/L	37.12	1.849	140,900
Be3130_R		49.34	ug/L	0.7013	1.421	4,991
Ca3158_R		2,546	ug/L	53.43	2.099	3,538
Cd2265_A		255.6	ug/L	5.706	2.232	4,177
Co2286_A		520.7	ug/L	11.81	2.268	2,501
Cr2677_A		210.9	ug/L	1.494	0.7086	3,244
Cu3273_A		263.8	ug/L	1.750	0.6634	4,243
Fe2599_R		1,023	ug/L	26.68	2.609	2,293
K_7664_R		10,040	ug/L	153.7	1.531	7,789
Li6707_R		494.0	ug/L	7.064	1.430	7,200
Mg2025_A		4,992	ug/L	126.3	2.531	2,629
Mn2576_R		495.7	ug/L	10.78	2.175	6,254
Mo2020_A		103.8	ug/L	2.425	2.337	461.5
Na5895_R		7,547	ug/L	148.4	1.967	17,980
Ni2316_A		515.6	ug/L	11.44	2.218	1,243
Pb2203_A		105.9	ug/L	1.231	1.162	122.6
Sb2068_A		100.7	ug/L	1.743	1.732	71.03
Se1960_A		103.0	ug/L	1.472	1.429	41.77
Si2516_R		944.7	ug/L	23.22	2.458	622.7
Sn1899_A		539.3	ug/L	11.95	2.215	389.8
Sr4215_R		484.2	ug/L	10.59	2.187	38,390
Ti3349_A		521.6	ug/L	3.288	0.6304	18,130
Tl1908_A		105.4	ug/L	1.668	1.582	88.47
V_2924_A		517.3	ug/L	1.758	0.3399	8,009
Zn2062_A		504.5	ug/L	10.00	1.982	1,895
Y_3600_R		17,390	Cts/S	290.36	1.6697	17,390
Y_2243_A		8,544.8	Cts/S	156.94	1.8367	8,544.8
Y_3600_A		167,840	Cts/S	831.16	0.49522	167,840

SL4955-001

Method Name: FAST-2016_NO_AU
Method Revision: 465
Analyst Name: MD
Acquire Date: 6/12/2018 4:08:56PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		-0.05739	ug/L	1.838	3,203	-2,129
Al3961_R	W	87,650	ug/L	721.0	0.8226	111,400
As1891_A		71.41	ug/L	0.5757	0.8061	29.91
B_2089_A		145.3	ug/L	0.3982	0.2739	259.1
Ba4554_R		150.9	ug/L	1.591	1.054	11,090
Be3130_R		3.558	ug/L	0.1430	4.019	-55.34
Ca3158_R		21,100	ug/L	168.2	0.7971	30,890
Cd2265_A		-0.3576	ug/L	0.08883	24.84	294.9
Co2286_A		51.61	ug/L	0.5357	1.038	339.0
Cr2677_A		212.7	ug/L	6.975	3.280	3,373
Cu3273_A		321.9	ug/L	10.30	3.200	5,212
Fe2599_R	W	231,200	ug/L	373.2	0.1614	541,800
K_7664_R		6,851	ug/L	37.64	0.5495	5,542
Li6707_R		173.7	ug/L	1.964	1.131	2,641
Mg2025_A	W	45,920	ug/L	238.6	0.5196	24,920
Mn2576_R	W	3,511	ug/L	28.37	0.8082	46,160
Mo2020_A		18.65	ug/L	0.1440	0.7719	87.66
Na5895_R		1,470	ug/L	22.66	1.541	3,654
Ni2316_A		148.8	ug/L	0.3052	0.2051	367.3

SL4955-001

Method Name: FAST-2016_NO_AU
Method Revision: 465
Analyst Name: MD
Acquire Date: 6/12/2018 4:08:56PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A		232.5	ug/L	0.2123	0.09131	284.6
Sb2068_A		1.432	ug/L	0.2558	17.86	7.874
Se1960_A		-2.460	ug/L	0.6162	25.04	2.490
Si2516_R		3,027	ug/L	129.4	4.274	2,030
Sn1899_A		57.40	ug/L	0.3207	0.5588	44.65
Sr4215_R		68.93	ug/L	0.1964	0.2849	5,707
Ti3349_A	W	5,770	ug/L	147.3	2.553	204,900
Tl1908_A		0.1366	ug/L	1.763	1,291	-10.99
V_2924_A		215.8	ug/L	7.923	3.672	3,501
Zn2062_A	W	1,448	ug/L	1.309	0.09036	5,632
Y_3600_R		18,165	Cts/S	61.819	0.34032	18,165
Y_2243_A		8,843.8	Cts/S	21.313	0.24099	8,843.8
Y_3600_A		171,430	Cts/S	3,655.8	2.1326	171,430

CCV

Method Name: FAST-2016_NO_AU
Method Revision: 465
Analyst Name: MD
Acquire Date: 6/12/2018 4:14:06PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		503.7	ug/L	0.4470	0.08875	11,740
Al3961_R		12,330	ug/L	7.056	0.05725	15,030
As1891_A		482.6	ug/L	5.812	1.204	264.8
B_2089_A		482.1	ug/L	3.831	0.7947	870.3
Ba4554_R		493.2	ug/L	2.097	0.4252	34,660
Be3130_R		486.1	ug/L	0.6891	0.1418	49,480
Ca3158_R		12,410	ug/L	64.01	0.5160	17,390
Cd2265_A		484.3	ug/L	4.957	1.024	8,145
Co2286_A		493.1	ug/L	4.551	0.9228	2,433
Cr2677_A		508.4	ug/L	2.404	0.4730	7,985
Cu3273_A		497.2	ug/L	2.012	0.4046	8,167
Fe2599_R		12,400	ug/L	7.799	0.06288	27,850
K_7664_R		12,360	ug/L	13.78	0.1115	9,609
Li6707_R		492.2	ug/L	4.033	0.8193	7,180
Mg2025_A		12,150	ug/L	98.08	0.8073	6,557
Mn2576_R		493.5	ug/L	1.731	0.3508	6,228
Mo2020_A		488.8	ug/L	5.938	1.215	2,231
Na5895_R		12,160	ug/L	68.69	0.5647	29,020
Ni2316_A		489.1	ug/L	4.501	0.9203	1,214
Pb2203_A		488.9	ug/L	5.862	1.199	589.1
Sb2068_A		482.0	ug/L	5.278	1.095	361.7
Se1960_A		482.0	ug/L	5.726	1.188	195.1
Si2516_R		12,240	ug/L	22.37	0.1828	7,818
Sn1899_A		487.4	ug/L	4.386	0.8999	362.0
Sr4215_R		481.6	ug/L	3.171	0.6584	38,220
Ti3349_A		502.4	ug/L	1.745	0.3474	17,850
Tl1908_A		491.7	ug/L	4.031	0.8198	436.4
V_2924_A		500.8	ug/L	2.554	0.5100	7,878
Zn2062_A		485.6	ug/L	5.732	1.180	1,872
Y_3600_R		17,404	Cts/S	212.58	1.2214	17,404
Y_2243_A		8,774.3	Cts/S	83.609	0.95289	8,774.3
Y_3600_A		171,590	Cts/S	821.27	0.47863	171,590

CCB

Method Name: FAST-2016_NO_AU
Method Revision: 465
Analyst Name: MD
Acquire Date: 6/12/2018 4:18:13PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

CCB

Method Name: FAST-2016_NO_AU
Method Revision: 465
Analyst Name: MD
Acquire Date: 6/12/2018 4:18:13PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.1583	ug/L	0.005007	3.162	-27.79
Al3961_R		-4.120	ug/L	0.4077	9.896	-5.898
As1891_A		-0.1608	ug/L	0.1161	72.17	-1.818
B_2089_A		1.406	ug/L	0.2739	19.49	4.279
Ba4554_R		-0.05482	ug/L	0.06214	113.3	23.42
Be3130_R		0.01820	ug/L	0.03296	181.1	5.515
Ca3158_R		0.5616	ug/L	4.194	746.9	-36.24
Cd2265_A		0.01915	ug/L	0.05100	266.3	-2.385
Co2286_A		0.07073	ug/L	0.06538	92.42	2.889
Cr2677_A		0.05145	ug/L	0.02755	53.54	6.840
Cu3273_A		-0.4610	ug/L	0.1560	33.84	0.9990
Fe2599_R		1.104	ug/L	0.007238	0.6554	2.135
K_7664_R		-21.35	ug/L	18.76	87.86	-53.42
Li6707_R		1.626	ug/L	1.279	78.69	19.09
Mg2025_A		-0.2438	ug/L	0.4084	167.5	-1.824
Mn2576_R		-0.2728	ug/L	0.04998	18.32	-0.1244
Mo2020_A		0.4419	ug/L	0.1038	23.49	2.687
Na5895_R		4.894	ug/L	5.300	108.3	5.037
Ni2316_A		-0.2082	ug/L	0.1084	52.06	-1.449
Pb2203_A		0.6484	ug/L	0.8062	124.3	-1.403
Sb2068_A		0.5139	ug/L	0.4214	82.00	0.3261
Se1960_A		0.9377	ug/L	1.698	181.1	1.817
Si2516_R		8.852	ug/L	8.889	100.4	24.29
Sn1899_A		0.06818	ug/L	0.02169	31.81	1.947
Sr4215_R		0.004879	ug/L	0.003648	74.77	-2.248
Ti3349_A		-0.06681	ug/L	0.1398	209.2	-17.55
Tl1908_A		0.5820	ug/L	0.01466	2.520	-1.059
V_2924_A		-0.2054	ug/L	0.09148	44.53	-9.183
Zn2062_A		0.06141	ug/L	0.06551	106.7	0.6704
Y_3600_R		17,135	Cts/S	523.08	3.0528	17,135
Y_2243_A		8,839.0	Cts/S	53.669	0.60719	8,839.0
Y_3600_A		172,750	Cts/S	160.33	0.092811	172,750

SL4955-002

Method Name: FAST-2016_NO_AU
Method Revision: 465
Analyst Name: MD
Acquire Date: 6/12/2018 4:22:38PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.2480	ug/L	7.025	2,833	-4,749
Al3961_R	W	115,200	ug/L	5,193	4.507	144,600
As1891_A		410.0	ug/L	1.087	0.2651	205.5
B_2089_A		65.95	ug/L	0.3617	0.5485	189.9
Ba4554_R		639.8	ug/L	29.89	4.671	46,320
Be3130_R		6.406	ug/L	0.005103	0.07965	227.7
Ca3158_R	W	29,110	ug/L	1,249	4.292	42,080
Cd2265_A		9.175	ug/L	1.359	14.82	828.0
Co2286_A		224.7	ug/L	0.2468	0.1098	1,191
Cr2677_A		849.8	ug/L	1.663	0.1957	13,330
Cu3273_A	W	5,272	ug/L	2.713	0.05146	85,870
Fe2599_R	F	526,000	ug/L	17,160	3.263	1,217,000
K_7664_R		11,930	ug/L	587.6	4.927	9,553
Li6707_R		225.2	ug/L	10.19	4.524	3,381
Mg2025_A	W	58,540	ug/L	244.1	0.4170	31,340
Mn2576_R	W	3,910	ug/L	166.6	4.261	50,650
Mo2020_A	W	1,447	ug/L	3.702	0.2558	6,562
Na5895_R		3,168	ug/L	141.7	4.473	7,781
Ni2316_A		477.7	ug/L	0.7387	0.1546	1,181

Logbooks and Supporting Documents

Katahdin Analytical Services, LLC

Non-Volatile TCLP/SPLP Extraction Fluid Preparation and Use Logbook

AMJ 5/24/18

FLUID PREPARATION

TCLP ☑ SPLP ☐	TCLP Fluid #:	Fluid Batch #:	Prep Date:	Prepared by:	Measured pH:
	~~1456A~~ 1	1456A	5/24/18	AMJ	4.98

AMJ 5/29/18

Reagent	Manufacturer's Lot Number	Reagent Volume (mL)	Reagent Mass (g)	Fluid Final Volume (L)
Glacial Acetic Acid	MSR48291	120	N.A.	20L
Sodium Hydroxide	MSR79	N.A.	55.04	↓
0.6% Sulfuric Acid / 0.4% nitric acid				

Matrix Spike: 20mL of MW17771/MW17772 + 0.2mL of MS2124/MW17789

FLUID USE LOG

Katahdin Sample Number	TCLP Extraction Start Date	Extract to be Analyzed for: Metals	SVOA	Pest	Herb
Blank: PBT1456A	5/24/18	✓	✓	✓	✓
Matrix Spike: SL4502-F	↓				
SL4502-2F	↓	✓	✓	✓	✓
SL4620-4C	5/29/18	✓	✓	✓	✓
SL4800-2D	6/4/18	✓	✓	✓	✓
SL4912-2F	↓	✓	✓		
~~SL4800-2D~~ AMJ 6/5/18	~~6/5/18~~				
SL4984-1B	6/6/18	✓	✓	✓	✓
SL5227-5A	6/13/18	✓			
↓ -6A	↓	✓			
				MP 6/14/18	

KATAHDIN ANALYTICAL SERVICES, LLC. Non-Volatile TCLP/SPLP Extraction Log

I. EXTRACTION CONDITIONS

Extraction Method:	SW846 1311 (TCLP) ☑ SW846 1312 (SPLP) ☐		Balance ID: BAL-15 pH Meter ID: Orion 520A s/n 7422	Rotary Extractor ID: 2 pH Probe ID: 5733526-003B		
Solid pH Determination:	Date: 5-24-18	Analyst: AMJ	Room Thermometer ID: Dig 70	(Room Temp Criteria. 23(±2)°C)		
Rotary Extraction Started:	Date: 5-24-18	Time: 1355	Analyst: AMJ	RoomTemp(°C):	Start: 21.4	End: 22.1
Rotary Extraction Completed:	Date: 5-25-18	Time: 0720	Analyst: AMJ	Room Temp (°C):	Min. 21.2	Max. 22.3
Extraction Filtered:	Date: 5-25-18	Time: 0810	Analyst: AMJ	Filter Lot #: R7MA33070		
Elapsed Extraction Time (HH:MM): 17:25	4.98	5% HNO_3 ID (used to wash filters): MSR101		HNO_3 Lot # (used to preserve extracts): MR		
Fluid 1 pH (Day of use): PBT1454A - 4.90 PBT1456A -		Fluid 1 Expiration Date: 5/15/19		Rotary Extractor Rotation Rate Checked? ✓		
Fluid 2 pH (Day of use): NA		Fluid 2 Expiration Date: NA		Criteria. 30 ± 2 RPM ✓ (29)		

II. EXTRACTION SETUP

TCLP Fluid pH: #1 - 4.93 ± 0.05 #2 - 2.88 ± 0.05 SPLP Fluid pH: #1 - 4.20 ± 0.05 #2 - 5.00 ± 0.05

Katahdin Sample No. (include bottle ID)	Matrix	Check One: 100% Wet Solids-waste will yield no liquid upon filtration	Check One: < 100% Wet Solids (Perform Solids Determination below)	SPLP FLUID # (1 for east and 2 for west of Mississippi River)	TCLP pH Determination and Fluid Selection (date & init. above): Initial pH of solid phase: (if <5, use Fluid #1; if >5 add 3.5 mL of 1 N HCl)	TCLP pH Determination and Fluid Selection (date & init. above): pH after 1 N HCL addition (if <5, use Fluid #1; if >5, use Fluid #2	Extraction Setup: Volume of Extraction Fluid (mL)	Extraction Setup: Fluid # used	Extraction Setup: Associated Extraction Blank ID: AMJ 5/24/18	Extraction Setup: Weight of Waste (g)	pH of extract after extraction:	Extract to be analyzed for: Metals (M), SVOA (S), PEST (P), HERB (H), Cyanide (C)	Extraction Bottle ID (if applicable)
SL4502-2F	SL	✓	—	—	8.68	4.00	2000	1	PBT1456A	100.01	6.24	M,P,H,S	25
PBT1456A	AQ	✓	—	—	—	—	2000	1	PBT1456A	NA	4.96	M,P,H,S	21

ME-001 – Revision 7 – 02/23/2018

AMJ 5/25/1

KATAHDIN ANALYTICAL SERVICES, LLC. Non-Volatile TCLP/SPLP Extraction Log

I. EXTRACTION CONDITIONS

Extraction Method:	SW846 1311 (TCLP) ☑		Balance ID: BAL-15	Rotary Extractor ID: 2		
	SW846 1312 (SPLP) ☐		pH Meter ID: Orion 520A s/n 7422	pH Probe ID: 5733526-003B		
Solid pH Determination:	Date: 6-6-18	Analyst: AMJ	Room Thermometer ID: Dig 71	(Room Temp Criteria. 23(±2)°C)		
Rotary Extraction Started:	Date: 6-6-18	Time: 1350	Analyst: AMJ	RoomTemp(°C):	Start: 21.4	End: 23.1
Rotary Extraction Completed:	Date: 6-7-18	Time: 0550	Analyst: AMJ	Room Temp (°C):	Min. 21.4	Max. 23.2
Extraction Filtered:	Date: 6-7-18	Time: 0734	Analyst: AMJ	Filter Lot #: R7MA33070		
Elapsed Extraction Time (HH:MM): 16:00		5% HNO_3 ID (used to wash filters): MS2032		HNO_3 Lot # (used to preserve extracts): MSR101		
Fluid 1 pH (Day of use): PBT1456A- 4.95		Fluid 1 Expiration Date: 5/24/19		Rotary Extractor Rotation Rate Checked? ✓		
Fluid 2 pH (Day of use): NA		Fluid 2 Expiration Date: NA		Criteria. 30 ± 2 RPM (30)		

II. EXTRACTION SETUP

TCLP Fluid pH: #1 - 4.93 ± 0.05 #2 - 2.88 ± 0.05 SPLP Fluid pH: #1 - 4.20 ± 0.05 #2 - 5.00 ± 0.05

Katahdin Sample No. (include bottle ID)	Matrix	Check One: 100% Wet Solids- waste will yield no liquid upon filtration	Check One: < 100% Wet Solids (Perform Solids Determination below)	SPLP FLUID # (1 for east and 2 for west of Mississippi River)	TCLP pH Determination and Fluid Selection (date & init. above): Initial pH of solid phase: (if <5, use Fluid #1; if >5 add 3.5 mL of 1 N HCl)	TCLP pH Determination and Fluid Selection (date & init. above): pH after 1 N HCL addition (if <5, use Fluid #1; if >5, use Fluid #2	Extraction Setup: Volume of Extraction Fluid (mL)	Extraction Setup: Fluid # used	Extraction Setup: Associated Extraction Blank ID:	Extraction Setup: Weight of Waste (g)	pH of extract after extraction:	Extract to be analyzed for: Metals (M), SVOA (S), PEST (P), HERB (H), Cyanide (C)	Extraction Bottle ID (if applicable)
SL4984-1B	SL	✓	–	–	9.01	1.80	2000	1	PBT1456A	100.04g	5.47	M, H, P, S, V.	34

CMS 6/7/18

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QAA191

Katahdin Analytical Services 4000138

Katahdin Analytical Services, Inc. **Metals Preparation Benchsheet**

Reagent Information: **Method:** 7470

HNO3: MSR101 H2SO4: MSR43

KMNO4: MR2021 K2S2O8: MR1963 NH2OH-HCl: MR2011

REVIEWED
MD 5/29/18
KATAHDIN ANALYTICAL
METALS SECTION

Standards/Spiking Information:

1ppm A : MW17789

1ppm B : MW17722

Heat Source ID : B

Start Time: 1317 /Temp. 93 °C

End Time: 1517 /Temp. 95 °C

Thermometer ID/Pos: AIC25 / 5.7

Pipet		
M11	LCSW = 125uL of 1ppm A	to 25mL
M11	Spike(S/P) = 25uL of 1ppm A	to 25mL
M15	ICV = 600uL of 1ppm B	to 100 mL
M15	S10.0 = 1000uL of 1ppm A	to 100 mL

Sample ID	Batch ID	Initial Wt/Vol	Initial Units	Final Vol	Final Units	MX	Meth	Anal.	Date	Bottle
LCSWLE25HGW2	LE25HGW2	0.025	L	0.025	L	AQ	HG	AMJ	05/25/2018	
PBT1456A	LE25HGW2	"	L	"	L	AQ	HG	AMJ	05/25/2018	A
PBWLE25HGW2	LE25HGW2	"	L	"	L	AQ	HG	AMJ	05/25/2018	
SL4448-001	LE25HGW2	"	L	"	L	AQ	HG	AMJ	05/25/2018	H
SL4502-002	LE25HGW2	"	L	"	L	AQ	HG	AMJ	05/25/2018	F
SL4502-002P	LE25HGW2	"	L	"	L	AQ	HG	AMJ	05/25/2018	F
*SL4502-002S	LE25HGW2	"	L	"	L	AQ	HG	AMJ	05/25/2018	F
SL4519-001	LE25HGW2	"	L	"	L	AQ	HG	AMJ	05/25/2018	C
SL4519-002	LE25HGW2	"	L	"	L	AQ	HG	AMJ	05/25/2018	C
SL4561-001	LE25HGW2	"	L	"	L	AQ	HG	AMJ	05/25/2018	D

* Matrix Spike information please look at QAA185 pg 64.

MD 5/29/18

Katahdin Analytical Services, Inc.

Metals Preparation Benchsheet

Reagent Information:

Method: 3010

HNO3: MSR101 HCL: MSR97

REVIEWED
MD 5/29/18
KATAHDIN ANALYTICAL
METALS SECTION

Pipet **LCS/Spiking Information:**

M11 CLPP-SPK-1 (ID/Vol): MS2124 / 0.05 mL
M15 CLPP-SPK-INT1 (ID/Vol): MW1771 / 0.5 mL
M15 CLPP-SPK-INT2 (ID/Vol): MW1772 / 0.5 mL
___ ___ Spike (ID/Vol): NA / ___ mL

Heat Source ID : E
Start Time: 1827 /Temp. 92 °C
End Time: 1914 /Temp. 93 °C
Thermometer ID/Pos: ALC24 / 3.1

Sample ID	Batch ID	Initial Wt/Vol	Initial Units	Final Vol	Final Units	MX	Meth	Anal.	Date	Bottle
LCSWLE25ICW2	LE25ICW2	0.05	L	0.05	L	AQ	IC	AMJ	05/25/2018	
PBT1456A	LE25ICW2	0.01	L		L	AQ	IC	AMJ	05/25/2018	A
PBWLE25ICW2	LE25ICW2	0.05	L		L	AQ	IC	AMJ	05/25/2018	
SL4502-002	LE25ICW2	0.01	L		L	AQ	IC	AMJ	05/25/2018	F
~~SL4502-002P~~	LE25ICW2	0.01	L		L	AQ	IC	AMJ	05/25/2018	F
~~SL4502-002S~~	LE25ICW2	0.01	L		L	AQ	IC	AMJ	05/25/2018	F
SL4506-001	LE25ICW2	0.05	L		L	AQ	IC	AMJ	05/25/2018	~~A~~ H
SL4506-002	LE25ICW2		L		L	AQ	IC	AMJ	05/25/2018	~~A~~ H
SL4506-005	LE25ICW2		L		L	AQ	IC	AMJ	05/25/2018	H
SL4509-001	LE25ICW2		L		L	AQ	IC	AMJ	05/25/2018	A
SL4509-002	LE25ICW2		L		L	AQ	IC	AMJ	05/25/2018	A
SL4509-003	LE25ICW2		L		L	AQ	IC	AMJ	05/25/2018	A
SL4509-004	LE25ICW2		L		L	AQ	IC	AMJ	05/25/2018	A
SL4519-001	LE25ICW2		L		L	AQ	IC	AMJ	05/25/2018	C
SL4519-002	LE25ICW2		L		L	AQ	IC	AMJ	05/25/2018	C
~~SL4561-001~~	~~LE25ICW2~~		~~L~~		~~L~~	~~AQ~~	~~IC~~	~~AMJ~~	~~05/25/2018~~	~~H~~
SL4572-004	LE25ICW2		L		L	AQ	IC	AMJ	05/25/2018	
SL4572-006	LE25ICW2		L		L	AQ	IC	AMJ	05/25/2018	
SL4572-009	LE25ICW2		L		L	AQ	IC	AMJ	05/25/2018	
SL4572-011	LE25ICW2		L		L	AQ	IC	AMJ	05/25/2018	
SL4572-012	LE25ICW2		L		L	AQ	IC	AMJ	05/25/2018	

AMJ 5/25/18

MD 5/29/18

* Matrix Spike information please look at QAAA185 pg65.

MD 5/29/18

QA-064-Revision 3 - 06/15/2017 Digestion performed by: AMJ On: 5/25/18 Page: LE147 Revision: 00

Katahdin Analytical Services, Inc. **Metals Preparation Benchsheet**

Method: 7470

REVIEWED
JS 6-13-18
KATAHDIN ANALYTICAL METALS SECTION

Reagent Information:

HNO3: MSR101 H2SO4: MSR43

KMNO4: MR2030 K2S2O8: ~~MS~~ MR2028 NH2OH-HCl: MR ~~MS~~ 2029
AMS 6/12/18

Standards/Spiking Information:

1ppm A : MW17789

Pipet 1ppm B : MW17814 AMS 6/12/18

M11 LCSW = 125uL of 1ppm A to 25mL

~~M11~~ M15 Spike(S/P) = 25uL of 1ppm A to 25mL
AMS M11 6/12/18

M15 ICV = 600uL of 1ppm B to 100 mL

M15 S10.0 = 1000uL of 1ppm A to 100 mL

Heat Source ID : B

Start Time: 0832 /Temp. 92 °C

End Time: 1052 /Temp. 95 °C

Thermometer ID/Pos: AIR25 / 11.4

Sample ID	Batch ID	Initial Wt/Vol	Initial Units	Final Vol	Final Units	MX	Meth	Anal.	Date	Bottle
LCSWLF12HGW3	LF12HGW3	0025	L	0.025	L	AQ	HG	AMJ	06/12/2018	
PBWLF12HGW3	LF12HGW3		L		L	AQ	HG	AMJ	06/12/2018	
SL4925-005	LF12HGW3		L		L	AQ	HG	AMJ	06/12/2018	F
SL4925-006	LF12HGW3		L		L	AQ	HG	AMJ	06/12/2018	F
SL4925-008	LF12HGW3		L		L	AQ	HG	AMJ	06/12/2018	P
SL4925-008P	LF12HGW3		L		L	AQ	HG	AMJ	06/12/2018	P
SL4925-008S	LF12HGW3		L		L	AQ	HG	AMJ	06/12/2018	P
SL4925-009	LF12HGW3		L		L	AQ	HG	AMJ	06/12/2018	C
SL4925-009P	LF12HGW3		L		L	AQ	HG	AMJ	06/12/2018	C
SL4925-009S	LF12HGW3		L		L	AQ	HG	AMJ	06/12/2018	C
SL4925-010	LF12HGW3		L		L	AQ	HG	AMJ	06/12/2018	F
SL4925-011	LF12HGW3		L		L	AQ	HG	AMJ	06/12/2018	D
SL4925-015	LF12HGW3		L		L	AQ	HG	AMJ	06/12/2018	F
SL4925-016	LF12HGW3		L		L	AQ	HG	AMJ	06/12/2018	A
SL4984-001	LF12HGW3	↓	L	↓	L	AQ	HG	AMJ	06/12/2018	B

JS 6-13-18

 Digestion performed by: amj **On:** 6/12/18

Katahdin Analytical Services 4000141

Katahdin Analytical Services, Inc.

Metals Preparation Benchsheet

Reagent Information:

Method: 3010 REVIEWED

HNO3: MSR101 HCL: MSR97

JSG 12.18
KATAHDIN ANALYTICAL
METALS SECTION

Pipet **LCS/Spiking Information:**

M11 **CLPP-SPK-1 (ID/Vol):** MS2124 / 0.05 mL
M15 **CLPP-SPK-INT1 (ID/Vol):** MW1771 / 0.5 mL
M15 **CLPP-SPK-INT2 (ID/Vol):** MW1772 / 0.5 mL
____ _____ **Spike (ID/Vol):** NA / _____ mL

Heat Source ID : E
Start Time: 0838 **/Temp.** 91 °C
End Time: 1336 **/Temp.** 94 °C
Thermometer ID/Pos: AIC24 / 1.8

Sample ID	Batch ID	Initial Wt/Vol	Initial Units	Final Vol	Final Units	MX	Meth	Anal.	Date	Bottle
LCSWLF12ICW1	LF12ICW1	0.05	L	0.05	L	AQ	IC	AMJ	06/12/2018	
PBWLF12ICW1	LF12ICW1	↓	L	↓	L	AQ	IC	AMJ	06/12/2018	
SL4984-001	LF12ICW1	0.01	L	↓	L	AQ	IC	AMJ	06/12/2018	B

JSG 12.18

QA-064-Revision 3 - 06/15/2017 **Digestion performed by:** AMJ **On:** 6/12/18 **Page:** LF048 **Revision:** 00

CONVENTIONAL AND PHYSICAL ANALYTICAL DATA

QC Summary Section

Quality Control Report

Blank Sample Summary Report

Cyanide, Reactive

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL	LOD
MBLANK	WG229939	SW846 7.3.3	06-JUN-18	06-JUN-18	U 10. mg/Kg	20. mg/Kg	10.

Ignitability

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL	LOD
MBLANK	WG230048	SW846 1010A	08-JUN-18	N/A	> 71. Deg. C	71. Deg. C	N/A

Paint Filter Liquids Test

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL	LOD
MBLANK	WG230352	SW846 9095B	14-JUN-18	N/A	NFL		N/A

Sulfide,Reactive

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL	LOD
MBLANK	WG230154	SW846 7.3.4	06-JUN-18	06-JUN-18	U 25. mg/Kg	50. mg/Kg	25.

Total Solids

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL	LOD
MBLANK	WG229882	SW3540C	07-JUN-18	06-JUN-18	100 %	1 %	N/A

Quality Control Report

Laboratory Control Sample Summary Report

Cyanide, Reactive

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG229939-2	LCS	WG229939	06-JUN-18	06-JUN-18	mg/Kg	20	J 4.7	23	0-100	

Ignitability

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG230048-2	LCS	WG230048	08-JUN-18	N/A	Deg. C	27	29.	107	80-120	
WG230048-3	LCSD	WG230048	08-JUN-18	N/A	Deg. C	27	31.	114	80-120	7

Sulfide,Reactive

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG230154-2	LCS	WG230154	06-JUN-18	06-JUN-18	mg/Kg	863.9	620	71	50-150	

Total Solids

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG229882-2	LCS	WG229882	07-JUN-18	06-JUN-18	%	90	90.	100	90-110	

pH(Soil)

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG229846-1	LCS	WG229846	05-JUN-18	05-JUN-18	pH	7	7.0	100	90-110	

Quality Control Report

Duplicate Sample Summary Report

Cyanide, Reactive

Duplicate Sample ID	Original Sample ID	QC Batch	Analysis Date	Result Units	Sample Result	Duplicate Result	RPD(%)	RPD Limit
WG229939-3	SL4984-1	WG229939	06-JUN-18	mg/Kg	U 10.	U 10.	NC	20

Sulfide,Reactive

Duplicate Sample ID	Original Sample ID	QC Batch	Analysis Date	Result Units	Sample Result	Duplicate Result	RPD(%)	RPD Limit
WG230154-3	SL4984-1	WG230154	06-JUN-18	mg/Kg	U 25.	U 25	NC	20

Matrix Spike Sample Summary Report

Cyanide, Reactive

Matrix Spike Sample ID	Sample Type	Original Sample ID	QC Batch	Analysis Date	Result Units	Spike Amount	Sample Result	MS Result	Recovery (%)	Recovery Limit
WG229939-4	MS	SL4984-1	WG229939	06-JUN-18	mg/Kg	20	U 10.	J 8.4	42	0 - 100

Sulfide,Reactive

Matrix Spike Sample ID	Sample Type	Original Sample ID	QC Batch	Analysis Date	Result Units	Spike Amount	Sample Result	MS Result	Recovery (%)	Recovery Limit
WG230154-4	MS	SL4984-1	WG230154	06-JUN-18	mg/Kg	863.9	U 25.	480	56	30 - 120

Sample Data Section

KATAHDIN ANALYTICAL SERVICES – INORGANIC DATA QUALIFIERS

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Practical Quantitation Level (PQL) (also called Limit of Quantitation (LOQ)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL "U" LOQ or "U" LOD, where the rate of false negatives is <1%.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Practical Quantitation Level (PQL) (also called Limit of Quantitation (LOQ)), but above the Method Detection Limit (MDL).

I-7 The laboratory's Practical Quantitation Level (PQL) or LOQ could not be achieved for this parameter due to sample composition, matrix effects, sample volume, or quantity used for analysis.

A-4 Please refer to cover letter or narrative for further information.

H_ Please note that the regulatory holding time for _____ is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. _____ for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H1 - pH H2 - DO H3 - sulfite H4 - residual chlorine

T1 The client did not provide the full volume of at least one liter for analysis of TSS. Therefore, the PQL of 2.5 mg/L could not be achieved.

T2 The client provided the required volume of at least one liter for analysis of TSS, but the laboratory could not filter the full one liter volume due to the sample matrix. Therefore, the PQL of 2.5 mg/L could not be achieved.

M1 The matrix spike and/or matrix spike duplicate recovery performed on this sample was outside of the laboratory acceptance criteria. Sample matrix is suspected. The laboratory criteria was met for the Laboratory Control Sample (LCS) analyzed concurrently with this sample.

M2 The matrix spike and/or matrix spike duplicate recovery was outside of the laboratory acceptance criteria. The native sample concentration is greater than four times the spike added concentration so the spike added could not be distinguished from the native sample concentration.

R1 The relative percent difference (RPD) between the duplicate analyses performed on this sample was outside of the laboratory acceptance criteria (when both values are greater than ten times the PQL).

MCL	Maximum Contaminant Level	NL	No limit
NFL	No Free Liquid Present	FLP	Free Liquid Present
NOD	No Odor Detected	TON	Threshold Odor Number

D-1 As required by Method 5210B, APHA Standard Methods for the Examination of Water and Wastewater (21st edition), the BOD value reported for this sample is 'qualified' because the check standard run concurrently with the sample analysis did not meet the criteria specified in the method (198 +/- 30.5 mg/L). These results may not be reportable for compliance purposes.

D-2 The measured final dissolved oxygen concentrations of all dilutions were less than the method-specified limit of 1 mg/L. The reported BOD result was calculated assuming a final oxygen concentration equal to 1 mg/L. The reported value should be considered a minimum value.

D-3 The dilution water used to prepare this sample did not meet the method and/or regulatory criteria of less than 0.2 or 0.4 mg/L dissolved oxygen (DO) uptake over the five day period of incubation. These results may not be reportable for compliance purposes.

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: David Nelson
ATI, Inc.
9220 Rumsey Road
Columbia,MD 21045

Lab Sample ID: SL4984-1
Report Date: 20-JUN-18
Client PO: PN:16-027
Project: Cornhusker Army Ammu
SDG: SL4984

Sample Description	Matrix	Date Sampled	Date Received
CHAAP-IDW-SOIL-060418	SL	04-JUN-18 16:00:00	05-JUN-18

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Cyanide, Reactive	U10. mg/Kg	20.	0.16	10.	SW846 7.3.3	WG229939	06-JUN-18 16:20:03	SW846 7.3.4	06-JUN-18	
Ignitability	>71. Deg. C	71.	71.	N/A	SW846 1010A	WG230048	08-JUN-18 14:05:00	N/A	N/A	
Paint Filter Liquids Test	NFL			N/A	SW846 9095B	WG230352	14-JUN-18 11:11:00	N/A	N/A	
Sulfide,Reactive	U25. mg/Kg	50.	16.	25.	SW846 7.3.4	WG230154	06-JUN-18 17:30:00	SW846 7.3.4	06-JUN-18	
Total Solids	91. %	1		N/A	SW3540C	WG229882	07-JUN-18 11:48:29	SW3540C	06-JUN-18	
pH(Soil)	8.8 pH	0.10	0.10	N/A	SW846 9045D	WG229846	05-JUN-18 19:13:00	SW846 9045C	05-JUN-18	

Katahdin Analytical Services 5000009

Raw Data Section

WET CHEMISTRY BATCH REPORT
Jun 08 2018, 11:24 am
Batch: WG229938

Parameter: Cyanide, Reactive

Prep Date: 31-MAY-18

Date Analyzed: 06-JUN-18

Prep Method: SW846 7.3.4

Analyst Initials: AP

Prep Chemist: RO

Sample	Samp Type	Method	Initial Amt.	Final Amt.	Rpt. DF	Result	Rpt Result	TS(%)	PQL	MDL	Adj PQL	RPD	%Rec
SL4800-1	SAMP	SW846 7.3.3	12.462g	190.00mL	.802	-1.4068	U10. mg/Kg	78.	20	0.16	20.		
SL4843-1	SAMP	SW846 7.3.3	10.036g	190.00mL	.996	-1.4515	U20. mg/Kg	58.	20	0.16	20.		
WG229938-1	MBLANK	SW846 7.3.3	10.000g	190.00mL	1	-1.15948	U10. mg/Kg	NA	20	0.16	20.		
WG229938-2	LCS	SW846 7.3.3	10.000g	190.00mL	3	281.09735	J5.3 mg/Kg	NA	20	0.47	60.		26
WG229938-3	LCSD	SW846 7.3.3	10.000g	190.00mL	3	316.02631	J6.0 mg/Kg	NA	20	0.47	60.	12	30

Comments:

WG229938-1	SL4800-1
WG229938-2	SL4800-1
WG229938-3	SL4800-1

Entered by: for AP Date: 06/08/18 Accepted by: Date: 06/08/18

Katahdin Analytical Services 5000011

WET CHEMISTRY BATCH REPORT
Jun 08 2018, 11:25 am
Batch: WG229939

Parameter: Cyanide, Reactive

Prep Date: 06-JUN-18

Date Analyzed: 06-JUN-18

Prep Method: SW846 7.3.4

Analyst Initials: AP

Prep Chemist: RO

Sample	Samp Type	Method	Initial Amt.	Final Amt.	Rpt. DF	Result	Rpt Result	TS(%)	PQL	MDL	Adj PQL	RPD	%Rec
SL4914-1	SAMP	SW846 7.3.3	10.170g	190.00mL	.983	-1.20636	U10. mg/Kg	67.	20	0.16	20.		
SL4914-2	SAMP	SW846 7.3.3	10.399g	190.00mL	.962	-.92067	U10. mg/Kg	80.	20	0.16	20.		
SL4984-1	SAMP	SW846 7.3.3	10.055g	190.00mL	.994	-.92002	U10. mg/Kg	91.	20	0.16	20.		
WG229939-1	MBLANK	SW846 7.3.3	10.000g	190.00mL	1	-.69565	U10. mg/Kg	NA	20	0.16	20.		
WG229939-2	LCS	SW846 7.3.3	10.000g	190.00mL	5	246.2261	J4.7 mg/Kg	NA	20	0.78	100		23
WG229939-3	DUP	SW846 7.3.3	10.548g	190.00mL	.948	-.68133	U10. mg/Kg	NA	20	0.16	20.	NC	
WG229939-4	MS	SW846 7.3.3	9.9900g	190.00mL	5.005	439.78421	J8.4 mg/Kg	NA	20	0.78	100		42

Comments:

WG229939-1	SL4984-1
WG229939-2	SL4984-1
WG229939-3	SL4984-1
WG229939-4	SL4984-1

Entered by: [signature] for AP Date: 06/08/18 Accepted by: [signature] Date: 06/08/18

Katahdin Analytical Services 5000012

WET CHEMISTRY BATCH REPORT
Jun 07 2018, 02:21 pm
Batch: WG229940

Parameter: Total Cyanide

Prep Date: 06-JUN-18

Date Analyzed: 06-JUN-18

Prep Method: EPA 335.4

Analyst Initials: AP

Prep Chemist: AP

Sample	Samp Type	Method	Initial Amt.	Final Amt.	Rpt. DF	Result	Rpt Result	TS(%)	PQL	MDL	Adj PQL	RPD	%Rec
SL4830-2	SAMP	EPA 335.4	6.0000mL	6.0000mL	1	.69973	U5.0 ug/L	NA	5	4.0	5.0		
SL5039-1	SAMP	EPA 335.4	6.0000mL	6.0000mL	1	-1.34393	U5.0 ug/L	NA	5	4.0	5.0		
SL5040-1	SAMP	EPA 335.4	6.0000mL	6.0000mL	1	-.24771	U5.0 ug/L	NA	5	4.0	5.0		
WG229940-1	MBLANK	EPA 335.4	6.0000mL	6.0000mL	1	-1.65662	U5.0 ug/L	NA	5	4.0	5.0		
WG229940-2	LCS	EPA 335.4	6.0000mL	6.0000mL	1	188.74957	190 ug/L	NA	5	4.0	5.0		94
WG229940-3	DUP	EPA 335.4	6.0000mL	6.0000mL	1	-.02367	U5.0 ug/L	NA	5	4.0	5.0	NC	
WG229940-4	MS	EPA 335.4	6.0000mL	6.0000mL	1	97.97224	98. ug/L	NA	5	4.0	5.0		98

Comments:

WG229940-1	SL4830-2
WG229940-2	SL4830-2
WG229940-3	SL4830-2
WG229940-4	SL4830-2

Entered by: AP Date: 6/7/18 Accepted by: [signature] Date: 06/07/18 ✓

Katahdin Analytical Services 5000013

WET CHEMISTRY BATCH REPORT
Jun 07 2018, 02:21 pm
Batch: WG229941

Parameter: Total Cyanide

Prep Date: 06-JUN-18

Date Analyzed: 06-JUN-18

Prep Method: EPA 335.4

Analyst Initials: AP

Prep Chemist: AP

Sample	Samp Type	Method	Initial Amt.	Final Amt.	Rpt. DF	Result	Rpt Result	TS(%)	PQL	MDL	Adj PQL	RPD	%Rec
SL5013-1	SAMP	EPA 335.4	6.0000mL	6.0000mL	1	55.18163	55. ug/L	NA	10	4.0	10.		
WG229941-1	MBLANK	EPA 335.4	6.0000mL	6.0000mL	1	-1.65662	U8.0 ug/L	NA	10	4.0	10.		
WG229941-2	LCS	EPA 335.4	6.0000mL	6.0000mL	1	188.74957	190 ug/L	NA	10	4.0	10.		94

Comments:

WG229941-1 SL5013-1
WG229941-2 SL5013-1

Entered by: AP Date: 6/7/18 Accepted by: Date: 06/07/18

Katahdin Analytical Services 5000014

KATAHDIN ANALYTICAL SERVICES, LLC.
Wet Chemistry Analysis Run Information Sheet

Analyte: CYANIDE	**Analyst:** AP
Instrument: KONELAB 20	**Analysis Date:** 6/6/18

Analytical Method (Check all that apply):

- [ ] EPA 335.2
- [ ] EPA 335.3
- [x] EPA335.4
- [ ] SW846 9012M
- [x] SW846 7.3.4 (Reactive) WG229941 R477397

WG229938 R477394
WG229939 R477395
WG229940 R477396

For reagents and standards prepared on each day of use and are either totally comsumed or disposed of, the reagent or standard ID is the abreviation of the reagent or standard name followed by the date. Please follow the preparation directions in the notes section.

Reagent Information: pH paper Lot ID: HC601354

Reagent Name	Reagent ID	Expiration Date
Pyridine / Barbituric Acid	**W16274**	**9/14/2018**
Phosphate Buffer	**SWL 4214**	**6/22/2018**
Chloramine-T (dry reagent)	**SWL3964**	**3/7/2021**
Chloramine-T Solution, (Prepared from dry reagent)	CHL-T_~~0531~~0606 18	Day of use only
10 N NaOH Solution	**SWL4138**	**2/28/2019**
0.25 N NaOH Solution (Prepared from 10 N NaOH)	**W16285**	**3/16/2019**

AP 6/7/18

Standards Information:

Standard Name	Concentration	ID	Expiration Date
Cal. Standard / CCV Stock	1000 mg/L	**SWL 4053**	**5/18/2018**
Cal. Std. / CCV Intermediate	50 mg/L	**W15989**	**6/8/2018**
250 ug/L Calibration Standard	250 ug/L	**W16568**	**8/24/2018**
CCV	125 ug/L	CN_CCV_060618	Day of use only
ICV Stock	1000 mg/L	**SWL4274**	**5/30/2019**
ICV Intermediate	50 mg/L	CN_ICV_IM_060618	Day of use only
ICV	200 ug/L	CN_ICV_060618	Day of use only

Notes:

1) Some reagents and standards were prepared on day of use by dilution with reagent water as follows:

Reagent or Standard	Prepared From	Amount Added	Final Volume
Chloramine-T Solution	Chloramine-T (dry reagent)	1.0 g	100 mL
0.25 N NaOH	10 N NaOH	25 mL	1000 mL
Cal. Std. / CCV Intermediate	Cal. Std. / CCV Stock	0.50 mL	10.0 mL
250 ug/L Calibration Standard	Cal. Std. / CCV Intermediate	0.125 mL	25.0 mL
CCV	250 ug/L Calibration Standard	5.0 mL	10.0 mL
ICV Intermediate	ICV Stock	0.500 mL	10.0 mL
ICV	ICV Intermediate	0.100 mL	25.0 mL

2) Additional calibration standards (100, 50, 25, 10, 5 ug/L) prepared by instrument during analysis through dilution of the 250 ug/L calibration standard.

Aquakem v. 7.2
Results from time period:
Wed Jun 06 10:00:46 2018
Wed Jun 06 17:45:46 2018

Sample Id	Test short name	Result	Result unit	Result date and time	Dil. ratio	Manual dil. ratio	Dil. Factor	Response	Blank init abs. (A)	Main abs. 1	Comments
CN-0	Cyanide	-1.16516	µg/l	6/6/18 12:14:28	0		1	0.00474	-0.00072	0.00401	CAL PT ACCEPTED
CN-250	Cyanide	3.9968	µg/l	6/6/18 12:14:29	49		50	0.0093	-0.00028	0.00902	CAL PT ACCEPTED
CN-250	Cyanide	9.34495	µg/l	6/6/18 12:14:30	24		25	0.01402	-0.00092	0.0131	CAL PT ACCEPTED
CN-250	Cyanide	23.04839	µg/l	6/6/18 12:14:31	9		10	0.02612	-0.00097	0.02515	CAL PT ACCEPTED
CN-250	Cyanide	49.77087	µg/l	6/6/18 12:14:32	4		5	0.04973	-0.00077	0.04895	CAL PT ACCEPTED
CN-250	Cyanide	107.86149	µg/l	6/6/18 12:14:33	1.5		2.5	0.10103	0.00004	0.10107	CAL PT ACCEPTED
CN-250	Cyanide	247.14267	µg/l	6/6/18 12:14:34	0		1	0.22405	-0.00055	0.2235	CAL PT ACCEPTED
CN-CCV	Cyanide	117.53073	µg/l	6/6/18 14:16:52	0		1	0.10957	0.00017	0.10974	94.02%
CN-CCB	Cyanide	-1.21974	µg/l	6/6/18 14:16:53	0		1	0.00469	-0.00026	0.00443	
060118 RBLANK	Cyanide	-1.15948	µg/l	6/6/18 14:16:54	0	0	1	0.00474	-0.00031	0.00444	ACCEPTED
060118 RLCS	Cyanide	317.5054	µg/l	6/6/18 14:16:55	0	0	1	0.28619	0.00112	0.28731	RERUN DILUTE
060118 RLCSD	Cyanide	385.53726	µg/l	6/6/18 14:16:56	0	0	1	0.34628	0.00109	0.34737	RERUN DILUTE
SL4800-1	Cyanide	-1.4068	µg/l	6/6/18 14:16:57	0	0	1	0.00452	-0.00059	0.00394	ACCEPTED
SL4843-1	Cyanide	-1.4515	µg/l	6/6/18 14:16:58	0	0	1	0.00449	-0.00079	0.00369	ACCEPTED
CN-CCV	Cyanide	122.51375	µg/l	6/6/18 14:19:31	0		1	0.11397	-0.00053	0.11344	98.01%
CN-CCB	Cyanide	-1.51939	µg/l	6/6/18 14:19:32	0		1	0.00443	-0.00087	0.00355	
CN-CCB	Cyanide		µg/l	6/6/18 14:41:37	0		1				
CN-CCV	Cyanide	120.48303	µg/l	6/6/18 14:54:54	0		1	0.11218	0.00129	0.11347	96.39%
060118 RLCS	Cyanide	281.09735	µg/l	6/6/18 14:54:56	2	0	3	0.08852	0.00095	0.08947	ACCEPTED
060118 RLCSD	Cyanide	316.02631	µg/l	6/6/18 14:54:57	2	0	3	0.09881	0.00052	0.09932	ACCEPTED
DIST LCS	Cyanide	188.74957	µg/l	6/6/18 14:58:24	0	0	1	0.17247	0.00132	0.17379	ACCEPTED
HIGH	Cyanide	241.32936	µg/l	6/6/18 14:58:25	0	0	1	0.21891	0.00182	0.22073	ACCEPTED
LOW	Cyanide	7.75061	µg/l	6/6/18 14:58:26	0	0	1	0.01261	0.00143	0.01404	ACCEPTED
SL4830-2	Cyanide	0.69973	µg/l	6/6/18 14:58:27	0	0	1	0.00639	0.00185	0.00824	ACCEPTED
SL4830-2 DUP	Cyanide	-0.02367	µg/l	6/6/18 14:58:28	0	0	1	0.00575	0.00275	0.0085	ACCEPTED
SL4830-2 MS	Cyanide	97.97224	µg/l	6/6/18 14:58:29	0	0	1	0.0923	0.01249	0.10479	ACCEPTED
SL5039-1	Cyanide	-1.34393	µg/l	6/6/18 15:02:29	0	0	1	0.00458	0.0027	0.00728	ACCEPTED
SL5040-1	Cyanide	-0.24771	µg/l	6/6/18 15:02:30	0	0	1	0.00555	0.00234	0.00789	ACCEPTED
CN-CCV	Cyanide	120.53795	µg/l	6/6/18 15:02:31	0		1	0.11223	0.00011	0.11233	96.43%
CN-CCB	Cyanide	-1.19814	µg/l	6/6/18 15:02:32	0		1	0.00471	-0.0002	0.00451	
SL5013-1	Cyanide	55.18163	µg/l	6/6/18 15:02:33	0	0	1	0.0545	0.00062	0.05513	ACCEPTED
CN-CCV	Cyanide	122.75703	µg/l	6/6/18 15:05:40	0		1	0.11419	-0.00018	0.11401	98.21%
CN-CCB	Cyanide	-1.38184	µg/l	6/6/18 15:05:41	0		1	0.00455	-0.00013	0.00441	
CN-CCV	Cyanide	120.01815	µg/l	6/6/18 15:21:58	0		1	0.11177	0.00025	0.11201	96.01%
CN-CCB	Cyanide	-0.9019	µg/l	6/6/18 15:21:59	0		1	0.00497	-0.00009	0.00488	
DIST BLANK	Cyanide	-1.65662	µg/l	6/6/18 15:22:00	0	0	1	0.0043	-0.00071	0.0036	ACCEPTED
CN-CCV	Cyanide	116.4235	µg/l	6/6/18 15:24:13	0		1	0.10859	0.00009	0.10868	93.14%
CN-CCB	Cyanide	-0.28177	µg/l	6/6/18 15:24:14	0		1	0.00552	0.00119	0.00671	

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SL4914-2
AR 6/7/18

CN-CCV	Cyanide	114.03652	µg/l	6/6/18 16:19:57	0		1	0.10649	-0.00009	0.10639	91.23%
CN-CCB	Cyanide	-0.81875	µg/l	6/6/18 16:19:58	0		1	0.00504	-0.00037	0.00468	
060618 RBLANK	Cyanide	-0.69565	µg/l	6/6/18 16:19:59	0	0	1	0.00515	-0.00021	0.00494	ACCEPTED
060618 RLCS	Cyanide	348.36481	µg/l	6/6/18 16:20:00	0	0	1	0.31345	0.0067	0.32014	RERUN DILUTE
SL4914-1	Cyanide	-1.20636	µg/l	6/6/18 16:20:01	0	0	1	0.0047	-0.00065	0.00405	ACCEPTED
~~SL4911-2~~	Cyanide	-0.92067	µg/l	6/6/18 16:20:02	0	0	1	0.00495	-0.00054	0.00441	ACCEPTED
SL4984-1	Cyanide	-0.92002	µg/l	6/6/18 16:20:03	0	0	1	0.00495	-0.0007	0.00426	ACCEPTED
SL4984-1 DUP	Cyanide	-0.68133	µg/l	6/6/18 16:20:04	0	0	1	0.00517	-0.00082	0.00435	ACCEPTED
SL4984-1 MS	Cyanide	507.34714	µg/l	6/6/18 16:20:05	0	0	1	0.45386	0.00154	0.4554	RERUN DILUTE
CN-CCV	Cyanide	119.94719	µg/l	6/6/18 16:23:02	0		1	0.11171	-0.00019	0.11151	95.96%
CN-CCB	Cyanide	-1.36088	µg/l	6/6/18 16:23:03	0		1	0.00457	-0.00066	0.00391	
CN-CCV	Cyanide	119.64809	µg/l	6/6/18 16:39:12	0		1	0.11144	-0.00022	0.11122	95.72%
CN-CCB	Cyanide	-1.0872	µg/l	6/6/18 16:39:13	0		1	0.00481	-0.00045	0.00436	
060618 RLCS	Cyanide	246.2261	µg/l	6/6/18 16:39:14	4	0	5	0.04926	-0.00012	0.04914	ACCEPTED
SL4984-1 MS	Cyanide	439.78421	µg/l	6/6/18 16:39:15	4	0	5	0.08345	-0.00046	0.08299	ACCEPTED
CN-CCV	Cyanide	120.41336	µg/l	6/6/18 16:41:54	0		1	0.11212	-0.00047	0.11165	96.33%
CN-CCB	Cyanide	-1.24479	µg/l	6/6/18 16:41:55	0		1	0.00467	-0.00074	0.00393	

Laboratory
Analyzer User

Date : 6/6/2018
Time : 16:52

Test Cyanide
Unit µg/l

Sample ID:	Result	Date and Time	Note
CN-CCV	117.5307	6/6/2018 14:16	
CN-CCB	-1.2197	6/6/2018 14:16	
060118 RBLANK	-1.1595	6/6/2018 14:16	
060118 RLCS	_____	-	R
060118 RLCSD	_____	-	R
SL4800-1	-1.4068	6/6/2018 14:16	
SL4843-1	-1.4515	6/6/2018 14:16	
CN-CCV	122.5137	6/6/2018 14:19	
CN-CCB	-1.5194	6/6/2018 14:19	
CN-CCB	_____	-	
CN-CCV	_____	-	
060118 RLCS	281.0974	6/6/2018 14:54	R
060118 RLCSD	316.0263	6/6/2018 14:54	R
DIST LCS	188.7496	6/6/2018 14:58	
HIGH	241.3294	6/6/2018 14:58	
LOW	7.7506	6/6/2018 14:58	
SL4830-2	0.6997	6/6/2018 14:58	
SL4830-2 DUP	-0.0237	6/6/2018 14:58	
SL4830-2 MS	97.9722	6/6/2018 14:58	
SL5039-1	-1.3439	6/6/2018 15:02	
SL5040-1	-0.2477	6/6/2018 15:02	
CN-CCV	_____	-	
CN-CCB	_____	-	
SL5013-1	55.1816	6/6/2018 15:02	
CN-CCV	_____	-	
CN-CCB	_____	-	
CN-CCV	120.0182	6/6/2018 15:21	
CN-CCB	-0.9019	6/6/2018 15:21	
DIST BLANK	-1.6566	6/6/2018 15:22	
CN-CCV	116.4235	6/6/2018 15:24	
CN-CCB	-0.2818	6/6/2018 15:24	
CN-CCV	114.0365	6/6/2018 16:19	
CN-CCB	-0.8188	6/6/2018 16:19	
060618 RBLANK	-0.6957	6/6/2018 16:19	
060618 RLCS	_____	-	R
SL4914-1	-1.2064	6/6/2018 16:20	
SL4911-2	-0.9207	6/6/2018 16:20	
SL4984-1	-0.9200	6/6/2018 16:20	
SL4984-1 DUP	-0.6813	6/6/2018 16:20	
SL4984-1 MS	_____	-	R
CN-CCV	119.9472	6/6/2018 16:23	
CN-CCB	-1.3609	6/6/2018 16:23	
CN-CCV	119.6481	6/6/2018 16:39	
CN-CCB	-1.0872	6/6/2018 16:39	
060618 RLCS	246.2261	6/6/2018 16:39	R
SL4984-1 MS	439.7842	6/6/2018 16:39	R
CN-CCV	120.4134	6/6/2018 16:41	
CN-CCB	-1.2448	6/6/2018 16:41	

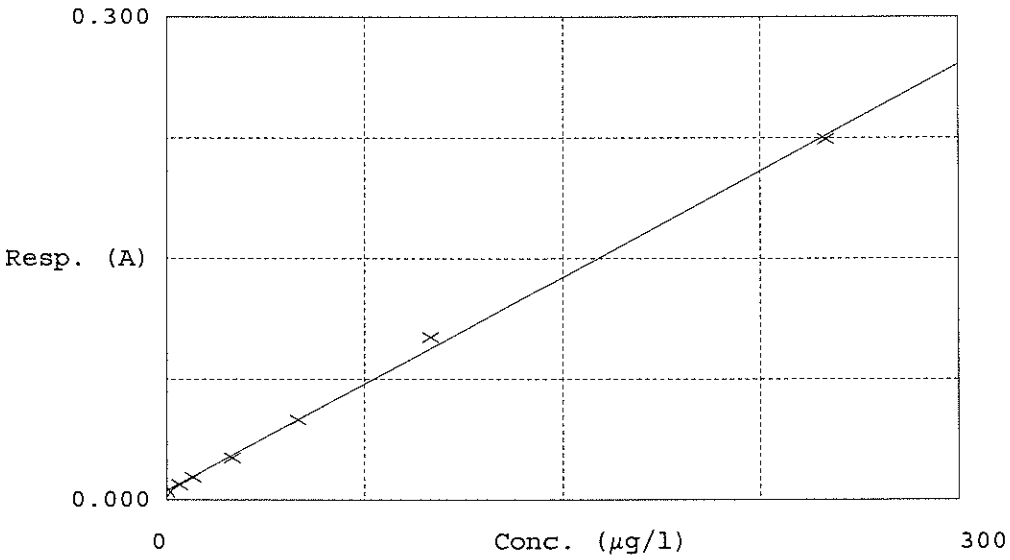
Laboratory
Analyzer User

6/6/2018 12:23

Test Cyanide

Accepted	6/6/2018	12:23
Factor	1132	
Bias	0.006	
Coeff. of det.	0.998409	

Errors



	Calibrator	Response	Calc. con.	Conc.	Errors
1	CN-0	0.005	-1.16516	0.00000	
2	CN-250	0.009	3.99680	5.00000	
3	CN-250	0.014	9.34495	10.00000	
4	CN-250	0.026	23.04839	25.00000	
5	CN-250	0.050	49.77087	50.00000	
6	CN-250	0.101	107.86149	100.00000	
7	CN-250	0.224	247.14267	250.00000	

KATAHDIN ANALYTICAL SERVICES

CYANIDE MINI DISTILLATION:	SM4500-CN C	E335.4	SW9012B

Standard	True Value ug/L	Source Standard ID	Source Standard Spike Amount (mL)	PQL = 10 ug/L (AQ) & 0.5 mg/kg (SL)
Cal High Point	250	W16538	6 mL W13	Releasing Solution: W16494
Cal Low Point	10	W16272	"	NaOH Trapping Solution(IN): W16467
LCS	200	W16403		NaOH-0.25N: W16554
Matrix Spike	100	W15986	0.012 mL W12	Block SN: 131200002198

Notes:

KAS Sample ID	Res. Cl Check	Res. S2 Check	Initial pH	Distillation Start Time	Distillation End Time	Sample Volume (mL)	Sample Weight (g)	Distillate Volume	Comments
Blank	NA	NA	NA	1553	1624	6mL		N/A	Membrane failure
LCS	NA	NA	NA					6mL	
High	NA	NA	NA						
Low	NA	NA	NA						
SL4830-2	–	–	✓						
-2DUP									
-2MS									
SL5039-1									
SL5040-1									
SL5013-1						6 mL			
-1						3 mL			
-1						1.2mL			
-1						0.6mL			
-1						0.6mL			
-1						0.6mL			
6/7/18 Blank	N/A	N/A	N/A	~~1456~~ 1636	1707	6mL		6mL	

AP 6/7/18

DISTILLED BY:	AP	DISTILLATION DATE:	6/6/18
REVIEWED BY:		REVIEW DATE:	

W6229885

KATAHDIN ANALYTICAL
REACTIVE SULFIDE

METHOD: SW846 9030 / 7.3.4.2	PQL: 27 mg/kg
REAGENT LOT #:	
IODINE STANDARD: W164444	STS SOLUTION-0.0375N: SWL4257
Na2S SOLUTION: W162300	NaOH-0.25N: W16469
HCl-6N: W16238	H2SO4-.005N: 0.01N W16486
Total CN (1000ug/ml) SWL4274	
LCS PREP: 10 mL W164300 + 0.2 mL SWL4274	
MS PREP:	

STANDARDIZATION OF I2		CALC OF I2 N	STANDARDIZATION OF Na2S			CALC OF Na2S mg/ml
VOL(ml) I2	VOL(ml) Na2S2O3		VOL(ml) I2	VOL(ml) Na2S2O3	VOL(ml) Na2S	
10	6.55		10	3.75	2	
	6.60			3.60		
	6.40			3.75		
	X:			X:		

Prep Start Time	Prep End Time	Sample ID	Sample Wt. (g)	NaOH Trap Vol.(ml)	Analysis Vol.(ml)	ml I2 Soln Added	ml STS to Endpoint	Time of Analysis
1425	~~1452~~ 1453	Blank	10	140	150	10	6.40	1612
		LCS				25	10.75	
		LCSD				25	8.25	
		SL4800-1	12.462			10	6.05	
		SL4843-1	10.036			10	6.55	1625

NOTES:

ANALYST: TG	DATE: 5/31/18
CHECKED BY:	DATE: 06/07/18

KATAHDIN ANALYTICAL
REACTIVE SULFIDE

METHOD: SW846 9030 / 7.3.4.2	PQL: 27 mg/kg
REAGENT LOT #:	
IODINE STANDARD:	STS SOLUTION-0.0375N:
Na2S SOLUTION:	NaOH-0.25N:
HCl-6N:	H2SO4-.005N:
Total CN (1000ug/ml)	
LCS PREP:	
MS PREP:	

STANDARDIZATION OF I2		CALC OF I2 N
VOL(ml) I2	VOL(ml) Na2S2O3	
10	6.40	
	6.45	
	6.00	
	X:	

STANDARDIZATION OF Na2S			CALC OF Na2S mg/ml
VOL(ml) I2	VOL(ml) Na2S2O3	VOL(ml) Na2S	
10	3.65	2	
	3.60		
	3.785		
	X:		

Prep Start Time	Prep End Time	Sample ID	Sample Wt. (g)	NaOH Trap Vol.(ml)	Analysis Vol.(ml)	ml I2 Soln Added	ml STS to Endpoint	Time of Analysis
1307	1337	BLANK	10	190	150	~~10~~ 10	6.50	1650
		LCS				25	8.30	
		SC49514-1	10.170			10	6.40	
		-2	10.359				6.55	
		SC49514-1	10.055				6.55	
		-1MS	10.548				6.60	
		-1MSD	10.2990			25	8.55	

AM 6/7/18

NOTES:	
ANALYST: JVD	DATE: 6/6/18
CHECKED BY:	DATE:

WET CHEMISTRY BATCH REPORT
Jun 11 2018, 08:57 am
Batch: WG230048

Parameter: Ignitability

Date Analyzed: 08-JUN-18

Analyst Initials: JP

Prep Date: N/A

Prep Method: N/A

Prep Chemist: N/A

Sample	Samp Type	Method	Initial Amt.	Final Amt.	Rpt. DF	Result	Rpt Result	TS(%)	PQL	MDL	Adj PQL	RPD	%Rec
SL4914-1	SAMP	SW846 1010A	1g	1g	1	71	>71. Deg. C	67.	71	71.	71.		
SL4914-2	SAMP	SW846 1010A	1g	1g	1	71	>71. Deg. C	80.	71	71.	71.		
SL4984-1	SAMP	SW846 1010A	1g	1g	1	71	>71. Deg. C	91.	71	71.	71.		
SL5083-1	SAMP	SW846 1010A	1.0000mL	1.0000mL	1	71	>71. Deg. C	NA	71	71.	71.		
SL5153-1	SAMP	SW846 1010A	1g	1g	1	71	>71. Deg. C	NA	71	71.	71.		
SL5153-3	SAMP	SW846 1010A	1g	1g	1	71	>71. Deg. C	NA	71	71.	71.		
SL5153-5	SAMP	SW846 1010A	1g	1g	1	71	>71. Deg. C	NA	71	71.	71.		
SL5160-1	SAMP	SW846 1010A	1.0000mL	1.0000mL	1	71	>71. Deg. C	NA	71	71.	71.		
WG230048-1	MBLANK	SW846 1010A	1g	1g	1	71	>71. Deg. C	NA	71	71.	71.		
WG230048-2	LCS	SW846 1010A	1g	1g	1	28.934	29. Deg. C	NA	71	71.	71.		107
WG230048-3	LCSD	SW846 1010A	1g	1g	1	30.934	31. Deg. C	NA	71	71.	71.	7	114

Comments:

WG230048-1	SL4914-1
WG230048-2	SL4914-1
WG230048-3	SL4914-1

Entered by: RO Date: 6/11/18 Accepted by: [signature] Date: 06/11/18 ✓

Katahdin Analytical Services 5000023

WG230048 R477741

KATAHDIN ANALYTICAL SERVICES, INC. - FLASHPOINT – CLOSED CUP LOGBOOK

METHOD: SW 846 1010	p-XYLENE: 27 Degrees Celcius	Ambient Barometric Pressure (*) = 762 mm Hg (in. of Hg) X (25.4 mm/in)
PQL: 25 Degrees Celcius	p-XYLENE Lot Number:	

Sample ID	Analysis Time	Start Temperature (°C)	End Temperature (°C)	Flash? (Check appropriate box & record temp.)			Reported Flashpoint Corrected For Ambient Barometric Pressure	Comments
				YES	Temp.(°C)	NO		
p-Xylene (LCS)	11:14	25°	29°	✓	29°		28.934	
p-Xylene (LCS)	11:21	25°	31°	✓	31°		30.934	
Method Blank	11:51	25°	71°		>71°	✓		
SL 4914-1	12:20	25°	71°		>71°	✓		
SL 4914-2	12:55	25°	71°		>71°	✓		
SL 4984-1	14:05	25°	71°		>71°	✓		
SL 5083-1	14:32	25°	71°		>71°	✓		
SL 5153-1	15:05	25°	71°		>71°	✓		
SL 5153-3	15:29	25°	71°		>71°	✓		
SL 5153-5	15:55	25°	71°		>71°	✓		
SL 5160-1	16:18	25°	71°		>71°	✓		

*** = Ambient Pressure of the laboratory at the time of the test. When the pressure differs from 760 mm Hg, correct the flashpoint as follows: Corrected Flashpoint = (Observed Flashpoint in °C) + 0.033 (760 - the ambient barometric pressure in mm Hg) .**

Analyst JP **Date** 6/8/18

Reviewed By [signature] **Date** 06/11/18

WL-029 – REVISION 1 – 10/06/2010

QAWL868

Katahdin Analytical Services 5000024

0000049

WET CHEMISTRY BATCH REPORT
Jun 14 2018, 12:03 pm
Batch: WG230352

Parameter: Paint Filter Liquids Test

Date Analyzed: 14-JUN-18

Analyst Initials: SC

Prep Date: N/A

Prep Method: N/A

Prep Chemist: N/A

Sample	Samp Type	Method	Initial Amt.	Final Amt.	Rpt. DF	Result	Rpt Result	TS(%)	PQL	MDL	Adj PQL	RPD	%Rec
SL4984-1	SAMP	SW846 9095B					NFL	91.					
WG230352-1	MBLANK	SW846 9095B					NFL	NA					

Comments:

WG230352-1 SL4984-1

Entered by: SC Date: 6.14.18 Accepted by: Date: 06/14/18

Katahdin Analytical Services 5000025

WG1230352 R478692

KATAHDIN ANALYTICAL SERVICES, INC.

PAINT FILTER TEST

METHOD: SW846 9095

PAINT FILTER: MESH SIZE 60

COMMENTS:

NFL=No Free Liquid FLP=Free Liquid Present

CLIENT ID	KAS SAMPLE ID	ANALYSIS TIME IN	ANALYSIS TIME OUT	SAMPLE WEIGHT(g)	FREE LIQUIDS AFTER 5 MINUTES
	Blank	1106	1111	100.579	NFL
	SK4984-1	1107	1112	101.723	NFL

RC 6-14-18

ANALYST: RC **DATE:** 6.14.18

CHECKED BY: [signature] **DATE:** 06/14/18

WET CHEMISTRY BATCH REPORT
Jun 11 2018, 09:23 am
Batch: WG230154

Parameter: Sulfide,Reactive

Prep Date: 06-JUN-18

Date Analyzed: 06-JUN-18

Prep Method: SW846 7.3.4

Analyst Initials: RO

Prep Chemist: RO

Sample	Samp Type	Method	Initial Amt.	Final Amt.	Rpt. DF	Result	Rpt Result	TS(%)	PQL	MDL	Adj PQL	RPD	%Rec
SL4914-1	SAMP	SW846 7.3.4	10.170g	190.00mL	.98	-.01	U25 mg/Kg	67.	50	16.39	50		
SL4914-2	SAMP	SW846 7.3.4	10.399g	190.00mL	.96	-.1	U25 mg/Kg	80.	50	16.39	50		
SL4984-1	SAMP	SW846 7.3.4	10.055g	190.00mL	.99	-.1	U50. mg/Kg	91.	50	16.39	50.		
WG230154-1	MBLANK	SW846 7.3.4	10.000g	190.00mL	1	-.07	U25. mg/Kg	NA	50	16.39	50.		
WG230154-2	LCS	SW846 7.3.4	10.000g	190.00mL	1	4.6	620 mg/Kg	NA	50	16.39	50.		71
WG230154-3	DUP	SW846 7.3.4	10.548g	190.00mL	.95	-.13	U25 mg/Kg	NA	50	16.39	50	NC	
WG230154-4	MS	SW846 7.3.4	9.9900g	190.00mL	1	3.61	480 mg/Kg	NA	50	16.39	50.		56

Comments:

WG230154-1	SL4984-1
WG230154-2	SL4984-1
WG230154-3	SL4984-1
WG230154-4	SL4984-1

Entered by: RO Date: 6/11/18 Accepted by: [signature] Date: 06/11/18

Katahdin Analytical Services 5000027

REACTIVE SULFIDES
TITRIMETRIC

EPA: 7.3.4.2/9030
PQL = 27 mg/kg

DATE:	6/6/2018
ANALYST:	RO

STANDARDIZATION OF IODINE SOLUTION

VOL (mL) I_2	VOL (mL) $Na_2S_2O_3$
10.00	6.40
10.00	6.45
10.00	6.30
Mean $Na_2S_2O_3$=	**6.38**

CALC I_2 N = 0.02394

STANDARDIZATION OF SODIUM SULFIDE STANDARD

VOL (mL) I_2	VOL (mL) NA_2S	VOL (mL) $Na_2S_2O_3$
10.00	2.00	3.65
10.00	2.00	3.60
10.00	2.00	3.75
Mean Vol $Na_2S_2O_3$=		**3.67**

CALC NA_2S (mg H_2S/L): 863.90

$Na_2S_2O_3$ Normality:	**0.0375**

Sample ID	Sample Wt. (g)	Trap Vol. (mL)	Analysis Vol. (mL)	Volume I_2 Added (mL)	Volume $Na_2S_2O_3$ Added (mL)	Extraction Time (sec)	Calc. Sulfide (as S) in Analysis Aliquot (mg)	Releasable H_2S in Smpl. (mg/kg)	Recovery (%)	Duplicate RPD (%)
BLK	10.000	190.00	150.00	10.00	6.50	1800.00	-0.07	-9.44		
LCS S2	10.000	190.00	150.00	25.00	8.30	1800.00	4.60	619.86	71.8	
SL4914-1	10.170	190.00	150.00	10.00	6.40	1800.00	-0.01	-1.33		
SL4914-2	10.399	190.00	150.00	10.00	6.55	1800.00	-0.10	-12.97		
SL4984-1	10.055	190.00	150.00	10.00	6.55	1800.00	-0.10	-13.42	-0.1	
SL4984-1 DUP	10.548	190.00	150.00	10.00	6.60	1800.00	-0.13	-16.63		
SL4984-1 MS	9.990	190.00	150.00	25.00	9.95	1800.00	3.61	486.80		
							0.00	#DIV/0!		
							0.00	#DIV/0!		
							0.00	#DIV/0!		
							0.00	#DIV/0!		
							0.00	#DIV/0!		
							0.00	#DIV/0!		
							0.00	#DIV/0!		
							0.00	#DIV/0!		
							0.00	#DIV/0!		
							0.00	#DIV/0!		
							0.00	#DIV/0!		
							0.00	#DIV/0!		
							0.00	#DIV/0!		

Katahdin Analytical Services 5000028

UG230154

KATAHDIN ANALYTICAL
REACTIVE SULFIDE

METHOD: SW846 9030 / 7.3.4.2	PQL: 27 mg/kg
REAGENT LOT #:	
IODINE STANDARD: W16444	STS SOLUTION-0.0375N: SWC 4257
Na2S SOLUTION: W16200	NaOH-0.25N: W16469
HCl-6N: W16238	H2SO4-.005N: 0.01N W16484
Total CN (1000ug/ml) SWC 4274	
LCS PREP: 10 mL W16300 + 0.2 mL SWC 4274	
MS PREP:	

STANDARDIZATION OF I2		CALC OF I2 N	STANDARDIZATION OF Na2S			CALC OF Na2S mg/ml
VOL(ml) I2	VOL(ml) Na2S2O3		VOL(ml) I2	VOL(ml) Na2S2O3	VOL(ml) Na2S	
10	6.40		10	3.65	2	
	6.45			3.60		
	6.20			3.785		
	X:			X:		

Prep Start Time	Prep End Time	Sample ID	Sample Wt. (g)	NaOH Trap Vol.(ml)	Analysis Vol.(ml)	ml I2 Soln Added	ml STS to Endpoint	Time of Analysis
1307	1337	Blank	10	140	150	~~10~~ 10	6.50	1650
		LCS				25	8.30	
		SC49514-1	10.170			10	6.40	
		-2	10.359				6.55	
		SC49514-1	10.055				6.55	
		-1MS	10.548				6.60	
		-1MSD	10.490			25	8.95	1730

NOTES:

ANALYST: IVO	DATE: 6/6/18
CHECKED BY:	DATE: 06/11/18

TOTAL SOLIDS BATCH REPORT
Jun 07 2018, 11:59 am
Batch: WG229882

Sample	Matrix	Type	Prep Date	Tare	Initial	Final1	Final	by	Date	Raw TS	Rep TS	Recovery	RPD
SL4955-1	SL	SAMP	06-JUN-18	1.3 g	20.8313 g	20.5645 g	20.5645 g	AC	07-JUN-18	98.6340	99. %		
SL4955-2	SL	SAMP	06-JUN-18	1.3 g	15.4896 g	15.1798 g	15.1798 g	AC	07-JUN-18	97.8170	98. %		
SL4955-3	SL	SAMP	06-JUN-18	1.3 g	18.6228 g	18.1599 g	18.1599 g	AC	07-JUN-18	97.3280	97. %		
SL4984-1	SL	SAMP	06-JUN-18	1.3 g	18.2871 g	16.8056 g	16.8056 g	AC	07-JUN-18	91.2790	91. %		
SL5005-1	SL	SAMP	06-JUN-18	1.3 g	17.0132 g	14.6062 g	14.6062 g	AC	07-JUN-18	84.6820	85. %		
SL5005-2	SL	SAMP	06-JUN-18	1.3 g	23.862 g	21.6092 g	21.6092 g	AC	07-JUN-18	90.0150	90. %		
SL5005-3	SL	SAMP	06-JUN-18	1.3 g	28.326 g	26.4025 g	26.4025 g	AC	07-JUN-18	92.8830	93. %		
SL5005-4	SL	SAMP	06-JUN-18	1.3 g	23.0817 g	21.6624 g	21.6624 g	AC	07-JUN-18	93.4840	93. %		
SL5043-1	SL	SAMP	06-JUN-18	1.3 g	26.1256 g	10.426 g	10.426 g	AC	07-JUN-18	36.7600	37. %		
SL5043-2	SL	SAMP	06-JUN-18	1.3 g	22.1854 g	8.8665 g	8.8665 g	AC	07-JUN-18	36.2290	36. %		
SL5043-3	SL	SAMP	06-JUN-18	1.3 g	27.7604 g	10.8777 g	10.8777 g	AC	07-JUN-18	36.1960	36. %		
WG229882-1	SL	MBLANK	06-JUN-18	1.3 g	5.7957 g	5.7944 g	5.7944 g	AC	07-JUN-18	99.9710	100 %		
WG229882-2	SL	LCS	06-JUN-18	1.3 g	6.2939 g	5.7938 g	5.7938 g	AC	07-JUN-18	89.9860	90. %	100	
WG229882-3	SL	DUP	06-JUN-18	1.3 g	17.5725 g	17.3711 g	17.3711 g	AC	07-JUN-18	98.7620	99. %		0
WG229882-4	SL	DUP	06-JUN-18	1.3 g	20.3605 g	17.556 g	17.556 g	AC	07-JUN-18	85.2860	85. %		1

Comments:

WG229882-1	SL4955-1
WG229882-2	SL4955-1
WG229882-3	SL4955-1
WG229882-4	SL5005-1

Entered by: AC Date: 6-7-18 Accepted by: WB Date: 6-7-18

Katahdin Analytical Services 5000030

Katahdin
ANALYTICAL SERVICES

Katahdin Analytical Services

R477255

Work Group Report (wk02)

06-JUN-18 02:48 PM

Work Group: WG229882
Department: 100 Wetlab Prep

Operator:

Created: 06-JUN-18
Due:

Tin	Sample	Account Name	Product	Matrix	Status	UA	Workdate	PR Location
1	SL4955-1	[redacted]	TS	Solid	WIP	U	07-JUN-18	
2	SL4955-2	[redacted]	TS	Solid	WIP	U	07-JUN-18	
3	SL4955-3	[redacted]	TS	Solid	WIP	U	07-JUN-18	
4	SL4984-1	[redacted]	TS	Solid	WIP	U	17-JUN-18	
5	SL5005-1	[redacted]	TS	Solid	WIP	U	07-JUN-18	
6	SL5005-2	[redacted]	TS	Solid	WIP	U	07-JUN-18	
7	SL5005-3	[redacted]	TS	Solid	WIP	U	07-JUN-18	
8	SL5005-4	[redacted]	TS	Solid	WIP	U	07-JUN-18	
9	SL5043-1	[redacted]	TS	Solid	WIP	U	18-JUN-18	
10	SL5043-2	[redacted]	TS	Solid	WIP	U	18-JUN-18	
11	SL5043-3	[redacted]	TS	Solid	WIP	U	18-JUN-18	
12	WG229882-1	MBLANK	TS	Solid	WIP	U	06-JUN-18	
13	WG229882-2	LCS	TS	Solid	WIP	U	06-JUN-18	
14	WG229882-3	DUP	TS	Solid	WIP	U	06-JUN-18	
15	WG229882-4	DUP	TS	Solid	WIP	U	06-JUN-18	

Comments:

WG229882-1	SL4955-1
WG229882-2	SL4955-1
WG229882-3	SL4955-1
WG229882-4	SL5005-1

Start: 16:00

Total Solids: SM2540 G / ASTM D2216			PQL: 0.10%	Oven ID: 107N0042		Balance Calibrated?
TS	In 1	In 2	TS	Out 1	Out 2	Y / N
ANALYST IN:	JMS		ANALYST OUT:	AC		In:
DATE IN:	6/6/18		DATE OUT:	6-7-18		Out (TS):
TIME IN:	16:10		TIME OUT:	607		Balance ID:
TEMP IN: 104	104		TEMP OUT:	104		S/N 1124016031

WET CHEMISTRY BATCH REPORT
Jun 06 2018, 09:45 am
Batch: WG229844

Parameter: pH(Laboratory)

Prep Date: N/A

Date Analyzed: 05-JUN-18

Prep Method: N/A

Analyst Initials: ZF

Prep Chemist: N/A

Sample	Samp Type	Method	Initial Amt.	Final Amt.	Rpt. DF	Result	Rpt Result	TS(%)	PQL	MDL	Adj PQL	RPD	%Rec
SL4982-1	SAMP	EPA 150.1	20.000mL	20.000mL	1	7.87	7.9 pH	NA	.1	0.10	0.10		
SL5011-1	SAMP	EPA 150.1	20.000mL	20.000mL	1	7.54	7.5 pH	NA	.1	0.10	0.10		
SL5012-1	SAMP	EPA 150.1	20.000mL	20.000mL	1	6.77	6.8 pH	NA	.1	0.10	0.10		
WG229844-1	LCS	EPA 150.1	20.000mL	20.000mL	1	6.99	7.0 pH	NA	.1	0.10	0.10		100
WG229844-2	DUP	EPA 150.1	20.000mL	20.000mL	1	7.58	7.6 pH	NA	.1	0.10	0.10	4	

Comments:

WG229844-1 SL4982-1
WG229844-2 SL4982-1

Entered by: ZF Date: 6/6/18 Accepted by: Date: 06/06/18

Katahdin Analytical Services 5000032

WET CHEMISTRY BATCH REPORT
Jun 06 2018, 09:46 am
Batch: WG229845

Parameter: pH(Laboratory)

Prep Date: N/A

Date Analyzed: 05-JUN-18

Prep Method: N/A

Analyst Initials: ZF

Prep Chemist: N/A

Sample	Samp Type	Method	Initial Amt.	Final Amt.	Rpt. DF	Result	Rpt Result	TS(%)	PQL	MDL	Adj PQL	RPD	%Rec
SL4992-1	SAMP	SM 4500H-B	20.000mL	20.000mL	1	6.15	6.2 pH	NA	.1	0.10	0.10		
SL5027-1	SAMP	SM 4500H-B	20.000mL	20.000mL	1	6.88	6.9 pH	NA	.1	0.10	0.10		
SL5027-2	SAMP	SM 4500H-B	20.000mL	20.000mL	1	6.22	6.2 pH	NA	.1	0.10	0.10		
SL5027-3	SAMP	SM 4500H-B	20.000mL	20.000mL	1	9.01	9.0 pH	NA	.1	0.10	0.10		
SL5028-1	SAMP	SM 4500H-B	20.000mL	20.000mL	1	5.56	5.6 pH	NA	.1	0.10	0.10		
SL5028-2	SAMP	SM 4500H-B	20.000mL	20.000mL	1	5.21	5.2 pH	NA	.1	0.10	0.10		
WG229845-1	LCS	SM 4500H-B	20.000mL	20.000mL	1	6.99	7.0 pH	NA	.1	0.10	0.10		100

Comments:

WG229845-1 SL5027-1

Entered by: ZF Date: 6/6/18 Accepted by: Date: 06/06/18

Katahdin Analytical Services 5000033

WET CHEMISTRY BATCH REPORT
Jun 06 2018, 09:46 am
Batch: WG229846

Parameter: pH(Soil)

Prep Date: 05-JUN-18

Date Analyzed: 05-JUN-18

Prep Method: SW846 9045C

Analyst Initials: ZF

Prep Chemist: ZF

Sample	Samp Type	Method	Initial Amt.	Final Amt.	Rpt. DF	Result	Rpt Result	TS(%)	PQL	MDL	Adj PQL	RPD	%Rec
SL4984-1	SAMP	SW846 9045D	20.615g	40mL	1	8.85	8.8 pH	NA	.1	0.10	0.10		
WG229846-1	LCS	SW846 9045D	20g	20mL	1	6.99	7.0 pH	NA	.1	0.10	0.10		100

Comments:

WG229846-1 SL4984-1

Entered by: ZF Date: 6/6/18 Accepted by: Date: 06/06/18

Katahdin Analytical Services 5000034

HW: WG229844 DUP R477118

WG229845 R477119

pH soils WG229846 R477120

KATAHDIN ANALYTICAL SERVICES

pH ELECTROMETRIC

pH meter Accumet 20 Serial Number C0024321 Probe ID:

EPA: 150.1 **SM 4500H- B** **SW846 9040**

CALIBRATION STDS:	CALIBRATED TO:	LOT NO:
pH 4.00	4.02	SWL 4234
pH 7.00	6.96	4304
pH 10.00	10.01	4002
pH 12.00		

SAMPLE ID	SITE ID	TIME OF ANALYSIS	pH	REPORTED pH	SAMPLE TEMP.	NOTES
CCV		17:52	6.95		18.7°C	
LCS		54	6.99		18.8°C	
SL4982-1		18:25	7.87		16.8°C	
-1Dup		22	7.58		15.7°C	
SL5011-1		23	7.54		16.5°C	
SL5012-1		24	6.77		16.5°C	
SL4992-1		40	6.15		9.0°C	
SL5027-1		45	6.88		13.8°C	
-2		48	6.22		14.5°C	
-3		52	9.01		15.7°C	
SL5028-1		19:01	5.56		15.5°C	
CCV		06	7.05		17.9°C	
SL5028-2		11	5.21		15.1°C	
SL4984-1		13	8.85		18.7°C	
CCV		19	7.04		18.0°C	
						ZF 6/6/18

ANALYST: ZF **DATE:** 6/5/18

CHECKED BY: [signature] **DATE:** 06/06/18

KATAHDIN ANALYTICAL SERVICES

SOIL PREPARATION BY METHOD E300

Balance ID: Bal 07

PREP TIME	SAMPLE ID	WEIGHT (g)	TOTAL H20 ADDED(ml)	ANALYSIS REQUESTED	SPIKE ADDED
	BLANK				
	LCS				
18:21	SL4984-1	20.615g	40mL	pH soils	
					ZF 6/6/18

NOTES:

ANALYST: ZF **DATE:** 6/5/18

CHECKED BY: **DATE:**

TCLP PESTICIDE DATA

QC Summary Section

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** Cornhusker Army Ammunition Plant **Matrix:** AQ
Lab Code: KAS **SDG:** SL4984

Client Sample ID	Lab Sample ID	Col. ID	DCB	#	TCX	#
CHAAP-IDW-SOIL-060418	SL4984-1	A	86.8		76.6	
CHAAP-IDW-SOIL-060418	SL4984-1	B	82.0		71.8	
Method Blank Sample	WG230200-1RA	A	71.5		67.5	
Method Blank Sample	WG230200-1RA	B	66.0		61.5	
Laboratory Control S	WG230200-2RA	A	66.0		65.0	
Laboratory Control S	WG230200-2RA	B	63.0		61.0	
Laboratory Control S	WG230200-3	A	34.1	*	72.9	
Laboratory Control S	WG230200-3	B	33.2	*	73.2	
Laboratory Control S	WG230200-4	A	35.1	*	74.5	
Laboratory Control S	WG230200-4	B	34.6	*	73.8	

		QC Limits
TCX	TETRACHLORO-M-XYLENE	44-124
DCB	DECACHLOROBIPHENYL	41-131

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

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Katahdin
ANALYTICAL SERVICES

Form 4
Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : 1LF10084.D
Matrix : AQ

Column A
Instrument ID : GC01
Date Analyzed : 15-JUN-18
Time Analyzed : 13:02

SDG : SL4984
Lab Sample ID : WG230200-1RA
Date Extracted : 12-JUN-18
Extraction Method : SW846 3510C

Column B
Instrument ID : GC01
Date Analyzed : 15-JUN-18
Time Analyzed : 13:02

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG230200-3	1LF10046.I	06/12/18	14:47
Laboratory Control S	WG230200-4	1LF10047.I	06/12/18	15:06
Laboratory Control S	WG230200-2RA	1LF10085.I	06/15/18	13:21
CHAAP-IDW-SOIL-060418	SL4984-1	1LF10086.I	06/15/18	13:40

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Katahdin
ANALYTICAL SERVICES

Form 8
GC Analytical Sequence

Lab Name : Katahdin Analytical Services **SDG :** SL4984
Project : Cornhusker Army Ammunition Plant **Column ID :** A
Instrument ID : GC01

Client Sample ID	Lab Sample ID	Date Analyzed	Time Analyzed	TCX	DCB	
Initial Calibration	WG223321-1	02/16/18	15:00			
Initial Calibration	WG223321-2	02/16/18	15:19			
Initial Calibration	WG223321-3	02/16/18	15:39			
Initial Calibration	WG223321-4	02/16/18	15:58			
Initial Calibration	WG223321-5	02/16/18	16:17			
Initial Calibration	WG223321-6	02/16/18	16:37			
Independent Source	WG223321-7	02/16/18	16:56			
Initial Calibration	WG223322-1	02/16/18	17:16			
Initial Calibration	WG223322-2	02/16/18	17:35			
Initial Calibration	WG223322-3	02/16/18	17:55			
Initial Calibration	WG223322-4	02/16/18	18:14			
Initial Calibration	WG223322-5	02/16/18	18:33			
Initial Calibration	WG223322-6	02/16/18	18:53			
Independent Source	WG223322-7	02/16/18	19:12			
Breakdown Evaluation	WG223323-1	02/16/18	21:48			
Initial Calibration	WG223323-2	02/16/18	22:07	4.215	12.49	
Initial Calibration	WG223323-3	02/16/18	22:27	4.213	12.49	
Initial Calibration	WG223323-4	02/16/18	22:46	4.215	12.49	
Initial Calibration	WG223323-5	02/16/18	23:06	4.212	12.49	
Initial Calibration	WG223323-6	02/16/18	23:25	4.212	12.49	
Initial Calibration	WG223323-7	02/16/18	23:44	4.214	12.49	
Independent Source	WG223323-8	02/17/18	00:04			
Continuing Calibrati	WG229644-6	06/12/18	10:54			
Continuing Calibrati	WG229644-7	06/12/18	11:14			
Laboratory Control S	WG230200-3	06/12/18	14:47	4.201	12.45	
Laboratory Control S	WG230200-4	06/12/18	15:06	4.201	12.45	
Continuing Calibrati	WG229644-17	06/12/18	16:24			
Continuing Calibrati	WG229644-18	06/12/18	16:43			
Breakdown Evaluation	WG229644-11	06/15/18	10:29			
Continuing Calibrati	WG229644-12	06/15/18	10:48	4.201	12.45	
Method Blank Sample	WG230200-1RA	06/15/18	13:02	4.213	12.46	
Laboratory Control S	WG230200-2RA	06/15/18	13:21	4.209	12.45	
CHAAP-IDW-SOIL-06041	SL4984-1	06/15/18	13:40	4.203	12.45	
Continuing Calibrati	WG229644-15	06/15/18	17:13	4.202	12.45	

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Katahdin
ANALYTICAL SERVICES

Form 8
GC Analytical Sequence

Lab Name : Katahdin Analytical Services **SDG :** SL4984
Project : Cornhusker Army Ammunition Plant **Column ID :** B
Instrument ID : GC01

Client Sample ID	Lab Sample ID	Date Analyzed	Time Analyzed	TCX	DCB	
Initial Calibration	WG223321-1	02/16/18	15:00			
Initial Calibration	WG223321-2	02/16/18	15:19			
Initial Calibration	WG223321-3	02/16/18	15:39			
Initial Calibration	WG223321-4	02/16/18	15:58			
Initial Calibration	WG223321-5	02/16/18	16:17			
Initial Calibration	WG223321-6	02/16/18	16:37			
Independent Source	WG223321-7	02/16/18	16:56			
Initial Calibration	WG223322-1	02/16/18	17:16			
Initial Calibration	WG223322-2	02/16/18	17:35			
Initial Calibration	WG223322-3	02/16/18	17:55			
Initial Calibration	WG223322-4	02/16/18	18:14			
Initial Calibration	WG223322-5	02/16/18	18:33			
Initial Calibration	WG223322-6	02/16/18	18:53			
Independent Source	WG223322-7	02/16/18	19:12			
Breakdown Evaluation	WG223323-1	02/16/18	21:48			
Initial Calibration	WG223323-2	02/16/18	22:07	4.312	13.03	
Initial Calibration	WG223323-3	02/16/18	22:27	4.312	13.03	
Initial Calibration	WG223323-4	02/16/18	22:46	4.313	13.03	
Initial Calibration	WG223323-5	02/16/18	23:06	4.311	13.03	
Initial Calibration	WG223323-6	02/16/18	23:25	4.311	13.03	
Initial Calibration	WG223323-7	02/16/18	23:44	4.312	13.03	
Independent Source	WG223323-8	02/17/18	00:04			
Continuing Calibrati	WG229644-6	06/12/18	10:54			
Continuing Calibrati	WG229644-7	06/12/18	11:14			
Laboratory Control S	WG230200-3	06/12/18	14:47	4.29	12.95	
Laboratory Control S	WG230200-4	06/12/18	15:06	4.29	12.96	
Continuing Calibrati	WG229644-17	06/12/18	16:24			
Continuing Calibrati	WG229644-18	06/12/18	16:43			
Breakdown Evaluation	WG229644-11	06/15/18	10:29			
Continuing Calibrati	WG229644-12	06/15/18	10:48	4.289	12.96	
Method Blank Sample	WG230200-1RA	06/15/18	13:02	4.288	12.96	
Laboratory Control S	WG230200-2RA	06/15/18	13:21	4.295	12.96	
CHAAP-IDW-SOIL-06041	SL4984-1	06/15/18	13:40	4.29	12.96	
Continuing Calibrati	WG229644-15	06/15/18	17:13	4.289	12.96	

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Sample Data Section

KATAHDIN ANALYTICAL SERVICES - ORGANIC DATA QUALIFIERS

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.

* Compound recovery or percent RPD (relative percent difference) was outside of quality control limits.

D Indicates the result was obtained from analysis of a diluted sample. Surrogate recoveries may not be calculable.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

or

J Used for Pesticides, PCBs, Herbicides, Formaldehyde, Explosives and Method 504.1 analytes when there is a greater than 40% difference for detected concentrations between the two GC columns.

B Indicates the analyte was detected in the laboratory method blank analyzed concurrently with the sample.

C Indicates that the flagged compound did not meet DoD criteria in the corresponding daily calibration verification (CV).

L Indicates that the flagged compound did not meet DoD criteria in the corresponding Laboratory Control Sample (LCS) and/or Laboratory Control Sample Duplicate (LCSD) prepared and/or analyzed concurrently with the sample.

M Indicates that the flagged compound did not meet DoD criteria in the Matrix Spike and/or Matrix Spike Duplicate prepared and/or analyzed concurrently with the native sample.

N Presumptive evidence of a compound based on a mass spectral library search.

A Indicates that a tentatively identified compound is a suspected aldol-condensation product.

P Used for Pesticide/Aroclor analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. (for CLP methods only).

Katahdin Analytical Services, Inc.

Manual Integration Codes For GC/MS, GC, HPLC and/or IC

M1	Peak splitting.
M2	Well defined peaks on the shoulders of the other peaks.
M3	There is additional area due to a coeluting interferant.
M4	There are negative spikes in the baseline.
M5	There are rising or falling baselines.
M6	The software has failed to detect a peak or misidentified a peak.
M7	Excessive peak tailing.
M8	Analysis such as GRO, DRO and TPH require a baseline hold.
M9	Peak was not completely integrated as in GC/MS.
M10	Primary ion was correctly integrated, but secondary or tertiary ion needed manual integration as in GC/MS.
M11	For GC analysis, when a sample is diluted by 1:10 or more, the surrogate is set to undetected and then the area under the surrogate is manually integrated.
M12	Manual integration saved in method due to TurboChrom floating point error.

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL4984-1
Client ID: CHAAP-IDW-SOIL-060418
Project: Cornhusker Army Ammunition Plant
SDG: SL4984
Lab File ID: 1LF10086.D

Sample Date: 04-JUN-18
Received Date: 05-JUN-18
Extract Date: 12-JUN-18
Extracted By: DP
Extraction Method: 3510C/1311
Lab Prep Batch: WG230200

Analysis Date: 15-JUN-18
Analyst: AC
Analysis Method: SW846 8081B
Matrix: AQ
% Solids: 91.
Report Date: 20-JUN-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
gamma-BHC	U	0.12	ug/L	1	.05	0.25	0.036	0.12
Heptachlor	U	0.12	ug/L	1	.05	0.25	0.040	0.12
Heptachlor Epoxide	U	0.12	ug/L	1	.05	0.25	0.037	0.12
Endrin	U	0.25	ug/L	1	.1	0.50	0.042	0.25
Methoxychlor	U	1.2	ug/L	1	.5	2.5	0.042	1.2
Technical Chlordane	U	1.2	ug/L	1	.5	2.5	0.42	1.2
Toxaphene	U	2.5	ug/L	1	1	5.0	0.85	2.5
Tetrachloro-M-Xylene		76.6	%					
Decachlorobiphenyl		86.8	%					

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Data File: \\target_server\gg\chem\gc01.i\GC01LF15.b\1LF10086.D
Report Date: 20-Jun-2018 09:08

Katahdin Analytical Services

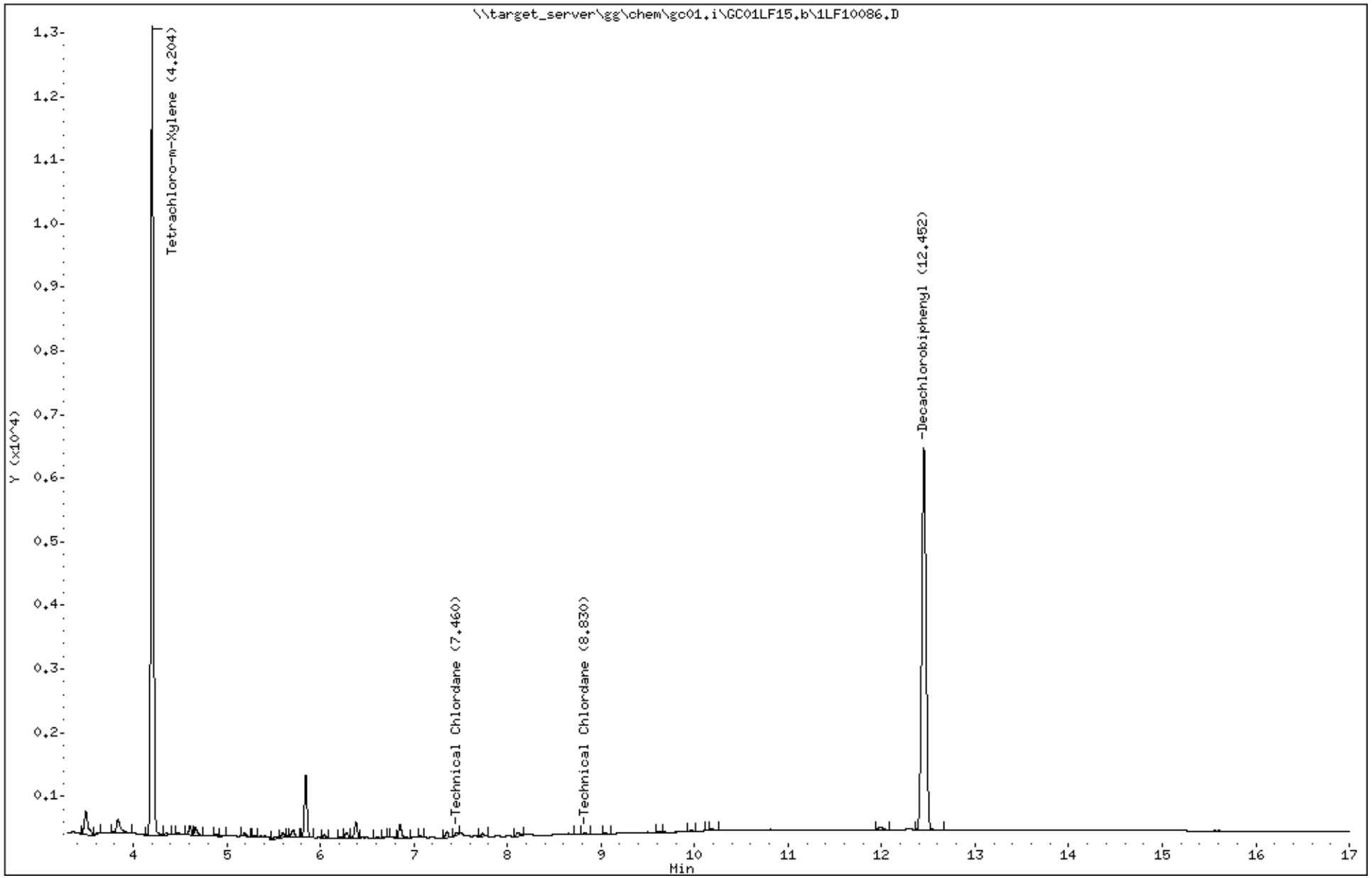
Data file : \\target_server\gg\chem\gc01.i\GC01LF15.b\1LF10086.D
Lab Smp Id: SL4984-1 Client Smp ID: HAAP-IDW-SOIL-06041
Inj Date : 15-JUN-2018 13:40
Operator : AC Inst ID: gc01.i
Smp Info : SL4984-1
Misc Info : WG229644,WG230200,WG223323-2
Comment :
Method : \\target_server\gg\chem\gc01.i\GC01LF15.b\PEST217.m
Meth Date : 18-Jun-2018 12:48 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 08:42 Cal File: 1LD10088.D
Als bottle: 77
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TCLP-SW8081.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	0.20000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS		
					ON-COLUMN	FINAL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/L)	REVIEW CODE
$ 4 Tetrachloro-m-Xylene	4.203	4.198	0.005	12725	0.07655	3.83	
$ 34 Decachlorobiphenyl	12.451	12.443	0.008	6011	0.08681	4.34	

Data File: \\target_server\gg\chem\gc01.i\GC01LF15.b\1LF10086.D
Date : 15-JUN-2018 13:40
Client ID: HAAP-IDW-SOIL-06041
Instrument: gc01.i
Sample Info: SL4984-1
Purge Volume: 0.2
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000012

Data File: 1LF10086.D
Report Date: 20-Jun-2018 09:08

Katahdin Analytical Services

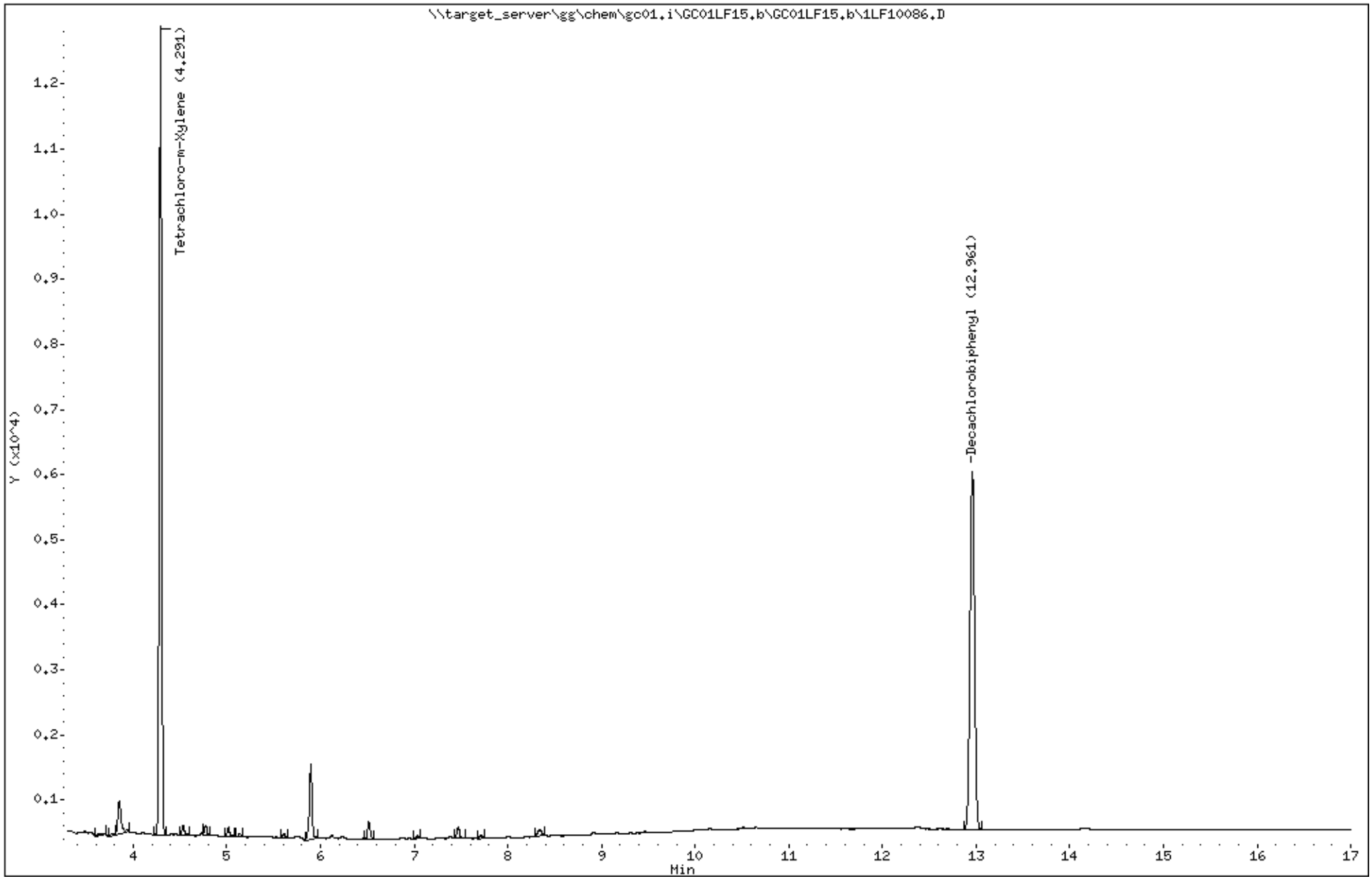
Data file : \\target_server\gg\chem\gc01.i\GC01LF15.b\GC01LF15.b\1LF10086.D
Lab Smp Id: SL4984-1 Client Smp ID: HAAP-IDW-SOIL-06041
Inj Date : 15-JUN-2018 13:40
Operator : AC Inst ID: gc01.i
Smp Info : SL4984-1
Misc Info : WG229644,WG230200,WG223323-2
Comment :
Method : \\target_server\gg\chem\gc01.i\GC01LF15.b\PEST217.m\PEST217.m
Meth Date : 18-Jun-2018 12:55 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 13:22 Cal File: 1LD10100.D
Als bottle: 77
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TCLP-SW8081.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	0.20000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS		
					ON-COLUMN	FINAL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/L)	REVIEW CODE
$ 4 Tetrachloro-m-Xylene	4.290	4.285	0.005	12424	0.07179	3.59	
$ 34 Decachlorobiphenyl	12.960	12.948	0.012	5496	0.08196	4.10	

Data File: \\target_server\gg\chem\gc01.i\GC01LF15.b\GC01LF15.b\1LF10086.D
Date : 15-JUN-2018 13:40
Client ID: HAAP-IDW-SOIL-06041
Instrument: gc01.i
Sample Info: SL4984-1
Purge Volume: 0.2
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000014

Standards Data Section

Katahdin
ANALYTICAL SERVICES

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL4984
Project : Cornhusker Army Ammunition Plant
Instrument ID: GC01
Lab File IDs : 1LB10218.D 1LB10217.D 1LB10216.D 1LB10213.D 1LB10215.D 1LB10214.D
Column ID: A
Calibration Date(s): 16-FEB-18 15:00 16-FEB-18 23:44

	0.0050000 Level 1	0.0100000 Level 2	0.0250000 Level 3	0.0500000 Level 4	0.1000000 Level 5	0.2500000 Level 6	New Crv	b	m1	m2	%RSD	Max %RSD	
Toxaphene(8)	176	444	956	1971	5090	22019	LNR	0.08449	2215		0.99972	0.99000	O
Toxaphene(4)	137	352	765	1550	4026	17122	LNR	0.07188	1721		0.99983	0.99000	O
Toxaphene(3)	112	284	596	1200	3029	12687	LNR	0.04588	1272		0.99990	0.99000	O
Toxaphene(5)	112	292	632	1269	3292	14354	LNR	0.08858	1444		0.99965	0.99000	O
Toxaphene(7)	201	509	1079	2244	5825	24705	LNR	0.07199	2483		0.99984	0.99000	O
Toxaphene(1)	57.00000	137	297	621	1586	6686	LNR	0.06294	672		0.99988	0.99000	O
Toxaphene(9)	322	789	1737	3650	9111	38537	LNR	0.05938	3869		0.99987	0.99000	O
Toxaphene(6)	217	538	1154	2361	6039	25877	LNR	0.07210	2600		0.99978	0.99000	O
Toxaphene(2)	100	249	537	1058	2692	11638	LNR	0.07094	1169		0.99969	0.99000	O

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

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Katahdin
ANALYTICAL SERVICES

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL4984
Project : Cornhusker Army Ammunition Plant
Instrument ID: GC01
Lab File IDs : 1LB10218.D 1LB10217.D 1LB10216.D 1LB10213.D 1LB10215.D 1LB10214.D
Column ID: B
Calibration Date(s): 16-FEB-18 15:00 16-FEB-18 23:44

	0.005000(Level 1	0.010000(Level 2	0.025000(Level 3	0.050000(Level 4	0.1000000 Level 5	0.2500000 Level 6	New Crv	b	m1	m2	%RSD	Max %RSD	
Toxaphene(1)	66.00000	185	388	773	1966	8173	LNR	0.03460	819		0.99992	0.99000	O
Toxaphene(7)	202	375	1096	2175	5821	25050	LNR	0.08012	2518		0.99966	0.99000	O
Toxaphene(2)	133	334	697	1382	3432	14075	LNR	0.01559	1408		0.99996	0.99000	O
Toxaphene(5)	134	276	738	1475	3843	16493	LNR	0.06957	1656		0.99971	0.99000	O
Toxaphene(8)	138	432	731	1486	4105	18566	LNR	0.10113	1866		0.99903	0.99000	O
Toxaphene(4)	114	299	647	1260	3355	14436	LNR	0.06692	1449		0.99967	0.99000	O
Toxaphene(3)	113	294	620	1288	3212	13328	LNR	0.03254	1335		0.99993	0.99000	O
Toxaphene(6)	156	343	790	1590	4079	17089	LNR	0.04481	1713		0.99987	0.99000	O
Toxaphene(9)	206	487	1056	2123	5606	24880	LNR	0.08575	2499		0.99938	0.99000	O

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

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Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10197.D
Report Date: 22-Feb-2018 12:18

Katahdin Analytical Services

RECOVERY REPORT

Client Name: Client SDG: SDGa00508
Sample Matrix: LIQUID Fraction: PESTICIDE
Lab Smp Id: WG223321-7
Level: LOW Operator: AC
Data Type: GC MULTI COMP SampleType: LCS
SpikeList File: tox_ind.spk Quant Type: ESTD
Sublist File: Tox.sub
Method File: \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m
Misc Info: WG223321,WG223321,WG223321,SL1057-1

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
18 Toxaphene	1.00	1.04	104.00	80-120

Data File: 1LB10197.D
Report Date: 22-Feb-2018 12:18

Katahdin Analytical Services

RECOVERY REPORT

Client Name: Client SDG: SDGa00508
Sample Matrix: LIQUID Fraction: PESTICIDE
Lab Smp Id: WG223321-7
Level: LOW Operator: AC
Data Type: GC MULTI COMP SampleType: LCS
SpikeList File: tox_ind.spk Quant Type: ESTD
Sublist File: Tox.sub
Method File: \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m\PEST217.m
Misc Info: WG223321,WG223321,WG223321,SL1057-1

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
18 Toxaphene	1.00	1.15	115.00	80-120

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10191.D
Report Date: 19-Feb-2018 13:43

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10191.D
Lab Smp Id: WG223321-1
Inj Date : 16-FEB-2018 15:00
Operator : AC Inst ID: gc01.i
Smp Info : WG223321-1
Misc Info :
Comment :
Method : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m
Meth Date : 19-Feb-2018 12:34 acronin Quant Type: ESTD
Cal Date : 16-FEB-2018 15:00 Cal File: 1LB10191.D
Als bottle: 82 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Tox.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

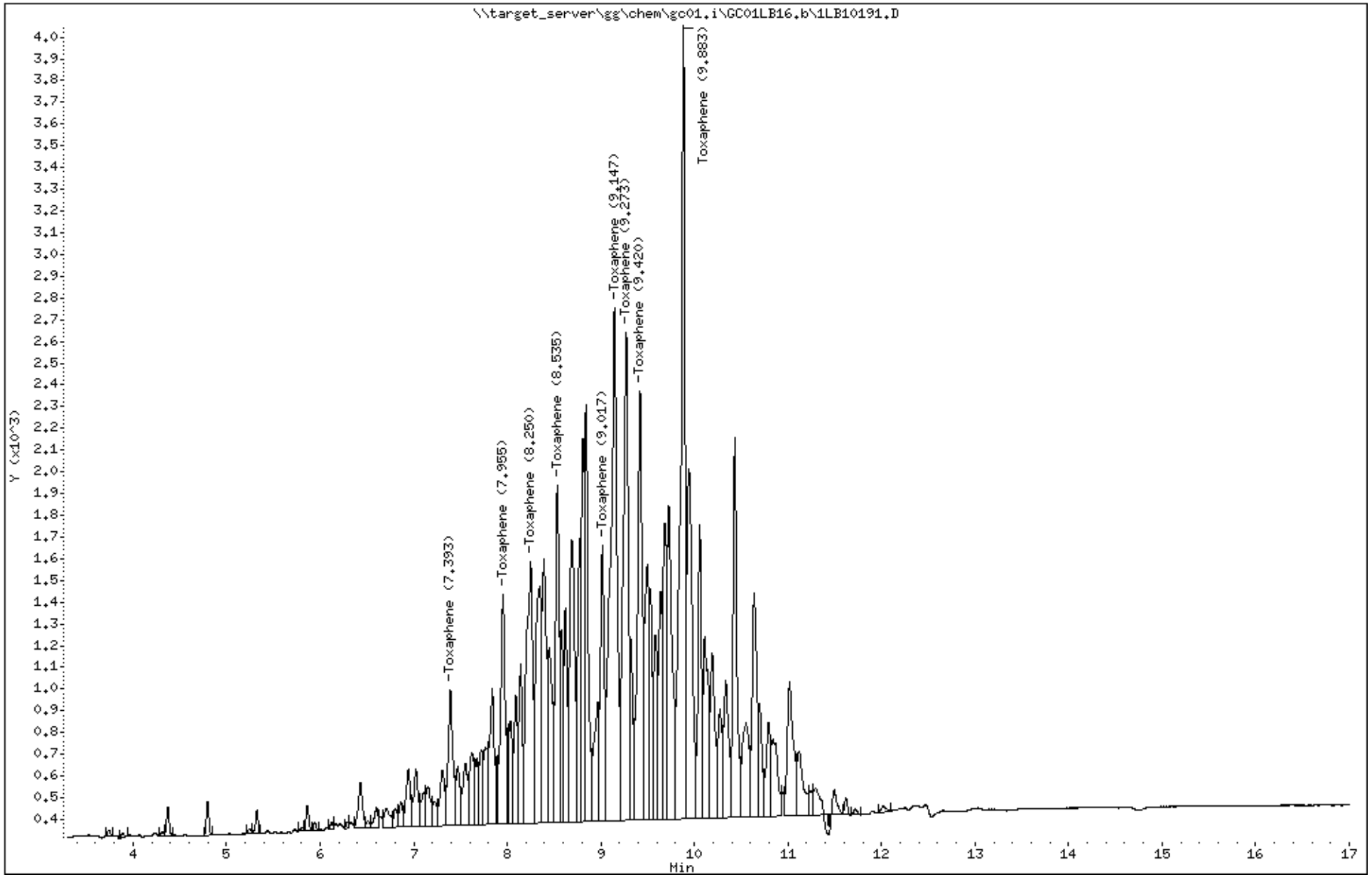
				AMOUNTS					
RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	TARGET RANGE	RATIO	REVIEW CODE	
18 Toxaphene					CAS #: 8001-35-2				
7.393	7.386	0.007	621	1.00000	1.00	80.00- 120.00	100.00(M)	M5	
7.954	7.946	0.008	1058	1.00000	1.00	141.69- 212.54	170.37	M5	
8.249	8.243	0.006	1200	1.00000	1.00	153.98- 230.97	193.24	M5	
8.534	8.528	0.006	1550	1.00000	1.00	199.87- 299.81	249.60	M5	
9.016	9.008	0.008	1269	1.00000	1.00	175.05- 262.57	204.35	M5	
9.146	9.138	0.008	2361	1.00000	1.00	309.22- 463.82	380.19	M5	
9.273	9.265	0.008	2244	1.00000	1.00	292.16- 438.24	361.35	M5	
9.419	9.410	0.009	1971	1.00000	1.00	262.32- 393.48	317.39	M5	
9.883	9.873	0.010	3650	1.00000	1.00	456.43- 684.64	587.76	M5	
Average of Peak Amounts =				1.00000					

AC
12:18 pm, Feb 22, 2018

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10191.D
Date : 16-FEB-2018 15:00
Client ID:
Instrument: gc01.i
Sample Info: WG223321-1
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000021

Data File: 1LB10191.D
Report Date: 22-Feb-2018 12:15

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10191.D
Lab Smp Id: WG223321-1
Inj Date : 16-FEB-2018 15:00
Operator : AC Inst ID: gc01.i
Smp Info : WG223321-1
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m\PEST217.m
Meth Date : 22-Feb-2018 12:14 acronin Quant Type: ESTD
Cal Date : 16-FEB-2018 15:00 Cal File: 1LB10191.D
Als bottle: 82 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Tox.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

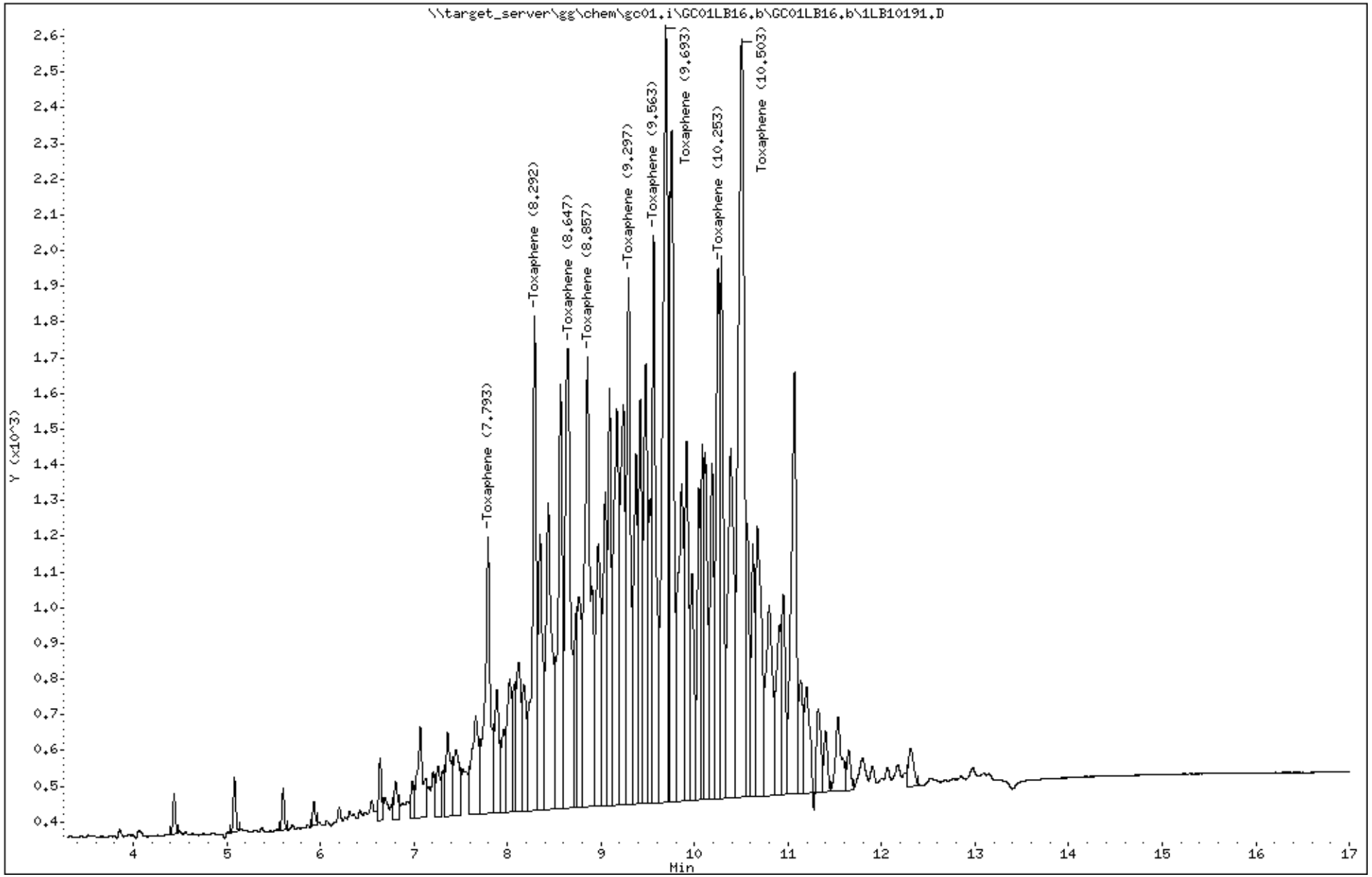
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
18 Toxaphene					CAS #: 8001-35-2			
7.793	7.793	0.000	773	1.00000	0.979	80.00- 120.00	100.00(M)	M5
8.291	8.291	0.000	1382	1.00000	0.997	161.21- 241.82	178.78	M5
8.645	8.645	0.000	1288	1.00000	0.997	136.97- 205.45	166.62	M5
8.856	8.856	0.000	1260	1.00000	0.937	138.18- 207.27	163.00	M5
9.296	9.296	0.000	1475	1.00000	1.18	162.42- 243.64	190.82	M5
9.563	9.563	0.000	1590	1.00000	1.01	189.09- 283.64	205.69	M5
9.693	9.693	0.000	2175	1.00000	1.26	244.85- 367.27	281.37	M5
10.253	10.253	0.000	1486	1.00000	0.796	167.27- 250.91	192.24	M5
10.503	10.503	0.000	2123	1.00000	0.935	249.70- 374.55	274.64	M5
Average of Peak Amounts =					1.01011			

AC
12:18 pm, Feb 22, 2018

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10191.D
Date : 16-FEB-2018 15:00
Client ID:
Instrument: gc01.i
Sample Info: WG223321-1
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000023

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10192.D
Report Date: 19-Feb-2018 13:43

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10192.D
Lab Smp Id: WG223321-2
Inj Date : 16-FEB-2018 15:19
Operator : AC Inst ID: gc01.i
Smp Info : WG223321-2
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m
Meth Date : 19-Feb-2018 12:34 acronin Quant Type: ESTD
Cal Date : 16-FEB-2018 22:27 Cal File: 1LB10214.D
Als bottle: 83 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Tox.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

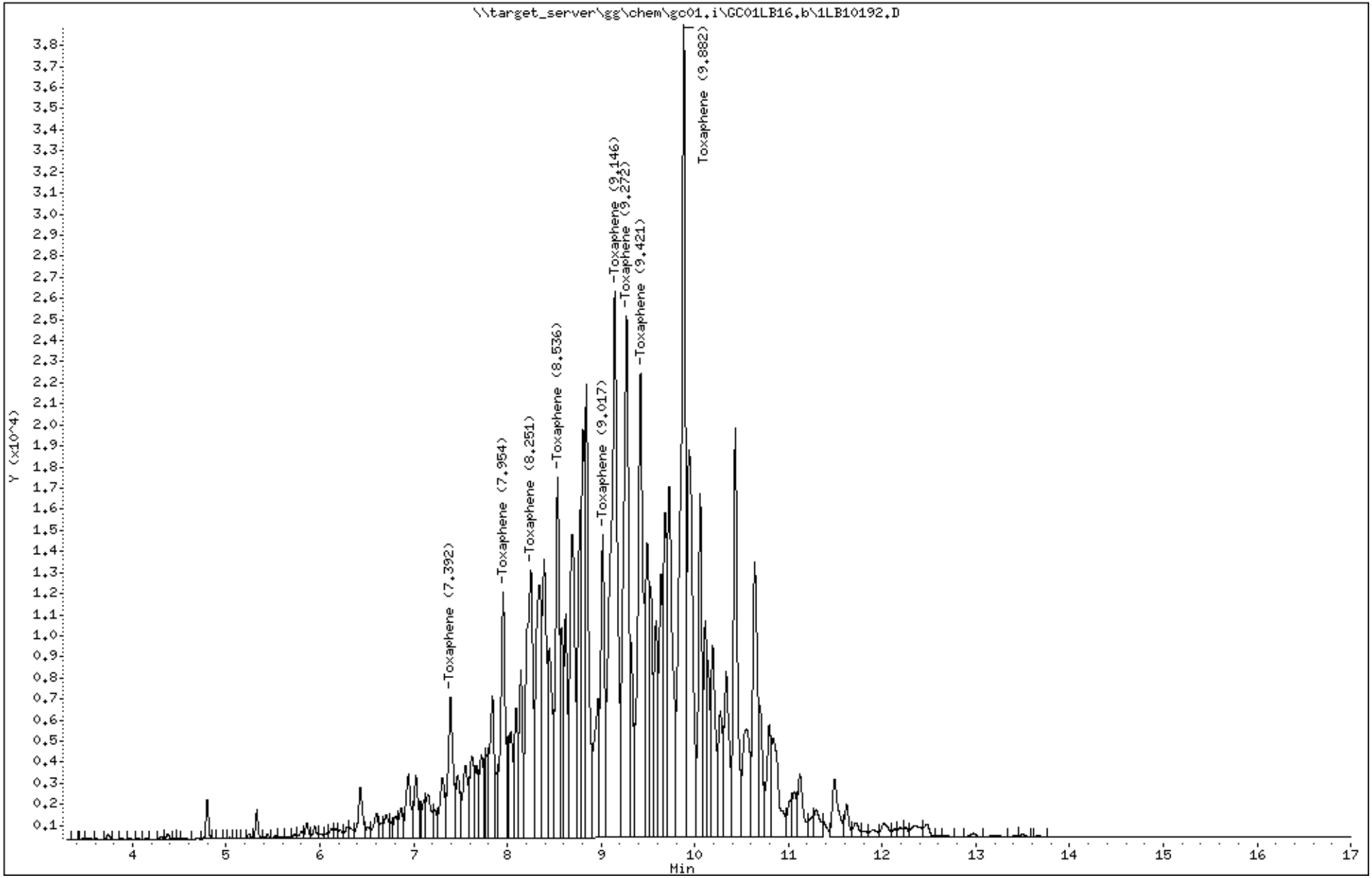
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
18 Toxaphene					CAS #: 8001-35-2			
7.392	7.386	0.006	6686	10.0000	10.0	80.00- 120.00	100.00(AM)	M5
7.953	7.946	0.007	11638	10.0000	10.0	141.69- 212.54	174.07	M5
8.250	8.243	0.007	12687	10.0000	10.0	153.98- 230.97	189.75	M5
8.535	8.528	0.007	17122	10.0000	10.0	199.87- 299.81	256.09	M5
9.017	9.008	0.009	14354	10.0000	10.0	175.05- 262.57	214.69	M5
9.145	9.138	0.007	25877	10.0000	10.0	309.22- 463.82	387.03	M5
9.272	9.265	0.007	24705	10.0000	10.0	292.16- 438.24	369.50	M5
9.420	9.410	0.010	22019	10.0000	10.0	262.32- 393.48	329.33	M5
9.882	9.873	0.009	38537	10.0000	10.0	456.43- 684.64	576.38	M5
Average of Peak Amounts =				10.0000				

AC
12:18 pm, Feb 22, 2018

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10192.D
Date : 16-FEB-2018 15:19
Client ID:
Instrument: gc01.i
Sample Info: WG223321-2
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000025

Data File: 1LB10192.D
Report Date: 22-Feb-2018 12:15

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10192.D
Lab Smp Id: WG223321-2
Inj Date : 16-FEB-2018 15:19
Operator : AC   Inst ID: gc01.i
Smp Info : WG223321-2
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m\PEST217.m
Meth Date : 22-Feb-2018 12:14 acronin   Quant Type: ESTD
Cal Date : 16-FEB-2018 22:07   Cal File: 1LB10213.D
Als bottle: 83   Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: Tox.sub
Target Version: 4.12   Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

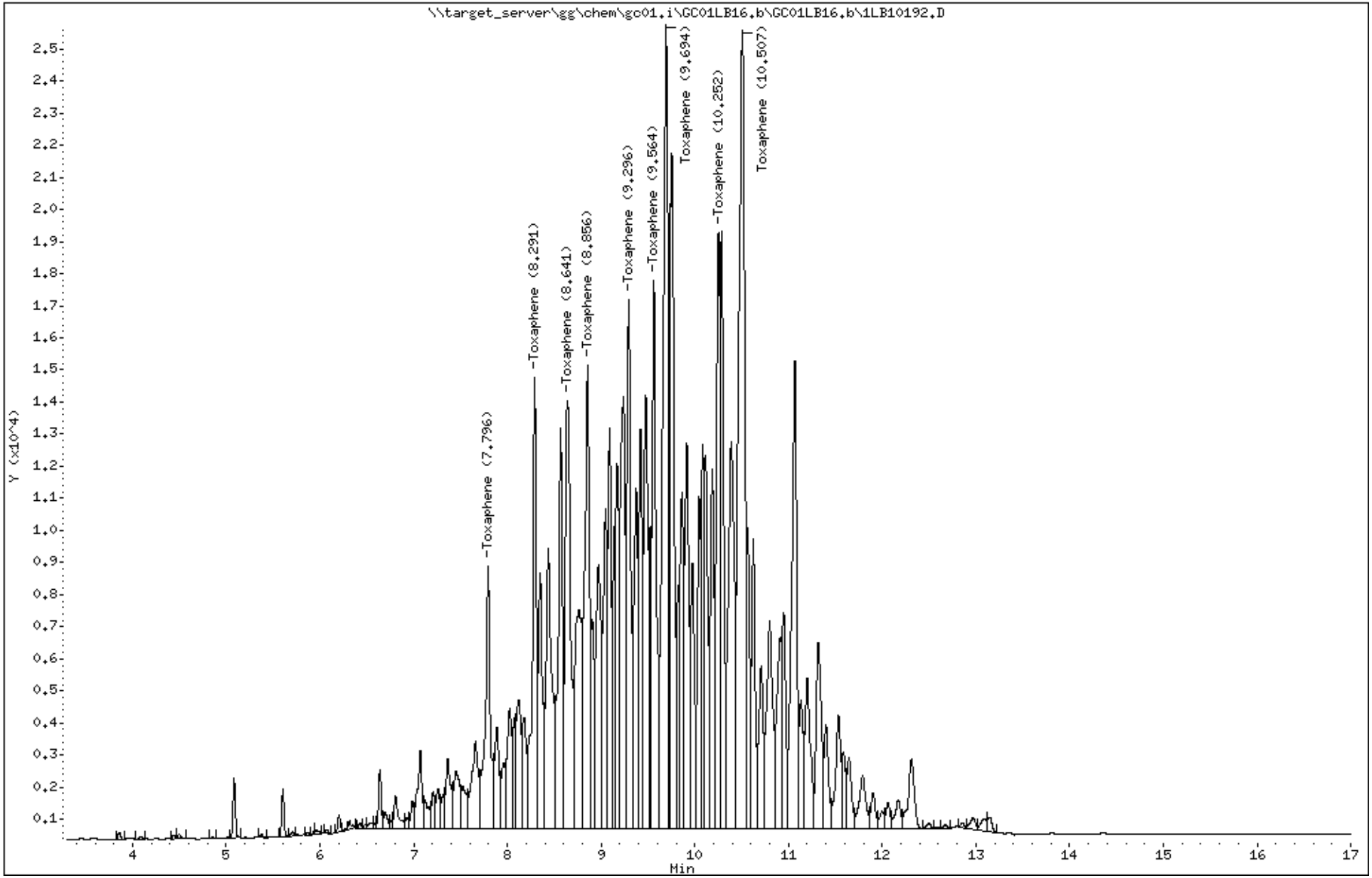
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

				AMOUNTS				
RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
18 Toxaphene					CAS #: 8001-35-2			
7.795	7.793	0.002	8173	10.0000	10.0	80.00- 120.00	100.00(A)	
8.290	8.291	-0.001	14075	10.0000	10.0	161.21- 241.82	172.21	
8.640	8.645	-0.005	13328	10.0000	10.0	136.97- 205.45	163.07	
8.855	8.856	-0.001	14436	10.0000	10.0	138.18- 207.27	176.63	
9.295	9.296	-0.001	16493	10.0000	10.1	162.42- 243.64	201.80	
9.564	9.563	0.001	17089	10.0000	10.0	189.09- 283.64	209.09	
9.694	9.693	0.001	25050	10.0000	10.1	244.85- 367.27	306.50	
10.252	10.253	-0.001	18566	10.0000	9.97	167.27- 250.91	227.16	
10.507	10.503	0.004	24880	10.0000	10.0	249.70- 374.55	304.42	
		Average of Peak Amounts =			10.0189			

QC Flag Legend

A - Target compound detected but, quantitated amount
    exceeded maximum amount.

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10192.D
Date : 16-FEB-2018 15:19
Client ID:
Instrument: gc01.i
Sample Info: WG223321-2
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000027

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10193.D
Report Date: 19-Feb-2018 13:43

Katahdin Analytical Services

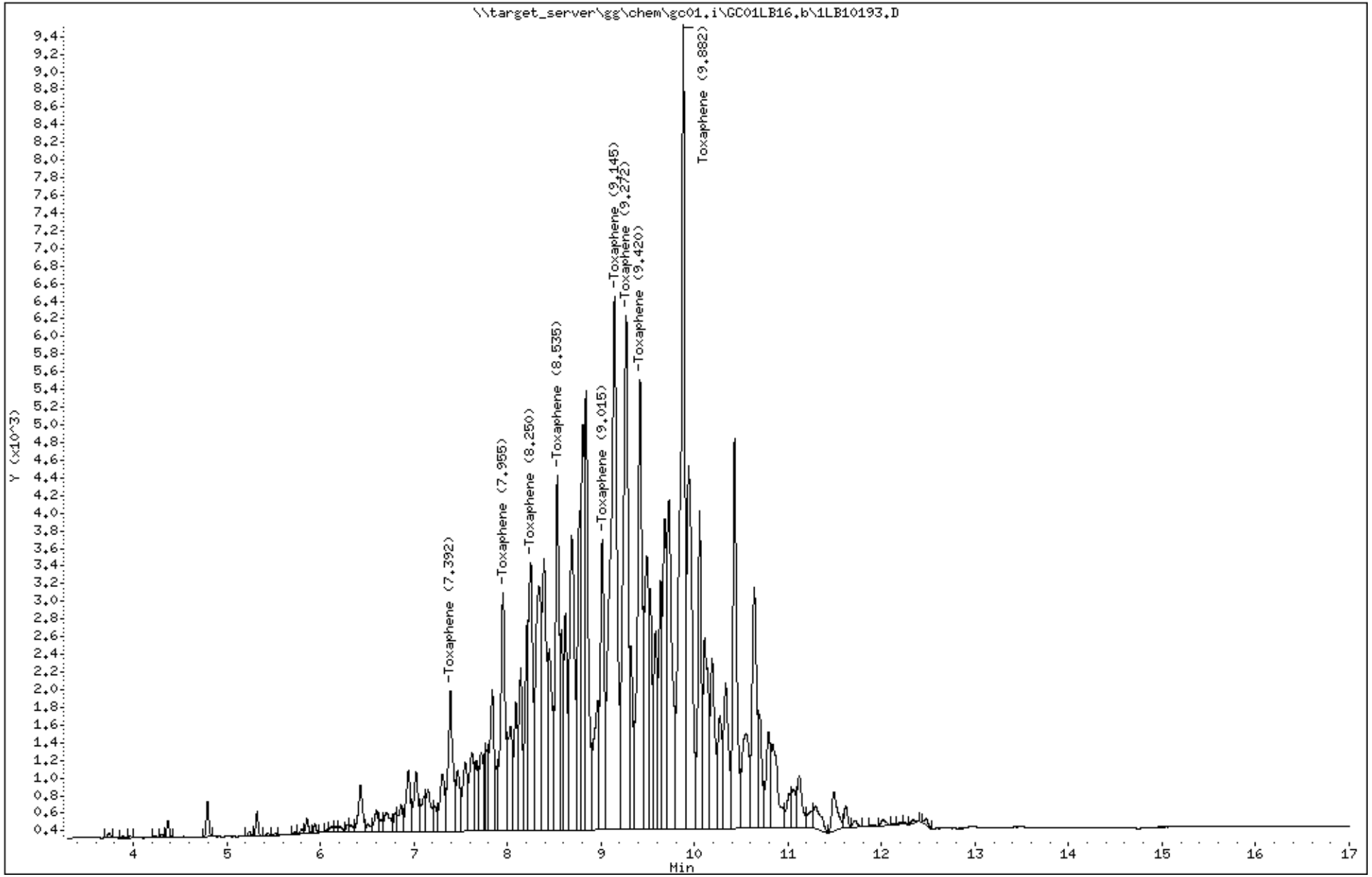
Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10193.D
Lab Smp Id: WG223321-3
Inj Date : 16-FEB-2018 15:39
Operator : AC Inst ID: gc01.i
Smp Info : WG223321-3
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m
Meth Date : 19-Feb-2018 12:34 acronin Quant Type: ESTD
Cal Date : 16-FEB-2018 22:46 Cal File: 1LB10215.D
Als bottle: 84 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Tox.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
18 Toxaphene					CAS #: 8001-35-2			
7.391	7.386	0.005	1586	2.50000	2.50	80.00- 120.00	100.00	
7.955	7.946	0.009	2692	2.50000	2.46	141.69- 212.54	169.74	
8.250	8.243	0.007	3029	2.50000	2.49	153.98- 230.97	190.98	
8.535	8.528	0.007	4026	2.50000	2.48	199.87- 299.81	253.85	
9.015	9.008	0.007	3292	2.50000	2.46	175.05- 262.57	207.57	
9.145	9.138	0.007	6039	2.50000	2.46	309.22- 463.82	380.77	
9.271	9.265	0.006	5825	2.50000	2.48	292.16- 438.24	367.28	
9.420	9.410	0.010	5090	2.50000	2.46	262.32- 393.48	320.93	
9.881	9.873	0.008	9111	2.50000	2.46	456.43- 684.64	574.46	
Average of Peak Amounts =					2.47222			

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10193.D
Date : 16-FEB-2018 15:39
Client ID:
Instrument: gc01.i
Sample Info: WG223321-3
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000029

Data File: 1LB10193.D
Report Date: 22-Feb-2018 12:15

Katahdin Analytical Services

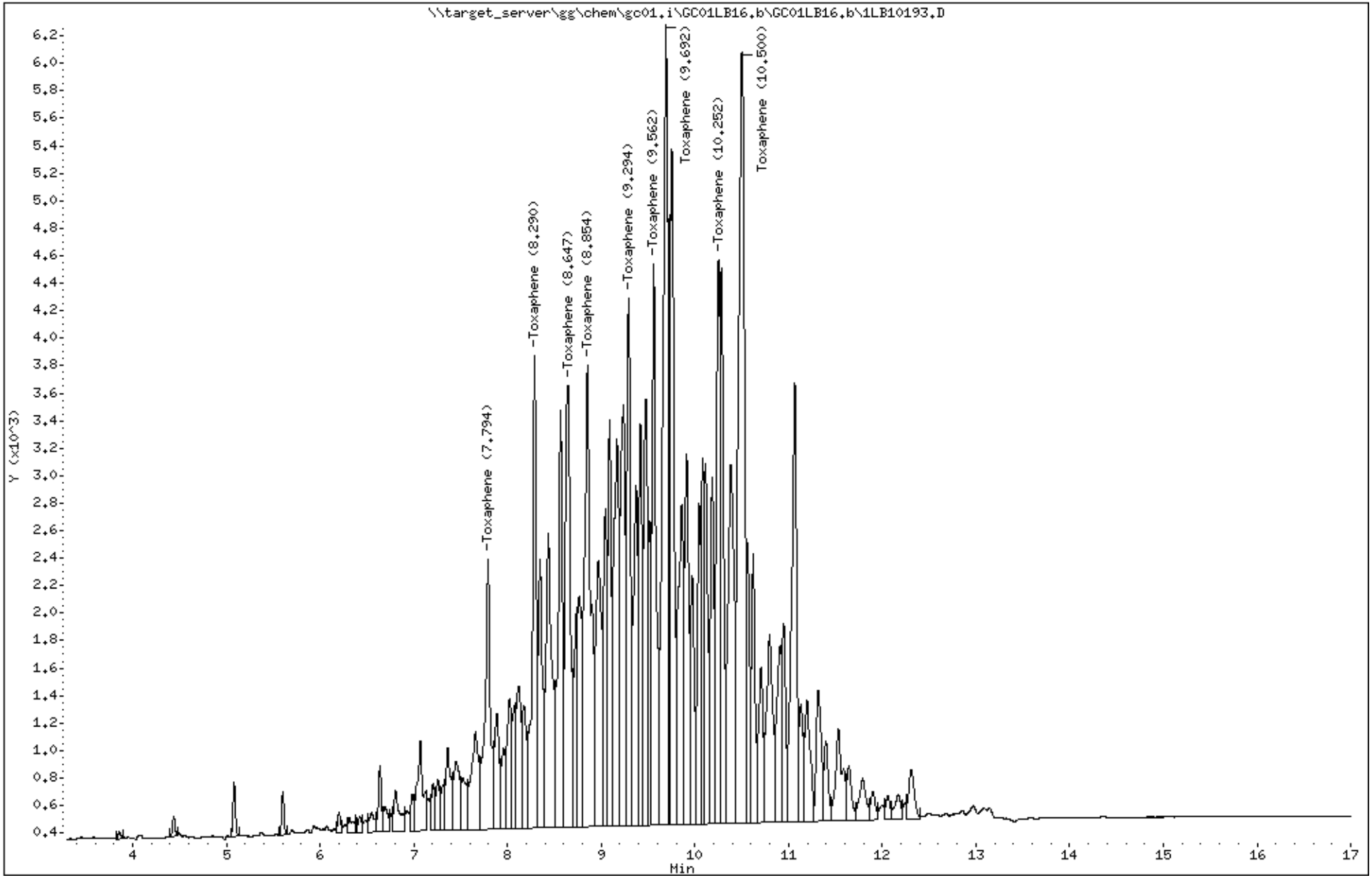
Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10193.D
Lab Smp Id: WG223321-3
Inj Date : 16-FEB-2018 15:39
Operator : AC   Inst ID: gc01.i
Smp Info : WG223321-3
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m\PEST217.m
Meth Date : 22-Feb-2018 12:14 acronin   Quant Type: ESTD
Cal Date : 16-FEB-2018 22:27   Cal File: 1LB10214.D
Als bottle: 84   Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: Tox.sub
Target Version: 4.12   Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

				AMOUNTS				
RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
18 Toxaphene					CAS #: 8001-35-2			
7.793	7.793	0.000	1966	2.50000	2.44	80.00- 120.00	100.00	
8.290	8.291	-0.001	3432	2.50000	2.45	161.21- 241.82	174.57	
8.646	8.645	0.001	3212	2.50000	2.44	136.97- 205.45	163.38	
8.853	8.856	-0.003	3355	2.50000	2.38	138.18- 207.27	170.65	
9.293	9.296	-0.003	3843	2.50000	2.40	162.42- 243.64	195.47	
9.561	9.563	-0.002	4079	2.50000	2.43	189.09- 283.64	207.48	
9.691	9.693	-0.002	5821	2.50000	2.41	244.85- 367.27	296.08	
10.251	10.253	-0.002	4105	2.50000	2.28	167.27- 250.91	208.80	
10.500	10.503	-0.003	5606	2.50000	2.33	249.70- 374.55	285.15	
		Average of Peak Amounts =			2.39556			

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10193.D
Date : 16-FEB-2018 15:39
Client ID:
Instrument: gc01.i
Sample Info: WG223321-3
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000031

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10194.D
Report Date: 19-Feb-2018 13:43

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10194.D
Lab Smp Id: WG223321-4
Inj Date : 16-FEB-2018 15:58
Operator : AC Inst ID: gc01.i
Smp Info : WG223321-4
Misc Info :
Comment :
Method : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m
Meth Date : 19-Feb-2018 12:34 acronin Quant Type: ESTD
Cal Date : 16-FEB-2018 23:06 Cal File: 1LB10216.D
Als bottle: 85 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Tox.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

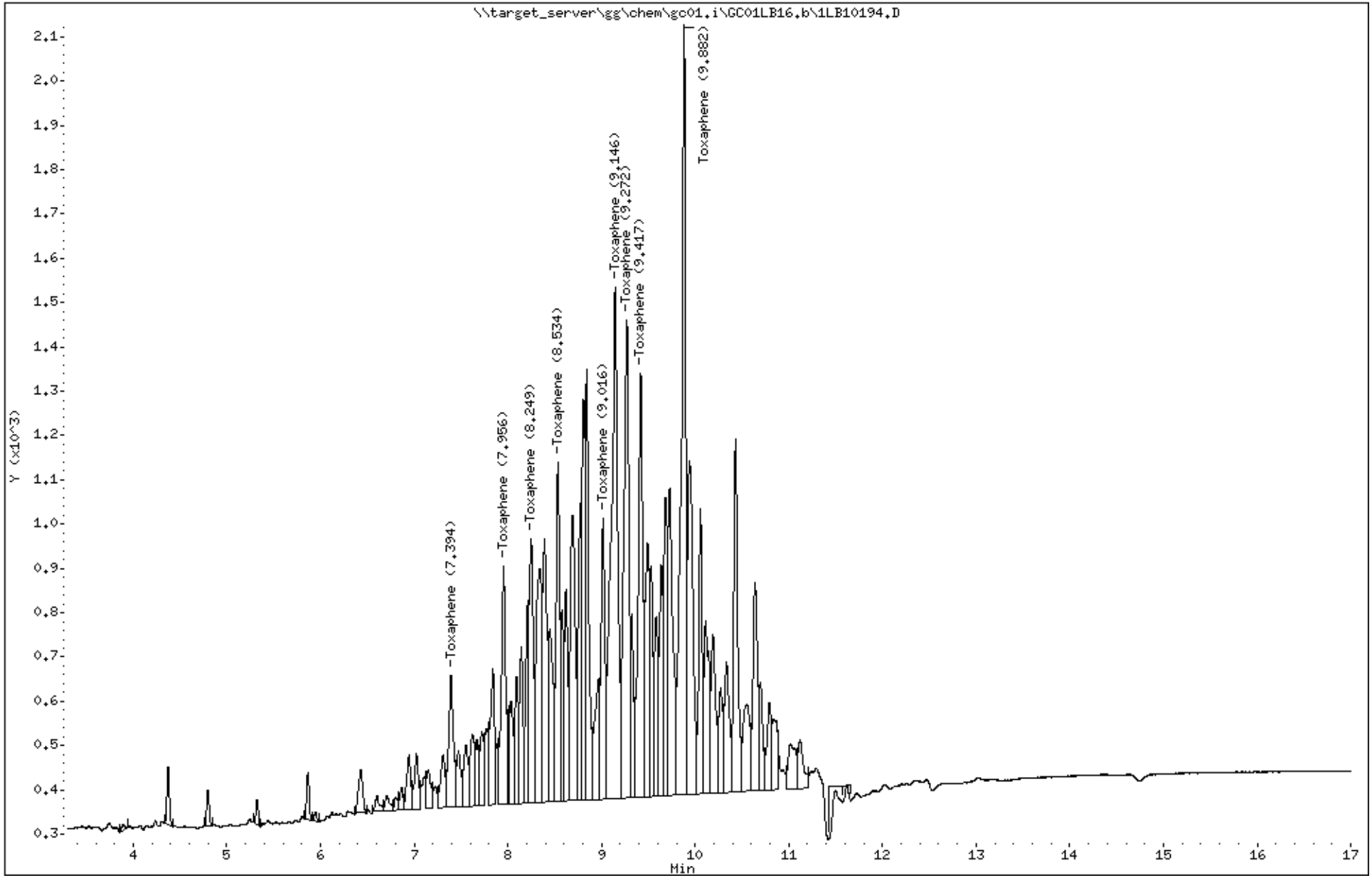
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
18 Toxaphene					CAS #: 8001-35-2			
7.392	7.386	0.006	297	0.50000	0.515	80.00- 120.00	100.00(M)	M5
7.953	7.946	0.007	537	0.50000	0.549	141.69- 212.54	180.81	M5
8.248	8.243	0.005	596	0.50000	0.535	153.98- 230.97	200.67	M5
8.533	8.528	0.005	765	0.50000	0.533	199.87- 299.81	257.58	M5
9.015	9.008	0.007	632	0.50000	0.545	175.05- 262.57	212.79	M5
9.145	9.138	0.007	1154	0.50000	0.526	309.22- 463.82	388.55	M5
9.272	9.265	0.007	1079	0.50000	0.517	292.16- 438.24	363.30	M5
9.417	9.410	0.007	956	0.50000	0.529	262.32- 393.48	321.89	M5
9.882	9.873	0.009	1737	0.50000	0.515	456.43- 684.64	584.85	M5
Average of Peak Amounts =					0.52933			

AC
12:18 pm, Feb 22, 2018

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10194.D
Date : 16-FEB-2018 15:58
Client ID:
Instrument: gc01.i
Sample Info: WG223321-4
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000033

Data File: 1LB10194.D
Report Date: 22-Feb-2018 12:15

Katahdin Analytical Services

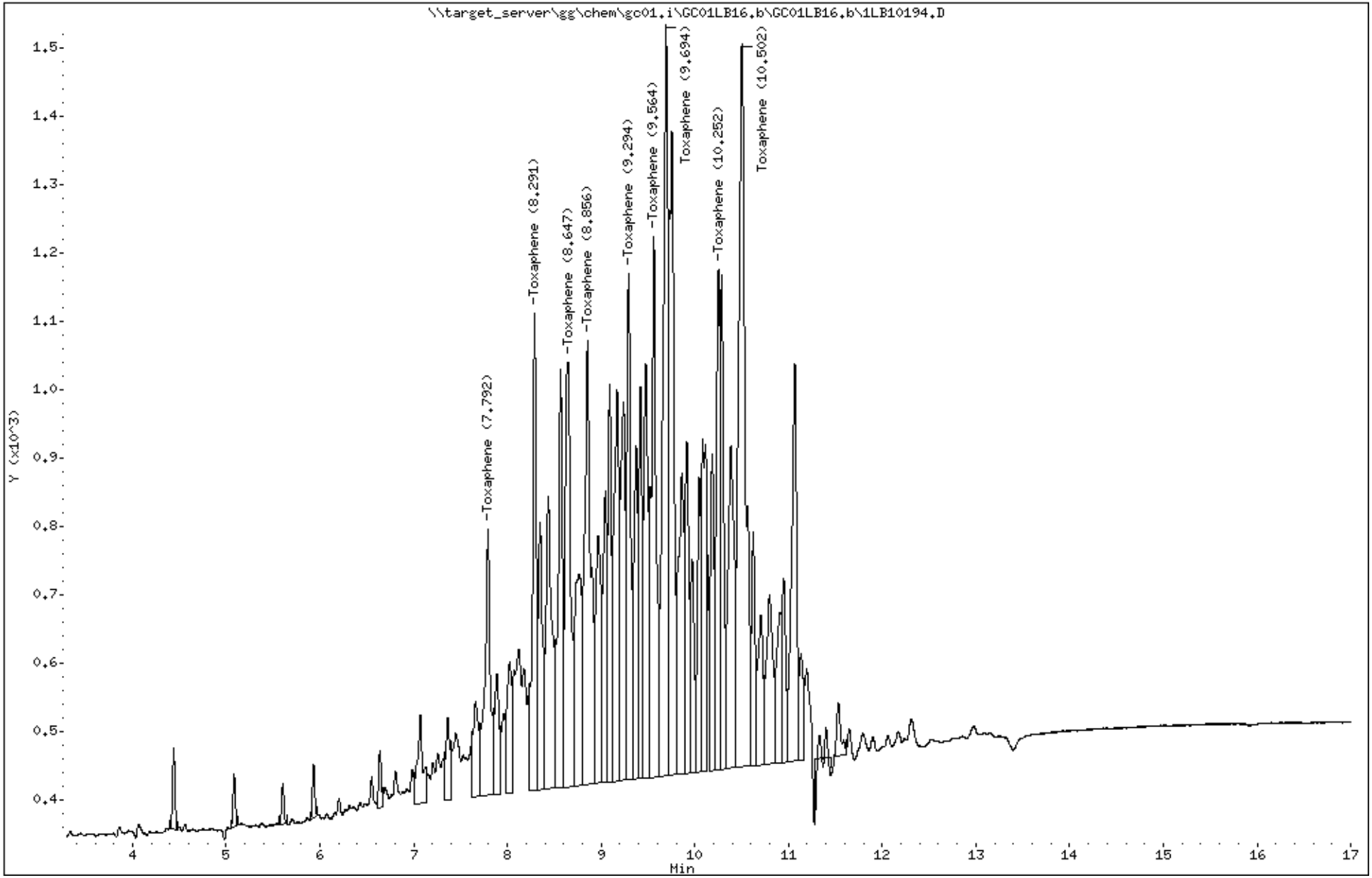
Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10194.D
Lab Smp Id: WG223321-4
Inj Date : 16-FEB-2018 15:58
Operator : AC   Inst ID: gc01.i
Smp Info : WG223321-4
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m\PEST217.m
Meth Date : 22-Feb-2018 12:14 acronin   Quant Type: ESTD
Cal Date : 16-FEB-2018 22:46   Cal File: 1LB10215.D
Als bottle: 85   Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: Tox.sub
Target Version: 4.12   Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
18 Toxaphene						CAS #: 8001-35-2		
7.792	7.793	-0.001	388	0.50000	0.508	80.00- 120.00	100.00	
8.290	8.291	-0.001	697	0.50000	0.510	161.21- 241.82	179.64	
8.647	8.645	0.002	620	0.50000	0.497	136.97- 205.45	159.79	
8.855	8.856	-0.001	647	0.50000	0.514	138.18- 207.27	166.75	
9.294	9.296	-0.002	738	0.50000	0.518	162.42- 243.64	190.21	
9.564	9.563	0.001	790	0.50000	0.508	189.09- 283.64	203.61	
9.694	9.693	0.001	1096	0.50000	0.519	244.85- 367.27	282.47	
10.252	10.253	-0.001	731	0.50000	0.489	167.27- 250.91	188.40	
10.502	10.503	-0.001	1056	0.50000	0.508	249.70- 374.55	272.16	
		Average of Peak Amounts =			0.50789			

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10194.D
Date : 16-FEB-2018 15:58
Client ID:
Instrument: gc01.i
Sample Info: WG223321-4
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000035

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10195.D
Report Date: 19-Feb-2018 13:43

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10195.D
Lab Smp Id: WG223321-5
Inj Date : 16-FEB-2018 16:17
Operator : AC Inst ID: gc01.i
Smp Info : WG223321-5
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m
Meth Date : 19-Feb-2018 12:34 acronin Quant Type: ESTD
Cal Date : 16-FEB-2018 23:25 Cal File: 1LB10217.D
Als bottle: 86 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Tox.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

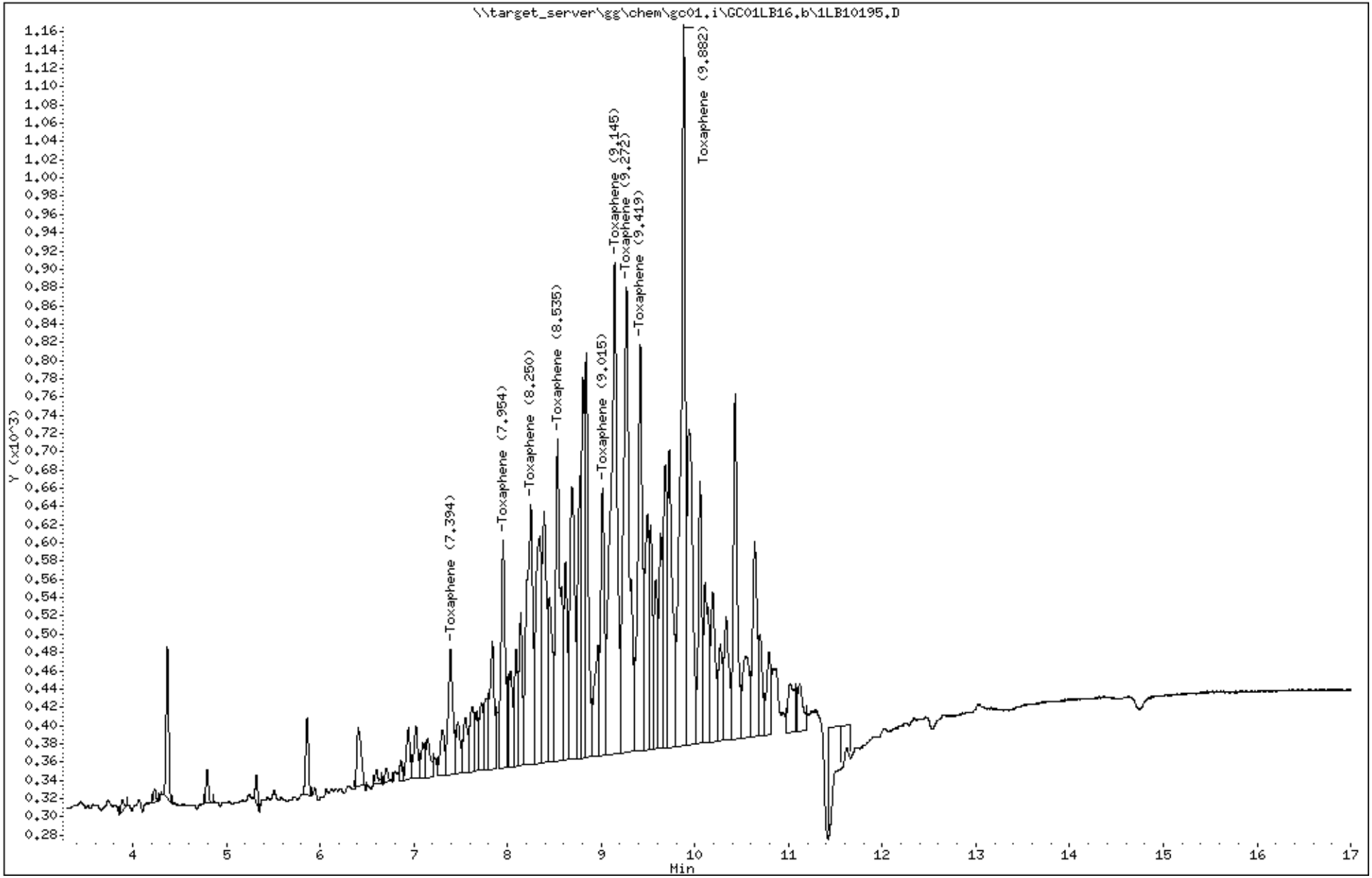
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

				AMOUNTS					
				CAL-AMT	ON-COL				
RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	TARGET RANGE	RATIO	REVIEW CODE	
18 Toxaphene					CAS #: 8001-35-2				
7.391	7.386	0.005	137	0.25000	0.270	80.00- 120.00	100.00(M)	M5	
7.953	7.946	0.007	249	0.25000	0.289	141.69- 212.54	181.75	M5	
8.248	8.243	0.005	284	0.25000	0.276	153.98- 230.97	207.30	M5	
8.535	8.528	0.007	352	0.25000	0.282	199.87- 299.81	256.93	M5	
9.015	9.008	0.007	292	0.25000	0.297	175.05- 262.57	213.14	M5	
9.143	9.138	0.005	538	0.25000	0.282	309.22- 463.82	392.70	M5	AC
9.271	9.265	0.006	509	0.25000	0.280	292.16- 438.24	371.53	M5	12:18 pm, Feb 22, 2018
9.418	9.410	0.008	444	0.25000	0.290	262.32- 393.48	324.09	M5	
9.881	9.873	0.008	789	0.25000	0.266	456.43- 684.64	575.91	M5	
Average of Peak Amounts =					0.28133				

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10195.D
Date : 16-FEB-2018 16:17
Client ID:
Instrument: gc01.i
Sample Info: WG223321-5
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000037

Data File: 1LB10195.D
Report Date: 22-Feb-2018 12:15

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10195.D
Lab Smp Id: WG223321-5
Inj Date : 16-FEB-2018 16:17
Operator : AC Inst ID: gc01.i
Smp Info : WG223321-5
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m\PEST217.m
Meth Date : 22-Feb-2018 12:14 acronin Quant Type: ESTD
Cal Date : 16-FEB-2018 16:17 Cal File: 1LB10195.D
Als bottle: 86 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Tox.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

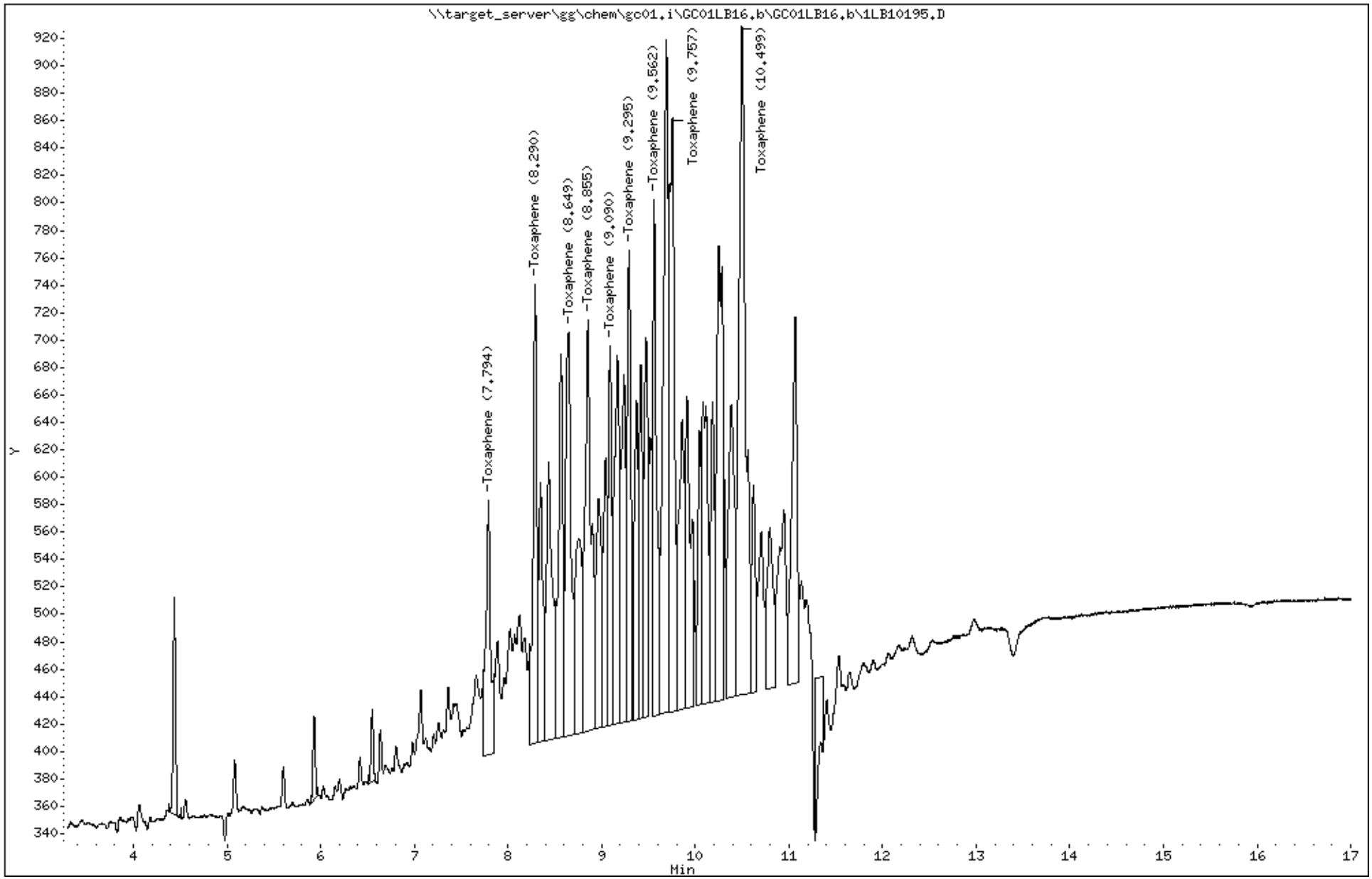
				AMOUNTS					
RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	TARGET RANGE	RATIO	REVIEW CODE	
18 Toxaphene					CAS #: 8001-35-2				
7.792	7.793	-0.001	185	0.25000	0.265	80.00- 120.00	100.00(M)	M5	
8.290	8.291	-0.001	334	0.25000	0.256	161.21- 241.82	180.54	M5	
8.647	8.645	0.002	294	0.25000	0.257	136.97- 205.45	158.92	M5	
8.855	8.856	-0.001	299	0.25000	0.278	138.18- 207.27	161.62	M5	
9.090	9.296	-0.206	276	0.25000	0.271	162.42- 243.64	149.19	M5	
9.293	9.563	-0.270	343	0.25000	0.276	189.09- 283.64	185.41	M5	
9.562	9.693	-0.131	375	0.25000	0.267	244.85- 367.27	202.70	M5	
9.757	10.253	-0.496	432	0.25000	0.271	167.27- 250.91	233.51	M5	
10.498	10.503	-0.005	487	0.25000	0.284	249.70- 374.55	263.24	M5	
Average of Peak Amounts =					0.26944				

AC
12:18 pm, Feb 22, 2018

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10195.D
Date : 16-FEB-2018 16:17
Client ID:
Instrument: gc01.i
Sample Info: WG223321-5
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000039

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10196.D
Report Date: 19-Feb-2018 13:43

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10196.D
Lab Smp Id: WG223321-6
Inj Date : 16-FEB-2018 16:37
Operator : AC Inst ID: gc01.i
Smp Info : WG223321-6
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m
Meth Date : 19-Feb-2018 12:34 acronin Quant Type: ESTD
Cal Date : 16-FEB-2018 23:44 Cal File: 1LB10218.D
Als bottle: 87 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Tox.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

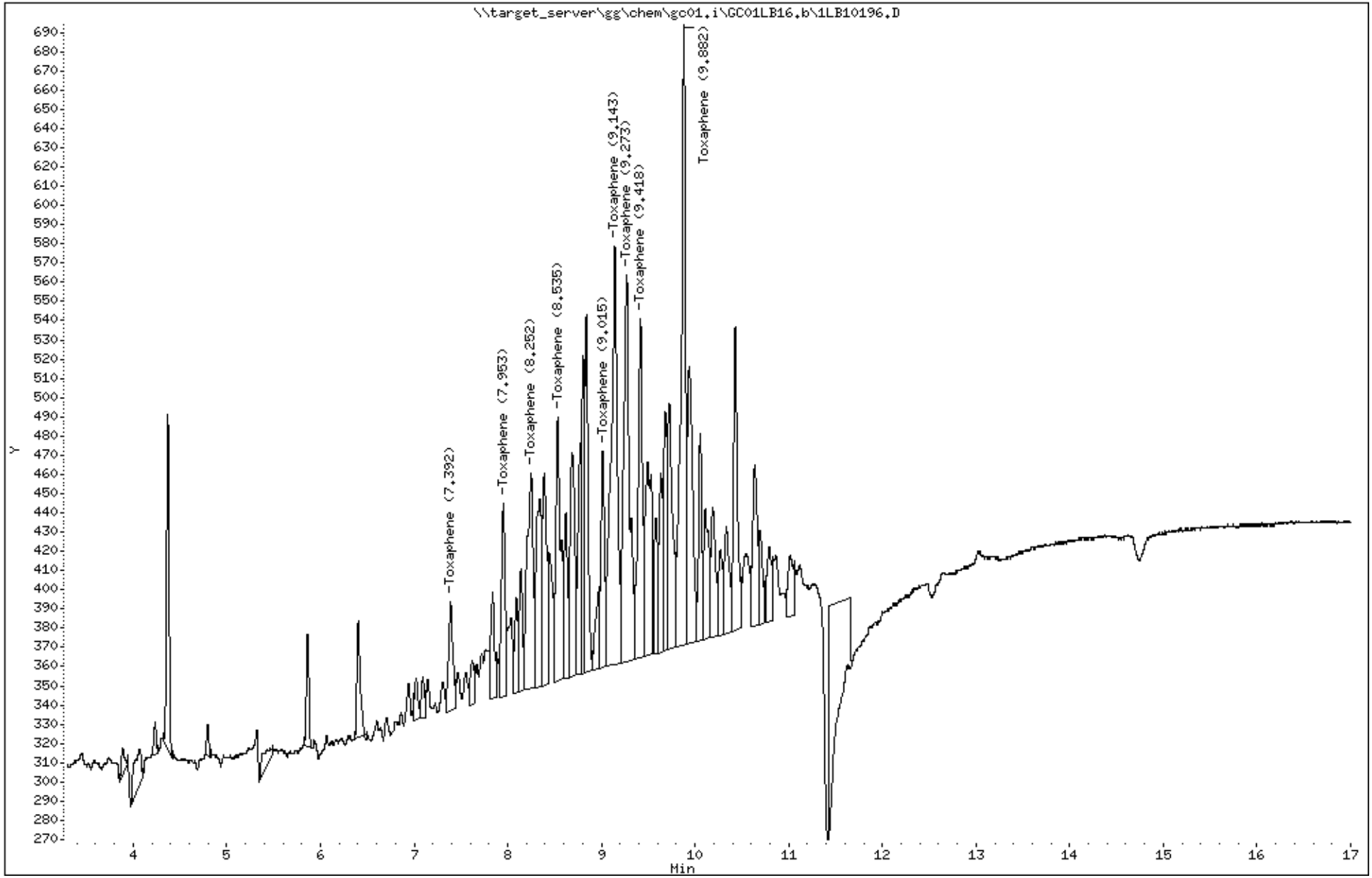
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
18 Toxaphene					CAS #: 8001-35-2			
7.388	7.386	0.002	57	0.10000	0.148	80.00- 120.00	100.00(M)	M5
7.951	7.946	0.005	100	0.10000	0.156	141.69- 212.54	175.44	M5
8.249	8.243	0.006	112	0.10000	0.134	153.98- 230.97	196.49	M5
8.533	8.528	0.005	137	0.10000	0.151	199.87- 299.81	240.35	M5
9.011	9.008	0.003	112	0.10000	0.166	175.05- 262.57	196.49	M5
9.143	9.138	0.005	217	0.10000	0.156	309.22- 463.82	380.70	M5
9.269	9.265	0.004	201	0.10000	0.153	292.16- 438.24	352.63	M5
9.416	9.410	0.006	176	0.10000	0.164	262.32- 393.48	308.77	M5
9.881	9.873	0.008	322	0.10000	0.142	456.43- 684.64	564.91	M5
Average of Peak Amounts =					0.15222			


12:18 pm, Feb 22, 2018

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10196.D
Date : 16-FEB-2018 16:37
Client ID:
Instrument: gc01.i
Sample Info: WG223321-6
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000041

Data File: 1LB10196.D
Report Date: 22-Feb-2018 12:15

Katahdin Analytical Services

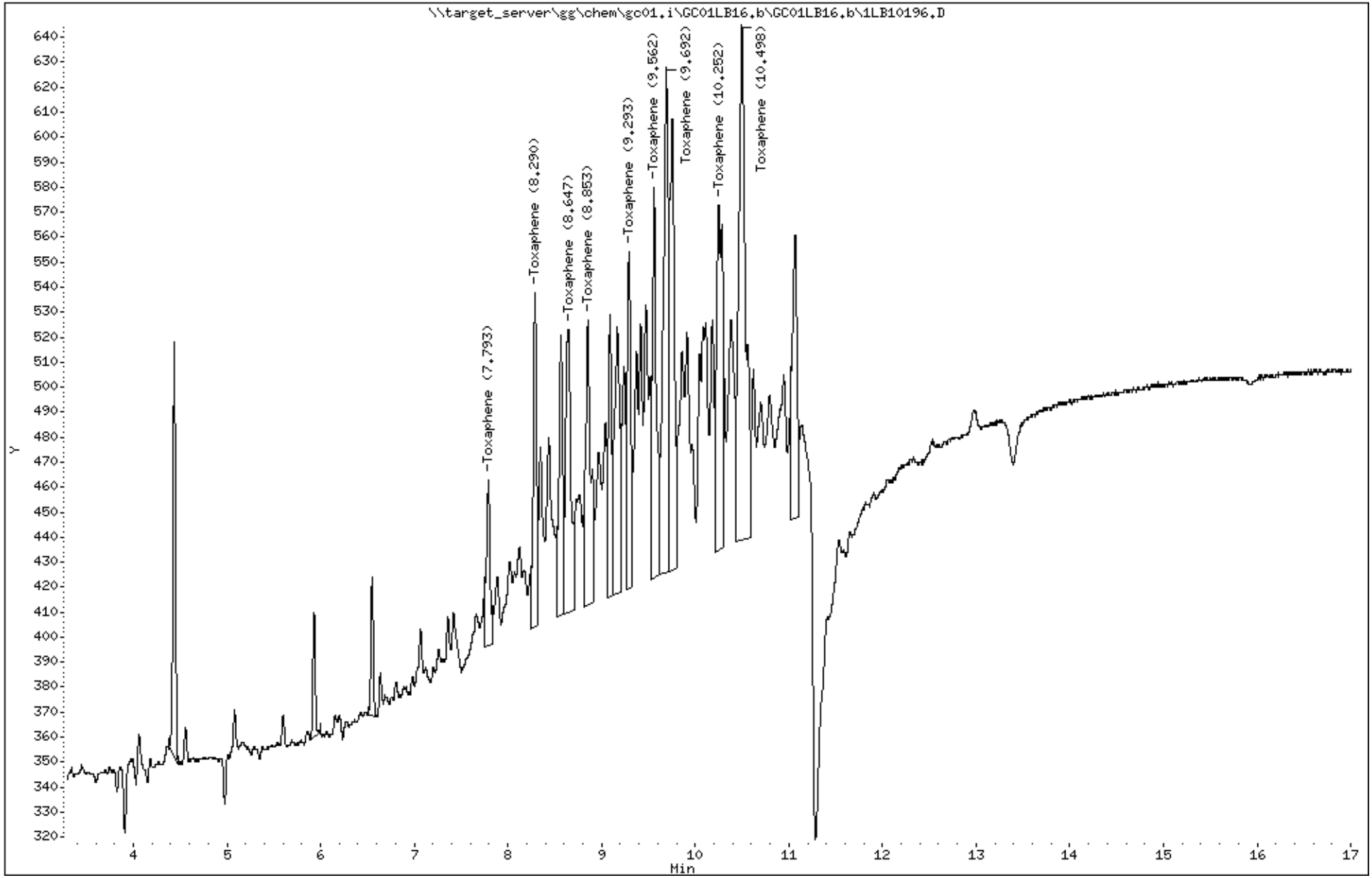
Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10196.D
Lab Smp Id: WG223321-6
Inj Date : 16-FEB-2018 16:37
Operator : AC Inst ID: gc01.i
Smp Info : WG223321-6
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m\PEST217.m
Meth Date : 22-Feb-2018 12:14 acronin Quant Type: ESTD
Cal Date : 16-FEB-2018 23:06 Cal File: 1LB10216.D
Als bottle: 87 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Tox.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
18 Toxaphene					CAS #: 8001-35-2			
7.793	7.793	0.000	66	0.10000	0.115	80.00- 120.00	100.00	
8.290	8.291	-0.001	133	0.10000	0.110	161.21- 241.82	201.52	
8.646	8.645	0.001	113	0.10000	0.117	136.97- 205.45	171.21	
8.853	8.856	-0.003	114	0.10000	0.146	138.18- 207.27	172.73	
9.293	9.296	-0.003	134	0.10000	0.150	162.42- 243.64	203.03	
9.561	9.563	-0.002	156	0.10000	0.136	189.09- 283.64	236.36	
9.691	9.693	-0.002	202	0.10000	0.160	244.85- 367.27	306.06	
10.251	10.253	-0.002	138	0.10000	0.175	167.27- 250.91	209.09	
10.498	10.503	-0.005	206	0.10000	0.168	249.70- 374.55	312.12	
Average of Peak Amounts =					0.14189			

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10196.D
Date : 16-FEB-2018 16:37
Client ID:
Instrument: gc01.i
Sample Info: WG223321-6
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000043

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10197.D
Report Date: 22-Feb-2018 12:18

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10197.D
Lab Smp Id: WG223321-7
Inj Date : 16-FEB-2018 16:56
Operator : AC Inst ID: gc01.i
Smp Info : WG223321-7,SL1057
Misc Info : WG223321,WG223321,WG223321,SL1057-1
Comment :
Method : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m
Meth Date : 22-Feb-2018 12:13 acronin Quant Type: ESTD
Cal Date : 16-FEB-2018 23:44 Cal File: 1LB10218.D
Als bottle: 88 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Tox.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

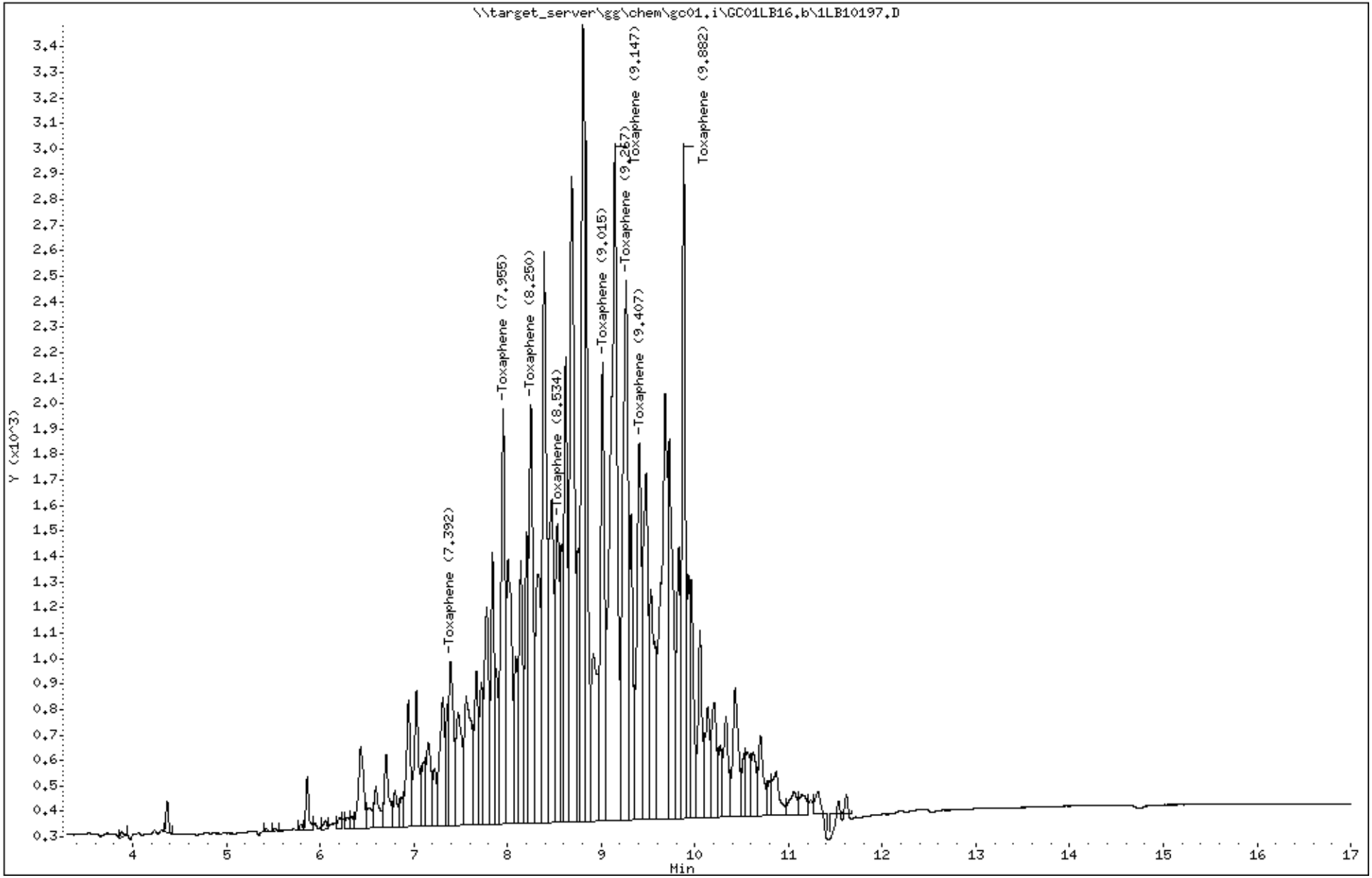
RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/mL)	CONCENTRATIONS FINAL (ug/L)	TARGET RANGE	RATIO	REVIEW CODE
18 Toxaphene					CAS #: 8001-35-2			
7.391	7.386	0.005	641	1.01736	1.02	80.00- 120.00	100.00(M)	M5
7.955	7.946	0.009	1626	1.46218	1.46	141.69- 212.54	253.67	M5
8.250	8.243	0.007	1638	1.33326	1.33	153.98- 230.97	255.54	M5
8.533	8.528	0.005	1170	0.75178	0.752	199.87- 299.81	182.53	M5
9.015	9.008	0.007	1798	1.33392	1.33	175.05- 262.57	280.50	M5
9.146	9.138	0.008	2653	1.09246	1.09	309.22- 463.82	413.88	M5
9.266	9.265	0.001	2117	0.92448	0.924	292.16- 438.24	330.27	M5
9.406	9.410	-0.004	1474	0.75009	0.750	262.32- 393.48	229.95	M5
9.881	9.873	0.008	2644	0.74270	0.743	456.43- 684.64	412.48	M5
		Average of Peak Concentrations =			1.04			

AC
12:19 pm, Feb 22, 2018

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10197.D
Date : 16-FEB-2018 16:56
Client ID:
Instrument: gc01.i
Sample Info: WG223321-7,SL1057
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000045

Data File: 1LB10197.D
Report Date: 22-Feb-2018 12:18

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10197.D
Lab Smp Id: WG223321-7
Inj Date : 16-FEB-2018 16:56
Operator : AC Inst ID: gc01.i
Smp Info : WG223321-7,SL1057
Misc Info : WG223321,WG223321,WG223321,SL1057-1
Comment :
Method : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m\PEST217.m
Meth Date : 22-Feb-2018 12:14 acronin Quant Type: ESTD
Cal Date : 16-FEB-2018 23:44 Cal File: 1LB10218.D
Als bottle: 88 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Tox.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

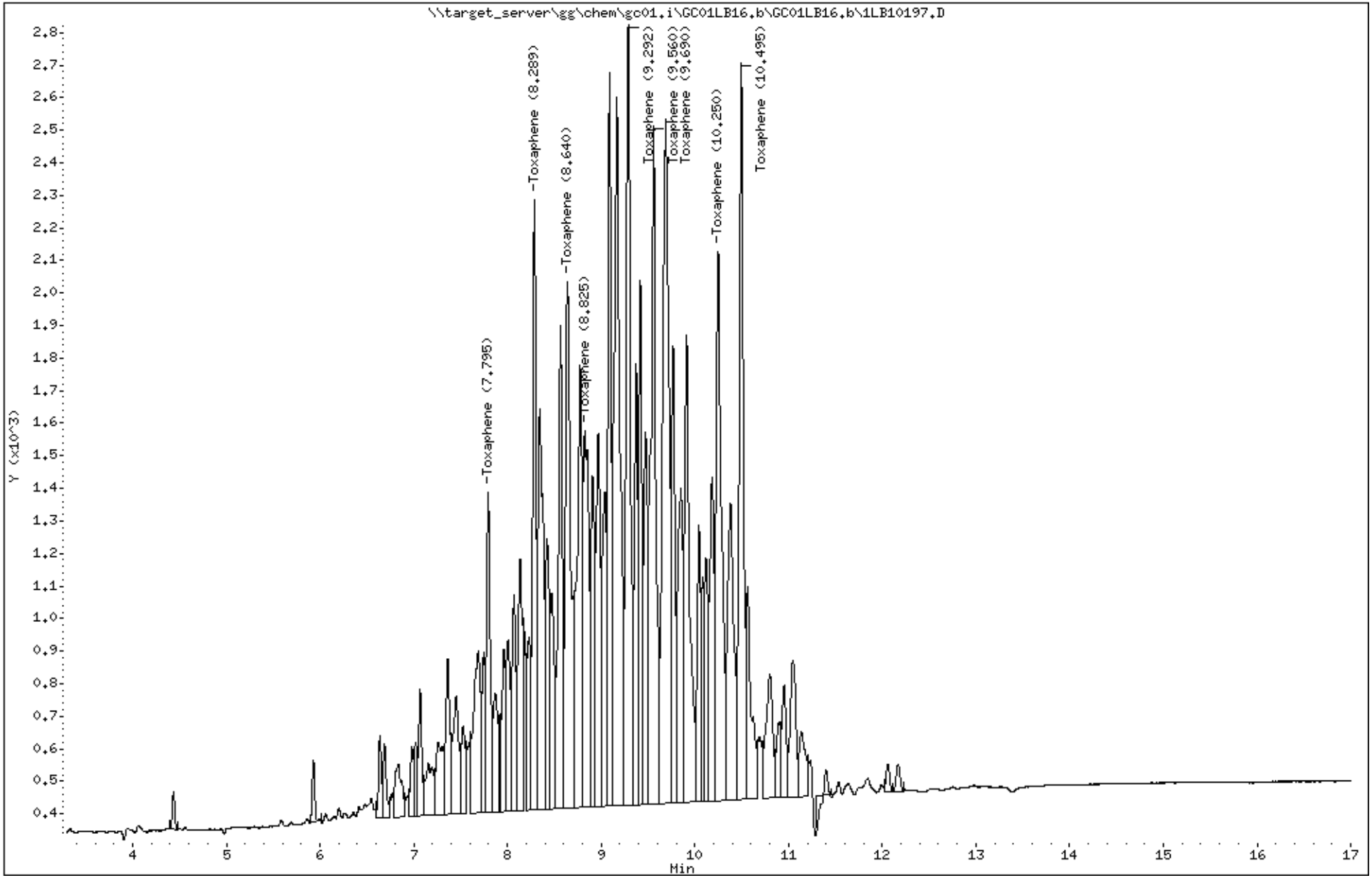
RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/mL)	CONCENTRATIONS FINAL (ug/L)	TARGET RANGE	RATIO	REVIEW CODE
18 Toxaphene					CAS #: 8001-35-2			
7.795	7.793	0.002	983	1.23518	1.24	80.00- 120.00	100.00(M)	M5
8.288	8.291	-0.003	1874	1.34643	1.35	161.21- 241.82	190.64	M5
8.640	8.645	-0.005	1618	1.24441	1.24	136.97- 205.45	164.60	M5
8.823	8.856	-0.033	1155	0.86415	0.864	138.18- 207.27	117.50	M5
9.292	9.296	-0.004	2397	1.51692	1.52	162.42- 243.64	243.85	M5
9.560	9.563	-0.003	2084	1.26125	1.26	189.09- 283.64	212.00	M5
9.690	9.693	-0.003	2102	0.91496	0.915	244.85- 367.27	213.84	M5
10.250	10.253	-0.003	1686	1.00460	1.00	167.27- 250.91	171.52	M5
10.495	10.503	-0.008	2261	0.99058	0.990	249.70- 374.55	230.01	M5
		Average of Peak Concentrations =			1.15			

AC
12:19 pm, Feb 22, 2018

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10197.D
Date : 16-FEB-2018 16:56
Client ID:
Instrument: gc01.i
Sample Info: WG223321-7,SL1057
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000047

Katahdin
ANALYTICAL SERVICES

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL4984
Project : Cornhusker Army Ammunition Plant
Instrument ID: GC01
Lab File IDs : 1LB10218.D 1LB10217.D 1LB10216.D 1LB10213.D 1LB10215.D 1LB10214.D
Column ID: A
Calibration Date(s): 16-FEB-18 15:00 16-FEB-18 23:44

	Level 1 0.0050000	Level 2 0.0100000	Level 3 0.0250000	Level 4 0.0500000	Level 5 0.1000000	Level 6 0.2500000	Crv New	b	m1	m2	%RSD	Max %RSD	
Technical Chlordane(3)	19300	19490	20284	20038	20230	18498	AVG		19640		3.50067	20.00000	O
Technical Chlordane(2)	19620	19560	21548	21100	21096	19235	AVG		20360		4.88915	20.00000	O
Technical Chlordane(1)	4100	4130	4188	4400	4527	4486	AVG		4305		4.37363	20.00000	O

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029
http://katahdinlab.com
sales@katahdinlab.com

Katahdin
ANALYTICAL SERVICES

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL4984
Project : Cornhusker Army Ammunition Plant
Instrument ID: GC01
Lab File IDs : 1LB10218.D 1LB10217.D 1LB10216.D 1LB10213.D 1LB10215.D 1LB10214.D
Column ID: B
Calibration Date(s): 16-FEB-18 15:00 16-FEB-18 23:44

	Level 1 0.0050000	Level 2 0.0100000	Level 3 0.0250000	Level 4 0.0500000	Level 5 0.1000000	Level 6 0.2500000	Crv New	b	m1	m2	%RSD	Max %RSD	
Technical Chlordane(1)	4220	4240	4684	4684	4701	4726	AVG		4543		5.34263	20.00000	O
Technical Chlordane(2)	16200	16020	17320	17006	17093	16106	AVG		16624		3.46892	20.00000	O
Technical Chlordane(3)	11580	11660	12560	12252	12110	11903	AVG		12011		3.09259	20.00000	O

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029
http://katahdinlab.com
sales@katahdinlab.com

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10204.D
Report Date: 19-Feb-2018 13:49

Katahdin Analytical Services

RECOVERY REPORT

Client Name: Client SDG: SDGa00508
Sample Matrix: LIQUID Fraction: PESTICIDE
Lab Smp Id: WG223322-7
Level: LOW Operator: AC
Data Type: GC MULTI COMP SampleType: LCS
SpikeList File: tc_ind.spk Quant Type: ESTD
Sublist File: TC.sub
Method File: \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m
Misc Info: WG223322,WG223322,WG223322,SL1057-1

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
14 Technical Chlordan	0.500	0.524	104.80	80-120

Data File: 1LB10204.D
Report Date: 19-Feb-2018 13:50

Katahdin Analytical Services

RECOVERY REPORT

Client Name: Client SDG: SDGa00508
Sample Matrix: LIQUID Fraction: PESTICIDE
Lab Smp Id: WG223322-7
Level: LOW Operator: AC
Data Type: GC MULTI COMP SampleType: LCS
SpikeList File: tc_ind.spk Quant Type: ESTD
Sublist File: TC.sub
Method File: \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m\PEST217.m
Misc Info: WG223322,WG223322,WG223322,SL1057-1

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
14 Technical Chlordan	0.500	0.582	116.40	80-120

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10198.D
Report Date: 19-Feb-2018 13:43

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10198.D
Lab Smp Id: WG223322-1
Inj Date : 16-FEB-2018 17:16
Operator : AC Inst ID: gc01.i
Smp Info : WG223322-1
Misc Info :
Comment :
Method : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m
Meth Date : 19-Feb-2018 12:34 acronin Quant Type: ESTD
Cal Date : 16-FEB-2018 17:16 Cal File: 1LB10198.D
Als bottle: 89 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TC.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

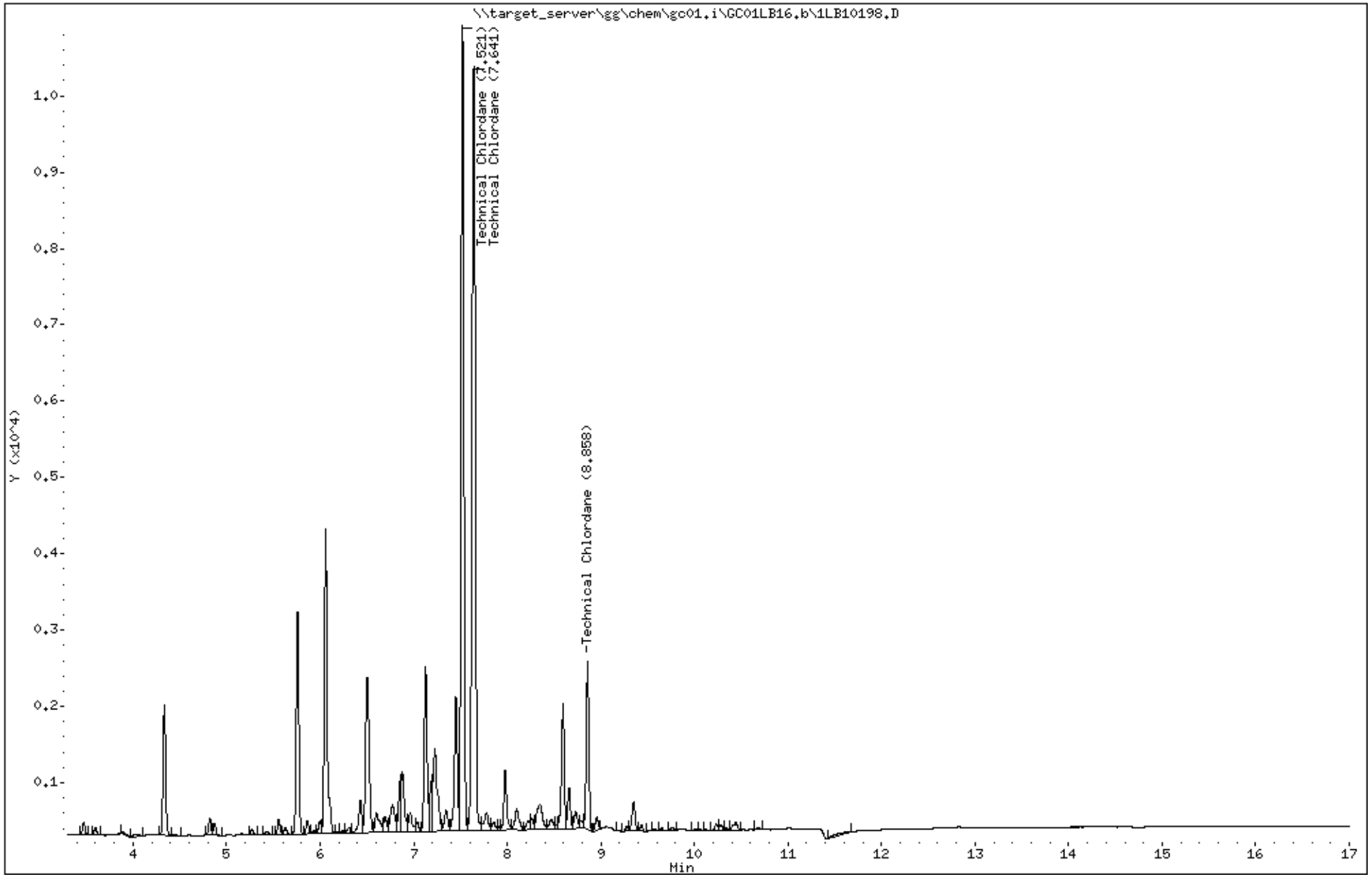
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
14 Technical Chlordane					CAS #: 12789-03-6			
8.858	8.853	0.005	2200	0.50000	0.400	80.00- 120.00	100.00(M)	M5
7.521	7.516	0.005	10550	0.50000	0.524	393.79- 590.69	479.55	
7.641	7.636	0.005	10019	0.50000	0.518	378.48- 567.73	455.41	
Average of Peak Amounts =					0.48067			

AC
12:33 pm, Feb 21, 2018

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10198.D
Date : 16-FEB-2018 17:16
Client ID:
Instrument: gc01.i
Sample Info: WG223322-1
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000053

Data File: 1LB10198.D
Report Date: 19-Feb-2018 13:44

Katahdin Analytical Services

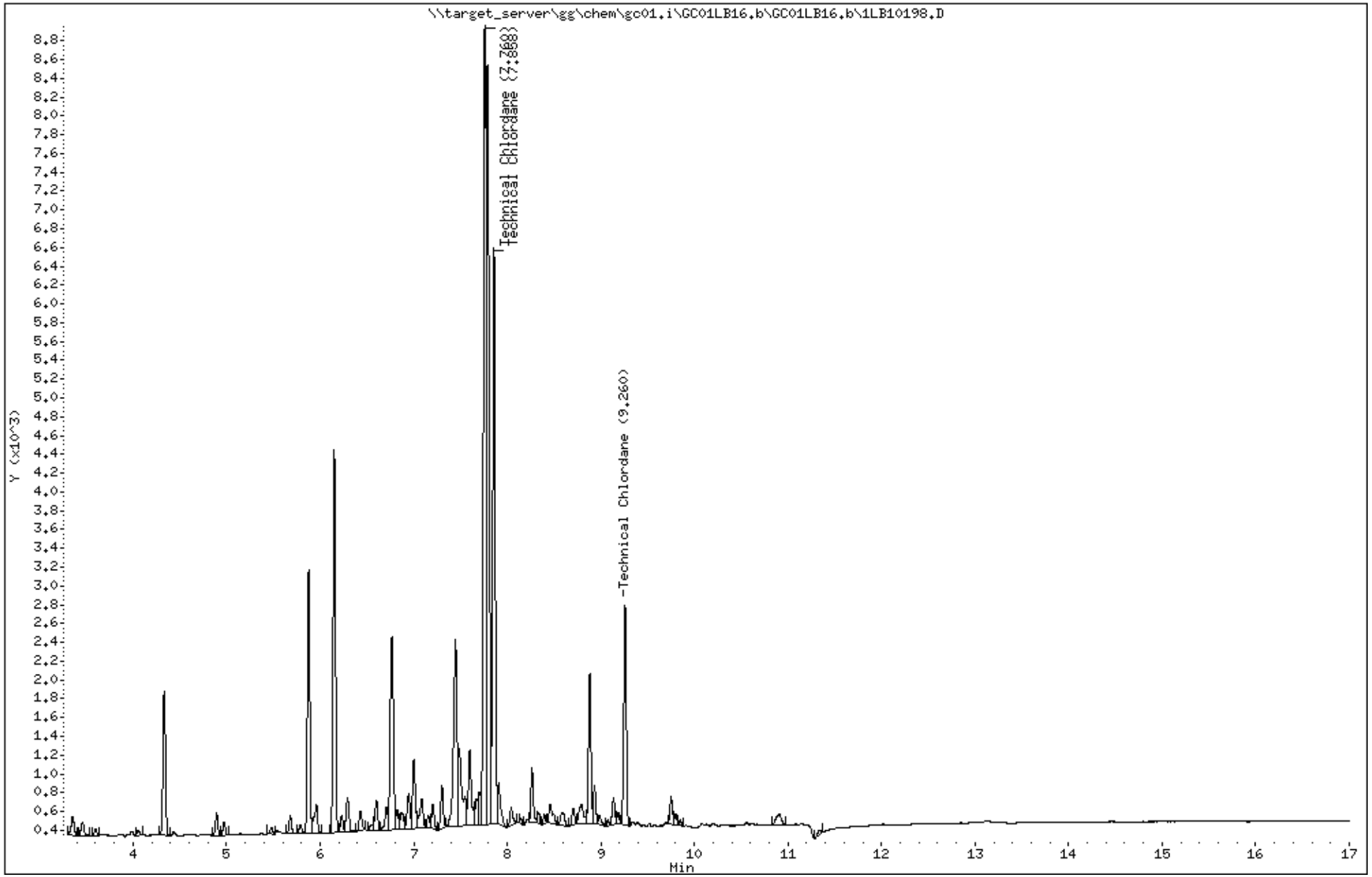
Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10198.D
Lab Smp Id: WG223322-1
Inj Date : 16-FEB-2018 17:16
Operator : AC   Inst ID: gc01.i
Smp Info : WG223322-1
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m\PEST217.m
Meth Date : 19-Feb-2018 12:35 acronin   Quant Type: ESTD
Cal Date : 16-FEB-2018 22:07   Cal File: 1LB10213.D
Als bottle: 89   Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: TC.sub
Target Version: 4.12   Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

			AMOUNTS					
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
14 Technical Chlordane					CAS #: 12789-03-6			
9.259	9.255	0.004	2342	0.50000	0.512	80.00- 120.00	100.00	
7.759	7.757	0.002	8503	0.50000	0.510	298.43- 447.64	363.07	
7.858	7.855	0.003	6126	0.50000	0.508	211.94- 317.90	261.57	
		Average of Peak Amounts =			0.51000			

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10198.D
Date : 16-FEB-2018 17:16
Client ID:
Instrument: gc01.i
Sample Info: WG223322-1
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000055

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10199.D
Report Date: 19-Feb-2018 13:43

Katahdin Analytical Services

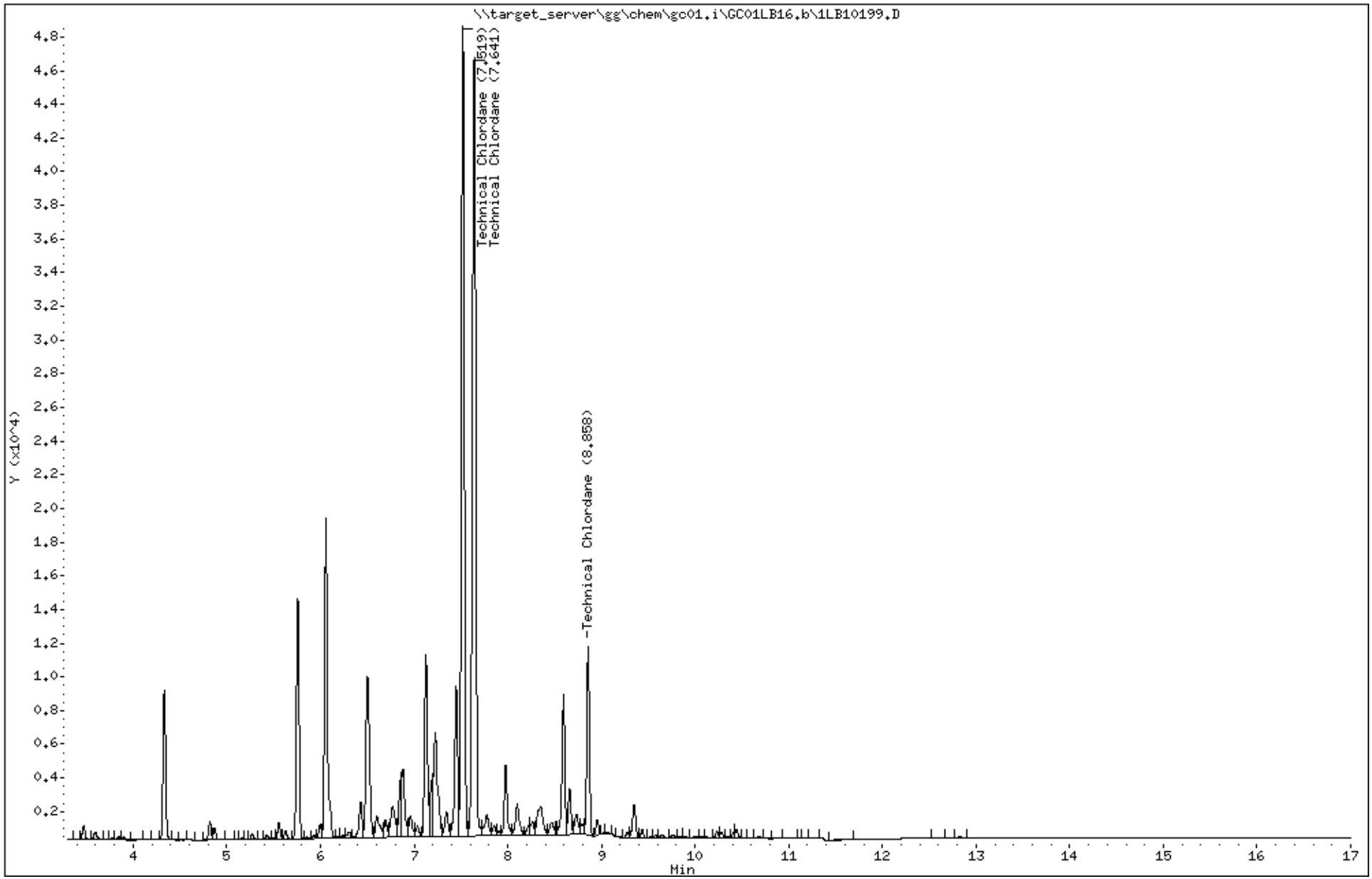
Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10199.D
Lab Smp Id: WG223322-2
Inj Date : 16-FEB-2018 17:35
Operator : AC   Inst ID: gc01.i
Smp Info : WG223322-2
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m
Meth Date : 19-Feb-2018 12:34 acronin   Quant Type: ESTD
Cal Date : 16-FEB-2018 22:07   Cal File: 1LB10213.D
Als bottle: 90   Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: TC.sub
Target Version: 4.12   Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
14 Technical Chlordane					CAS #: 12789-03-6			
8.857	8.853	0.004	11214	2.50000	2.39	80.00- 120.00	100.00	
7.519	7.516	0.003	48087	2.50000	2.46	393.79- 590.69	428.81	
7.641	7.636	0.005	46245	2.50000	2.47	378.48- 567.73	412.39	
		Average of Peak Amounts =			2.44000			

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10199.D
Date : 16-FEB-2018 17:35
Client ID:
Instrument: gc01.i
Sample Info: WG223322-2
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000057

Data File: 1LB10199.D
Report Date: 19-Feb-2018 13:44

Katahdin Analytical Services

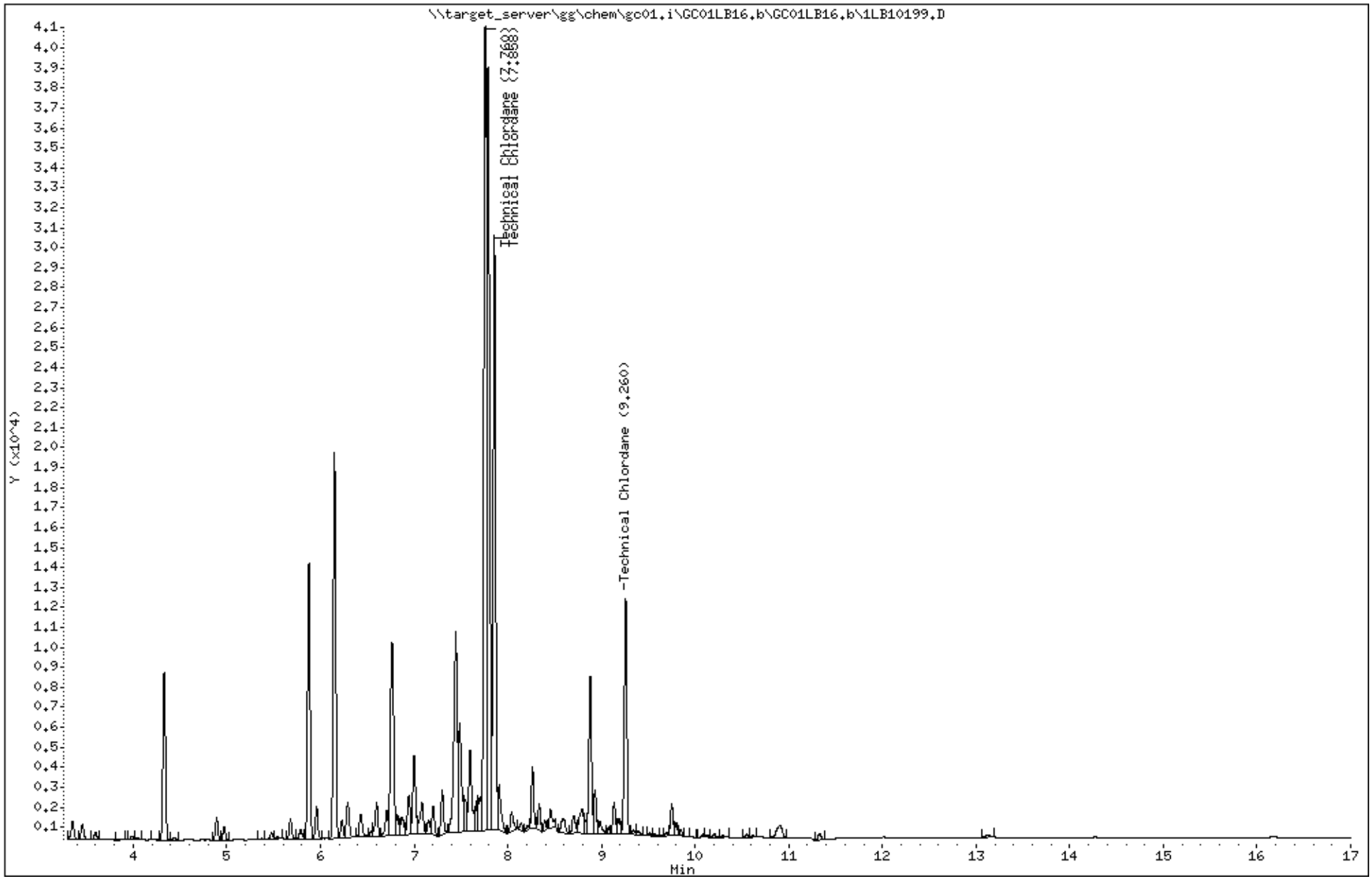
Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10199.D
Lab Smp Id: WG223322-2
Inj Date : 16-FEB-2018 17:35
Operator : AC   Inst ID: gc01.i
Smp Info : WG223322-2
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m\PEST217.m
Meth Date : 19-Feb-2018 12:35 acronin   Quant Type: ESTD
Cal Date : 16-FEB-2018 22:27   Cal File: 1LB10214.D
Als bottle: 90   Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: TC.sub
Target Version: 4.12   Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

				AMOUNTS					
				CAL-AMT	ON-COL				
RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	TARGET RANGE		RATIO	REVIEW CODE
14 Technical Chlordane						CAS #: 12789-03-6			
9.259	9.255	0.004	11816	2.50000	2.59	80.00-	120.00	100.00	
7.759	7.757	0.002	40266	2.50000	2.42	298.43-	447.64	340.78	
7.857	7.855	0.002	29758	2.50000	2.47	211.94-	317.90	251.84	
		Average of Peak Amounts =			2.49333				

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10199.D
Date : 16-FEB-2018 17:35
Client ID:
Instrument: gc01.i
Sample Info: WG223322-2
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000059

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10200.D
Report Date: 19-Feb-2018 13:43

Katahdin Analytical Services

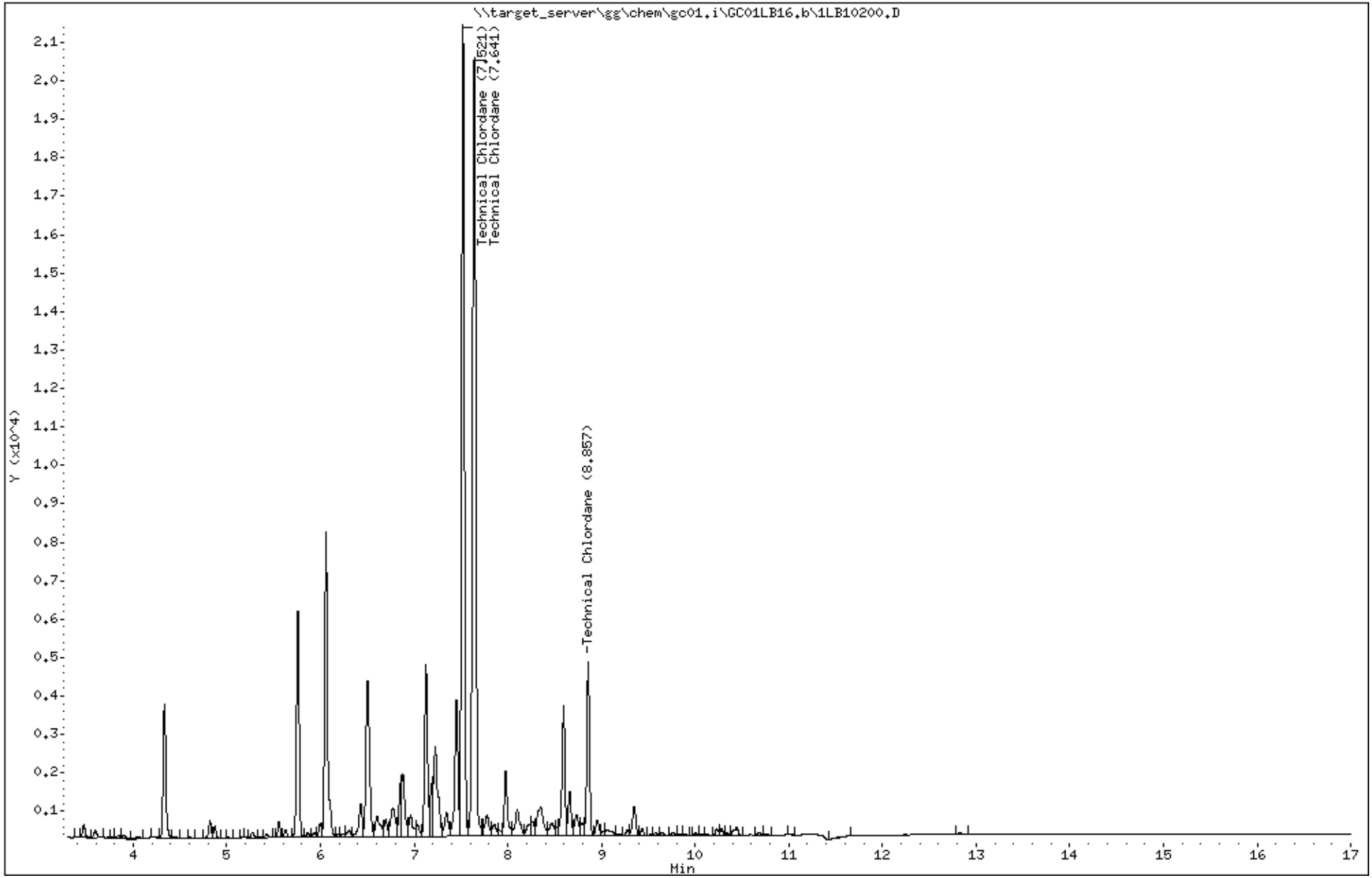
Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10200.D
Lab Smp Id: WG223322-3
Inj Date : 16-FEB-2018 17:55
Operator : AC   Inst ID: gc01.i
Smp Info : WG223322-3
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m
Meth Date : 19-Feb-2018 12:34 acronin   Quant Type: ESTD
Cal Date : 16-FEB-2018 22:27   Cal File: 1LB10214.D
Als bottle: 91   Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: TC.sub
Target Version: 4.12   Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

				AMOUNTS					
				CAL-AMT	ON-COL				
RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	TARGET RANGE		RATIO	REVIEW CODE
14 Technical Chlordane						CAS #: 12789-03-6			
8.857	8.853	0.004	4527	1.00000	0.997	80.00-	120.00	100.00	
7.520	7.516	0.004	21096	1.00000	1.07	393.79-	590.69	466.00	
7.640	7.636	0.004	20230	1.00000	1.07	378.48-	567.73	446.87	
		Average of Peak Amounts =			1.04567				

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10200.D
Date : 16-FEB-2018 17:55
Client ID:
Instrument: gc01.i
Sample Info: WG223322-3
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000061

Data File: 1LB10200.D
Report Date: 19-Feb-2018 13:44

Katahdin Analytical Services

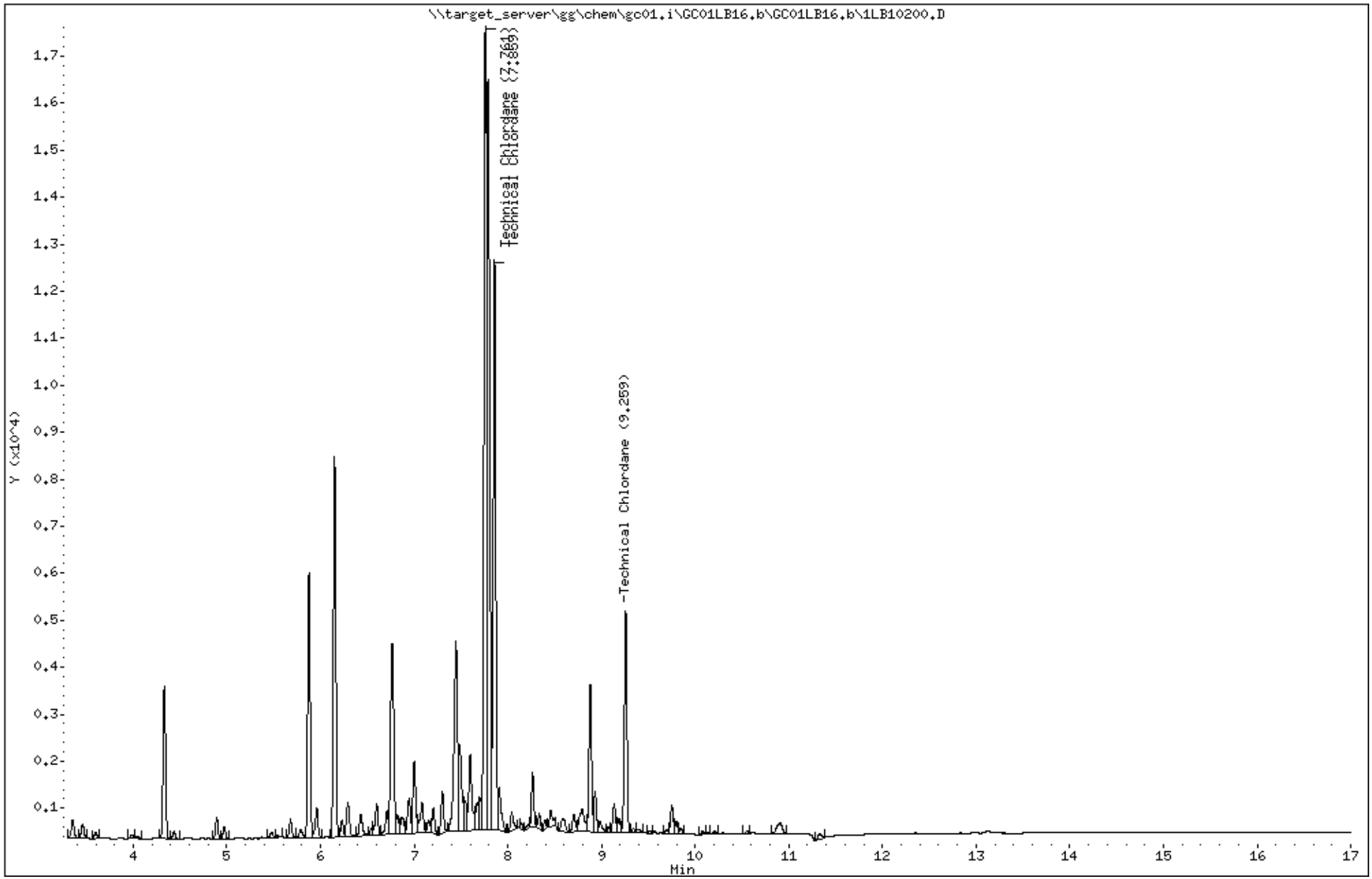
Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10200.D
Lab Smp Id: WG223322-3
Inj Date : 16-FEB-2018 17:55
Operator : AC   Inst ID: gc01.i
Smp Info : WG223322-3
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m\PEST217.m
Meth Date : 19-Feb-2018 12:35 acronin   Quant Type: ESTD
Cal Date : 16-FEB-2018 22:46   Cal File: 1LB10215.D
Als bottle: 91   Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: TC.sub
Target Version: 4.12   Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

				AMOUNTS					
				CAL-AMT	ON-COL				
RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	TARGET RANGE		RATIO	REVIEW CODE
14 Technical Chlordane						CAS #: 12789-03-6			
9.259	9.255	0.004	4701	1.00000	1.03	80.00-	120.00	100.00	
7.760	7.757	0.003	17093	1.00000	1.03	298.43-	447.64	363.60	
7.859	7.855	0.004	12110	1.00000	1.01	211.94-	317.90	257.60	
Average of Peak Amounts =					1.02333				

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10200.D
Date : 16-FEB-2018 17:55
Client ID:
Instrument: gc01.i
Sample Info: WG223322-3
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000063

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10201.D
Report Date: 19-Feb-2018 13:43

Katahdin Analytical Services

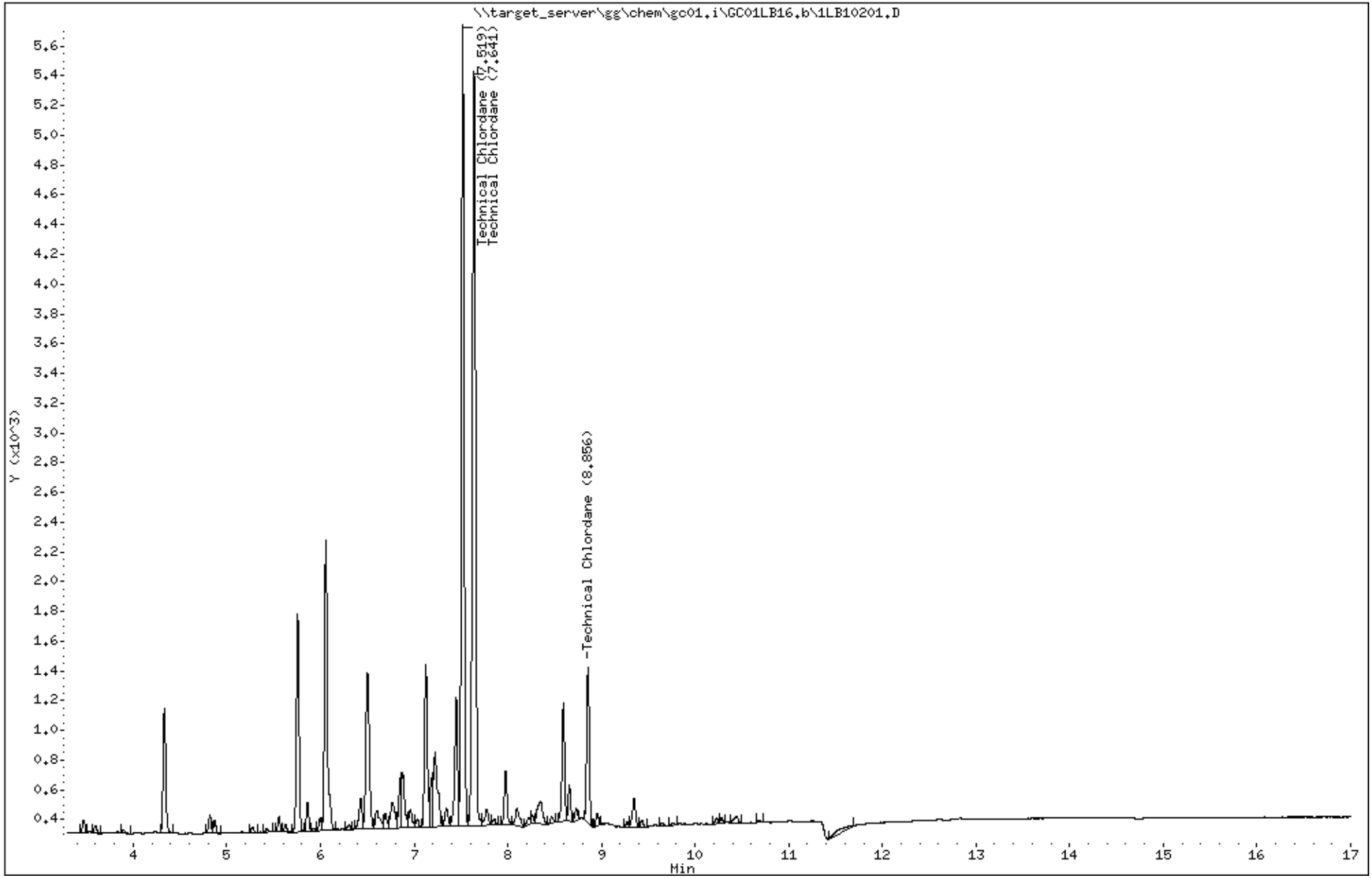
Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10201.D
Lab Smp Id: WG223322-4
Inj Date : 16-FEB-2018 18:14
Operator : AC   Inst ID: gc01.i
Smp Info : WG223322-4
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m
Meth Date : 19-Feb-2018 12:34 acronin   Quant Type: ESTD
Cal Date : 16-FEB-2018 22:46   Cal File: 1LB10215.D
Als bottle: 92   Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: TC.sub
Target Version: 4.12   Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

				AMOUNTS					
				CAL-AMT	ON-COL				
RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	TARGET RANGE		RATIO	REVIEW CODE
14 Technical Chlordane						CAS #: 12789-03-6			
8.856	8.853	0.003	1047	0.25000	0.231	80.00-	120.00	100.00	
7.519	7.516	0.003	5387	0.25000	0.256	393.79-	590.69	514.52	
7.641	7.636	0.005	5071	0.25000	0.252	378.48-	567.73	484.34	
		Average of Peak Amounts =			0.24633				

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10201.D
Date : 16-FEB-2018 18:14
Client ID:
Instrument: gc01.i
Sample Info: WG223322-4
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000065

Data File: 1LB10201.D
Report Date: 19-Feb-2018 13:44

Katahdin Analytical Services

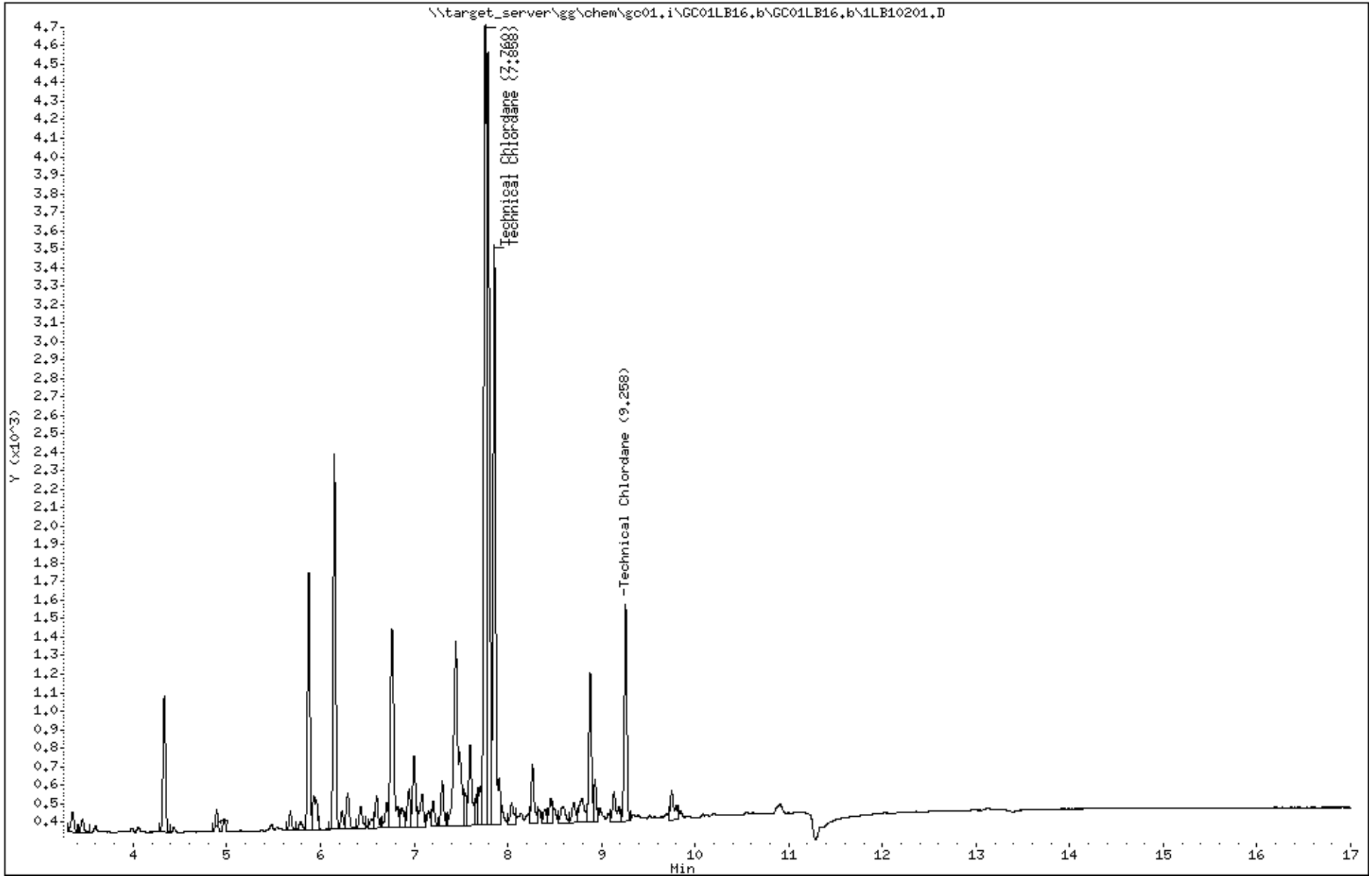
Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10201.D
Lab Smp Id: WG223322-4
Inj Date : 16-FEB-2018 18:14
Operator : AC   Inst ID: gc01.i
Smp Info : WG223322-4
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m\PEST217.m
Meth Date : 19-Feb-2018 12:35 acronin   Quant Type: ESTD
Cal Date : 16-FEB-2018 22:46   Cal File: 1LB10215.D
Als bottle: 92   Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: TC.sub
Target Version: 4.12   Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

				AMOUNTS					
				CAL-AMT	ON-COL				
RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	TARGET RANGE		RATIO	REVIEW CODE
14 Technical Chlordane						CAS #: 12789-03-6			
9.257	9.255	0.002	1171	0.25000	0.244	80.00-	120.00	100.00	
7.759	7.757	0.002	4330	0.25000	0.253	298.43-	447.64	369.77	
7.857	7.855	0.002	3140	0.25000	0.255	211.94-	317.90	268.15	
		Average of Peak Amounts =			0.25067				

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10201.D
Date : 16-FEB-2018 18:14
Client ID:
Instrument: gc01.i
Sample Info: WG223322-4
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000067

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10202.D
Report Date: 19-Feb-2018 13:43

Katahdin Analytical Services

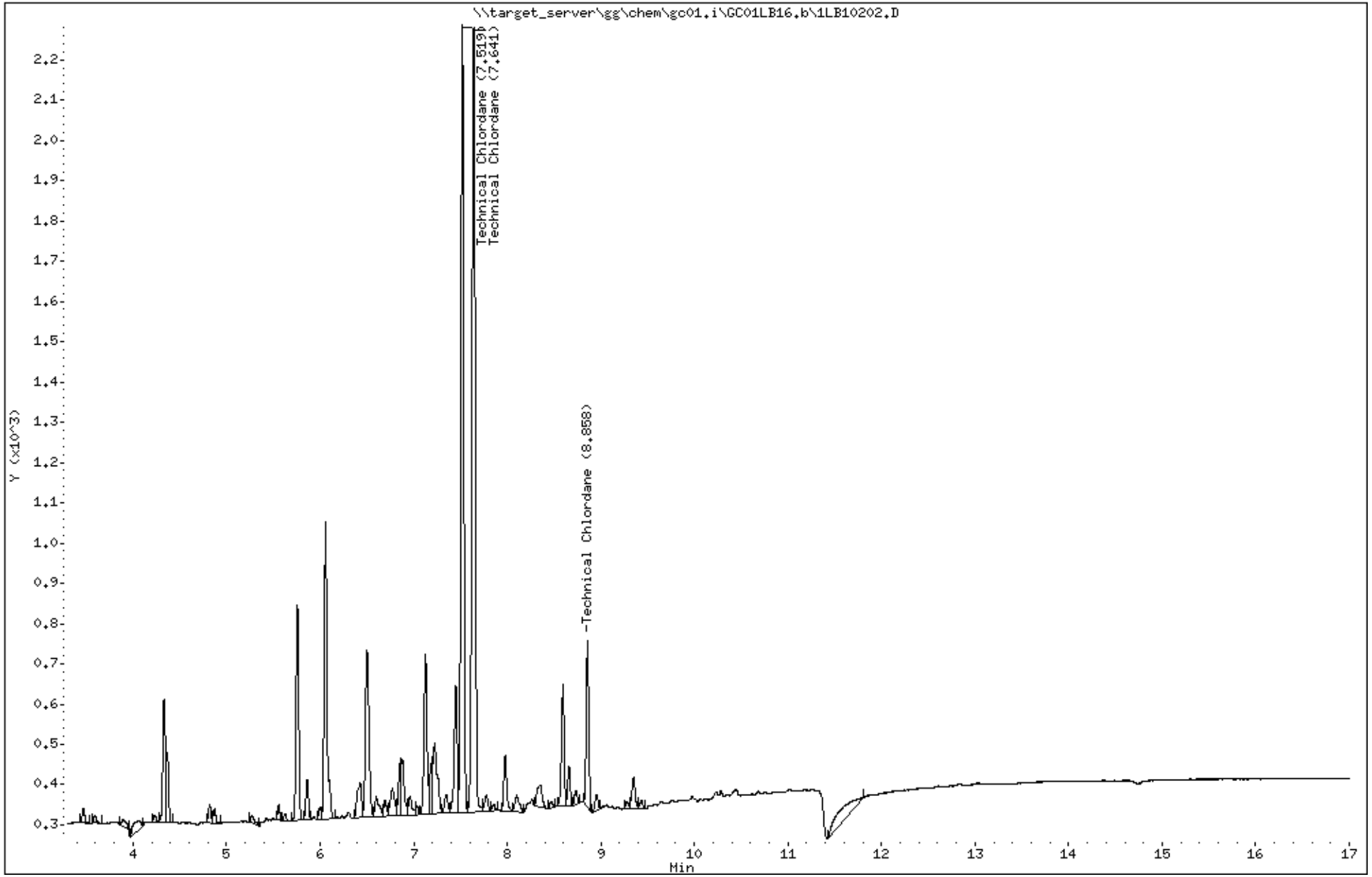
Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10202.D
Lab Smp Id: WG223322-5
Inj Date : 16-FEB-2018 18:33
Operator : AC   Inst ID: gc01.i
Smp Info : WG223322-5
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m
Meth Date : 19-Feb-2018 12:34 acronin   Quant Type: ESTD
Cal Date : 16-FEB-2018 23:06   Cal File: 1LB10216.D
Als bottle: 93   Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: TC.sub
Target Version: 4.12   Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
14 Technical Chlordane					CAS #: 12789-03-6			
8.857	8.853	0.004	413	0.10000	0.0952	80.00- 120.00	100.00	
7.519	7.516	0.003	1956	0.10000	0.0791	393.79- 590.69	473.61	
7.641	7.636	0.005	1949	0.10000	0.0841	378.48- 567.73	471.91	
Average of Peak Amounts =					0.08613			

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10202.D
Date : 16-FEB-2018 18:33
Client ID:
Instrument: gc01.i
Sample Info: WG223322-5
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000069

Data File: 1LB10202.D
Report Date: 19-Feb-2018 13:44

Katahdin Analytical Services

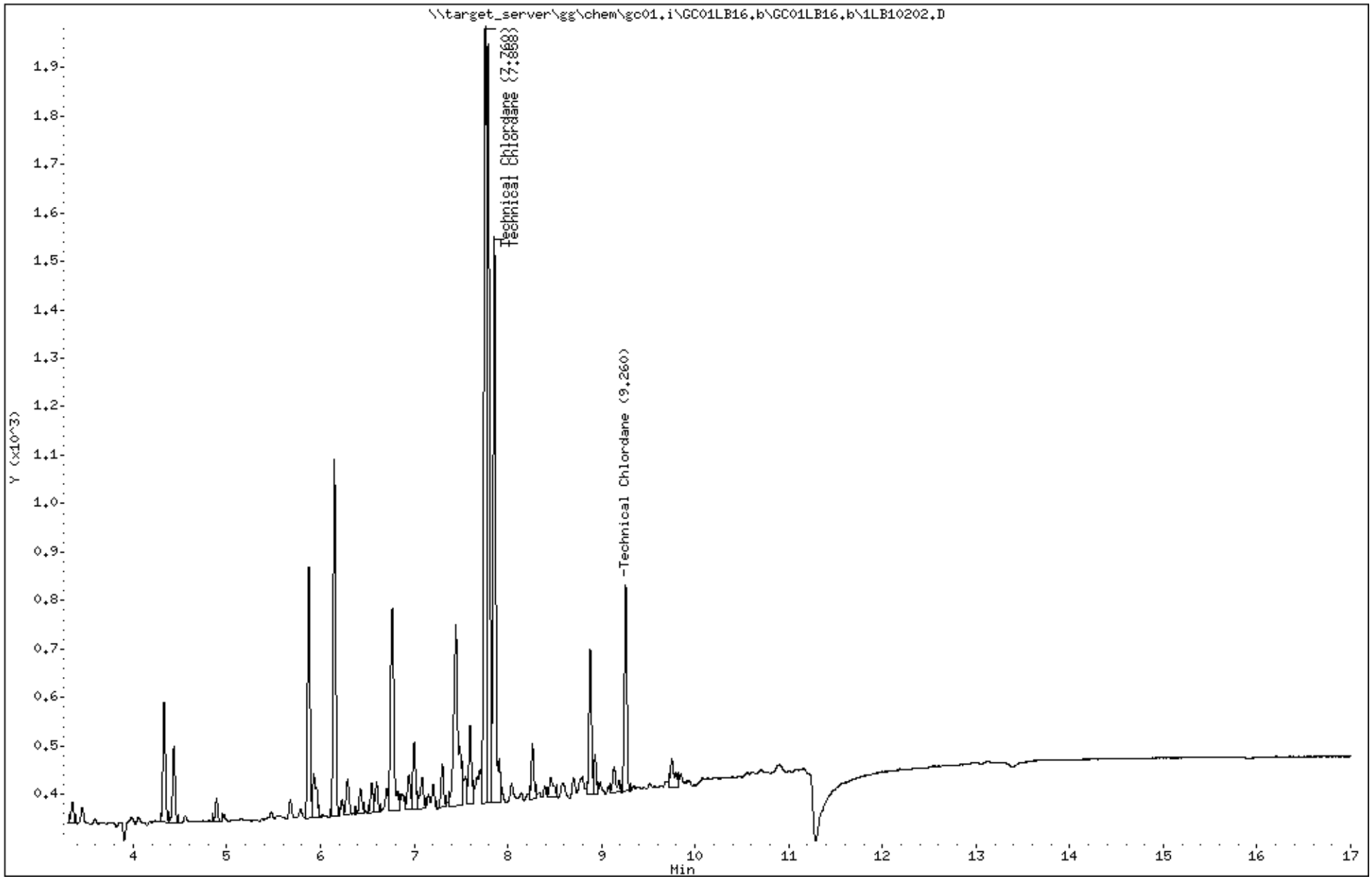
Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10202.D
Lab Smp Id: WG223322-5
Inj Date : 16-FEB-2018 18:33
Operator : AC   Inst ID: gc01.i
Smp Info : WG223322-5
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m\PEST217.m
Meth Date : 19-Feb-2018 12:35 acronin   Quant Type: ESTD
Cal Date : 16-FEB-2018 23:06   Cal File: 1LB10216.D
Als bottle: 93   Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: TC.sub
Target Version: 4.12   Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

				AMOUNTS					
RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
14 Technical Chlordane					CAS #: 12789-03-6			
9.259	9.255	0.004	424	0.10000	0.0924	80.00- 120.00	100.00	
7.759	7.757	0.002	1602	0.10000	0.0860	298.43- 447.64	377.83	
7.857	7.855	0.002	1166	0.10000	0.0922	211.94- 317.90	275.00	
Average of Peak Amounts =					0.09020			

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10202.D
Date : 16-FEB-2018 18:33
Client ID:
Instrument: gc01.i
Sample Info: WG223322-5
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000071

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10203.D
Report Date: 19-Feb-2018 13:43

Katahdin Analytical Services

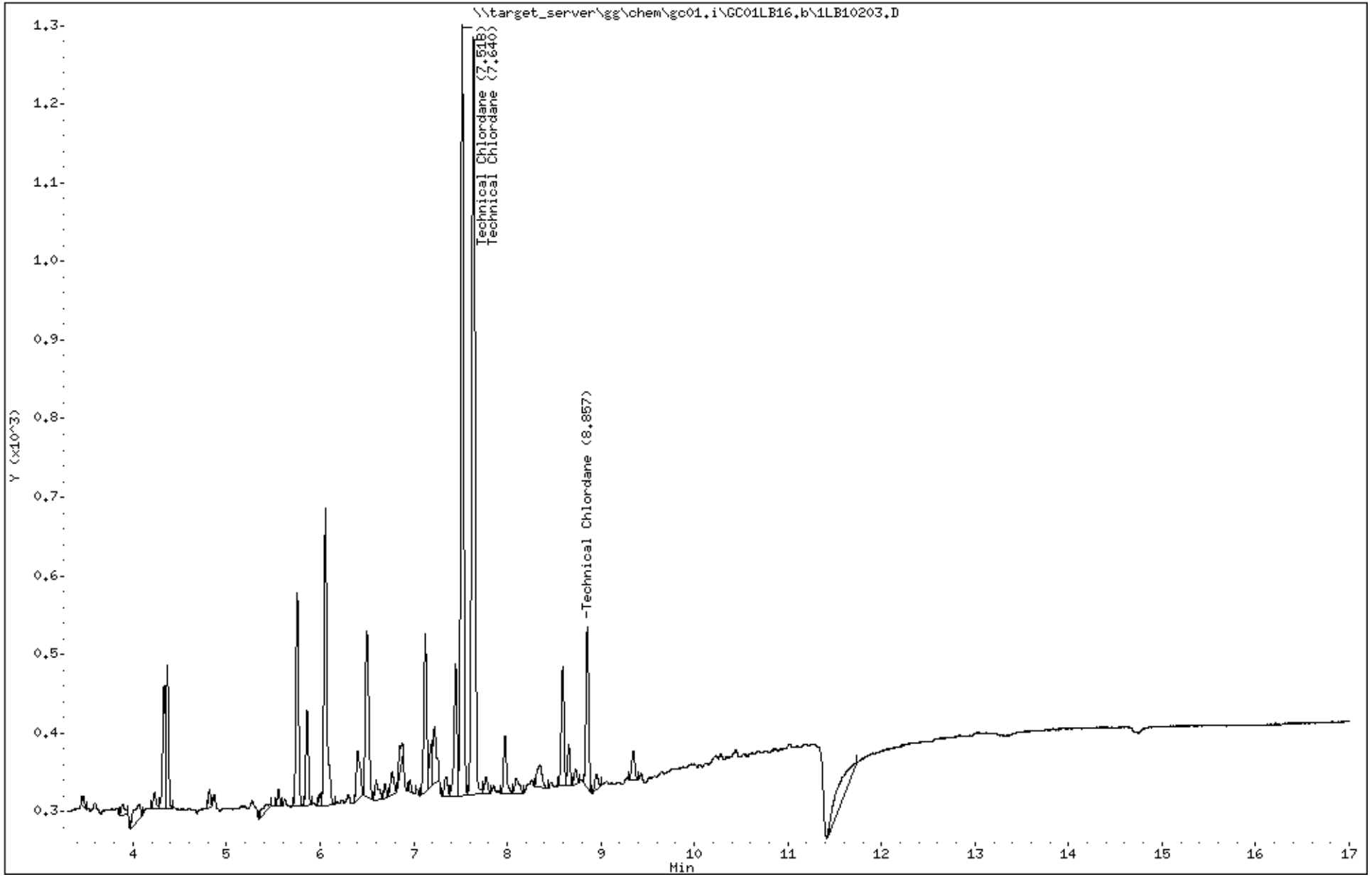
Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10203.D
Lab Smp Id: WG223322-6
Inj Date : 16-FEB-2018 18:53
Operator : AC   Inst ID: gc01.i
Smp Info : WG223322-6
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m
Meth Date : 19-Feb-2018 12:34 acronin   Quant Type: ESTD
Cal Date : 16-FEB-2018 23:25   Cal File: 1LB10217.D
Als bottle: 94   Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: TC.sub
Target Version: 4.12   Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
14 Technical Chlordane					CAS #: 12789-03-6			
8.856	8.853	0.003	205	0.05000	0.0520	80.00- 120.00	100.00	
7.518	7.516	0.002	981	0.05000	0.0287	393.79- 590.69	478.54	
7.639	7.636	0.003	965	0.05000	0.0312	378.48- 567.73	470.73	
Average of Peak Amounts =					0.03730			

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10203.D
Date : 16-FEB-2018 18:53
Client ID:
Instrument: gc01.i
Sample Info: WG223322-6
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000073

Data File: 1LB10203.D
Report Date: 19-Feb-2018 13:44

Katahdin Analytical Services

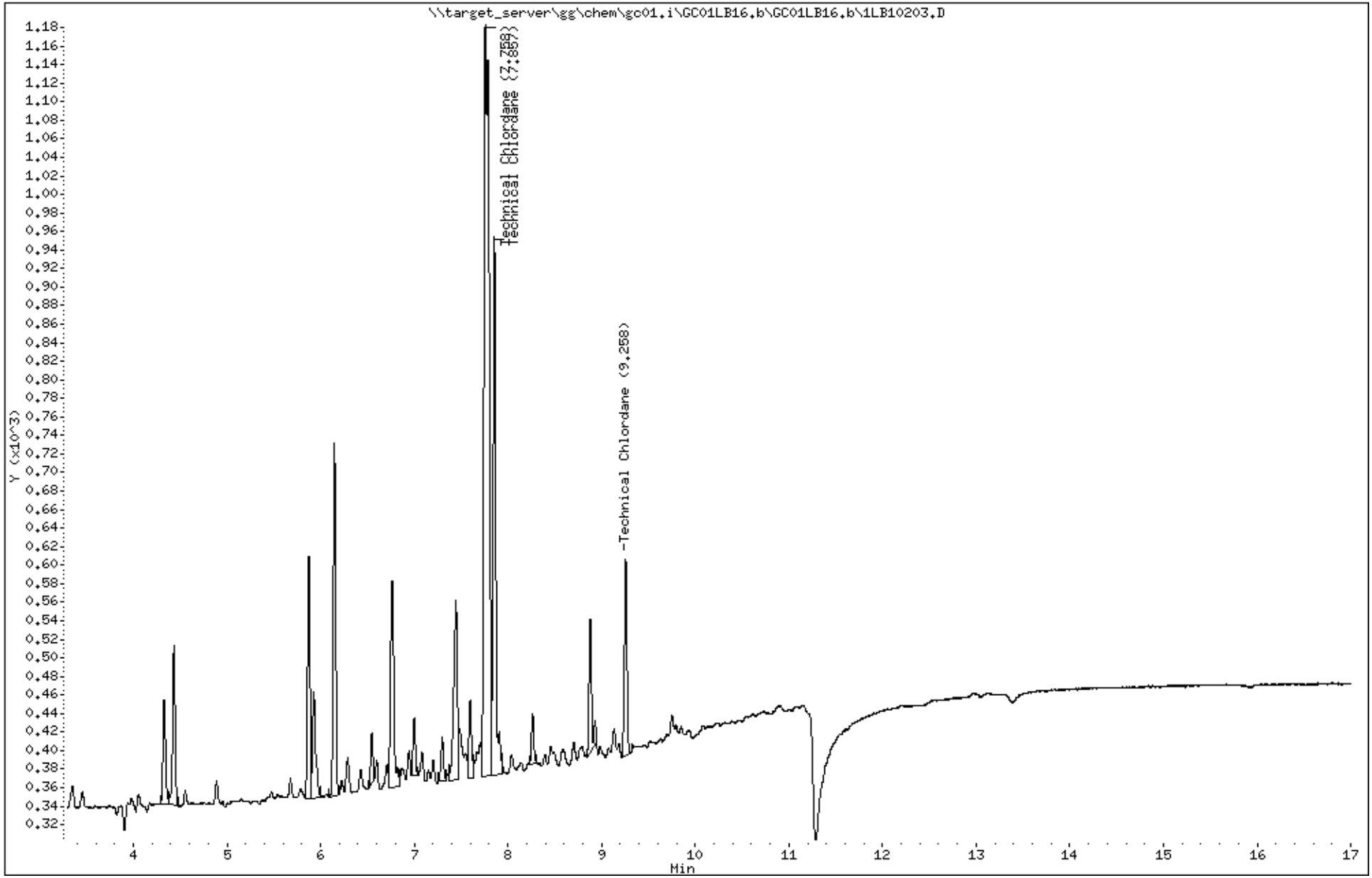
Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10203.D
Lab Smp Id: WG223322-6
Inj Date : 16-FEB-2018 18:53
Operator : AC   Inst ID: gc01.i
Smp Info : WG223322-6
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m\PEST217.m
Meth Date : 19-Feb-2018 12:35 acronin   Quant Type: ESTD
Cal Date : 16-FEB-2018 23:25   Cal File: 1LB10217.D
Als bottle: 94   Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: TC.sub
Target Version: 4.12   Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

				AMOUNTS					
				CAL-AMT	ON-COL				
RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	TARGET RANGE	RATIO	REVIEW CODE	
14 Technical Chlordane						CAS #: 12789-03-6			
9.258	9.255	0.003	211	0.05000	0.0505	80.00- 120.00	100.00		
7.758	7.757	0.001	810	0.05000	0.0375	298.43- 447.64	383.89		
7.856	7.855	0.001	579	0.05000	0.0437	211.94- 317.90	274.41		
		Average of Peak Amounts =			0.04390				

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10203.D
Date : 16-FEB-2018 18:53
Client ID:
Instrument: gc01.i
Sample Info: WG223322-6
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000075

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10204.D
Report Date: 19-Feb-2018 13:49

Katahdin Analytical Services

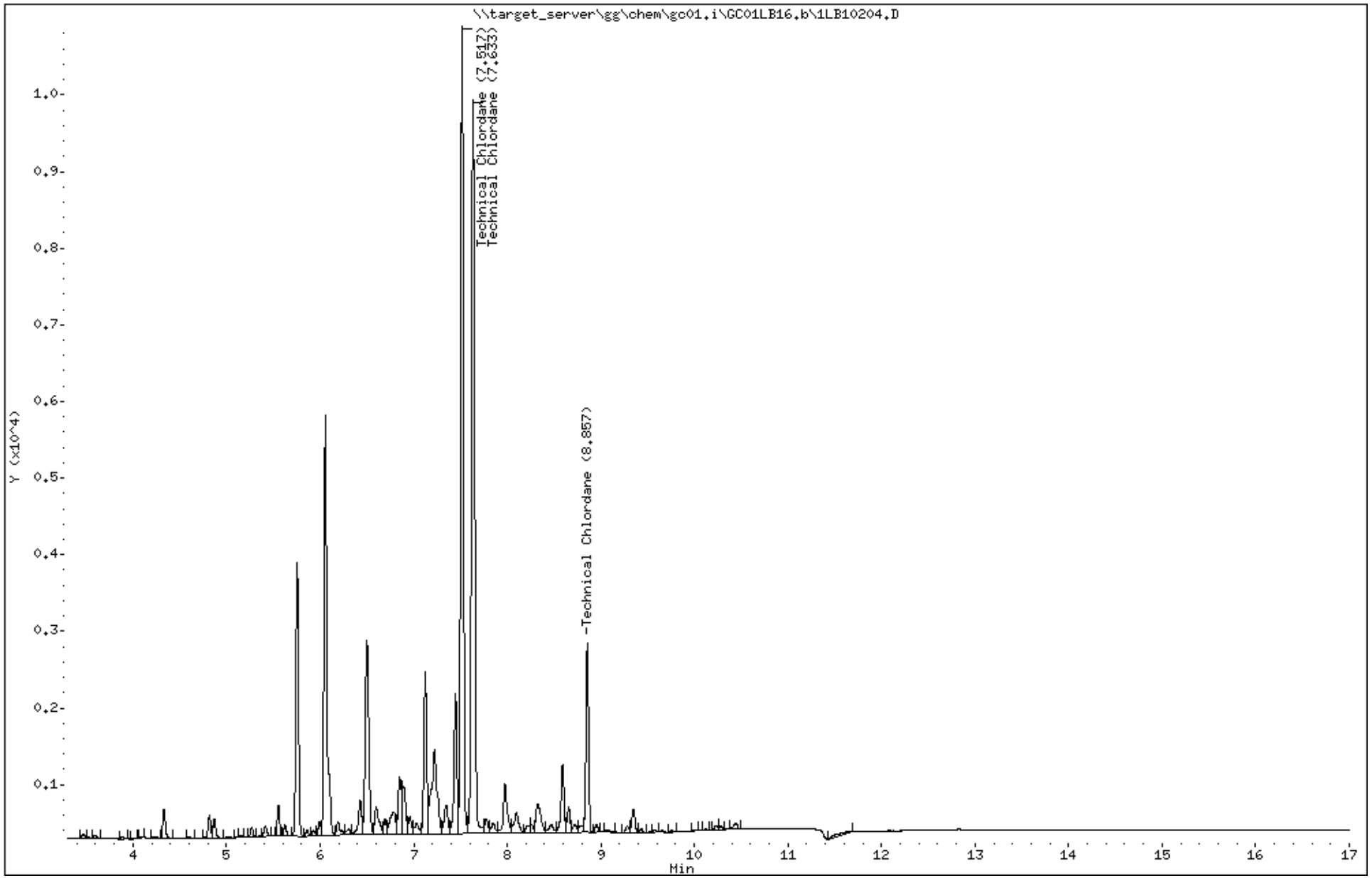
Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10204.D
Lab Smp Id: WG223322-7
Inj Date : 16-FEB-2018 19:12
Operator : AC   Inst ID: gc01.i
Smp Info : WG223322-7,SL1057
Misc Info : WG223322,WG223322,WG223322,SL1057-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m
Meth Date : 19-Feb-2018 12:34 acronin   Quant Type: ESTD
Cal Date : 16-FEB-2018 23:44   Cal File: 1LB10218.D
Als bottle: 95   QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: TC.sub
Target Version: 4.12   Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/mL)	CONCENTRATIONS FINAL (ug/L)	TARGET RANGE	RATIO	REVIEW CODE
14 Technical Chlordane					CAS #: 12789-03-6			
8.856	8.853	0.003	2466	0.55420	0.554	80.00- 120.00	100.00	
7.516	7.516	0.000	10535	0.52282	0.523	393.79- 590.69	427.21	
7.633	7.636	-0.003	9575	0.49443	0.494	378.48- 567.73	388.28	
		Average of Peak Concentrations =			0.524			

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10204.D
Date : 16-FEB-2018 19:12
Client ID:
Instrument: gc01.i
Sample Info: WG223322-7,SL1057
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000077

Data File: 1LB10204.D
Report Date: 19-Feb-2018 13:50

Katahdin Analytical Services

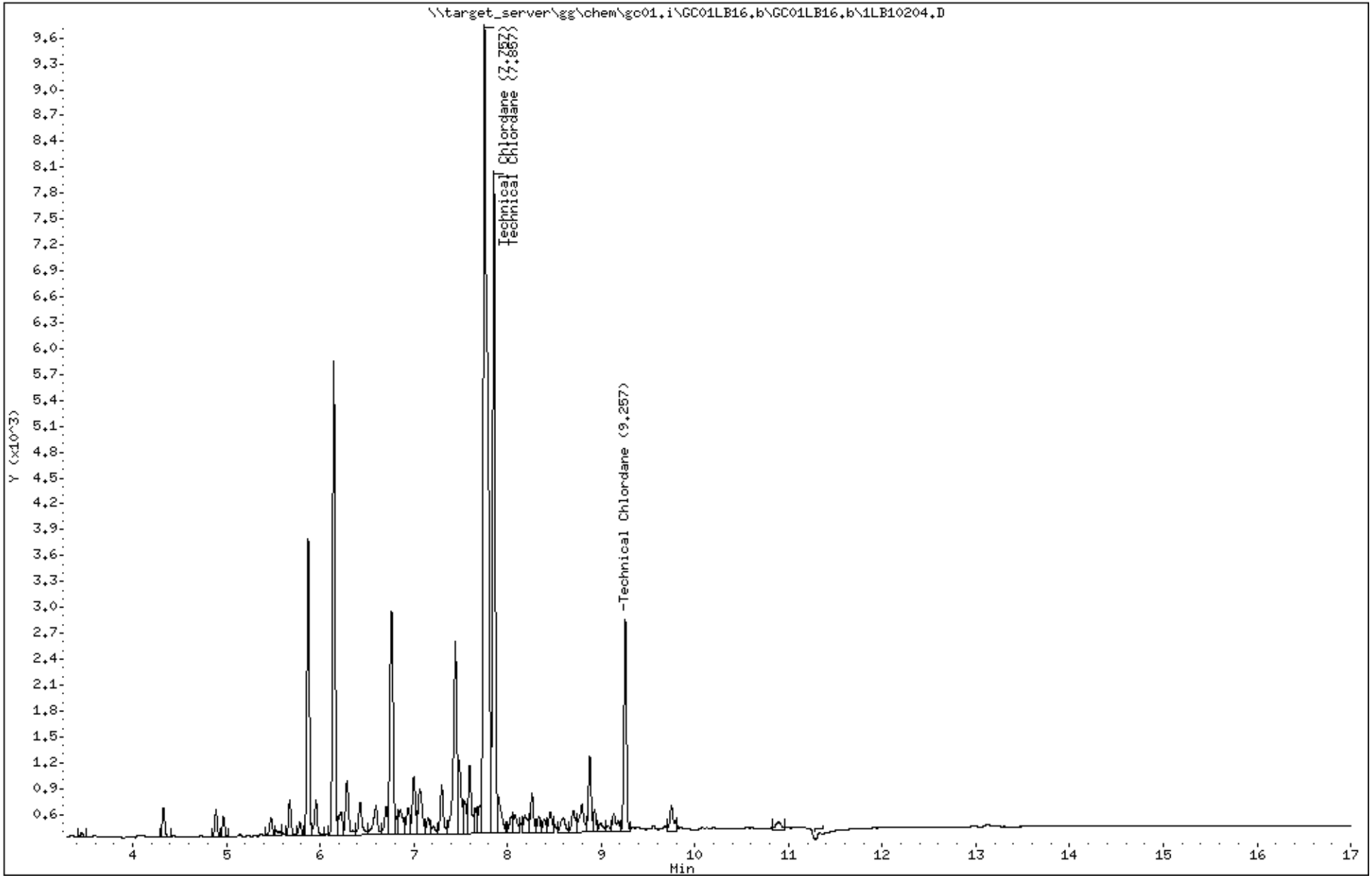
Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10204.D
Lab Smp Id: WG223322-7
Inj Date : 16-FEB-2018 19:12
Operator : AC   Inst ID: gc01.i
Smp Info : WG223322-7,SL1057
Misc Info : WG223322,WG223322,WG223322,SL1057-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m\PEST217.m
Meth Date : 19-Feb-2018 12:35 acronin   Quant Type: ESTD
Cal Date : 16-FEB-2018 23:44   Cal File: 1LB10218.D
Als bottle: 95   QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: TC.sub
Target Version: 4.12   Sample Matrix: WATER

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

				CONCENTRATIONS ON-COL	FINAL			
RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/L)	TARGET RANGE	RATIO	REVIEW CODE
14 Technical Chlordane					CAS #: 12789-03-6			
9.256	9.255	0.001	2461	0.54176	0.542	80.00- 120.00	100.00	
7.756	7.757	-0.001	9370	0.56364	0.564	298.43- 447.64	380.74	
7.856	7.855	0.001	7680	0.63942	0.639	211.94- 317.90	312.07	
		Average of Peak Concentrations =			0.582			

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10204.D
Date : 16-FEB-2018 19:12
Client ID:
Instrument: gc01.i
Sample Info: WG223322-7,SL1057
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000079

Katahdin
ANALYTICAL SERVICES

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL4984
Project : Cornhusker Army Ammunition Plant
Instrument ID: GC01
Lab File IDs : 1LB10218.D 1LB10217.D 1LB10216.D 1LB10213.D 1LB10215.D 1LB10214.D
Column ID: A
Calibration Date(s): 16-FEB-18 15:00 16-FEB-18 23:44

	0.0050000 Level 1	0.0100000 Level 2	0.0250000 Level 3	0.0500000 Level 4	0.1000000 Level 5	0.2500000 Level 6	New Crv	b	m1	m2	%RSD	Max %RSD	
gamma-BHC	211200	210100	244400	239160	231290	210328	AVG		224413		7.02331	20.00000	O
Heptachlor	177800	172800	196080	192720	182360	158504	AVG		180044		7.63447	20.00000	O
Heptachlor Epoxide	156800	149000	171160	161880	155980	134836	AVG		154943		7.93211	20.00000	O
4,4'-DDE	146200	140600	164920	161440	162540	143176	AVG		153146		7.15721	20.00000	O
Endrin	121200	121000	139720	138800	136420	122632	AVG		129962		7.10115	20.00000	O
Endrin	121200	121000	139720	138800	136420	122632	AVG		129962		7.10115	20.00000	O
4,4'-DDD	113000	113300	129280	126840	126040	115480	AVG		120657		6.21453	20.00000	O
4,4'-DDT	104400	104900	124280	125000	128000	119212	AVG		117632		8.88081	20.00000	O
Endrin Aldehyde	96200	92100	100720	96960	97070	87976	AVG		95171		4.69567	20.00000	O
Methoxychlor	59600	56000	62600	61140	59720	56200	AVG		59210		4.46800	20.00000	O
Endrin Ketone	114400	110500	128240	123020	125550	114004	AVG		119286		6.07216	20.00000	O
Tetrachloro-m-Xylene	165600	162500	180960	173100	163560	151708	AVG		166238		5.99436	20.00000	
Decachlorobiphenyl	73000	67900	73200	67820	68940	64588	AVG		69241		4.80570	20.00000	

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

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Katahdin
ANALYTICAL SERVICES

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL4984
Project : Cornhusker Army Ammunition Plant
Instrument ID: GC01
Lab File IDs : 1LB10218.D 1LB10217.D 1LB10216.D 1LB10213.D 1LB10215.D 1LB10214.D
Column ID: B
Calibration Date(s): 16-FEB-18 15:00 16-FEB-18 23:44

	0.0050000 Level 1	0.0100000 Level 2	0.0250000 Level 3	0.0500000 Level 4	0.1000000 Level 5	0.2500000 Level 6	New Crv	b	m1	m2	%RSD	Max %RSD	
gamma-BHC	212400	214200	250400	246320	239630	216492	AVG		229907		7.57641	20.00000	O
Heptachlor	182200	183000	210440	199640	192660	166612	AVG		189092		8.08867	20.00000	O
Heptachlor Epoxide	155600	155100	176320	166420	161430	143316	AVG		159698		7.03325	20.00000	O
4,4'-DDE	148000	145500	175840	170840	167560	150288	AVG		159671		8.27784	20.00000	O
Endrin	119000	117400	137680	134400	133660	119220	AVG		126893		7.30648	20.00000	O
Endrin	119000	117400	137680	134400	133660	119220	AVG		126893		7.30648	20.00000	O
4,4'-DDD	116400	115700	137800	133560	135390	122280	AVG		126855		7.82183	20.00000	O
4,4'-DDT	105800	106200	128400	124340	130190	122728	AVG		119610		9.09601	20.00000	O
Endrin Aldehyde	90200	85700	96360	93400	94110	85288	AVG		90843		5.05340	20.00000	O
Methoxychlor	52800	50100	56960	54640	55990	54256	AVG		54124		4.50708	20.00000	O
Endrin Ketone	102800	100100	115600	111600	112700	104572	AVG		107895		5.77234	20.00000	O
Tetrachloro-m-Xylene	170200	167500	186640	180620	172220	161196	AVG		173063		5.30923	20.00000	
Decachlorobiphenyl	71200	64900	71000	65780	67140	62324	AVG		67057		5.22594	20.00000	

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

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Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10219.D
Report Date: 21-Feb-2018 12:36

Katahdin Analytical Services

RECOVERY REPORT

Client Name: Client SDG: SDGa00508
Sample Matrix: LIQUID Fraction: PESTICIDE
Lab Smp Id: WG223323-8
Level: LOW Operator: AC
Data Type: GC MULTI COMP SampleType: LCS
SpikeList File: IND.spk Quant Type: ESTD
Sublist File: IND.sub
Method File: \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m
Misc Info: WG223323,WG223323,WG223323-2,SL1057-1

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
5 alpha-BHC	0.0500	0.0558	111.63	80-120
6 gamma-BHC	0.0500	0.0552	110.41	80-120
7 beta-BHC	0.0500	0.0533	106.69	80-120
8 delta-BHC	0.0500	0.0542	108.40	80-120
9 Heptachlor	0.0500	0.0557	111.34	80-120
10 Aldrin	0.0500	0.0556	111.26	80-120
13 Heptachlor Epoxide	0.0500	0.0536	107.16	80-120
15 gamma-Chlordane	0.0500	0.0561	112.27	80-120
17 alpha-Chlordane	0.0500	0.0558	111.72	80-120
19 4,4'-DDE	0.0500	0.0556	111.27	80-120
20 Endosulfan I	0.0500	0.0527	105.43	80-120
21 Dieldrin	0.0500	0.0534	106.78	80-120
23 Endrin	0.0500	0.0571	114.20	80-120
24 4,4'-DDD	0.0500	0.0563	112.65	80-120
26 Endosulfan II	0.0500	0.0558	111.57	80-120
27 4,4'-DDT	0.0500	0.0564	112.76	80-120
28 Endrin Aldehyde	0.0500	0.0544	108.77	80-120
29 Methoxychlor	0.0500	0.0529	105.86	80-120
32 Endosulfan sulfate	0.0500	0.0512	102.30	80-120
33 Endrin Ketone	0.0500	0.0520	104.00	80-120

Data File: 1LB10219.D
Report Date: 21-Feb-2018 12:36

Katahdin Analytical Services

RECOVERY REPORT

Client Name: Client SDG: SDGa00508
Sample Matrix: LIQUID Fraction: PESTICIDE
Lab Smp Id: WG223323-8
Level: LOW Operator: AC
Data Type: GC MULTI COMP SampleType: LCS
SpikeList File: IND.spk Quant Type: ESTD
Sublist File: IND.sub
Method File: \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m\PEST217.m
Misc Info: WG223323,WG223323,WG223323-2,SL1057-1

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
5 alpha-BHC	0.0500	0.0563	112.62	80-120
6 gamma-BHC	0.0500	0.0556	111.29	80-120
7 beta-BHC	0.0500	0.0542	108.47	80-120
8 delta-BHC	0.0500	0.0542	108.41	80-120
9 Heptachlor	0.0500	0.0562	112.52	80-120
10 Aldrin	0.0500	0.0539	107.87	80-120
13 Heptachlor Epoxide	0.0500	0.0528	105.52	80-120
15 gamma-Chlordane	0.0500	0.0547	109.43	80-120
17 alpha-Chlordane	0.0500	0.0541	108.25	80-120
19 4,4'-DDE	0.0500	0.0496	99.19	80-120
20 Endosulfan I	0.0500	0.0531	106.23	80-120
21 Dieldrin	0.0500	0.0534	106.89	80-120
23 Endrin	0.0500	0.0549	109.75	80-120
24 4,4'-DDD	0.0500	0.0553	110.66	80-120
26 Endosulfan II	0.0500	0.0541	108.29	80-120
27 4,4'-DDT	0.0500	0.0558	111.71	80-120
28 Endrin Aldehyde	0.0500	0.0557	111.42	80-120
29 Methoxychlor	0.0500	0.0538	107.71	80-120
32 Endosulfan sulfate	0.0500	0.0511	102.16	80-120
33 Endrin Ketone	0.0500	0.0512	102.36	80-120

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10213.D
Report Date: 19-Feb-2018 13:43

Katahdin Analytical Services

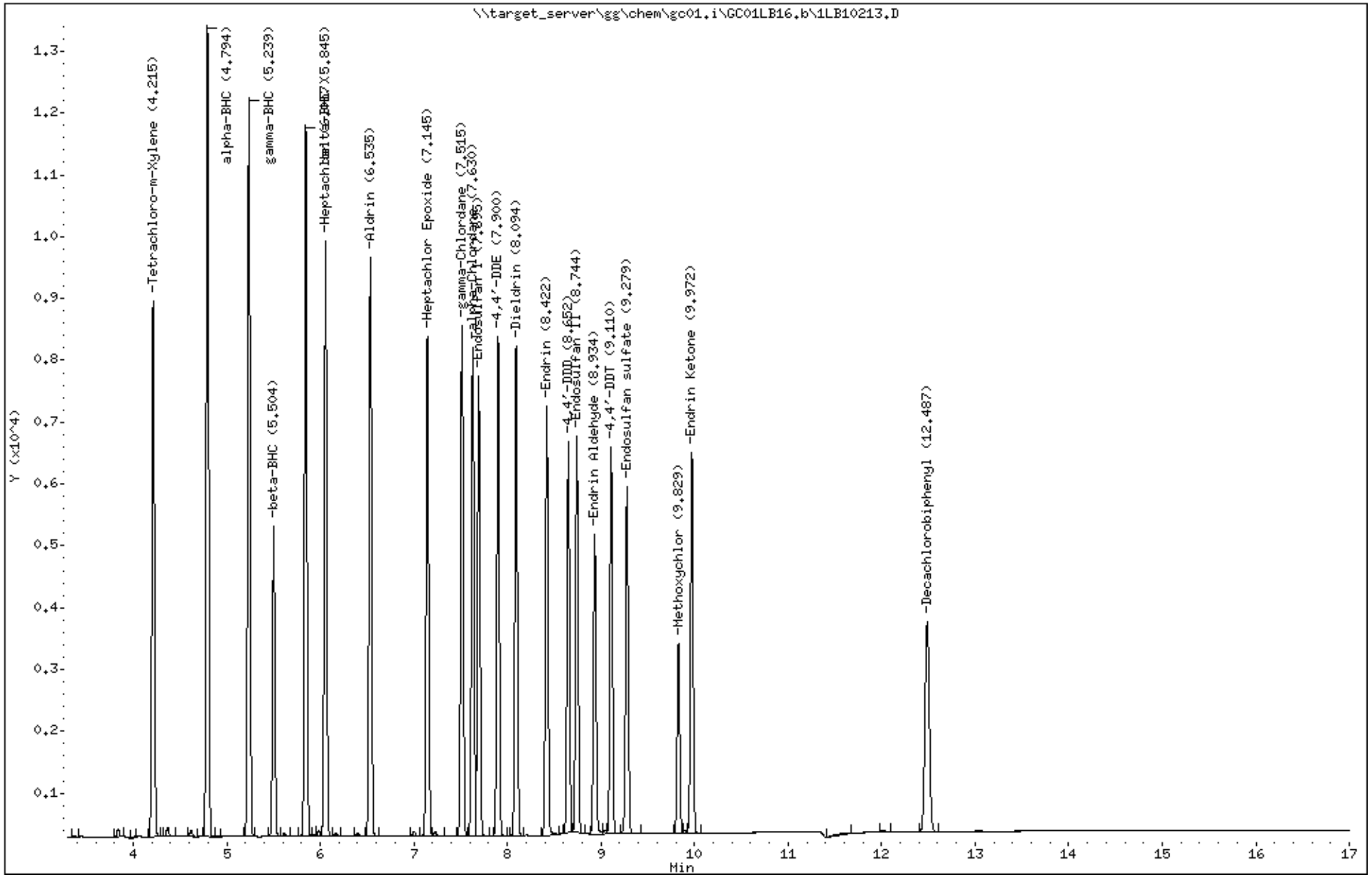
Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10213.D
Lab Smp Id: WG223323-2
Inj Date : 16-FEB-2018 22:07
Operator : AC   Inst ID: gc01.i
Smp Info : WG223323-2
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m
Meth Date : 19-Feb-2018 12:34 acronin   Quant Type: ESTD
Cal Date : 16-FEB-2018 22:07   Cal File: 1LB10213.D
Als bottle: 5   Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						AMOUNTS		
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	REVIEW CODE
$	4 Tetrachloro-m-Xylene	4.215	4.214	0.001	8655	0.05000	0.0500	
	5 alpha-BHC	4.793	4.794	-0.001	13122	0.05000	0.0500	
	6 gamma-BHC	5.238	5.238	0.000	11958	0.05000	0.0500	
	7 beta-BHC	5.503	5.503	0.000	5007	0.05000	0.0500	
	8 delta-BHC	5.845	5.844	0.001	11517	0.05000	0.0500	
	9 Heptachlor	6.056	6.056	0.000	9636	0.05000	0.0500	
	10 Aldrin	6.535	6.536	-0.001	9367	0.05000	0.0500	
	13 Heptachlor Epoxide	7.145	7.146	-0.001	8094	0.05000	0.0500	
	15 gamma-Chlordane	7.515	7.514	0.001	8266	0.05000	0.0500	
	17 alpha-Chlordane	7.630	7.629	0.001	7913	0.05000	0.0500	
	19 4,4'-DDE	7.900	7.901	-0.001	8072	0.05000	0.0500	
	20 Endosulfan I	7.695	7.696	-0.001	7437	0.05000	0.0500	
	21 Dieldrin	8.093	8.094	-0.001	7922	0.05000	0.0500	
	23 Endrin	8.421	8.421	0.000	6940	0.05000	0.0500	
	24 4,4'-DDD	8.651	8.651	0.000	6342	0.05000	0.0500	
	26 Endosulfan II	8.743	8.743	0.000	6409	0.05000	0.0500	
	27 4,4'-DDT	9.110	9.109	0.001	6250	0.05000	0.0500	
	28 Endrin Aldehyde	8.933	8.933	0.000	4848	0.05000	0.0500	
	29 Methoxychlor	9.828	9.828	0.000	3057	0.05000	0.0500	
	32 Endosulfan sulfate	9.278	9.278	0.000	5608	0.05000	0.0500	
	33 Endrin Ketone	9.971	9.971	0.000	6151	0.05000	0.0500	
$	34 Decachlorobiphenyl	12.486	12.483	0.003	3391	0.05000	0.0500	

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10213.D
Date : 16-FEB-2018 22:07
Client ID:
Instrument: gc01.i
Sample Info: WG223323-2
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000085

Data File: 1LB10213.D
Report Date: 19-Feb-2018 13:44

Katahdin Analytical Services

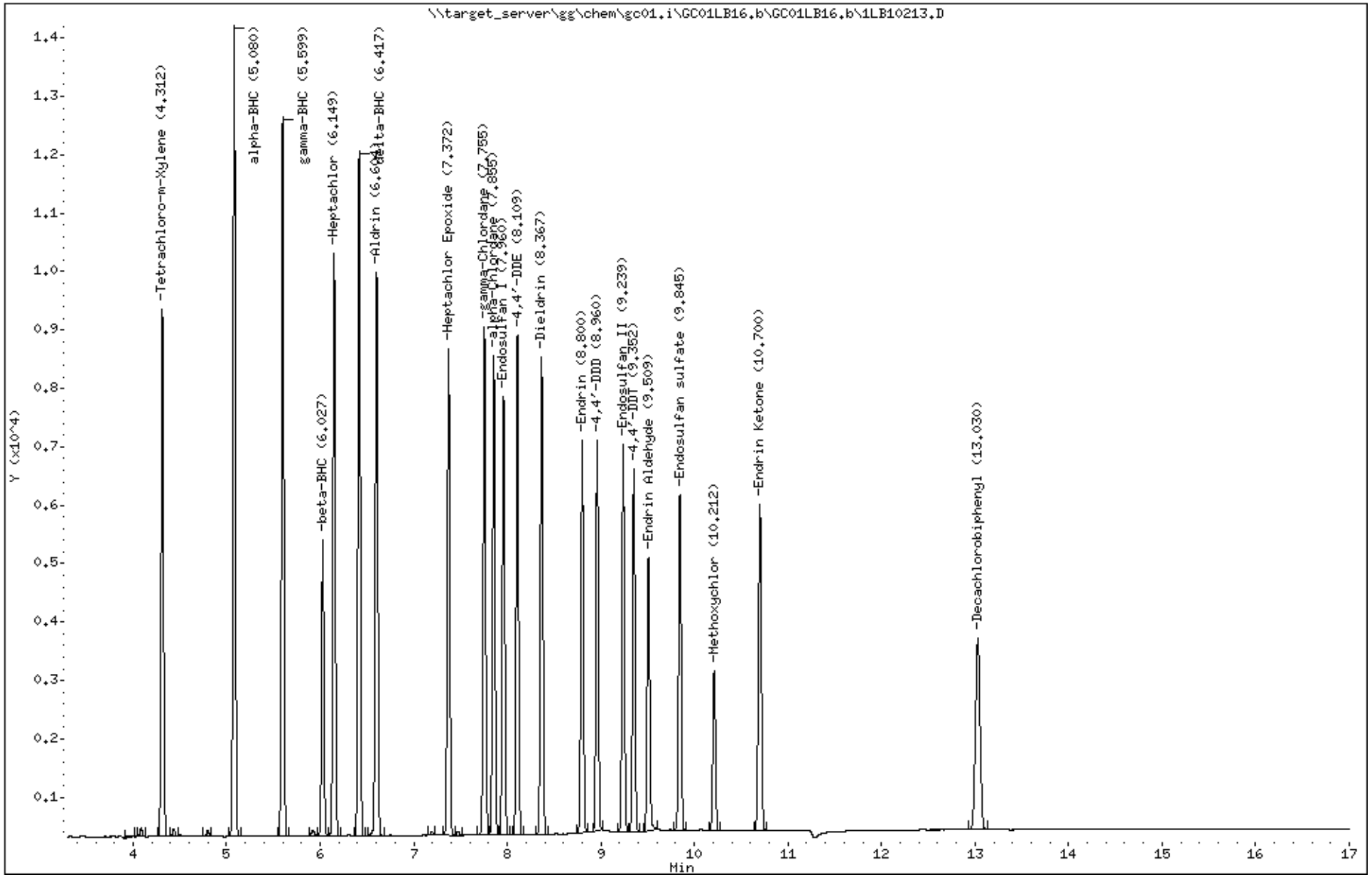
Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10213.D
Lab Smp Id: WG223323-2
Inj Date : 16-FEB-2018 22:07
Operator : AC   Inst ID: gc01.i
Smp Info : WG223323-2
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m\PEST217.m
Meth Date : 19-Feb-2018 12:35 acronin   Quant Type: ESTD
Cal Date : 16-FEB-2018 22:07   Cal File: 1LB10213.D
Als bottle: 5   Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						AMOUNTS		
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	REVIEW CODE
$	4 Tetrachloro-m-Xylene	4.312	4.311	0.001	9031	0.05000	0.0500	
	5 alpha-BHC	5.080	5.081	-0.001	13882	0.05000	0.0500	
	6 gamma-BHC	5.598	5.600	-0.002	12316	0.05000	0.0500	
	7 beta-BHC	6.027	6.028	-0.001	5073	0.05000	0.0500	
	8 delta-BHC	6.417	6.416	0.001	11723	0.05000	0.0500	
	9 Heptachlor	6.148	6.150	-0.002	9982	0.05000	0.0500	
	10 Aldrin	6.603	6.603	0.000	9650	0.05000	0.0500	
	13 Heptachlor Epoxide	7.372	7.373	-0.001	8321	0.05000	0.0500	
	15 gamma-Chlordane	7.755	7.756	-0.001	8691	0.05000	0.0500	
	17 alpha-Chlordane	7.855	7.856	-0.001	8194	0.05000	0.0500	
	19 4,4'-DDE	8.108	8.108	0.000	8542	0.05000	0.0500	
	20 Endosulfan I	7.960	7.960	0.000	7490	0.05000	0.0500	
	21 Dieldrin	8.367	8.368	-0.001	8171	0.05000	0.0500	
	23 Endrin	8.800	8.800	0.000	6720	0.05000	0.0500	
	24 4,4'-DDD	8.960	8.960	0.000	6678	0.05000	0.0500	
	26 Endosulfan II	9.238	9.240	-0.002	6638	0.05000	0.0500	
	27 4,4'-DDT	9.352	9.353	-0.001	6217	0.05000	0.0500	
	28 Endrin Aldehyde	9.508	9.508	0.000	4670	0.05000	0.0500	
	29 Methoxychlor	10.212	10.211	0.001	2732	0.05000	0.0500	
	32 Endosulfan sulfate	9.845	9.845	0.000	5757	0.05000	0.0500	
	33 Endrin Ketone	10.700	10.700	0.000	5580	0.05000	0.0500	
$	34 Decachlorobiphenyl	13.030	13.028	0.002	3289	0.05000	0.0500	

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10213.D
Date : 16-FEB-2018 22:07
Client ID:
Instrument: gc01.i
Sample Info: WG223323-2
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000087

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10214.D
Report Date: 19-Feb-2018 13:43

Katahdin Analytical Services

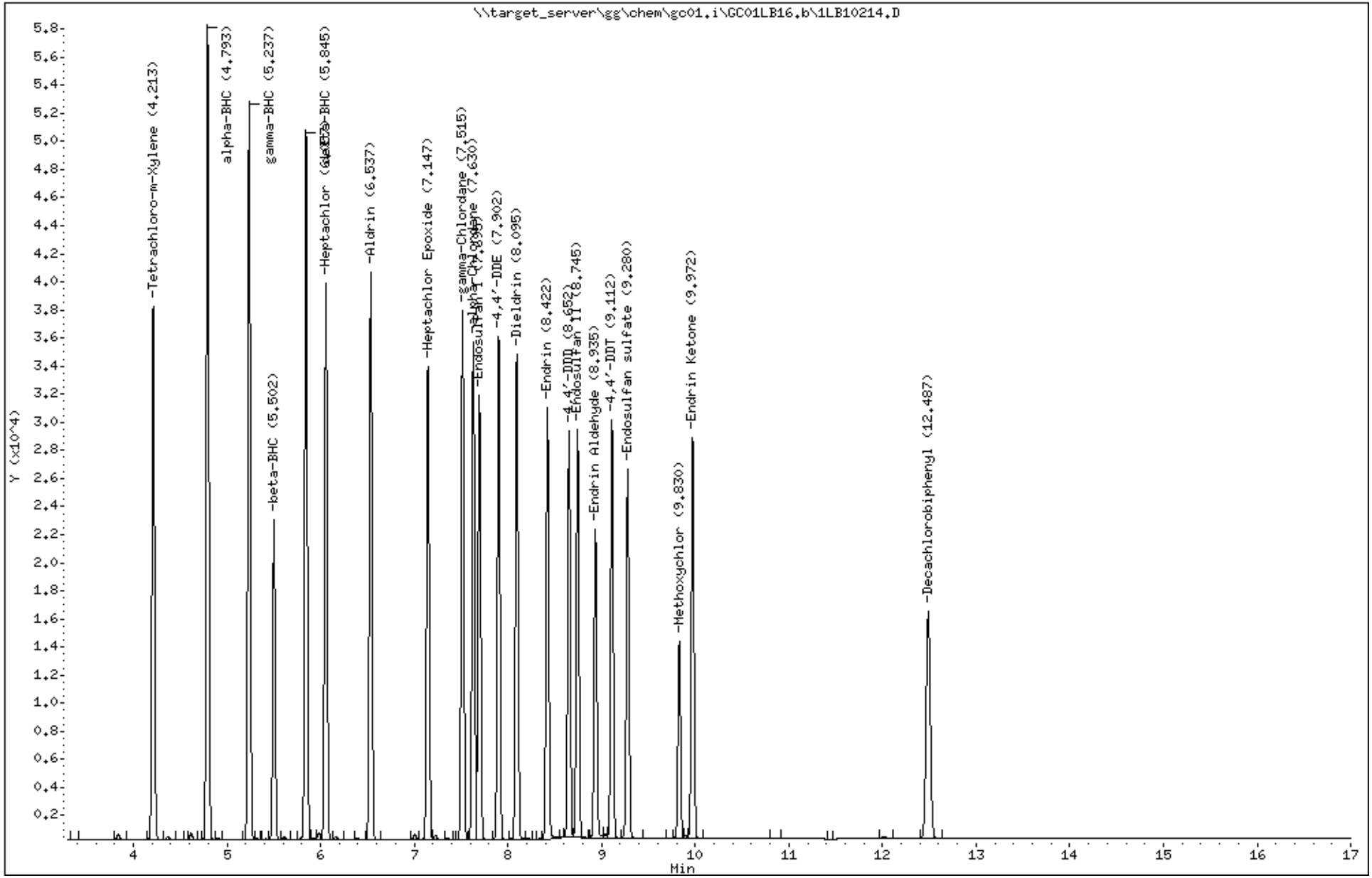
Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10214.D
Lab Smp Id: WG223323-3
Inj Date : 16-FEB-2018 22:27
Operator : AC   Inst ID: gc01.i
Smp Info : WG223323-3
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m
Meth Date : 19-Feb-2018 12:34 acronin   Quant Type: ESTD
Cal Date : 16-FEB-2018 22:27   Cal File: 1LB10214.D
Als bottle: 6   Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						AMOUNTS		
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	REVIEW CODE
$ 4	Tetrachloro-m-Xylene	4.213	4.214	-0.001	37927	0.25000	0.234	
5	alpha-BHC	4.793	4.794	-0.001	58010	0.25000	0.235	
6	gamma-BHC	5.236	5.238	-0.002	52582	0.25000	0.234	
7	beta-BHC	5.501	5.503	-0.002	22767	0.25000	0.238	
8	delta-BHC	5.845	5.844	0.001	50487	0.25000	0.234	
9	Heptachlor	6.056	6.056	0.000	39626	0.25000	0.226	
10	Aldrin	6.536	6.536	0.000	40400	0.25000	0.232	
13	Heptachlor Epoxide	7.146	7.146	0.000	33709	0.25000	0.227	
15	gamma-Chlordane	7.515	7.514	0.001	37690	0.25000	0.238	
17	alpha-Chlordane	7.630	7.629	0.001	35394	0.25000	0.236	
19	4,4'-DDE	7.901	7.901	0.000	35794	0.25000	0.235	
20	Endosulfan I	7.695	7.696	-0.001	31569	0.25000	0.230	
21	Dieldrin	8.095	8.094	0.001	34548	0.25000	0.233	
23	Endrin	8.421	8.421	0.000	30658	0.25000	0.234	
24	4,4'-DDD	8.651	8.651	0.000	28870	0.25000	0.238	
26	Endosulfan II	8.745	8.743	0.002	28964	0.25000	0.237	
27	4,4'-DDT	9.111	9.109	0.002	29803	0.25000	0.244	
28	Endrin Aldehyde	8.935	8.933	0.002	21994	0.25000	0.238	
29	Methoxychlor	9.830	9.828	0.002	14050	0.25000	0.239	
32	Endosulfan sulfate	9.280	9.278	0.002	26228	0.25000	0.242	
33	Endrin Ketone	9.971	9.971	0.000	28501	0.25000	0.240	
$ 34	Decachlorobiphenyl	12.486	12.483	0.003	16147	0.25000	0.244	

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10214.D
Date : 16-FEB-2018 22:27
Client ID:
Instrument: gc01.i
Sample Info: WG223323-3
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000089

Data File: 1LB10214.D
Report Date: 19-Feb-2018 13:44

Katahdin Analytical Services

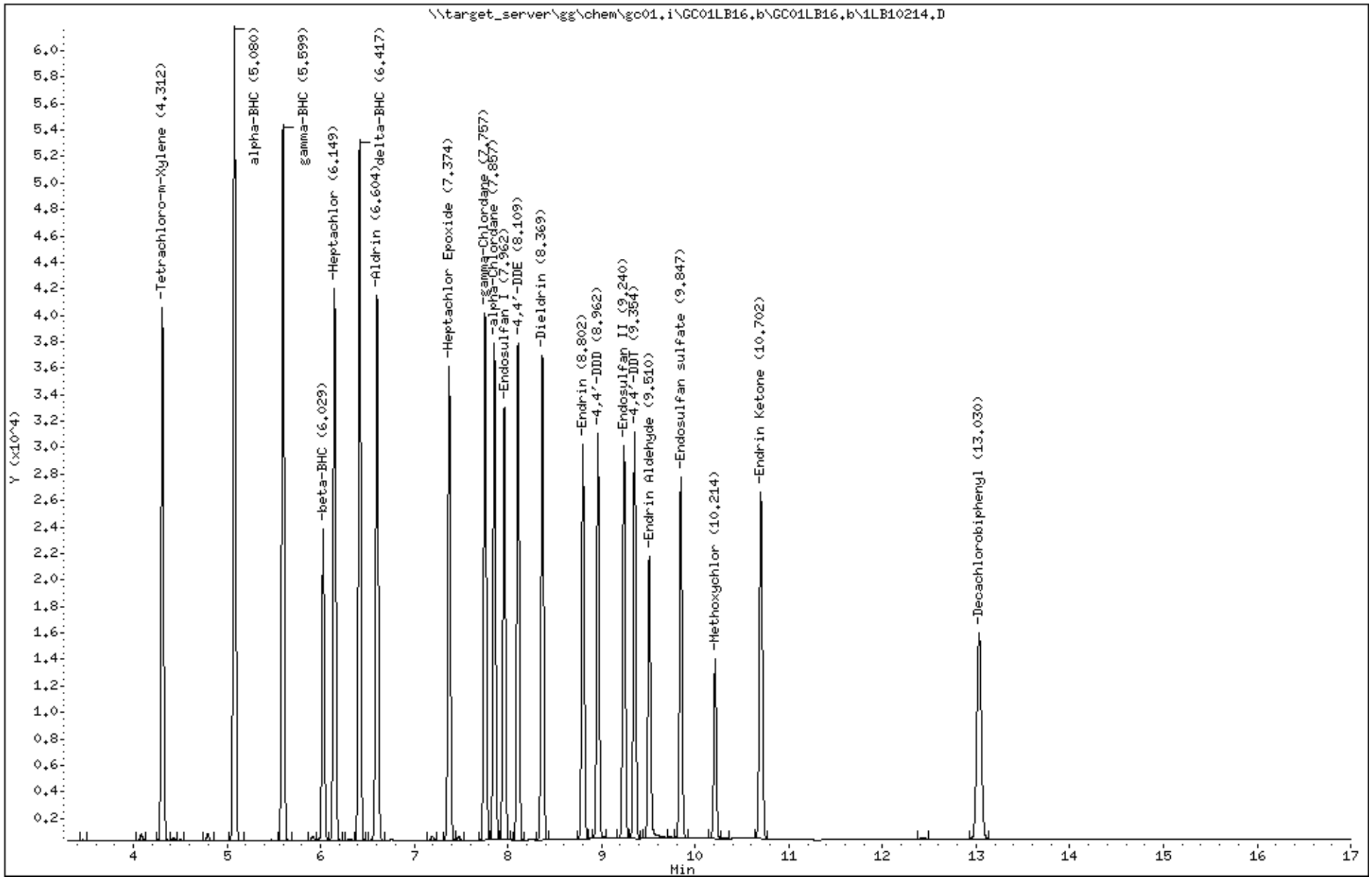
Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10214.D
Lab Smp Id: WG223323-3
Inj Date : 16-FEB-2018 22:27
Operator : AC   Inst ID: gc01.i
Smp Info : WG223323-3
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m\PEST217.m
Meth Date : 19-Feb-2018 12:35 acronin   Quant Type: ESTD
Cal Date : 16-FEB-2018 22:27   Cal File: 1LB10214.D
Als bottle: 6   Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						AMOUNTS		
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	REVIEW CODE
$ 4	Tetrachloro-m-Xylene	4.312	4.311	0.001	40299	0.25000	0.236	
5	alpha-BHC	5.080	5.081	-0.001	61508	0.25000	0.235	
6	gamma-BHC	5.598	5.600	-0.002	54123	0.25000	0.234	
7	beta-BHC	6.028	6.028	0.000	23542	0.25000	0.241	
8	delta-BHC	6.417	6.416	0.001	52898	0.25000	0.237	
9	Heptachlor	6.148	6.150	-0.002	41653	0.25000	0.227	
10	Aldrin	6.603	6.603	0.000	41150	0.25000	0.230	
13	Heptachlor Epoxide	7.373	7.373	0.000	35829	0.25000	0.231	
15	gamma-Chlordane	7.757	7.756	0.001	39770	0.25000	0.239	
17	alpha-Chlordane	7.857	7.856	0.001	37483	0.25000	0.239	
19	4,4'-DDE	8.108	8.108	0.000	37572	0.25000	0.234	
20	Endosulfan I	7.962	7.960	0.002	32608	0.25000	0.233	
21	Dieldrin	8.368	8.368	0.000	36575	0.25000	0.236	
23	Endrin	8.802	8.800	0.002	29805	0.25000	0.235	
24	4,4'-DDD	8.962	8.960	0.002	30570	0.25000	0.239	
26	Endosulfan II	9.240	9.240	0.000	29649	0.25000	0.236	
27	4,4'-DDT	9.353	9.353	0.000	30682	0.25000	0.248	
28	Endrin Aldehyde	9.510	9.508	0.002	21322	0.25000	0.239	
29	Methoxychlor	10.213	10.211	0.002	13564	0.25000	0.249	
32	Endosulfan sulfate	9.847	9.845	0.002	27283	0.25000	0.243	
33	Endrin Ketone	10.702	10.700	0.002	26143	0.25000	0.242	
$ 34	Decachlorobiphenyl	13.030	13.028	0.002	15581	0.25000	0.243	

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10214.D
Date : 16-FEB-2018 22:27
Client ID:
Instrument: gc01.i
Sample Info: WG223323-3
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000091

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10215.D
Report Date: 19-Feb-2018 13:44

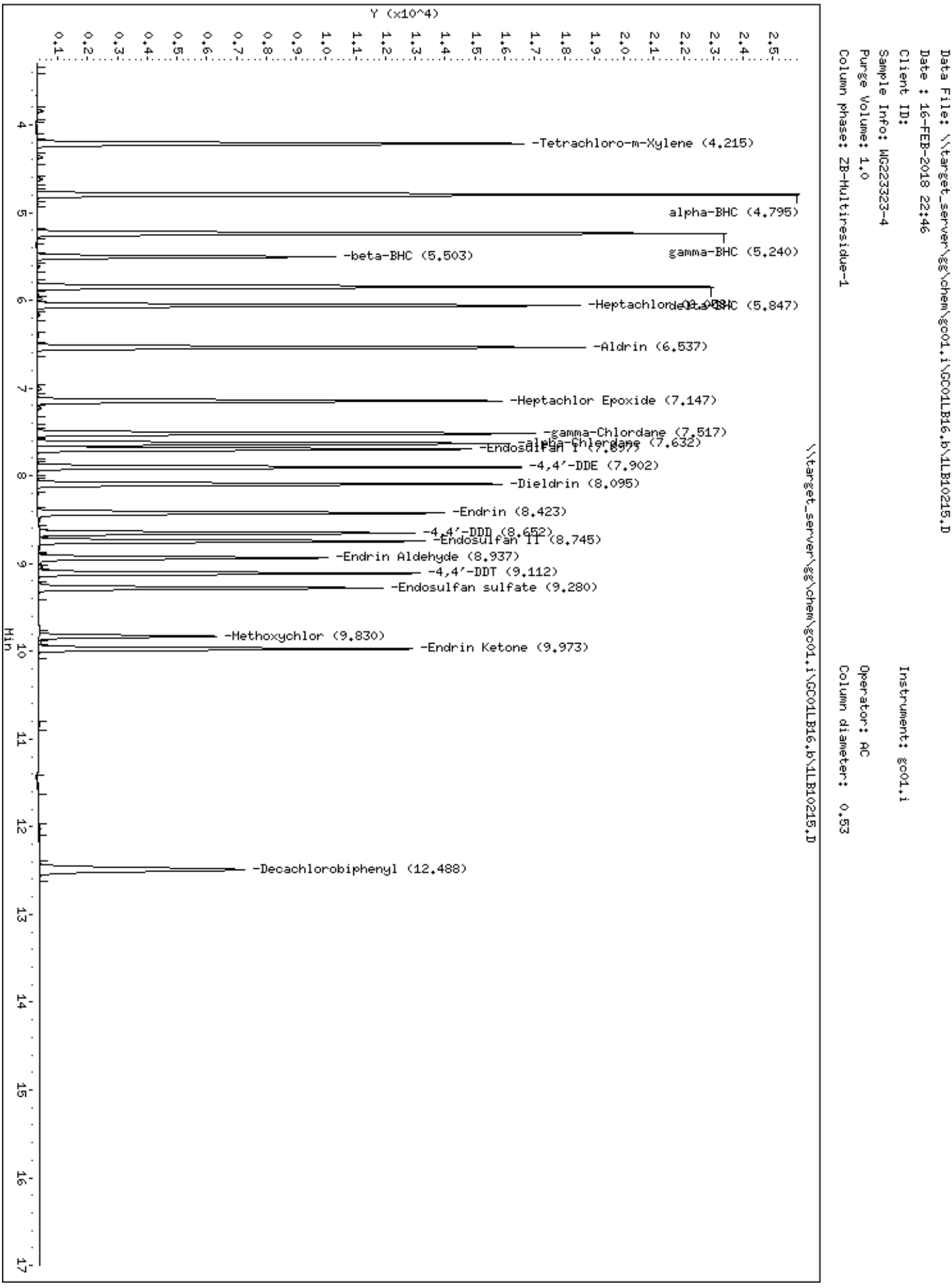
Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10215.D
Lab Smp Id: WG223323-4
Inj Date : 16-FEB-2018 22:46
Operator : AC   Inst ID: gc01.i
Smp Info : WG223323-4
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m
Meth Date : 19-Feb-2018 12:34 acronin   Quant Type: ESTD
Cal Date : 16-FEB-2018 22:46   Cal File: 1LB10215.D
Als bottle: 7   Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)	REVIEW CODE
$ 4	Tetrachloro-m-Xylene	4.215	4.214	0.001	16356	0.10000	0.100	
5	alpha-BHC	4.795	4.794	0.001	25590	0.10000	0.102	
6	gamma-BHC	5.240	5.238	0.002	23129	0.10000	0.102	
7	beta-BHC	5.503	5.503	0.000	10007	0.10000	0.103	
8	delta-BHC	5.846	5.844	0.002	22723	0.10000	0.103	
9	Heptachlor	6.058	6.056	0.002	18236	0.10000	0.102	
10	Aldrin	6.536	6.536	0.000	18413	0.10000	0.104	
13	Heptachlor Epoxide	7.146	7.146	0.000	15598	0.10000	0.103	
15	gamma-Chlordane	7.516	7.514	0.002	16703	0.10000	0.104	
17	alpha-Chlordane	7.631	7.629	0.002	15857	0.10000	0.104	
19	4,4'-DDE	7.901	7.901	0.000	16254	0.10000	0.104	
20	Endosulfan I	7.696	7.696	0.000	14578	0.10000	0.104	
21	Dieldrin	8.095	8.094	0.001	15593	0.10000	0.103	
23	Endrin	8.423	8.421	0.002	13642	0.10000	0.103	
24	4,4'-DDD	8.651	8.651	0.000	12604	0.10000	0.103	
26	Endosulfan II	8.745	8.743	0.002	12942	0.10000	0.104	
27	4,4'-DDT	9.111	9.109	0.002	12800	0.10000	0.103	
28	Endrin Aldehyde	8.936	8.933	0.003	9707	0.10000	0.103	
29	Methoxychlor	9.830	9.828	0.002	5972	0.10000	0.101	
32	Endosulfan sulfate	9.280	9.278	0.002	11550	0.10000	0.104	
33	Endrin Ketone	9.973	9.971	0.002	12555	0.10000	0.104	
$ 34	Decachlorobiphenyl	12.488	12.483	0.005	6894	0.10000	0.103	


Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10215.D
Date : 16-FEB-2018 22:46
Client ID:
Sample Info: WG223323-4
Purge Volume: 1.0
Column phase: ZB-Multiresidue-1
Instrument: gc01.i
Operator: AC
Column diameter: 0.53
\\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10215.D
Y (x10^4)
Min
-Tetrachloro-m-Xylene (4.215)
alpha-BHC (4.795)
gamma-BHC (5.240)
-beta-BHC (5.503)
-Heptachlor/delta-BHC (5.847)
-Aldrin (6.537)
-Heptachlor Epoxide (7.147)
-gamma-Chlordane (7.517)
-alpha-Chlordane (7.632)
-Endosulfan I (7.879)
-4,4'-DDE (7.902)
-Dieldrin (8.095)
-Endrin (8.423)
-4,4'-DDD (8.652)
-Endosulfan II (8.745)
-Endrin Aldehyde (8.937)
-4,4'-DDT (9.112)
-Endosulfan sulfate (9.280)
-Methoxychlor (9.830)
-Endrin Ketone (9.973)
-Decachlorobiphenyl (12.488)

Data File: 1LB10215.D
Report Date: 19-Feb-2018 13:44

Katahdin Analytical Services

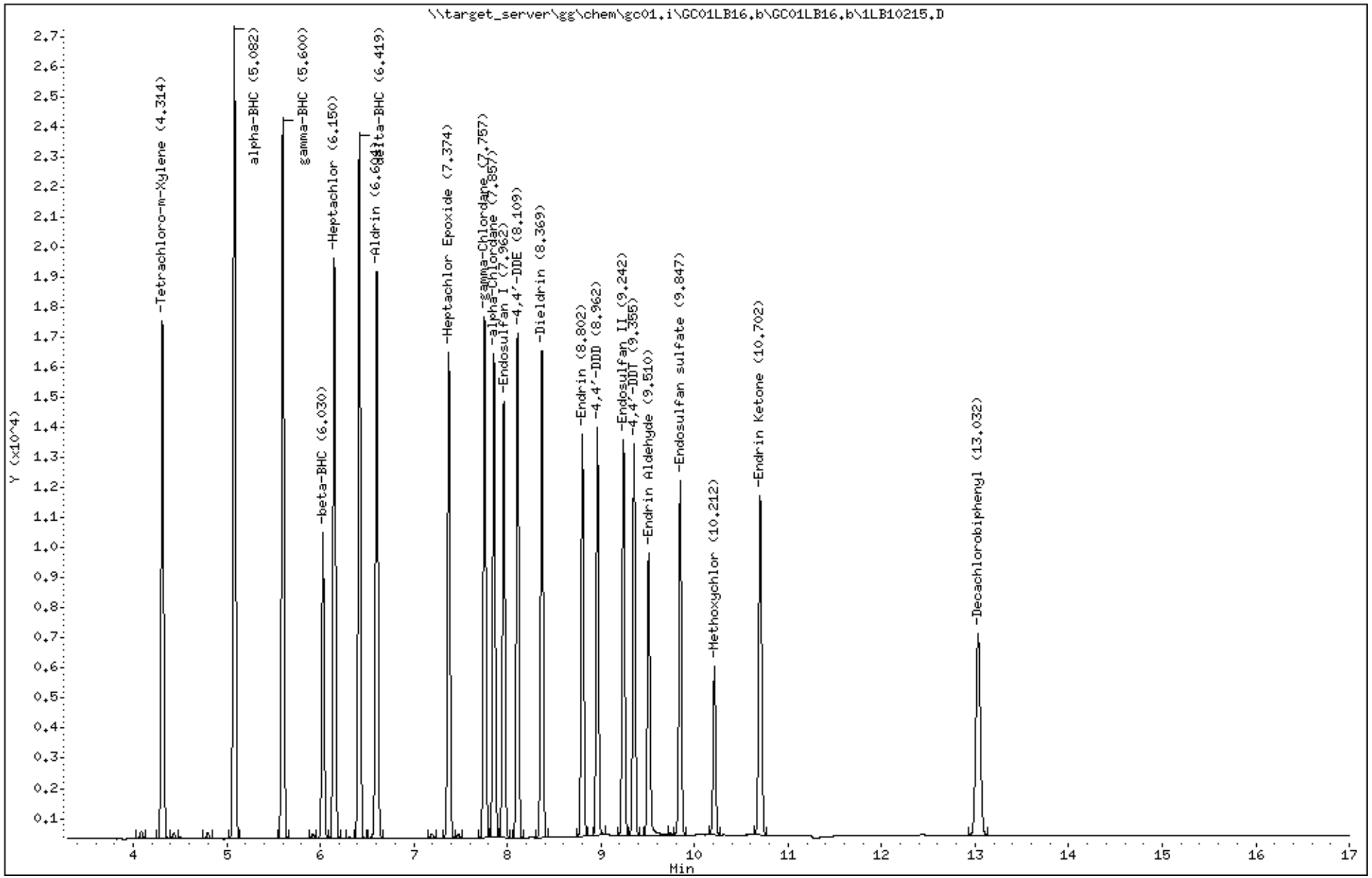
Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10215.D
Lab Smp Id: WG223323-4
Inj Date : 16-FEB-2018 22:46
Operator : AC   Inst ID: gc01.i
Smp Info : WG223323-4
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m\PEST217.m
Meth Date : 19-Feb-2018 12:35 acronin   Quant Type: ESTD
Cal Date : 16-FEB-2018 22:46   Cal File: 1LB10215.D
Als bottle: 7   Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						AMOUNTS		
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	REVIEW CODE
$	4 Tetrachloro-m-Xylene	4.313	4.311	0.002	17222	0.10000	0.100	
	5 alpha-BHC	5.081	5.081	0.000	27007	0.10000	0.102	
	6 gamma-BHC	5.600	5.600	0.000	23963	0.10000	0.102	
	7 beta-BHC	6.030	6.028	0.002	10151	0.10000	0.102	
	8 delta-BHC	6.418	6.416	0.002	23478	0.10000	0.103	
	9 Heptachlor	6.150	6.150	0.000	19266	0.10000	0.103	
	10 Aldrin	6.603	6.603	0.000	18852	0.10000	0.104	
	13 Heptachlor Epoxide	7.373	7.373	0.000	16143	0.10000	0.103	
	15 gamma-Chlordane	7.756	7.756	0.000	17298	0.10000	0.102	
	17 alpha-Chlordane	7.856	7.856	0.000	16094	0.10000	0.102	
	19 4,4'-DDE	8.108	8.108	0.000	16756	0.10000	0.103	
	20 Endosulfan I	7.961	7.960	0.001	14504	0.10000	0.102	
	21 Dieldrin	8.368	8.368	0.000	16192	0.10000	0.103	
	23 Endrin	8.801	8.800	0.001	13366	0.10000	0.104	
	24 4,4'-DDD	8.961	8.960	0.001	13539	0.10000	0.104	
	26 Endosulfan II	9.241	9.240	0.001	13156	0.10000	0.103	
	27 4,4'-DDT	9.355	9.353	0.002	13019	0.10000	0.104	
	28 Endrin Aldehyde	9.510	9.508	0.002	9411	0.10000	0.103	
	29 Methoxychlor	10.211	10.211	0.000	5599	0.10000	0.102	
	32 Endosulfan sulfate	9.846	9.845	0.001	11799	0.10000	0.103	
	33 Endrin Ketone	10.701	10.700	0.001	11270	0.10000	0.103	
$	34 Decachlorobiphenyl	13.031	13.028	0.003	6714	0.10000	0.103	

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10215.D
Date : 16-FEB-2018 22:46
Client ID:
Instrument: gc01.i
Sample Info: WG223323-4
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000095

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10216.D
Report Date: 19-Feb-2018 13:44

Katahdin Analytical Services

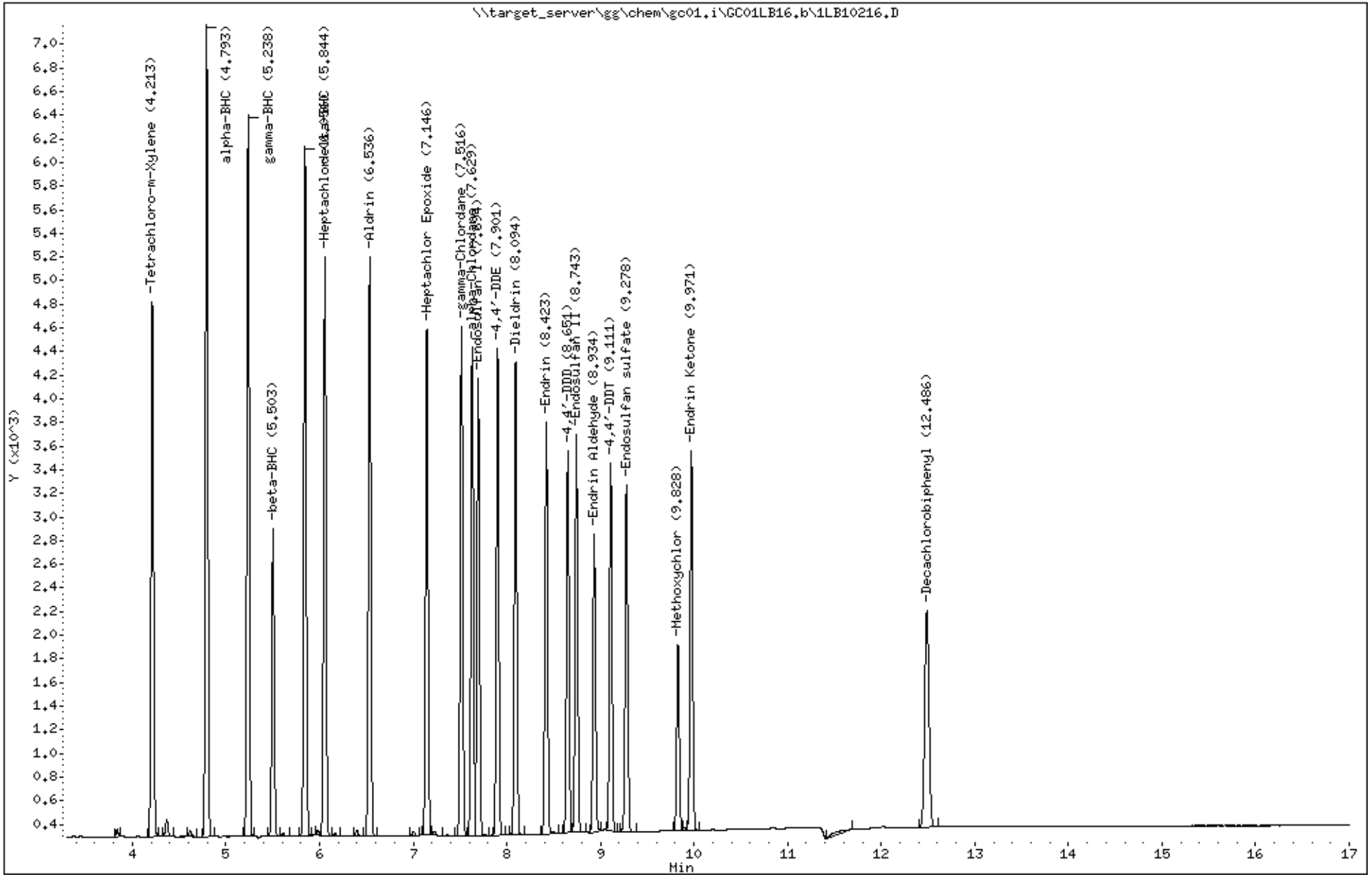
Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10216.D
Lab Smp Id: WG223323-5
Inj Date : 16-FEB-2018 23:06
Operator : AC   Inst ID: gc01.i
Smp Info : WG223323-5
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m
Meth Date : 19-Feb-2018 12:34 acronin   Quant Type: ESTD
Cal Date : 16-FEB-2018 23:06   Cal File: 1LB10216.D
Als bottle: 8   Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						AMOUNTS		
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	REVIEW CODE
$	4 Tetrachloro-m-Xylene	4.212	4.214	-0.002	4524	0.02500	0.0270	
	5 alpha-BHC	4.792	4.794	-0.002	6870	0.02500	0.0268	
	6 gamma-BHC	5.237	5.238	-0.001	6110	0.02500	0.0264	
	7 beta-BHC	5.502	5.503	-0.001	2606	0.02500	0.0264	
	8 delta-BHC	5.844	5.844	0.000	5836	0.02500	0.0261	
	9 Heptachlor	6.056	6.056	0.000	4902	0.02500	0.0269	
	10 Aldrin	6.536	6.536	0.000	4900	0.02500	0.0269	
	13 Heptachlor Epoxide	7.146	7.146	0.000	4279	0.02500	0.0274	
	15 gamma-Chlordane	7.516	7.514	0.002	4306	0.02500	0.0263	
	17 alpha-Chlordane	7.629	7.629	0.000	4132	0.02500	0.0265	
	19 4,4'-DDE	7.901	7.901	0.000	4123	0.02500	0.0261	
	20 Endosulfan I	7.694	7.696	-0.002	3867	0.02500	0.0269	
	21 Dieldrin	8.094	8.094	0.000	4002	0.02500	0.0261	
	23 Endrin	8.422	8.421	0.001	3493	0.02500	0.0260	
	24 4,4'-DDD	8.651	8.651	0.000	3232	0.02500	0.0260	
	26 Endosulfan II	8.742	8.743	-0.001	3368	0.02500	0.0265	
	27 4,4'-DDT	9.111	9.109	0.002	3107	0.02500	0.0250	
	28 Endrin Aldehyde	8.934	8.933	0.001	2518	0.02500	0.0263	
	29 Methoxychlor	9.827	9.828	-0.001	1565	0.02500	0.0261	
	32 Endosulfan sulfate	9.277	9.278	-0.001	2935	0.02500	0.0261	
	33 Endrin Ketone	9.971	9.971	0.000	3206	0.02500	0.0261	
$	34 Decachlorobiphenyl	12.486	12.483	0.003	1830	0.02500	0.0267	

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10216.D
Date : 16-FEB-2018 23:06
Client ID:
Instrument: gc01.i
Sample Info: WG223323-5
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000097

Data File: 1LB10216.D
Report Date: 19-Feb-2018 13:44

Katahdin Analytical Services

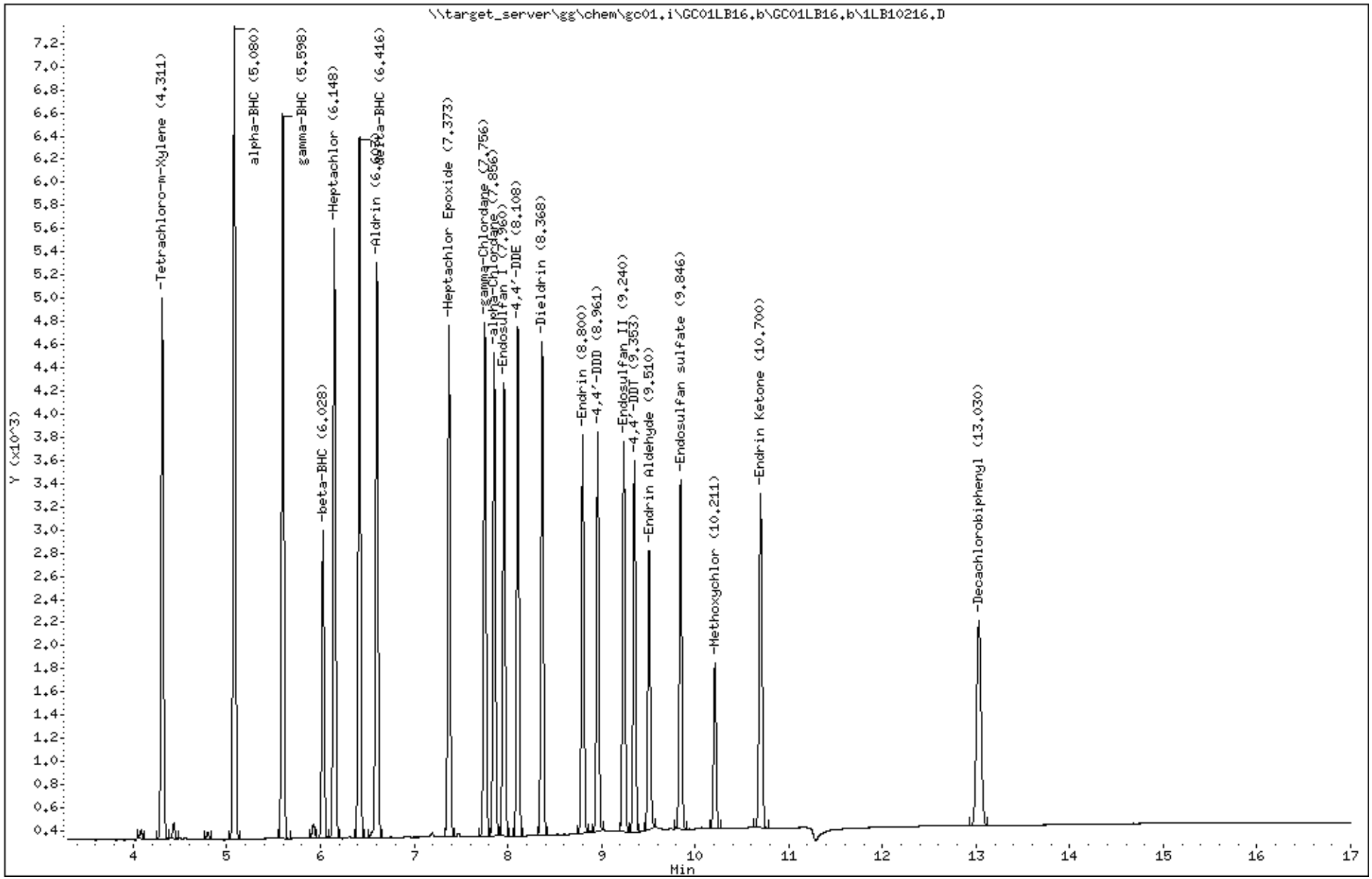
Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10216.D
Lab Smp Id: WG223323-5
Inj Date : 16-FEB-2018 23:06
Operator : AC   Inst ID: gc01.i
Smp Info : WG223323-5
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m\PEST217.m
Meth Date : 19-Feb-2018 12:35 acronin   Quant Type: ESTD
Cal Date : 16-FEB-2018 23:06   Cal File: 1LB10216.D
Als bottle: 8   Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						AMOUNTS		
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	REVIEW CODE
$	4 Tetrachloro-m-Xylene	4.311	4.311	0.000	4666	0.02500	0.0266	
	5 alpha-BHC	5.079	5.081	-0.002	7019	0.02500	0.0261	
	6 gamma-BHC	5.597	5.600	-0.003	6260	0.02500	0.0263	
	7 beta-BHC	6.027	6.028	-0.001	2654	0.02500	0.0263	
	8 delta-BHC	6.416	6.416	0.000	6055	0.02500	0.0262	
	9 Heptachlor	6.147	6.150	-0.003	5261	0.02500	0.0274	
	10 Aldrin	6.602	6.603	-0.001	4963	0.02500	0.0266	
	13 Heptachlor Epoxide	7.372	7.373	-0.001	4408	0.02500	0.0272	
	15 gamma-Chlordane	7.756	7.756	0.000	4431	0.02500	0.0259	
	17 alpha-Chlordane	7.856	7.856	0.000	4167	0.02500	0.0260	
	19 4,4'-DDE	8.107	8.108	-0.001	4396	0.02500	0.0265	
	20 Endosulfan I	7.959	7.960	-0.001	3910	0.02500	0.0269	
	21 Dieldrin	8.367	8.368	-0.001	4258	0.02500	0.0265	
	23 Endrin	8.799	8.800	-0.001	3442	0.02500	0.0262	
	24 4,4'-DDD	8.961	8.960	0.001	3445	0.02500	0.0260	
	26 Endosulfan II	9.239	9.240	-0.001	3367	0.02500	0.0260	
	27 4,4'-DDT	9.352	9.353	-0.001	3210	0.02500	0.0254	
	28 Endrin Aldehyde	9.509	9.508	0.001	2409	0.02500	0.0261	
	29 Methoxychlor	10.211	10.211	0.000	1424	0.02500	0.0257	
	32 Endosulfan sulfate	9.846	9.845	0.001	3010	0.02500	0.0260	
	33 Endrin Ketone	10.699	10.700	-0.001	2890	0.02500	0.0260	
$	34 Decachlorobiphenyl	13.029	13.028	0.001	1775	0.02500	0.0267	

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10216.D
Date : 16-FEB-2018 23:06
Client ID:
Instrument: gc01.i
Sample Info: WG223323-5
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000099

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10217.D
Report Date: 19-Feb-2018 13:44

Katahdin Analytical Services

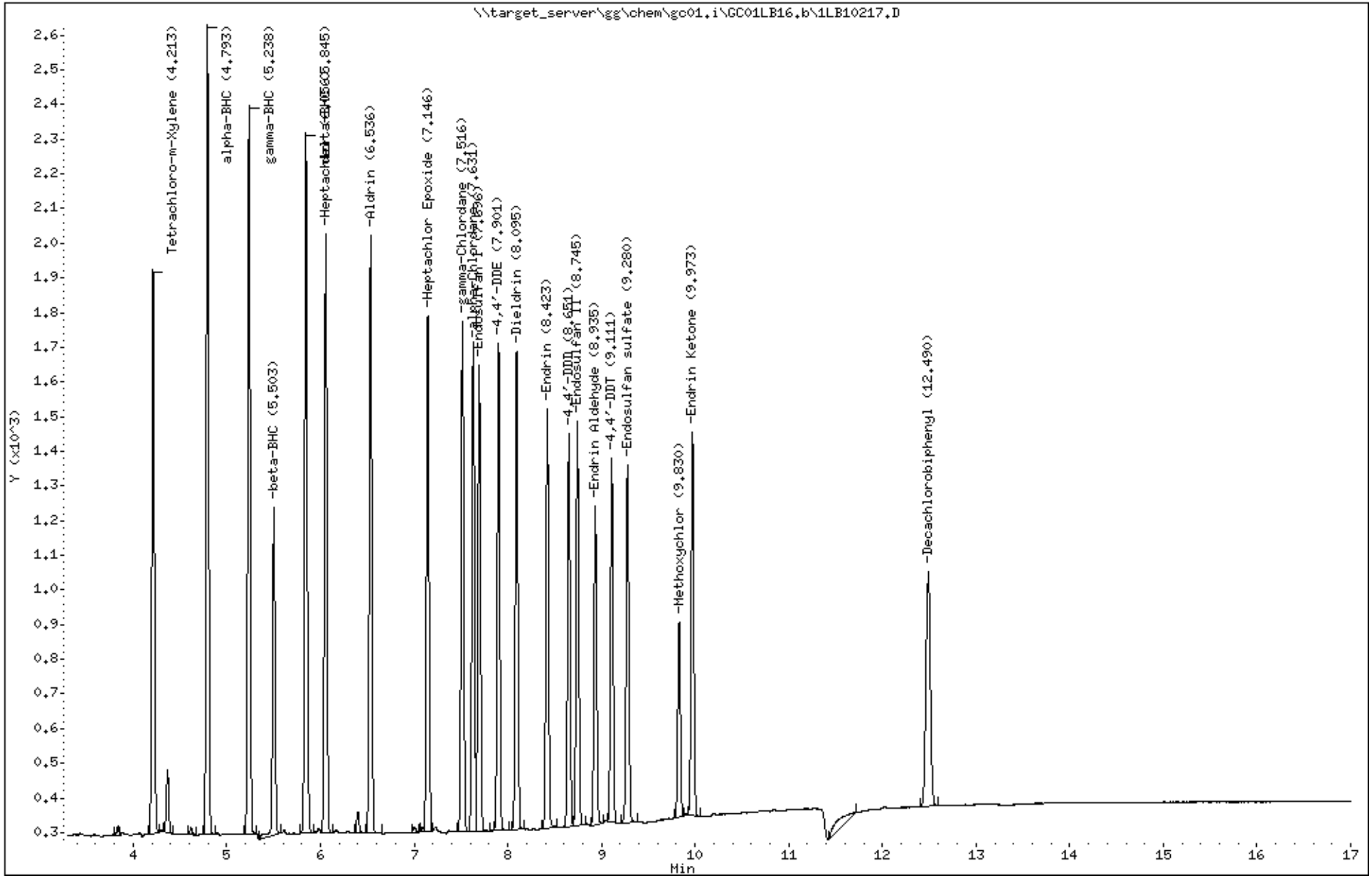
Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10217.D
Lab Smp Id: WG223323-6
Inj Date : 16-FEB-2018 23:25
Operator : AC   Inst ID: gc01.i
Smp Info : WG223323-6
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m
Meth Date : 19-Feb-2018 12:34 acronin   Quant Type: ESTD
Cal Date : 16-FEB-2018 23:25   Cal File: 1LB10217.D
Als bottle: 9   Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						AMOUNTS		
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	REVIEW CODE
$	4 Tetrachloro-m-Xylene	4.212	4.214	-0.002	1625	0.01000	0.00977	
	5 alpha-BHC	4.792	4.794	-0.002	2335	0.01000	0.00928	
	6 gamma-BHC	5.237	5.238	-0.001	2101	0.01000	0.00925	
	7 beta-BHC	5.502	5.503	-0.001	946	0.01000	0.00965	
	8 delta-BHC	5.844	5.844	0.000	2018	0.01000	0.00922	
	9 Heptachlor	6.056	6.056	0.000	1728	0.01000	0.00957	
	10 Aldrin	6.536	6.536	0.000	1725	0.01000	0.00957	
	13 Heptachlor Epoxide	7.146	7.146	0.000	1490	0.01000	0.00964	
	15 gamma-Chlordane	7.516	7.514	0.002	1470	0.01000	0.00916	
	17 alpha-Chlordane	7.631	7.629	0.002	1400	0.01000	0.00917	
	19 4,4'-DDE	7.901	7.901	0.000	1406	0.01000	0.00910	
	20 Endosulfan I	7.696	7.696	0.000	1346	0.01000	0.00948	
	21 Dieldrin	8.094	8.094	0.000	1380	0.01000	0.00919	
	23 Endrin	8.422	8.421	0.001	1210	0.01000	0.00919	
	24 4,4'-DDD	8.651	8.651	0.000	1133	0.01000	0.00927	
	26 Endosulfan II	8.744	8.743	0.001	1168	0.01000	0.00934	
	27 4,4'-DDT	9.111	9.109	0.002	1049	0.01000	0.00872	
	28 Endrin Aldehyde	8.934	8.933	0.001	921	0.01000	0.00970	
	29 Methoxychlor	9.829	9.828	0.001	560	0.01000	0.00947	
	32 Endosulfan sulfate	9.279	9.278	0.001	1034	0.01000	0.00934	
	33 Endrin Ketone	9.972	9.971	0.001	1105	0.01000	0.00919	
$	34 Decachlorobiphenyl	12.489	12.483	0.006	679	0.01000	0.00991	

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10217.D
Date : 16-FEB-2018 23:25
Client ID:
Instrument: gc01.i
Sample Info: WG223323-6
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000101

Data File: 1LB10217.D
Report Date: 19-Feb-2018 13:44

Katahdin Analytical Services

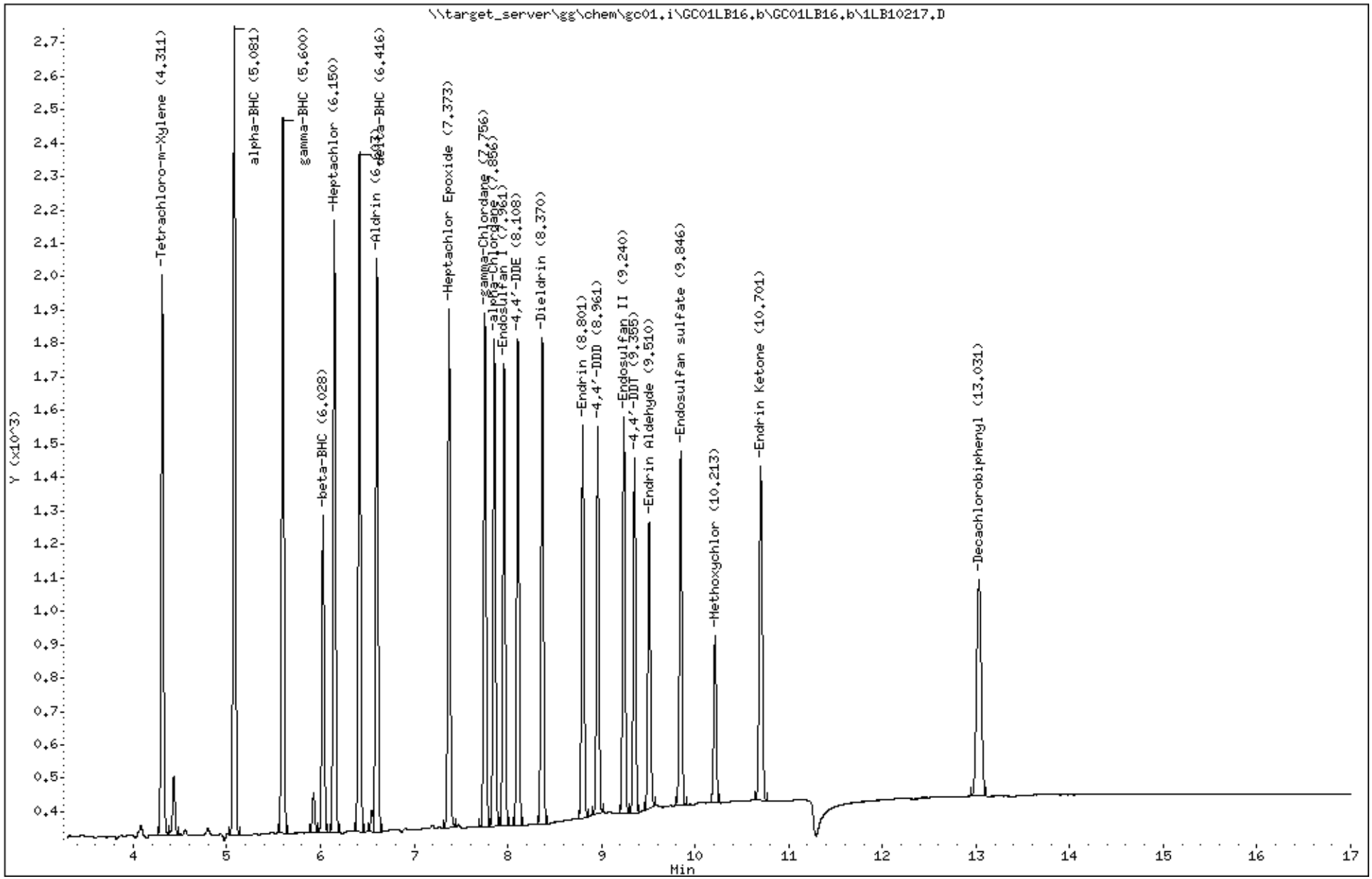
Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10217.D
Lab Smp Id: WG223323-6
Inj Date : 16-FEB-2018 23:25
Operator : AC   Inst ID: gc01.i
Smp Info : WG223323-6
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m\PEST217.m
Meth Date : 19-Feb-2018 12:35 acronin   Quant Type: ESTD
Cal Date : 16-FEB-2018 23:25   Cal File: 1LB10217.D
Als bottle: 9   Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						AMOUNTS		
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	REVIEW CODE
$	4 Tetrachloro-m-Xylene	4.311	4.311	0.000	1675	0.01000	0.00965	
	5 alpha-BHC	5.081	5.081	0.000	2419	0.01000	0.00919	
	6 gamma-BHC	5.599	5.600	-0.001	2142	0.01000	0.00918	
	7 beta-BHC	6.028	6.028	0.000	947	0.01000	0.00951	
	8 delta-BHC	6.416	6.416	0.000	2035	0.01000	0.00903	
	9 Heptachlor	6.149	6.150	-0.001	1830	0.01000	0.00961	
	10 Aldrin	6.603	6.603	0.000	1717	0.01000	0.00937	
	13 Heptachlor Epoxide	7.373	7.373	0.000	1551	0.01000	0.00966	
	15 gamma-Chlordane	7.756	7.756	0.000	1536	0.01000	0.00918	
	17 alpha-Chlordane	7.856	7.856	0.000	1460	0.01000	0.00927	
	19 4,4'-DDE	8.108	8.108	0.000	1455	0.01000	0.00898	
	20 Endosulfan I	7.961	7.960	0.001	1382	0.01000	0.00960	
	21 Dieldrin	8.369	8.368	0.001	1453	0.01000	0.00923	
	23 Endrin	8.801	8.800	0.001	1174	0.01000	0.00914	
	24 4,4'-DDD	8.961	8.960	0.001	1157	0.01000	0.00897	
	26 Endosulfan II	9.239	9.240	-0.001	1186	0.01000	0.00932	
	27 4,4'-DDT	9.354	9.353	0.001	1062	0.01000	0.00868	
	28 Endrin Aldehyde	9.509	9.508	0.001	857	0.01000	0.00942	
	29 Methoxychlor	10.213	10.211	0.002	501	0.01000	0.00921	
	32 Endosulfan sulfate	9.846	9.845	0.001	1057	0.01000	0.00930	
	33 Endrin Ketone	10.701	10.700	0.001	1001	0.01000	0.00919	
$	34 Decachlorobiphenyl	13.031	13.028	0.003	649	0.01000	0.00980	

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10217.D
Date : 16-FEB-2018 23:25
Client ID:
Instrument: gc01.i
Sample Info: WG223323-6
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000103

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10218.D
Report Date: 19-Feb-2018 13:44

Katahdin Analytical Services

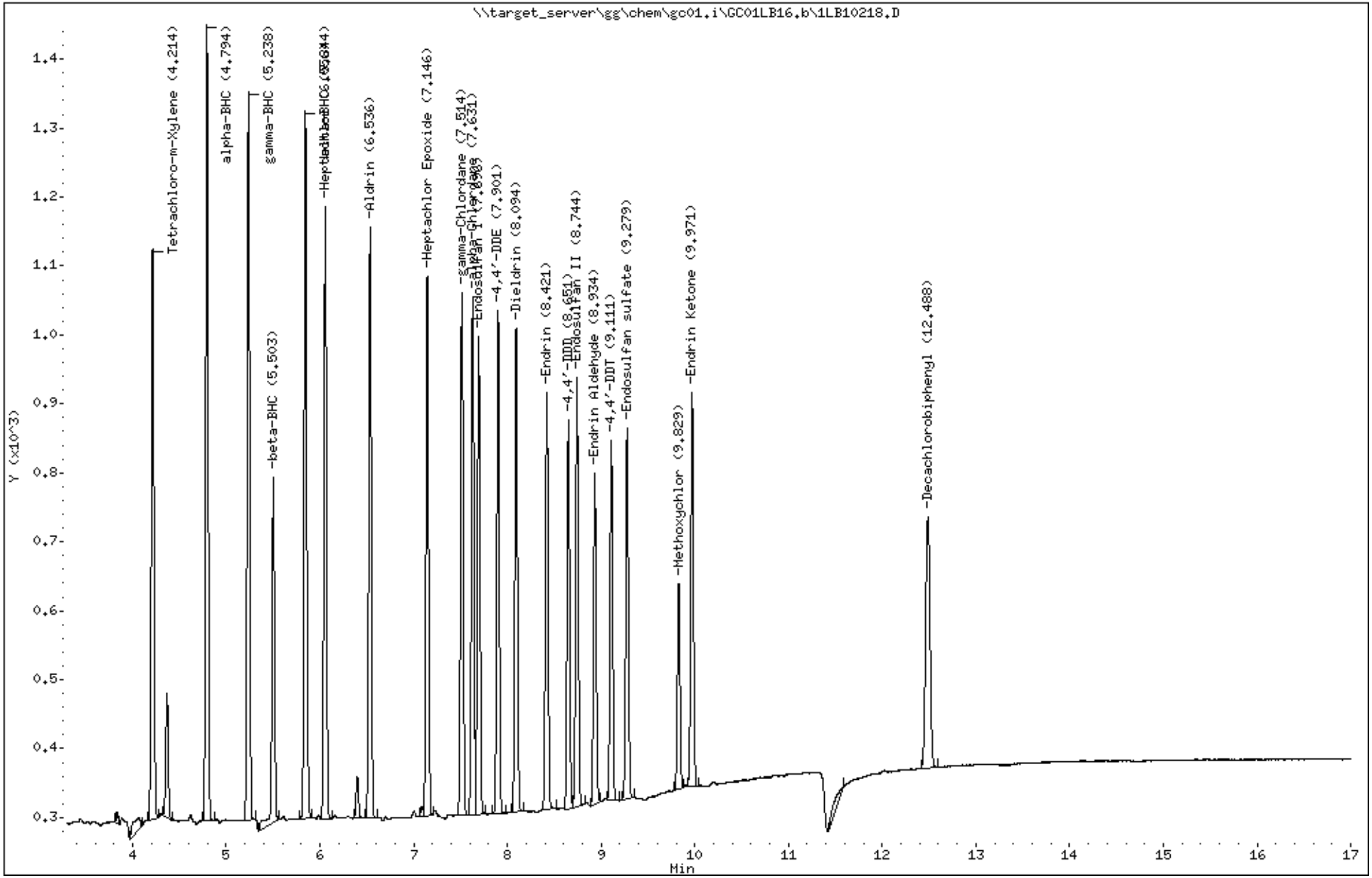
Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10218.D
Lab Smp Id: WG223323-7
Inj Date : 16-FEB-2018 23:44
Operator : AC   Inst ID: gc01.i
Smp Info : WG223323-7
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m
Meth Date : 19-Feb-2018 12:34 acronin   Quant Type: ESTD
Cal Date : 16-FEB-2018 23:44   Cal File: 1LB10218.D
Als bottle: 10   Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						AMOUNTS		
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	REVIEW CODE
$	4 Tetrachloro-m-Xylene	4.214	4.214	0.000	828	0.00500	0.00498	
	5 alpha-BHC	4.794	4.794	0.000	1155	0.00500	0.00465	
	6 gamma-BHC	5.237	5.238	-0.001	1056	0.00500	0.00470	
	7 beta-BHC	5.502	5.503	-0.001	502	0.00500	0.00510	
	8 delta-BHC	5.844	5.844	0.000	1027	0.00500	0.00474	
	9 Heptachlor	6.055	6.056	-0.001	889	0.00500	0.00494	
	10 Aldrin	6.535	6.536	-0.001	858	0.00500	0.00480	
	13 Heptachlor Epoxide	7.145	7.146	-0.001	784	0.00500	0.00506	
	15 gamma-Chlordane	7.514	7.514	0.000	759	0.00500	0.00477	
	17 alpha-Chlordane	7.630	7.629	0.001	752	0.00500	0.00494	
	19 4,4'-DDE	7.900	7.901	-0.001	731	0.00500	0.00477	
	20 Endosulfan I	7.695	7.696	-0.001	694	0.00500	0.00490	
	21 Dieldrin	8.094	8.094	0.000	701	0.00500	0.00472	
	23 Endrin	8.420	8.421	-0.001	606	0.00500	0.00466	
	24 4,4'-DDD	8.650	8.651	-0.001	565	0.00500	0.00468	
	26 Endosulfan II	8.744	8.743	0.001	624	0.00500	0.00499	
	27 4,4'-DDT	9.110	9.109	0.001	522	0.00500	0.00444	
	28 Endrin Aldehyde	8.934	8.933	0.001	481	0.00500	0.00505	
	29 Methoxychlor	9.829	9.828	0.001	298	0.00500	0.00503	
	32 Endosulfan sulfate	9.279	9.278	0.001	538	0.00500	0.00488	
	33 Endrin Ketone	9.970	9.971	-0.001	572	0.00500	0.00480	
$	34 Decachlorobiphenyl	12.487	12.483	0.004	365	0.00500	0.00527	

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10218.D
Date : 16-FEB-2018 23:44
Client ID:
Instrument: gc01.i
Sample Info: WG223323-7
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000105

Data File: 1LB10218.D
Report Date: 19-Feb-2018 13:44

Katahdin Analytical Services

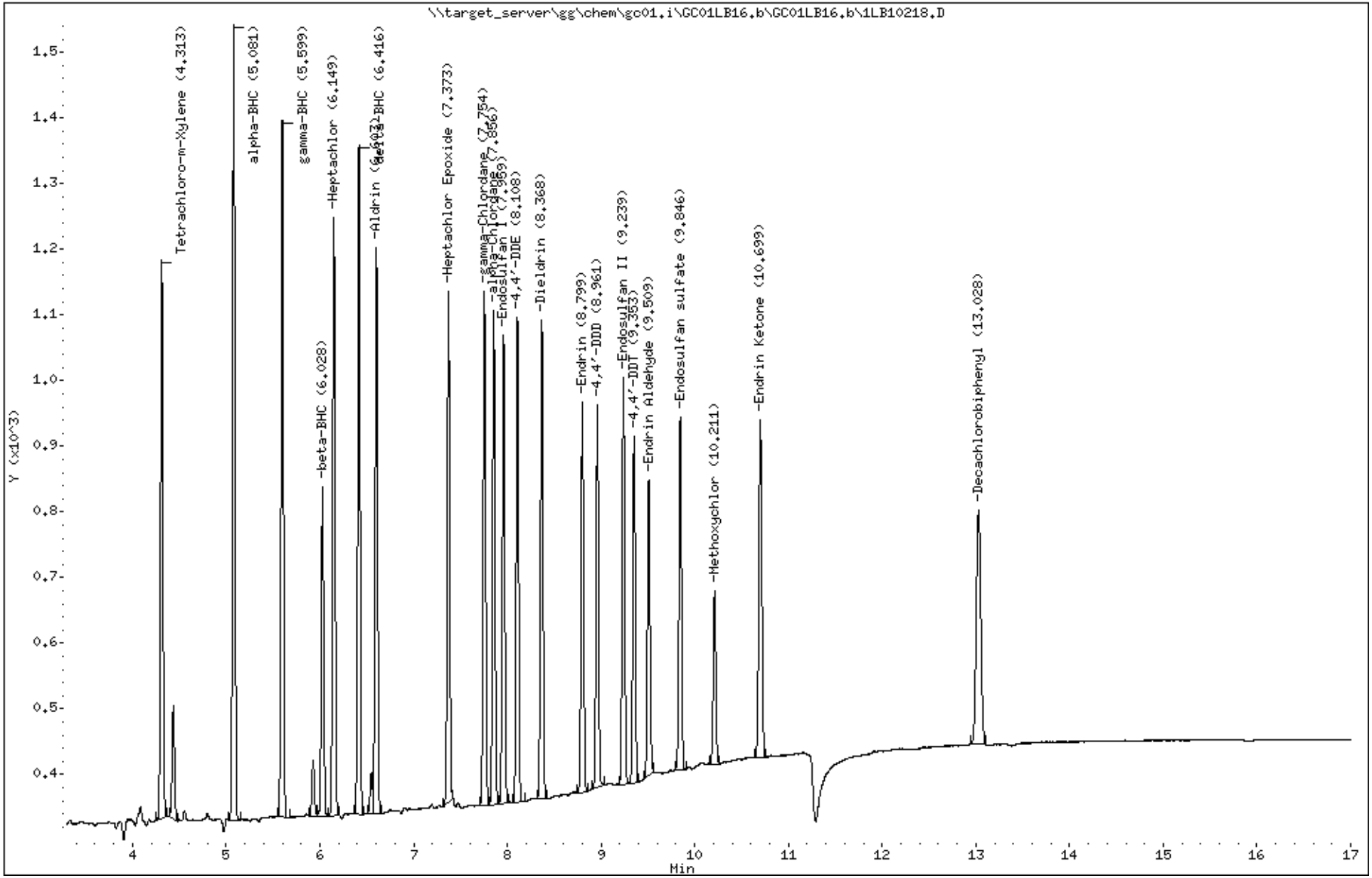
Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10218.D
Lab Smp Id: WG223323-7
Inj Date : 16-FEB-2018 23:44
Operator : AC   Inst ID: gc01.i
Smp Info : WG223323-7
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m\PEST217.m
Meth Date : 19-Feb-2018 12:35 acronin   Quant Type: ESTD
Cal Date : 16-FEB-2018 23:44   Cal File: 1LB10218.D
Als bottle: 10   Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						AMOUNTS		
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	REVIEW CODE
$	4 Tetrachloro-m-Xylene	4.312	4.311	0.001	851	0.00500	0.00492	
	5 alpha-BHC	5.081	5.081	0.000	1211	0.00500	0.00466	
	6 gamma-BHC	5.599	5.600	-0.001	1062	0.00500	0.00462	
	7 beta-BHC	6.027	6.028	-0.001	502	0.00500	0.00503	
	8 delta-BHC	6.416	6.416	0.000	1019	0.00500	0.00460	
	9 Heptachlor	6.149	6.150	-0.001	911	0.00500	0.00482	
	10 Aldrin	6.602	6.603	-0.001	863	0.00500	0.00476	
	13 Heptachlor Epoxide	7.372	7.373	-0.001	778	0.00500	0.00487	
	15 gamma-Chlordane	7.754	7.756	-0.002	783	0.00500	0.00473	
	17 alpha-Chlordane	7.856	7.856	0.000	753	0.00500	0.00482	
	19 4,4'-DDE	8.107	8.108	-0.001	740	0.00500	0.00463	
	20 Endosulfan I	7.959	7.960	-0.001	712	0.00500	0.00495	
	21 Dieldrin	8.367	8.368	-0.001	729	0.00500	0.00469	
	23 Endrin	8.799	8.800	-0.001	595	0.00500	0.00469	
	24 4,4'-DDD	8.961	8.960	0.001	582	0.00500	0.00459	
	26 Endosulfan II	9.239	9.240	-0.001	620	0.00500	0.00489	
	27 4,4'-DDT	9.352	9.353	-0.001	529	0.00500	0.00442	
	28 Endrin Aldehyde	9.509	9.508	0.001	451	0.00500	0.00496	
	29 Methoxychlor	10.211	10.211	0.000	264	0.00500	0.00488	
	32 Endosulfan sulfate	9.846	9.845	0.001	537	0.00500	0.00477	
	33 Endrin Ketone	10.699	10.700	-0.001	514	0.00500	0.00476	
$	34 Decachlorobiphenyl	13.027	13.028	-0.001	356	0.00500	0.00531	

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10218.D
Date : 16-FEB-2018 23:44
Client ID:
Instrument: gc01.i
Sample Info: WG223323-7
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000107

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10219.D
Report Date: 21-Feb-2018 12:36

Katahdin Analytical Services

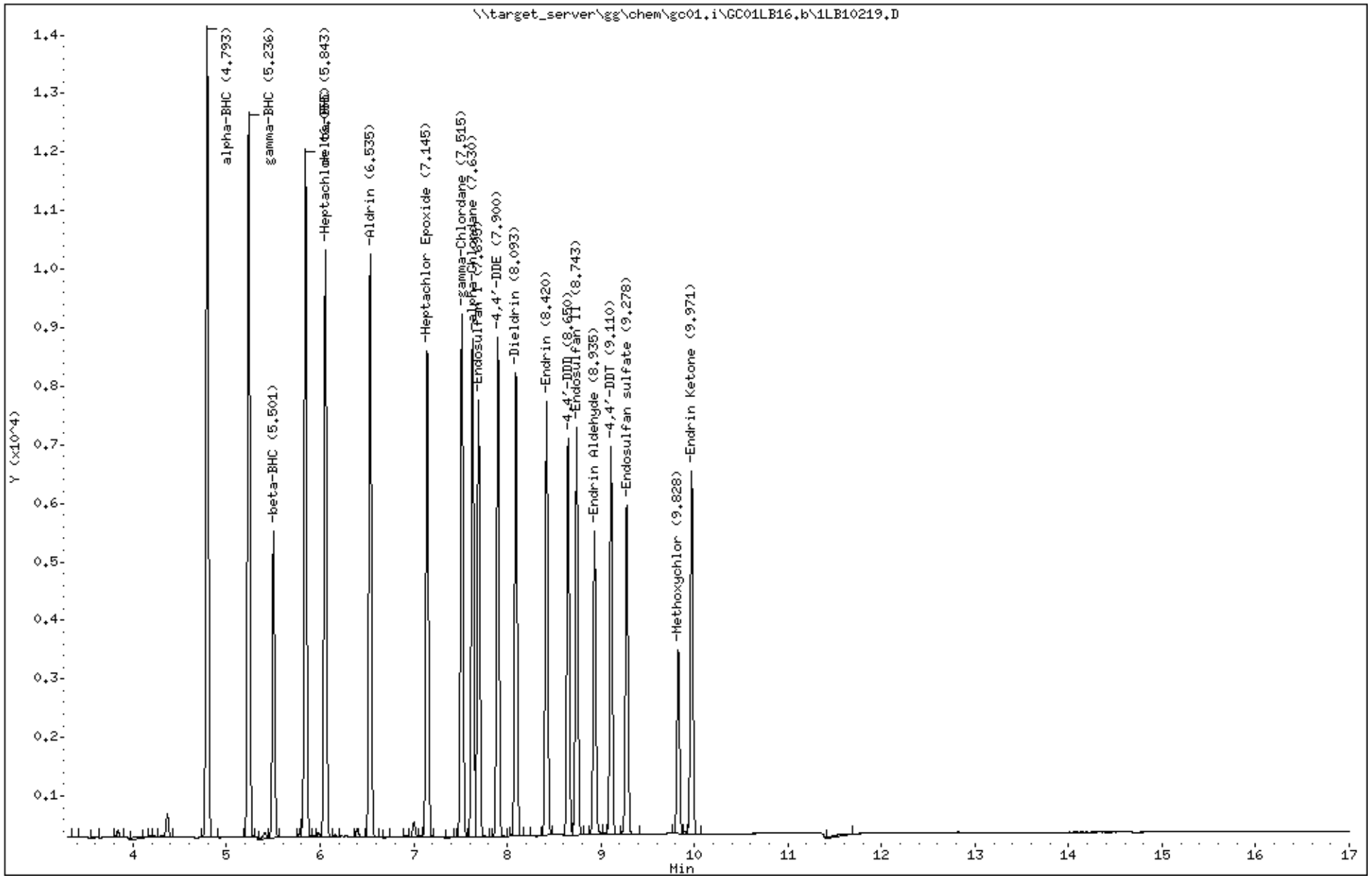
Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10219.D
Lab Smp Id: WG223323-8
Inj Date : 17-FEB-2018 00:04
Operator : AC   Inst ID: gc01.i
Smp Info : WG223323-8,SL1057
Misc Info : WG223323,WG223323,WG223323-2,SL1057-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m
Meth Date : 19-Feb-2018 12:34 acronin   Quant Type: ESTD
Cal Date : 16-FEB-2018 22:27   Cal File: 1LB10214.D
Als bottle: 11   QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: IND.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS		
					ON-COLUMN	FINAL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/L)	REVIEW CODE
5 alpha-BHC	4.793	4.794	-0.001	13858	0.05582	0.0558	
6 gamma-BHC	5.236	5.238	-0.002	12389	0.05521	0.0552	
7 beta-BHC	5.501	5.503	-0.002	5250	0.05334	0.0533	
8 delta-BHC	5.843	5.844	-0.001	11745	0.05420	0.0542	
9 Heptachlor	6.054	6.056	-0.002	10023	0.05567	0.0557	
10 Aldrin	6.534	6.536	-0.002	9950	0.05563	0.0556	
13 Heptachlor Epoxide	7.144	7.146	-0.002	8302	0.05358	0.0536	
15 gamma-Chlordane	7.514	7.514	0.000	8927	0.05614	0.0561	
17 alpha-Chlordane	7.629	7.629	0.000	8510	0.05586	0.0558	
19 4,4'-DDE	7.899	7.901	-0.002	8520	0.05563	0.0556	
20 Endosulfan I	7.694	7.696	-0.002	7458	0.05271	0.0527	
21 Dieldrin	8.093	8.094	-0.001	7927	0.05339	0.0534	
23 Endrin	8.419	8.421	-0.002	7421	0.05710	0.0571	
24 4,4'-DDD	8.649	8.651	-0.002	6796	0.05633	0.0563	
26 Endosulfan II	8.743	8.743	0.000	6971	0.05578	0.0558	
27 4,4'-DDT	9.109	9.109	0.000	6632	0.05638	0.0564	
28 Endrin Aldehyde	8.934	8.933	0.001	5176	0.05439	0.0544	
29 Methoxychlor	9.828	9.828	0.000	3134	0.05293	0.0529	
32 Endosulfan sulfate	9.278	9.278	0.000	5635	0.05115	0.0512	
33 Endrin Ketone	9.971	9.971	0.000	6203	0.05200	0.0520	

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10219.D
Date : 17-FEB-2018 00:04
Client ID:
Instrument: gc01.i
Sample Info: WG223323-8,SL1057
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000109

Data File: 1LB10219.D
Report Date: 21-Feb-2018 12:36

Katahdin Analytical Services

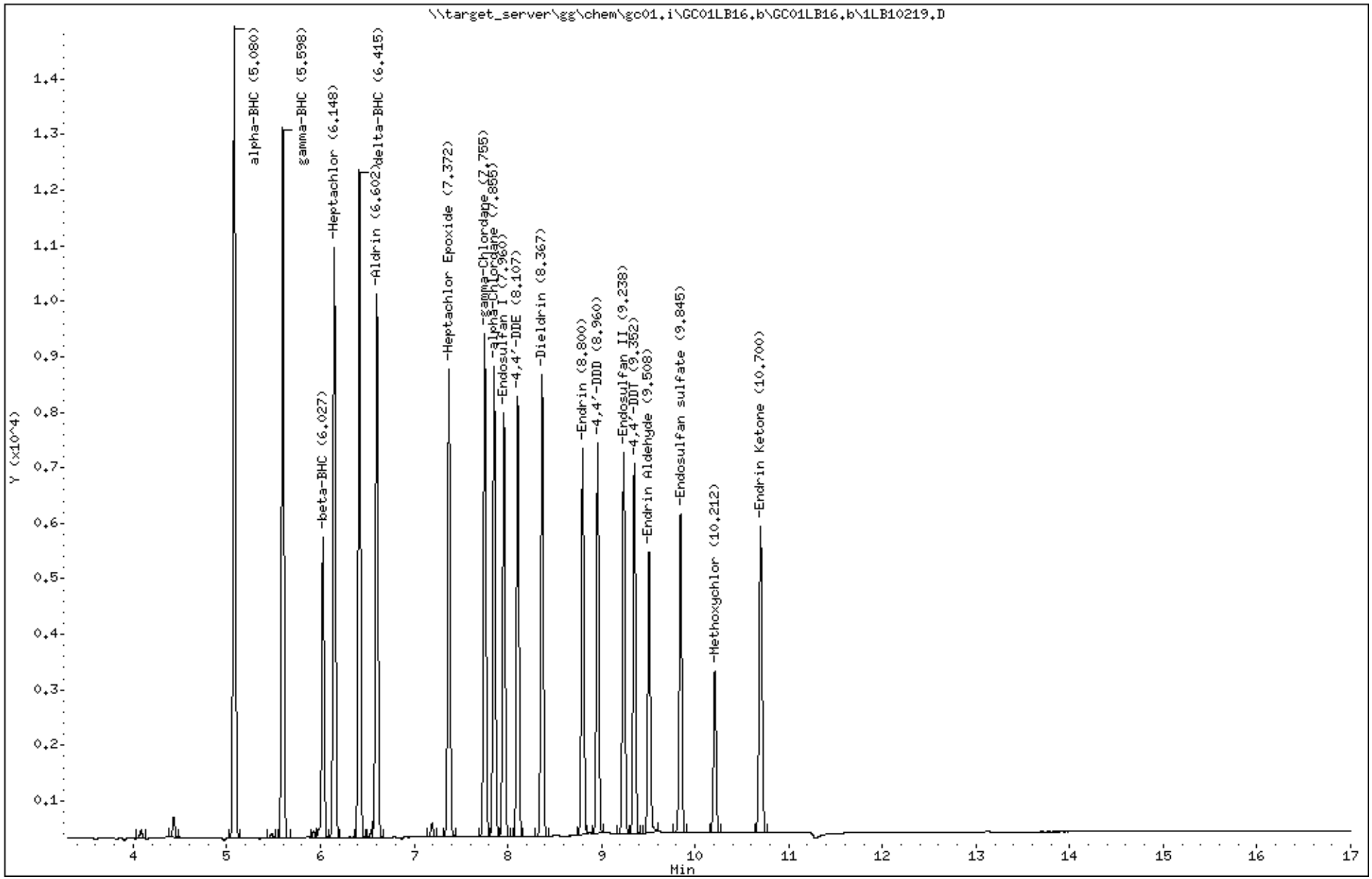
Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10219.D
Lab Smp Id: WG223323-8
Inj Date : 17-FEB-2018 00:04
Operator : AC   Inst ID: gc01.i
Smp Info : WG223323-8,SL1057
Misc Info : WG223323,WG223323,WG223323-2,SL1057-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m\PEST217.m
Meth Date : 19-Feb-2018 12:35 acronin   Quant Type: ESTD
Cal Date : 16-FEB-2018 23:44   Cal File: 1LB10218.D
Als bottle: 11   QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: IND.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
5 alpha-BHC	5.079	5.081	-0.002	14628	0.05631	0.0563	
6 gamma-BHC	5.598	5.600	-0.002	12793	0.05564	0.0556	
7 beta-BHC	6.026	6.028	-0.002	5409	0.05423	0.0542	
8 delta-BHC	6.414	6.416	-0.002	12018	0.05420	0.0542	
9 Heptachlor	6.148	6.150	-0.002	10638	0.05626	0.0562	
10 Aldrin	6.601	6.603	-0.002	9789	0.05394	0.0539	
13 Heptachlor Epoxide	7.371	7.373	-0.002	8426	0.05276	0.0528	
15 gamma-Chlordane	7.754	7.756	-0.002	9058	0.05471	0.0547	
17 alpha-Chlordane	7.854	7.856	-0.002	8462	0.05413	0.0541	
19 4,4'-DDE	8.106	8.108	-0.002	7919	0.04960	0.0496	
20 Endosulfan I	7.959	7.960	-0.001	7633	0.05311	0.0531	
21 Dieldrin	8.366	8.368	-0.002	8311	0.05344	0.0534	
23 Endrin	8.799	8.800	-0.001	6963	0.05487	0.0549	
24 4,4'-DDD	8.959	8.960	-0.001	7019	0.05533	0.0553	
26 Endosulfan II	9.238	9.240	-0.002	6860	0.05414	0.0541	
27 4,4'-DDT	9.351	9.353	-0.002	6681	0.05586	0.0558	
28 Endrin Aldehyde	9.508	9.508	0.000	5061	0.05571	0.0557	
29 Methoxychlor	10.211	10.211	0.000	2915	0.05386	0.0538	
32 Endosulfan sulfate	9.844	9.845	-0.001	5753	0.05108	0.0511	
33 Endrin Ketone	10.699	10.700	-0.001	5522	0.05118	0.0512	

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10219.D
Date : 17-FEB-2018 00:04
Client ID:
Instrument: gc01.i
Sample Info: WG223323-8,SL1057
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000111

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL4984
Lab ID : WG229644-6
Analytical Date: 06/12/18 10:54
Lab File ID : 1LF10041.D
Instrument ID: GC01
Initial Calibration Date(s): 02/16/18 15:00 02/16/18 23:44
Column ID: A

Compound	$\overline{RRF}$/Amount	RF0.025	CCAL RRF0.025	Min	%D/ %Drift	Max %D/ %Drift	Curve Type	
18 Toxaphene(9)	0.50000	0.37184	2418	0.001	-25.63299	20.00000	Linear	*
18 Toxaphene(7)	0.50000	0.43682	1812	0.001	-12.63515	20.00000	Linear	
18 Toxaphene(6)	0.50000	0.45555	1994	0.001	-8.88989	20.00000	Linear	
18 Toxaphene(8)	0.50000	0.46515	1686	0.001	-6.96913	20.00000	Linear	
18 Toxaphene(4)	0.50000	0.49144	1444	0.001	-1.71147	20.00000	Linear	
18 Toxaphene(5)	0.50000	0.50900	1214	0.001	1.80090	20.00000	Linear	
18 Toxaphene(2)	0.50000	0.53982	1096	0.001	7.96464	20.00000	Linear	
18 Toxaphene(3)	0.50000	0.62198	1466	0.001	24.39521	20.00000	Linear	*
18 Toxaphene(1)	0.50000	0.68086	830	0.001	36.17133	20.00000	Linear	*

*** = Compound out of QC criteria**

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Data File: \\target_server\gg\chem\gc01.i\GC01LF12.b\1LF10041.D
Report Date: 20-Jun-2018 09:06

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LF12.b\1LF10041.D
Lab Smp Id: WG229644-6
Inj Date : 12-JUN-2018 10:54
Operator : AC Inst ID: gc01.i
Smp Info : WG229644-6,SL4984
Misc Info : WG229644,WG223,WG223321,SL4984-1
Comment :
Method : \\target_server\gg\chem\gc01.i\GC01LF12.b\PEST217.m
Meth Date : 13-Jun-2018 10:39 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 08:42 Cal File: 1LD10088.D
Als bottle: 36 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Tox.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

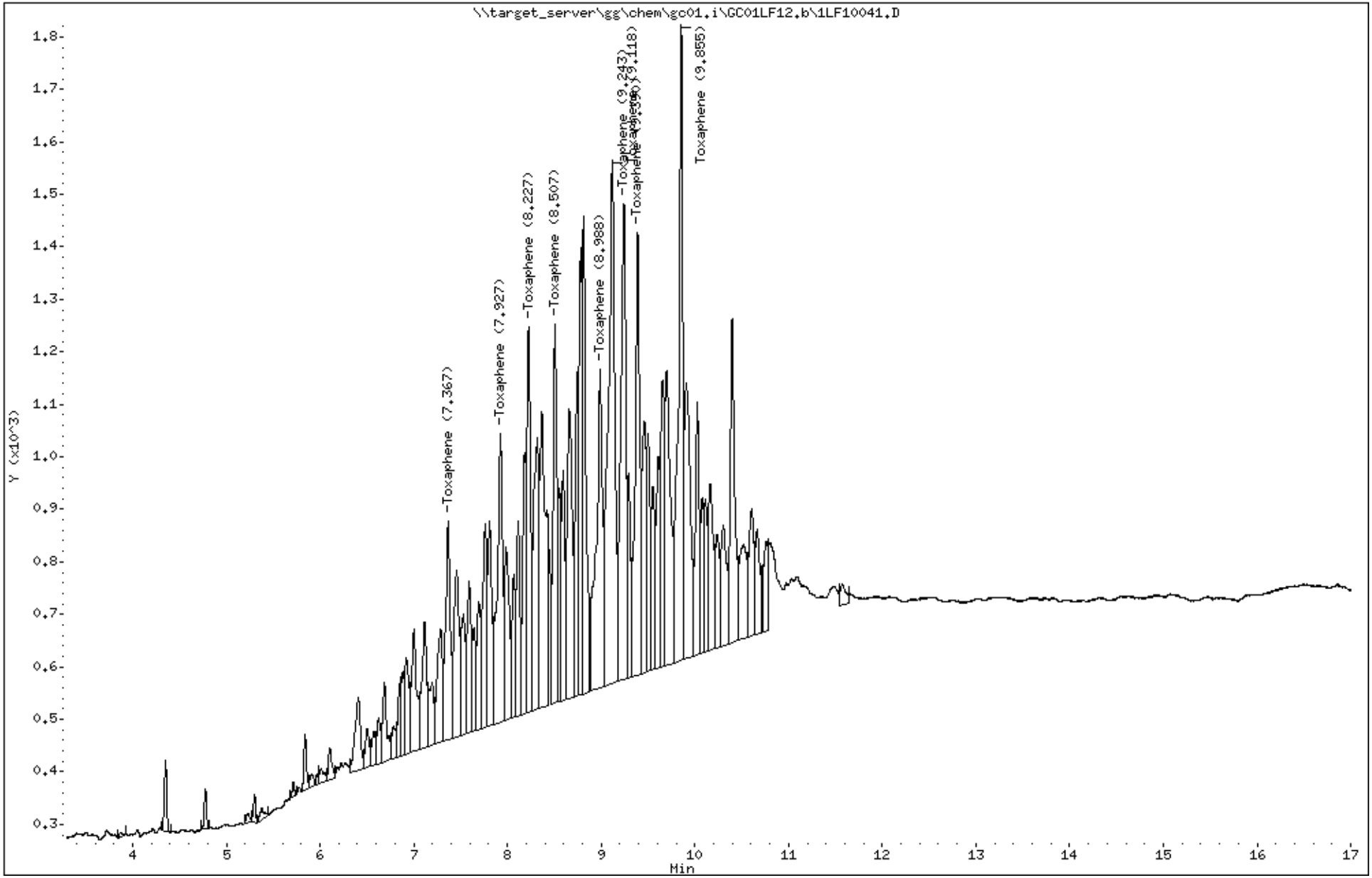
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
18 Toxaphene					CAS #: 8001-35-2			
7.366	7.366	0.000	415	1.00000	0.681	80.00- 120.00	100.00(M)	M5
7.925	7.925	0.000	548	1.00000	0.540	105.64- 158.46	132.05	M5
8.226	8.226	0.000	733	1.00000	0.622	141.30- 211.95	176.63	M5
8.506	8.506	0.000	722	1.00000	0.491	139.18- 208.77	173.98	M5
8.988	8.988	0.000	607	1.00000	0.509	117.01- 175.52	146.27	M5
9.118	9.118	0.000	997	1.00000	0.456	192.19- 288.29	240.24	M5
9.243	9.243	0.000	906	1.00000	0.437	174.65- 261.98	218.31	M5
9.390	9.390	0.000	843	1.00000	0.465	162.51- 243.76	203.13	M5
9.855	9.855	0.000	1209	1.00000	0.372	233.06- 349.59	291.33	M5
Average of Peak Amounts =					0.50811			

AC
9:46 am, Jun 20, 2018

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LF12.b\1LF10041.D
Date : 12-JUN-2018 10:54
Client ID:
Instrument: gc01.i
Sample Info: WG229644-6,SL4984
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000114

Katahdin
ANALYTICAL SERVICES

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL4984
Lab ID : WG229644-6
Analytical Date: 06/12/18 10:54
Lab File ID : 1LF10041.D
Instrument ID: GC01
Initial Calibration Date(s): 02/16/18 15:00 02/16/18 23:44
Column ID: B

Compound	$\overline{RRF}$/Amount	RF0.025	CCAL RRF0.025	Min	%D/ %Drift	Max %D/ %Drift	Curve Type	
18 Toxaphene(7)	0.50000	0.42803	1752	0.001	-14.39345	20.00000	Linear	
18 Toxaphene(8)	0.50000	0.43015	1228	0.001	-13.97012	20.00000	Linear	
18 Toxaphene(5)	0.50000	0.46990	1326	0.001	-6.02069	20.00000	Linear	
18 Toxaphene(9)	0.50000	0.47394	1940	0.001	-5.21241	20.00000	Linear	
18 Toxaphene(6)	0.50000	0.49192	1532	0.001	-1.61525	20.00000	Linear	
18 Toxaphene(4)	0.50000	0.50039	1256	0.001	0.07839	20.00000	Linear	
18 Toxaphene(2)	0.50000	0.51200	1398	0.001	2.39914	20.00000	Linear	
18 Toxaphene(3)	0.50000	0.55684	1400	0.001	11.36724	20.00000	Linear	
18 Toxaphene(1)	0.50000	0.67214	1044	0.001	34.42824	20.00000	Linear	*

*** = Compound out of QC criteria**

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Data File: 1LF10041.D
Report Date: 20-Jun-2018 09:06

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LF12.b\GC01LF12.b\1LF10041.D
Lab Smp Id: WG229644-6
Inj Date : 12-JUN-2018 10:54
Operator : AC Inst ID: gc01.i
Smp Info : WG229644-6,SL4984
Misc Info : WG229644,WG223,WG223321,SL4984-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LF12.b\PEST217.m\PEST217.m
Meth Date : 13-Jun-2018 10:46 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 13:22 Cal File: 1LD10100.D
Als bottle: 36 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Tox.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

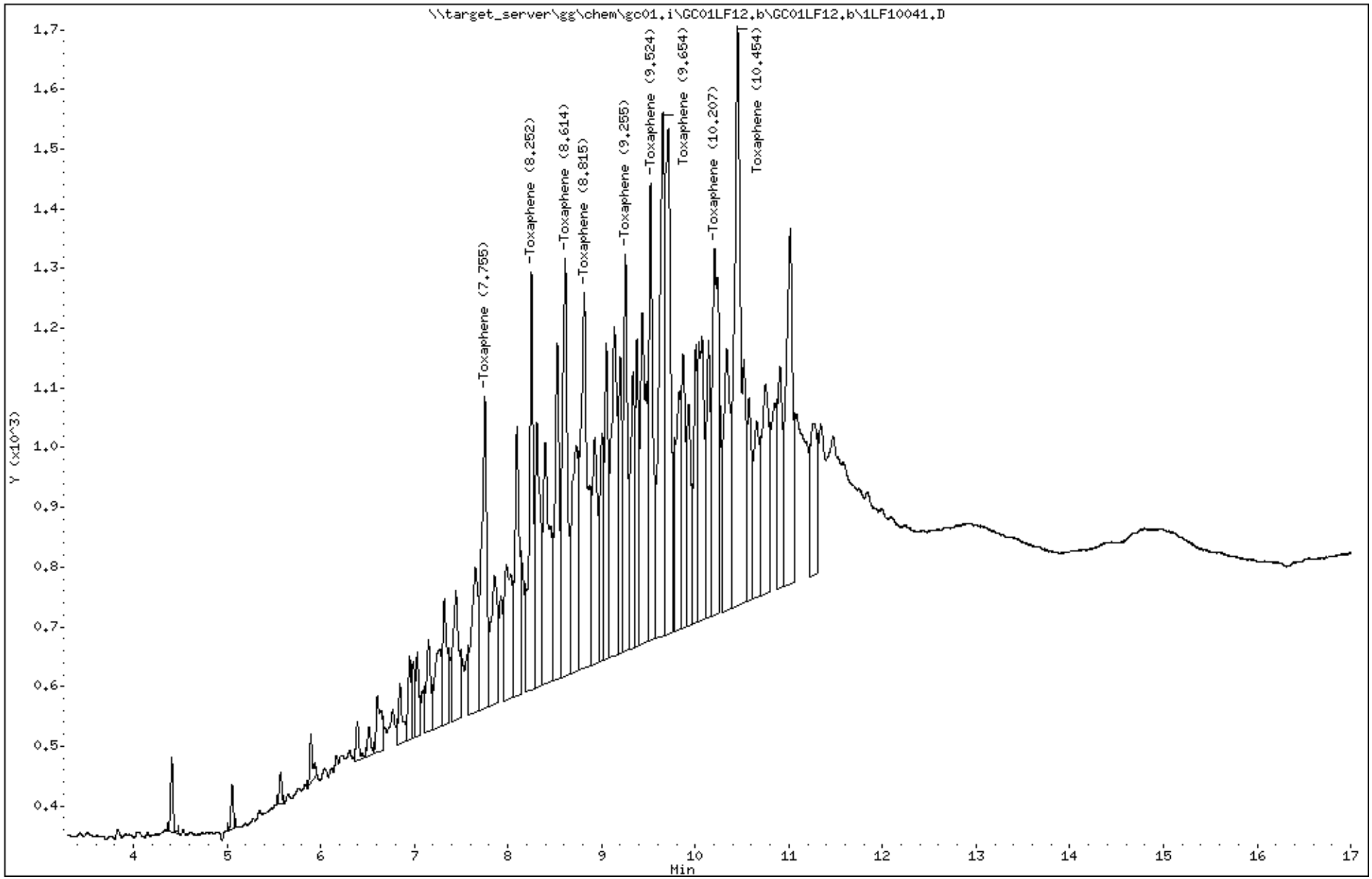
				AMOUNTS					
RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	TARGET RANGE	RATIO	REVIEW CODE	
18 Toxaphene					CAS #: 8001-35-2				
7.755	7.753	0.002	522	1.00000	0.672	80.00- 120.00	100.00(M)	M5	
8.252	8.251	0.001	699	1.00000	0.512	120.92- 181.37	133.91	M5	
8.613	8.611	0.002	700	1.00000	0.557	117.25- 175.88	134.10	M5	
8.815	8.813	0.002	628	1.00000	0.500	118.30- 177.45	120.31	M5	
9.255	9.255	0.000	663	1.00000	0.470	123.71- 185.56	127.01	M5	
9.523	9.521	0.002	766	1.00000	0.492	135.40- 203.10	146.74	M5	
9.653	9.653	0.000	876	1.00000	0.428	177.54- 266.30	167.82	M5	
10.207	10.206	0.001	614	1.00000	0.430	117.43- 176.14	117.62	M5	
10.452	10.455	-0.003	970	1.00000	0.474	178.76- 268.14	185.82	M5	
Average of Peak Amounts =					0.50389				

AC
9:46 am, Jun 20, 2018

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LF12.b\GC01LF12.b\1LF10041.D
Date : 12-JUN-2018 10:54
Client ID:
Instrument: gc01.i
Sample Info: WG229644-6,SL4984
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000117

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG229644-7
Lab File ID : 1LF10042.D
Initial Calibration Date(s): 02/16/18 15:00 02/16/18 23:44

SDG: SL4984
Analytical Date: 06/12/18 11:14
Instrument ID: GC01
Column ID: A

Compound	RRF/Amount	RF0.025	CCAL RRF0.025	Min	%D/ %Drift	Max %D/ %Drift	Curve Type	
14 Technical Chlordane(3)	19640	18568	18568	0.001	-5.45825	20.00000	Averaged	
14 Technical Chlordane(2)	20360	19316	19316	0.001	-5.12677	20.00000	Averaged	
14 Technical Chlordane(1)	4305	3340	3340	0.001	-22.41760	20.00000	Averaged	*

*** = Compound out of QC criteria**

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Data File: \\target_server\gg\chem\gc01.i\GC01LF12.b\1LF10042.D
Report Date: 20-Jun-2018 09:06

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LF12.b\1LF10042.D
Lab Smp Id: WG229644-7
Inj Date : 12-JUN-2018 11:14
Operator : AC   Inst ID: gc01.i
Smp Info : WG229644-7,SL4984
Misc Info : WG229644,WG223,WG223322,SL4984-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LF12.b\PEST217.m
Meth Date : 13-Jun-2018 10:39 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 08:42   Cal File: 1LD10088.D
Als bottle: 37   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: TC.sub
Target Version: 4.12   Sample Matrix: WATER
Processing Host: T8-D4700

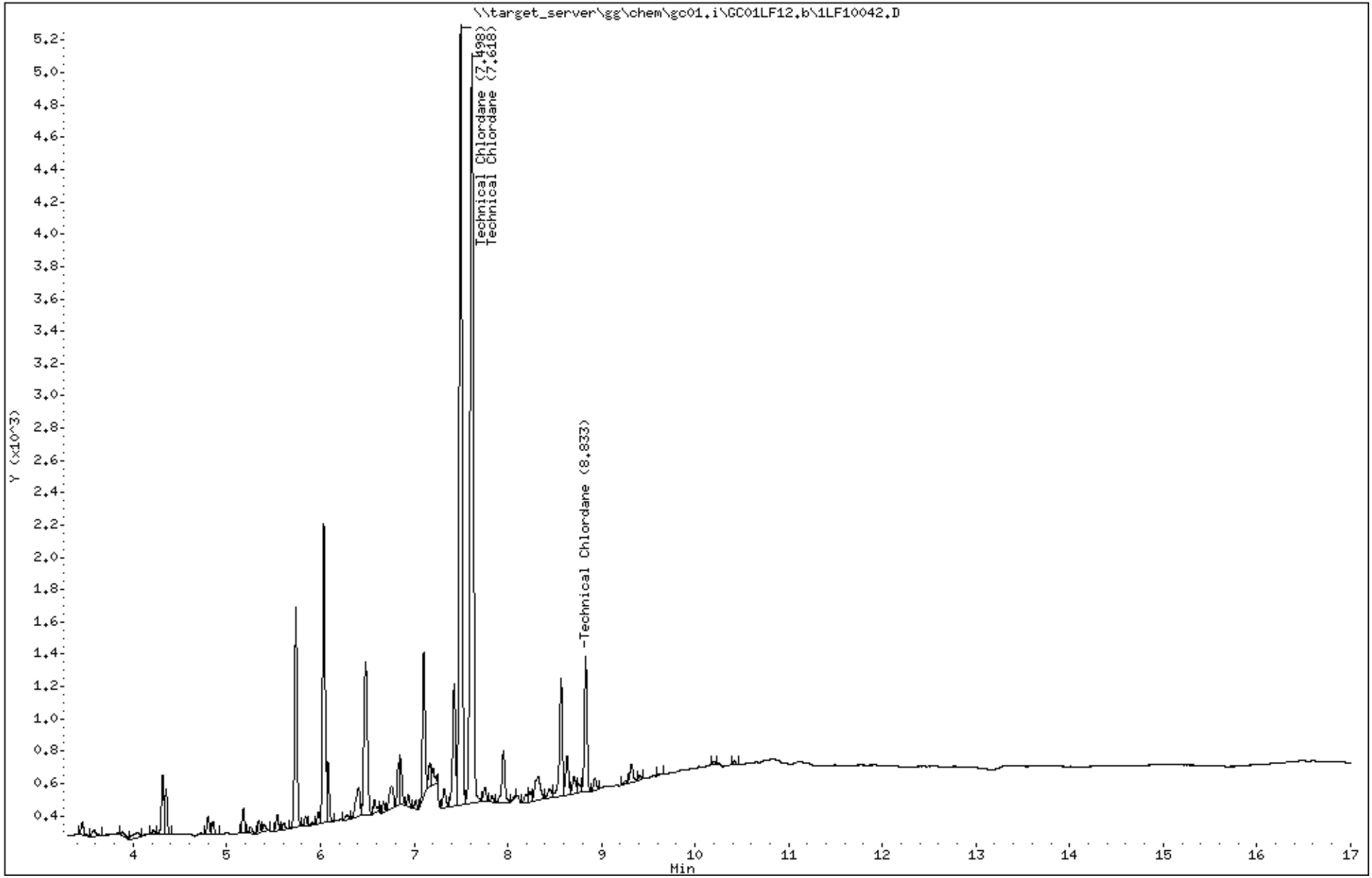
Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

				AMOUNTS					
RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	TARGET RANGE	RATIO	REVIEW CODE	
14 Technical Chlordane					CAS #: 12789-03-6				
8.833	8.834	-0.001	835	0.50000	0.194	80.00- 120.00	100.00	M5	
7.498	7.497	0.001	4829	0.50000	0.237	418.73- 628.09	578.32	M5	
7.618	7.617	0.001	4642	0.50000	0.236	407.55- 611.32	555.93	M5	
Average of Peak Amounts =					0.22233				

AC
9:46 am, Jun 20, 2018

Data File: \\target_server\gg\chem\gc01.i\GC01LF12.b\1LF10042.D
Date : 12-JUN-2018 11:14
Client ID:
Instrument: gc01.i
Sample Info: WG229644-7,SL4984
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000120

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG229644-7
Lab File ID : 1LF10042.D
Initial Calibration Date(s): 02/16/18 15:00 02/16/18 23:44

SDG: SL4984
Analytical Date: 06/12/18 11:14
Instrument ID: GC01
Column ID: B

Compound	RRF/Amount	RF0.025	CCAL RRF0.025	Min	%D/ %Drift	Max %D/ %Drift	Curve Type	
14 Technical Chlordane(3)	12011	10620	10620	0.001	-11.58007	20.00000	Averaged	
14 Technical Chlordane(2)	16624	15296	15296	0.001	-7.98974	20.00000	Averaged	
14 Technical Chlordane(1)	4543	3320	3320	0.001	-26.91357	20.00000	Averaged	*

*** = Compound out of QC criteria**

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Data File: 1LF10042.D
Report Date: 20-Jun-2018 09:06

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LF12.b\GC01LF12.b\1LF10042.D
Lab Smp Id: WG229644-7
Inj Date : 12-JUN-2018 11:14
Operator : AC   Inst ID: gc01.i
Smp Info : WG229644-7,SL4984
Misc Info : WG229644,WG223,WG223322,SL4984-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LF12.b\PEST217.m\PEST217.m
Meth Date : 13-Jun-2018 10:46 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 13:22   Cal File: 1LD10100.D
Als bottle: 37   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: TC.sub
Target Version: 4.12   Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

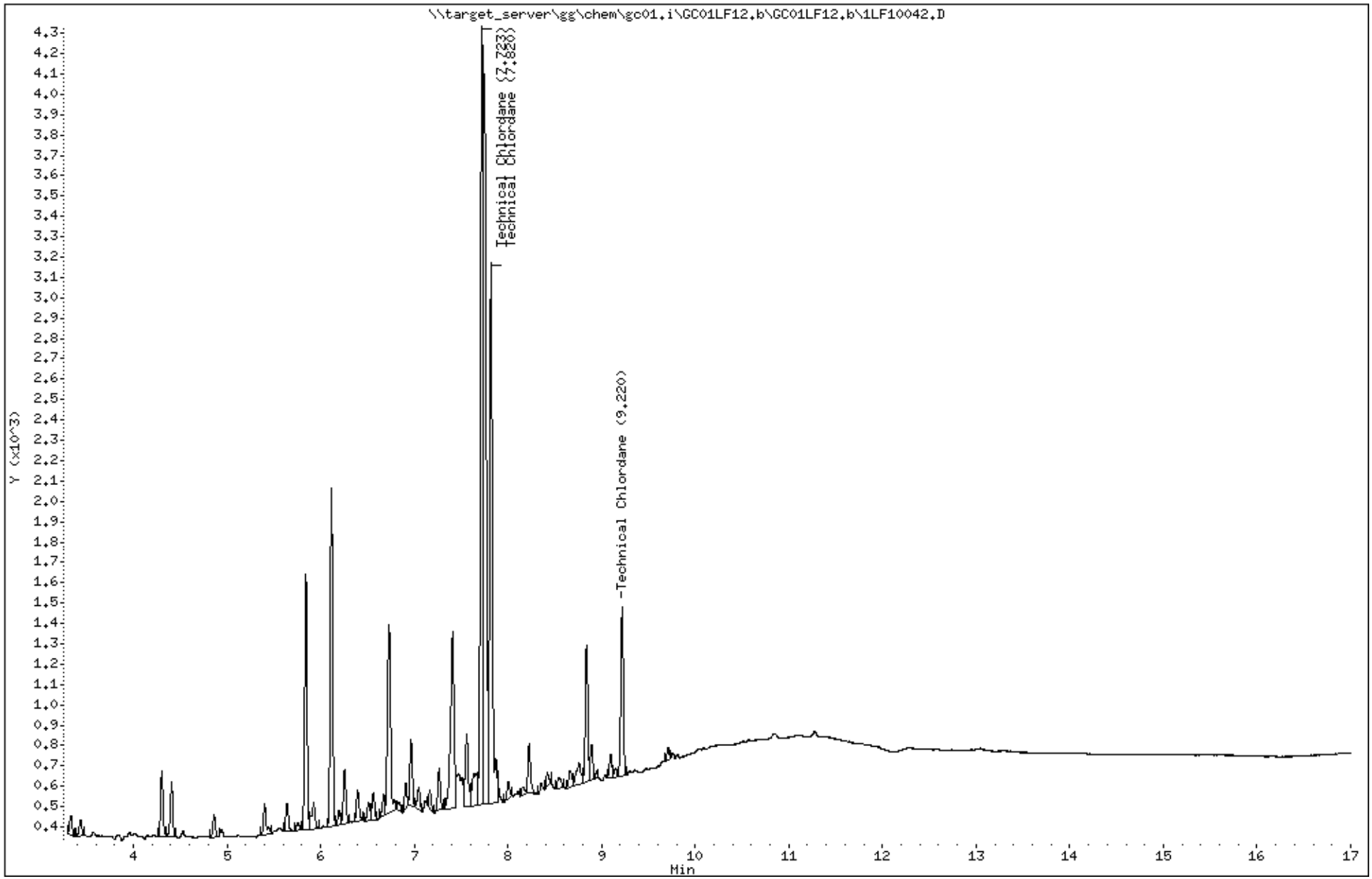
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
14 Technical Chlordane					CAS #: 12789-03-6			
9.220	9.220	0.000	830	0.50000	0.183	80.00- 120.00	100.00(M)	M5
7.723	7.723	0.000	3824	0.50000	0.230	368.58- 552.87	460.72	M5
7.820	7.820	0.000	2655	0.50000	0.221	255.90- 383.86	319.88	M5
Average of Peak Amounts =					0.21133			

AC
9:46 am, Jun 20, 2018

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LF12.b\GC01LF12.b\1LF10042.D
Date : 12-JUN-2018 11:14
Client ID:
Instrument: gc01.i
Sample Info: WG229644-7,SL4984
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000123

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG229644-17
Lab File ID : 1LF10051.D
Initial Calibration Date(s): 02/16/18 15:00 02/16/18 23:44

SDG: SL4984
Analytical Date: 06/12/18 16:24
Instrument ID: GC01
Column ID: A

Compound	$\overline{RRF}$/Amount	RF0.050	CCAL RRF0.050	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
18 Toxaphene(9)	1.00000	0.84711	3048	0.001	-15.28851	20.00000	Linear
18 Toxaphene(7)	1.00000	0.90555	2070	0.001	-9.44485	20.00000	Linear
18 Toxaphene(6)	1.00000	0.92554	2219	0.001	-7.44586	20.00000	Linear
18 Toxaphene(8)	1.00000	0.93884	1892	0.001	-6.11575	20.00000	Linear
18 Toxaphene(5)	1.00000	0.96821	1270	0.001	-3.17871	20.00000	Linear
18 Toxaphene(4)	1.00000	0.97609	1556	0.001	-2.39131	20.00000	Linear
18 Toxaphene(2)	1.00000	1.06688	1164	0.001	6.68841	20.00000	Linear
18 Toxaphene(3)	1.00000	1.16507	1424	0.001	16.50654	20.00000	Linear
18 Toxaphene(1)	1.00000	1.18115	751	0.001	18.11457	20.00000	Linear

*** = Compound out of QC criteria**

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Data File: \\target_server\gg\chem\gc01.i\GC01LF12.b\1LF10051.D
Report Date: 20-Jun-2018 09:06

Katahdin Analytical Services

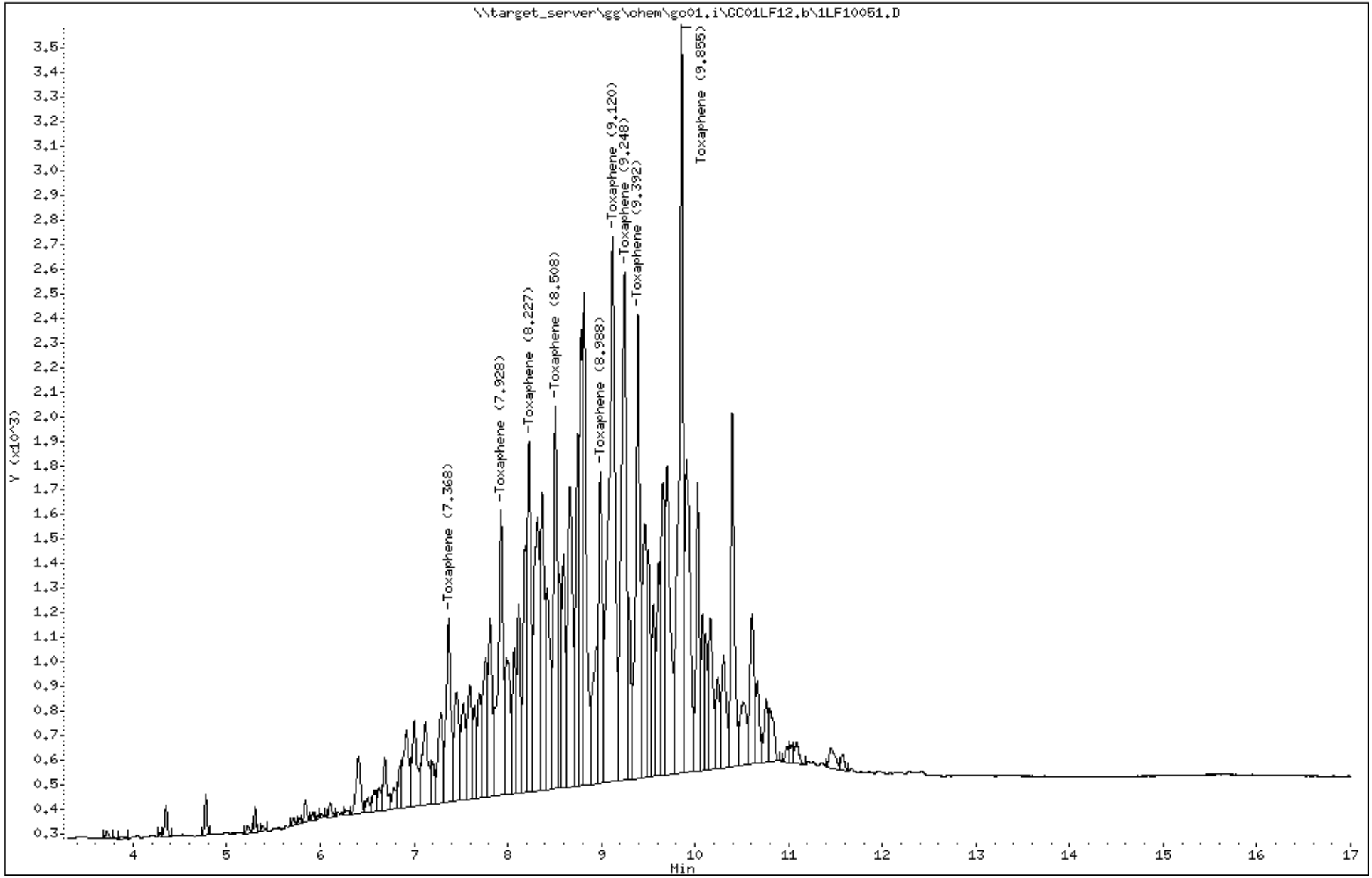
Data file : \\target_server\gg\chem\gc01.i\GC01LF12.b\1LF10051.D
Lab Smp Id: WG229644-17
Inj Date : 12-JUN-2018 16:24
Operator : AC   Inst ID: gc01.i
Smp Info : WG229644-17,SL4984
Misc Info : WG229644,WG230200,WG223321,SL4984-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LF12.b\PEST217.m
Meth Date : 13-Jun-2018 10:39 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 08:42   Cal File: 1LD10088.D
Als bottle: 46   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: Tox.sub
Target Version: 4.12   Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
18 Toxaphene						CAS #: 8001-35-2		
7.368	7.366	0.002	751	1.00000	1.18	80.00- 120.00	100.00	
7.928	7.925	0.003	1164	1.00000	1.07	105.64- 158.46	154.99	
8.226	8.226	0.000	1424	1.00000	1.16	141.30- 211.95	189.61	
8.508	8.506	0.002	1556	1.00000	0.976	139.18- 208.77	207.19	
8.988	8.988	0.000	1270	1.00000	0.968	117.01- 175.52	169.11	
9.119	9.118	0.001	2219	1.00000	0.926	192.19- 288.29	295.47	
9.248	9.243	0.005	2070	1.00000	0.906	174.65- 261.98	275.63	
9.391	9.390	0.001	1892	1.00000	0.939	162.51- 243.76	251.93	
9.854	9.855	-0.001	3048	1.00000	0.847	233.06- 349.59	405.86	
		Average of Peak Amounts =			0.99689			

Data File: \\target_server\gg\chem\gc01.i\GC01LF12.b\1LF10051.D
Date : 12-JUN-2018 16:24
Client ID:
Instrument: gc01.i
Sample Info: WG229644-17,SL4984
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000126

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL4984
Lab ID : WG229644-17
Analytical Date: 06/12/18 16:24
Lab File ID : 1LF10051.D
Instrument ID: GC01
Initial Calibration Date(s): 02/16/18 15:00 02/16/18 23:44
Column ID: B

Compound	$\overline{RRF}$/Amount	RF0.050	CCAL RRF0.050	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
18 Toxaphene(8)	1.00000	0.82240	1346	0.001	-17.75957	20.00000	Linear
18 Toxaphene(7)	1.00000	0.88835	2035	0.001	-11.16524	20.00000	Linear
18 Toxaphene(9)	1.00000	0.90574	2049	0.001	-9.42572	20.00000	Linear
18 Toxaphene(5)	1.00000	0.92578	1418	0.001	-7.42214	20.00000	Linear
18 Toxaphene(6)	1.00000	0.95072	1552	0.001	-4.92839	20.00000	Linear
18 Toxaphene(2)	1.00000	0.99988	1386	0.001	-0.01242	20.00000	Linear
18 Toxaphene(4)	1.00000	1.00289	1356	0.001	0.28929	20.00000	Linear
18 Toxaphene(3)	1.00000	1.03919	1344	0.001	3.91854	20.00000	Linear
18 Toxaphene(1)	1.00000	1.15457	917	0.001	15.45750	20.00000	Linear

*** = Compound out of QC criteria**

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Data File: 1LF10051.D
Report Date: 20-Jun-2018 09:06

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LF12.b\GC01LF12.b\1LF10051.D
Lab Smp Id: WG229644-17
Inj Date : 12-JUN-2018 16:24
Operator : AC Inst ID: gc01.i
Smp Info : WG229644-17,SL4984
Misc Info : WG229644,WG230200,WG223321,SL4984-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LF12.b\PEST217.m\PEST217.m
Meth Date : 13-Jun-2018 10:46 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 13:22 Cal File: 1LD10100.D
Als bottle: 46 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Tox.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

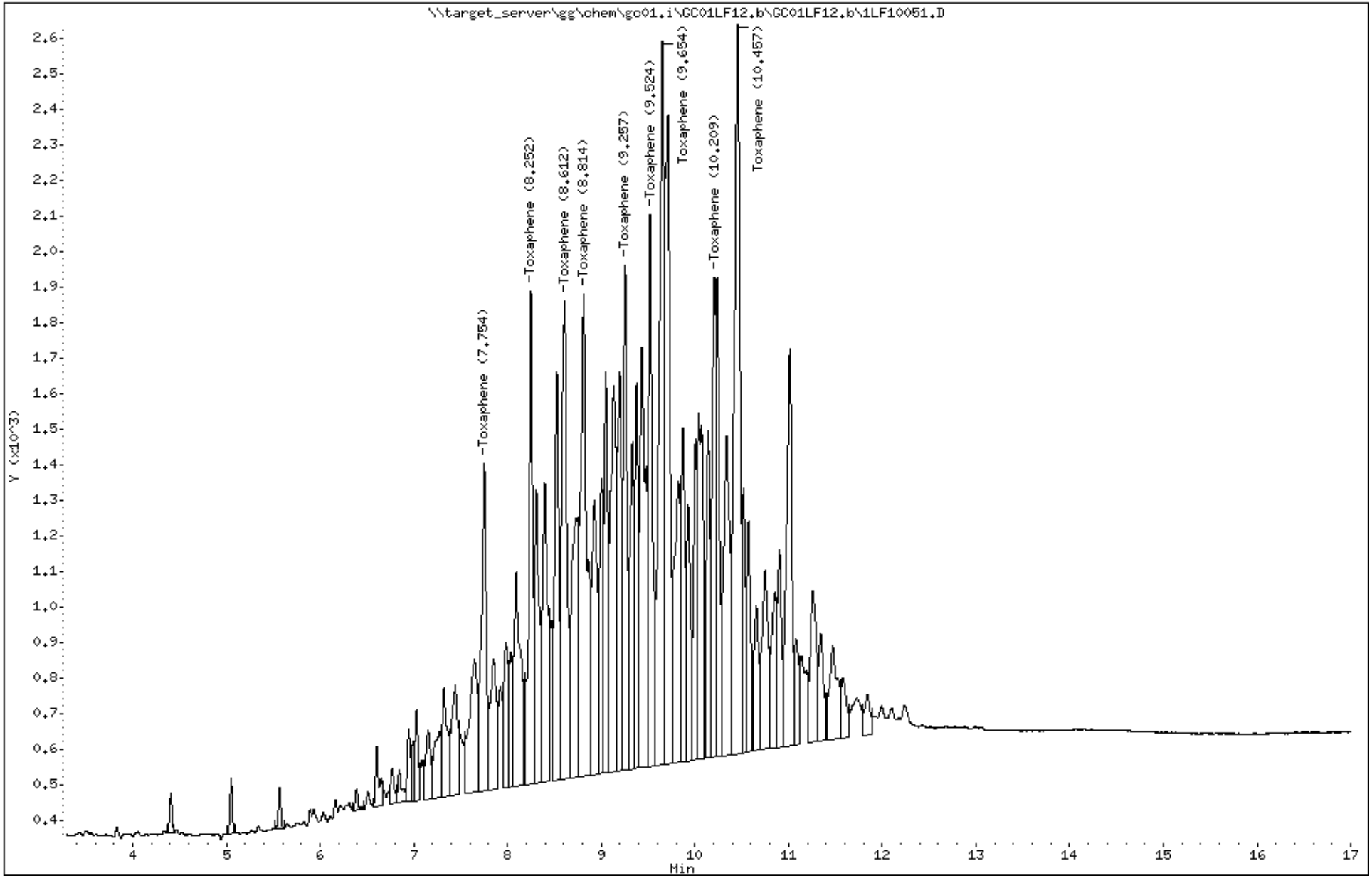
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
18 Toxaphene					CAS #: 8001-35-2			
7.753	7.753	0.000	917	1.00000	1.15	80.00- 120.00	100.00(M)	
8.251	8.251	0.000	1386	1.00000	1.000	120.92- 181.37	151.15	
8.611	8.611	0.000	1344	1.00000	1.04	117.25- 175.88	146.56	
8.813	8.813	0.000	1356	1.00000	1.00	118.30- 177.45	147.87	M5
9.255	9.255	0.000	1418	1.00000	0.926	123.71- 185.56	154.63	
9.521	9.521	0.000	1552	1.00000	0.951	135.40- 203.10	169.25	
9.653	9.653	0.000	2035	1.00000	0.888	177.54- 266.30	221.92	
10.206	10.206	0.000	1346	1.00000	0.822	117.43- 176.14	146.78	
10.455	10.455	0.000	2049	1.00000	0.906	178.76- 268.14	223.45	
Average of Peak Amounts =					0.96478			

AC
9:46 am, Jun 20, 2018

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LF12.b\GC01LF12.b\1LF10051.D
Date : 12-JUN-2018 16:24
Client ID:
Instrument: gc01.i
Sample Info: WG229644-17,SL4984
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000129

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG229644-18
Lab File ID : 1LF10052.D
Initial Calibration Date(s): 02/16/18 15:00 02/16/18 23:44

SDG: SL4984
Analytical Date: 06/12/18 16:43
Instrument ID: GC01
Column ID: A

Compound	RRF/Amount	RF0.050	CCAL RRF0.050	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
14 Technical Chlordane(3)	19640	20632	20632	0.001	5.05092	20.00000	Averaged
14 Technical Chlordane(2)	20360	21198	21198	0.001	4.11694	20.00000	Averaged
14 Technical Chlordane(1)	4305	4050	4050	0.001	-5.92553	20.00000	Averaged

*** = Compound out of QC criteria**

Data File: \\target_server\gg\chem\gc01.i\GC01LF12.b\1LF10052.D
Report Date: 20-Jun-2018 09:06

Katahdin Analytical Services

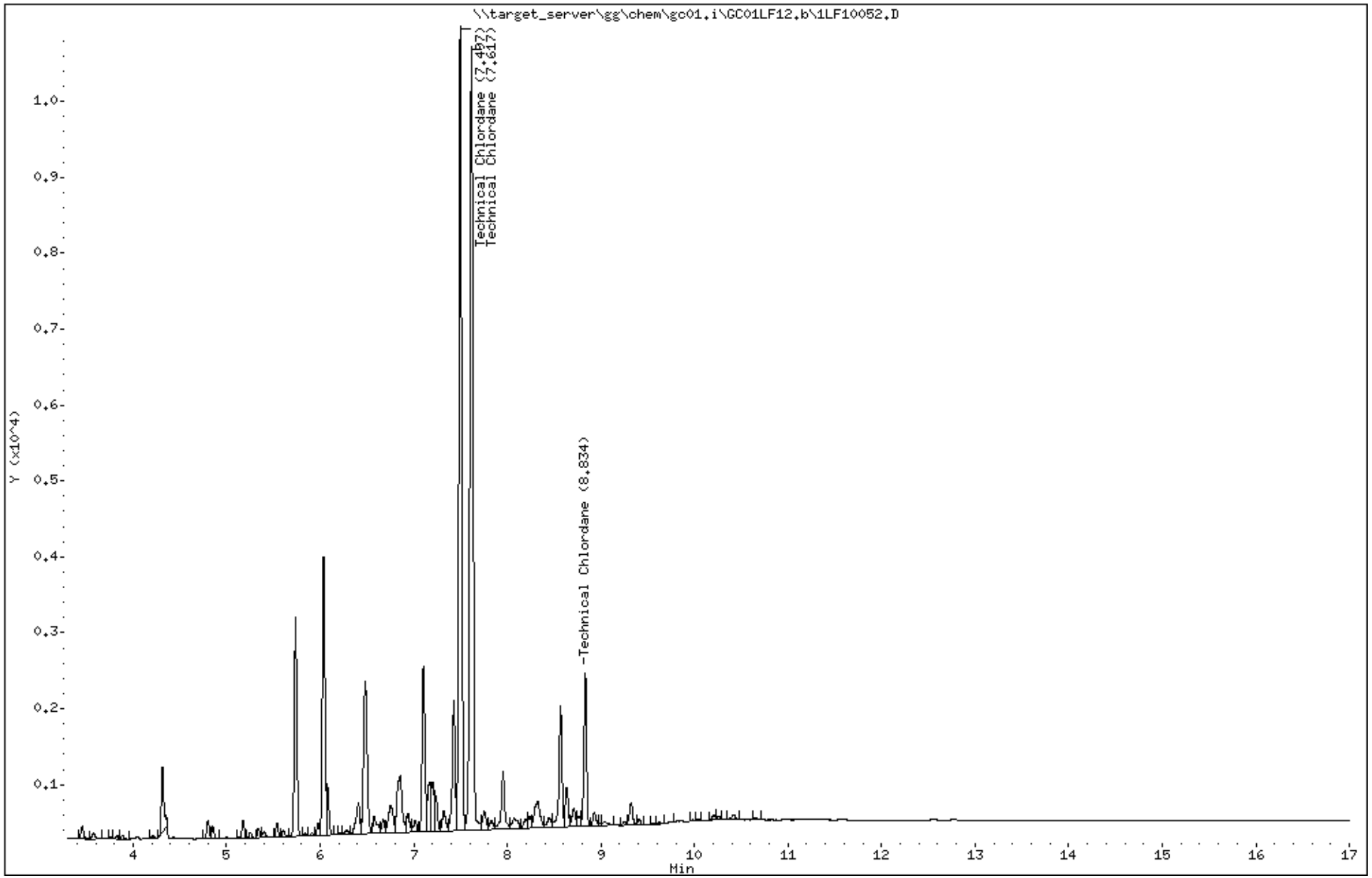
Data file : \\target_server\gg\chem\gc01.i\GC01LF12.b\1LF10052.D
Lab Smp Id: WG229644-18
Inj Date : 12-JUN-2018 16:43
Operator : AC   Inst ID: gc01.i
Smp Info : WG229644-18,SL4984
Misc Info : WG229644,WG230200,WG223322,SL4984-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LF12.b\PEST217.m
Meth Date : 13-Jun-2018 10:39 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 08:42   Cal File: 1LD10088.D
Als bottle: 47   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: TC.sub
Target Version: 4.12   Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

				AMOUNTS					
				CAL-AMT	ON-COL				
RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	TARGET RANGE		RATIO	REVIEW CODE
14 Technical Chlordane						CAS #: 12789-03-6			
8.834	8.834	0.000	2025	0.50000	0.470	80.00-	120.00	100.00	
7.497	7.497	0.000	10599	0.50000	0.520	418.73-	628.09	523.41	
7.617	7.617	0.000	10316	0.50000	0.525	407.55-	611.32	509.43	
		Average of Peak Amounts =			0.50500				

Data File: \\target_server\gg\chem\gc01.i\GC01LF12.b\1LF10052.D
Date : 12-JUN-2018 16:43
Client ID:
Instrument: gc01.i
Sample Info: WG229644-18,SL4984
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000132

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG229644-18
Lab File ID : 1LF10052.D
Initial Calibration Date(s): 02/16/18 15:00 02/16/18 23:44

SDG: SL4984
Analytical Date: 06/12/18 16:43
Instrument ID: GC01
Column ID: B

Compound	RRF/Amount	RF0.050	CCAL RRF0.050	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
14 Technical Chlordane(3)	12011	11438	11438	0.001	-4.76957	20.00000	Averaged
14 Technical Chlordane(2)	16624	16266	16266	0.001	-2.15489	20.00000	Averaged
14 Technical Chlordane(1)	4543	3948	3948	0.001	-13.08878	20.00000	Averaged

*** = Compound out of QC criteria**

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Data File: 1LF10052.D
Report Date: 20-Jun-2018 09:06

Katahdin Analytical Services

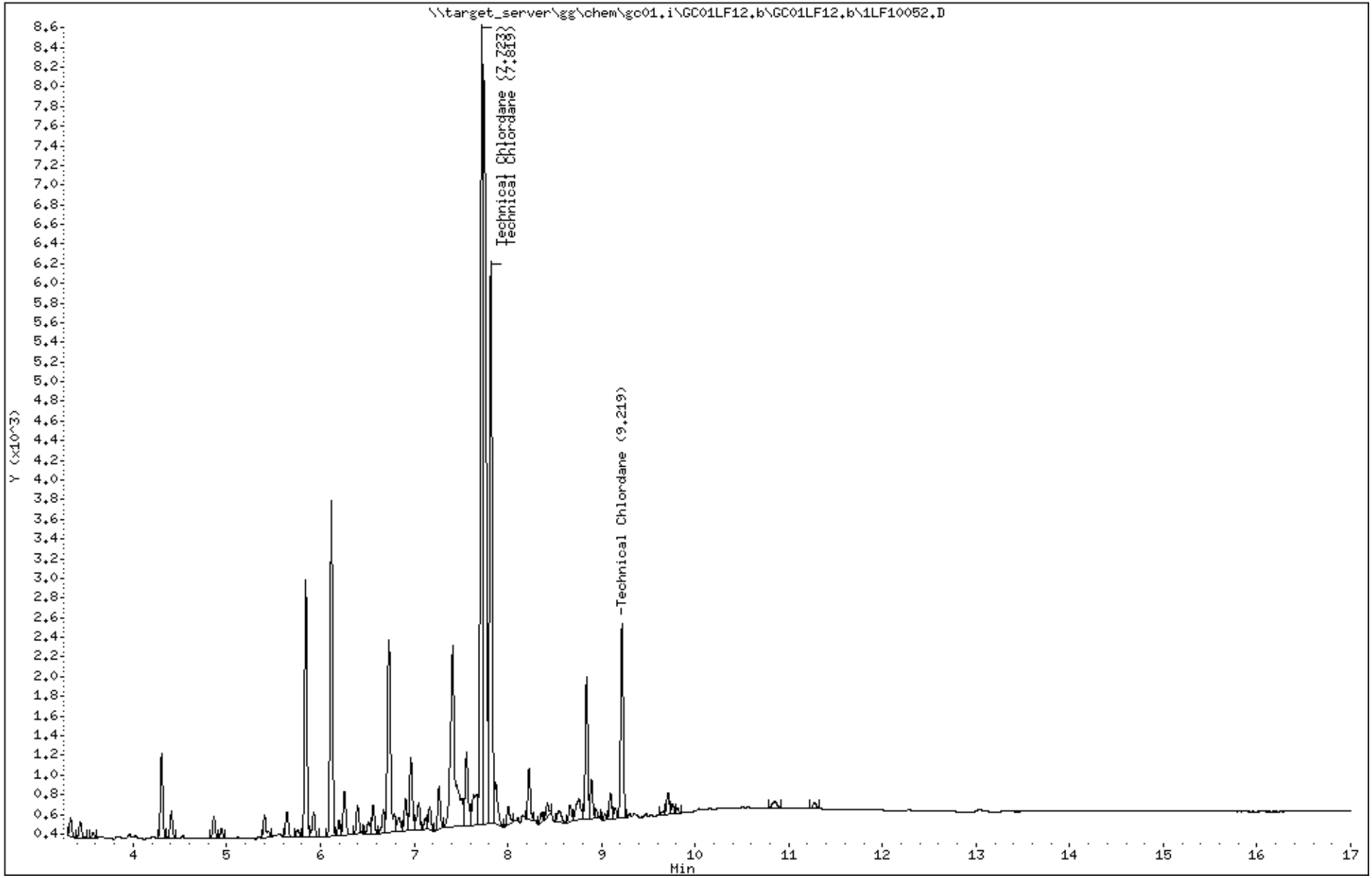
Data file : \\target_server\gg\chem\gc01.i\GC01LF12.b\GC01LF12.b\1LF10052.D
Lab Smp Id: WG229644-18
Inj Date : 12-JUN-2018 16:43
Operator : AC   Inst ID: gc01.i
Smp Info : WG229644-18,SL4984
Misc Info : WG229644,WG230200,WG223322,SL4984-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LF12.b\PEST217.m\PEST217.m
Meth Date : 13-Jun-2018 10:46 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 13:22   Cal File: 1LD10100.D
Als bottle: 47   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: TC.sub
Target Version: 4.12   Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

				AMOUNTS					
RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
14 Technical Chlordane					CAS #: 12789-03-6			
9.219	9.220	-0.001	1974	0.50000	0.434	80.00- 120.00	100.00	
7.722	7.723	-0.001	8133	0.50000	0.489	368.58- 552.87	412.01	
7.819	7.820	-0.001	5719	0.50000	0.476	255.90- 383.86	289.72	
		Average of Peak Amounts =			0.46633			

Data File: \\target_server\gg\chem\gc01.i\GC01LF12.b\GC01LF12.b\1LF10052.D
Date : 12-JUN-2018 16:43
Client ID:
Instrument: gc01.i
Sample Info: WG229644-18,SL4984
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000135

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG229644-12
Lab File ID : 1LF10083.D
Initial Calibration Date(s): 02/16/18 15:00 02/16/18 23:44

SDG: SL4984
Analytical Date: 06/15/18 10:48
Instrument ID: GC01
Column ID: A

	Compound	$\overline{\text{RRF}}$/Amount	RF0.025	CCAL RRF0.025	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
6	gamma-BHC	224413	236920	236920	0.001	5.57321	20.00000	Averaged
9	Heptachlor	180044	184800	184800	0.001	2.64158	20.00000	Averaged
13	Heptachlor Epoxide	154943	165080	165080	0.001	6.54264	20.00000	Averaged
19	4,4'-DDE	153146	165640	165640	0.001	8.15823	20.00000	Averaged
23	Endrin	129962	130880	130880	0.001	0.70636	20.00000	Averaged
24	4,4'-DDD	120657	127440	127440	0.001	5.62201	20.00000	Averaged
27	4,4'-DDT	117632	98400	98400	0.001	-16.34929	20.00000	Averaged
28	Endrin Aldehyde	95171	97240	97240	0.001	2.17398	20.00000	Averaged
29	Methoxychlor	59210	47600	47600	0.001	-19.60817	20.00000	Averaged
33	Endrin Ketone	119286	120960	120960	0.001	1.40363	20.00000	Averaged
4	Tetrachloro-m-Xylene	166238	170640	170640	0.001	2.64801	20.00000	Averaged
34	Decachlorobiphenyl	69241	70520	70520	0.001	1.84668	20.00000	Averaged

*** = Compound out of QC criteria**

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Data File: \\target_server\gg\chem\gc01.i\GC01LF15.b\1LF10083.D
Report Date: 20-Jun-2018 09:08

Katahdin Analytical Services

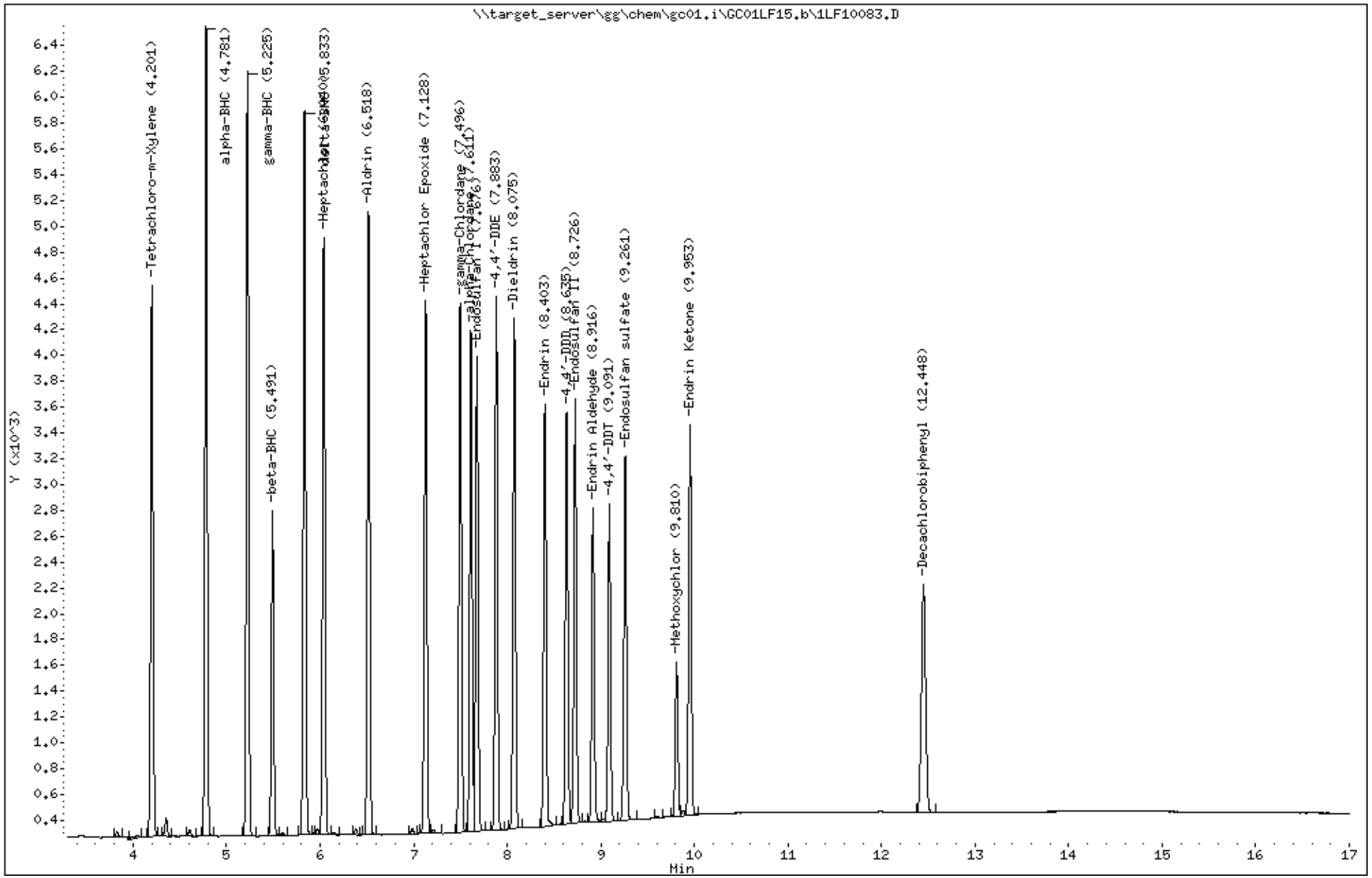
Data file : \\target_server\gg\chem\gc01.i\GC01LF15.b\1LF10083.D
Lab Smp Id: WG229644-12
Inj Date : 15-JUN-2018 10:48
Operator : AC   Inst ID: gc01.i
Smp Info : WG229644-12,SL4984
Misc Info : WG229644,WG230,WG223323-2,SL4984-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LF15.b\PEST217.m
Meth Date : 18-Jun-2018 12:48 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 08:42   Cal File: 1LD10088.D
Als bottle: 74   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: cv.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)	REVIEW CODE
$	4 Tetrachloro-m-Xylene	4.201	4.198	0.003	4266	0.05000	0.0257	
	5 alpha-BHC	4.781	4.776	0.005	6274	0.05000	0.0253	
	6 gamma-BHC	5.224	5.220	0.004	5923	0.05000	0.0264	
	7 beta-BHC	5.491	5.488	0.003	2510	0.05000	0.0255	
	8 delta-BHC	5.832	5.828	0.004	5606	0.05000	0.0259	
	9 Heptachlor	6.039	6.036	0.003	4620	0.05000	0.0257	
	10 Aldrin	6.517	6.513	0.004	4822	0.05000	0.0270	
	13 Heptachlor Epoxide	7.127	7.123	0.004	4127	0.05000	0.0266	
	15 gamma-Chlordane	7.496	7.493	0.003	4097	0.05000	0.0258	
	17 alpha-Chlordane	7.611	7.608	0.003	3877	0.05000	0.0254	
	19 4,4'-DDE	7.882	7.880	0.002	4141	0.05000	0.0270	
	20 Endosulfan I	7.676	7.673	0.003	3672	0.05000	0.0260	
	21 Dieldrin	8.074	8.071	0.003	3949	0.05000	0.0266	
	23 Endrin	8.402	8.400	0.002	3272	0.05000	0.0252	
	24 4,4'-DDD	8.634	8.630	0.004	3186	0.05000	0.0264	
	26 Endosulfan II	8.726	8.723	0.003	3282	0.05000	0.0263	
	27 4,4'-DDT	9.091	9.090	0.001	2460	0.05000	0.0209	
	28 Endrin Aldehyde	8.916	8.915	0.001	2431	0.05000	0.0255	
	29 Methoxychlor	9.809	9.806	0.003	1190	0.05000	0.0201	
	32 Endosulfan sulfate	9.261	9.256	0.005	2823	0.05000	0.0256	
	33 Endrin Ketone	9.952	9.950	0.002	3024	0.05000	0.0254	
$	34 Decachlorobiphenyl	12.447	12.443	0.004	1763	0.05000	0.0255	

Data File: \\target_server\gg\chem\gc01.i\GC01LF15.b\1LF10083.D
Date : 15-JUN-2018 10:48
Client ID:
Instrument: gc01.i
Sample Info: WG229644-12,SL4984
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000138

Katahdin
ANALYTICAL SERVICES

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL4984
Lab ID : WG229644-12
Analytical Date: 06/15/18 10:48
Lab File ID : 1LF10083.D
Instrument ID: GC01
Initial Calibration Date(s): 02/16/18 15:00 02/16/18 23:44
Column ID: B

	Compound	$\overline{\text{RRF}}$/Amount	RF0.025	CCAL RRF0.025	Min	%D/ %Drift	Max %D/ %Drift	Curve Type	
6	gamma-BHC	229907	220560	220560	0.001	-4.06556	20.00000	Averaged	
9	Heptachlor	189092	167200	167200	0.001	-11.57743	20.00000	Averaged	
13	Heptachlor Epoxide	159698	154000	154000	0.001	-3.56778	20.00000	Averaged	
19	4,4'-DDE	159671	152160	152160	0.001	-4.70425	20.00000	Averaged	
23	Endrin	126893	108440	108440	0.001	-14.54240	20.00000	Averaged	
24	4,4'-DDD	126855	120680	120680	0.001	-4.86776	20.00000	Averaged	
27	4,4'-DDT	119610	88320	88320	0.001	-26.15981	20.00000	Averaged	*
28	Endrin Aldehyde	90843	89200	89200	0.001	-1.80861	20.00000	Averaged	
29	Methoxychlor	54124	40880	40880	0.001	-24.47020	20.00000	Averaged	*
33	Endrin Ketone	107895	101920	101920	0.001	-5.53808	20.00000	Averaged	
4	Tetrachloro-m-Xylene	173063	168280	168280	0.001	-2.76355	20.00000	Averaged	
34	Decachlorobiphenyl	67057	63320	63320	0.001	-5.57334	20.00000	Averaged	

*** = Compound out of QC criteria**

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Data File: 1LF10083.D
Report Date: 20-Jun-2018 09:08

Katahdin Analytical Services

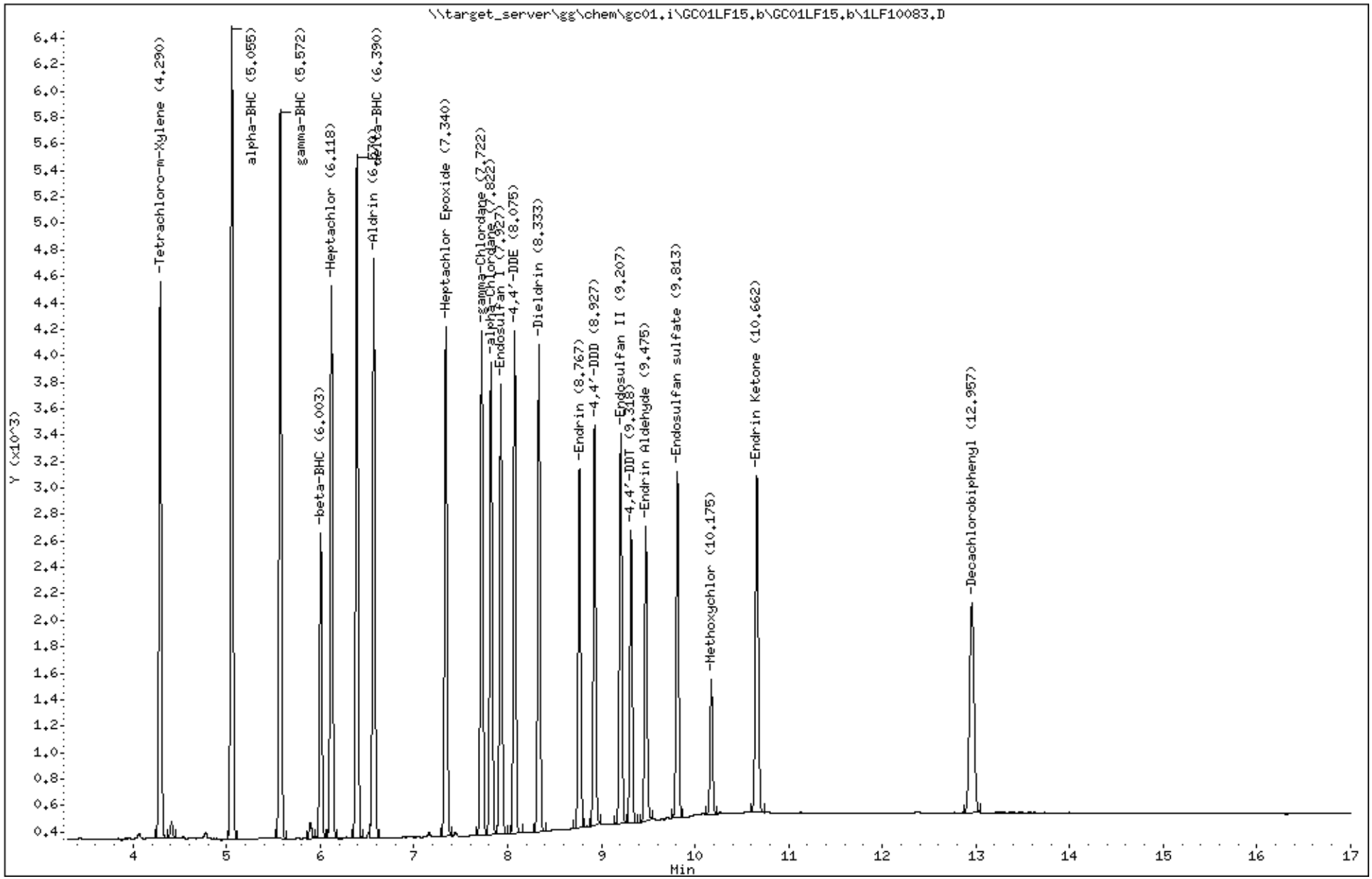
Data file : \\target_server\gg\chem\gc01.i\GC01LF15.b\GC01LF15.b\1LF10083.D
Lab Smp Id: WG229644-12
Inj Date : 15-JUN-2018 10:48
Operator : AC   Inst ID: gc01.i
Smp Info : WG229644-12,SL4984
Misc Info : WG229644,WG230,WG223323-2,SL4984-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LF15.b\PEST217.m\PEST217.m
Meth Date : 18-Jun-2018 12:55 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 13:22   Cal File: 1LD10100.D
Als bottle: 74   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						AMOUNTS		
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	REVIEW CODE
$	4 Tetrachloro-m-Xylene	4.289	4.285	0.004	4207	0.05000	0.0243	
	5 alpha-BHC	5.054	5.050	0.004	6144	0.05000	0.0236	
	6 gamma-BHC	5.571	5.568	0.003	5514	0.05000	0.0240	
	7 beta-BHC	6.003	6.000	0.003	2309	0.05000	0.0232	
	8 delta-BHC	6.389	6.385	0.004	5167	0.05000	0.0233	
	9 Heptachlor	6.118	6.113	0.005	4180	0.05000	0.0221	
	10 Aldrin	6.569	6.567	0.002	4379	0.05000	0.0241	
	13 Heptachlor Epoxide	7.339	7.335	0.004	3850	0.05000	0.0241	
	15 gamma-Chlordane	7.721	7.718	0.003	3812	0.05000	0.0230	
	17 alpha-Chlordane	7.821	7.818	0.003	3572	0.05000	0.0228	
	19 4,4'-DDE	8.074	8.070	0.004	3804	0.05000	0.0238	
	20 Endosulfan I	7.926	7.923	0.003	3403	0.05000	0.0237	
	21 Dieldrin	8.333	8.328	0.005	3678	0.05000	0.0236	
	23 Endrin	8.766	8.763	0.003	2711	0.05000	0.0214	
	24 4,4'-DDD	8.926	8.925	0.001	3017	0.05000	0.0238	
	26 Endosulfan II	9.206	9.203	0.003	2953	0.05000	0.0233	
	27 4,4'-DDT	9.318	9.315	0.003	2208	0.05000	0.0185	
	28 Endrin Aldehyde	9.474	9.472	0.002	2230	0.05000	0.0245	
	29 Methoxychlor	10.174	10.170	0.004	1022	0.05000	0.0189	
	32 Endosulfan sulfate	9.813	9.808	0.005	2621	0.05000	0.0233	
	33 Endrin Ketone	10.661	10.657	0.004	2548	0.05000	0.0236	
$	34 Decachlorobiphenyl	12.956	12.948	0.008	1583	0.05000	0.0236	

Data File: \\target_server\gg\chem\gc01.i\GC01LF15.b\GC01LF15.b\1LF10083.D
Date : 15-JUN-2018 10:48
Client ID:
Instrument: gc01.i
Sample Info: WG229644-12,SL4984
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000141

Katahdin
ANALYTICAL SERVICES

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL4984
Lab ID : WG229644-15
Analytical Date: 06/15/18 17:13
Lab File ID : 1LF10097.D
Instrument ID: GC01
Initial Calibration Date(s): 02/16/18 15:00 02/16/18 23:44
Column ID: A

	Compound	RRF/Amount	RF0.050	CCAL RRF0.050	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
6	gamma-BHC	224413	245360	245360	0.001	9.33413	20.00000	Averaged
9	Heptachlor	180044	189000	189000	0.001	4.97434	20.00000	Averaged
13	Heptachlor Epoxide	154943	171560	171560	0.001	10.72483	20.00000	Averaged
19	4,4'-DDE	153146	175300	175300	0.001	14.46593	20.00000	Averaged
23	Endrin	129962	140840	140840	0.001	8.37014	20.00000	Averaged
24	4,4'-DDD	120657	138780	138780	0.001	15.02058	20.00000	Averaged
27	4,4'-DDT	117632	108760	108760	0.001	-7.54217	20.00000	Averaged
28	Endrin Aldehyde	95171	102760	102760	0.001	7.97407	20.00000	Averaged
29	Methoxychlor	59210	51680	51680	0.001	-12.71745	20.00000	Averaged
33	Endrin Ketone	119286	128000	128000	0.001	7.30543	20.00000	Averaged
4	Tetrachloro-m-Xylene	166238	177920	177920	0.001	7.02727	20.00000	Averaged
34	Decachlorobiphenyl	69241	72320	72320	0.001	4.44628	20.00000	Averaged

*** = Compound out of QC criteria**

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Data File: \\target_server\gg\chem\gc01.i\GC01LF15.b\1LF10097.D
Report Date: 20-Jun-2018 09:08

Katahdin Analytical Services

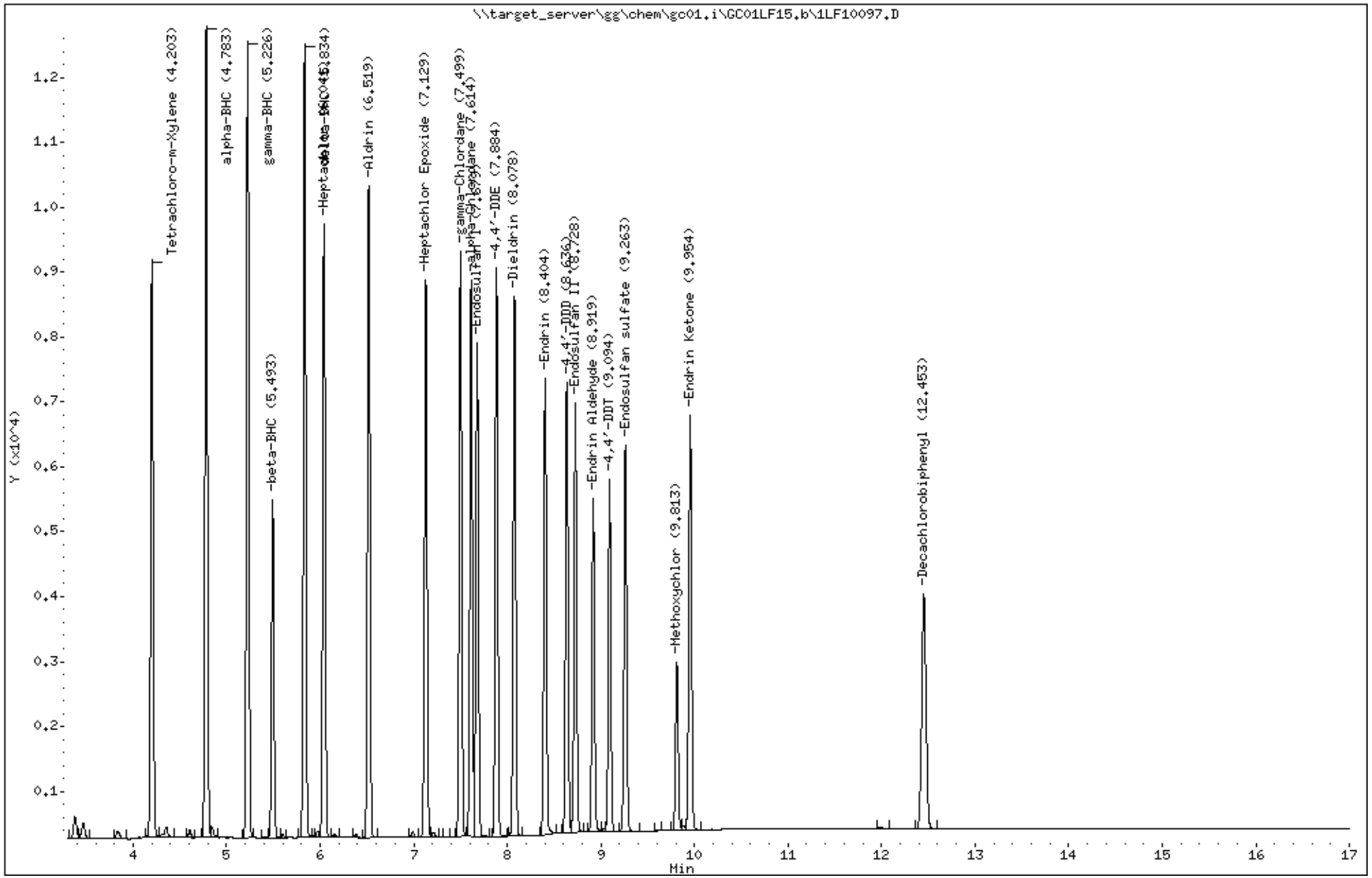
Data file : \\target_server\gg\chem\gc01.i\GC01LF15.b\1LF10097.D
Lab Smp Id: WG229644-15
Inj Date : 15-JUN-2018 17:13
Operator : AC   Inst ID: gc01.i
Smp Info : WG229644-15,SL4984
Misc Info : WG229644,WG230,WG223323-2,SL4984-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LF15.b\PEST217.m
Meth Date : 18-Jun-2018 12:48 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 08:42   Cal File: 1LD10088.D
Als bottle: 88   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)	REVIEW CODE
$ 4	Tetrachloro-m-Xylene	4.202	4.198	0.004	8896	0.05000	0.0535	
5	alpha-BHC	4.782	4.776	0.006	12501	0.05000	0.0504	
6	gamma-BHC	5.225	5.220	0.005	12268	0.05000	0.0547	
7	beta-BHC	5.492	5.488	0.004	5209	0.05000	0.0529	
8	delta-BHC	5.834	5.828	0.006	12216	0.05000	0.0564	
9	Heptachlor	6.040	6.036	0.004	9450	0.05000	0.0525	
10	Aldrin	6.519	6.513	0.006	10045	0.05000	0.0562	
13	Heptachlor Epoxide	7.129	7.123	0.006	8578	0.05000	0.0554	
15	gamma-Chlordane	7.499	7.493	0.006	9016	0.05000	0.0567	
17	alpha-Chlordane	7.614	7.608	0.006	8571	0.05000	0.0562	
19	4,4'-DDE	7.884	7.880	0.004	8765	0.05000	0.0572	
20	Endosulfan I	7.679	7.673	0.006	7600	0.05000	0.0537	
21	Dieldrin	8.077	8.071	0.006	8308	0.05000	0.0560	
23	Endrin	8.404	8.400	0.004	7042	0.05000	0.0542	
24	4,4'-DDD	8.635	8.630	0.005	6939	0.05000	0.0575	
26	Endosulfan II	8.727	8.723	0.004	6624	0.05000	0.0530	
27	4,4'-DDT	9.094	9.090	0.004	5438	0.05000	0.0462	
28	Endrin Aldehyde	8.919	8.915	0.004	5138	0.05000	0.0540	
29	Methoxychlor	9.812	9.806	0.006	2584	0.05000	0.0436	
32	Endosulfan sulfate	9.262	9.256	0.006	5967	0.05000	0.0542	
33	Endrin Ketone	9.954	9.950	0.004	6400	0.05000	0.0536	
$ 34	Decachlorobiphenyl	12.452	12.443	0.009	3616	0.05000	0.0522	

Data File: \\target_server\gg\chem\gc01.i\GC01LF15.b\1LF10097.D
Date : 15-JUN-2018 17:13
Client ID:
Instrument: gc01.i
Sample Info: WG229644-15,SL4984
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000144

Katahdin
ANALYTICAL SERVICES

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL4984
Lab ID : WG229644-15
Analytical Date: 06/15/18 17:13
Lab File ID : 1LF10097.D
Instrument ID: GC01
Initial Calibration Date(s): 02/16/18 15:00 02/16/18 23:44
Column ID: B

	Compound	RRF/Amount	RF0.050	CCAL RRF0.050	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
6	gamma-BHC	229907	233380	233380	0.001	1.51061	20.00000	Averaged
9	Heptachlor	189092	174500	174500	0.001	-7.71688	20.00000	Averaged
13	Heptachlor Epoxide	159698	161360	161360	0.001	1.04093	20.00000	Averaged
19	4,4'-DDE	159671	161940	161940	0.001	1.42084	20.00000	Averaged
23	Endrin	126893	119100	119100	0.001	-6.14164	20.00000	Averaged
24	4,4'-DDD	126855	131560	131560	0.001	3.70896	20.00000	Averaged
27	4,4'-DDT	119610	100440	100440	0.001	-16.02685	20.00000	Averaged
28	Endrin Aldehyde	90843	92160	92160	0.001	1.44975	20.00000	Averaged
29	Methoxychlor	54124	43380	43380	0.001	-19.85121	20.00000	Averaged
33	Endrin Ketone	107895	108960	108960	0.001	0.98676	20.00000	Averaged
4	Tetrachloro-m-Xylene	173063	175060	175060	0.001	1.15411	20.00000	Averaged
34	Decachlorobiphenyl	67057	68000	68000	0.001	1.40576	20.00000	Averaged

*** = Compound out of QC criteria**

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Data File: 1LF10097.D
Report Date: 20-Jun-2018 09:08

Katahdin Analytical Services

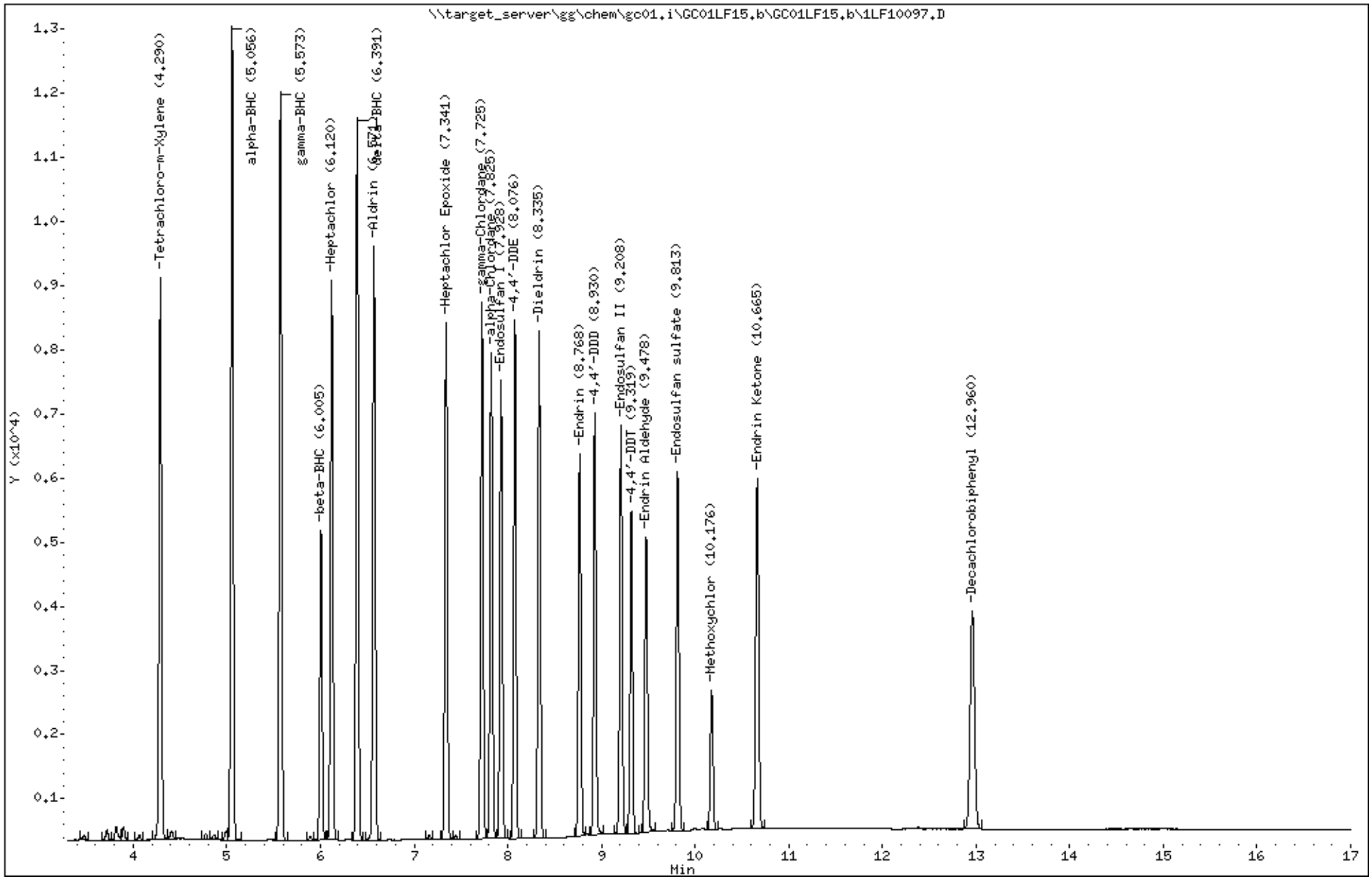
Data file : \\target_server\gg\chem\gc01.i\GC01LF15.b\GC01LF15.b\1LF10097.D
Lab Smp Id: WG229644-15
Inj Date : 15-JUN-2018 17:13
Operator : AC   Inst ID: gc01.i
Smp Info : WG229644-15,SL4984
Misc Info : WG229644,WG230,WG223323-2,SL4984-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LF15.b\PEST217.m\PEST217.m
Meth Date : 18-Jun-2018 12:55 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 13:22   Cal File: 1LD10100.D
Als bottle: 88   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)	REVIEW CODE
$ 4	Tetrachloro-m-Xylene	4.289	4.285	0.004	8753	0.05000	0.0506	
5	alpha-BHC	5.056	5.050	0.006	12693	0.05000	0.0489	
6	gamma-BHC	5.572	5.568	0.004	11669	0.05000	0.0508	
7	beta-BHC	6.004	6.000	0.004	4834	0.05000	0.0485	
8	delta-BHC	6.391	6.385	0.006	11265	0.05000	0.0508	
9	Heptachlor	6.119	6.113	0.006	8725	0.05000	0.0461	
10	Aldrin	6.571	6.567	0.004	9261	0.05000	0.0510	
13	Heptachlor Epoxide	7.341	7.335	0.006	8068	0.05000	0.0505	
15	gamma-Chlordane	7.724	7.718	0.006	8369	0.05000	0.0506	
17	alpha-Chlordane	7.824	7.818	0.006	7576	0.05000	0.0484	
19	4,4'-DDE	8.076	8.070	0.006	8097	0.05000	0.0507	
20	Endosulfan I	7.927	7.923	0.004	7152	0.05000	0.0498	
21	Dieldrin	8.334	8.328	0.006	7916	0.05000	0.0509	
23	Endrin	8.767	8.763	0.004	5955	0.05000	0.0469	
24	4,4'-DDD	8.929	8.925	0.004	6578	0.05000	0.0518	
26	Endosulfan II	9.207	9.203	0.004	6368	0.05000	0.0503	
27	4,4'-DDT	9.319	9.315	0.004	5022	0.05000	0.0420	
28	Endrin Aldehyde	9.477	9.472	0.005	4608	0.05000	0.0507	
29	Methoxychlor	10.176	10.170	0.006	2169	0.05000	0.0401	
32	Endosulfan sulfate	9.812	9.808	0.004	5591	0.05000	0.0496	
33	Endrin Ketone	10.664	10.657	0.007	5448	0.05000	0.0505	
$ 34	Decachlorobiphenyl	12.959	12.948	0.011	3400	0.05000	0.0507	

Data File: \\target_server\gg\chem\gc01.i\GC01LF15.b\GC01LF15.b\1LF10097.D
Date : 15-JUN-2018 17:13
Client ID:
Instrument: gc01.i
Sample Info: WG229644-15,SL4984
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000147

Katahdin
ANALYTICAL SERVICES

Form 7D

Pesticide Calibration Verification Summary

Lab ID: WG223323-1
Client ID: Breakdown Evaluation
Init. Calib. Date(s): 16-FEB-18 -16-FEB-18
Lab File ID: 1LB10212.D

Analysis Date: 16-FEB-18
Report Date: 20-JUN-18
SDG: SL4984
Column ID: A

Lab Sample ID	Filename	% DDT Breakdown	% Endrin Breakdown
WG223323-1	1LB10212.D	.682	1.24

QC Limits:

4,4'-DDT breakdown must be less than or equal to 15.0%

Endrin breakdown must be less than or equal to 15.0%

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Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10212.D
Report Date: 20-Jun-2018 09:10

Katahdin Analytical Services

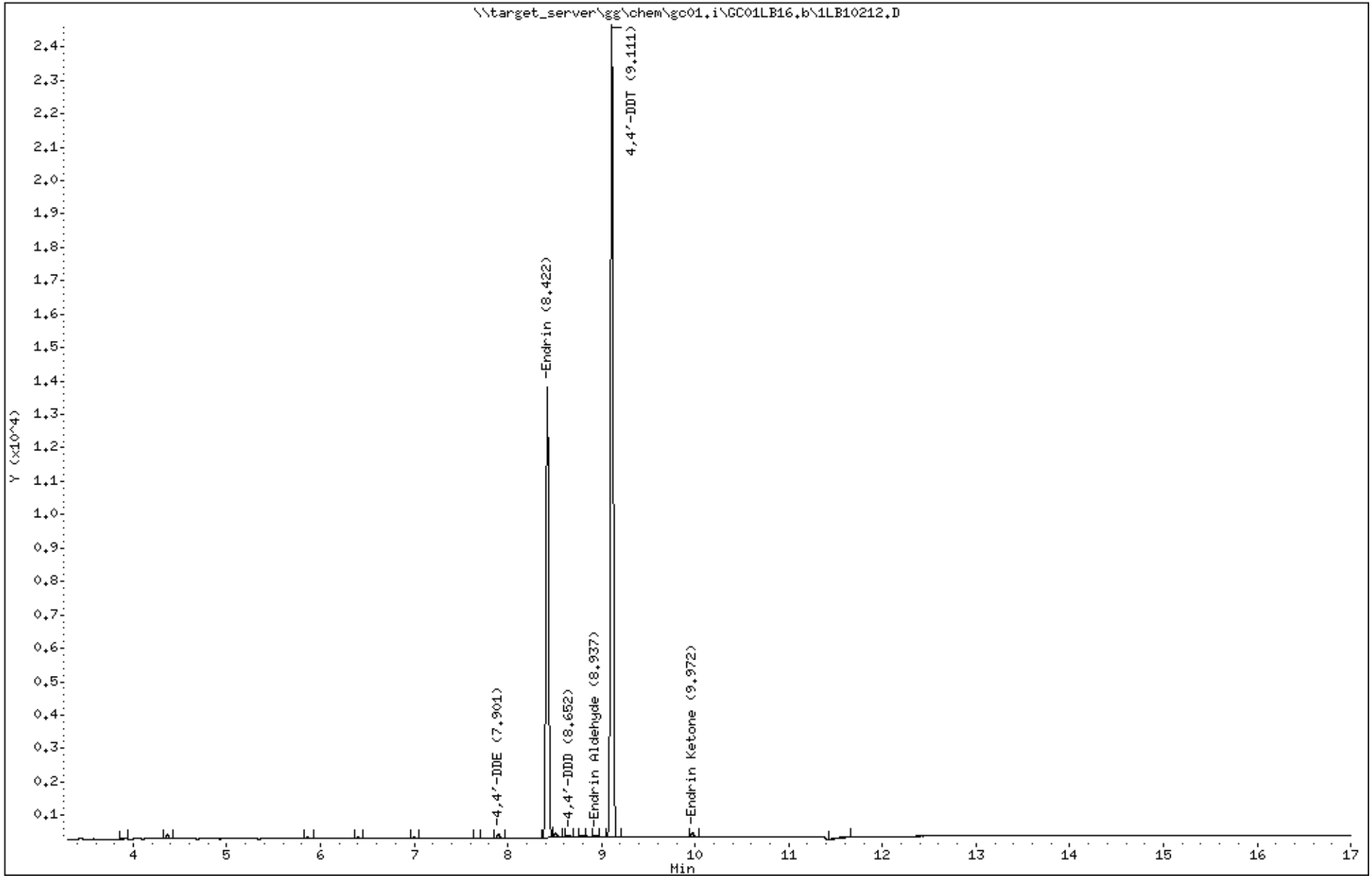
Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10212.D
Lab Smp Id: WG223323-1
Inj Date : 16-FEB-2018 21:48
Operator : AC   Inst ID: gc01.i
Smp Info : WG223323-1,SL4984
Misc Info : WG223323,WG223323,WG223323-2,SL4984-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m
Meth Date : 03-Apr-2018 14:16 gc01.i   Quant Type: ESTD
Cal Date : 16-FEB-2018 22:27   Cal File: 1LB10214.D
Als bottle: 4
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: eval.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
19 4,4'-DDE	7.900	7.900	0.000	122	8.e-004	0.00797	
23 Endrin	8.422	8.420	0.002	13501	0.10388	1.04	
24 4,4'-DDD	8.652	8.650	0.002	45	4e-004	0.00373	
27 4,4'-DDT	9.110	9.110	0.000	24303	0.20660	2.07	
28 Endrin Aldehyde	8.937	8.934	0.003	47	5e-004	0.00494	
33 Endrin Ketone	9.972	9.970	0.002	122	0.00102	0.0102	

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\1LB10212.D
Date : 16-FEB-2018 21:48
Client ID:
Instrument: gc01.i
Sample Info: WG223323-1,SL4984
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000150

Katahdin
ANALYTICAL SERVICES

Form 7D

Pesticide Calibration Verification Summary

Lab ID: WG223323-1
Client ID: Breakdown Evaluation
Init. Calib. Date(s): 16-FEB-18 -16-FEB-18
Lab File ID: 1LB10212.D

Analysis Date: 16-FEB-18
Report Date: 20-JUN-18
SDG: SL4984
Column ID: B

Lab Sample ID	Filename	% DDT Breakdown	% Endrin Breakdown
WG223323-1	1LB10212.D	.461	1.17

QC Limits:

4,4'-DDT breakdown must be less than or equal to 15.0%

Endrin breakdown must be less than or equal to 15.0%

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Data File: 1LB10212.D
Report Date: 20-Jun-2018 09:10

Katahdin Analytical Services

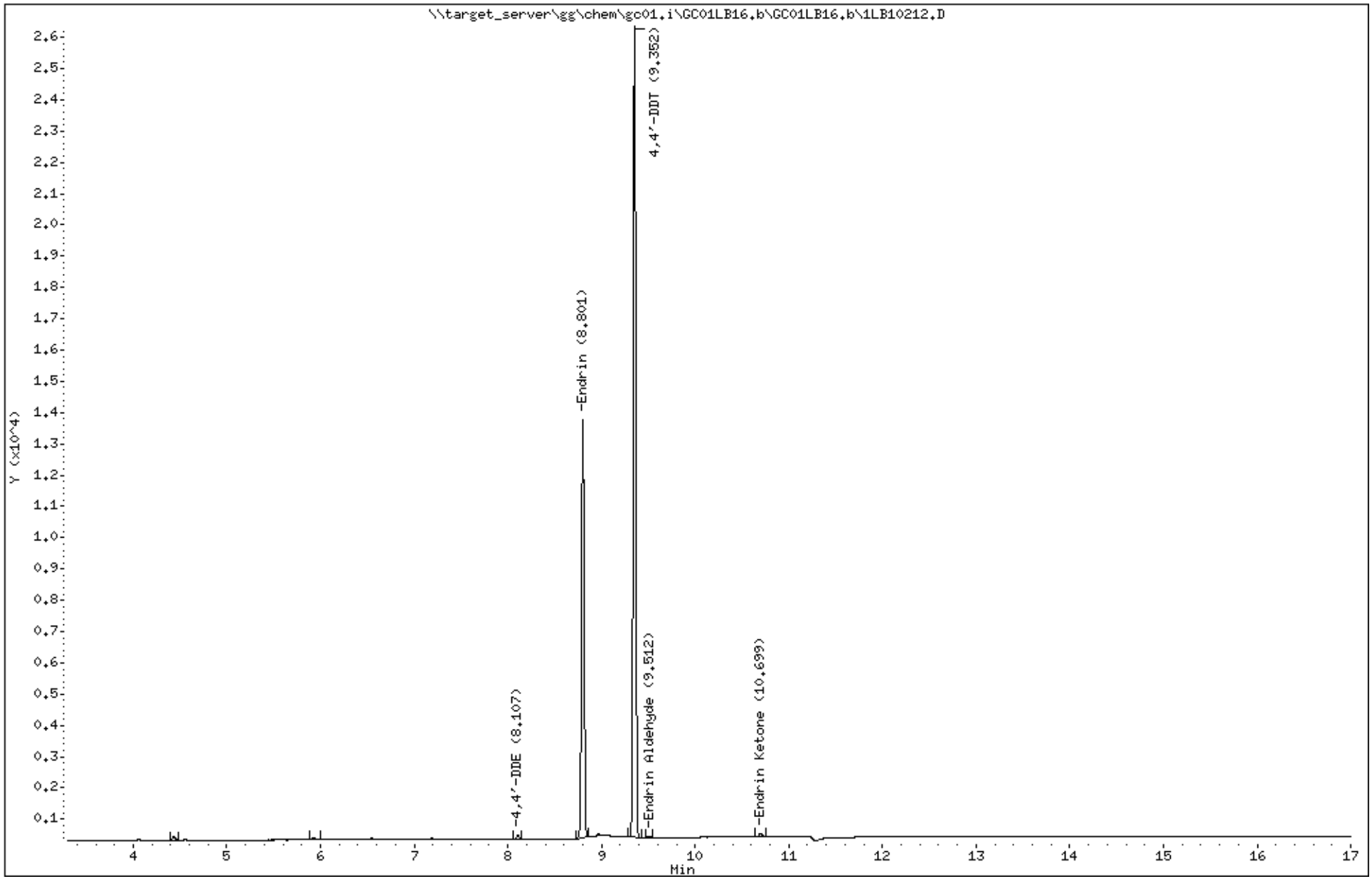
Data file : \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10212.D
Lab Smp Id: WG223323-1
Inj Date : 16-FEB-2018 21:48
Operator : AC   Inst ID: gc01.i
Smp Info : WG223323-1,SL4984
Misc Info : WG223323,WG223323,WG223323-2,SL4984-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LB16.b\PEST217.m\PEST217.m
Meth Date : 03-Apr-2018 14:18 gc01.i   Quant Type: ESTD
Cal Date : 16-FEB-2018 23:44   Cal File: 1LB10218.D
Als bottle: 4
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: eval.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS		
					ON-COLUMN	FINAL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/L)	REVIEW CODE
19 4,4'-DDE	8.107	8.107	0.000	120	8e-004	0.00752	
23 Endrin	8.800	8.799	0.001	13357	0.10526	1.05	
27 4,4'-DDT	9.352	9.352	0.000	25919	0.21670	2.17	
28 Endrin Aldehyde	9.512	9.509	0.003	45	5.e-004	0.00495	
33 Endrin Ketone	10.699	10.699	0.000	113	0.00105	0.0105	

Data File: \\target_server\gg\chem\gc01.i\GC01LB16.b\GC01LB16.b\1LB10212.D
Date : 16-FEB-2018 21:48
Client ID:
Instrument: gc01.i
Sample Info: WG223323-1,SL4984
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000153

Katahdin
ANALYTICAL SERVICES

Form 7D

Pesticide Calibration Verification Summary

Lab ID: WG229644-11
Client ID: Breakdown Evaluation
Init. Calib. Date(s): 16-FEB-18 -16-FEB-18
Lab File ID: 1LF10082.D

Analysis Date: 15-JUN-18
Report Date: 20-JUN-18
SDG: SL4984
Column ID: A

Lab Sample ID	Filename	% DDT Breakdown	% Endrin Breakdown
WG229644-11	1LF10082.D	4.3	4.00

QC Limits:

4,4'-DDT breakdown must be less than or equal to 15.0%

Endrin breakdown must be less than or equal to 15.0%

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Data File: \\target_server\gg\chem\gc01.i\GC01LF15.b\1LF10082.D
Report Date: 20-Jun-2018 09:08

Katahdin Analytical Services

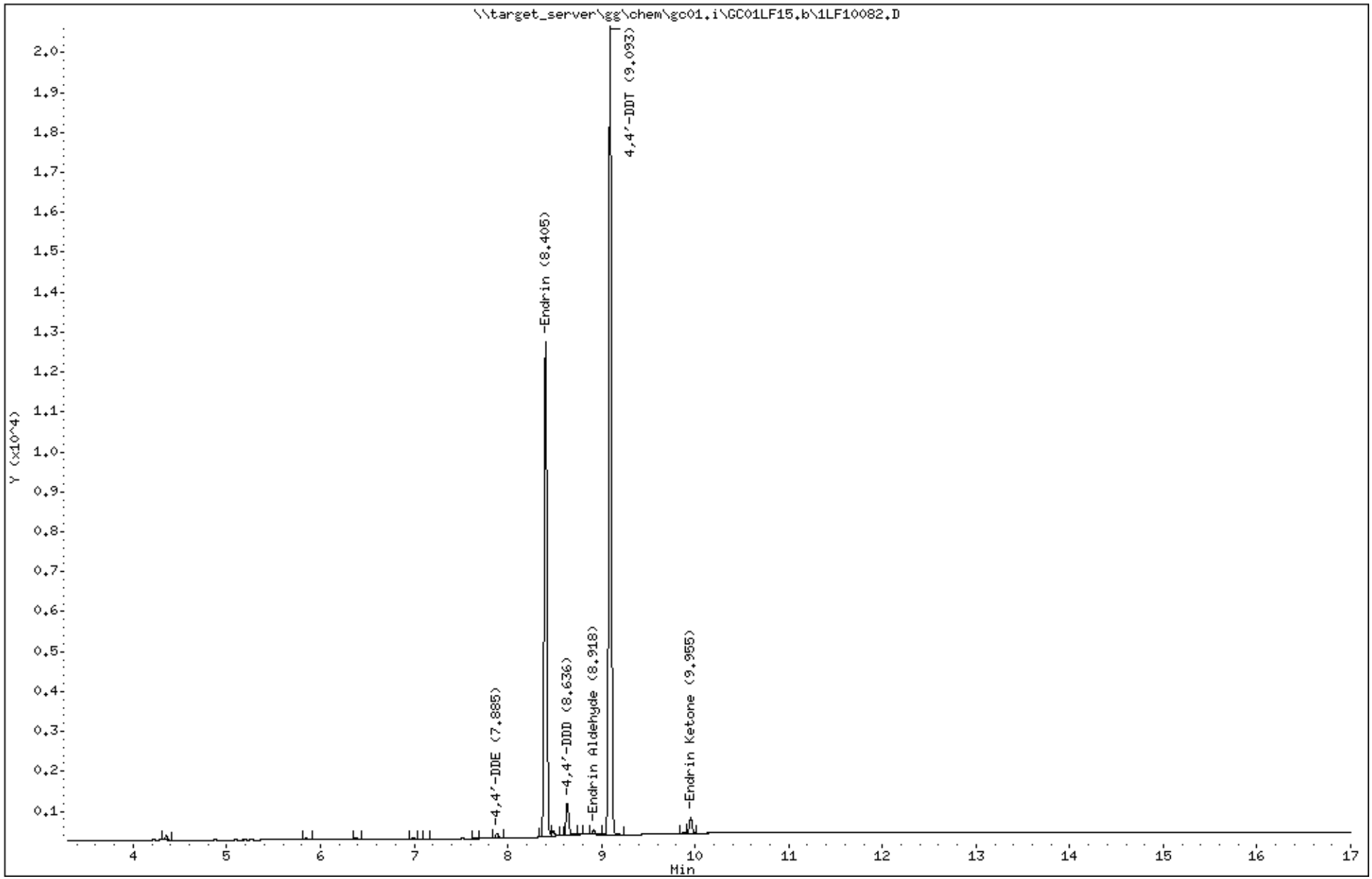
Data file : \\target_server\gg\chem\gc01.i\GC01LF15.b\1LF10082.D
Lab Smp Id: WG229644-11
Inj Date : 15-JUN-2018 10:29
Operator : AC   Inst ID: gc01.i
Smp Info : WG229644-11,SL4984
Misc Info : WG229644,WG230,WG223323-2,SL4984-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LF15.b\PEST217.m
Meth Date : 18-Jun-2018 12:48 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 08:42   Cal File: 1LD10088.D
Als bottle: 73
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: eval.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS		
					ON-COLUMN	FINAL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/L)	REVIEW CODE
19 4,4'-DDE	7.884	7.880	0.004	114	7e-004	0.00744	
23 Endrin	8.404	8.400	0.004	12392	0.09535	0.954	
24 4,4'-DDD	8.636	8.630	0.006	796	0.00660	0.0660	
27 4,4'-DDT	9.092	9.090	0.002	20246	0.17211	1.72	
28 Endrin Aldehyde	8.917	8.915	0.002	115	0.00121	0.0121	
33 Endrin Ketone	9.954	9.950	0.004	401	0.00336	0.0336	

Data File: \\target_server\gg\chem\gc01.i\GC01LF15.b\1LF10082.D
Date : 15-JUN-2018 10:29
Client ID:
Instrument: gc01.i
Sample Info: WG229644-11,SL4984
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000156

Katahdin
ANALYTICAL SERVICES

Form 7D

Pesticide Calibration Verification Summary

Lab ID: WG229644-11
Client ID: Breakdown Evaluation
Init. Calib. Date(s): 16-FEB-18 -16-FEB-18
Lab File ID: 1LF10082.D

Analysis Date: 15-JUN-18
Report Date: 20-JUN-18
SDG: SL4984
Column ID: B

Lab Sample ID	Filename	% DDT Breakdown	% Endrin Breakdown
WG229644-11	1LF10082.D	4.17	5.14

QC Limits:

4,4'-DDT breakdown must be less than or equal to 15.0%

Endrin breakdown must be less than or equal to 15.0%

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

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Data File: 1LF10082.D
Report Date: 20-Jun-2018 09:08

Katahdin Analytical Services

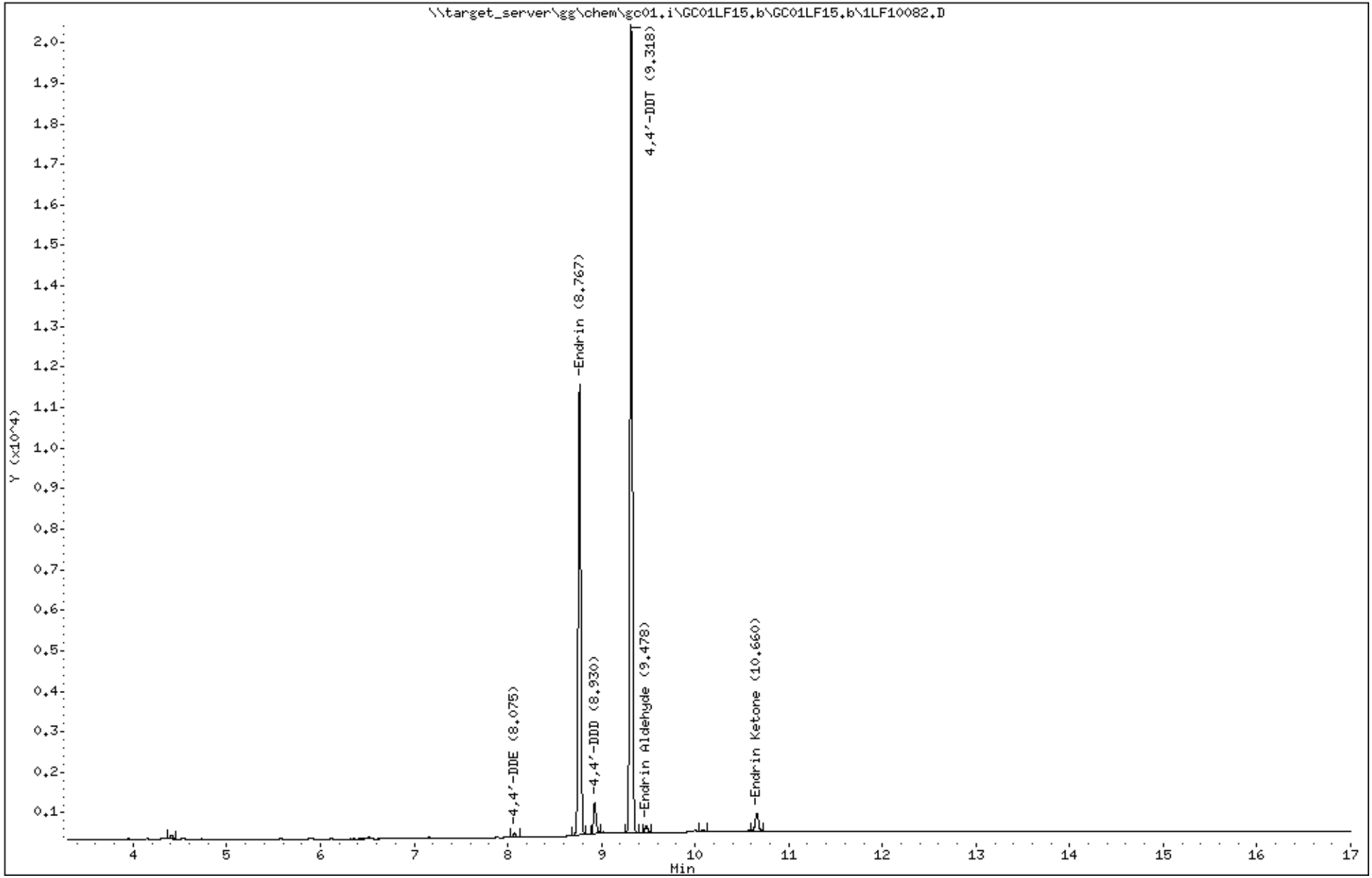
Data file : \\target_server\gg\chem\gc01.i\GC01LF15.b\GC01LF15.b\1LF10082.D
Lab Smp Id: WG229644-11
Inj Date : 15-JUN-2018 10:29
Operator : AC   Inst ID: gc01.i
Smp Info : WG229644-11,SL4984
Misc Info : WG229644,WG230,WG223323-2,SL4984-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LF15.b\PEST217.m\PEST217.m
Meth Date : 18-Jun-2018 12:55 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 13:22   Cal File: 1LD10100.D
Als bottle: 73
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: eval.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
19 4,4'-DDE	8.074	8.070	0.004	106	7e-004	0.00664	
23 Endrin	8.766	8.763	0.003	11117	0.08761	0.876	
24 4,4'-DDD	8.929	8.925	0.004	762	0.00601	0.0601	
27 4,4'-DDT	9.318	9.315	0.003	19938	0.16669	1.67	
28 Endrin Aldehyde	9.478	9.472	0.006	163	0.00179	0.0179	
33 Endrin Ketone	10.659	10.657	0.002	439	0.00407	0.0407	

Data File: \\target_server\gg\chem\gc01.i\GC01LF15.b\GC01LF15.b\1LF10082.D
Date : 15-JUN-2018 10:29
Client ID:
Instrument: gc01.i
Sample Info: WG229644-11,SL4984
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000159

Raw QC Data Section

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client:
Lab ID: WG230200-1RA
Client ID: Method Blank Sample
Project:
SDG: SL4984
Lab File ID: 1LF10084.D

Sample Date:
Received Date:
Extract Date: 12-JUN-18
Extracted By: DP
Extraction Method: SW846 3510C
Lab Prep Batch: WG230200

Analysis Date: 15-JUN-18
Analyst: AC
Analysis Method: SW846 8081B
Matrix: AQ
% Solids: NA
Report Date: 20-JUN-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
gamma-BHC	U	0.0050	ug/L	1	.05	0.010	0.0014	0.0050
Heptachlor	U	0.0050	ug/L	1	.05	0.010	0.0016	0.0050
Heptachlor Epoxide	U	0.0050	ug/L	1	.05	0.010	0.0015	0.0050
Endrin	U	0.010	ug/L	1	.1	0.020	0.0017	0.010
Methoxychlor	U	0.050	ug/L	1	.5	0.10	0.0017	0.050
Technical Chlordane	U	0.050	ug/L	1	.5	0.10	0.017	0.050
Toxaphene	U	0.10	ug/L	1	1	0.20	0.034	0.10
Tetrachloro-M-Xylene		67.5	%					
Decachlorobiphenyl		71.5	%					

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Data File: \\target_server\gg\chem\gc01.i\GC01LF15.b\1LF10084.D
Report Date: 20-Jun-2018 09:08

Katahdin Analytical Services

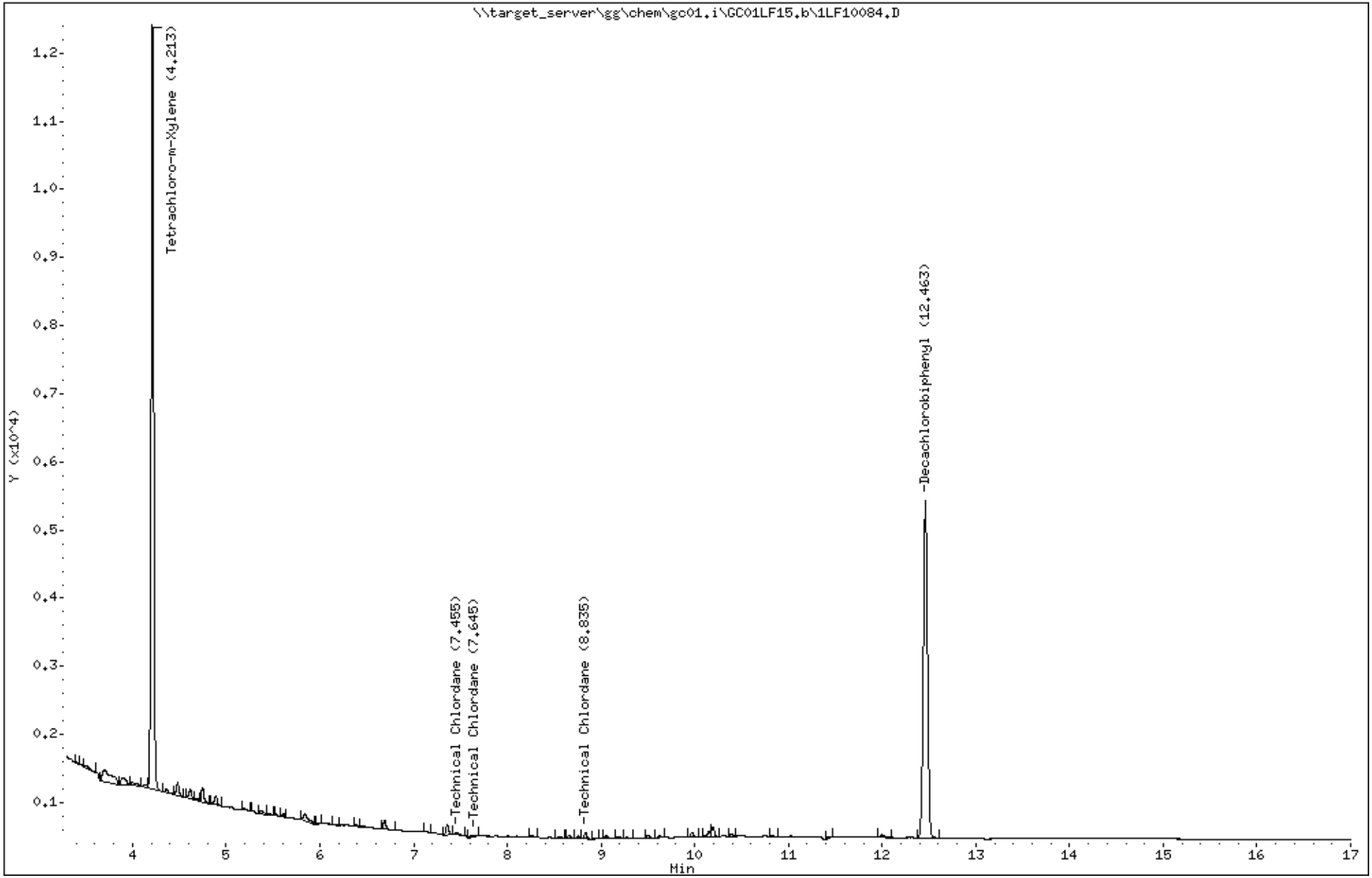
Data file : \\target_server\gg\chem\gc01.i\GC01LF15.b\1LF10084.D
Lab Smp Id: WG230200-1RA Client Smp ID: WG230200-Blank
Inj Date : 15-JUN-2018 13:02
Operator : AC Inst ID: gc01.i
Smp Info : WG230200-1RA,SL4984
Misc Info : WG229644,WG230200,WG223323-2,SL4984-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LF15.b\PEST217.m
Meth Date : 18-Jun-2018 12:48 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 08:42 Cal File: 1LD10088.D
Als bottle: 75 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8081+TC.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 4 Tetrachloro-m-Xylene	4.213	4.198	0.015	11225	0.06752	0.135	
$ 34 Decachlorobiphenyl	12.463	12.443	0.020	4946	0.07143	0.143	

Data File: \\target_server\gg\chem\gc01.i\GC01LF15.b\1LF10084.D
Date : 15-JUN-2018 13:02
Client ID: WG230200-Blank
Instrument: gc01.i
Sample Info: WG230200-1RA,SL4984
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000163

Data File: 1LF10084.D
Report Date: 20-Jun-2018 09:08

Katahdin Analytical Services

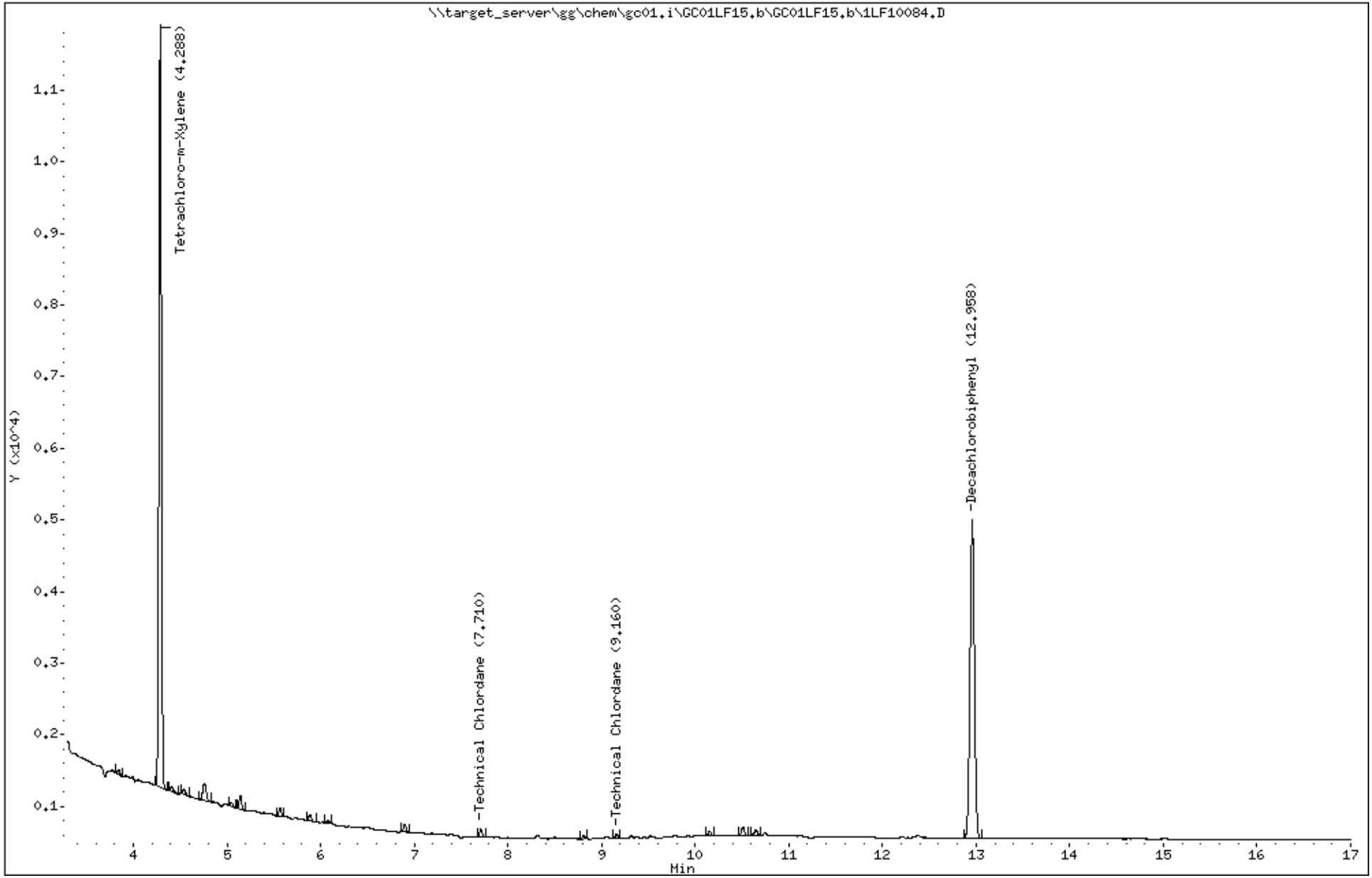
Data file : \\target_server\gg\chem\gc01.i\GC01LF15.b\GC01LF15.b\1LF10084.D
Lab Smp Id: WG230200-1RA Client Smp ID: WG230200-Blank
Inj Date : 15-JUN-2018 13:02
Operator : AC Inst ID: gc01.i
Smp Info : WG230200-1RA,SL4984
Misc Info : WG229644,WG230200,WG223323-2,SL4984-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LF15.b\PEST217.m\PEST217.m
Meth Date : 18-Jun-2018 12:55 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 13:22 Cal File: 1LD10100.D
Als bottle: 75 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8081+TC.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 4 Tetrachloro-m-Xylene	4.288	4.285	0.003	10645	0.06151	0.123	
$ 34 Decachlorobiphenyl	12.958	12.948	0.010	4440	0.06621	0.132	

Data File: \\target_server\gg\chem\gc01.i\GC01LF15.b\GC01LF15.b\1LF10084.D
Date : 15-JUN-2018 13:02
Client ID: WG230200-Blank
Instrument: gc01.i
Sample Info: WG230200-1RA,SL4984
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000165

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client:
Lab ID: WG229287-8
Client ID: TCLP Blank
Project:
SDG: SL4984
Lab File ID: 1LE10178.D

Sample Date:
Received Date:
Extract Date: 30-MAY-18
Extracted By: DP
Extraction Method: 3510C/1311
Lab Prep Batch: WG229287

Analysis Date: 30-MAY-18
Analyst: BF
Analysis Method: SW846 8081B
Matrix: AQ
% Solids: NA
Report Date: 20-JUN-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
gamma-BHC	U	0.12	ug/L	1	.05	0.25	0.036	0.12
Heptachlor	U	0.12	ug/L	1	.05	0.25	0.040	0.12
Heptachlor Epoxide	U	0.12	ug/L	1	.05	0.25	0.037	0.12
Endrin	U	0.25	ug/L	1	.1	0.50	0.042	0.25
Methoxychlor	U	1.2	ug/L	1	.5	2.5	0.042	1.2
Technical Chlordane	U	1.2	ug/L	1	.5	2.5	0.42	1.2
Toxaphene	U	2.5	ug/L	1	1	5.0	0.85	2.5
Tetrachloro-M-Xylene		71.2	%					
Decachlorobiphenyl		86.4	%					

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Data File: \\target_server\gg\chem\gc01.i\GC01LE30.b\1LE10178.D
Report Date: 20-Jun-2018 09:18

Katahdin Analytical Services

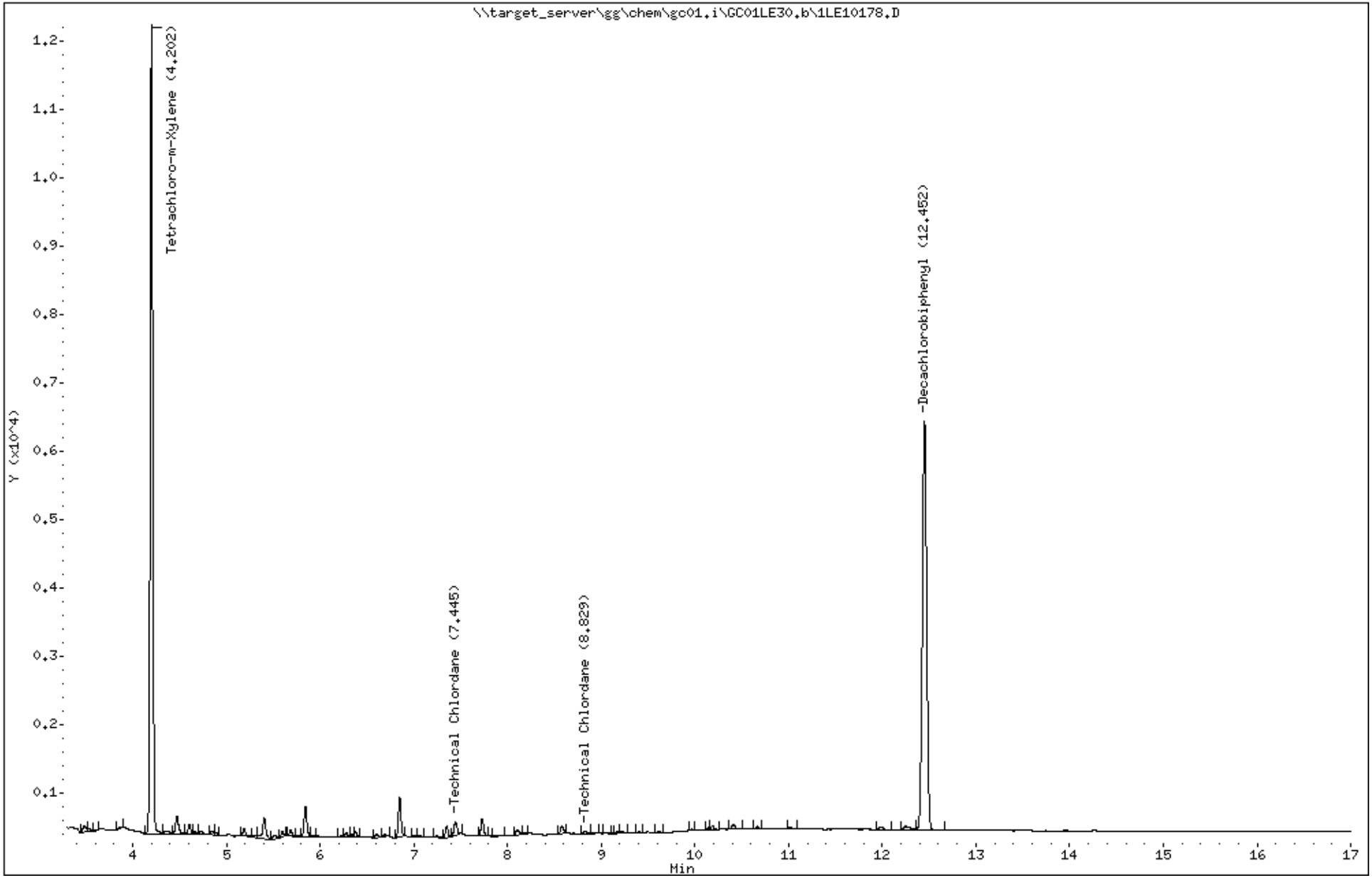
Data file : \\target_server\gg\chem\gc01.i\GC01LE30.b\1LE10178.D
Lab Smp Id: WG229287-8 Client Smp ID: WG229287-TclpBlank
Inj Date : 30-MAY-2018 18:09
Operator : BF Inst ID: gc01.i
Smp Info : WG229287-8,SL4984
Misc Info : WG229230,WG229287,WG223321,SL4984-1
Comment :
Method : \\target_server\gg\chem\gc01.i\GC01LE30.b\PEST217.m
Meth Date : 31-May-2018 10:30 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 08:42 Cal File: 1LD10088.D
Als bottle: 32 QC Sample: TCLPBLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8081+TC.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	0.20000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 4 Tetrachloro-m-Xylene	4.201	4.194	0.007	11832	0.07118	3.56	
$ 34 Decachlorobiphenyl	12.451	12.440	0.011	5982	0.08639	4.32	

Data File: \\target_server\gg\chem\gc01.i\GC01LE30.b\1LE10178.D
Date : 30-MAY-2018 18:09
Client ID: WG229287-TclpBlank
Instrument: gc01.i
Sample Info: WG229287-8,SL4984
Purge Volume: 0.2
Operator: BF
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000168

Data File: 1LE10178.D
Report Date: 20-Jun-2018 09:18

Katahdin Analytical Services

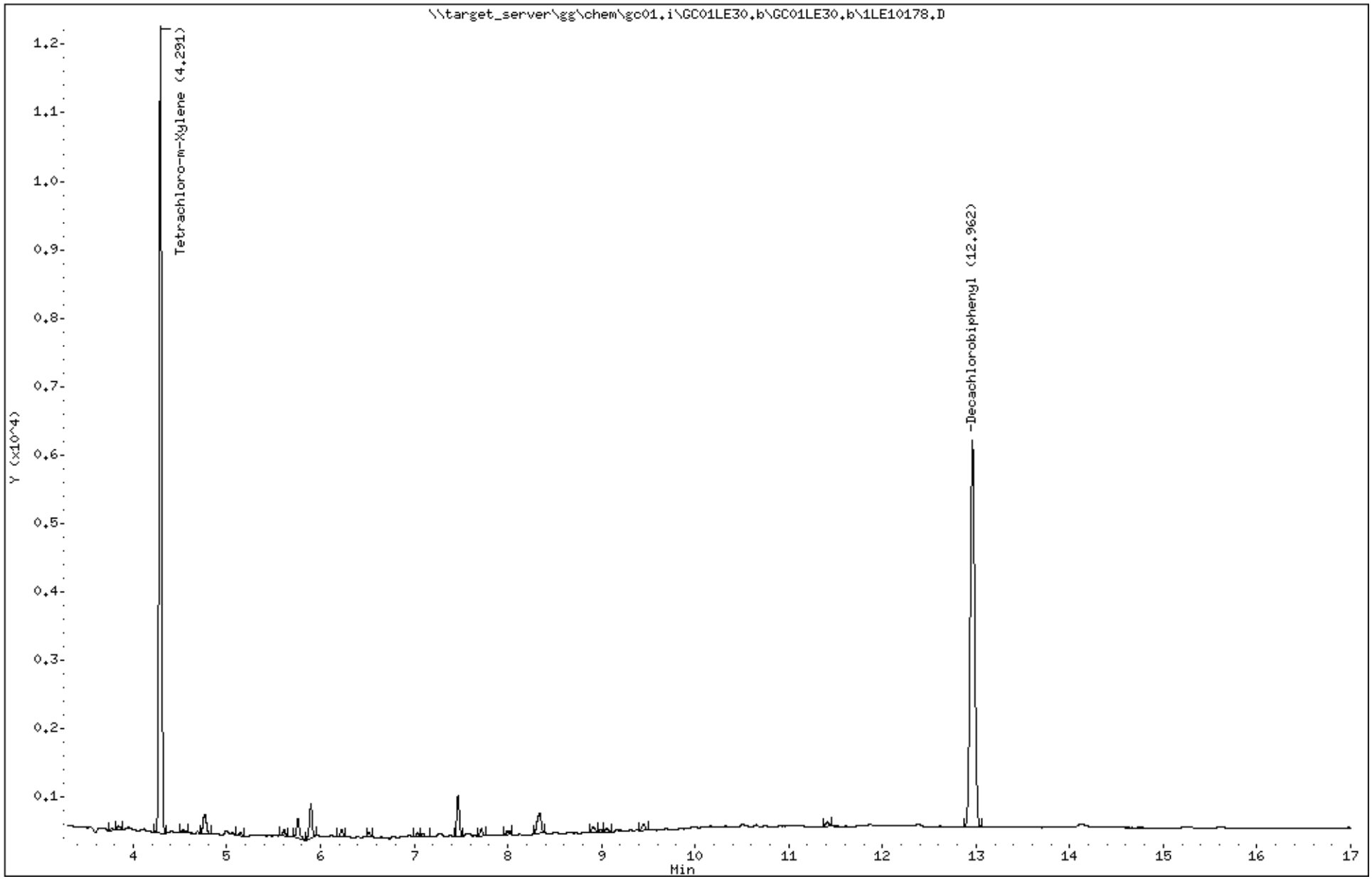
Data file : \\target_server\gg\chem\gc01.i\GC01LE30.b\GC01LE30.b\1LE10178.D
Lab Smp Id: WG229287-8 Client Smp ID: WG229287-TclpBlank
Inj Date : 30-MAY-2018 18:09
Operator : BF Inst ID: gc01.i
Smp Info : WG229287-8,SL4984
Misc Info : WG229230,WG229287,WG223321,SL4984-1
Comment :
Method : \\target_server\gg\chem\gc01.i\GC01LE30.b\PEST217.m\PEST217.m
Meth Date : 31-May-2018 15:51 gc01.i Quant Type: ESTD
Cal Date : 09-APR-2018 13:22 Cal File: 1LD10100.D
Als bottle: 32 QC Sample: TCLPBLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8081+TC.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	0.20000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 4 Tetrachloro-m-Xylene	4.290	4.284	0.006	11802	0.06819	3.41	
$ 34 Decachlorobiphenyl	12.962	12.951	0.011	5646	0.08420	4.21	

Data File: \\target_server\gg\chem\gc01.i\GC01LE30.b\GC01LE30.b\1LE10178.D
Date : 30-MAY-2018 18:09
Client ID: WG229287-TclpBlank
Instrument: gc01.i
Sample Info: WG229287-8,SL4984
Purge Volume: 0.2
Operator: BF
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000170

Katahdin
ANALYTICAL SERVICES

LCS Recovery Report

Client:
Lab ID: WG230200-3
Client ID: LCS1
Project:
SDG: SL4984
LCS File ID: 1LF10046.D

Sample Date:
Received Date:
Extract Date: 12-JUN-18
Extracted By: DP
Extraction Method: SW846 3510C
Lab Prep Batch: WG230200

Analysis Date: 12-JUN-18
Analyst: AC
Analysis Method: SW846 8081B
Matrix: AQ
% Solids: NA
Report Date: 20-JUN-18

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
Toxaphene	86.4	10.0	8.64	ug/L	33-134
Tetrachloro-M-Xylene	73.2				44-124
Decachlorobiphenyl	* 34.1				41-131

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Data File: \\target_server\gg\chem\gc01.i\GC01LF12.b\1LF10046.D
Report Date: 20-Jun-2018 09:49

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LF12.b\1LF10046.D
Lab Smp Id: WG230200-3 Client Smp ID: WG230200-LCS1
Inj Date : 12-JUN-2018 14:47
Operator : AC Inst ID: gc01.i
Smp Info : WG230200-3,SL4984
Misc Info : WG229644,WG230200,WG223323-2,SL4984-1
Comment :
Method : \\target_server\gg\chem\gc01.i\GC01LF12.b\PEST217.m
Meth Date : 13-Jun-2018 10:39 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 08:42 Cal File: 1LD10088.D
Als bottle: 41 QC Sample: LCS1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: DoD5_toxLCS.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/mL)	CONCENTRATIONS FINAL (ug/L)	TARGET RANGE	RATIO	REVIEW CODE
$ 4 Tetrachloro-m-Xylene					CAS #: 877-09-8			
4.201	4.197	0.004	12124	0.07293	0.729			
18 Toxaphene					CAS #: 8001-35-2			
7.370	7.366	0.004	536	0.86102	8.61	80.00- 120.00	100.00(M)	M5
7.933	7.925	0.008	1269	1.15672	11.6	105.64- 158.46	236.75	M5
8.228	8.226	0.002	1294	1.06289	10.6	141.30- 211.95	241.42	M5
8.511	8.506	0.005	846	0.56350	5.64	139.18- 208.77	157.84	M5
8.990	8.988	0.002	1359	1.02986	10.3	117.01- 175.52	253.54	M5
9.121	9.118	0.003	1932	0.81516	8.15	192.19- 288.29	360.45	M5
9.245	9.243	0.002	1497	0.67481	6.75	174.65- 261.98	279.29	M5
9.385	9.390	-0.005	996	0.53424	5.34	162.51- 243.76	185.82	M5
9.856	9.855	0.001	1892	0.54835	5.48	233.06- 349.59	352.99	M5
		Average of Peak Concentrations =			8.05			
$ 34 Decachlorobiphenyl					CAS #: 2051-24-3			
12.448	12.446	0.002	2362	0.03411	0.341		(R)	

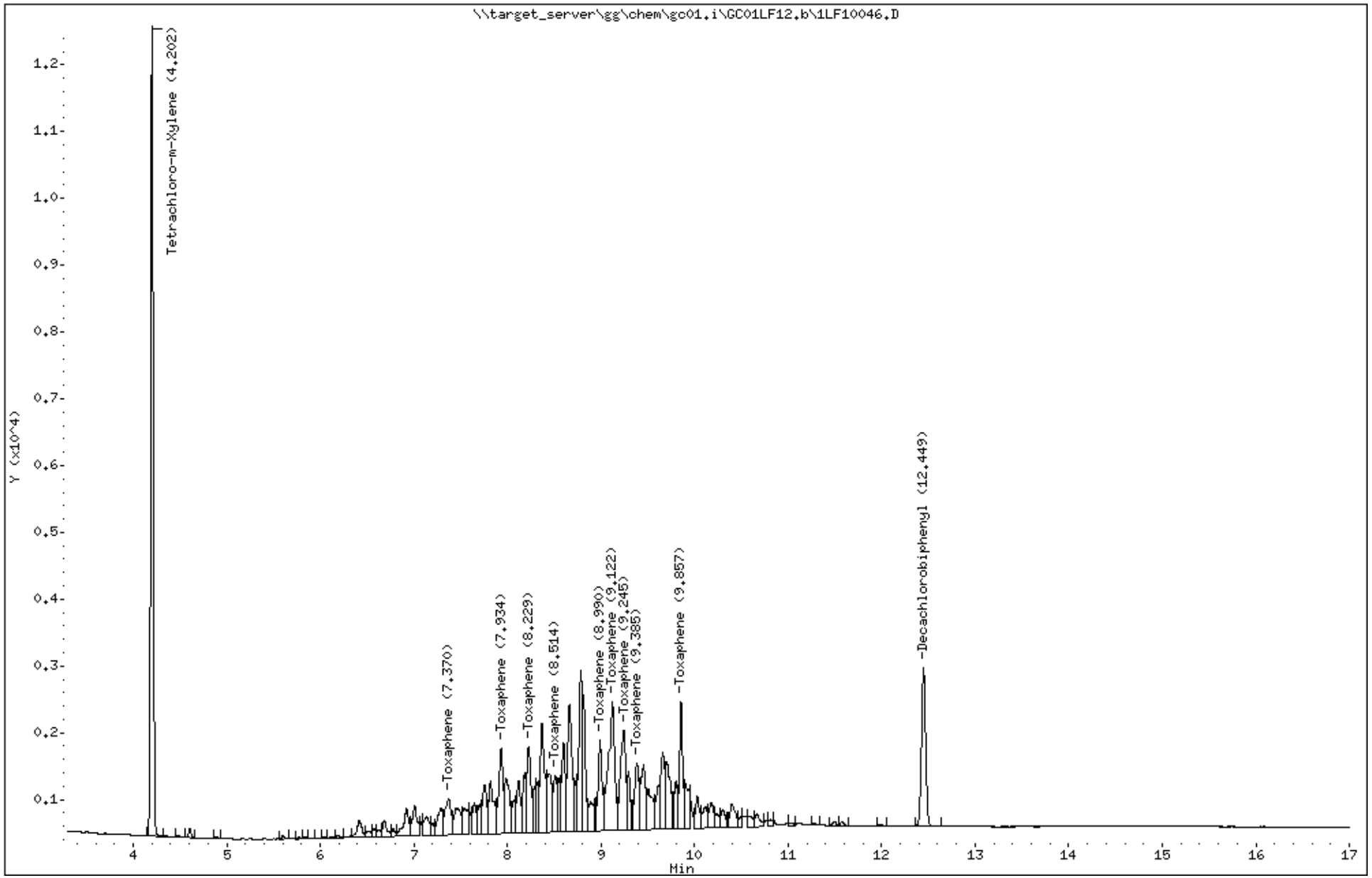
AC
9:52 am, Jun 20, 2018

Data File: \\target_server\gg\chem\gc01.i\GC01LF12.b\1LF10046.D
Report Date: 20-Jun-2018 09:49

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LF12.b\1LF10046.D
Date : 12-JUN-2018 14:47
Client ID: WG230200-LCS1
Instrument: gc01.i
Sample Info: WG230200-3,SL4984
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000174

Data File: 1LF10046.D
Report Date: 20-Jun-2018 09:49

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LF12.b\GC01LF12.b\1LF10046.D
Lab Smp Id: WG230200-3 Client Smp ID: WG230200-LCS1
Inj Date : 12-JUN-2018 14:47
Operator : AC Inst ID: gc01.i
Smp Info : WG230200-3,SL4984
Misc Info : WG229644,WG230200,WG223323-2,SL4984-1
Comment :
Method : \\target_server\gg\chem\gc01.i\GC01LF12.b\PEST217.m\PEST217.m
Meth Date : 13-Jun-2018 10:46 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 13:22 Cal File: 1LD10100.D
Als bottle: 41 QC Sample: LCS1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: DoD5_toxLCS.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/mL)	CONCENTRATIONS FINAL (ug/L)	TARGET RANGE	RATIO	REVIEW CODE
$ 4 Tetrachloro-m-Xylene					CAS #: 877-09-8			
4.290	4.286	0.004	12676	0.07325	0.732			
18 Toxaphene					CAS #: 8001-35-2			
7.757	7.753	0.004	741	0.93962	9.40	80.00- 120.00	100.00(M)	M5
8.252	8.251	0.001	1392	1.00414	10.0	120.92- 181.37	187.85	M5
8.602	8.611	-0.009	1180	0.91635	9.16	117.25- 175.88	159.24	M5
8.783	8.813	-0.030	861	0.66122	6.61	118.30- 177.45	116.19	M5
9.252	9.255	-0.003	1755	1.12926	11.3	123.71- 185.56	236.84	M5
9.522	9.521	0.001	1559	0.95480	9.55	135.40- 203.10	210.39	M5
9.652	9.653	-0.001	1517	0.68262	6.83	177.54- 266.30	204.72	M5
10.205	10.206	-0.001	1168	0.72702	7.27	117.43- 176.14	157.62	M5
10.450	10.455	-0.005	1684	0.75967	7.60	178.76- 268.14	227.26	M5
		Average of Peak Concentrations =			8.64			
$ 34 Decachlorobiphenyl					CAS #: 2051-24-3			
12.953	12.951	0.002	2228	0.03323	0.332		(R)	

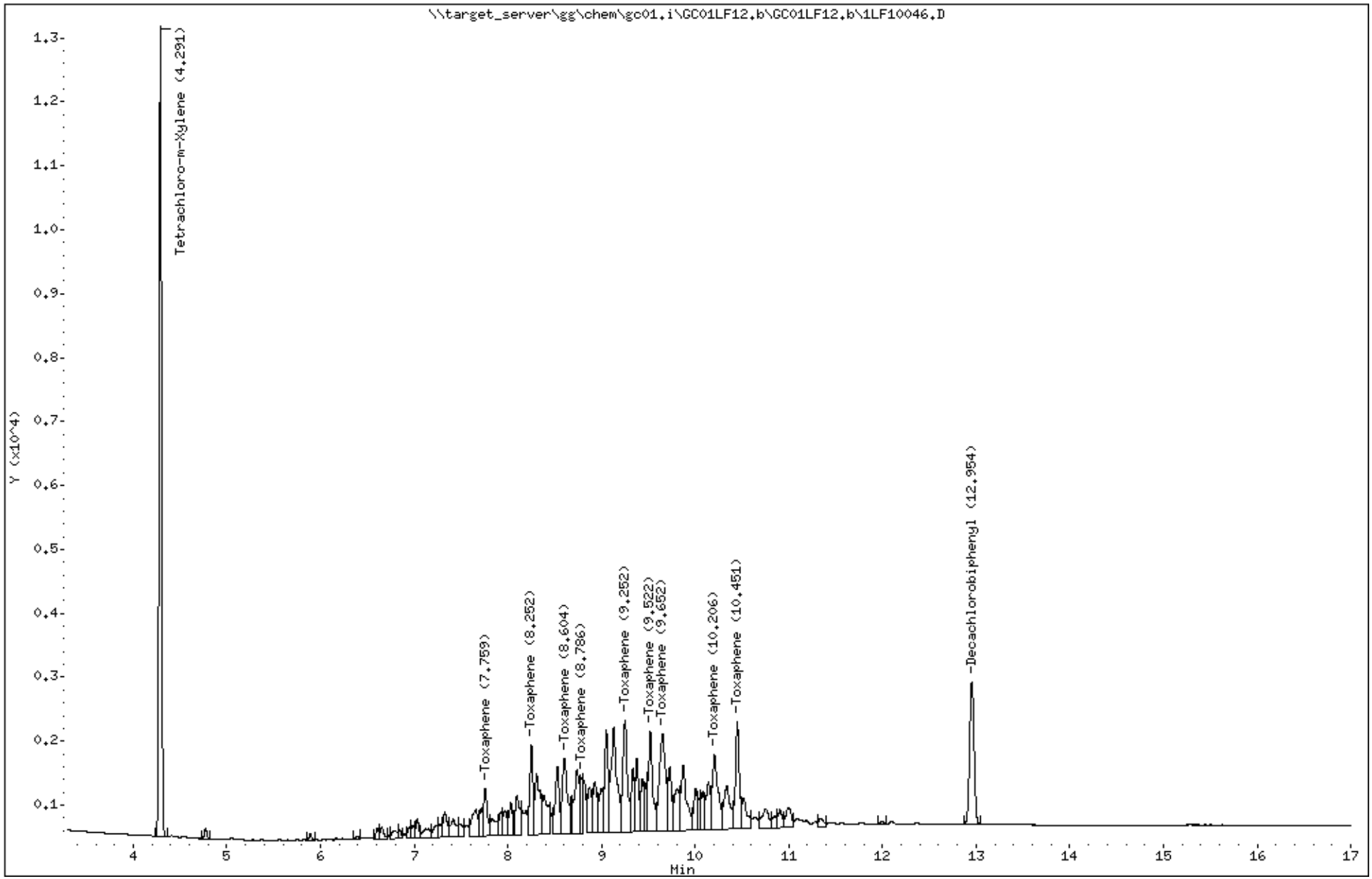
AC
9:52 am, Jun 20, 2018

Data File: 1LF10046.D
Report Date: 20-Jun-2018 09:49

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LF12.b\GC01LF12.b\1LF10046.D
Date : 12-JUN-2018 14:47
Client ID: WG230200-LCS1
Instrument: gc01.i
Sample Info: WG230200-3,SL4984
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000177

Katahdin
ANALYTICAL SERVICES

LCS Recovery Report

Client:
Lab ID: WG230200-4
Client ID: LCS2
Project:
SDG: SL4984
LCS File ID: 1LF10047.D

Sample Date:
Received Date:
Extract Date: 12-JUN-18
Extracted By: DP
Extraction Method: SW846 3510C
Lab Prep Batch: WG230200

Analysis Date: 12-JUN-18
Analyst: AC
Analysis Method: SW846 8081B
Matrix: AQ
% Solids: NA
Report Date: 20-JUN-18

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
Technical Chlordane	82.7	10.0	8.27	ug/L	62-140
Tetrachloro-M-Xylene	74.5				44-124
Decachlorobiphenyl	* 35.1				41-131

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
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Data File: \\target_server\gg\chem\gc01.i\GC01LF12.b\1LF10047.D
Report Date: 20-Jun-2018 09:49

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LF12.b\1LF10047.D
Lab Smp Id: WG230200-4 Client Smp ID: WG230200-LCS2
Inj Date : 12-JUN-2018 15:06
Operator : AC Inst ID: gc01.i
Smp Info : WG230200-4,SL4984
Misc Info : WG229644,WG230200,WG223323-2,SL4984-1
Comment :
Method : \\target_server\gg\chem\gc01.i\GC01LF12.b\PEST217.m
Meth Date : 13-Jun-2018 10:39 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 08:42 Cal File: 1LD10088.D
Als bottle: 42 QC Sample: LCS2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: DoD5_tcLCS.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

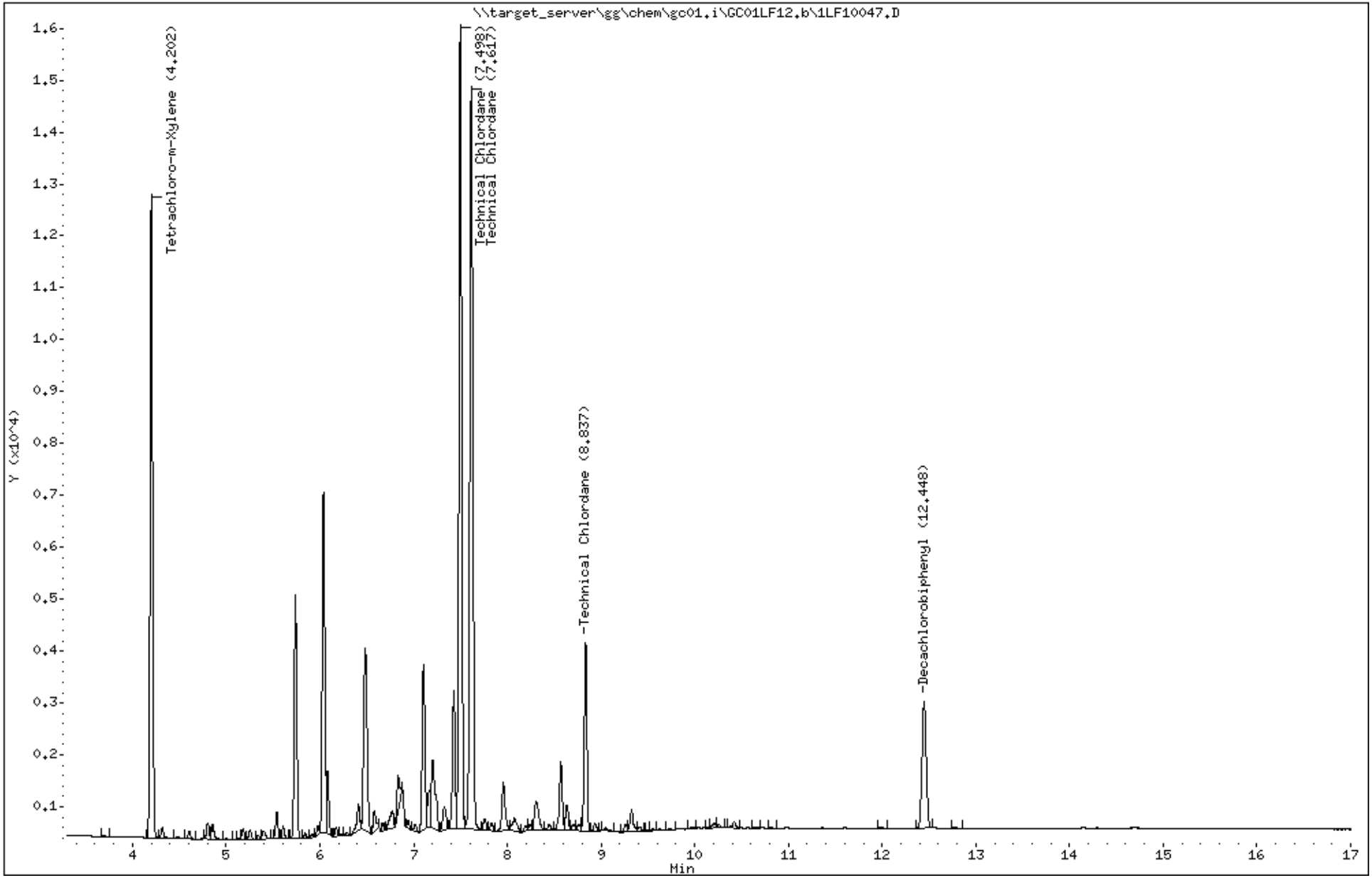
RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/mL)	CONCENTRATIONS FINAL (ug/L)	TARGET RANGE	RATIO	REVIEW CODE
$ 4 Tetrachloro-m-Xylene					CAS #: 877-09-8			
4.201	4.197	0.004	12390	0.07453	0.745			
14 Technical Chlordane					CAS #: 12789-03-6			
8.836	8.834	0.002	3630	0.84319	8.43	80.00- 120.00	100.00	M5
7.498	7.497	0.001	15488	0.76071	7.61	418.73- 628.09	426.67	M5
7.616	7.617	-0.001	14306	0.72841	7.28	407.55- 611.32	394.10	M5
Average of Peak Concentrations =					7.77			
$ 34 Decachlorobiphenyl					CAS #: 2051-24-3			
12.448	12.446	0.002	2429	0.03508	0.351			(R)

AC
9:52 am, Jun 20, 2018

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: \\target_server\gg\chem\gc01.i\GC01LF12.b\1LF10047.D
Date : 12-JUN-2018 15:06
Client ID: WG230200-LCS2
Instrument: gc01.i
Sample Info: WG230200-4,SL4984
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000180

Data File: 1LF10047.D
Report Date: 20-Jun-2018 09:49

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LF12.b\GC01LF12.b\1LF10047.D
Lab Smp Id: WG230200-4 Client Smp ID: WG230200-LCS2
Inj Date : 12-JUN-2018 15:06
Operator : AC Inst ID: gc01.i
Smp Info : WG230200-4,SL4984
Misc Info : WG229644,WG230200,WG223323-2,SL4984-1
Comment :
Method : \\target_server\gg\chem\gc01.i\GC01LF12.b\PEST217.m\PEST217.m
Meth Date : 13-Jun-2018 10:46 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 13:22 Cal File: 1LD10100.D
Als bottle: 42 QC Sample: LCS2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: DoD5_tcLCS.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

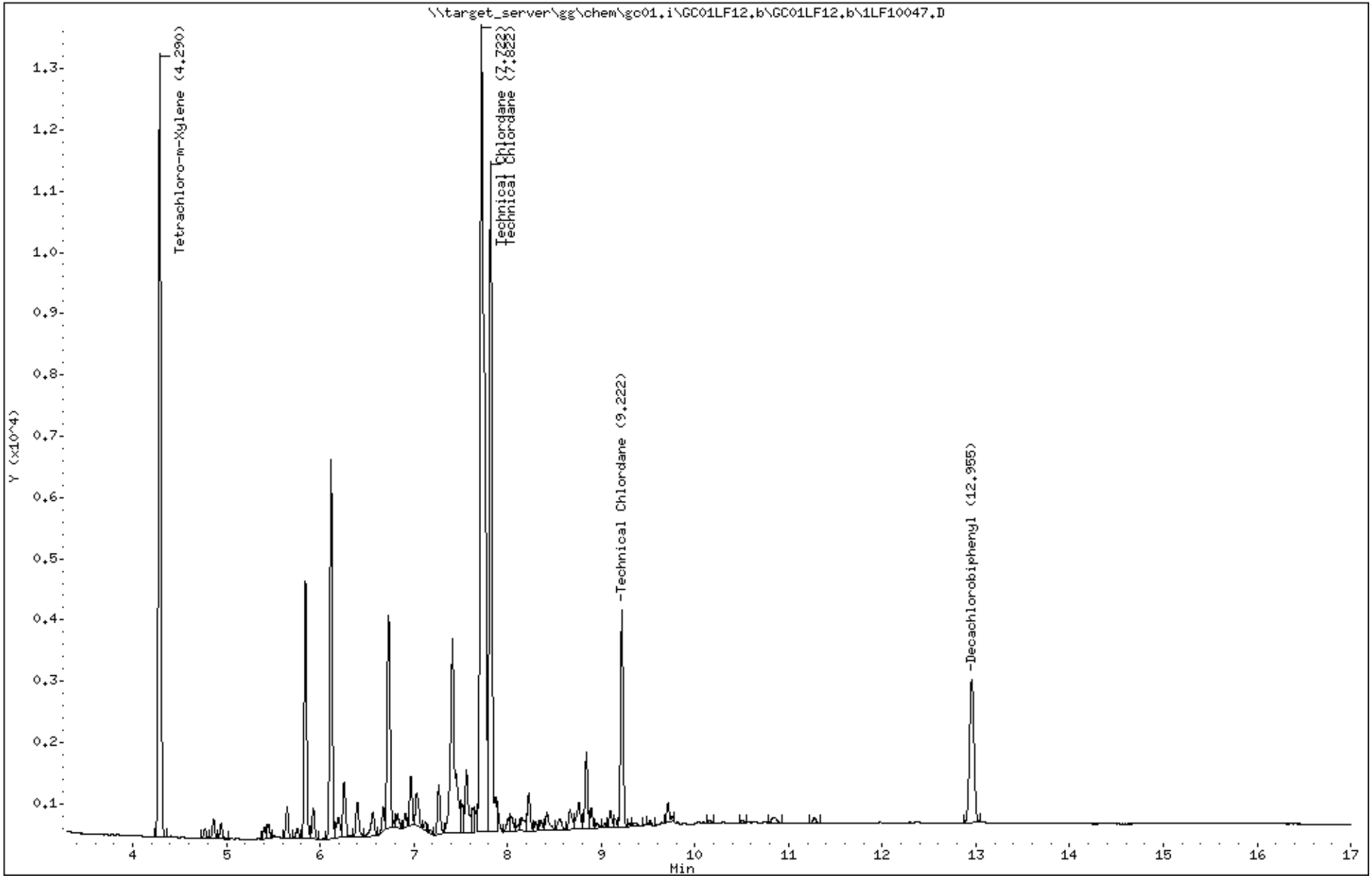
RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/mL)	FINAL (ug/L)	TARGET RANGE	RATIO	REVIEW CODE
$ 4 Tetrachloro-m-Xylene					CAS #: 877-09-8			
4.290	4.286	0.004	12777	0.07383	0.738			
14 Technical Chlordane					CAS #: 12789-03-6			
9.221	9.220	0.001	3535	0.77819	7.78	80.00- 120.00	100.00(M)	M5
7.721	7.723	-0.002	13172	0.79234	7.92	368.58- 552.87	372.62	M5
7.821	7.820	0.001	10940	0.91084	9.11	255.90- 383.86	309.48	M5
Average of Peak Concentrations =					8.27			
$ 34 Decachlorobiphenyl					CAS #: 2051-24-3			
12.955	12.951	0.004	2323	0.03464	0.346		(R)	

AC
9:52 am, Jun 20, 2018

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LF12.b\GC01LF12.b\1LF10047.D
Date : 12-JUN-2018 15:06
Client ID: WG230200-LCS2
Instrument: gc01.i
Sample Info: WG230200-4,SL4984
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000182

Katahdin
ANALYTICAL SERVICES

LCS Recovery Report

Client:
Lab ID: WG230200-2RA
Client ID: LCS
Project:
SDG: SL4984
LCS File ID: 1LF10085.D

Sample Date:
Received Date:
Extract Date: 12-JUN-18
Extracted By: DP
Extraction Method: SW846 3510C
Lab Prep Batch: WG230200

Analysis Date: 15-JUN-18
Analyst: AC
Analysis Method: SW846 8081B
Matrix: AQ
% Solids: NA
Report Date: 20-JUN-18

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
gamma-BHC	90.2	0.100	0.0902	ug/L	59-134
Heptachlor	86.2	0.100	0.0862	ug/L	54-130
Heptachlor Epoxide	95.0	0.100	0.0950	ug/L	61-133
Endrin	98.8	0.100	0.0988	ug/L	60-138
Methoxychlor	93.5	0.100	0.0935	ug/L	54-145
Tetrachloro-M-Xylene	65.0				44-124
Decachlorobiphenyl	66.0				41-131

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

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Data File: \\target_server\gg\chem\gc01.i\GC01LF15.b\1LF10085.D
Report Date: 20-Jun-2018 09:08

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LF15.b\1LF10085.D
Lab Smp Id: WG230200-2RA Client Smp ID: WG230200-LCS
Inj Date : 15-JUN-2018 13:21
Operator : AC Inst ID: gc01.i
Smp Info : WG230200-2RA,SL4984
Misc Info : WG229644,WG230200,WG223323-2,SL4984-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LF15.b\PEST217.m
Meth Date : 18-Jun-2018 12:48 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 08:42 Cal File: 1LD10088.D
Als bottle: 76 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: LCS.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
Compounds		RT	EXP RT	DLT RT	RESPONSE			
$	4 Tetrachloro-m-Xylene	4.209	4.198	0.011	10817	0.06507	0.130(M)	M4
	5 alpha-BHC	4.786	4.776	0.010	11047	0.04449	0.0890(M)	
	6 gamma-BHC	5.229	5.220	0.009	10119	0.04509	0.0902	
	7 beta-BHC	5.496	5.488	0.008	4420	0.04491	0.0898	
	8 delta-BHC	5.838	5.828	0.010	10128	0.04674	0.0935	
	9 Heptachlor	6.043	6.036	0.007	7756	0.04308	0.0862	
	10 Aldrin	6.523	6.513	0.010	7739	0.04327	0.0865	
	13 Heptachlor Epoxide	7.131	7.123	0.008	7362	0.04751	0.0950	
	15 gamma-Chlordane	7.501	7.493	0.008	7684	0.04832	0.0966	
	17 alpha-Chlordane	7.616	7.608	0.008	7540	0.04949	0.0990	
	20 Endosulfan I	7.681	7.673	0.008	6238	0.04409	0.0882	
	19 4,4'-DDE	7.886	7.880	0.006	7730	0.05047	0.101	
	21 Dieldrin	8.079	8.071	0.008	7006	0.04719	0.0944	
	23 Endrin	8.406	8.400	0.006	6424	0.04943	0.0988	
	24 4,4'-DDD	8.636	8.630	0.006	6407	0.05310	0.106	
	26 Endosulfan II	8.729	8.723	0.006	6008	0.04808	0.0962	
	28 Endrin Aldehyde	8.919	8.915	0.004	4643	0.04879	0.0976	
	27 4,4'-DDT	9.094	9.090	0.004	5633	0.04789	0.0958	
	32 Endosulfan sulfate	9.263	9.256	0.007	5392	0.04895	0.0979	
	29 Methoxychlor	9.813	9.806	0.007	2769	0.04677	0.0935(a)	
	33 Endrin Ketone	9.958	9.950	0.008	5677	0.04759	0.0952	
$	34 Decachlorobiphenyl	12.453	12.443	0.010	4563	0.06590	0.132	

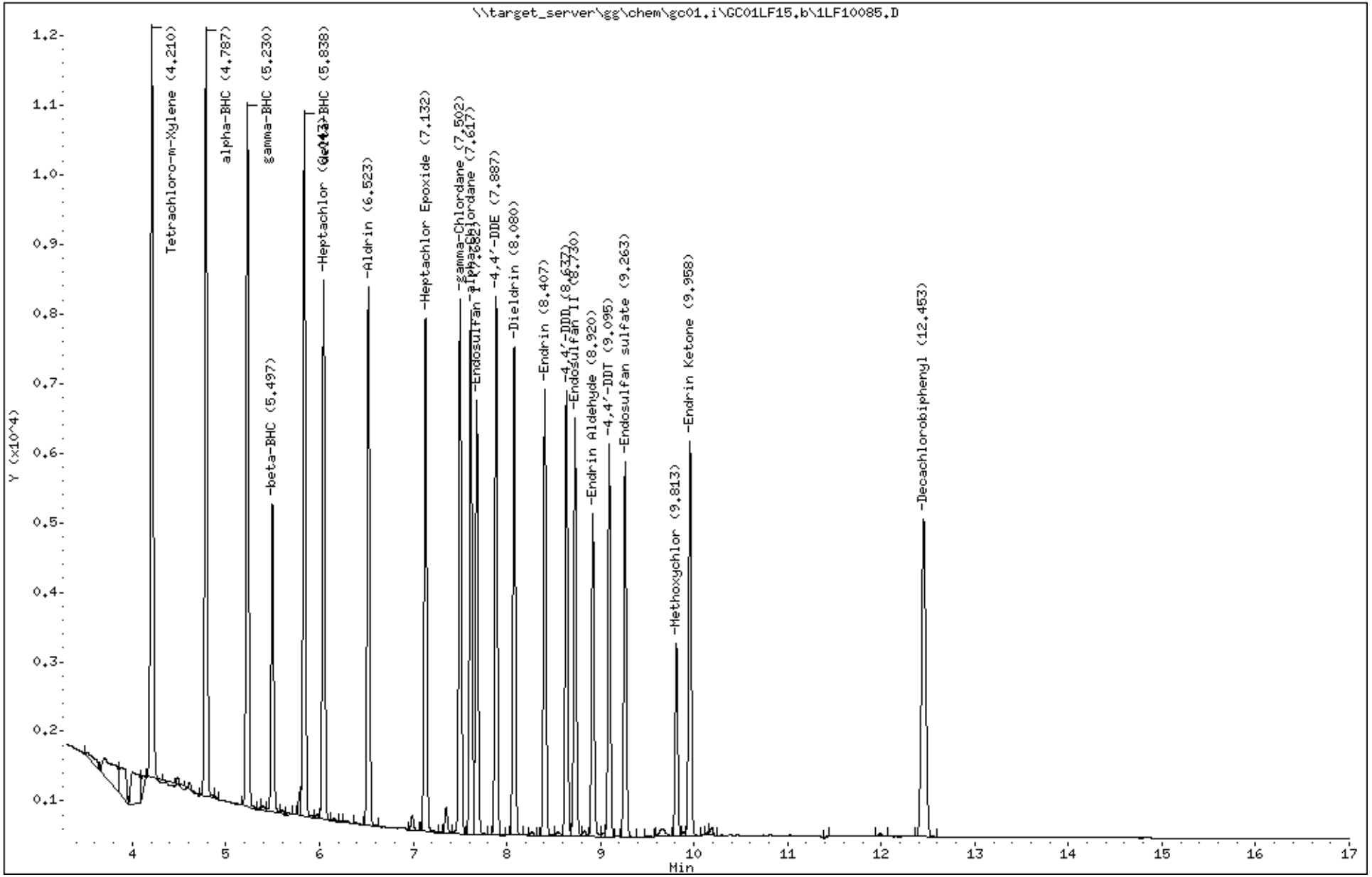
AC
9:52 am, Jun 20, 2018

Data File: \\target_server\gg\chem\gc01.i\GC01LF15.b\1LF10085.D
Report Date: 20-Jun-2018 09:08

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LF15.b\1LF10085.D
Date : 15-JUN-2018 13:21
Client ID: WG230200-LCS
Instrument: gc01.i
Sample Info: WG230200-2RA,SL4984
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000186

Data File: 1LF10085.D
Report Date: 20-Jun-2018 09:08

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LF15.b\GC01LF15.b\1LF10085.D
Lab Smp Id: WG230200-2RA Client Smp ID: WG230200-LCS
Inj Date : 15-JUN-2018 13:21
Operator : AC Inst ID: gc01.i
Smp Info : WG230200-2RA,SL4984
Misc Info : WG229644,WG230200,WG223323-2,SL4984-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LF15.b\PEST217.m\PEST217.m
Meth Date : 18-Jun-2018 12:55 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 13:22 Cal File: 1LD10100.D
Als bottle: 76 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: LCS.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00200	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

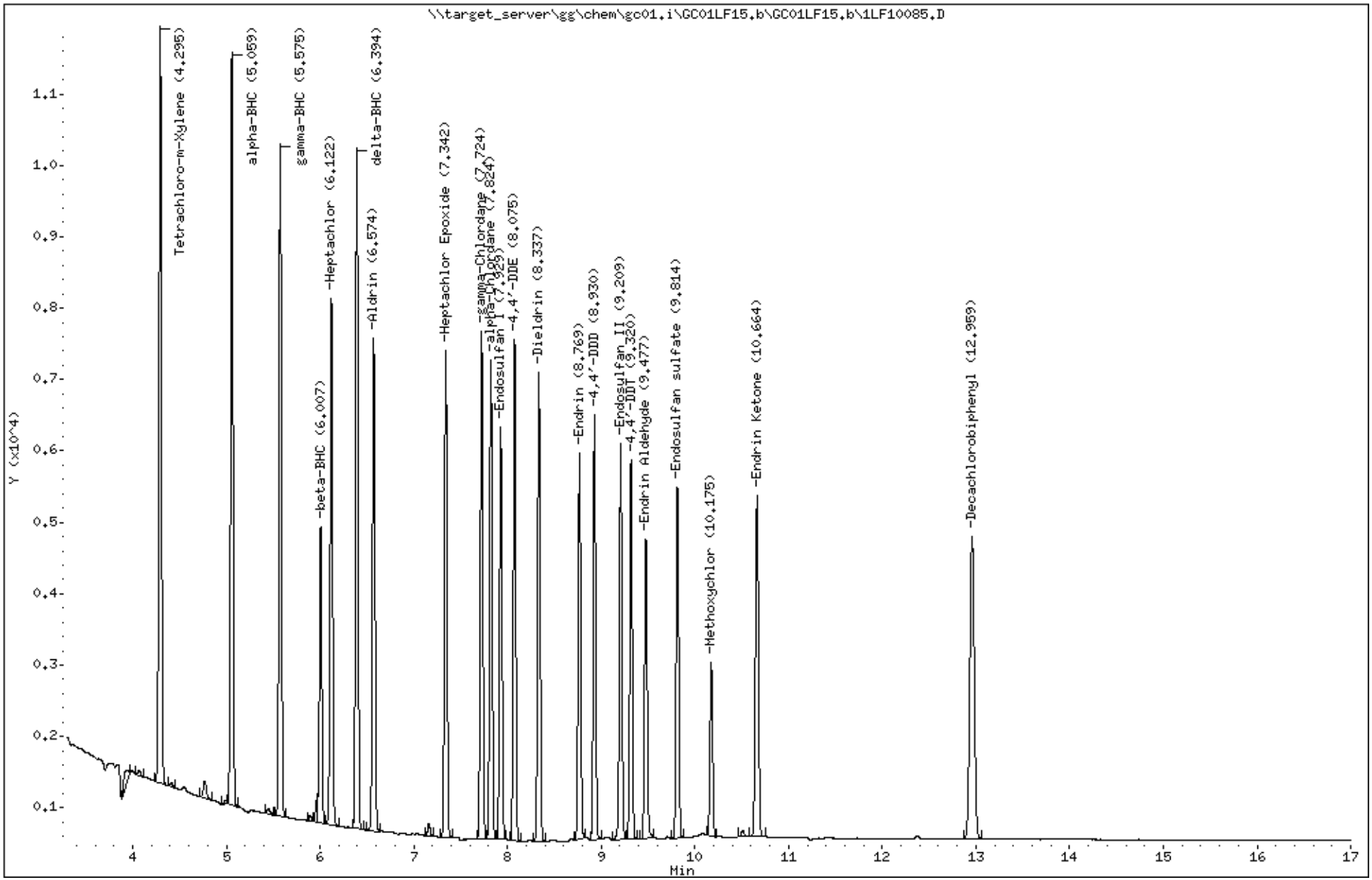
						CONCENTRATIONS		
						ON-COLUMN	FINAL	
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/L)	REVIEW CODE
$	4 Tetrachloro-m-Xylene	4.295	4.285	0.010	10602	0.06126	0.122	
	5 alpha-BHC	5.058	5.050	0.008	10532	0.04054	0.0811	
	6 gamma-BHC	5.575	5.568	0.007	9427	0.04100	0.0820	
	7 beta-BHC	6.006	6.000	0.006	4139	0.04150	0.0830	
	8 delta-BHC	6.393	6.385	0.008	9544	0.04304	0.0861	
	9 Heptachlor	6.121	6.113	0.008	7378	0.03902	0.0780	
	10 Aldrin	6.573	6.567	0.006	6903	0.03804	0.0761	
	13 Heptachlor Epoxide	7.341	7.335	0.006	6813	0.04266	0.0853	
	15 gamma-Chlordane	7.723	7.718	0.005	7106	0.04292	0.0858	
	17 alpha-Chlordane	7.823	7.818	0.005	6718	0.04297	0.0859	
	20 Endosulfan I	7.928	7.923	0.005	5778	0.04021	0.0804	
	19 4,4'-DDE	8.075	8.070	0.005	7016	0.04394	0.0879	
	21 Dieldrin	8.336	8.328	0.008	6567	0.04223	0.0844	
	23 Endrin	8.768	8.763	0.005	5412	0.04265	0.0853	
	24 4,4'-DDD	8.930	8.925	0.005	5958	0.04697	0.0939	
	26 Endosulfan II	9.208	9.203	0.005	5533	0.04367	0.0873	
	28 Endrin Aldehyde	9.476	9.472	0.004	4182	0.04604	0.0921	
	27 4,4'-DDT	9.320	9.315	0.005	5304	0.04434	0.0887	
	32 Endosulfan sulfate	9.813	9.808	0.005	4911	0.04360	0.0872	
	29 Methoxychlor	10.175	10.170	0.005	2424	0.04479	0.0896(a)	
	33 Endrin Ketone	10.663	10.657	0.006	4788	0.04438	0.0888	
$	34 Decachlorobiphenyl	12.958	12.948	0.010	4244	0.06329	0.126	

Data File: 1LF10085.D
Report Date: 20-Jun-2018 09:08

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).

Data File: \\target_server\gg\chem\gc01.i\GC01LF15.b\GC01LF15.b\1LF10085.D
Date : 15-JUN-2018 13:21
Client ID: WG230200-LCS
Instrument: gc01.i
Sample Info: WG230200-2RA,SL4984
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000189

Logbooks and Supporting Documents

KATAHDIN ANALYTICAL SERVICES, LLC. **Non-Volatile TCLP/SPLP Extraction Log**

I. EXTRACTION CONDITIONS

Extraction Method:	SW846 1311 (TCLP) ☑		Balance ID: BAL-15	Rotary Extractor ID: 2		
	SW846 1312 (SPLP) ☐		pH Meter ID: Orion 520A s/n 7422	pH Probe ID: 5733526-0038		
Solid pH Determination:	Date: 5-24-18	Analyst: AMJ	Room Thermometer ID: Dig-70	(Room Temp Criteria. 23(±2)°C)		
Rotary Extraction Started:	Date: 5-24-18	Time: 1355	Analyst: AMJ	RoomTemp(°C):	Start: 21.4	End: 22.1
Rotary Extraction Completed:	Date: 5-25-18	Time: 0720	Analyst: AMJ	Room Temp (°C):	Min. 21.2	Max. 22.3
Extraction Filtered:	Date: 5-25-18	Time: 0810	Analyst: AMJ	Filter Lot #: RMA330710		
Elapsed Extraction Time (HH:MM):	17:25 4.98	5% HNO_3 ID (used to wash filters): MSR10		HNO_3 Lot # (used to preserve extracts): MR		
Fluid 1 pH (Day of use): PBT1454A - 4.90 PBT1456A -		Fluid 1 Expiration Date: 5/15/19		Rotary Extractor Rotation Rate Checked? ✓		
Fluid 2 pH (Day of use):	NA	Fluid 2 Expiration Date:	NA	Criteria. 30 ± 2 RPM ✓ (29)		

II. EXTRACTION SETUP TCLP Fluid pH: #1 - 4.93 ± 0.05 #2 - 2.88 ± 0.05 SPLP Fluid pH: #1 - 4.20 ± 0.05 #2 - 5.00 ± 0.05

Katahdin Sample No. (include bottle ID)	Matrix	Check One: 100% Wet Solids- waste will yield no liquid upon filtration	Check One: < 100% Wet Solids (Perform Solids Determination below)	SPLP FLUID # (1 for east and 2 for west of Mississippi River)	TCLP pH Determination and Fluid Selection (date & init. above): Initial pH of solid phase: (if <5, use Fluid #1; if >5 add 3.5 mL of 1 N HCl)	TCLP pH Determination and Fluid Selection (date & init. above): pH after 1 N HCL addition (if <5, use Fluid #1; if >5, use Fluid #2	Extraction Setup: Volume of Extraction Fluid (mL)	Extraction Setup: Fluid # used	Extraction Setup: Associated Extraction Blank ID:	Extraction Setup: Weight of Waste (g)	pH of extract after extraction:	Extract to be analyzed for: Metals (M), SVOA (S), PEST (P), HERB (H), Cyanide (C)	Extraction Bottle ID (if applicable)
SL4502-2F	SL	✓	—	—	8.68	4.00	2000	1	PBT1454A	10001	6.24	M,P,H,S	25
PBT1456A	AQ	✓	—	—	—	—	2000	1	PBT1456A	NA	4.96	M,P,H,S	21

ME-001 – Revision 7 – 02/23/2018

AMJ 5/25/18

QAAA191 0000080

III. SOLIDS DETERMINATION

Date AQ Filtered: 5-23-18

Katahdin Sample No. (include bottle ID)	AQ or SL	Time Filt'd	A: Weight of filter (g)	B: Weight of filtrate vessel (g)	C: Weight of weigh boat + waste (g)	D: Weight of weigh boat + residue (g)	E: Weight of waste (C-D) (g)	F: Weight of filtrate vessel + filtrate (g)	G: Weight of liquid phase (F-B) (g)	H: Percent wet solids [(E-G)/E x 100%]	I: Weight of filter + dry solids (g)	J: Weight of dry solids (I-A) (g)	K: Percent dry solids (J/E x 100%)
SL4448-1H	AQ	9:40	1.13	18.14	124.54	18.18	106.36	123.67	105.53	0.78	1.14	0.01	0.009

IV. PHASE SEPARATION

Katahdin Sample No. (include bottle ID)	Matrix	Percent dry solids [1]: <0.5%	Percent dry solids [1]: >0.5%	L: Weight of filtrate vessel (g)	M: Weight of weigh boat + waste (g)	N: Weight of weigh boat + residue (g)	O: Weight of waste (M-N) (g)	P: Weight of filtrate vessel + filtrate (g)	Q: Weight of liquid phase (P-L) (g)	R: Volume of liquid phase (mL) [2]	S: Weight of wet solids (O - Q) (g)

1) If dry solids is <0.5%, filter sufficient volume of waste to support all required analyses. If dry solids >0.5% and wet solids <100%, perform phase separation (steps L – S above).

2) If miscible, proportionately combine pre-extraction filtrate with rotary extract. If not miscible, analyze aliquots separately and mathematically combine results.

AMJ 5/25/18

V. COMMENTS:

Reviewed By: [signature] Date: 5/30/18

ME-001 – Revision 7 – 02/23/2018

Katahdin Analytical Services 6000191

KATAHDIN ANALYTICAL SERVICES, LLC. **Non-Volatile TCLP/SPLP Extraction Log**

I. EXTRACTION CONDITIONS

Extraction Method:	SW846 1311 (TCLP) ☑ SW846 1312 (SPLP) ☐		Balance ID: BAL-15	Rotary Extractor ID: 2		
			pH Meter ID: Orion 520A s/n 7422	pH Probe ID: 5733526-003B		
Solid pH Determination:	Date: 6-6-18	Analyst: AMJ	Room Thermometer ID: Dig 71	(Room Temp Criteria. 23(±2)°C)		
Rotary Extraction Started:	Date: 6-6-18	Time: 1350	Analyst: AMJ	RoomTemp(°C):	Start: 21.4	End: 23.1
Rotary Extraction Completed:	Date: 6-7-18	Time: 0550	Analyst: AMJ	Room Temp (°C):	Min. 21.4	Max. 23.2
Extraction Filtered:	Date: 6-7-18	Time: 0734	Analyst: AMJ	Filter Lot #: R7MA33070		
Elapsed Extraction Time (HH:MM): 16:00		5% HNO_3 ID (used to wash filters): MS2032		HNO_3 Lot # (used to preserve extracts): MSR101		
Fluid 1 pH (Day of use): PBT1456A-4.95		Fluid 1 Expiration Date: 5/24/19		Rotary Extractor Rotation Rate Checked? ✓		
Fluid 2 pH (Day of use): NA		Fluid 2 Expiration Date: NA		Criteria. 30 ± 2 RPM (30)		

II. EXTRACTION SETUP

TCLP Fluid pH: #1 - 4.93 ± 0.05 #2 - 2.88 ± 0.05 SPLP Fluid pH: #1 - 4.20 ± 0.05 #2 - 5.00 ± 0.05

Katahdin Sample No. (include bottle ID)	Matrix	Check One: 100% Wet Solids-waste will yield no liquid upon filtration	Check One: < 100% Wet Solids (Perform Solids Determination below)	SPLP FLUID # (1 for east and 2 for west of Mississippi River)	TCLP pH Determination and Fluid Selection (date & init. above): Initial pH of solid phase: (if <5, use Fluid #1; if >5 add 3.5 mL of 1 N HCl)	TCLP pH Determination and Fluid Selection (date & init. above): pH after 1 N HCL addition (if <5, use Fluid #1; if >5, use Fluid #2	Extraction Setup: Volume of Extraction Fluid (mL)	Extraction Setup: Fluid # used	Extraction Setup: Associated Extraction Blank ID:	Extraction Setup: Weight of Waste (g)	pH of extract after extraction:	Extract to be analyzed for: Metals (M), SVOA (S), PEST (P), HERB (H), Cyanide (C)	Extraction Bottle ID (if applicable)
SL4984-1B	SL	✓	—	—	9.01	1.80	2000	1	PBT1456A	100.04 g	5.47	M, H, P, S, V,	34

ME-001 – Revision 7 – 02/23/2018

AMJ 6/7/18

QAAA191 0000086

III. SOLIDS DETERMINATION

Date AQ Filtered:			A	B	C	D	E	F	G	H	I	J	K
Katahdin Sample No. (include bottle ID)	AQ or SL	Time Flt'd	Weight of filter (g)	Weight of filtrate vessel (g)	Weight of weigh boat + waste (g)	Weight of weigh boat + residue (g)	Weight of waste (C-D) (g)	Weight of filtrate vessel + filtrate (g)	Weight of liquid phase (F-B) (g)	Percent wet solids [(E-G)/E x 100%]	Weight of filter + dry solids (g)	Weight of dry solids (I-A) (g)	Percent dry solids (J/E x 100%)

IV. PHASE SEPARATION

Katahdin Sample No. (include bottle ID)	Matrix	Percent dry solids [1] <0.5%	Percent dry solids [1] >0.5%	L Weight of filtrate vessel (g)	M Weight of weigh boat + waste (g)	N Weight of weigh boat + residue (g)	O Weight of waste (M-N) (g)	P Weight of filtrate vessel + filtrate (g)	Q Weight of liquid phase (P-L) (g)	R Volume of liquid phase (mL) [2]	S Weight of wet solids (O - Q) (g)

AMJ 6/7/18

1) If dry solids is <0.5%, filter sufficient volume of waste to support all required analyses. If dry solids >0.5% and wet solids <100%, perform phase separation (steps L – S above).

2) If miscible, proportionately combine pre-extraction filtrate with rotary extract. If not miscible, analyze aliquots separately and mathematically combine results.

V. COMMENTS:

Reviewed By [signature] Date 6/7/18

ME-001 – Revision 7 – 02/23/2018

QAAA191 0000087

SEP: PEST/PCB

KATAHDIN ANALYTICAL SERVICES, LLC.
ORGANIC EXTRACTIONS LOG - AQUEOUS PESTICIDE/PCB

Extraction Method: (check one)	SW846 3510 (SEP) x		SW846 3520 (CLLE)	SW846 3535 (SPE)
Analytical Method:(check one)	SW846 8081 x	SW846 8082 x	EPA 608	Other:
Surrogate ID: GC1880	Spike ID: GC1863 (PCB)		Spike ID: GC1869 (PEST)	—
Methylene Chloride Lot #: D7886	Hexane Lot #: D7291		Acetone Lot #: —	—
KI Starch Paper ID: 102017	pH Paper Lot # HC787135		Sample pH between 5 and 9? Yes	Note samples requiring pH adjustment in comments section.
$NaSO_4$ Lot # R7968001	Filter Paper Lot #: 14081047		Boiling Stones ID: 03272014	H_2SO_4 or NaOH Lot #: 19543
Nitrogen Bath Temperature: 36°	Vial Lot #: 402436		—	—
Prep Start Time: 12:45	Prep End Time: 13:45		CLLE Start Time: —	CLLE End Date & Time: —

Date Extracted	Ext. Init.	Sample ID	Initial Vol. (mL)	Surr. Vol.	Spike Vol.	Fraction: Pest	Fraction: PCB	Final Vol. mL	Date Conc.	Tray Location (PP47)	Initials	Clean-Up: GPC	Clean-Up: Flor.	Clean-Up: Acid Wash	Clean-Up: Other	Comments (PEST: R476025 / PCB: R476026)
5-30-18	DP	WG229287 -1 / WG229886	1000	0.20	NR	x	x	2mL	5-30-18	C 11	JMS			✓		
		WG229886 -2			0.20					J 12			✓			
		-4								D1						BS4 : GC1867
		-5	1000	1.00	0.20					2						MS : SL4628-1B
		-6	1010							3				✓		MSD: SL4628-1C
		WG229287 -2	1000	0.20	0.20	✓				4						
		-3								5						LCSD
		-4								6						TCX : GC1846
		-5								7						TCHLOR : GC1847
		-6	1010	1.00	1.00					8						MS: SL4628-1E
		-7	1030							9						MSD: SL4628-1F

Date Extracted	Ext. Init.	Sample ID	Initial Vol. mL	Surr. Vol.	Spike Vol.	Fraction: Pest	Fraction: PCB	Final Vol. mL	Date Conc.	Tray Location (PP47)	Initials	Clean-Up: GPC	Clean-Up: Flor.	Clean-Up: Acid Wash	Clean-Up: Other	Comments
5-30-18	DP	WG229287 -8	200	1.00	NR	x		10mL	5-30-18	D10	JMS					2cmls diluted to 100
		-9								11						PBT14564
		SL4498 -1H								12						PBT14574
		SL4592 -2F								E1						
		SL4620 -2C								2						
		-4C								3						
		SL4628-1A	1000	0.20		x	x	2mL		4				✓		
		-2A	1000							5						
		SL4630 -1H	200	1.00				10mL		6						2cmls diluted to 1000 mls
		SL3510-5/A	1000				x			7				✓		AE
		-54A	940							8						

Katahdin Analytical Services 6000193

SEP: PEST / PCB / 608

KATAHDIN ANALYTICAL SERVICES, LLC.
ORGANIC EXTRACTIONS LOG - AQUEOUS PESTICIDE/PCB

Extraction Method: (check one)	SW846 3510 (SEP) x	SW846 3520 (CLLE)	SW846 3535 (SPE)
Analytical Method:(check one)	SW846 8081 x / SW846 8082 x	EPA 608 x / Other:	
Surrogate ID: GC1880	Spike ID: GC1863	Spike ID: GC1869	—
Methylene Chloride Lot #: DT994-US	Hexane Lot #: DT291	Acetone Lot #: —	—
KI Starch Paper ID: 102017	pH Paper Lot # HC739245	Sample pH between 5 and 9? Yes	Note samples requiring pH adjustment in comments section.
$NaSO_4$ Lot # 27968001	Filter Paper Lot #: 14081047	Boiling Stones ID: 03272014	H_2SO_4 or NaOH Lot #: 177543
Nitrogen Bath Temperature: 36°	Vial Lot #: 402438	—	—
Prep Start Time: 1030	Prep End Time: 12:00	CLLE Start Time: —	CLLE End Date & Time: —

Date Extracted	Ext. Init.	Sample ID	Initial Vol. (mL)	Surr. Vol.	Spike Vol.	Fraction Pest	Fraction PCB	Final Vol. mL	Date Conc.	Tray Location (PP475)	Initials	Clean-Up GPC	Clean-Up Flor.	Clean-Up Acid Wash	Clean-Up Other	Comments
06-12-18	DP/AC	WG230200 WG230201 WG230202 -1	1000	0.20	NR	x	x	KF 6/12 ~~10.00~~ 2mL	06-12-18	C2	KF			✓		PEST: R478280 PCB: R478281
	DP/AC	WG230200 -2 WG230202		0.20	0.20			2mL		C3						608: R478282
	DP	WG230200 -3		1.00	1.00			10mL		C4						PEST/608
		-4		L	L					C5						TOX: GC1846
		WG230201 -2		1.00	1.00		x			C6				✓		TCHLOR: GC1847
		-3		L	L		L			C7				✓		PCB
																1254: GC1867

DP 06-12-18

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QAEX340

0000182

Date Extracted	Ext. Init.	Sample ID	Initial Vol. mL	Surr. Vol.	Spike Vol.	Fraction Pest	Fraction PCB	Final Vol. mL	Date Conc.	Tray Location	Initials	Clean-Up GPC	Clean-Up Flor.	Clean-Up Acid Wash	Clean-Up Other	Comments
06-12-18	DP	SL4984 -1B	200	1.00	NR	x		10.00	06-12-18	C8	KF					200 mls diluted to 1000 mls
		SL5164 -1K	1050				x			C9				✓		
		SL5165 -1K	970							C10				✓		
	DP/AC	SL5090 -1F	1060	0.20				2mL		C11						emulsion side-sep 608 centrifuge
	DP	SL5091-10 L	990	1.00			x	10mL		C12				✓		"emulsion, side sep"
		-11 I	1000							D1						"centrifuged"
		-21 J	1060							D2						
		-22 J	940							D3						
		SL5130 -5J	1000							D4						
		-6J	950							D5						"centrifuged"
		-7J	1020							D6						
		-8K	1010							D7						
		-14K	1060							D8						

DP 06-12-18

EX-002 – Revision 3 – 08/30/2017

QAEX340

0000183

Katahdin Analytical Services

GC Laboratory Instrument Runlog
Instrument: GC01
Amount Injected: 2 uL
Column Numbers: 473/474
Method: SW846 8011 / (8081) / 8082 / 8151
(circle) EPA 504.1 / 556 / 608

Standard	Standard ID

Date	Init.	Result File	Sample ID	Y/N	Analytical Workgroup	Method	Comments
2-16-18	AC	LB10185	MDL Tox	N	NA	Pest216	
		186					
		187					
		188					
		189	CCV				
			Change Liner / Change septa				
2-16-18		190	Prime			Pest217	
		191	Tox 1.0	Y	WG223321-1		P9025
		192	10		-2		P9024
		193	2.5		-3		50→200 P9024
		194	0.5		-4		P9026
		195	0.25		-5		50→200 P9025
		196	0.1		-6		20→200 P9025
		197	IWD		-7		P9028
		198	TC 0.5	Y	WG223322-1		P~~8041~~ 8947
		199	2.5		-2		50→200 P8946
		200	1.0		-3		20→200 P8946
		201	0.25		-4		P8948
		202	0.1		-5		50→250 P8947
		203	0.05		-6		20→200 P8947
		204	IWD		-7		P8945
		205	Extra 8 0.05	Y	WG223320-1		P8975
		206	0.25		-2		P8974
		207	0.1		-3		100→250 P8974
		208	0.025		-4		P8976
		209	0.01		-5		50→250 P8975
		210	0.005		-6		20→200 P8975
		211	IWD		-7		P8978
		212	EVAC	Y	WG223323-1		P9029
		213	IWDA3 0.05	Y	-2		P9031

Katahdin Analytical Services

GC Laboratory Instrument Runlog
Instrument: GC01
Amount Injected: 2 uL
Column Numbers: 473/474
Method: SW846 8011 / (8081) / 8082 / 8151
(circle) EPA 504.1 / 556 / 608

Standard	Standard ID	
EVAL	P9029	
INDAB 0.05 0.025	P9031	P9032
Tox 1.0 0.5	P9025	P9026
TC 0.5 0.25	P8947	P8948

Date	Init.	Result File	Sample ID	Y/N	Analytical Workgroup	Method	Comments
2-16-18	AC	LLB10214	INDAB 0.25	Y	WG223323-3	Pest217	50→200 P9030
		215	0.1		-4		20→200 P9030
		216	0.025		-5		P9032
		217	0.01		-6		50→250 P9031
		218	0.005		-7		20→200 P9031
2-17-18		219	INO	↓	-8		P8883
		220	WG222809-1	Y			
		221	-2	Y			
		222	SL0493-2	Y			
		223	-2DL	Y			1:4 100/400
		224	-3	Y			
		225	-4	Y			
		226	Tox 1.0	Y	-9		
		227	TC 0.5	Y	-10		
		228	INDAB 0.05	Y	-11		
		229	WG223367-1	Y			
		230	-2	Y			
		231	-3	Y			
		232	-4	Y			
		233	-5	Y			
		234	SL1057-1	Y			
		235	SL1072-1	Y			
		236	-3	Y			
		237	-5	Y			
		238	Tox 0.5	Y	-12		
		239	TC 0.25	Y	-13		
		240	INDAB 0.025	Y	-14		
		241	Prime			Form013	
		242	Form 100				
		243	75				

Katahdin Analytical Services

GC Laboratory Instrument Runlog
Instrument: GC01
Amount Injected: 2 uL
Column Numbers: 473/474
Method: SW846 8011 / (8081) / 8082 / 8151
(circle) EPA 504.1 / 556 / 608

Standard		Standard ID	
CVAL		PQ029	
INDAB 0.05	0.025	PQ031	PQ032
Tox 1.0	0.5	PQ025	PQ026
TC 0.5	0.25	PQ114	PQ115

Date	Init.	Result File	Sample ID	Y/N	Analytical Workgroup	Method	Comments
5-30-18	BF	ICE0168	INDAB 0.05	Y	WG229230-9	Per 817	
		169	Tox 1.0		-10		
		170	TC 0.5		-11		
		171	WG229287-1	Y			
		172	-2	Y			
		173	-3	Y			
		174	-4	Y			
		175	-5	Y			
		176	-6	Y			
		177	-7	Y			
		178	-8	Y			
		179	-9	Y			
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		185	-2	Y			
		186	SL4630-1	Y			
		187	SL4502-1DL	Y			1:20 50/1000
		188	Hexane	N			clark samples
		189	INDAB 0.025	Y	-12		
		190	Tox 0.5	Y	-13		
		191	TC 0.25	Y	-14		
		192	SL4329-1	Y			
		193	Hexane	N			clark sample
		194	INDAB 0.05	Y			2LA+B Sample matrix

Katahdin Analytical Services

GC Laboratory Instrument Runlog
Instrument: GC01
Amount Injected: 2 uL
Column Numbers: 473/474
Method: SW846 8011 / 8081 / 8082 / 8151
(circle) EPA 504.1 / 556 / 608

Standard	Standard ID	
EVAL	P9029	
INDAB 0.05 0.025	P9031	P9032
Tox 1.0 0.5	P9025	P9026
TC 0.5 0.25	P9114	P9115

Date	Init.	Result File	Sample ID	Y/N	Analytical Workgroup	Method	Comments
6-6-18	AC	ILE10031	Tox 0.5	Y	WG229644	Pest217	
6-12-18		32	Rinse	N			
		33	EVAL	Y	-4		
		34	INDAB 005	Y	-5		
		35	WG230024-1				
		36	↓ -2				1260 contamination
		37	SL5043-1				TCX↓A+B
		38	↓ -2				TCX↓A+B
		39	↓ -3				TCX↓A+B
		40	Hexane	N			
		41	Tox 0.5	Y	-6		
		42	TC 0.25	Y	-7		
		43	INDAB 0.025	Y	-8		DDT/Meth↓A+B
		44	WG230200-1	N			
		45	↓ -2	↓			
		46	WG230200-3	Y			DCB↓A+B
		47	↓ -4	Y			DCB↓A+B
		48	SL4984-1	N			
		49	SL5164-1	↓			
		50	SL5165-1	↓			
		51	Tox 1.0	Y	-17		
		52	TC 0.5	Y	-18		
		53	INDAB 0.05	Y			
		54	1660-1.0	Y			
		55	SL5090-1	Y			
		56	Hexane	N			
↓	↓	57	INDAB 0.025	Y	↓	↓	2,4A+B
6-13-18		58	Rinse	N	WG230282	504.1/608	
		59	ICAL 0.05	Y			
↓	↓	60	↓ 0.1	Y	↓	↓	

Katahdin Analytical Services

GC Laboratory Instrument Runlog
Instrument: GC01
Amount Injected: 2 uL
Column Numbers: 473/474
Method: SW846 (8011) / (8081) / 8082 / 8151
(circle) EPA 504.1 / 556 / 608

Standard	Standard ID

Date	Init.	Result File	Sample ID	Y/N	Analytical Workgroup	Method	Comments
6-13-18	AC	ILF10061	ICAL 0.25	Y	WG230282	504/108	
		62	0.5	Y			
		63	1.0	Y			
		64	2.5	Y			
		65	QC INO	Y			
		66	MDL	Y			
		67	IDBCM	Y			
		68	WG230282-1	Y			
		69	-2	Y			
		70	SL4835-1	Y			
		71	-2	Y			
		72	-3	Y			
		73	-4	Y			
		74	-5	Y			
		75	-6	Y			
		76	-7	Y			
		77	CV 0.5	Y			
6-15-18		78	Prime	N	WG229644	Pest217	
		79	Eval	N			breakdown check
		80	Tox 0.5	Y	-9		P9029
		81	TC 0.25	Y	-10		P9025
		82	EVAL	Y	-11		P9029
		83	IWDAB 0.025	Y	-12		2WB P9032
		84	WG230200-1RA	Y			
		85	-2RA	Y			
		86	SL4984-1	Y			
		87	SL5164-1	Y			
		88	SL5165-1	Y			
		89	WG230264-1	Y			
		90	-2	Y			

Katahdin Analytical Services

GC Laboratory Instrument Runlog
Instrument: GC01
Amount Injected: 2 uL
Column Numbers: 473/474
Method: SW846 8011 / 8081 / 8082 / 8151
(circle) EPA 504.1 / 556 / 608

Standard	Standard ID
EVAL	P9029
IWDAB 0.05 0.025	P9158 P9159
Tox 1.0 0.5	P9025 P9026
TC 0.5 0.25	P9114 P9115

Date	Init.	Result File	Sample ID	Y/N	Analytical Workgroup	Method	Comments
6-15-18	AC	1LF10091	W6230264-3	Y	W6~~230~~29644 AC	Pest217	
		92	-4	Y	W6229644		
		93	SL5166-4	Y			
		94	-5	Y			
		95	Tox 1.0	Y	-13		
		96	TC 0.5	Y	-14		
		97	IWDAB 0.05	Y	-15		
		98	W6230264-5	Y			
		99	-6	Y			
		100	SL5153-1	Y			
		101	-3	Y			
		102	-5	Y			
		103	SL5166-1	Y			
		104	-6	Y			
		105	-7	Y			
		106	-3	Y			
		107	-2	Y			TCX↓A DCB↑A
		108	Hexane	N			very dark sample
		109	IWDAB 0.025	Y	-16		2dA+B Matrix
		110	Hexane	N			
6-18-18		111	Prime	N	W6230599	CPCTA24	
		112	ICAL 50	Y			
		113	2	Y			
		114	5	Y			
		115	10	Y			
		116	25	Y			
		117	75	Y			
		118	100	Y			
		119	W6230599-1	Y			TCX↓B
		120	-2	Y			

ATI, INC.
CORNHUSKER
ARMY AMMUNITION PLANT
SL7420

KATAHDIN ANALYTICAL SERVICES
600 TECHNOLOGY WAY
SCARBOROUGH, ME 04074

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SAMPLE DATA PACKAGE

NARRATIVE
KATAHDIN ANALYTICAL SERVICES
ATI, INC.
CORNHUSKER ARMY AMMUNITION PLANT
SL7420

Sample Receipt

The following samples were received on August 08, 2018 and were logged in under Katahdin Analytical Services work order number SL7420 for a hardcopy due date of August 20, 2018.

KATAHDIN	ATI
Sample No.	Sample Identification
SL7420-1	CHAAP-IDW-SOIL-080618-S
SL7420-2	CHAAP-IDW-SOIL-080618-N

The samples were logged in for the analyses specified on the chain of custody form. All problems encountered and resolved during sample receipt have been documented on the applicable chain of custody forms.

We certify that the test results provided in this report meet all the requirements of the NELAP standards unless otherwise noted in this narrative or in the Report of Analysis.

We certify that the test results provided in this report are accredited under the laboratory's ISO/IEC 17025:2005 and DoD-ELAP accreditation issued by the ANSI-ASQ National Accreditation Board. Refer to certificate and scope of accreditation L2223.

Analytes which are reported but not listed on our ANAB scope of accreditation will be "^" flagged and the following language will be included in the case narrative for all DoD compliant work: "^" Indicates this analyte is not included on Katahdin Analytical Services DoD-ELAP Scope of Accreditation.

Sample analyses have been performed by the methods as noted herein.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact your Katahdin Analytical Services Project Manager, **Ms. Heather Manz**. This narrative is an integral part of the Report of Analysis.

Organics Analysis

The samples of Work Order # SL7420 were analyzed in accordance with "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846, 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998 & 2004, Office of Solid Waste and Emergency Response, U.S. EPA, and/or for the specific methods listed below or on the Report of Analysis.

8270D TCLP Analysis

The independent check standard (file U1769) associated with the initial calibration on the U instrument on 07/24/2018 had a high concentration for the target analyte pentachlorophenol, which exceeded the DoD QSM acceptance limit of ±20% of the expected value from the ICAL. The Independent Check

Report consists of the full list of spiked analytes, but only the client's list of target analytes are evaluated.

Note: The Form VII has a column for %D that is set to 20%. The DoD QSM 5.0 criterion for an opening CV is 20%D and a closing CV is 50%D. All of the compounds in the CV's were evaluated to either 20% criteria for opening CVs or 50% criteria for closing CVs.

8260B TCLP Analysis

The closing calibration verification standard (CV) (file P7227) had a high response for the target analyte tetrachloroethene that resulted in a %D that exceeded the DoD QSM acceptance limit of ±20%. If a closing CV fails, the DoD QSM allows for the analysis of two additional CVs which do not need to be within the 12 hour window. The two additional CV's (files P7228 and P7229) were acceptable and all three CVs are reported.

The TCLP blank associated with samples SL7420-1 and 2 was extracted and analyzed on a different day than the samples. Therefore, the report includes a Report of Analysis (ROA) for the TCLP blank but no supporting data. The supporting data for the sample and its associated extracted QC are included in the report. The blank had a high recovery for the surrogate 1,2-dichloroethane-d4 that was outside of the DoD QSM acceptance limits. Since a high recovery would indicate a high bias and there were no target analytes detected above the MDL, no further action was taken.

8151A TCLP Analysis

There were no protocol deviations or observations noted by the organics laboratory staff for this analysis.

8081B TCLP Analysis

Sample SL7420-1 had a high recovery for the surrogate DCB on channel B that was outside of the laboratory established acceptance limits. Since a high recovery would indicate a high bias and no target analytes were detected in the sample, no further action was taken.

The LCS WG234964-4 had high recoveries for the target analyte technical chlordane and the surrogates TCX and DCB on one or both channels that were outside of the DoD QSM and laboratory established acceptance limits, respectively. Since a high recovery would indicate a high bias and the affected target analyte was not detected in the associated samples, no further action was taken.

The opening calibration verification standard (file 1LH10142) had high response for the target analyte technical chlordane on both channels that resulted in a %D that was outside of the DoD QSM acceptance criteria of ±20%. Since a high response would indicate a high bias and the affected target analyte was not detected in the associated samples, no further action was taken.

There were no other protocol deviations or observations noted by the organics laboratory staff.

Metals Analysis

The samples of Katahdin Work Order SL7420 were prepared and analyzed for metals in accordance with the "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846. 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA and IIIB 1996, 1998 & 2004, Office of Solid Waste and Emergency Response, U.S. EPA.

TCLP Extraction (EPA Method 1311)

TCLP Fluid Blank PBT1470B is an aqueous sample that was subjected to TCLP extraction on 08/09/18 in accordance with USEPA Method 1311.

Katahdin Sample Numbers SL7420-(1, 2) are solid samples that were subjected to TCLP extraction on 08/09/18 in accordance with USEPA Method 1311. The TCLP fluid blank identified as PBT1470B is associated with these samples. The measured concentrations of contaminants in this TCLP fluid blank are listed in the Form 3P in the accompanying data package. The measured barium concentration (90.8 ug/L) in TCLP fluid blank PBT1470B is above the laboratory's reporting limit. However, because the concentrations of barium in the TCLP blank and in the associated TCLP extracts are well below the regulatory limit, reanalysis was not required.

Inductively-Coupled Plasma Atomic Emission Spectroscopic Analysis (ICP)

Aqueous-matrix TCLP Fluid Blank PBT1470B and TCLP extracts of Katahdin Sample Numbers SL7420-(1,2) were digested for ICP analysis on 08/10/18 (QC Batch LH10ICW1) in accordance with USEPA Method 3010A.

All TCLP extracts were diluted by a factor of five during digestion to reduce matrix interferences during ICP analysis. Per client request, samples which required an additional dilution during analysis have been identified using a "D" flag in the qualifier column on all Form 1s.

ICP analyses of Katahdin Work Order SL7420 sample digestates were performed using a Thermo iCAP 6500 ICP spectrometer in accordance with USEPA Method 6010C. All samples were analyzed within holding times and all analytical run QC criteria were met.

Analysis of Mercury by Cold Vapor Atomic Absorption (CVAA)

Aqueous-matrix TCLP Fluid Blank PBT1470B and TCLP extracts of Katahdin Sample Numbers SL7420-(1,2) were digested for mercury analysis on 08/10/18 (QC Batch LH10HGW1) in accordance with USEPA Method 7470A.

Mercury analysis of the Katahdin Work Order SL7420 sample digestates were performed using a Cetac M6100 automated mercury analyzer in accordance with USEPA Method 7470A. All analytical run QC criteria were met and all samples were analyzed within holding times.

Reporting of Metals Results

Per client request, analytical results for client samples on Form I and preparation blanks on Form IIIP have been reported using the laboratory's limits of detection (LOD). All results were evaluated down to the laboratory's method detection limits (MDLs). Results that fall between the MDL and the LOQ are flagged with "J" in the C-qualifier column, and the measured concentration appears in the concentration column. Results that are less than the MDL are flagged with "U" in the C-qualifier column, and the LOD is listed in the concentration column. These LOQs, MDLs and LODs have been adjusted for each sample based on the sample amounts used in preparation and analysis.

Analytical results on Forms VA, VD, VII, and IX for client samples, matrix QC samples (duplicates and matrix spikes), and laboratory control samples have been reported down to the laboratory's method detection limits (MDLs). Analytical results that are below the MDLs are flagged with "U" in the C-qualifier column, and the LOD is listed in the concentration column.

Analytical results for instrument run QC samples (ICVs, ICBs, etc.) have been reported down to the laboratory's instrument detection limits (IDLs).

IDLs, LODs, MDLs, and LOQs are listed on Form 10 of the accompanying data package.

Wet Chemistry Analysis

The sample of Work Order SL7420 was analyzed in accordance with the specific methods listed on the Report of Analysis.

Analyses for reactive cyanide, reactive sulfide, ignitability, paint filter, and pH were performed according to "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA,III, IIIA and IIIB 1996, 1998 & 2004, Office of Solid Waste and Emergency Response, U.S. EPA.

All Wet Chemistry results were evaluated to Katahdin Analytical Services' Method Detection Limits (MDL). Measured concentrations that fall between the MDL and Katahdin's Limit of Quantitation (LOQ) are flagged "J". Measured concentrations that are below the MDL are flagged "U" and reported as "U LOD", where "LOD" is the numerical value of the Limit of Detection.

All analyses were performed within analytical holding times. All quality control criteria were met.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Quality Assurance Officer, or their designee, as verified by the following signature.

Leslie Dimond
08.27.18

Leslie Dimond
Quality Assurance Officer

Katahdin Analytical Services, Inc.

Manual Integration Codes For GC/MS, GC, HPLC and/or IC

M1	Peak splitting.
M2	Well defined peaks on the shoulders of the other peaks.
M3	There is additional area due to a coeluting interferant.
M4	There are negative spikes in the baseline.
M5	There are rising or falling baselines.
M6	The software has failed to detect a peak or misidentified a peak.
M7	Excessive peak tailing.
M8	Analysis such as GRO, DRO and TPH require a baseline hold.
M9	Peak was not completely integrated as in GC/MS.
M10	Primary ion was correctly integrated, but secondary or tertiary ion needed manual integration as in GC/MS.
M11	For GC analysis, when a sample is diluted by 1:10 or more, the surrogate is set to undetected and then the area under the surrogate is manually integrated.
M12	Manual integration saved in method due to TurboChrom floating point error.

Katahdin Analytical Services, LLC.

Sample Receipt Condition Report

Client: ATI	KAS PM: MHM	Sampled By: Client
Project:	KIMS Entry By: SO	Delivered By: Fedex
KAS Work Order#: SL7419	KIMS Review By: AMH	Received By: SO
SDG #:	Cooler: 1 of 5	Date/Time Rec.: 8-8-18 845

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?	✓				
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?			X		
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓				Temp (°C): 0.5
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals (except Hg soil) analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt to begin cooling process) or insufficient ice may not meet certain regulatory requirements and may invalidate certain data.
If yes, was there sufficient ice to meet temperature requirements?	✓				
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metals (except Hg soil) analysis.
6. Volatiles: **Aqueous:** No bubble larger than a pea?	✓				
Soil/Sediment:					
Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
D.I. Water - Received within 48 hour HT?				✓	
Air: Refer to KAS COC for canister/flow controller requirements.	√ if air included				
7. Trip Blank present in cooler?	✓				
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2	✓				
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments.

Only one Aq. Trip blank rec'd. No trip blank for SL7420. All VOA samples were rec'd in same cooler for both work orders (cooler #4)

Katahdin Analytical Services, LLC. — Sample Receipt Condition Report

Client: ATI	KAS PM: HHM	Sampled By: Client
Project:	KIMS Entry By: SO	Delivered By: Fedex
KAS Work Order#: SL7419	KIMS Review By: AMH	Received By: SO
SDG #:	Cooler: 2 of 5	Date/Time Rec.: 8-8-18 845

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?	✓				
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?			X		
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓				Temp (°C): 3.7
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals (except Hg soil) analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt to begin cooling process) or insufficient ice may not meet certain regulatory requirements and may invalidate certain data.
If yes, was there sufficient ice to meet temperature requirements?	✓				
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metals (except Hg soil) analysis.
6. Volatiles:					
Aqueous: No bubble larger than a pea?	JCB WAS			✓	
Soil/Sediment:					
Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
D.I. Water - Received within 48 hour HT?				✓	
Air: Refer to KAS COC for canister/flow controller requirements.	√ if air included			✓	
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2				✓	
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments.

Katahdin Analytical Services, LLC. — Sample Receipt Condition Report

Client: ATI	KAS PM: MHM	Sampled By: Client
Project:	KIMS Entry By: SO	Delivered By: Fedex
KAS Work Order#: SL7419	KIMS Review By: AMH	Received By: SO
SDG #:	Cooler: 3 of 5	Date/Time Rec.: 8-8-18 845

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?	✓				
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?			X		
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓				Temp (°C): 4.6
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals (except Hg soil) analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt to begin cooling process) or insufficient ice may not meet certain regulatory requirements and may invalidate certain data.
If yes, was there sufficient ice to meet temperature requirements?	✓				
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metals (except Hg soil) analysis.
6. Volatiles:					
Aqueous: No bubble larger than a pea?				✓	
Soil/Sediment:					
Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
D.I. Water - Received within 48 hour HT?				✓	
Air: Refer to KAS COC for canister/flow controller requirements.	√ if air included				
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved?					
Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2				✓	
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments.

Katahdin Analytical Services, LLC.

Sample Receipt Condition Report

Client: ATI	KAS PM: MHM	Sampled By: Client
Project:	KIMS Entry By: SO	Delivered By: Fedex
KAS Work Order#: SL7419 | 7420	KIMS Review By: AMH	Received By: SO
SDG #:	Cooler: 4 of 5	Date/Time Rec.: 8-8-18 845

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?	✓				
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?			X		
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓				Temp (°C): 3.0
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals (except Hg soil) analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt to begin cooling process) or insufficient ice may not meet certain regulatory requirements and may invalidate certain data.
If yes, was there sufficient ice to meet temperature requirements?	✓				
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metals (except Hg soil) analysis.
6. Volatiles: **Aqueous:** No bubble larger than a pea?	✓				
Soil/Sediment: Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
D.I. Water - Received within 48 hour HT?				✓	
Air: Refer to KAS COC for canister/flow controller requirements.	√ if air included				
7. Trip Blank present in cooler?	✓				
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2	✓				
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments.

Katahdin Analytical Services, LLC.

Sample Receipt Condition Report

Client: ATI	KAS PM: MHM	Sampled By: Client
Project:	KIMS Entry By: SO	Delivered By: Fedex
KAS Work Order#: SL7419	KIMS Review By: AMH	Received By: SO
SDG #:	Cooler: 5 of 5	Date/Time Rec.: 8-8-18 845

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?	✓				
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?			X		
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓				Temp (°C): 4.8
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals (except Hg soil) analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt to begin cooling process) or insufficient ice may not meet certain regulatory requirements and may invalidate certain data.
If yes, was there sufficient ice to meet temperature requirements?	✓				
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metals (except Hg soil) analysis.
6. Volatiles: **Aqueous:** No bubble larger than a pea?				✓	
Soil/Sediment:				✓	
Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
D.I. Water - Received within 48 hour HT?				✓	
Air: Refer to KAS COC for canister/flow controller requirements.	√ if air included				
7. Trip Blank present in cooler?				✓	
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2				✓	
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments.

Allison Harbottle

From: Spies, Jennifer <jspies@hgl.com>
Sent: Thursday, August 9, 2018 9:15 AM
To: Allison Harbottle
Subject: RE: Question about samples

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Allison,
We need TCLP run on the highlighted analyses. thanks!

Address: 8220 Rumsey Road, Suite 100 City: Columbia State: MD Zip Code: 21045

Purchase Order #: Proj. Name/No.: Katahdin Quote #:

Bill (if different than above): Address:

Sampler (Print/Sign): Stuart Cameron (ATI) Copies To: Ryan Sullivan / Jennifer Spies

LAB USE ONLY Work Order #: SL7420
Remarks: Katahdin Project Number:

Shipping Info: FEDEX UPS CLIENT
Airbill No:
Temp C Temp Blank Intact Not Intact

	Sample Description	Time Collected	Date Collected	Matrix	No. of Containers	Analysis and Container Type Preservatives: VOCs	Filt. N Paint Filter Test (9095B)	Filt. N Flash Point (1010A)	Filt. N pH (9045D)	Filt. N Cyanide (SW846 7.3.3.2)	Filt. N Sulfide (SW846 7.3.4.2)	Filt. N TCLP VOCs	Filt. N TCLP (1311)	Filt. N Solid SVOCs (8270C)	Filt. N Solid Metals (6010/7471B)
1	CHAAP-IDW-SOIL-080618-S	14:00	8/6/2018	Soil	3		X	X	X	X	X	X	X	X	X
2	CHAAP-IDW-SOIL-080618-N	14:10	8/6/2018	Soil	3		X	X	X	X	X	X	X	X	X
2	TB-070618	09:00	5/15/2018	AQ	2	X									
	- End of Samples														

Jennifer Spies
HGL
85 NE Interstate Loop 410, Suite 605
San Antonio, TX 78216
phone: 512-291-3588

0000012

www.hgl.com

From: Allison Harbottle <aharbottle@katahdinlab.com>
Sent: Wednesday, August 08, 2018 3:26 PM
To: Spies, Jennifer <jspies@hgl.com>
Subject: Question about samples

Good afternoon Jennifer –

We received IDW samples today from the Cornhusker site. Can you confirm that TCLP is only requested on the VOC analysis and that we are to run totals for all other analyses? I want to make sure this isn't a mistake on the chain (attached)

Regards,
Allison Harbottle
Client Accounts Manager
aharbottle@katahdinlab.com

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Scarborough, ME, 04074
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Consider the Environment before printing this email.

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Katahdin ANALYTICAL SERVICES
600 Technology Way
P.O. Box 540
Scarborough, ME 04070
Tel: (207) 874-2400
Fax: (207) 775-4029

Chain of Custody

Client: **ATI INC.**	Contact: **David Nelson**	Phone #: 410-992-3424	Fax #: ( )
Address: 9220 Rumsey Road, Suite 100	City: Columbia	State: MD	Zip Code: 21045
Purchase Order #:	Proj. Name/No.:		Katahdin Quote #:
Bill (if different than above):		Address:	
Sampler (Print/Sign): Stuart Cameron (ATI)			Copies To: Ryan Sullivan / Jennifer Spies

LAB USE ONLY

Work Order #:
Katahdin Project Number: SL7420

Remarks:

Shipping Info: FEDEX UPS CLIENT
Airbill No:
Temp C Temp Blank Intact Not Intact

	Sample Description	Time Collected	Date Collected	Matrix	No. of Containers	Analysis and Container Type Preservatives: VOCs Filt. N	Paint Filter Test (9095B) Filt. N	Flash Point (1010A) Filt. N	pH (9045D) Filt. N	Cyanide (SW846 7.3.3.2) Filt. N	Sulfide (SW846 7.3.4.2) Filt. N	TCLP VOCs Filt. N	TCLP (1311) Filt. N	Solid SVOCs (8270C) Filt. N	Solid Metals (6010/7471B) Filt. N	Solid Herb/Pest (8151A/8081B) Filt. N
1	CHAAP-IDW-SOIL-080618-S	14:00	8/6/2018	Soil	3		X	X	X	X	X	X	X	X	X	X
2	CHAAP-IDW-SOIL-080618-N	14:10	8/6/2018	Soil	3		X	X	X	X	X	X	X	X	X	X
2	TB-070618	09:00	5/15/2018	AQ	2	X										
	- End of Samples															

COMMENTS: Samples held on Ice overnight to be shipped with groundwater samples collected on 8/7/2018.

Relinquished By: Stuart Cameron (ATI)	Date/Time 8/7/2018 17:00	Received By: 8/8 845	Relinquished By:	Date/Time	Received By:
Relinquished By:	Date/Time	Received By:	Relinquished By:	Date/Time	Received By:

All laboratory and field work shall be governed by KATAHDIN's Standard Terms and Conditions, except where a Purchase Order or Contract supersede.

00000014

Katahdin
ANALYTICAL SERVICES

Katahdin Analytical Services

Login Chain of Custody Report (lno1)

Aug. 27, 2018
12:12 PM

Login Number: SL7420

Account: ATI001 Web
ATI, Inc.

Project: ATI-CORN-AAP
Cornhusker Army Ammunition Plant

Primary Report Address:
David Nelson
ATI, Inc.
9220 Rumsey Road
Suite 100
Columbia,MD 21045
david.nelson@atiinc.com

Primary Invoice Address:
David Nelson
ATI, Inc.
9220 Rumsey Road
Suite 100
Columbia,MD 21045

Report CC Addresses:
Invoice CC Addresses:

Quote/Incoming: ATI-CORN-AAP

Login Information:

ANALYSIS INSTRUCTIONS	:	FDS, DOD 5.0, ND to LOD w/ J flags. Report all valid runs. Summary needs all forms. GC/MS IS eval window +/- 10s. Metals ICSA - 2 sigfigs. Flag dilutions w/ "D" qualifier. Include any excedences in the case narrative. Limits in KIMS match QAPP. Hold extracts for 60 days. 8260B, 8270DSIM, 8330B, 6020A/7471A/7471B. No explo soil prep needed (8330B Mod). Reprep failing hex cr matrix QC & parent samples, include info in narrative. Samples w/ "CHAAP-21B" may have high VOC hits.
CHECK NO.	:	
CLIENT PO#	:	PN:16-027
CLIENT PROJECT MANAGE	:	
CONTRACT	:	W9182F-16-D-0014
COOLER TEMPERATURE	:	3.0
DELIVERY SERVICES	:	Fedex
EDD FORMAT	:	ATI-(ERIS)
LOGIN INITIALS	:	SO
PM	:	HHM
PROJECT NAME	:	Cornhusker Army Ammunition Plant
QC LEVEL	:	IV
REPORT INSTRUCTIONS	:	SDS needs all forms. Check EDD, if errors, fix them or contact client (Jeff Martin763-736-4533 jmartin@hgl.com). Upload PDF & EDD to SDS. Email david.nelson@atiinc.com, seichelberger@hgl.com, rsullivan@hgl.com, Teresa.offner@atiinc.com, jspies@hgl.com to tell them report is uploaded. Email invoice to jspies@hgl.com, david.nelson@atiinc.com and seichelberger@hgl.com.
SDG ID	:	
SDG STATUS	:	
VERBAL TAT	:	5

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SL7420-1	CHAAP-IDW-SOIL-080618-S	06-AUG-18 14:00	08-AUG-18		15-AUG-18	20-AUG-18	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW1010-IGNITABILITY	20-AUG-18	250mL Plastic		
Solid	S	SW7.3.4-REAC CYANIDE	20-AUG-18	500mL P+ZnAc/NaOH		
Solid	S	SW7.3.4-REAC SULFIDE	13-AUG-18	100g Glass		
Solid	S	SW9045C-PH SOIL	07-AUG-18	100g Glass		
Solid	S	SW9095A-PNTFILTRTEST	03-SEP-18	50g Glass		
Solid	P	TCLP-HERB8151				
SW1311-EXT-HERB		TCLP-SW8151				
Solid	P	TCLP-METALS				
SW1311-EXT		SW3010-PREP		TCLP-ARSENIC		
TCLP-BARIUM		TCLP-CADMIUM		TCLP-CHROMIUM		
TCLP-LEAD		TCLP-MERCURY		TCLP-SELENIUM		
TCLP-SILVER						
Solid	P	TCLP-PEST				
SW1311-EXT-PEST		TCLP-SW8081				
Solid	P	TCLP-SVOA				
SW1311-EXT-SVOA		TCLP-SW8270				
Solid	P	TCLP-VOA				
SW1311-EXT-VOA		TCLP-SW8260				

Total Samples: **2** ***Total Analyses:*** **20**

HHM 8-27-18

Katahdin ANALYTICAL SERVICES

Katahdin Analytical Services

Login Chain of Custody Report (lno1)

Aug. 27, 2018
12:12 PM

Login Number: SL7420

Account: ATI001 Web
ATI, Inc.

Project: ATI-CORN-AAP
Cornhusker Army Ammunition Plant

Primary Report Address:
David Nelson
ATI, Inc.
9220 Rumsey Road
Suite 100
Columbia,MD 21045
david.nelson@atiinc.com

Primary Invoice Address:
David Nelson
ATI, Inc.
9220 Rumsey Road
Suite 100
Columbia,MD 21045

Report CC Addresses:
Invoice CC Addresses:

Quote/Incoming: ATI-CORN-AAP

Login Information:

ANALYSIS INSTRUCTIONS	:	FDS, DOD 5.0, ND to LOD w/ J flags. Report all valid runs. Summary needs all forms. GC/MS IS eval window +/- 10s. Metals ICSA - 2 sigfigs. Flag dilutions w/ "D" qualifier. Include any excedences in the case narrative. Limits in KIMS match QAPP. Hold extracts for 60 days. 8260B, 8270DSIM, 8330B, 6020A/7471A/7471B. No explo soil prep needed (8330B Mod). Reprep failing hex cr matrix QC & parent samples, include info in narrative. Samples w/ "CHAAP-21B" may have high VOC hits.
CHECK NO.	:	
CLIENT PO#	:	PN:16-027
CLIENT PROJECT MANAGE	:	
CONTRACT	:	W9182F-16-D-0014
COOLER TEMPERATURE	:	3.0
DELIVERY SERVICES	:	Fedex
EDD FORMAT	:	ATI-(ERIS)
LOGIN INITIALS	:	SO
PM	:	HHM
PROJECT NAME	:	~~Cornhusker Army Ammunition Plant~~
QC LEVEL	:	IV
REPORT INSTRUCTIONS	:	SDS needs all forms. Check EDD, if errors, fix them or contact client (Jeff Martin703-736-4533 jmartin@hgl.com). Upload PDF & EDD to SDS. Email david.nelson@atiinc.com, seichelberger@hgl.com, rsullivan@hgl.com, Teresa.offner@atiinc.com, jspies@hgl.com to tell them report is uploaded. Email invoice to jspies@hgl.com, david.nelson@atiinc.com and seichelberger@hgl.com.
SDG ID	:	
SDG STATUS	:	
VERBAL TAT	:	5

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SL7420-2	CHAAP-IDW-SOIL-080618-N	06-AUG-18 14:10	08-AUG-18			20-AUG-18	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW1010-IGNITABILITY	20-AUG-18	250mL Plastic		
Solid	S	SW7.3.4-REAC CYANIDE	20-AUG-18	500mL P+ZnAc/NaOH		
Solid	S	SW7.3.4-REAC SULFIDE	13-AUG-18	100g Glass		
Solid	S	SW9045C-PH SOIL	07-AUG-18	100g Glass		
Solid	S	SW9095A-PNTFILTRTEST	03-SEP-18	50g Glass		
Solid	P	TCLP-HERB8151				
SW1311-EXT-HERB		TCLP-SW8151				
Solid	P	TCLP-METALS				
SW1311-EXT		SW3010-PREP		TCLP-ARSENIC		
TCLP-BARIUM		TCLP-CADMIUM		TCLP-CHROMIUM		
TCLP-LEAD		TCLP-MERCURY		TCLP-SELENIUM		
TCLP-SILVER						
Solid	P	TCLP-PEST				
SW1311-EXT-PEST		TCLP-SW8081				
Solid	P	TCLP-SVOA				
SW1311-EXT-SVOA		TCLP-SW8270				
Solid	P	TCLP-VOA				
SW1311-EXT-VOA		TCLP-SW8260				

Total Samples: **2** ***Total Analyses:*** **20**

HHM 8-27-18

SAMPLE DATA SUMMARY PACKAGE

KATAHDIN ANALYTICAL SERVICES - ORGANIC DATA QUALIFIERS

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.

* Compound recovery or percent RPD (relative percent difference) was outside of quality control limits.

D Indicates the result was obtained from analysis of a diluted sample. Surrogate recoveries may not be calculable.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

or

J Used for Pesticides, PCBs, Herbicides, Formaldehyde, Explosives and Method 504.1 analytes when there is a greater than 40% difference for detected concentrations between the two GC columns.

B Indicates the analyte was detected in the laboratory method blank analyzed concurrently with the sample.

C Indicates that the flagged compound did not meet DoD criteria in the corresponding daily calibration verification (CV).

L Indicates that the flagged compound did not meet DoD criteria in the corresponding Laboratory Control Sample (LCS) and/or Laboratory Control Sample Duplicate (LCSD) prepared and/or analyzed concurrently with the sample.

M Indicates that the flagged compound did not meet DoD criteria in the Matrix Spike and/or Matrix Spike Duplicate prepared and/or analyzed concurrently with the native sample.

N Presumptive evidence of a compound based on a mass spectral library search.

A Indicates that a tentatively identified compound is a suspected aldol-condensation product.

P Used for Pesticide/Aroclor analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. (for CLP methods only).

METALS SAMPLE FLAGGING

FLAG	SPECIFIED MEANING
E	The reported value is estimated because of the presence of interference (as indicated by serial dilution).
N	The pre-digestion spiked sample recovery is not within control limits.
*	The duplicate sample analysis relative percent difference (RPD) is not within control limits.
B	Indicates the analyte was detected in the laboratory method blank analyzed concurrently with the sample.
A	The post-digestion spiked sample recovery is not within control limits.
•	Analytical run QC sample (e.g. ICV, CCV, ICB, CCB, ICSA, ICSAB) not within control limits.
U	The analyte was not detected above the specified level. This level may be the Limit of Quantitation (LOQ) (previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client. Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.
J	The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ) (previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).
Q	One or more quality control criteria failed (e.g., LCS recovery, surrogate spike recovery or CCV).

KATAHDIN ANALYTICAL SERVICES – INORGANIC DATA QUALIFIERS

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Practical Quantitation Level (PQL) (also called Limit of Quantitation (LOQ)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL "U" LOQ or "U" LOD, where the rate of false negatives is <1%.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Practical Quantitation Level (PQL) (also called Limit of Quantitation (LOQ)), but above the Method Detection Limit (MDL).

I-7 The laboratory's Practical Quantitation Level (PQL) or LOQ could not be achieved for this parameter due to sample composition, matrix effects, sample volume, or quantity used for analysis.

A-4 Please refer to cover letter or narrative for further information.

H_ Please note that the regulatory holding time for _____ is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. _____ for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H1 - pH H2 - DO H3 - sulfite H4 - residual chlorine

T1 The client did not provide the full volume of at least one liter for analysis of TSS. Therefore, the PQL of 2.5 mg/L could not be achieved.

T2 The client provided the required volume of at least one liter for analysis of TSS, but the laboratory could not filter the full one liter volume due to the sample matrix. Therefore, the PQL of 2.5 mg/L could not be achieved.

M1 The matrix spike and/or matrix spike duplicate recovery performed on this sample was outside of the laboratory acceptance criteria. Sample matrix is suspected. The laboratory criteria was met for the Laboratory Control Sample (LCS) analyzed concurrently with this sample.

M2 The matrix spike and/or matrix spike duplicate recovery was outside of the laboratory acceptance criteria. The native sample concentration is greater than four times the spike added concentration so the spike added could not be distinguished from the native sample concentration.

R1 The relative percent difference (RPD) between the duplicate analyses performed on this sample was outside of the laboratory acceptance criteria (when both values are greater than ten times the PQL).

MCL	Maximum Contaminant Level	NL	No limit
NFL	No Free Liquid Present	FLP	Free Liquid Present
NOD	No Odor Detected	TON	Threshold Odor Number

D-1 As required by Method 5210B, APHA Standard Methods for the Examination of Water and Wastewater (21st edition), the BOD value reported for this sample is 'qualified' because the check standard run concurrently with the sample analysis did not meet the criteria specified in the method (198 +/- 30.5 mg/L). These results may not be reportable for compliance purposes.

D-2 The measured final dissolved oxygen concentrations of all dilutions were less than the method-specified limit of 1 mg/L. The reported BOD result was calculated assuming a final oxygen concentration equal to 1 mg/L. The reported value should be considered a minimum value.

D-3 The dilution water used to prepare this sample did not meet the method and/or regulatory criteria of less than 0.2 or 0.4 mg/L dissolved oxygen (DO) uptake over the five day period of incubation. These results may not be reportable for compliance purposes.

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL7420-1DLRA
Client ID: CHAAP-IDW-SOIL-080618-S
Project: Cornhusker Army Ammunition Plant
SDG: SL7420
Lab File ID: P7236.D

Sample Date: 06-AUG-18
Received Date: 08-AUG-18
Extract Date: 15-AUG-18
Extracted By: HG
Extraction Method: 5030/1311
Lab Prep Batch: WG234446

Analysis Date: 15-AUG-18
Analyst: HG
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-AUG-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzene	U	10	ug/L	20	5	100	5.2	10.
Carbon Tetrachloride	U	10	ug/L	20	5	100	4.4	10.
Chlorobenzene	U	10	ug/L	20	5	100	4.4	10.
Chloroform	U	10	ug/L	20	5	100	6.4	10.
1,2-Dichloroethane	U	10	ug/L	20	5	100	4.0	10.
1,1-Dichloroethene	U	10	ug/L	20	5	100	7.0	10.
2-Butanone	U	50	ug/L	20	15	300	26.	50.
Tetrachloroethene	U	10	ug/L	20	5	100	8.0	10.
Trichloroethene	U	10	ug/L	20	5	100	5.6	10.
Vinyl Chloride	U	20	ug/L	20	5	100	5.0	20.
1,2-Dichloroethane-D4		105.	%					
Toluene-D8		100.	%					
p-Bromofluorobenzene		100.	%					
Dibromofluoromethane		102.	%					

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ANALYTICAL SERVICES

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL7420-2DL
Client ID: CHAAP-IDW-SOIL-080618-N
Project: Cornhusker Army Ammunition Plant
SDG: SL7420
Lab File ID: P7220.D

Sample Date: 06-AUG-18
Received Date: 08-AUG-18
Extract Date: 14-AUG-18
Extracted By: HG
Extraction Method: 5030/1311
Lab Prep Batch: WG234298

Analysis Date: 14-AUG-18
Analyst: HG
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-AUG-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzene	U	10	ug/L	20	5	100	5.2	10.
Carbon Tetrachloride	U	10	ug/L	20	5	100	4.4	10.
Chlorobenzene	U	10	ug/L	20	5	100	4.4	10.
Chloroform	U	10	ug/L	20	5	100	6.4	10.
1,2-Dichloroethane	U	10	ug/L	20	5	100	4.0	10.
1,1-Dichloroethene	U	10	ug/L	20	5	100	7.0	10.
2-Butanone	U	50	ug/L	20	15	300	26.	50.
Tetrachloroethene	U	10	ug/L	20	5	100	8.0	10.
Trichloroethene	U	10	ug/L	20	5	100	5.6	10.
Vinyl Chloride	U	20	ug/L	20	5	100	5.0	20.
1,2-Dichloroethane-D4		111.	%					
Toluene-D8		102.	%					
p-Bromofluorobenzene		101.	%					
Dibromofluoromethane		108.	%					

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Report of Analytical Results

Client:
Lab ID: WG234298-2
Client ID: Method Blank Sample
Project:
SDG: SL7420
Lab File ID: P7210.D

Sample Date:
Received Date:
Extract Date: 14-AUG-18
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG234298

Analysis Date: 14-AUG-18
Analyst: HG
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-AUG-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzene	U	0.50	ug/L	1	5	5.0	0.26	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	5	5.0	0.22	0.50
Chlorobenzene	U	0.50	ug/L	1	5	5.0	0.22	0.50
Chloroform	U	0.50	ug/L	1	5	5.0	0.32	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	5	5.0	0.20	0.50
1,1-Dichloroethene	U	0.50	ug/L	1	5	5.0	0.35	0.50
2-Butanone	U	2.5	ug/L	1	15	15.	1.3	2.5
Tetrachloroethene	U	0.50	ug/L	1	5	5.0	0.40	0.50
Trichloroethene	U	0.50	ug/L	1	5	5.0	0.28	0.50
Vinyl Chloride	U	1.0	ug/L	1	5	5.0	0.25	1.0
1,2-Dichloroethane-D4		104.	%					
Toluene-D8		100.	%					
p-Bromofluorobenzene		100.	%					
Dibromofluoromethane		102.	%					

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ANALYTICAL SERVICES

Report of Analytical Results

Client:
Lab ID: WG234446-2
Client ID: Method Blank Sample
Project:
SDG: SL7420
Lab File ID: P7235.D

Sample Date:
Received Date:
Extract Date: 15-AUG-18
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG234446

Analysis Date: 15-AUG-18
Analyst: HG
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-AUG-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzene	U	0.50	ug/L	1	5	5.0	0.26	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	5	5.0	0.22	0.50
Chlorobenzene	U	0.50	ug/L	1	5	5.0	0.22	0.50
Chloroform	U	0.50	ug/L	1	5	5.0	0.32	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	5	5.0	0.20	0.50
1,1-Dichloroethene	U	0.50	ug/L	1	5	5.0	0.35	0.50
2-Butanone	U	2.5	ug/L	1	15	15.	1.3	2.5
Tetrachloroethene	U	0.50	ug/L	1	5	5.0	0.40	0.50
Trichloroethene	U	0.50	ug/L	1	5	5.0	0.28	0.50
Vinyl Chloride	U	1.0	ug/L	1	5	5.0	0.25	1.0
1,2-Dichloroethane-D4		104.	%					
Toluene-D8		100.	%					
p-Bromofluorobenzene		98.6	%					
Dibromofluoromethane		103.	%					

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ANALYTICAL SERVICES

Report of Analytical Results

Client:
Lab ID: WG232889-7
Client ID: TCLP Blank
Project:
SDG: SL7420
Lab File ID: T6180.D

Sample Date:
Received Date:
Extract Date: 26-JUL-18
Extracted By: HG
Extraction Method: 5030/1311
Lab Prep Batch: WG232889

Analysis Date: 26-JUL-18
Analyst: HG
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 27-AUG-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzene	U	10	ug/L	20	5	100	5.2	10.
Carbon Tetrachloride	U	10	ug/L	20	5	100	4.4	10.
Chlorobenzene	U	10	ug/L	20	5	100	4.4	10.
Chloroform	U	10	ug/L	20	5	100	6.4	10.
1,2-Dichloroethane	U	10	ug/L	20	5	100	4.0	10.
1,1-Dichloroethene	U	10	ug/L	20	5	100	7.0	10.
2-Butanone	U	50	ug/L	20	15	300	26.	50.
Tetrachloroethene	U	10	ug/L	20	5	100	8.0	10.
Trichloroethene	U	10	ug/L	20	5	100	5.6	10.
Vinyl Chloride	U	20	ug/L	20	5	100	5.0	20.
1,2-Dichloroethane-D4	*	121.	%					
Toluene-D8		103.	%					
p-Bromofluorobenzene		104.	%					
Dibromofluoromethane		112.	%					

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Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** Cornhusker Army Ammunition Plant **Matrix:** AQ
Lab Code: KAS **SDG:** SL7420

Client Sample ID	Lab Sample ID	Col. ID	BFB	#	DBF	#	DCA	#	TOL	#
CHAAP-IDW-SOIL-080618	SL7420-1DLRA		100.		102.		105.		100.	
CHAAP-IDW-SOIL-080618	SL7420-2DL		101.		108.		111.		102.	
Laboratory Control S	WG234298-1		101.		102.		100.		100.	
Method Blank Sample	WG234298-2		100.		102.		104.		100.	
Laboratory Control S	WG234446-1		103.		102.		99.9		101.	
Method Blank Sample	WG234446-2		98.6		103.		104.		100.	

		QC Limits
DCA	1,2-DICHLOROETHANE-D4	81-118
TOL	TOLUENE-D8	89-112
DBF	DIBROMOFLUOROMETHANE	80-119
BFB	P-BROMOFLUOROBENZENE	85-114

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

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Katahdin
ANALYTICAL SERVICES

LCS Recovery Report

Client:
Lab ID: WG234298-1
Client ID: LCS
Project:
SDG: SL7420
LCS File ID: P7208.D

Sample Date:
Received Date:
Extract Date: 14-AUG-18
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG234298

Analysis Date: 14-AUG-18
Analyst: HG
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-AUG-18

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
Benzene	101.	50.0	50.4	ug/L	79-120
Carbon Tetrachloride	94.6	50.0	47.3	ug/L	72-136
Chlorobenzene	98.6	50.0	49.3	ug/L	82-118
Chloroform	100.	50.0	50.0	ug/L	79-124
1,2-Dichloroethane	95.6	50.0	47.8	ug/L	73-128
1,1-Dichloroethene	96.0	50.0	48.0	ug/L	71-131
2-Butanone	109.	50.0	54.4	ug/L	56-143
Tetrachloroethene	95.8	50.0	47.9	ug/L	74-129
Trichloroethene	98.4	50.0	49.2	ug/L	79-123
Vinyl Chloride	102.	50.0	51.2	ug/L	58-137
1,2-Dichloroethane-D4	100.				81-118
Toluene-D8	100.				89-112
p-Bromofluorobenzene	101.				85-114
Dibromofluoromethane	102.				80-119

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Katahdin
ANALYTICAL SERVICES

LCS Recovery Report

Client:
Lab ID: WG234446-1
Client ID: LCS
Project:
SDG: SL7420
LCS File ID: P7233.D

Sample Date:
Received Date:
Extract Date: 15-AUG-18
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG234446

Analysis Date: 15-AUG-18
Analyst: HG
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-AUG-18

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
Benzene	109.	50.0	54.6	ug/L	79-120
Carbon Tetrachloride	108.	50.0	54.2	ug/L	72-136
Chlorobenzene	106.	50.0	52.9	ug/L	82-118
Chloroform	110.	50.0	54.9	ug/L	79-124
1,2-Dichloroethane	105.	50.0	52.4	ug/L	73-128
1,1-Dichloroethene	110.	50.0	54.8	ug/L	71-131
2-Butanone	99.4	50.0	49.7	ug/L	56-143
Tetrachloroethene	104.	50.0	51.8	ug/L	74-129
Trichloroethene	108.	50.0	54.1	ug/L	79-123
Vinyl Chloride	117.	50.0	58.3	ug/L	58-137
1,2-Dichloroethane-D4	99.9				81-118
Toluene-D8	101.				89-112
p-Bromofluorobenzene	103.				85-114
Dibromofluoromethane	102.				80-119

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Form 4
Method Blank Summary - VOA

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : P7210.D
Instrument ID : GCMS-P
Heated Purge : No

SDG : SL7420
Lab Sample ID : WG234298-2
Date Analyzed : 14-AUG-18
Time Analyzed : 09:19

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG234298-1	P7208.D	08/14/18	08:07
CHAAP-IDW-SOIL-080618-N	SL7420-2DL	P7220.D	08/14/18	14:41

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Form 4
Method Blank Summary - VOA

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : P7235.D
Instrument ID : GCMS-P
Heated Purge : No

SDG : SL7420
Lab Sample ID : WG234446-2
Date Analyzed : 15-AUG-18
Time Analyzed : 09:07

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG234446-1	P7233.D	08/15/18	07:56
CHAAP-IDW-SOIL-080618-S	SL7420-1DLRA	P7236.D	08/15/18	09:39

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Form 5
Volatile Organic Instrument Performance Check

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : PB112.D
Instrument ID : GCMS-P

SDG : SL7420
Date Analyzed : 11-AUG-18
Time Analyzed : 10:25
Heated Purge : No

m/e	Ion Abundance Criteria	% Relative Abundance		
50	15.0 - 40.0% of mass 95	16.6		
75	30.0 - 60.0% of mass 95	51.1		
95	Base Peak, 100% relative abundance	100		
96	5.0 - 9.0% of mass 95	7.0		
173	Less than 2.0% of mass 174	0.3	0.40	1
174	Greater than 50.0% of mass 95	67.8		
175	5.0 - 9.0% of mass 174	4.9	7.26	1
176	95.0 - 101.0% of mass 174	64.7	95.47	1
177	5.0 - 9.0% of mass 176	4.2	6.44	2

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following samples, LCS, MS, MSD and standards:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Initial Calibration	WG234067-4	P7167.D	08/11/18	12:12
Initial Calibration	WG234067-3	P7168.D	08/11/18	12:44
Initial Calibration	WG234067-2	P7169.D	08/11/18	13:16
Initial Calibration	WG234067-1	P7170.D	08/11/18	13:49
Initial Calibration	WG234067-6	P7171.D	08/11/18	14:21
Initial Calibration	WG234067-5	P7172.D	08/11/18	14:53
Independent Source	WG234067-7	P7173.D	08/11/18	15:25

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Form 5
Volatile Organic Instrument Performance Check

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : PB114A.D
Instrument ID : GCMS-P

SDG : SL7420
Date Analyzed : 14-AUG-18
Time Analyzed : 07:00
Heated Purge : No

m/e	Ion Abundance Criteria	% Relative Abundance		
50	15.0 - 40.0% of mass 95	17.3		
75	30.0 - 60.0% of mass 95	50.5		
95	Base Peak, 100% relative abundance	100		
96	5.0 - 9.0% of mass 95	7.1		
173	Less than 2.0% of mass 174	0.0	0.0	1
174	Greater than 50.0% of mass 95	63.6		
175	5.0 - 9.0% of mass 174	4.7	7.35	1
176	95.0 - 101.0% of mass 174	62.2	97.78	1
177	5.0 - 9.0% of mass 176	4.0	6.43	2

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following samples, LCS, MS, MSD and standards:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Continuing Calibrati	WG234298-4	P7207.D	08/14/18	07:26
Laboratory Control S	WG234298-1	P7208.D	08/14/18	08:07
Method Blank Sample	WG234298-2	P7210.D	08/14/18	09:19
CHAAP-IDW-SOIL-080618-N	SL7420-2DL	P7220.D	08/14/18	14:41
Continuing Calibrati	WG234298-5	P7227.D	08/14/18	18:26

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Form 5
Volatile Organic Instrument Performance Check

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : PB115A.D
Instrument ID : GCMS-P

SDG : SL7420
Date Analyzed : 15-AUG-18
Time Analyzed : 06:41
Heated Purge : No

m/e	Ion Abundance Criteria	% Relative Abundance		
50	15.0 - 40.0% of mass 95	17.4		
75	30.0 - 60.0% of mass 95	51.5		
95	Base Peak, 100% relative abundance	100		
96	5.0 - 9.0% of mass 95	7.1		
173	Less than 2.0% of mass 174	0.0	0.0	1
174	Greater than 50.0% of mass 95	66.4		
175	5.0 - 9.0% of mass 174	5.0	7.60	1
176	95.0 - 101.0% of mass 174	64.9	97.75	1
177	5.0 - 9.0% of mass 176	4.2	6.51	2

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following samples, LCS, MS, MSD and standards:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Continuing Calibrati	WG234446-4	P7232.D	08/15/18	07:05
Laboratory Control S	WG234446-1	P7233.D	08/15/18	07:56
Method Blank Sample	WG234446-2	P7235.D	08/15/18	09:07
CHAAP-IDW-SOIL-080618-S	SL7420-1DLRA	P7236.D	08/15/18	09:39
Continuing Calibrati	WG234446-5	P7237.D	08/15/18	10:11

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Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL7420
Project : Cornhusker Army Ammunition Plant
Instrument ID: GCMS-P
Lab File IDs : P7170.D P7169.D P7168.D P7167.D P7172.D P7171.D
Column ID:
Calibration Date(s): 11-AUG-18 12:12, 11-AUG-18 14:53

	1.0000 Level 1	5.0000 Level 2	20.0000 Level 3	50.0000 Level 4	100.0000 Level 5	150.0000 Level 6	New Crv	b	m1	m2	%RSD	Max %RSD	
Vinyl chloride	0.39913	0.46222	0.45202	0.42624	0.43583	0.44020	AVG		0.43594		5.04275	15.00000	O
1,1-Dichloroethene	0.28350	0.35360	0.35999	0.32143	0.32375	0.31976	AVG		0.32700		8.41051	15.00000	O
Chloroform	0.74942	0.89977	0.90368	0.84310	0.84100	0.86835	AVG		0.85089		6.63491	15.00000	O
Carbon Tetrachloride	0.31773	0.40780	0.41669	0.39973	0.38611	0.38550	AVG		0.38559		9.18045	15.00000	O
2-Butanone	0.12729	0.18022	0.17375	0.16943	0.17744	0.15596	AVG		0.16402		12.1339(	15.00000	O
Benzene	0.90260	1.15773	1.17920	1.09061	1.05824	1.05484	AVG		1.07387		9.15716	15.00000	O
1,2-Dichloroethane	0.39843	0.37721	0.36047	0.34108	0.32920	0.33762	AVG		0.35733		7.44479	15.00000	O
Trichloroethene	0.25151	0.30367	0.29585	0.27393	0.26834	0.26729	AVG		0.27677		7.03378	15.00000	O
Tetrachloroethene	0.19322	0.24581	0.23783	0.22140	0.21276	0.20944	AVG		0.22008		8.78025	15.00000	O
Chlorobenzene	0.65814	0.82734	0.77509	0.72185	0.71399	0.69931	AVG		0.73262		8.16619	15.00000	O
Dibromofluoromethane	0.50623	0.50400	0.50473	0.50064	0.51662	0.52340	AVG		0.50927		1.72478	15.00000	
1,2-Dichloroethane-D4	0.69501	0.68033	0.65058	0.66560	0.66528	0.68404	AVG		0.67347		2.37165	15.00000	
Toluene-D8	1.24906	1.25057	1.25858	1.25790	1.25419	1.25898	AVG		1.25488		0.34289	15.00000	
P-Bromofluorobenzene	0.54238	0.54218	0.54576	0.55135	0.55717	0.55927	AVG		0.54968		1.35101	15.00000	

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

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Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL7420
Lab ID : WG234298-4
Analytical Date: 08/14/18 07:26
Lab File ID : P7207.D
Instrument ID: GCMS-P
Initial Calibration Date(s): 08/11/18 12:12 08/11/18 14:53
Column ID:

	Compound	$\overline{\text{RRF}}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
3	Vinyl chloride	0.43594	0.43007	0.43007	0.010	-1.34571	20.00000	Averaged
8	1,1-Dichloroethene	0.32700	0.30005	0.30005	0.100	-8.24305	20.00000	Averaged
31	Chloroform	0.85089	0.80926	0.80926	0.010	-4.89217	20.00000	Averaged
32	Carbon Tetrachloride	0.38559	0.35794	0.35794	0.010	-7.17043	20.00000	Averaged
36	2-Butanone	0.16402	0.17946	0.17946	0.010	9.41716	20.00000	Averaged
38	Benzene	1.07387	1.02599	1.02599	0.010	-4.45868	20.00000	Averaged
44	1,2-Dichloroethane	0.35733	0.32272	0.32272	0.010	-9.68702	20.00000	Averaged
47	Trichloroethene	0.27677	0.25716	0.25716	0.010	-7.08269	20.00000	Averaged
60	Tetrachloroethene	0.22008	0.20252	0.20252	0.010	-7.97576	20.00000	Averaged
69	Chlorobenzene	0.73262	0.67098	0.67098	0.300	-8.41329	20.00000	Averaged
34	Dibromofluoromethane	0.50927	0.51845	0.51845	0.010	1.80228	20.00000	Averaged
42	1,2-Dichloroethane-D4	0.67347	0.66924	0.66924	0.010	-0.62873	20.00000	Averaged
58	Toluene-D8	1.25488	1.25931	1.25931	0.010	0.35315	20.00000	Averaged
77	P-Bromofluorobenzene	0.54968	0.55773	0.55773	0.010	1.46373	20.00000	Averaged

*** = Compound out of QC criteria**

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Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL7420
Lab ID : WG234298-5
Analytical Date: 08/14/18 18:26
Lab File ID : P7227.D
Instrument ID: GCMS-P
Initial Calibration Date(s): 08/11/18 12:12 08/11/18 14:53
Column ID:

	Compound	$\overline{\text{RRF}}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type	
3	Vinyl chloride	0.43594	0.46765	0.46765	0.010	7.27455	50.00000	Averaged	
8	1,1-Dichloroethene	0.32700	0.34003	0.34003	0.100	3.98272	50.00000	Averaged	
31	Chloroform	0.85089	0.85317	0.85317	0.010	0.26783	50.00000	Averaged	
32	Carbon Tetrachloride	0.38559	0.37869	0.37869	0.010	-1.79134	50.00000	Averaged	
36	2-Butanone	0.16402	0.15088	0.15088	0.010	-8.01027	50.00000	Averaged	
38	Benzene	1.07387	1.06841	1.06841	0.010	-0.50840	50.00000	Averaged	
44	1,2-Dichloroethane	0.35733	0.34290	0.34290	0.010	-4.03930	50.00000	Averaged	
47	Trichloroethene	0.27677	0.28336	0.28336	0.010	2.38411	50.00000	Averaged	
60	Tetrachloroethene	0.22008	0.36417	0.36417	0.010	65.47492	50.00000	Averaged	*
69	Chlorobenzene	0.73262	0.72142	0.72142	0.300	-1.52923	50.00000	Averaged	
34	Dibromofluoromethane	0.50927	0.51553	0.51553	0.010	1.22878	50.00000	Averaged	
42	1,2-Dichloroethane-D4	0.67347	0.66639	0.66639	0.010	-1.05221	50.00000	Averaged	
58	Toluene-D8	1.25488	1.27118	1.27118	0.010	1.29867	50.00000	Averaged	
77	P-Bromofluorobenzene	0.54968	0.57029	0.57029	0.010	3.74813	50.00000	Averaged	

*** = Compound out of QC criteria**

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Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL7420
Lab ID : WG234298-8
Analytical Date: 08/14/18 18:58
Lab File ID : P7228.D
Instrument ID: GCMS-P
Initial Calibration Date(s): 08/11/18 12:12 08/11/18 14:53
Column ID:

	Compound	$\overline{\text{RRF}}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
3	Vinyl chloride	0.43594	0.51531	0.51531	0.010	18.20589	50.00000	Averaged
8	1,1-Dichloroethene	0.32700	0.37579	0.37579	0.100	14.91989	50.00000	Averaged
31	Chloroform	0.85089	0.94290	0.94290	0.010	10.81418	50.00000	Averaged
32	Carbon Tetrachloride	0.38559	0.41945	0.41945	0.010	8.77949	50.00000	Averaged
36	2-Butanone	0.16402	0.15826	0.15826	0.010	-3.50726	50.00000	Averaged
38	Benzene	1.07387	1.17527	1.17527	0.010	9.44255	50.00000	Averaged
44	1,2-Dichloroethane	0.35733	0.36245	0.36245	0.010	1.43316	50.00000	Averaged
47	Trichloroethene	0.27677	0.29409	0.29409	0.010	6.25876	50.00000	Averaged
60	Tetrachloroethene	0.22008	0.22985	0.22985	0.010	4.43846	50.00000	Averaged
69	Chlorobenzene	0.73262	0.76868	0.76868	0.300	4.92173	50.00000	Averaged
34	Dibromofluoromethane	0.50927	0.51474	0.51474	0.010	1.07371	50.00000	Averaged
42	1,2-Dichloroethane-D4	0.67347	0.66044	0.66044	0.010	-1.93526	50.00000	Averaged
58	Toluene-D8	1.25488	1.25742	1.25742	0.010	0.20244	50.00000	Averaged
77	P-Bromofluorobenzene	0.54968	0.55957	0.55957	0.010	1.79900	50.00000	Averaged

*** = Compound out of QC criteria**

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Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL7420
Lab ID : WG234298-9
Analytical Date: 08/14/18 19:30
Lab File ID : P7229.D
Instrument ID: GCMS-P
Initial Calibration Date(s): 08/11/18 12:12 08/11/18 14:53
Column ID:

	Compound	$\overline{RRF}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
3	Vinyl chloride	0.43594	0.48425	0.48425	0.010	11.08229	50.00000	Averaged
8	1,1-Dichloroethene	0.32700	0.35648	0.35648	0.100	9.01290	50.00000	Averaged
31	Chloroform	0.85089	0.91794	0.91794	0.010	7.88000	50.00000	Averaged
32	Carbon Tetrachloride	0.38559	0.39806	0.39806	0.010	3.23268	50.00000	Averaged
36	2-Butanone	0.16402	0.15837	0.15837	0.010	-3.44036	50.00000	Averaged
38	Benzene	1.07387	1.12906	1.12906	0.010	5.13943	50.00000	Averaged
44	1,2-Dichloroethane	0.35733	0.35689	0.35689	0.010	-0.12535	50.00000	Averaged
47	Trichloroethene	0.27677	0.28262	0.28262	0.010	2.11446	50.00000	Averaged
60	Tetrachloroethene	0.22008	0.21507	0.21507	0.010	-2.27657	50.00000	Averaged
69	Chlorobenzene	0.73262	0.75004	0.75004	0.300	2.37801	50.00000	Averaged
34	Dibromofluoromethane	0.50927	0.51832	0.51832	0.010	1.77777	50.00000	Averaged
42	1,2-Dichloroethane-D4	0.67347	0.66616	0.66616	0.010	-1.08514	50.00000	Averaged
58	Toluene-D8	1.25488	1.26069	1.26069	0.010	0.46329	50.00000	Averaged
77	P-Bromofluorobenzene	0.54968	0.56165	0.56165	0.010	2.17722	50.00000	Averaged

*** = Compound out of QC criteria**

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Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant **SDG:** SL7420
Lab ID : WG234446-4 **Analytical Date:** 08/15/18 07:05
Lab File ID : P7232.D **Instrument ID:** GCMS-P
Initial Calibration Date(s): 08/11/18 12:12 08/11/18 14:53 **Column ID:**

	Compound	$\overline{RRF}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
3	Vinyl chloride	0.43594	0.44544	0.44544	0.010	2.17922	20.00000	Averaged
8	1,1-Dichloroethene	0.32700	0.33181	0.33181	0.100	1.47002	20.00000	Averaged
31	Chloroform	0.85089	0.86482	0.86482	0.010	1.63807	20.00000	Averaged
32	Carbon Tetrachloride	0.38559	0.39469	0.39469	0.010	2.35961	20.00000	Averaged
36	2-Butanone	0.16402	0.15374	0.15374	0.010	-6.26232	20.00000	Averaged
38	Benzene	1.07387	1.09188	1.09188	0.010	1.67688	20.00000	Averaged
44	1,2-Dichloroethane	0.35733	0.34389	0.34389	0.010	-3.76228	20.00000	Averaged
47	Trichloroethene	0.27677	0.27433	0.27433	0.010	-0.87876	20.00000	Averaged
60	Tetrachloroethene	0.22008	0.21465	0.21465	0.010	-2.46540	20.00000	Averaged
69	Chlorobenzene	0.73262	0.71485	0.71485	0.300	-2.42531	20.00000	Averaged
34	Dibromofluoromethane	0.50927	0.51596	0.51596	0.010	1.31367	20.00000	Averaged
42	1,2-Dichloroethane-D4	0.67347	0.65739	0.65739	0.010	-2.38729	20.00000	Averaged
58	Toluene-D8	1.25488	1.26318	1.26318	0.010	0.66171	20.00000	Averaged
77	P-Bromofluorobenzene	0.54968	0.56723	0.56723	0.010	3.19230	20.00000	Averaged

*** = Compound out of QC criteria**

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Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL7420
Lab ID : WG234446-5
Analytical Date: 08/15/18 10:11
Lab File ID : P7237.D
Instrument ID: GCMS-P
Initial Calibration Date(s): 08/11/18 12:12 08/11/18 14:53
Column ID:

	Compound	$\overline{\text{RRF}}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
3	Vinyl chloride	0.43594	0.43020	0.43020	0.010	-1.31716	50.00000	Averaged
8	1,1-Dichloroethene	0.32700	0.32121	0.32121	0.100	-1.77196	50.00000	Averaged
31	Chloroform	0.85089	0.82844	0.82844	0.010	-2.63824	50.00000	Averaged
32	Carbon Tetrachloride	0.38559	0.37749	0.37749	0.010	-2.10142	50.00000	Averaged
36	2-Butanone	0.16402	0.14669	0.14669	0.010	-10.56498	50.00000	Averaged
38	Benzene	1.07387	1.05894	1.05894	0.010	-1.38995	50.00000	Averaged
44	1,2-Dichloroethane	0.35733	0.33172	0.33172	0.010	-7.16677	50.00000	Averaged
47	Trichloroethene	0.27677	0.26389	0.26389	0.010	-4.65246	50.00000	Averaged
60	Tetrachloroethene	0.22008	0.20096	0.20096	0.010	-8.68521	50.00000	Averaged
69	Chlorobenzene	0.73262	0.67983	0.67983	0.300	-7.20539	50.00000	Averaged
34	Dibromofluoromethane	0.50927	0.51534	0.51534	0.010	1.19128	50.00000	Averaged
42	1,2-Dichloroethane-D4	0.67347	0.67143	0.67143	0.010	-0.30338	50.00000	Averaged
58	Toluene-D8	1.25488	1.27271	1.27271	0.010	1.42127	50.00000	Averaged
77	P-Bromofluorobenzene	0.54968	0.57702	0.57702	0.010	4.97260	50.00000	Averaged

*** = Compound out of QC criteria**

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Form 8
Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition I
Lab ID : WG234067-4
Lab File ID : P7167.D

SDG: SL7420
Analytical Date: 08/11/18 12:12
Instrument ID: GCMS-P

		PENTAFLUOROBENZENE			1,4-DIFLUOROBENZENE			CHLOROBENZENE-D5		
		Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
	Std .	431953		6.19		761727		7.15		770111		11.63	
	Upper Limit	863906		6.35		1523454		7.32		1540222		11.80	
	Lower Limit	215976.5		6.02		380863.5		6.98		385055.5		11.47	
Client Sample ID	Lab Sample ID												
Continuing Calibrati	WG234298-4	420048		6.19		766426		7.15		786418		11.63	
Laboratory Control S	WG234298-1	422571		6.19		770494		7.15		783751		11.63	
Method Blank Sample	WG234298-2	403115		6.19		745906		7.15		766728		11.63	
CHAAP-IDW-SOIL-08	SL7420-2DL	357992		6.19		667928		7.16		689921		11.63	
Continuing Calibrati	WG234298-5	397591		6.19		714468		7.15		737891		11.63	
Continuing Calibrati	WG234446-4	409284		6.18		736547		7.16		756323		11.63	
Laboratory Control S	WG234446-1	406460		6.18		740030		7.16		761932		11.63	
Method Blank Sample	WG234446-2	388359		6.19		712957		7.16		727600		11.63	
CHAAP-IDW-SOIL-08	SL7420-1DLRA	379586		6.19		693296		7.16		712564		11.63	
Continuing Calibrati	WG234446-5	399250		6.19		714768		7.15		743713		11.63	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 10 seconds of internal standard RT
RT Lower Limit = - 10 seconds of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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Form 8
Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition I
Lab ID : WG234067-4
Lab File ID : P7167.D

SDG: SL7420
Analytical Date: 08/11/18 12:12
Instrument ID: GCMS-P

		1,4-DICHLOROBENZENE-D4			
		Area	#	RT	#
	Std .	384502		14.63	
	Upper Limit	769004		14.80	
	Lower Limit	192251		14.46	
Client Sample ID	Lab Sample ID				
Continuing Calibrati	WG234298-4	393252		14.63	
Laboratory Control S	WG234298-1	395411		14.63	
Method Blank Sample	WG234298-2	364542		14.63	
CHAAP-IDW-SOIL-08	SL7420-2DL	330562		14.63	
Continuing Calibrati	WG234298-5	372188		14.63	
Continuing Calibrati	WG234446-4	381735		14.63	
Laboratory Control S	WG234446-1	386550		14.63	
Method Blank Sample	WG234446-2	350520		14.63	
CHAAP-IDW-SOIL-08	SL7420-1DLRA	342757		14.63	
Continuing Calibrati	WG234446-5	380055		14.63	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 10 seconds of internal standard RT
RT Lower Limit = - 10 seconds of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL7420-1
Client ID: CHAAP-IDW-SOIL-080618-S
Project: Cornhusker Army Ammunition Plant
SDG: SL7420
Lab File ID: U1912.D

Sample Date: 06-AUG-18
Received Date: 08-AUG-18
Extract Date: 10-AUG-18
Extracted By: DP
Extraction Method: 3510C/1311
Lab Prep Batch: WG233966

Analysis Date: 13-AUG-18
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: AQ
% Solids: NA
Report Date: 24-AUG-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Pyridine	U	190	ug/L	1	50	250	7.5	190
1,4-Dichlorobenzene	U	38	ug/L	1	10	50.	11.	38.
2-Methylphenol	U	38	ug/L	1	10	50.	19.	38.
3&4-Methylphenol	U	38	ug/L	1	10	50.	28.	38.
Hexachloroethane	U	38	ug/L	1	10	50.	12.	38.
Nitrobenzene	U	38	ug/L	1	10	50.	16.	38.
Hexachlorobutadiene	U	38	ug/L	1	10	50.	9.0	38.
2,4,6-Trichlorophenol	U	38	ug/L	1	10	50.	14.	38.
2,4,5-Trichlorophenol	U	94	ug/L	1	25	120	18.	94.
2,4-Dinitrotoluene	U	38	ug/L	1	10	50.	11.	38.
Hexachlorobenzene	U	38	ug/L	1	10	50.	10.	38.
Pentachlorophenol	U	94	ug/L	1	25	120	12.	94.
2-Fluorophenol		29.6	%					
Phenol-D6		20.2	%					
Nitrobenzene-D5		57.6	%					
2-Fluorobiphenyl		60.2	%					
2,4,6-Tribromophenol		83.6	%					
Terphenyl-D14		84.3	%					

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ANALYTICAL SERVICES

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL7420-2
Client ID: CHAAP-IDW-SOIL-080618-N
Project: Cornhusker Army Ammunition Plant
SDG: SL7420
Lab File ID: U1913.D

Sample Date: 06-AUG-18
Received Date: 08-AUG-18
Extract Date: 10-AUG-18
Extracted By: DP
Extraction Method: 3510C/1311
Lab Prep Batch: WG233966

Analysis Date: 13-AUG-18
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: AQ
% Solids: NA
Report Date: 24-AUG-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Pyridine	U	190	ug/L	1	50	250	7.5	190
1,4-Dichlorobenzene	U	38	ug/L	1	10	50.	11.	38.
2-Methylphenol	U	38	ug/L	1	10	50.	19.	38.
3&4-Methylphenol	U	38	ug/L	1	10	50.	28.	38.
Hexachloroethane	U	38	ug/L	1	10	50.	12.	38.
Nitrobenzene	U	38	ug/L	1	10	50.	16.	38.
Hexachlorobutadiene	U	38	ug/L	1	10	50.	9.0	38.
2,4,6-Trichlorophenol	U	38	ug/L	1	10	50.	14.	38.
2,4,5-Trichlorophenol	U	94	ug/L	1	25	120	18.	94.
2,4-Dinitrotoluene	U	38	ug/L	1	10	50.	11.	38.
Hexachlorobenzene	U	38	ug/L	1	10	50.	10.	38.
Pentachlorophenol	U	94	ug/L	1	25	120	12.	94.
2-Fluorophenol		37.7	%					
Phenol-D6		24.6	%					
Nitrobenzene-D5		73.5	%					
2-Fluorobiphenyl		75.6	%					
2,4,6-Tribromophenol		81.4	%					
Terphenyl-D14		78.2	%					

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Report of Analytical Results

Client:
Lab ID: WG233966-1
Client ID: Method Blank Sample
Project:
SDG: SL7420
Lab File ID: U1908.D

Sample Date:
Received Date:
Extract Date: 10-AUG-18
Extracted By: DP
Extraction Method: SW846 3510C
Lab Prep Batch: WG233966

Analysis Date: 13-AUG-18
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: AQ
% Solids: NA
Report Date: 24-AUG-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Pyridine	U	38	ug/L	1	50	50.	1.5	38.
1,4-Dichlorobenzene	U	7.5	ug/L	1	10	10.	2.2	7.5
2-Methylphenol	U	7.5	ug/L	1	10	10.	3.8	7.5
3&4-Methylphenol	U	7.5	ug/L	1	10	10.	5.6	7.5
Hexachloroethane	U	7.5	ug/L	1	10	10.	2.3	7.5
Nitrobenzene	U	7.5	ug/L	1	10	10.	3.1	7.5
Hexachlorobutadiene	U	7.5	ug/L	1	10	10.	1.8	7.5
2,4,6-Trichlorophenol	U	7.5	ug/L	1	10	10.	2.7	7.5
2,4,5-Trichlorophenol	U	19	ug/L	1	25	25.	3.6	19.
2,4-Dinitrotoluene	U	7.5	ug/L	1	10	10.	2.2	7.5
Hexachlorobenzene	U	7.5	ug/L	1	10	10.	2.1	7.5
Pentachlorophenol	U	19	ug/L	1	25	25.	2.3	19.
2-Fluorophenol		37.7	%					
Phenol-D6		26.4	%					
Nitrobenzene-D5		66.3	%					
2-Fluorobiphenyl		66.0	%					
2,4,6-Tribromophenol		79.2	%					
Terphenyl-D14		80.2	%					

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Report of Analytical Results

Client:
Lab ID: WG233966-3
Client ID: TCLP Blank
Project:
SDG: SL7420
Lab File ID: U1909.D

Sample Date:
Received Date:
Extract Date: 10-AUG-18
Extracted By: DP
Extraction Method: 3510C/1311
Lab Prep Batch: WG233966

Analysis Date: 13-AUG-18
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: AQ
% Solids: NA
Report Date: 24-AUG-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Pyridine	U	190	ug/L	1	50	250	7.5	190
1,4-Dichlorobenzene	U	38	ug/L	1	10	50.	11.	38.
2-Methylphenol	U	38	ug/L	1	10	50.	19.	38.
3&4-Methylphenol	U	38	ug/L	1	10	50.	28.	38.
Hexachloroethane	U	38	ug/L	1	10	50.	12.	38.
Nitrobenzene	U	38	ug/L	1	10	50.	16.	38.
Hexachlorobutadiene	U	38	ug/L	1	10	50.	9.0	38.
2,4,6-Trichlorophenol	U	38	ug/L	1	10	50.	14.	38.
2,4,5-Trichlorophenol	U	94	ug/L	1	25	120	18.	94.
2,4-Dinitrotoluene	U	38	ug/L	1	10	50.	11.	38.
Hexachlorobenzene	U	38	ug/L	1	10	50.	10.	38.
Pentachlorophenol	U	94	ug/L	1	25	120	12.	94.
2-Fluorophenol		36.2	%					
Phenol-D6		24.7	%					
Nitrobenzene-D5		70.8	%					
2-Fluorobiphenyl		71.2	%					
2,4,6-Tribromophenol		79.6	%					
Terphenyl-D14		82.3	%					

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Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** Cornhusker Army Ammunition Plant **Matrix:** AQ
Lab Code: KAS **SDG:** SL7420

Client Sample ID	Lab Sample ID	Col. ID	2FBP	#	2FP	#	NBZ	#	PHL	#	TBP	#	TPH	#
CHAAP-IDW-SOIL-080618	SL7420-1		60.2		29.6		57.6		20.2		83.6		84.3	
CHAAP-IDW-SOIL-080618	SL7420-2		75.6		37.7		73.5		24.6		81.4		78.2	
Method Blank Sample	WG233966-1		66.0		37.7		66.3		26.4		79.2		80.2	
Laboratory Control S	WG233966-2		74.0		38.3		73.3		24.2		84.8		83.2	
TCLP Blank	WG233966-3		71.2		36.2		70.8		24.7		79.6		82.3	

		QC Limits
2FP	2-FLUOROPHENOL	19-119
NBZ	NITROBENZENE-D5	44-120
TBP	2,4,6-TRIBROMOPHENOL	43-140
TPH	TERPHENYL-D14	50-134
2FBP	2-FLUOROBIPHENYL	44-119
PHL	PHENOL-D6	10-90

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

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LCS Recovery Report

Client:
Lab ID: WG233966-2
Client ID: LCS
Project:
SDG: SL7420
LCS File ID: U1911.D

Sample Date:
Received Date:
Extract Date: 10-AUG-18
Extracted By: DP
Extraction Method: SW846 3510C
Lab Prep Batch: WG233966

Analysis Date: 13-AUG-18
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: AQ
% Solids: NA
Report Date: 24-AUG-18

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
Pyridine	21.0	50.0	10.5	ug/L	10-96
1,4-Dichlorobenzene	64.8	50.0	32.4	ug/L	29-112
2-Methylphenol	57.4	100.	57.4	ug/L	30-117
3&4-Methylphenol	51.5	100.	51.5	ug/L	29-110
Hexachloroethane	61.2	50.0	30.6	ug/L	21-115
Nitrobenzene	74.4	50.0	37.2	ug/L	48-95
Hexachlorobutadiene	67.2	50.0	33.6	ug/L	22-124
2,4,6-Trichlorophenol	74.0	100.	74.0	ug/L	50-125
2,4,5-Trichlorophenol	79.8	100.	79.8	ug/L	53-123
2,4-Dinitrotoluene	86.4	50.0	43.2	ug/L	57-128
Hexachlorobenzene	81.2	50.0	40.6	ug/L	53-125
Pentachlorophenol	108.	100.	108.	ug/L	35-138
2-Fluorophenol	38.3				19-119
Phenol-D6	24.2				10-90
Nitrobenzene-D5	73.3				44-120
2-Fluorobiphenyl	74.0				44-119
2,4,6-Tribromophenol	84.8				43-140
Terphenyl-D14	83.2				50-134

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Katahdin
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Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : U1908.D
Instrument ID : GCMS-U
Matrix : AQ

SDG : SL7420
Lab Sample ID : WG233966-1
Date Extracted : 10-AUG-18
Date Analyzed : 13-AUG-18
Time Analyzed : 11:18

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
TCLP Blank	WG233966-3	U1909.D	08/13/18	11:50
Laboratory Control S	WG233966-2	U1911.D	08/13/18	12:55
CHAAP-IDW-SOIL-080618-S	SL7420-1	U1912.D	08/13/18	13:27
CHAAP-IDW-SOIL-080618-N	SL7420-2	U1913.D	08/13/18	14:00

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Form 5
Semivolatile Organic Instrument Performance Check

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : UD943.D
Instrument ID : GCMS-U

SDG : SL7420
Date Analyzed : 24-JUL-18
Time Analyzed : 15:00

m/e	Ion Abundance Criteria	% Relative Abundance		
51	30.0 - 60.0% of mass 198	31.6		
68	Less than 2.0% of mass 69	0.0	0.0	1
69	Less than 100.0% of mass 198	33.7		
70	Less than 2.0% of mass 69	0.0	0.0	1
127	40.0 - 60.0% of mass 198	50.0		
197	Less than 1.0% of mass 198	0.0		
198	Base Peak, 100% relative abundance	100		
199	5.0 - 9.0% of mass 198	6.9		
275	10.0 - 30.0% of mass 198	22.7		
365	1.0 - 100.0% of mass 198	2.8		
441	0.0 - 100.0% of mass 443	9.7	83.80	2
442	40.0 - 100.0% of mass 198	59.4		
443	17.0 - 23.0% of mass 442	11.5	19.40	3

1-Value is % mass 69
2-Value is % mass 443
3-Value is % mass 442

This check applies to the following samples, LCS, MS, MSD and standards:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Initial Calibration	WG232607-4	U1763.D	07/24/18	15:19
Initial Calibration	WG232607-2	U1764.D	07/24/18	15:51
Initial Calibration	WG232607-3	U1765.D	07/24/18	16:24
Initial Calibration	WG232607-5	U1766.D	07/24/18	16:56
Initial Calibration	WG232607-6	U1767.D	07/24/18	17:28
Initial Calibration	WG232607-7	U1768.D	07/24/18	18:01
Independent Source	WG232607-8	U1769.D	07/24/18	18:34

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Katahdin
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Form 5
Semivolatile Organic Instrument Performance Check

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : UD953.D
Instrument ID : GCMS-U

SDG : SL7420
Date Analyzed : 13-AUG-18
Time Analyzed : 10:27

m/e	Ion Abundance Criteria	% Relative Abundance		
51	30.0 - 60.0% of mass 198	33.3		
68	Less than 2.0% of mass 69	0.3	0.78	1
69	Less than 100.0% of mass 198	35.3		
70	Less than 2.0% of mass 69	0.0	0.0	1
127	40.0 - 60.0% of mass 198	50.4		
197	Less than 1.0% of mass 198	0.3		
198	Base Peak, 100% relative abundance	100		
199	5.0 - 9.0% of mass 198	6.8		
275	10.0 - 30.0% of mass 198	22.5		
365	1.0 - 100.0% of mass 198	2.8		
441	0.0 - 100.0% of mass 443	9.6	82.12	2
442	40.0 - 100.0% of mass 198	60.8		
443	17.0 - 23.0% of mass 442	11.7	19.27	3

1-Value is % mass 69
2-Value is % mass 443
3-Value is % mass 442

This check applies to the following samples, LCS, MS, MSD and standards:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Continuing Calibrati	WG233872-2	U1907.D	08/13/18	10:46
Method Blank Sample	WG233966-1	U1908.D	08/13/18	11:18
TCLP Blank	WG233966-3	U1909.D	08/13/18	11:50
Laboratory Control S	WG233966-2	U1911.D	08/13/18	12:55
CHAAP-IDW-SOIL-080618-S	SL7420-1	U1912.D	08/13/18	13:27
CHAAP-IDW-SOIL-080618-N	SL7420-2	U1913.D	08/13/18	14:00
Continuing Calibrati	WG233872-3	U1921.D	08/13/18	18:17

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Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL7420
Project : Cornhusker Army Ammunition Plant
Instrument ID: GCMS-U
Lab File IDs : U1764.D U1765.D U1763.D U1766.D U1767.D U1768.D
Column ID:
Calibration Date(s): 24-JUL-18 15:19, 24-JUL-18 18:01

	10.0000 Level 1	25.0000 Level 2	50.0000 Level 3	75.0000 Level 4	100.0000 Level 5	125.0000 Level 6	New Crv	b	m1	m2	%RSD	Max %RSD	
Pyridine	1.53166	1.48880	1.44019	1.39497	1.34510	1.41269	AVG		1.43557		4.66714	15.00000	O
1,4-Dichlorobenzene	1.43482	1.49585	1.41907	1.31650	1.26030	1.25662	AVG		1.36386		7.33025	15.00000	O
2-Methylphenol	1.05984	1.13489	1.15183	1.09246	1.05494	1.06302	AVG		1.09283		3.80894	15.00000	O
3&4-Methylphenol	1.16823	1.28353	1.25620	1.12963	1.06564	1.05644	AVG		1.15995		8.19072	15.00000	O
Hexachloroethane	0.57258	0.59335	0.58816	0.55100	0.53326	0.51648	AVG		0.55914		5.51165	15.00000	O
Nitrobenzene	0.32449	0.32416	0.32714	0.31203	0.28799	0.27884	AVG		0.30911		6.72323	15.00000	O
Hexachlorobutadiene	0.17413	0.17552	0.16949	0.15953	0.14756	0.14684	AVG		0.16218		7.94580	15.00000	O
2,4,6-Trichlorophenol	0.33770	0.36150	0.35409	0.33398	0.32514	0.31450	AVG		0.33782		5.20304	15.00000	O
2,4,5-Trichlorophenol	0.33461	0.38151	0.37672	0.37353	0.36048	0.35425	AVG		0.36352		4.81013	15.00000	O
2,4-Dinitrotoluene	0.33599	0.36436	0.35353	0.34346	0.32323	0.35143	AVG		0.34533		4.18710	15.00000	O
Hexachlorobenzene	0.22468	0.22574	0.21582	0.20164	0.19281	0.18643	AVG		0.20785		8.02403	15.00000	O
Pentachlorophenol	4003	23385	66214	95633	127055	136444	QUA	0.09650	8.51382	8.35366	0.99698	0.99000	O
2-Fluorophenol	1.35077	1.34546	1.31677	1.25192	1.20689	1.23655	AVG		1.28473		4.73902	15.00000	
Phenol-D6	1.46678	1.52876	1.46716	1.36422	1.28037	1.28038	AVG		1.39795		7.53148	15.00000	
Nitrobenzene-D5	0.34016	0.34890	0.35702	0.34211	0.32638	0.31913	AVG		0.33895		4.14658	15.00000	
2-Fluorobiphenyl	1.30761	1.34083	1.22996	1.14476	1.09957	1.06612	AVG		1.19814		9.39469	15.00000	
2,4,6-Tribromophenol	0.12437	0.14648	0.14767	0.14487	0.13646	0.14169	AVG		0.14026		6.24627	15.00000	
Terphenyl-D14	1.08099	1.06027	1.08992	1.05258	0.99495	0.93719	AVG		1.03598		5.66863	15.00000	

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

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Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant **SDG:** SL7420
Lab ID : WG233872-2 **Analytical Date:** 08/13/18 10:46
Lab File ID : U1907.D **Instrument ID:** GCMS-U
Initial Calibration Date(s): 07/24/18 15:19 07/24/18 18:01 **Column ID:**

	Compound	$\overline{RRF}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
3	Pyridine	1.43557	1.35405	1.35405	0.010	-5.67833	20.00000	Averaged
19	1,4-Dichlorobenzene	1.36386	1.31410	1.31410	0.010	-3.64826	20.00000	Averaged
23	2-Methylphenol	1.09283	1.07563	1.07563	0.010	-1.57375	20.00000	Averaged
24	3&4-Methylphenol	1.15995	1.16093	1.16093	0.010	0.08527	20.00000	Averaged
32	Hexachloroethane	0.55914	0.53208	0.53208	0.010	-4.83914	20.00000	Averaged
34	Nitrobenzene	0.30911	0.30617	0.30617	0.010	-0.95095	20.00000	Averaged
49	Hexachlorobutadiene	0.16218	0.15841	0.15841	0.010	-2.32100	20.00000	Averaged
61	2,4,6-Trichlorophenol	0.33782	0.34174	0.34174	0.010	1.16011	20.00000	Averaged
62	2,4,5-Trichlorophenol	0.36352	0.36838	0.36838	0.010	1.33722	20.00000	Averaged
87	2,4-Dinitrotoluene	0.34533	0.33270	0.33270	0.010	-3.65905	20.00000	Averaged
103	Hexachlorobenzene	0.20785	0.20085	0.20085	0.010	-3.37108	20.00000	Averaged
106	Pentachlorophenol	50.00000	50.50256	0.09783	0.010	1.00512	20.01000	Quadratic
8	2-Fluorophenol	1.28473	1.22737	1.22737	0.010	-4.46419	20.00000	Averaged
13	Phenol-D6	1.39795	1.35502	1.35502	0.010	-3.07090	20.00000	Averaged
33	Nitrobenzene-D5	0.33895	0.33643	0.33643	0.010	-0.74403	20.00000	Averaged
63	2-Fluorobiphenyl	1.19814	1.17896	1.17896	0.010	-1.60126	20.00000	Averaged
95	2,4,6-Tribromophenol	0.14026	0.14606	0.14606	0.010	4.13710	20.00000	Averaged
127	Terphenyl-D14	1.03598	1.02060	1.02060	0.010	-1.48495	20.00000	Averaged

*** = Compound out of QC criteria**

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Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant **SDG:** SL7420
Lab ID : WG233872-3 **Analytical Date:** 08/13/18 18:17
Lab File ID : U1921.D **Instrument ID:** GCMS-U
Initial Calibration Date(s): 07/24/18 15:19 07/24/18 18:01 **Column ID:**

	Compound	$\overline{RRF}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
3	Pyridine	1.43557	1.29380	1.29380	0.010	-9.87549	20.00000	Averaged
19	1,4-Dichlorobenzene	1.36386	1.33129	1.33129	0.010	-2.38754	20.00000	Averaged
23	2-Methylphenol	1.09283	1.05744	1.05744	0.010	-3.23800	20.00000	Averaged
24	3&4-Methylphenol	1.15995	1.22087	1.22087	0.010	5.25236	20.00000	Averaged
32	Hexachloroethane	0.55914	0.51251	0.51251	0.010	-8.34021	20.00000	Averaged
34	Nitrobenzene	0.30911	0.29464	0.29464	0.010	-4.68062	20.00000	Averaged
49	Hexachlorobutadiene	0.16218	0.15961	0.15961	0.010	-1.58331	20.00000	Averaged
61	2,4,6-Trichlorophenol	0.33782	0.33909	0.33909	0.010	0.37671	20.00000	Averaged
62	2,4,5-Trichlorophenol	0.36352	0.36250	0.36250	0.010	-0.28100	20.00000	Averaged
87	2,4-Dinitrotoluene	0.34533	0.35223	0.35223	0.010	1.99804	20.00000	Averaged
103	Hexachlorobenzene	0.20785	0.20324	0.20324	0.010	-2.21804	20.00000	Averaged
106	Pentachlorophenol	50.00000	42.86385	0.08315	0.010	-14.27231	20.01000	Quadratic
8	2-Fluorophenol	1.28473	1.22696	1.22696	0.010	-4.49611	20.00000	Averaged
13	Phenol-D6	1.39795	1.36154	1.36154	0.010	-2.60412	20.00000	Averaged
33	Nitrobenzene-D5	0.33895	0.32606	0.32606	0.010	-3.80173	20.00000	Averaged
63	2-Fluorobiphenyl	1.19814	1.14694	1.14694	0.010	-4.27305	20.00000	Averaged
95	2,4,6-Tribromophenol	0.14026	0.15309	0.15309	0.010	9.14568	20.00000	Averaged
127	Terphenyl-D14	1.03598	1.05080	1.05080	0.010	1.42961	20.00000	Averaged

*** = Compound out of QC criteria**

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Form 8
Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition I
Lab ID : WG232607-4
Lab File ID : U1763.D

SDG: SL7420
Analytical Date: 07/24/18 15:19
Instrument ID: GCMS-U

		1,4-DICHLOROBENZENE-D4				NAPHTHALENE-D8				ACENAPHTHENE-D10			
		Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
	Std .	174863		7.16		622604		8.84		345674		11.19	
	Upper Limit	349726		7.33		1245208		9.00		691348		11.35	
	Lower Limit	87431.5		6.99		311302		8.67		172837		11.02	
Client Sample ID	Lab Sample ID												
Continuing Calibrati	WG233872-2	222447		7.14		772667		8.83		409255		11.17	
Method Blank Sample	WG233966-1	229599		7.14		816773		8.81		465761		11.17	
TCLP Blank	WG233966-3	230449		7.14		822265		8.81		454394		11.17	
Laboratory Control S	WG233966-2	208264		7.14		725012		8.82		405191		11.18	
CHAAP-IDW-SOIL-08	SL7420-1	220882		7.14		772696		8.81		425222		11.17	
CHAAP-IDW-SOIL-08	SL7420-2	218893		7.14		764334		8.81		420484		11.17	
Continuing Calibrati	WG233872-3	206382		7.14		757703		8.82		423455		11.18	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 10 seconds of internal standard RT
RT Lower Limit = - 10 seconds of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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Form 8
Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition I
Lab ID : WG232607-4
Lab File ID : U1763.D

SDG: SL7420
Analytical Date: 07/24/18 15:19
Instrument ID: GCMS-U

		PHENANTHRENE-D10			CHRYSENE-D12			PERYLENE-D12		
		Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
	Std .	518646		13.19		307285		17.04		225220		20.08	
	Upper Limit	1037292		13.36		614570		17.21		450440		20.24	
	Lower Limit	259323		13.03		153642.5		16.88		112610		19.91	
Client Sample ID	Lab Sample ID												
Continuing Calibrati	WG233872-2	623845		13.18		377384		17.03		268517		20.07	
Method Blank Sample	WG233966-1	737836		13.17		539214		17.02		434820		20.06	
TCLP Blank	WG233966-3	720044		13.17		512214		17.02		410849		20.06	
Laboratory Control S	WG233966-2	666834		13.17		419984		17.02		308051		20.07	
CHAAP-IDW-SOIL-08	SL7420-1	640943		13.17		467122		17.02		392649		20.06	
CHAAP-IDW-SOIL-08	SL7420-2	650899		13.17		486661		17.02		412090		20.06	
Continuing Calibrati	WG233872-3	686013		13.18		400400		17.03		236938		20.06	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 10 seconds of internal standard RT
RT Lower Limit = - 10 seconds of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL7420-1
Client ID: CHAAP-IDW-SOIL-080618-S
Project: Cornhusker Army Ammunition Plant
SDG: SL7420
Lab File ID: 8LH00020.D

Sample Date: 06-AUG-18
Received Date: 08-AUG-18
Extract Date: 10-AUG-18
Extracted By: DP
Extraction Method: 3510C/1311
Lab Prep Batch: WG233963

Analysis Date: 13-AUG-18
Analyst: BF
Analysis Method: SW846 8151A
Matrix: AQ
% Solids: NA
Report Date: 15-AUG-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
2,4-D	U	7.0	ug/L	1	3	14.	1.4	7.0
Silvex	U	7.1	ug/L	1	3	14.	0.95	7.1
2,4-Dichlorophenylacetic Acid		65.0	%					

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ANALYTICAL SERVICES

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL7420-2
Client ID: CHAAP-IDW-SOIL-080618-N
Project: Cornhusker Army Ammunition Plant
SDG: SL7420
Lab File ID: 8LH00021.D

Sample Date: 06-AUG-18
Received Date: 08-AUG-18
Extract Date: 10-AUG-18
Extracted By: DP
Extraction Method: 3510C/1311
Lab Prep Batch: WG233963

Analysis Date: 13-AUG-18
Analyst: BF
Analysis Method: SW846 8151A
Matrix: AQ
% Solids: NA
Report Date: 15-AUG-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
2,4-D	U	7.0	ug/L	1	3	14.	1.4	7.0
Silvex	U	7.1	ug/L	1	3	14.	0.95	7.1
2,4-Dichlorophenylacetic Acid		42.7	%					

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Report of Analytical Results

Client:
Lab ID: WG233963-1
Client ID: Method Blank Sample
Project:
SDG: SL7420
Lab File ID: 8LH00016.D

Sample Date:
Received Date:
Extract Date: 10-AUG-18
Extracted By: DP
Extraction Method: SW846 3510C
Lab Prep Batch: WG233963

Analysis Date: 13-AUG-18
Analyst: BF
Analysis Method: SW846 8151A
Matrix: AQ
% Solids: NA
Report Date: 15-AUG-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
2,4-D	U	1.4	ug/L	1	3	2.8	0.28	1.4
Silvex	U	1.4	ug/L	1	3	2.8	0.19	1.4
2,4-Dichlorophenylacetic Acid		62.6	%					

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Report of Analytical Results

Client:
Lab ID: WG233963-3
Client ID: TCLP Blank
Project:
SDG: SL7420
Lab File ID: 8LH00018.D

Sample Date:
Received Date:
Extract Date: 10-AUG-18
Extracted By: DP
Extraction Method: 3510C/1311
Lab Prep Batch: WG233963

Analysis Date: 13-AUG-18
Analyst: BF
Analysis Method: SW846 8151A
Matrix: AQ
% Solids: NA
Report Date: 15-AUG-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
2,4-D	U	7.0	ug/L	1	3	14.	1.4	7.0
Silvex	U	7.1	ug/L	1	3	14.	0.95	7.1
2,4-Dichlorophenylacetic Acid		53.8	%					

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Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** Cornhusker Army Ammunition Plant **Matrix:** AQ
Lab Code: KAS **SDG:** SL7420

Client Sample ID	Lab Sample ID	Col. ID	DCPA	#
CHAAP-IDW-SOIL-080618	SL7420-1	A	65.0	
CHAAP-IDW-SOIL-080618	SL7420-1	B	62.0	
CHAAP-IDW-SOIL-080618	SL7420-2	A	42.7	
CHAAP-IDW-SOIL-080618	SL7420-2	B	41.2	
Method Blank Sample	WG233963-1	A	60.7	
Method Blank Sample	WG233963-1	B	62.6	
Laboratory Control S	WG233963-2	A	92.7	
Laboratory Control S	WG233963-2	B	96.2	
TCLP Blank	WG233963-3	A	53.8	
TCLP Blank	WG233963-3	B	53.0	

		QC Limits
DCPA	2,4-DICHLOROPHENYLACETIC ACID	32-138

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

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LCS Recovery Report

Client:
Lab ID: WG233963-2
Client ID: LCS
Project:
SDG: SL7420
LCS File ID: 8LH00017.D

Sample Date:
Received Date:
Extract Date: 10-AUG-18
Extracted By: DP
Extraction Method: SW846 3510C
Lab Prep Batch: WG233963

Analysis Date: 13-AUG-18
Analyst: BF
Analysis Method: SW846 8151A
Matrix: AQ
% Solids: NA
Report Date: 15-AUG-18

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
2,4-D	88.9	4.70	4.18	ug/L	45-152
Silvex	88.4	4.75	4.20	ug/L	51-134
2,4-Dichlorophenylacetic Acid	96.2				32-138

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Form 4
Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : 8LH00016.D
Matrix : AQ

Column A
Instrument ID : GC08
Date Analyzed : 13-AUG-18
Time Analyzed : 15:51

SDG : SL7420
Lab Sample ID : WG233963-1
Date Extracted : 10-AUG-18
Extraction Method : SW846 3510C

Column B
Instrument ID : GC08
Date Analyzed : 13-AUG-18
Time Analyzed : 15:51

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG233963-2	8LH00017.	08/13/18	16:14
TCLP Blank	WG233963-3	8LH00018.	08/13/18	16:38
CHAAP-IDW-SOIL-080618-S	SL7420-1	8LH00020.	08/13/18	17:25
CHAAP-IDW-SOIL-080618-N	SL7420-2	8LH00021.	08/13/18	17:49

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Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL7420
Project : Cornhusker Army Ammunition Plant
Instrument ID: GC08
Lab File IDs : 8LG00063.D 8LG00064.D 8LG00062.D 8LG00065.D 8LG00066.D 8LG00067.D
Column ID: A
Calibration Date(s): 23-JUL-18 15:52 23-JUL-18 17:49

	0.100000(Level 1	0.250000(Level 2	0.500000(Level 3	0.750000(Level 4	1.0000 Level 5	2.0000 Level 6	New Crv	b	m1	m2	%RSD	Max %RSD	
2,4-D	118740	123540	107442	105833	117178	114856	AVG		114598		5.94232	20.00000	O
Silvex	631630	669144	581550	554620	599666	542710	AVG		596553		8.00144	20.00000	O
2,4-Dichlorophenylacetic Ac	87325	89634	81798	76268	84836	83837	AVG		83950		5.53973	20.00000	

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

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Katahdin
ANALYTICAL SERVICES

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL7420
Project : Cornhusker Army Ammunition Plant
Instrument ID: GC08
Lab File IDs : 8LG00063.D 8LG00064.D 8LG00062.D 8LG00065.D 8LG00066.D 8LG00067.D
Column ID: B
Calibration Date(s): 23-JUL-18 15:52 23-JUL-18 17:49

	0.100000(Level 1	0.250000(Level 2	0.500000(Level 3	0.750000(Level 4	1.0000 Level 5	2.0000 Level 6	New Crv	b	m1	m2	%RSD	Max %RSD	
2,4-D	89940	92288	82040	79799	89949	90595	AVG		87435		5.91085	20.00000	O
Silvex	360050	412960	370734	357260	380854	352308	AVG		372361		6.01087	20.00000	O
2,4-Dichlorophenylacetic Ac	68165	68274	63715	58595	64793	62177	AVG		64286		5.75225	20.00000	

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

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Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG234216-1
Lab File ID : 8LH00015.D
Initial Calibration Date(s): 07/23/18 15:52 07/23/18 17:49

SDG: SL7420
Analytical Date: 08/13/18 13:22
Instrument ID: GC08
Column ID: A

	Compound	RRF/Amount	RF0.500	CCAL RRF0.500	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
7	2,4-D	114598	109420	109420	0.010	-4.51859	20.00000	Averaged
9	Silvex	596553	581306	581306	0.010	-2.55589	20.00000	Averaged
2	2,4-Dichlorophenylacetic Ac	83950	85046	85046	0.010	1.30604	20.00000	Averaged

*** = Compound out of QC criteria**

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Katahdin
ANALYTICAL SERVICES

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG234216-1
Lab File ID : 8LH00015.D
Initial Calibration Date(s): 07/23/18 15:52 07/23/18 17:49

SDG: SL7420
Analytical Date: 08/13/18 13:22
Instrument ID: GC08
Column ID: B

Compound	RRF/Amount	RF0.500	CCAL RRF0.500	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
7 2,4-D	87435	88090	88090	0.010	0.74910	20.00000	Averaged
9 Silvex	372361	395784	395784	0.010	6.29042	20.00000	Averaged
2 2,4-Dichlorophenylacetic Ac	64286	68990	68990	0.010	7.31656	20.00000	Averaged

*** = Compound out of QC criteria**

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Katahdin
ANALYTICAL SERVICES

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG234216-2
Lab File ID : 8LH00026.D
Initial Calibration Date(s): 07/23/18 15:52 07/23/18 17:49

SDG: SL7420
Analytical Date: 08/13/18 19:47
Instrument ID: GC08
Column ID: A

	Compound	RRF/Amount	RF0.250	CCAL RRF0.250	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
7	2,4-D	114598	119800	119800	0.010	4.53914	20.00000	Averaged
9	Silvex	596553	647556	647556	0.010	8.54957	20.00000	Averaged
2	2,4-Dichlorophenylacetic Ac	83950	86530	86530	0.010	3.07377	20.00000	Averaged

*** = Compound out of QC criteria**

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ANALYTICAL SERVICES

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG234216-2
Lab File ID : 8LH00026.D
Initial Calibration Date(s): 07/23/18 15:52 07/23/18 17:49

SDG: SL7420
Analytical Date: 08/13/18 19:47
Instrument ID: GC08
Column ID: B

	Compound	RRF/Amount	RF0.250	CCAL RRF0.250	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
7	2,4-D	87435	92640	92640	0.010	5.95296	20.00000	Averaged
9	Silvex	372361	421328	421328	0.010	13.15044	20.00000	Averaged
2	2,4-Dichlorophenylacetic Ac	64286	70496	70496	0.010	9.65920	20.00000	Averaged

*** = Compound out of QC criteria**

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Form 8
GC Analytical Sequence

Lab Name : Katahdin Analytical Services
SDG : SL7420
Project : Cornhusker Army Ammunition Plant
Column ID : A
Instrument ID : GC08

Client Sample ID	Lab Sample ID	Date Analyzed	Time Analyzed	DCPA	
Initial Calibration	WG232698-1	07/23/18	15:52	10.71	
Initial Calibration	WG232698-2	07/23/18	16:15	10.71	
Initial Calibration	WG232698-3	07/23/18	16:39	10.72	
Initial Calibration	WG232698-4	07/23/18	17:02	10.72	
Initial Calibration	WG232698-5	07/23/18	17:26	10.73	
Initial Calibration	WG232698-6	07/23/18	17:49	10.74	
Independent Source	WG232698-7	07/23/18	18:13		
Continuing Calibrati	WG234216-1	08/13/18	13:22	10.69	
Method Blank Sample	WG233963-1	08/13/18	15:51	10.70	
Laboratory Control S	WG233963-2	08/13/18	16:14	10.69	
TCLP Blank	WG233963-3	08/13/18	16:38	10.70	
CHAAP-IDW-SOIL-08061	SL7420-1	08/13/18	17:25	10.72	
CHAAP-IDW-SOIL-08061	SL7420-2	08/13/18	17:49	10.72	
Continuing Calibrati	WG234216-2	08/13/18	19:47	10.74	

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Form 8
GC Analytical Sequence

Lab Name : Katahdin Analytical Services
SDG : SL7420
Project : Cornhusker Army Ammunition Plant
Column ID : B
Instrument ID : GC08

Client Sample ID	Lab Sample ID	Date Analyzed	Time Analyzed	DCPA	
Initial Calibration	WG232698-1	07/23/18	15:52	11.80	
Initial Calibration	WG232698-2	07/23/18	16:15	11.82	
Initial Calibration	WG232698-3	07/23/18	16:39	11.82	
Initial Calibration	WG232698-4	07/23/18	17:02	11.84	
Initial Calibration	WG232698-5	07/23/18	17:26	11.84	
Initial Calibration	WG232698-6	07/23/18	17:49	11.84	
Independent Source	WG232698-7	07/23/18	18:13		
Continuing Calibrati	WG234216-1	08/13/18	13:22	11.80	
Method Blank Sample	WG233963-1	08/13/18	15:51	11.80	
Laboratory Control S	WG233963-2	08/13/18	16:14	11.81	
TCLP Blank	WG233963-3	08/13/18	16:38	11.83	
CHAAP-IDW-SOIL-08061	SL7420-1	08/13/18	17:25	11.84	
CHAAP-IDW-SOIL-08061	SL7420-2	08/13/18	17:49	11.85	
Continuing Calibrati	WG234216-2	08/13/18	19:47	11.86	

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INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-IDW-SOIL-080618-S

Matrix: WATER **SDG Name:** SL7420

Percent Solids: 0.00 **Lab Sample ID:** SL7420-001

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-38-2	ARSENIC, TCLP	16	J		P	1	40	7.0	25
7440-39-3	BARIUM, TCLP	326		B	P	1	25	1.2	15
7440-43-9	CADMIUM, TCLP	0.78	J		P	1	25	0.25	15
7440-47-3	CHROMIUM, TCLP	3.1	J		P	1	50	1.8	20
7439-92-1	LEAD, TCLP	20	U		P	1	25	5.5	20
7439-97-6	MERCURY, TCLP	0.031	J		CV	1	0.20	0.013	0.10
7782-49-2	SELENIUM, TCLP	35	U		P	1	50	12	35
7440-22-4	SILVER, TCLP	20	U		P	1	50	1.4	20

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-IDW-SOIL-080618-N

Matrix: WATER **SDG Name:** SL7420

Percent Solids: 0.00 **Lab Sample ID:** SL7420-002

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-38-2	ARSENIC, TCLP	42			P	1	40	7.0	25
7440-39-3	BARIUM, TCLP	648		B	P	1	25	1.2	15
7440-43-9	CADMIUM, TCLP	0.52	J		P	1	25	0.25	15
7440-47-3	CHROMIUM, TCLP	4.2	J		P	1	50	1.8	20
7439-92-1	LEAD, TCLP	20	U		P	1	25	5.5	20
7439-97-6	MERCURY, TCLP	0.018	J		CV	1	0.20	0.013	0.10
7782-49-2	SELENIUM, TCLP	35	U		P	1	50	12	35
7440-22-4	SILVER, TCLP	2.9	J		P	1	50	1.4	20

Comments:

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Concentration Units: ug/L

SAMPLE: ICV

File: HLH10A Aug 10, 2018 12:01

Analyte	True	Found	%R (1)
MERCURY	6.0	6.07	101.2

SAMPLE: CCV

File: HLH10A Aug 10, 2018 12:07

Analyte	True	Found	%R (1)
MERCURY	5.0	4.83	96.6

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Concentration Units: ug/L

SAMPLE: CCV

File: HLH10A Aug 10, 2018 12:34

Analyte	True	Found	%R (1)
MERCURY	5.0	4.86	97.2

SAMPLE: CCV

File: HLH10A Aug 10, 2018 13:00

Analyte	True	Found	%R (1)
MERCURY	5.0	5.06	101.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Concentration Units: ug/L

SAMPLE: CCV

File: HLH10A Aug 10, 2018 13:27

Analyte	True	Found	%R (1)
MERCURY	5.0	4.90	98.0

SAMPLE: CCV

File: HLH10A Aug 10, 2018 13:34

Analyte	True	Found	%R (1)
MERCURY	5.0	4.95	99.0

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Concentration Units: ug/L

SAMPLE: CCV

File: HLH10A Aug 10, 2018 14:01

Analyte	True	Found	%R (1)
MERCURY	5.0	4.92	98.4

SAMPLE: CCV

File: HLH10A Aug 10, 2018 14:27

Analyte	True	Found	%R (1)
MERCURY	5.0	4.99	99.8

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Concentration Units: ug/L

SAMPLE: CCV

File: HLH10A Aug 10, 2018 14:53

Analyte	True	Found	%R (1)
MERCURY	5.0	4.98	99.6

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Concentration Units: ug/L

SAMPLE: ICV

File: ILH10A Aug 10, 2018 13:28

Analyte	True	Found	%R (1)
ALUMINUM	10000.0	10070.00	100.7
ARSENIC	400.0	402.40	100.6
BARIUM	400.0	398.30	99.6
CADMIUM	400.0	410.30	102.6
CALCIUM	10000.0	10260.00	102.6
CHROMIUM	400.0	399.40	99.8
IRON	10000.0	10270.00	102.7
LEAD	400.0	412.90	103.2
MAGNESIUM	10000.0	10380.00	103.8
SELENIUM	400.0	406.90	101.7
SILVER	400.0	399.80	100.0

SAMPLE: CCV

File: ILH10A Aug 10, 2018 13:52

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12690.00	101.5
ARSENIC	500.0	500.30	100.1
BARIUM	500.0	496.00	99.2
CADMIUM	500.0	503.00	100.6
CALCIUM	12500.0	12690.00	101.5
CHROMIUM	500.0	493.00	98.6
IRON	12500.0	12680.00	101.4
LEAD	500.0	506.20	101.2
MAGNESIUM	12500.0	12850.00	102.8
SELENIUM	500.0	505.00	101.0
SILVER	500.0	491.70	98.3

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Concentration Units: ug/L

SAMPLE: CCV

File: ILH10A Aug 10, 2018 14:12

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12880.00	103.0
ARSENIC	500.0	504.20	100.8
BARIUM	500.0	506.50	101.3
CADMIUM	500.0	502.30	100.5
CALCIUM	12500.0	12890.00	103.1
CHROMIUM	500.0	504.50	100.9
IRON	12500.0	12960.00	103.7
LEAD	500.0	505.10	101.0
MAGNESIUM	12500.0	12810.00	102.5
SELENIUM	500.0	507.40	101.5
SILVER	500.0	498.60	99.7

SAMPLE: CCV

File: ILH10A Aug 10, 2018 15:09

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12890.00	103.1
ARSENIC	500.0	491.30	98.3
BARIUM	500.0	506.20	101.2
CADMIUM	500.0	489.30	97.9
CALCIUM	12500.0	12910.00	103.3
CHROMIUM	500.0	502.80	100.6
IRON	12500.0	12950.00	103.6
LEAD	500.0	494.00	98.8
MAGNESIUM	12500.0	12560.00	100.5
SELENIUM	500.0	491.60	98.3
SILVER	500.0	499.70	99.9

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Concentration Units: ug/L

SAMPLE: CCV

File: ILH10A Aug 10, 2018 16:09

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12960.00	103.7
ARSENIC	500.0	498.70	99.7
BARIUM	500.0	509.40	101.9
CADMIUM	500.0	493.90	98.8
CALCIUM	12500.0	12950.00	103.6
CHROMIUM	500.0	510.60	102.1
IRON	12500.0	13120.00	105.0
LEAD	500.0	495.60	99.1
MAGNESIUM	12500.0	12710.00	101.7
SELENIUM	500.0	502.40	100.5
SILVER	500.0	503.00	100.6

SAMPLE: CCV

File: ILH10A Aug 10, 2018 17:08

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12770.00	102.2
ARSENIC	500.0	495.90	99.2
BARIUM	500.0	501.30	100.3
CADMIUM	500.0	494.30	98.9
CALCIUM	12500.0	12700.00	101.6
CHROMIUM	500.0	499.20	99.8
IRON	12500.0	12840.00	102.7
LEAD	500.0	497.40	99.5
MAGNESIUM	12500.0	12680.00	101.4
SELENIUM	500.0	496.10	99.2
SILVER	500.0	494.80	99.0

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Concentration Units: ug/L

SAMPLE: CCV

File: ILH10A Aug 10, 2018 18:02

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12800.00	102.4
ARSENIC	500.0	498.00	99.6
BARIUM	500.0	500.50	100.1
CADMIUM	500.0	491.90	98.4
CALCIUM	12500.0	12700.00	101.6
CHROMIUM	500.0	501.90	100.4
IRON	12500.0	12910.00	103.3
LEAD	500.0	494.30	98.9
MAGNESIUM	12500.0	12640.00	101.1
SELENIUM	500.0	500.30	100.1
SILVER	500.0	489.90	98.0

SAMPLE: CCV

File: ILH10A Aug 10, 2018 18:56

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12700.00	101.6
ARSENIC	500.0	488.90	97.8
BARIUM	500.0	497.20	99.4
CADMIUM	500.0	482.10	96.4
CALCIUM	12500.0	12700.00	101.6
CHROMIUM	500.0	496.10	99.2
IRON	12500.0	12830.00	102.6
LEAD	500.0	486.10	97.2
MAGNESIUM	12500.0	12480.00	99.8
SELENIUM	500.0	490.40	98.1
SILVER	500.0	488.40	97.7

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Concentration Units: ug/L

SAMPLE: PQL

File: HLH10A Aug 10, 2018 12:05

Analyte	TRUE	FOUND	% R
MERCURY	0.2	0.21	105.0

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Concentration Units: ug/L

SAMPLE: PQL

File: ILH10A Aug 10, 2018 13:37

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	318.00	106.0
ARSENIC	8.0	8.63	107.9
BARIUM	5.0	4.98	99.6
CADMIUM	5.0	5.18	103.6
CALCIUM	100.0	108.50	108.5
CHROMIUM	10.0	10.50	105.0
IRON	100.0	109.00	109.0
LEAD	5.0	5.49	109.8
MAGNESIUM	100.0	103.70	103.7
SELENIUM	10.0	10.24	102.4
SILVER	10.0	10.62	106.2

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Concentration Units: ug/L

SAMPLE: ICB

File: HLH10A Aug 10, 2018 12:03

Analyte	Result	C
MERCURY	0.026	U

SAMPLE: CCB

File: HLH10A Aug 10, 2018 12:09

Analyte	Result	C
MERCURY	0.026	U

SAMPLE: CCB

File: HLH10A Aug 10, 2018 12:37

Analyte	Result	C
MERCURY	0.050	J

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Concentration Units: ug/L

SAMPLE: CCB
File: HLH10A Aug 10, 2018 13:02

Analyte	Result	C
MERCURY	0.031	J

SAMPLE: CCB
File: HLH10A Aug 10, 2018 13:29

Analyte	Result	C
MERCURY	0.108	B

SAMPLE: CCB
File: HLH10A Aug 10, 2018 13:37

Analyte	Result	C
MERCURY	0.026	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Concentration Units: ug/L

SAMPLE: CCB
File: HLH10A Aug 10, 2018 14:03

Analyte	Result	C
MERCURY	0.026	U

SAMPLE: CCB
File: HLH10A Aug 10, 2018 14:29

Analyte	Result	C
MERCURY	0.026	U

SAMPLE: CCB
File: HLH10A Aug 10, 2018 14:55

Analyte	Result	C
MERCURY	0.026	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Concentration Units: ug/L

SAMPLE: ICB

File: ILH10A Aug 10, 2018 13:32

Analyte	Result	C
ALUMINUM	19.000	U
ARSENIC	1.500	U
BARIUM	0.330	U
CADMIUM	0.073	U
CALCIUM	5.900	U
CHROMIUM	0.590	U
IRON	3.300	U
LEAD	1.100	U
MAGNESIUM	2.500	U
SELENIUM	3.300	U
SILVER	0.590	U

SAMPLE: CCB

File: ILH10A Aug 10, 2018 13:56

Analyte	Result	C
ALUMINUM	19.000	U
ARSENIC	1.500	U
BARIUM	0.330	U
CADMIUM	0.081	J
CALCIUM	5.900	U
CHROMIUM	0.590	U
IRON	3.300	U
LEAD	1.100	U
MAGNESIUM	2.500	U
SELENIUM	3.300	U
SILVER	0.590	U

SAMPLE: CCB

File: ILH10A Aug 10, 2018 14:16

Analyte	Result	C
ALUMINUM	19.000	U
ARSENIC	1.582	J
BARIUM	-0.331	U
CADMIUM	0.073	U
CALCIUM	5.900	U
CHROMIUM	0.590	U
IRON	3.300	U
LEAD	1.100	U
MAGNESIUM	2.500	U
SELENIUM	3.300	U
SILVER	0.590	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Concentration Units: ug/L

SAMPLE: CCB
File: ILH10A Aug 10, 2018 15:13

Analyte	Result	C
ALUMINUM	19.000	U
ARSENIC	1.500	U
BARIUM	0.330	U
CADMIUM	0.073	U
CALCIUM	5.900	U
CHROMIUM	0.590	U
IRON	3.300	U
LEAD	1.100	U
MAGNESIUM	2.500	U
SELENIUM	3.300	U
SILVER	0.590	U

SAMPLE: CCB
File: ILH10A Aug 10, 2018 16:13

Analyte	Result	C
ALUMINUM	19.000	U
ARSENIC	1.500	U
BARIUM	0.330	U
CADMIUM	0.073	U
CALCIUM	5.900	U
CHROMIUM	0.590	U
IRON	3.300	U
LEAD	1.100	U
MAGNESIUM	2.500	U
SELENIUM	3.300	U
SILVER	0.590	U

SAMPLE: CCB
File: ILH10A Aug 10, 2018 17:12

Analyte	Result	C
ALUMINUM	19.000	U
ARSENIC	1.500	U
BARIUM	0.330	U
CADMIUM	0.073	U
CALCIUM	5.900	U
CHROMIUM	0.590	U
IRON	3.300	U
LEAD	1.100	U
MAGNESIUM	2.500	U
SELENIUM	3.300	U
SILVER	0.590	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Concentration Units: ug/L

SAMPLE: CCB

File: ILH10A Aug 10, 2018 18:06

Analyte	Result	C
ALUMINUM	19.000	U
ARSENIC	1.500	U
BARIUM	0.330	U
CADMIUM	0.073	U
CALCIUM	5.900	U
CHROMIUM	0.590	U
IRON	3.300	U
LEAD	1.100	U
MAGNESIUM	2.500	U
SELENIUM	3.300	U
SILVER	0.590	U

SAMPLE: CCB

File: ILH10A Aug 10, 2018 19:00

Analyte	Result	C
ALUMINUM	19.000	U
ARSENIC	1.500	U
BARIUM	0.330	U
CADMIUM	0.073	U
CALCIUM	6.116	J
CHROMIUM	0.590	U
IRON	3.300	U
LEAD	1.100	U
MAGNESIUM	2.500	U
SELENIUM	3.300	U
SILVER	0.590	U

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBT1470B

Matrix: WATER **SDG Name:** SL7420

QC Batch ID: LH10ICW1

Concentration Units : ug/L

Analyte	RESULT	C
ARSENIC	25	U
BARIUM	90.8	B
CADMIUM	0.78	J
CHROMIUM	20	U
LEAD	6.3	J
MERCURY	0.019	J
SELENIUM	35	U
SILVER	2.6	J

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBWLH10HGW1

Matrix: WATER **SDG Name:** SL7420

QC Batch ID: LH10HGW1

Concentration Units : ug/L

Analyte	RESULT	C
MERCURY	0.10	U

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBWLH10ICW1

Matrix: WATER **SDG Name:** SL7420

QC Batch ID: LH10ICW1

Concentration Units : ug/L

Analyte	RESULT	C
ARSENIC	5.0	U
BARIUM	3.0	U
CADMIUM	3.0	U
CHROMIUM	4.0	U
LEAD	4.0	U
SELENIUM	7.0	U
SILVER	0.97	J

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Concentration Units: ug/L

SAMPLE: ICSA

File: ILH10A Aug 10, 2018 13:41

Analyte	TRUE	FOUND	% R
ALUMINUM	500000.00	498000.00	99.6
ARSENIC	0	1.41	
BARIUM	0	0.01	
CADMIUM	0	0.07	
CALCIUM	500000.00	472200.00	94.4
CHROMIUM	0	0.77	
IRON	200000.00	188500.00	94.3
LEAD	0	3.38	
MAGNESIUM	500000.00	451600.00	90.3
SELENIUM	0	-1.77	
SILVER	0	-0.60	

SAMPLE: ICSAB

File: ILH10A Aug 10, 2018 13:46

Analyte	TRUE	FOUND	% R
ALUMINUM	500000.00	501600.00	100.3
ARSENIC	100.00	98.80	99.0
BARIUM	500.00	495.40	99.0
CADMIUM	1000.00	935.00	93.5
CALCIUM	500000.00	473700.00	94.7
CHROMIUM	500.00	473.90	94.8
IRON	200000.00	190400.00	95.2
LEAD	50.00	48.14	96.0
MAGNESIUM	500000.00	458400.00	91.7
SELENIUM	50.00	46.47	92.0
SILVER	200.00	210.30	105.0

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSWLH10HGW1

Matrix: WATER **SDG Name:** SL7420

QC Batch ID: LH10HGW1

Concentration Units : ug/L

Analyte	TRUE	FOUND	% R	LIMITS (%)	
MERCURY	5.00	5.12	102.4	82	119

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSWLH10ICW1

Matrix: WATER **SDG Name:** SL7420

QC Batch ID: LH10ICW1

Concentration Units : ug/L

Analyte	TRUE	FOUND	% R	LIMITS (%)	
ARSENIC	100	101	101.1	87	113
BARIUM	2000	1970	98.7	88	113
CADMIUM	250	253	101.3	88	113
CHROMIUM	200	208	104.0	90	113
LEAD	100	102	101.7	86	113
SELENIUM	100	99.0	99.0	83	114
SILVER	50.0	51.2	102.5	84	115

INSTRUMENT DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** H

Instrument Name: CETAC M6100 **Date:** 7/11/2018

Concentration Units: ug/L

Analyte	PQL/LOQ	IDL	M
MERCURY	0.20	0.026	CV

INSTRUMENT DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 7/16/2018

Concentration Units: ug/L

Analyte	PQL/LOQ	IDL	M
ALUMINUM	300	19	P
ARSENIC	8.0	1.5	P
BARIUM	5.0	0.33	P
CADMIUM	5.0	0.073	P
CALCIUM	100	5.9	P
CHROMIUM	10	0.59	P
IRON	100	3.3	P
LEAD	5.0	1.1	P
MAGNESIUM	100	2.5	P
SELENIUM	10	3.3	P
SILVER	10	0.59	P

LIMITS of DETECTION

Lab Name: Katahdin Analytical Services **Instrument Code:** H

Instrument Name: CETAC M6100 **Date:** 2/9/2011

Analyte	LOD	Units	M	EPA Prep./Anal. Method
MERCURY	0.10	ug/L	CV	SW846 7470A / SW846 7470A

LIMITS of DETECTION

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/19/2011

Analyte	LOD	Units	M	EPA Prep./Anal. Method
ARSENIC	5.0	ug/L	P	SW846 3010A / SW846 6010C
BARIUM	3.0	ug/L	P	SW846 3010A / SW846 6010C
CADMIUM	3.0	ug/L	P	SW846 3010A / SW846 6010C
CHROMIUM	4.0	ug/L	P	SW846 3010A / SW846 6010C
LEAD	4.0	ug/L	P	SW846 3010A / SW846 6010C
SELENIUM	7.0	ug/L	P	SW846 3010A / SW846 6010C
SILVER	4.0	ug/L	P	SW846 3010A / SW846 6010C

METHOD DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** H

Instrument Name: CETAC M6100 **Date:** 2/9/2011

Analyte	MDL	Units	M	EPA Prep./Anal. Method
MERCURY	0.013	ug/L	CV	SW846 7470A / SW846 7470A

METHOD DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/19/2011

Analyte	MDL	Units	M	EPA Prep./Anal. Method
ARSENIC	1.4	ug/L	P	SW846 3010A / SW846 6010C
BARIUM	0.23	ug/L	P	SW846 3010A / SW846 6010C
CADMIUM	0.049	ug/L	P	SW846 3010A / SW846 6010C
CHROMIUM	0.36	ug/L	P	SW846 3010A / SW846 6010C
LEAD	1.1	ug/L	P	SW846 3010A / SW846 6010C
SELENIUM	2.4	ug/L	P	SW846 3010A / SW846 6010C
SILVER	0.27	ug/L	P	SW846 3010A / SW846 6010C

ICP INTERELEMENT CORRECTION FACTORS

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Instrument Name: THERMO ICAP 6500 **Instrument ID:** I **Date:** 7/12/2018

Analyte	Wavelength (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	As	Cr	Co	Cu	Mn	Mo	Ni	Ti	V
ALUMINUM	396.15	0.0	0.0004500	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0363000	0.0	0.0	0.0
ANTIMONY	206.83	0.0000090	0.0	0.0000310	0.0	-0.0000820	0.0091920	0.0	0.0	0.0	-0.0019100	-0.0010130	0.0	-0.0003690
ARSENIC	189.04	-0.0000120	0.0	-0.0000840	0.0	0.0	0.0002030	0.0	0.0	0.0	0.0006500	0.0	0.0	0.0
BARIUM	455.40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BERYLLIUM	313.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0007160	0.0000820
BORON	208.96	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0446700	0.0	0.0	0.0
CADMIUM	226.50	0.0	0.0	0.0000640	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0000800	0.0000260	0.0
CALCIUM	315.89	0.0	0.0	0.0	0.0	0.0	0.0008850	0.0030700	0.0	0.0	0.0	0.0	0.0	0.0
CHROMIUM	267.72	0.0	0.0	0.0000070	0.0	0.0	0.0	0.0	0.0	0.0001360	0.0	0.0	0.0	0.0000720
COBALT	228.62	0.0	0.0	0.0000010	0.0	0.0	-0.0000420	0.0	0.0	0.0	0.0	0.0000640	0.0020930	0.0
COPPER	327.40	0.0000050	0.0	-0.0000110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0014700	0.0004010
GOLD	242.79	0.0	0.0	0.0001110	0.0	0.0	0.0	0.0	0.0	0.0058700	0.0	0.0	0.0	0.0
IRON	259.94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LEAD	220.35	-0.0000930	0.0	0.0000260	0.0	0.0	-0.0001750	-0.0000480	0.0000290	0.0	-0.0012100	0.0002080	-0.0001240	0.0
LITHIUM	670.78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAGNESIUM	202.58	0.0	0.0	0.0005280	0.0	0.0	0.0	0.0687500	0.0	0.0	0.0209000	0.0	-0.0000620	0.0
MANGANESE	257.61	-0.0000160	0.0	-0.0000300	0.0000310	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MOLYBDENUM	202.03	0.0	0.0	0.0	0.0	0.0	0.0000620	0.0	0.0	0.0000840	0.0	0.0	0.0	-0.0001920
NICKEL	231.60	0.0	0.0	-0.0000380	0.0	0.0	0.0	0.0001750	0.0	0.0	0.0019630	0.0	0.0	0.0
POTASSIUM	766.49	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SELENIUM	196.09	0.0000220	0.0	0.0000110	0.0	-0.0000500	0.0	0.0001640	0.0	0.0003770	0.0	0.0	0.0	-0.0000070
SILICON	251.61	0.0	0.0	-0.0004840	0.0	0.0	0.0	0.0	0.0	0.0	0.0107740	0.0	0.0069100	0.0
SILVER	328.07	0.0	0.0	-0.0003310	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0001370	0.0
SODIUM	589.59	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STRONTIUM	421.55	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THALLIUM	190.86	0.0000040	0.0	-0.0000090	0.0	0.0	0.0	0.0021060	0.0000120	-0.0015310	-0.0000380	0.0	-0.0007180	-0.0083600
TIN	189.99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TITANIUM	334.90	0.0	0.0	0.0	0.0	0.0	0.0001290	0.0	0.0	0.0	0.0019400	0.0	0.0	0.0
VANADIUM	292.40	0.0	0.0	0.0000050	0.0	0.0	-0.0028120	0.0	0.0	-0.0002370	-0.0039090	0.0	0.0006460	0.0
ZINC	206.20	0.0	0.0	0.0	0.0	0.0	0.0000010	0.0	0.0	0.0	0.0	0.0	0.0	0.0

FORM XI - IN

ICP LINEAR RANGES

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 7/11/2018

Concentration Units: ug/L

Analyte	Integration Time (sec)	Linear Range	M
ALUMINUM	5.00	500000	P
ARSENIC	45.00	20000	P
BARIUM	5.00	20000	P
CADMIUM	45.00	20000	P
CALCIUM	5.00	500000	P
CHROMIUM	10.00	20000	P
IRON	5.00	250000	P
LEAD	45.00	20000	P
MAGNESIUM	45.00	200000	P
SELENIUM	45.00	20000	P
SILVER	10.00	2000	P

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** LH10HGW1

Matrix: WATER **SDG Name:** SL7420

Method: CV **Prep Date:** 08/10/2018

Client ID	Lab Sample ID	Initial (L)	Final (L)	Bottle ID
LCSWLH10HGW1	LCSWLH10HGW1	0.025	0.025	
PBT1470B	PBT1470B	0.025	0.025	
PBWLH10HGW1	PBWLH10HGW1	0.025	0.025	
CHAAP-IDW-SOIL-080618-S	SL7420-001	0.025	0.025	C
CHAAP-IDW-SOIL-080618-N	SL7420-002	0.025	0.025	C

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** LH10ICW1

Matrix: WATER **SDG Name:** SL7420

Method: P **Prep Date:** 08/10/2018

Client ID	Lab Sample ID	Initial (L)	Final (L)	Bottle ID
LCSWLH10ICW1	LCSWLH10ICW1	0.05	0.05	
PBT1470B	PBT1470B	0.01	0.05	
PBWLH10ICW1	PBWLH10ICW1	0.05	0.05	
CHAAP-IDW-SOIL-080618-S	SL7420-001	0.01	0.05	C
CHAAP-IDW-SOIL-080618-N	SL7420-002	0.01	0.05	C

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Instrument ID: CETAC M6100 **File Name:** HLH10A

Date: 8/10/2018 **Method:** CV

Lab Sample ID	Client ID	D.F.	Time	Elements
Calibration Blank		1	11:42	Hg
Standard #1 (0.2 ppb		1	11:44	Hg
Standard #2 (0.5 ppb		1	11:46	Hg
Standard #3 (1.0 ppb		1	11:48	Hg
Standard #4 (5.0 ppb		1	11:50	Hg
Standard #5 (10.0 pp		1	11:52	Hg
ICV		1	12:01	HG
ICB		1	12:03	HG
PQL		1	12:05	HG
CCV		1	12:07	HG
CCB		1	12:09	HG
ZZZZZZ		1	12:11	
ZZZZZZ		1	12:13	
ZZZZZZ		1	12:16	
ZZZZZZ		1	12:22	
ZZZZZZ		1	12:24	
ZZZZZZ		1	12:26	
ZZZZZZ		1	12:28	
ZZZZZZ		1	12:30	
ZZZZZZ		1	12:32	
CCV		1	12:34	HG
CCB		1	12:37	HG
ZZZZZZ		1	12:39	
ZZZZZZ		1	12:41	
ZZZZZZ		5	12:43	
ZZZZZZ		1	12:45	
ZZZZZZ		1	12:47	

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Instrument ID: CETAC M6100 **File Name:** HLH10A

Date: 8/10/2018 **Method:** CV

Lab Sample ID	Client ID	D.F.	Time	Elements
ZZZZZZ		1	12:49	
ZZZZZZ		1	12:52	
ZZZZZZ		5	12:54	
ZZZZZZ		1	12:56	
ZZZZZZ		1	12:58	
CCV		1	13:00	HG
CCB		1	13:02	HG
ZZZZZZ		1	13:04	
ZZZZZZ		1	13:07	
ZZZZZZ		1	13:09	
ZZZZZZ		1	13:11	
ZZZZZZ		1	13:13	
ZZZZZZ		1	13:15	
ZZZZZZ		1	13:17	
ZZZZZZ		1	13:21	
ZZZZZZ		1	13:23	
ZZZZZZ		1	13:25	
CCV		1	13:27	HG
CCB		1	13:29	HG
CCV		1	13:34	HG
CCB		1	13:37	HG
ZZZZZZ		1	13:39	
ZZZZZZ		1	13:41	
ZZZZZZ		1	13:44	
ZZZZZZ		1	13:46	
ZZZZZZ		1	13:48	
ZZZZZZ		1	13:50	

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Instrument ID: CETAC M6100 **File Name:** HLH10A

Date: 8/10/2018 **Method:** CV

Lab Sample ID	Client ID	D.F.	Time	Elements
ZZZZZZ		1	13:52	
ZZZZZZ		1	13:54	
ZZZZZZ		1	13:57	
ZZZZZZ		1	13:59	
CCV		1	14:01	HG
CCB		1	14:03	HG
ZZZZZZ		1	14:05	
ZZZZZZ		1	14:07	
ZZZZZZ		1	14:09	
ZZZZZZ		1	14:12	
ZZZZZZ		1	14:14	
PBWLH10HGW1		1	14:16	HG
LCSWLH10HGW1		1	14:18	HG
PBT1470B		1	14:20	HG
ZZZZZZ		1	14:22	
ZZZZZZ		1	14:25	
CCV		1	14:27	HG
CCB		1	14:29	HG
ZZZZZZ		1	14:31	
ZZZZZZ		1	14:33	
ZZZZZZ		1	14:35	
ZZZZZZ		1	14:38	
ZZZZZZ		1	14:40	
ZZZZZZ		1	14:42	
ZZZZZZ		1	14:44	
SL7420-001	CHAAP-IDW-SOIL-080618-S	1	14:46	HG
SL7420-002	CHAAP-IDW-SOIL-080618-N	1	14:48	HG

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Instrument ID: CETAC M6100 **File Name:** HLH10A

Date: 8/10/2018 **Method:** CV

Lab Sample ID	Client ID	D.F.	Time	Elements
ZZZZZZ		1	14:51	
CCV		1	14:53	HG
CCB		1	14:55	HG

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Instrument ID: THERMO ICAP 6500 **File Name:** ILH10A

Date: 8/10/2018 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements									
Blank		1	13:20	AL	AS	BA	CD	CA	CR	FE	PB	MG	SE	AG
Std 1		1	13:24	AL	AS	BA	CD	CA	CR	FE	PB	MG	SE	AG
ICV		1	13:28	AL	AS	BA	CD	CA	CR	FE	PB	MG	SE	AG
ICB		1	13:32	AL	AS	BA	CD	CA	CR	FE	PB	MG	SE	AG
PQL		1	13:37	AL	AS	BA	CD	CA	CR	FE	PB	MG	SE	AG
ICSA		1	13:41	AL	AS	BA	CD	CA	CR	FE	PB	MG	SE	AG
ICSAB		1	13:46	AL	AS	BA	CD	CA	CR	FE	PB	MG	SE	AG
CCV		1	13:52	AL	AS	BA	CD	CA	CR	FE	PB	MG	SE	AG
CCB		1	13:56	AL	AS	BA	CD	CA	CR	FE	PB	MG	SE	AG
ZZZZZZ		1	14:00											
ZZZZZZ		1	14:06											
CCV		1	14:12	AL	AS	BA	CD	CA	CR	FE	PB	MG	SE	AG
CCB		1	14:16	AL	AS	BA	CD	CA	CR	FE	PB	MG	SE	AG
ZZZZZZ		1	14:20											
ZZZZZZ		1	14:25											
ZZZZZZ		1	14:29											
ZZZZZZ		1	14:33											
ZZZZZZ		1	14:38											
ZZZZZZ		1	14:44											
ZZZZZZ		5	14:49											
ZZZZZZ		1	14:53											
ZZZZZZ		1	14:58											
ZZZZZZ		1	15:04											
CCV		1	15:09	AL	AS	BA	CD	CA	CR	FE	PB	MG	SE	AG
CCB		1	15:13	AL	AS	BA	CD	CA	CR	FE	PB	MG	SE	AG
ZZZZZZ		1	15:17											
ZZZZZZ		1	15:23											

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Instrument ID: THERMO ICAP 6500 **File Name:** ILH10A

Date: 8/10/2018 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements									
ZZZZZZ		1	15:28										
ZZZZZZ		1	15:33										
ZZZZZZ		1	15:38										
ZZZZZZ		1	15:43										
ZZZZZZ		1	15:48										
ZZZZZZ		1	15:53										
ZZZZZZ		1	15:59										
ZZZZZZ		1	16:04										
CCV		1	16:09	AL	AS	BA	CD	CA	CR	FE	PB	MG	SE	AG
CCB		1	16:13	AL	AS	BA	CD	CA	CR	FE	PB	MG	SE	AG
ZZZZZZ		1	16:17										
ZZZZZZ		1	16:23										
ZZZZZZ		1	16:28										
ZZZZZZ		1	16:33										
ZZZZZZ		1	16:38										
ZZZZZZ		2	16:43										
ZZZZZZ		10	16:49										
ZZZZZZ		2	16:53										
ZZZZZZ		2	16:58										
ZZZZZZ		2	17:02										
CCV		1	17:08	AL	AS	BA	CD	CA	CR	FE	PB	MG	SE	AG
CCB		1	17:12	AL	AS	BA	CD	CA	CR	FE	PB	MG	SE	AG
ZZZZZZ		2	17:16										
ZZZZZZ		2	17:21										
ZZZZZZ		2	17:27										
ZZZZZZ		2	17:31										
ZZZZZZ		2	17:35										

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Instrument ID: THERMO ICAP 6500 **File Name:** ILH10A

Date: 8/10/2018 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements												
ZZZZZZ		2	17:40													
PBWLH10ICW1		1	17:44		AS	BA		CD	CR			PB			SE	AG
LCSWLH10ICW1		1	17:48		AS	BA		CD	CR			PB			SE	AG
PBT1470B		1	17:52		AS	BA		CD	CR			PB			SE	AG
ZZZZZZ		1	17:58													
CCV		1	18:02	AL	AS	BA		CD	CA	CR		FE	PB	MG	SE	AG
CCB		1	18:06	AL	AS	BA		CD	CA	CR		FE	PB	MG	SE	AG
SL7420-001	CHAAP-IDW-SOIL-080618-S	1	18:11		AS	BA		CD	CR			PB			SE	AG
SL7420-002	CHAAP-IDW-SOIL-080618-N	1	18:16		AS	BA		CD	CR			PB			SE	AG
ZZZZZZ		1	18:21													
ZZZZZZ		5	18:27													
ZZZZZZ		1	18:31													
ZZZZZZ		1	18:36													
ZZZZZZ		1	18:41													
ZZZZZZ		1	18:47													
ZZZZZZ		1	18:52													
CCV		1	18:56	AL	AS	BA		CD	CA	CR		FE	PB	MG	SE	AG
CCB		1	19:00	AL	AS	BA		CD	CA	CR		FE	PB	MG	SE	AG

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: David Nelson
ATI, Inc.
9220 Rumsey Road
Columbia,MD 21045

Lab Sample ID: SL7420-1
Report Date: 25-AUG-18
Client PO: PN:16-027
Project: Cornhusker Army Ammu
SDG: SL7420

Sample Description	Matrix	Date Sampled	Date Received
CHAAP-IDW-SOIL-080618-S	SL	06-AUG-18 14:00:00	08-AUG-18

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Cyanide, Reactive	U10. mg/Kg	20.	0.16	10.	SW846 7.3.3	WG234469	13-AUG-18 16:11:55	SW846 7.3.4	13-AUG-18	
Ignitability	>71. Deg. C	71.	71.	N/A	SW846 1010A	WG233970	09-AUG-18 15:19:00	N/A	N/A	
Paint Filter Liquids Test	NFL			N/A	SW846 9095B	WG234215	13-AUG-18 12:19:00	N/A	N/A	
Sulfide,Reactive	U50 mg/Kg	50	16.39	25	SW846 7.3.4	WG234234	13-AUG-18 15:40:00	SW846 7.3.4	13-AUG-18	
pH(Soil)	8.1 pH	0.10	0.10	N/A	SW846 9045D	WG233892	08-AUG-18 16:49:20	SW846 9045C	08-AUG-18	

Katahdin Analytical Services A0000098

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: David Nelson
ATI, Inc.
9220 Rumsey Road
Columbia,MD 21045

Lab Sample ID: SL7420-2
Report Date: 25-AUG-18
Client PO: PN:16-027
Project: Cornhusker Army Ammu
SDG: SL7420

Sample Description	Matrix	Date Sampled	Date Received
CHAAP-IDW-SOIL-080618-N	SL	06-AUG-18 14:10:00	08-AUG-18

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Cyanide, Reactive	U10. mg/Kg	20.	0.16	10.	SW846 7.3.3	WG234469	13-AUG-18 16:11:56	SW846 7.3.4	13-AUG-18	
Ignitability	>71. Deg. C	71.	71.	N/A	SW846 1010A	WG233970	09-AUG-18 16:12:00	N/A	N/A	
Paint Filter Liquids Test	NFL			N/A	SW846 9095B	WG234215	13-AUG-18 12:19:00	N/A	N/A	
Sulfide,Reactive	U50 mg/Kg	50	16.39	25	SW846 7.3.4	WG234234	13-AUG-18 15:40:00	SW846 7.3.4	13-AUG-18	
pH(Soil)	8.2 pH	0.10	0.10	N/A	SW846 9045D	WG233892	08-AUG-18 16:53:47	SW846 9045C	08-AUG-18	

Katahdin Analytical Services A0000099

Quality Control Report

Blank Sample Summary Report

Cyanide, Reactive

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL	LOD
MBLANK	WG234469	SW846 7.3.3	13-AUG-18	13-AUG-18	U 10. mg/Kg	20. mg/Kg	10.

Ignitability

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL	LOD
MBLANK	WG233970	SW846 1010A	09-AUG-18	N/A	> 71. Deg. C	71. Deg. C	N/A

Paint Filter Liquids Test

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL	LOD
MBLANK	WG234215	SW846 9095B	13-AUG-18	N/A	NFL		N/A

Sulfide,Reactive

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL	LOD
MBLANK	WG234234	SW846 7.3.4	13-AUG-18	13-AUG-18	U 25. mg/Kg	50. mg/Kg	25.

Quality Control Report

Laboratory Control Sample Summary Report

Cyanide, Reactive

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG234469-2	LCS	WG234469	13-AUG-18	13-AUG-18	mg/Kg	20	J 4.2	21	0-100	
WG234469-3	LCSD	WG234469	13-AUG-18	13-AUG-18	mg/Kg	20	J 5.8	29	0-100	33*

Ignitability

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG233970-2	LCS	WG233970	09-AUG-18	N/A	Deg. C	27	27.	100	80-120	
WG233970-3	LCSD	WG233970	09-AUG-18	N/A	Deg. C	27	29.	108	80-120	7

Sulfide,Reactive

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG234234-2	LCS	WG234234	13-AUG-18	13-AUG-18	mg/Kg	954	860	90	50-150	
WG234234-3	LCSD	WG234234	13-AUG-18	13-AUG-18	mg/Kg	954	820	86	50-150	5

pH(Soil)

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG233892-1	LCS	WG233892	08-AUG-18	08-AUG-18	pH	7	7.0	100	90-110	
WG233892-2	LCSD	WG233892	08-AUG-18	08-AUG-18	pH	7	7.0	100	90-110	0

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ANALYTICAL SERVICES

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL7420-1
Client ID: CHAAP-IDW-SOIL-080618-S
Project: Cornhusker Army Ammunition Plant
SDG: SL7420
Lab File ID: 1LH10148.D

Sample Date: 06-AUG-18
Received Date: 08-AUG-18
Extract Date: 10-AUG-18
Extracted By: DP
Extraction Method: 3510C/1311
Lab Prep Batch: WG233964

Analysis Date: 10-AUG-18
Analyst: AC
Analysis Method: SW846 8081B
Matrix: AQ
% Solids: NA
Report Date: 24-AUG-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
gamma-BHC	U	0.12	ug/L	1	.05	0.25	0.036	0.12
Heptachlor	U	0.12	ug/L	1	.05	0.25	0.040	0.12
Heptachlor Epoxide	U	0.12	ug/L	1	.05	0.25	0.037	0.12
Endrin	U	0.25	ug/L	1	.1	0.50	0.042	0.25
Methoxychlor	U	1.2	ug/L	1	.5	2.5	0.042	1.2
Technical Chlordane	UL	1.2	ug/L	1	.5	2.5	0.42	1.2
Toxaphene	U	2.5	ug/L	1	1	5.0	0.85	2.5
Tetrachloro-M-Xylene		121.	%					
Decachlorobiphenyl	*	140.	%					

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL7420-2
Client ID: CHAAP-IDW-SOIL-080618-N
Project: Cornhusker Army Ammunition Plant
SDG: SL7420
Lab File ID: 1LH10149.D

Sample Date: 06-AUG-18
Received Date: 08-AUG-18
Extract Date: 10-AUG-18
Extracted By: DP
Extraction Method: 3510C/1311
Lab Prep Batch: WG233964

Analysis Date: 10-AUG-18
Analyst: AC
Analysis Method: SW846 8081B
Matrix: AQ
% Solids: NA
Report Date: 24-AUG-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
gamma-BHC	U	0.12	ug/L	1	.05	0.25	0.036	0.12
Heptachlor	U	0.12	ug/L	1	.05	0.25	0.040	0.12
Heptachlor Epoxide	U	0.12	ug/L	1	.05	0.25	0.037	0.12
Endrin	U	0.25	ug/L	1	.1	0.50	0.042	0.25
Methoxychlor	U	1.2	ug/L	1	.5	2.5	0.042	1.2
Technical Chlordane	UL	1.2	ug/L	1	.5	2.5	0.42	1.2
Toxaphene	U	2.5	ug/L	1	1	5.0	0.85	2.5
Tetrachloro-M-Xylene		81.2	%					
Decachlorobiphenyl		73.0	%					

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Report of Analytical Results

Client:
Lab ID: WG233964-1
Client ID: Method Blank Sample
Project:
SDG: SL7420
Lab File ID: 1LH10138.D

Sample Date:
Received Date:
Extract Date: 10-AUG-18
Extracted By: DP
Extraction Method: SW846 3510C
Lab Prep Batch: WG233964

Analysis Date: 10-AUG-18
Analyst: AC
Analysis Method: SW846 8081B
Matrix: AQ
% Solids: NA
Report Date: 24-AUG-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
gamma-BHC	U	0.025	ug/L	1	.05	0.050	0.0072	0.025
Heptachlor	U	0.025	ug/L	1	.05	0.050	0.0080	0.025
Heptachlor Epoxide	U	0.025	ug/L	1	.05	0.050	0.0074	0.025
Endrin	U	0.050	ug/L	1	.1	0.10	0.0084	0.050
Methoxychlor	U	0.25	ug/L	1	.5	0.50	0.0084	0.25
Technical Chlordane	U	0.25	ug/L	1	.5	0.50	0.083	0.25
Toxaphene	U	0.50	ug/L	1	1	1.0	0.17	0.50
Tetrachloro-M-Xylene		73.9	%					
Decachlorobiphenyl		67.0	%					

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Report of Analytical Results

Client:
Lab ID: WG233964-5
Client ID: TCLP Blank
Project:
SDG: SL7420
Lab File ID: 1LH10145.D

Sample Date:
Received Date:
Extract Date: 10-AUG-18
Extracted By: DP
Extraction Method: 3510C/1311
Lab Prep Batch: WG233964

Analysis Date: 10-AUG-18
Analyst: AC
Analysis Method: SW846 8081B
Matrix: AQ
% Solids: NA
Report Date: 24-AUG-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
gamma-BHC	U	0.12	ug/L	1	.05	0.25	0.036	0.12
Heptachlor	U	0.12	ug/L	1	.05	0.25	0.040	0.12
Heptachlor Epoxide	U	0.12	ug/L	1	.05	0.25	0.037	0.12
Endrin	U	0.25	ug/L	1	.1	0.50	0.042	0.25
Methoxychlor	U	1.2	ug/L	1	.5	2.5	0.042	1.2
Technical Chlordane	U	1.2	ug/L	1	.5	2.5	0.42	1.2
Toxaphene	U	2.5	ug/L	1	1	5.0	0.85	2.5
Tetrachloro-M-Xylene		92.4	%					
Decachlorobiphenyl		98.2	%					

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Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** Cornhusker Army Ammunition Plant **Matrix:** AQ
Lab Code: KAS **SDG:** SL7420

Client Sample ID	Lab Sample ID	Col. ID	DCB	#	TCX	#
CHAAP-IDW-SOIL-080618	SL7420-1	A	129.		120.	
CHAAP-IDW-SOIL-080618	SL7420-1	B	140.	*	121.	
CHAAP-IDW-SOIL-080618	SL7420-2	A	70.0		81.2	
CHAAP-IDW-SOIL-080618	SL7420-2	B	73.0		80.0	
Method Blank Sample	WG233964-1	A	65.7		73.9	
Method Blank Sample	WG233964-1	B	67.0		72.4	
Laboratory Control S	WG233964-2	A	74.3		87.9	
Laboratory Control S	WG233964-2	B	77.0		84.9	
Laboratory Control S	WG233964-3	A	51.8		84.7	
Laboratory Control S	WG233964-3	B	51.8		82.7	
Laboratory Control S	WG233964-4	A	140.	*	126.	*
Laboratory Control S	WG233964-4	B	148.	*	131.	*
TCLP Blank	WG233964-5	A	94.8		91.8	
TCLP Blank	WG233964-5	B	98.2		92.4	

		QC Limits
TCX	TETRACHLORO-M-XYLENE	44-124
DCB	DECACHLOROBIPHENYL	41-131

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

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Katahdin
ANALYTICAL SERVICES

LCS Recovery Report

Client:
Lab ID: WG233964-2
Client ID: LCS
Project:
SDG: SL7420
LCS File ID: 1LH10139.D

Sample Date:
Received Date:
Extract Date: 10-AUG-18
Extracted By: DP
Extraction Method: SW846 3510C
Lab Prep Batch: WG233964

Analysis Date: 10-AUG-18
Analyst: AC
Analysis Method: SW846 8081B
Matrix: AQ
% Solids: NA
Report Date: 24-AUG-18

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
gamma-BHC	92.2	0.500	0.461	ug/L	59-134
Heptachlor	92.8	0.500	0.464	ug/L	54-130
Heptachlor Epoxide	85.6	0.500	0.428	ug/L	61-133
Endrin	86.8	0.500	0.434	ug/L	60-138
Methoxychlor	91.0	0.500	0.455	ug/L	54-145
Tetrachloro-M-Xylene	87.9				44-124
Decachlorobiphenyl	77.0				41-131

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LCS Recovery Report

Client:
Lab ID: WG233964-3
Client ID: LCS1
Project:
SDG: SL7420
LCS File ID: 1LH10140.D

Sample Date:
Received Date:
Extract Date: 10-AUG-18
Extracted By: DP
Extraction Method: SW846 3510C
Lab Prep Batch: WG233964

Analysis Date: 10-AUG-18
Analyst: AC
Analysis Method: SW846 8081B
Matrix: AQ
% Solids: NA
Report Date: 24-AUG-18

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
Toxaphene	93.3	10.0	9.33	ug/L	33-134
Tetrachloro-M-Xylene	84.7				44-124
Decachlorobiphenyl	51.8				41-131

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LCS Recovery Report

Client:
Lab ID: WG233964-4
Client ID: LCS2
Project:
SDG: SL7420
LCS File ID: 1LH10144.D

Sample Date:
Received Date:
Extract Date: 10-AUG-18
Extracted By: DP
Extraction Method: SW846 3510C
Lab Prep Batch: WG233964

Analysis Date: 10-AUG-18
Analyst: AC
Analysis Method: SW846 8081B
Matrix: AQ
% Solids: NA
Report Date: 24-AUG-18

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
Technical Chlordane	* 228.	10.0	22.8	ug/L	62-140
Tetrachloro-M-Xylene	* 131.				44-124
Decachlorobiphenyl	* 148.				41-131

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Form 4
Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : 1LH10138.D
Matrix : AQ

Column A
Instrument ID : GC01
Date Analyzed : 10-AUG-18
Time Analyzed : 18:01

SDG : SL7420
Lab Sample ID : WG233964-1
Date Extracted : 10-AUG-18
Extraction Method : SW846 3510C

Column B
Instrument ID : GC01
Date Analyzed : 10-AUG-18
Time Analyzed : 18:01

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG233964-2	1LH10139.	08/10/18	18:20
Laboratory Control S	WG233964-3	1LH10140.	08/10/18	18:39
Laboratory Control S	WG233964-4	1LH10144.	08/10/18	19:57
TCLP Blank	WG233964-5	1LH10145.	08/10/18	20:16
CHAAP-IDW-SOIL-080618-S	SL7420-1	1LH10148.	08/10/18	21:14
CHAAP-IDW-SOIL-080618-N	SL7420-2	1LH10149.	08/10/18	21:34

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Katahdin
ANALYTICAL SERVICES

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL7420
Project : Cornhusker Army Ammunition Plant
Instrument ID: GC01
Lab File IDs : 1LD10093.D 1LD10092.D 1LD10091.D 1LD10100.D 1LD10089.D 1LD10088.D
Column ID: A
Calibration Date(s): 16-FEB-18 15:00 03-AUG-18 21:53

	0.0050000 Level 1	0.0100000 Level 2	0.0250000 Level 3	0.0500000 Level 4	0.1000000 Level 5	0.2500000 Level 6	New Crv	b	m1	m2	%RSD	Max %RSD	
Toxaphene(9)	515	784	1601	2952	8191	34769	LNR	0.05957	3488		0.99958	0.99000	O
Toxaphene(4)	258	385	765	1336	3744	16048	LNR	0.05711	1609		0.99940	0.99000	O
Toxaphene(3)	211	319	640	995	2916	11599	LNR	-0.00869	1158		0.99959	0.99000	O
Toxaphene(6)	470	589	1152	2061	5584	23689	LNR	0.03189	2369		0.99944	0.99000	O
Toxaphene(2)	197	289	570	906	2631	10806	LNR	0.01583	1080		0.99950	0.99000	O
Toxaphene(5)	237	347	662	1208	3184	13623	LNR	0.03602	1363		0.99949	0.99000	O
Toxaphene(8)	315	485	965	1821	4784	20273	LNR	0.03989	2030		0.99965	0.99000	O
Toxaphene(7)	566	658	1077	1951	5436	23174	LNR	0.02611	2315		0.99908	0.99000	O
Toxaphene(1)	109	170	334	582	1547	6406	LNR	0.00849	640		0.99972	0.99000	O

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

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Katahdin
ANALYTICAL SERVICES

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL7420
Project : Cornhusker Army Ammunition Plant
Instrument ID: GC01
Lab File IDs : 1LD10093.D 1LD10092.D 1LD10091.D 1LD10100.D 1LD10089.D 1LD10088.D
Column ID: B
Calibration Date(s): 16-FEB-18 15:00 03-AUG-18 18:40

	Level 1 0.0050000	Level 2 0.0100000	Level 3 0.0250000	Level 4 0.0500000	Level 5 0.1000000	Level 6 0.2500000	Crv New	b	m1	m2	%RSD	Max %RSD	
Toxaphene(7)	338	523	1123	2476	6066	27187	LNR	0.07395	2726		0.99925	0.99000	O
Toxaphene(4)	367	339	736	1463	3848	16879	LNR	0.05163	1689		0.99912	0.99000	O
Toxaphene(8)	260	350	723	1733	4165	19781	LNR	0.10807	1987		0.99840	0.99000	O
Toxaphene(6)	293	429	881	1966	4383	18952	LNR	0.01954	1893		0.99952	0.99000	O
Toxaphene(1)	381	283	419	807	2172	9261	LNR	-0.01650	921		0.99821	0.99000	O
Toxaphene(2)	232	370	790	1342	3849	16311	LNR	0.04861	1634		0.99950	0.99000	O
Toxaphene(9)	354	528	1100	1648	6182	28489	LNR	0.14699	2875		0.99769	0.99000	O
Toxaphene(3)	180	309	674	1274	3502	15048	LNR	0.06373	1509		0.99956	0.99000	O
Toxaphene(5)	489	381	795	1606	4097	18181	LNR	0.04115	1817		0.99877	0.99000	O

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

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Katahdin
ANALYTICAL SERVICES

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL7420
Project : Cornhusker Army Ammunition Plant
Instrument ID: GC01
Lab File IDs : 1LD10093.D 1LD10092.D 1LD10091.D 1LD10100.D 1LD10089.D 1LD10088.D
Column ID: A
Calibration Date(s): 16-FEB-18 15:00 03-AUG-18 21:53

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Crv					Max	
	0.0050000	0.0100000	0.0250000	0.0500000	0.1000000	0.2500000	New	b	m1	m2	%RSD	%RSD	
Technical Chlordane(1)	3840	3730	4088	3980	4363	4668	AVG		4112		8.49858	20.00000	O
Technical Chlordane(2)	23380	20730	20416	19672	20857	19810	AVG		20811		6.46934	20.00000	O
Technical Chlordane(3)	22460	19520	19476	18788	20116	18947	AVG		19885		6.77236	20.00000	O

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

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Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL7420
Project : Cornhusker Army Ammunition Plant
Instrument ID: GC01
Lab File IDs : 1LD10093.D 1LD10092.D 1LD10091.D 1LD10100.D 1LD10089.D 1LD10088.D
Column ID: B
Calibration Date(s): 16-FEB-18 15:00 03-AUG-18 18:40

	0.005000(Level 1	0.010000(Level 2	0.025000(Level 3	0.050000(Level 4	0.1000000 Level 5	0.2500000 Level 6	New Crv	b	m1	m2	%RSD	Max %RSD	
Technical Chlordane(1)	6660	4870	4196	4270	4800	5185	AVG		4997		17.95787	20.00000	O
Technical Chlordane(2)	21660	18940	18032	17818	18824	18291	AVG		18928		7.43998	20.00000	O
Technical Chlordane(3)	16420	13800	12368	12590	13397	13087	AVG		13610		10.81551	20.00000	O

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

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Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL7420
Project : Cornhusker Army Ammunition Plant
Instrument ID: GC01
Lab File IDs : 1LD10093.D 1LD10092.D 1LD10091.D 1LD10100.D 1LD10089.D 1LD10088.D
Column ID: A
Calibration Date(s): 16-FEB-18 15:00 06-AUG-18 14:11

	Level 1 0.0050000	Level 2 0.0100000	Level 3 0.0250000	Level 4 0.0500000	Level 5 0.1000000	Level 6 0.2500000	Crv New	b	m1	m2	%RSD	Max %RSD	
gamma-BHC	226400	196300	247920	213360	230730	229292	AVG		224000		7.81370	20.00000	O
Heptachlor	165400	145700	181480	157200	173850	180064	AVG		167282		8.36512	20.00000	O
Heptachlor Epoxide	178200	145700	185400	147760	170530	165396	AVG		165498		9.70309	20.00000	O
4,4'-DDE	169800	136800	179360	149760	176390	183012	AVG		165854		11.1390	20.00000	O
Endrin	140600	111400	148440	123240	143350	144976	AVG		135334		10.8387	20.00000	O
Endrin	140600	111400	148440	123240	143350	144976	AVG		135334		10.8387	20.00000	O
4,4'-DDD	130600	102600	134040	113700	138020	143592	AVG		127092		12.3482	20.00000	O
4,4'-DDT	103000	81500	117280	104280	126030	138876	AVG		111828		17.9636	20.00000	O
Endrin Aldehyde	120200	92500	110280	92080	106600	109884	AVG		105257		10.4774	20.00000	O
Methoxychlor	55400	41500	54960	46700	56390	61560	AVG		52752		13.8251	20.00000	O
Endrin Ketone	134000	102900	134080	115340	137970	137864	AVG		127026		11.4313	20.00000	O
Tetrachloro-m-Xylene	161000	146300	174200	158000	156040	153492	AVG		158172		5.87877	20.00000	
Decachlorobiphenyl	87400	65300	79480	65080	75240	79980	AVG		75413		11.7135	20.00000	

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

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Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL7420
Project : Cornhusker Army Ammunition Plant
Instrument ID: GC01
Lab File IDs : 1LD10093.D 1LD10092.D 1LD10091.D 1LD10100.D 1LD10089.D 1LD10088.D
Column ID: B
Calibration Date(s): 16-FEB-18 15:00 06-AUG-18 14:11

	0.0050000(Level 1	0.0100000(Level 2	0.0250000(Level 3	0.0500000(Level 4	0.1000000 Level 5	0.2500000 Level 6	New Crv	b	m1	m2	%RSD	Max %RSD	
gamma-BHC	257400	216300	276440	242300	269630	262536	AVG		254101		8.60485	20.00000	O
Heptachlor	198200	161300	215560	183020	208610	212344	AVG		196506		10.6371(	20.00000	O
Heptachlor Epoxide	201800	159500	206560	172100	198870	196736	AVG		189261		9.98301	20.00000	O
4,4'-DDE	185200	148400	205200	171400	200040	209444	AVG		186614		12.5458(	20.00000	O
Endrin	147000	112100	153600	128240	153520	162248	AVG		142785		13.2213(	20.00000	O
Endrin	147000	112100	153600	128240	153520	162248	AVG		142785		13.2213(	20.00000	O
4,4'-DDD	141400	111700	151360	127360	156380	163904	AVG		142017		13.7513(	20.00000	O
4,4'-DDT	432	721	2871	5124	13184	38340	LNR	0.00888	156883		0.99556	0.99000	D
Endrin Aldehyde	120600	93600	113920	94720	117990	122344	AVG		110529		11.7595(	20.00000	O
Methoxychlor	192	307	1123	2089	5379	16426	LNR	0.01020	67356		0.99348	0.99000	D
Endrin Ketone	115800	92600	124400	106940	130970	143888	AVG		119100		15.2269(	20.00000	O
Tetrachloro-m-Xylene	197200	173200	210080	184720	189930	183700	AVG		189805		6.68353	20.00000	
Decachlorobiphenyl	92400	73000	90560	74620	87930	94744	AVG		85542		10.9561(	20.00000	

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

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Form 7D

Pesticide Calibration Verification Summary

Lab ID: WG233901-1
Client ID: Breakdown Evaluation
Init. Calib. Date(s): 16-FEB-18 -06-AUG-18
Lab File ID: 1LH10041.D

Analysis Date: 06-AUG-18
Report Date: 24-AUG-18
SDG: SL7420
Column ID: A

Lab Sample ID	Filename	% DDT Breakdown	% Endrin Breakdown
WG233901-1	1LH10041.D	1.31	2.03

QC Limits:

4,4'-DDT breakdown must be less than or equal to 15.0%

Endrin breakdown must be less than or equal to 15.0%

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Form 7D

Pesticide Calibration Verification Summary

Lab ID: WG233901-1
Client ID: Breakdown Evaluation
Init. Calib. Date(s): 16-FEB-18 -06-AUG-18
Lab File ID: 1LH10041.D

Analysis Date: 06-AUG-18
Report Date: 24-AUG-18
SDG: SL7420
Column ID: B

Lab Sample ID	Filename	% DDT Breakdown	% Endrin Breakdown
WG233901-1	1LH10041.D	2.01	2.54

QC Limits:

4,4'-DDT breakdown must be less than or equal to 15.0%

Endrin breakdown must be less than or equal to 15.0%

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Form 7D

Pesticide Calibration Verification Summary

Lab ID: WG233999-3
Client ID: Breakdown Evaluation
Init. Calib. Date(s): 16-FEB-18 -06-AUG-18
Lab File ID: 1LH10127.D

Analysis Date: 10-AUG-18
Report Date: 24-AUG-18
SDG: SL7420
Column ID: A

Lab Sample ID	Filename	% DDT Breakdown	% Endrin Breakdown
WG233999-3	1LH10127.D	1.18	3.09

QC Limits:

4,4'-DDT breakdown must be less than or equal to 15.0%

Endrin breakdown must be less than or equal to 15.0%

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Form 7D

Pesticide Calibration Verification Summary

Lab ID: WG233999-3
Client ID: Breakdown Evaluation
Init. Calib. Date(s): 16-FEB-18 -06-AUG-18
Lab File ID: 1LH10127.D

Analysis Date: 10-AUG-18
Report Date: 24-AUG-18
SDG: SL7420
Column ID: B

Lab Sample ID	Filename	% DDT Breakdown	% Endrin Breakdown
WG233999-3	1LH10127.D	1.29	3.56

QC Limits:

4,4'-DDT breakdown must be less than or equal to 15.0%

Endrin breakdown must be less than or equal to 15.0%

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Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL7420
Lab ID : WG233999-1
Analytical Date: 08/10/18 13:19
Lab File ID : 1LH10125.D
Instrument ID: GC01
Initial Calibration Date(s): 02/16/18 15:00 08/03/18 21:53
Column ID: A

Compound	$\overline{RRF}$/Amount	RF0.050	CCAL RRF0.050	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
18 Toxaphene(9)	1.00000	0.87599	2848	0.001	-12.40147	20.00000	Linear
18 Toxaphene(7)	1.00000	0.91886	2067	0.001	-8.11396	20.00000	Linear
18 Toxaphene(8)	1.00000	0.96113	1870	0.001	-3.88725	20.00000	Linear
18 Toxaphene(6)	1.00000	0.97144	2226	0.001	-2.85613	20.00000	Linear
18 Toxaphene(5)	1.00000	1.00245	1317	0.001	0.24479	20.00000	Linear
18 Toxaphene(4)	1.00000	1.03792	1578	0.001	3.79193	20.00000	Linear
18 Toxaphene(3)	1.00000	1.09047	1273	0.001	9.04660	20.00000	Linear
18 Toxaphene(2)	1.00000	1.10817	1180	0.001	10.81688	20.00000	Linear
18 Toxaphene(1)	1.00000	1.16048	737	0.001	16.04800	20.00000	Linear

*** = Compound out of QC criteria**

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Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL7420
Lab ID : WG233999-1
Analytical Date: 08/10/18 13:19
Lab File ID : 1LH10125.D
Instrument ID: GC01
Initial Calibration Date(s): 02/16/18 15:00 08/03/18 21:53
Column ID: B

Compound	$\overline{RRF}$/Amount	RF0.050	CCAL RRF0.050	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
18 Toxaphene(8)	1.00000	0.89614	1566	0.001	-10.38550	20.00000	Linear
18 Toxaphene(7)	1.00000	0.93772	2355	0.001	-6.22844	20.00000	Linear
18 Toxaphene(9)	1.00000	0.96710	2358	0.001	-3.29012	20.00000	Linear
18 Toxaphene(5)	1.00000	0.97792	1702	0.001	-2.20847	20.00000	Linear
18 Toxaphene(6)	1.00000	0.98791	1833	0.001	-1.20949	20.00000	Linear
18 Toxaphene(4)	1.00000	1.03661	1664	0.001	3.66109	20.00000	Linear
18 Toxaphene(2)	1.00000	1.04852	1634	0.001	4.85159	20.00000	Linear
18 Toxaphene(3)	1.00000	1.05417	1495	0.001	5.41692	20.00000	Linear
18 Toxaphene(1)	1.00000	1.07034	1001	0.001	7.03416	20.00000	Linear

*** = Compound out of QC criteria**

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Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL7420
Lab ID : WG233999-4
Analytical Date: 08/10/18 14:17
Lab File ID : 1LH10128.D
Instrument ID: GC01
Initial Calibration Date(s): 02/16/18 15:00 08/06/18 14:11
Column ID: A

	Compound	$\overline{RRF}$/Amount	RF0.050	CCAL RRF0.050	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
6	gamma-BHC	224000	220340	220340	0.001	-1.63407	20.00000	Averaged
9	Heptachlor	167282	161740	161740	0.001	-3.31316	20.00000	Averaged
13	Heptachlor Epoxide	165498	147480	147480	0.001	-10.88696	20.00000	Averaged
19	4,4'-DDE	165854	149060	149060	0.001	-10.12559	20.00000	Averaged
23	Endrin	135334	120240	120240	0.001	-11.15337	20.00000	Averaged
24	4,4'-DDD	127092	110220	110220	0.001	-13.27542	20.00000	Averaged
27	4,4'-DDT	111828	102800	102800	0.001	-8.07284	20.00000	Averaged
28	Endrin Aldehyde	105257	90360	90360	0.001	-14.15325	20.00000	Averaged
29	Methoxychlor	52752	45400	45400	0.001	-13.93637	20.00000	Averaged
33	Endrin Ketone	127026	109780	109780	0.001	-13.57652	20.00000	Averaged
4	Tetrachloro-m-Xylene	158172	160020	160020	0.001	1.16835	20.00000	Averaged
34	Decachlorobiphenyl	75413	62040	62040	0.001	-17.73338	20.00000	Averaged

*** = Compound out of QC criteria**

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Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL7420
Lab ID : WG233999-4
Analytical Date: 08/10/18 14:17
Lab File ID : 1LH10128.D
Instrument ID: GC01
Initial Calibration Date(s): 02/16/18 15:00 08/06/18 14:11
Column ID: B

	Compound	$\overline{RRF}$/Amount	RF0.050	CCAL RRF0.050	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
6	gamma-BHC	254101	241040	241040	0.001	-5.14008	20.00000	Averaged
9	Heptachlor	196506	193280	193280	0.001	-1.64151	20.00000	Averaged
13	Heptachlor Epoxide	189261	166680	166680	0.001	-11.93114	20.00000	Averaged
19	4,4'-DDE	186614	165620	165620	0.001	-11.24996	20.00000	Averaged
23	Endrin	142785	123560	123560	0.001	-13.46410	20.00000	Averaged
24	4,4'-DDD	142017	124720	124720	0.001	-12.17973	20.00000	Averaged
27	4,4'-DDT	0.05000	0.04329	107960	0.001	-13.42921	20.00000	Linear
28	Endrin Aldehyde	110529	93680	93680	0.001	-15.24396	20.00000	Averaged
29	Methoxychlor	0.05000	0.04212	43000	0.001	-15.76742	20.00000	Linear
33	Endrin Ketone	119100	104100	104100	0.001	-12.59421	20.00000	Averaged
4	Tetrachloro-m-Xylene	189805	189440	189440	0.001	-0.19230	20.00000	Averaged
34	Decachlorobiphenyl	85542	72080	72080	0.001	-15.73763	20.00000	Averaged

*** = Compound out of QC criteria**

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Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL7420
Lab ID : WG233999-5
Analytical Date: 08/10/18 18:59
Lab File ID : 1LH10141.D
Instrument ID: GC01
Initial Calibration Date(s): 02/16/18 15:00 08/03/18 21:53
Column ID: A

Compound	$\overline{RRF}$/Amount	RF0.025	CCAL RRF0.025	Min	%D/ %Drift	Max %D/ %Drift	Curve Type	
18 Toxaphene(9)	0.50000	0.50189	3086	0.001	0.37809	20.00000	Linear	
18 Toxaphene(7)	0.50000	0.50207	2204	0.001	0.41383	20.00000	Linear	
18 Toxaphene(6)	0.50000	0.52994	2360	0.001	5.98865	20.00000	Linear	
18 Toxaphene(8)	0.50000	0.53598	2014	0.001	7.19616	20.00000	Linear	
18 Toxaphene(5)	0.50000	0.55189	1406	0.001	10.37810	20.00000	Linear	
18 Toxaphene(4)	0.50000	0.58481	1698	0.001	16.96109	20.00000	Linear	
18 Toxaphene(3)	0.50000	0.59658	1402	0.001	19.31593	20.00000	Linear	
18 Toxaphene(2)	0.50000	0.60921	1282	0.001	21.84215	20.00000	Linear	*
18 Toxaphene(1)	0.50000	0.61184	772	0.001	22.36773	20.00000	Linear	*

*** = Compound out of QC criteria**

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Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL7420
Lab ID : WG233999-5
Analytical Date: 08/10/18 18:59
Lab File ID : 1LH10141.D
Instrument ID: GC01
Initial Calibration Date(s): 02/16/18 15:00 08/03/18 21:53
Column ID: B

Compound	$\overline{RRF}$/Amount	RF0.025	CCAL RRF0.025	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
18 Toxaphene(8)	0.50000	0.45833	1392	0.001	-8.33458	20.00000	Linear
18 Toxaphene(7)	0.50000	0.48474	2240	0.001	-3.05137	20.00000	Linear
18 Toxaphene(6)	0.50000	0.49606	1804	0.001	-0.78709	20.00000	Linear
18 Toxaphene(5)	0.50000	0.50293	1678	0.001	0.58544	20.00000	Linear
18 Toxaphene(9)	0.50000	0.52331	2164	0.001	4.66111	20.00000	Linear
18 Toxaphene(1)	0.50000	0.53398	1014	0.001	6.79604	20.00000	Linear
18 Toxaphene(4)	0.50000	0.54294	1660	0.001	8.58778	20.00000	Linear
18 Toxaphene(3)	0.50000	0.56856	1524	0.001	13.71146	20.00000	Linear
18 Toxaphene(2)	0.50000	0.57549	1722	0.001	15.09720	20.00000	Linear

*** = Compound out of QC criteria**

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Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL7420
Lab ID : WG233999-6
Analytical Date: 08/10/18 19:18
Lab File ID : 1LH10142.D
Instrument ID: GC01
Initial Calibration Date(s): 02/16/18 15:00 08/03/18 21:53
Column ID: A

Compound	RRF/Amount	RF0.025	CCAL RRF0.025	Min	%D/ %Drift	Max %D/ %Drift	Curve Type	
14 Technical Chlordane(3)	19885	26404	26404	0.001	32.78662	20.00000	Averaged	*
14 Technical Chlordane(2)	20811	27196	27196	0.001	30.68152	20.00000	Averaged	*
14 Technical Chlordane(1)	4112	5352	5352	0.001	30.16936	20.00000	Averaged	*

*** = Compound out of QC criteria**

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Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG233999-6
Lab File ID : 1LH10142.D
Initial Calibration Date(s): 02/16/18 15:00 08/03/18 21:53

SDG: SL7420
Analytical Date: 08/10/18 19:18
Instrument ID: GC01
Column ID: B

Compound	RRF/Amount	RF0.025	CCAL RRF0.025	Min	%D/ %Drift	Max %D/ %Drift	Curve Type	
14 Technical Chlordane(3)	13610	17500	17500	0.001	28.57909	20.00000	Averaged	*
14 Technical Chlordane(2)	18928	25216	25216	0.001	33.22391	20.00000	Averaged	*
14 Technical Chlordane(1)	4997	5672	5672	0.001	13.51265	20.00000	Averaged	

*** = Compound out of QC criteria**

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Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG233999-7
Lab File ID : 1LH10143.D
Initial Calibration Date(s): 02/16/18 15:00 08/06/18 14:11

SDG: SL7420
Analytical Date: 08/10/18 19:38
Instrument ID: GC01
Column ID: A

	Compound	$\overline{RRF}$/Amount	RF0.025	CCAL RRF0.025	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
6	gamma-BHC	224000	225760	225760	0.001	0.78556	20.00000	Averaged
9	Heptachlor	167282	169480	169480	0.001	1.31375	20.00000	Averaged
13	Heptachlor Epoxide	165498	163120	163120	0.001	-1.43668	20.00000	Averaged
19	4,4'-DDE	165854	155200	155200	0.001	-6.42353	20.00000	Averaged
23	Endrin	135334	126440	126440	0.001	-6.57212	20.00000	Averaged
24	4,4'-DDD	127092	115440	115440	0.001	-9.16816	20.00000	Averaged
27	4,4'-DDT	111828	101280	101280	0.001	-9.43207	20.00000	Averaged
28	Endrin Aldehyde	105257	96400	96400	0.001	-8.41493	20.00000	Averaged
29	Methoxychlor	52752	46280	46280	0.001	-12.26817	20.00000	Averaged
33	Endrin Ketone	127026	117600	117600	0.001	-7.42029	20.00000	Averaged
4	Tetrachloro-m-Xylene	158172	168720	168720	0.001	6.66869	20.00000	Averaged
34	Decachlorobiphenyl	75413	66160	66160	0.001	-12.27016	20.00000	Averaged

*** = Compound out of QC criteria**

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Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL7420
Lab ID : WG233999-7
Analytical Date: 08/10/18 19:38
Lab File ID : 1LH10143.D
Instrument ID: GC01
Initial Calibration Date(s): 02/16/18 15:00 08/06/18 14:11
Column ID: B

	Compound	$\overline{RRF}$/Amount	RF0.025	CCAL RRF0.025	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
6	gamma-BHC	254101	247360	247360	0.001	-2.65288	20.00000	Averaged
9	Heptachlor	196506	199440	199440	0.001	1.49326	20.00000	Averaged
13	Heptachlor Epoxide	189261	179760	179760	0.001	-5.02005	20.00000	Averaged
19	4,4'-DDE	186614	174680	174680	0.001	-6.39502	20.00000	Averaged
23	Endrin	142785	131440	131440	0.001	-7.94530	20.00000	Averaged
24	4,4'-DDD	142017	126440	126440	0.001	-10.96861	20.00000	Averaged
27	4,4'-DDT	0.02500	0.02491	100600	0.001	-0.36562	20.00000	Linear
28	Endrin Aldehyde	110529	98080	98080	0.001	-11.26311	20.00000	Averaged
29	Methoxychlor	0.02500	0.02543	41040	0.001	1.71568	20.00000	Linear
33	Endrin Ketone	119100	107640	107640	0.001	-9.62191	20.00000	Averaged
4	Tetrachloro-m-Xylene	189805	196560	196560	0.001	3.55892	20.00000	Averaged
34	Decachlorobiphenyl	85542	78040	78040	0.001	-8.77032	20.00000	Averaged

*** = Compound out of QC criteria**

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Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL7420
Lab ID : WG233999-8
Analytical Date: 08/10/18 23:10
Lab File ID : 1LH10154.D
Instrument ID: GC01
Initial Calibration Date(s): 02/16/18 15:00 08/03/18 21:53
Column ID: A

Compound	RRF/Amount	RF0.050	CCAL RRF0.050	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
14 Technical Chlordane(3)	19885	20428	20428	0.001	2.73311	20.00000	Averaged
14 Technical Chlordane(2)	20811	21614	21614	0.001	3.85904	20.00000	Averaged
14 Technical Chlordane(1)	4112	4392	4392	0.001	6.82060	20.00000	Averaged

*** = Compound out of QC criteria**

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Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG233999-8
Lab File ID : 1LH10154.D
Initial Calibration Date(s): 02/16/18 15:00 08/03/18 21:53

SDG: SL7420
Analytical Date: 08/10/18 23:10
Instrument ID: GC01
Column ID: B

Compound	RRF/Amount	RF0.050	CCAL RRF0.050	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
14 Technical Chlordane(3)	13610	13580	13580	0.001	-0.22263	20.00000	Averaged
14 Technical Chlordane(2)	18928	19466	19466	0.001	2.84489	20.00000	Averaged
14 Technical Chlordane(1)	4997	4730	4730	0.001	-5.33942	20.00000	Averaged

*** = Compound out of QC criteria**

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Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL7420
Lab ID : WG233999-10
Analytical Date: 08/10/18 23:49
Lab File ID : 1LH10156.D
Instrument ID: GC01
Initial Calibration Date(s): 02/16/18 15:00 08/06/18 14:11
Column ID: A

	Compound	$\overline{\text{RRF}}$/Amount	RF0.050	CCAL RRF0.050	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
6	gamma-BHC	224000	226760	226760	0.001	1.23199	20.00000	Averaged
9	Heptachlor	167282	170560	170560	0.001	1.95936	20.00000	Averaged
13	Heptachlor Epoxide	165498	158920	158920	0.001	-3.97448	20.00000	Averaged
19	4,4'-DDE	165854	159100	159100	0.001	-4.07206	20.00000	Averaged
23	Endrin	135334	130500	130500	0.001	-3.57214	20.00000	Averaged
24	4,4'-DDD	127092	121220	121220	0.001	-4.62028	20.00000	Averaged
27	4,4'-DDT	111828	117200	117200	0.001	4.80412	20.00000	Averaged
28	Endrin Aldehyde	105257	96600	96600	0.001	-8.22492	20.00000	Averaged
29	Methoxychlor	52752	51180	51180	0.001	-2.97937	20.00000	Averaged
33	Endrin Ketone	127026	116920	116920	0.001	-7.95561	20.00000	Averaged
4	Tetrachloro-m-Xylene	158172	168840	168840	0.001	6.74456	20.00000	Averaged
34	Decachlorobiphenyl	75413	69340	69340	0.001	-8.05339	20.00000	Averaged

*** = Compound out of QC criteria**

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ANALYTICAL SERVICES

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL7420
Lab ID : WG233999-10
Analytical Date: 08/10/18 23:49
Lab File ID : 1LH10156.D
Instrument ID: GC01
Initial Calibration Date(s): 02/16/18 15:00 08/06/18 14:11
Column ID: B

	Compound	$\overline{\text{RRF}}$/Amount	RF0.050	CCAL RRF0.050	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
6	gamma-BHC	254101	248840	248840	0.001	-2.07044	20.00000	Averaged
9	Heptachlor	196506	203800	203800	0.001	3.71202	20.00000	Averaged
13	Heptachlor Epoxide	189261	177320	177320	0.001	-6.30928	20.00000	Averaged
19	4,4'-DDE	186614	173580	173580	0.001	-6.98447	20.00000	Averaged
23	Endrin	142785	134220	134220	0.001	-5.99831	20.00000	Averaged
24	4,4'-DDD	142017	133680	133680	0.001	-5.87064	20.00000	Averaged
27	4,4'-DDT	0.05000	0.04690	119300	0.001	-6.20087	20.00000	Linear
28	Endrin Aldehyde	110529	100240	100240	0.001	-9.30887	20.00000	Averaged
29	Methoxychlor	0.05000	0.04719	49840	0.001	-5.61248	20.00000	Linear
33	Endrin Ketone	119100	114100	114100	0.001	-4.19788	20.00000	Averaged
4	Tetrachloro-m-Xylene	189805	196520	196520	0.001	3.53784	20.00000	Averaged
34	Decachlorobiphenyl	85542	79020	79020	0.001	-7.62468	20.00000	Averaged

*** = Compound out of QC criteria**

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Form 8
GC Analytical Sequence

Lab Name : Katahdin Analytical Services **SDG :** SL7420
Project : Cornhusker Army Ammunition Plant **Column ID :** A
Instrument ID : GC01

Client Sample ID	Lab Sample ID	Date Analyzed	Time Analyzed	TCX	DCB	
Initial Calibration	WG233898-1	08/03/18	14:16			
Initial Calibration	WG233898-2	08/03/18	14:36			
Initial Calibration	WG233898-3	08/03/18	14:55			
Initial Calibration	WG233898-4	08/03/18	15:14			
Initial Calibration	WG233898-5	08/03/18	15:34			
Initial Calibration	WG233898-6	08/03/18	16:24			
Independent Source	WG233898-7	08/03/18	16:44			
Initial Calibration	WG233899-1	08/03/18	17:03			
Initial Calibration	WG233899-2	08/03/18	17:22			
Initial Calibration	WG233899-3	08/03/18	17:42			
Initial Calibration	WG233899-4	08/03/18	18:01			
Initial Calibration	WG233899-5	08/03/18	18:20			
Initial Calibration	WG233899-6	08/03/18	18:40			
Independent Source	WG233899-7	08/03/18	18:59			
Breakdown Evaluation	WG233901-1	08/06/18	10:53			
Initial Calibration	WG233901-3	08/06/18	11:32	4.192	12.46	
Initial Calibration	WG233901-5	08/06/18	12:11	4.193	12.46	
Initial Calibration	WG233901-6	08/06/18	12:31	4.201	12.46	
Initial Calibration	WG233901-7	08/06/18	12:50	4.191	12.46	
Initial Calibration	WG233901-2	08/06/18	13:19	4.206	12.46	
Initial Calibration	WG233901-4	08/06/18	14:11	4.193	12.46	
Independent Source	WG233901-8	08/06/18	15:31			
Continuing Calibrati	WG233999-1	08/10/18	13:19			
Breakdown Evaluation	WG233999-3	08/10/18	13:58			
Continuing Calibrati	WG233999-4	08/10/18	14:17	4.202	12.45	
Method Blank Sample	WG233964-1	08/10/18	18:01	4.202	12.45	
Laboratory Control S	WG233964-2	08/10/18	18:20	4.202	12.45	
Laboratory Control S	WG233964-3	08/10/18	18:39	4.203	12.46	
Continuing Calibrati	WG233999-5	08/10/18	18:59			
Continuing Calibrati	WG233999-6	08/10/18	19:18			
Continuing Calibrati	WG233999-7	08/10/18	19:38	4.202	12.45	
Laboratory Control S	WG233964-4	08/10/18	19:57	4.184	12.45	
TCLP Blank	WG233964-5	08/10/18	20:16	4.199	12.46	
CHAAP-IDW-SOIL-08061	SL7420-1	08/10/18	21:14	4.193	12.46	
CHAAP-IDW-SOIL-08061	SL7420-2	08/10/18	21:34	4.204	12.45	
Continuing Calibrati	WG233999-8	08/10/18	23:10			

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Form 8
GC Analytical Sequence

Lab Name : Katahdin Analytical Services
SDG : SL7420
Project : Cornhusker Army Ammunition Plant
Column ID : A
Instrument ID : GC01

Continuing Calibrati	WG233999-10	08/10/18	23:49	4.199	12.45	

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Form 8
GC Analytical Sequence

Lab Name : Katahdin Analytical Services **SDG :** SL7420
Project : Cornhusker Army Ammunition Plant **Column ID :** B
Instrument ID : GC01

Client Sample ID	Lab Sample ID	Date Analyzed	Time Analyzed	TCX	DCB	
Initial Calibration	WG233898-1	08/03/18	14:16			
Initial Calibration	WG233898-2	08/03/18	14:36			
Initial Calibration	WG233898-3	08/03/18	14:55			
Initial Calibration	WG233898-4	08/03/18	15:15			
Initial Calibration	WG233898-5	08/03/18	15:34			
Initial Calibration	WG233898-6	08/03/18	16:24			
Independent Source	WG233898-7	08/03/18	16:44			
Initial Calibration	WG233899-1	08/03/18	17:03			
Initial Calibration	WG233899-2	08/03/18	17:22			
Initial Calibration	WG233899-3	08/03/18	17:42			
Initial Calibration	WG233899-4	08/03/18	18:01			
Initial Calibration	WG233899-5	08/03/18	18:20			
Initial Calibration	WG233899-6	08/03/18	18:40			
Independent Source	WG233899-7	08/03/18	18:59			
Breakdown Evaluation	WG233901-1	08/06/18	10:53			
Initial Calibration	WG233901-3	08/06/18	11:32	4.271	12.94	
Initial Calibration	WG233901-5	08/06/18	12:11	4.272	12.94	
Initial Calibration	WG233901-6	08/06/18	12:31	4.28	12.94	
Initial Calibration	WG233901-7	08/06/18	12:50	4.269	12.94	
Initial Calibration	WG233901-2	08/06/18	13:19	4.275	12.93	
Initial Calibration	WG233901-4	08/06/18	14:11	4.262	12.93	
Independent Source	WG233901-8	08/06/18	15:31			
Continuing Calibrati	WG233999-1	08/10/18	13:19			
Breakdown Evaluation	WG233999-3	08/10/18	13:58			
Continuing Calibrati	WG233999-4	08/10/18	14:17	4.28	12.93	
Method Blank Sample	WG233964-1	08/10/18	18:01	4.279	12.93	
Laboratory Control S	WG233964-2	08/10/18	18:20	4.279	12.93	
Laboratory Control S	WG233964-3	08/10/18	18:39	4.282	12.93	
Continuing Calibrati	WG233999-5	08/10/18	18:59			
Continuing Calibrati	WG233999-6	08/10/18	19:18			
Continuing Calibrati	WG233999-7	08/10/18	19:38	4.281	12.93	
Laboratory Control S	WG233964-4	08/10/18	19:57	4.263	12.93	
TCLP Blank	WG233964-5	08/10/18	20:16	4.278	12.93	
CHAAP-IDW-SOIL-08061	SL7420-1	08/10/18	21:14	4.271	12.93	
CHAAP-IDW-SOIL-08061	SL7420-2	08/10/18	21:34	4.282	12.93	
Continuing Calibrati	WG233999-8	08/10/18	23:10			

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ANALYTICAL SERVICES

Form 8
GC Analytical Sequence

Lab Name : Katahdin Analytical Services
SDG : SL7420
Project : Cornhusker Army Ammunition Plant
Column ID : B
Instrument ID : GC01

Continuing Calibrati	WG233999-10	08/10/18	23:49	4.278	12.93	

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TCLP VOLATILE DATA

QC Summary Section

Katahdin
ANALYTICAL SERVICES

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** Cornhusker Army Ammunition Plant **Matrix:** AQ
Lab Code: KAS **SDG:** SL7420

Client Sample ID	Lab Sample ID	Col. ID	BFB	#	DBF	#	DCA	#	TOL	#
CHAAP-IDW-SOIL-080618	SL7420-1DLRA		100.		102.		105.		100.	
CHAAP-IDW-SOIL-080618	SL7420-2DL		101.		108.		111.		102.	
Laboratory Control S	WG234298-1		101.		102.		100.		100.	
Method Blank Sample	WG234298-2		100.		102.		104.		100.	
Laboratory Control S	WG234446-1		103.		102.		99.9		101.	
Method Blank Sample	WG234446-2		98.6		103.		104.		100.	

		QC Limits
DCA	1,2-DICHLOROETHANE-D4	81-118
TOL	TOLUENE-D8	89-112
DBF	DIBROMOFLUOROMETHANE	80-119
BFB	P-BROMOFLUOROBENZENE	85-114

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

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Form 4
Method Blank Summary - VOA

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : P7210.D
Instrument ID : GCMS-P
Heated Purge : No

SDG : SL7420
Lab Sample ID : WG234298-2
Date Analyzed : 14-AUG-18
Time Analyzed : 09:19

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG234298-1	P7208.D	08/14/18	08:07
CHAAP-IDW-SOIL-080618-N	SL7420-2DL	P7220.D	08/14/18	14:41

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Form 4
Method Blank Summary - VOA

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : P7235.D
Instrument ID : GCMS-P
Heated Purge : No

SDG : SL7420
Lab Sample ID : WG234446-2
Date Analyzed : 15-AUG-18
Time Analyzed : 09:07

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG234446-1	P7233.D	08/15/18	07:56
CHAAP-IDW-SOIL-080618-S	SL7420-1DLRA	P7236.D	08/15/18	09:39

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Katahdin
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Form 5
Volatile Organic Instrument Performance Check

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : PB112.D
Instrument ID : GCMS-P

SDG : SL7420
Date Analyzed : 11-AUG-18
Time Analyzed : 10:25
Heated Purge : No

m/e	Ion Abundance Criteria	% Relative Abundance		
50	15.0 - 40.0% of mass 95	16.6		
75	30.0 - 60.0% of mass 95	51.1		
95	Base Peak, 100% relative abundance	100		
96	5.0 - 9.0% of mass 95	7.0		
173	Less than 2.0% of mass 174	0.3	0.40	1
174	Greater than 50.0% of mass 95	67.8		
175	5.0 - 9.0% of mass 174	4.9	7.26	1
176	95.0 - 101.0% of mass 174	64.7	95.47	1
177	5.0 - 9.0% of mass 176	4.2	6.44	2

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following samples, LCS, MS, MSD and standards:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Initial Calibration	WG234067-4	P7167.D	08/11/18	12:12
Initial Calibration	WG234067-3	P7168.D	08/11/18	12:44
Initial Calibration	WG234067-2	P7169.D	08/11/18	13:16
Initial Calibration	WG234067-1	P7170.D	08/11/18	13:49
Initial Calibration	WG234067-6	P7171.D	08/11/18	14:21
Initial Calibration	WG234067-5	P7172.D	08/11/18	14:53
Independent Source	WG234067-7	P7173.D	08/11/18	15:25

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Katahdin
ANALYTICAL SERVICES

Form 5
Volatile Organic Instrument Performance Check

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : PB114A.D
Instrument ID : GCMS-P

SDG : SL7420
Date Analyzed : 14-AUG-18
Time Analyzed : 07:00
Heated Purge : No

m/e	Ion Abundance Criteria	% Relative Abundance		
50	15.0 - 40.0% of mass 95	17.3		
75	30.0 - 60.0% of mass 95	50.5		
95	Base Peak, 100% relative abundance	100		
96	5.0 - 9.0% of mass 95	7.1		
173	Less than 2.0% of mass 174	0.0	0.0	1
174	Greater than 50.0% of mass 95	63.6		
175	5.0 - 9.0% of mass 174	4.7	7.35	1
176	95.0 - 101.0% of mass 174	62.2	97.78	1
177	5.0 - 9.0% of mass 176	4.0	6.43	2

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following samples, LCS, MS, MSD and standards:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Continuing Calibrati	WG234298-4	P7207.D	08/14/18	07:26
Laboratory Control S	WG234298-1	P7208.D	08/14/18	08:07
Method Blank Sample	WG234298-2	P7210.D	08/14/18	09:19
CHAAP-IDW-SOIL-080618-N	SL7420-2DL	P7220.D	08/14/18	14:41
Continuing Calibrati	WG234298-5	P7227.D	08/14/18	18:26

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Katahdin
ANALYTICAL SERVICES

Form 5
Volatile Organic Instrument Performance Check

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : PB115A.D
Instrument ID : GCMS-P

SDG : SL7420
Date Analyzed : 15-AUG-18
Time Analyzed : 06:41
Heated Purge : No

m/e	Ion Abundance Criteria	% Relative Abundance		
50	15.0 - 40.0% of mass 95	17.4		
75	30.0 - 60.0% of mass 95	51.5		
95	Base Peak, 100% relative abundance	100		
96	5.0 - 9.0% of mass 95	7.1		
173	Less than 2.0% of mass 174	0.0	0.0	1
174	Greater than 50.0% of mass 95	66.4		
175	5.0 - 9.0% of mass 174	5.0	7.60	1
176	95.0 - 101.0% of mass 174	64.9	97.75	1
177	5.0 - 9.0% of mass 176	4.2	6.51	2

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following samples, LCS, MS, MSD and standards:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Continuing Calibrati	WG234446-4	P7232.D	08/15/18	07:05
Laboratory Control S	WG234446-1	P7233.D	08/15/18	07:56
Method Blank Sample	WG234446-2	P7235.D	08/15/18	09:07
CHAAP-IDW-SOIL-080618-S	SL7420-1DLRA	P7236.D	08/15/18	09:39
Continuing Calibrati	WG234446-5	P7237.D	08/15/18	10:11

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ANALYTICAL SERVICES

Form 8
Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition I
Lab ID : WG234067-4
Lab File ID : P7167.D

SDG: SL7420
Analytical Date: 08/11/18 12:12
Instrument ID: GCMS-P

		PENTAFLUOROBENZENE			1,4-DIFLUOROBENZENE			CHLOROBENZENE-D5		
		Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
	Std .	431953		6.19		761727		7.15		770111		11.63	
	Upper Limit	863906		6.35		1523454		7.32		1540222		11.80	
	Lower Limit	215976.5		6.02		380863.5		6.98		385055.5		11.47	
Client Sample ID	Lab Sample ID												
Continuing Calibrati	WG234298-4	420048		6.19		766426		7.15		786418		11.63	
Laboratory Control S	WG234298-1	422571		6.19		770494		7.15		783751		11.63	
Method Blank Sample	WG234298-2	403115		6.19		745906		7.15		766728		11.63	
CHAAP-IDW-SOIL-08	SL7420-2DL	357992		6.19		667928		7.16		689921		11.63	
Continuing Calibrati	WG234298-5	397591		6.19		714468		7.15		737891		11.63	
Continuing Calibrati	WG234446-4	409284		6.18		736547		7.16		756323		11.63	
Laboratory Control S	WG234446-1	406460		6.18		740030		7.16		761932		11.63	
Method Blank Sample	WG234446-2	388359		6.19		712957		7.16		727600		11.63	
CHAAP-IDW-SOIL-08	SL7420-1DLRA	379586		6.19		693296		7.16		712564		11.63	
Continuing Calibrati	WG234446-5	399250		6.19		714768		7.15		743713		11.63	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 10 seconds of internal standard RT
RT Lower Limit = - 10 seconds of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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Katahdin
ANALYTICAL SERVICES

Form 8
Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition I
Lab ID : WG234067-4
Lab File ID : P7167.D

SDG: SL7420
Analytical Date: 08/11/18 12:12
Instrument ID: GCMS-P

		1,4-DICHLOROBENZENE-D4			
		Area	#	RT	#
	Std .	384502		14.63	
	Upper Limit	769004		14.80	
	Lower Limit	192251		14.46	
Client Sample ID	Lab Sample ID				
Continuing Calibrati	WG234298-4	393252		14.63	
Laboratory Control S	WG234298-1	395411		14.63	
Method Blank Sample	WG234298-2	364542		14.63	
CHAAP-IDW-SOIL-08	SL7420-2DL	330562		14.63	
Continuing Calibrati	WG234298-5	372188		14.63	
Continuing Calibrati	WG234446-4	381735		14.63	
Laboratory Control S	WG234446-1	386550		14.63	
Method Blank Sample	WG234446-2	350520		14.63	
CHAAP-IDW-SOIL-08	SL7420-1DLRA	342757		14.63	
Continuing Calibrati	WG234446-5	380055		14.63	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 10 seconds of internal standard RT
RT Lower Limit = - 10 seconds of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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Sample Data Section

KATAHDIN ANALYTICAL SERVICES - ORGANIC DATA QUALIFIERS

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.

* Compound recovery or percent RPD (relative percent difference) was outside of quality control limits.

D Indicates the result was obtained from analysis of a diluted sample. Surrogate recoveries may not be calculable.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

or

J Used for Pesticides, PCBs, Herbicides, Formaldehyde, Explosives and Method 504.1 analytes when there is a greater than 40% difference for detected concentrations between the two GC columns.

B Indicates the analyte was detected in the laboratory method blank analyzed concurrently with the sample.

C Indicates that the flagged compound did not meet DoD criteria in the corresponding daily calibration verification (CV).

L Indicates that the flagged compound did not meet DoD criteria in the corresponding Laboratory Control Sample (LCS) and/or Laboratory Control Sample Duplicate (LCSD) prepared and/or analyzed concurrently with the sample.

M Indicates that the flagged compound did not meet DoD criteria in the Matrix Spike and/or Matrix Spike Duplicate prepared and/or analyzed concurrently with the native sample.

N Presumptive evidence of a compound based on a mass spectral library search.

A Indicates that a tentatively identified compound is a suspected aldol-condensation product.

P Used for Pesticide/Aroclor analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. (for CLP methods only).

Katahdin Analytical Services, Inc.

Manual Integration Codes For GC/MS, GC, HPLC and/or IC

M1	Peak splitting.
M2	Well defined peaks on the shoulders of the other peaks.
M3	There is additional area due to a coeluting interferant.
M4	There are negative spikes in the baseline.
M5	There are rising or falling baselines.
M6	The software has failed to detect a peak or misidentified a peak.
M7	Excessive peak tailing.
M8	Analysis such as GRO, DRO and TPH require a baseline hold.
M9	Peak was not completely integrated as in GC/MS.
M10	Primary ion was correctly integrated, but secondary or tertiary ion needed manual integration as in GC/MS.
M11	For GC analysis, when a sample is diluted by 1:10 or more, the surrogate is set to undetected and then the area under the surrogate is manually integrated.
M12	Manual integration saved in method due to TurboChrom floating point error.

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL7420-1DLRA
Client ID: CHAAP-IDW-SOIL-080618-S
Project: Cornhusker Army Ammunition Plant
SDG: SL7420
Lab File ID: P7236.D

Sample Date: 06-AUG-18
Received Date: 08-AUG-18
Extract Date: 15-AUG-18
Extracted By: HG
Extraction Method: 5030/1311
Lab Prep Batch: WG234446

Analysis Date: 15-AUG-18
Analyst: HG
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-AUG-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzene	U	10	ug/L	20	5	100	5.2	10.
Carbon Tetrachloride	U	10	ug/L	20	5	100	4.4	10.
Chlorobenzene	U	10	ug/L	20	5	100	4.4	10.
Chloroform	U	10	ug/L	20	5	100	6.4	10.
1,2-Dichloroethane	U	10	ug/L	20	5	100	4.0	10.
1,1-Dichloroethene	U	10	ug/L	20	5	100	7.0	10.
2-Butanone	U	50	ug/L	20	15	300	26.	50.
Tetrachloroethene	U	10	ug/L	20	5	100	8.0	10.
Trichloroethene	U	10	ug/L	20	5	100	5.6	10.
Vinyl Chloride	U	20	ug/L	20	5	100	5.0	20.
1,2-Dichloroethane-D4		105.	%					
Toluene-D8		100.	%					
p-Bromofluorobenzene		100.	%					
Dibromofluoromethane		102.	%					

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Data File: \\target_server\gg\chem\gcms-p.i\P081518.b\P7236.D
Report Date: 20-Aug-2018 14:48

Katahdin Analytical Services

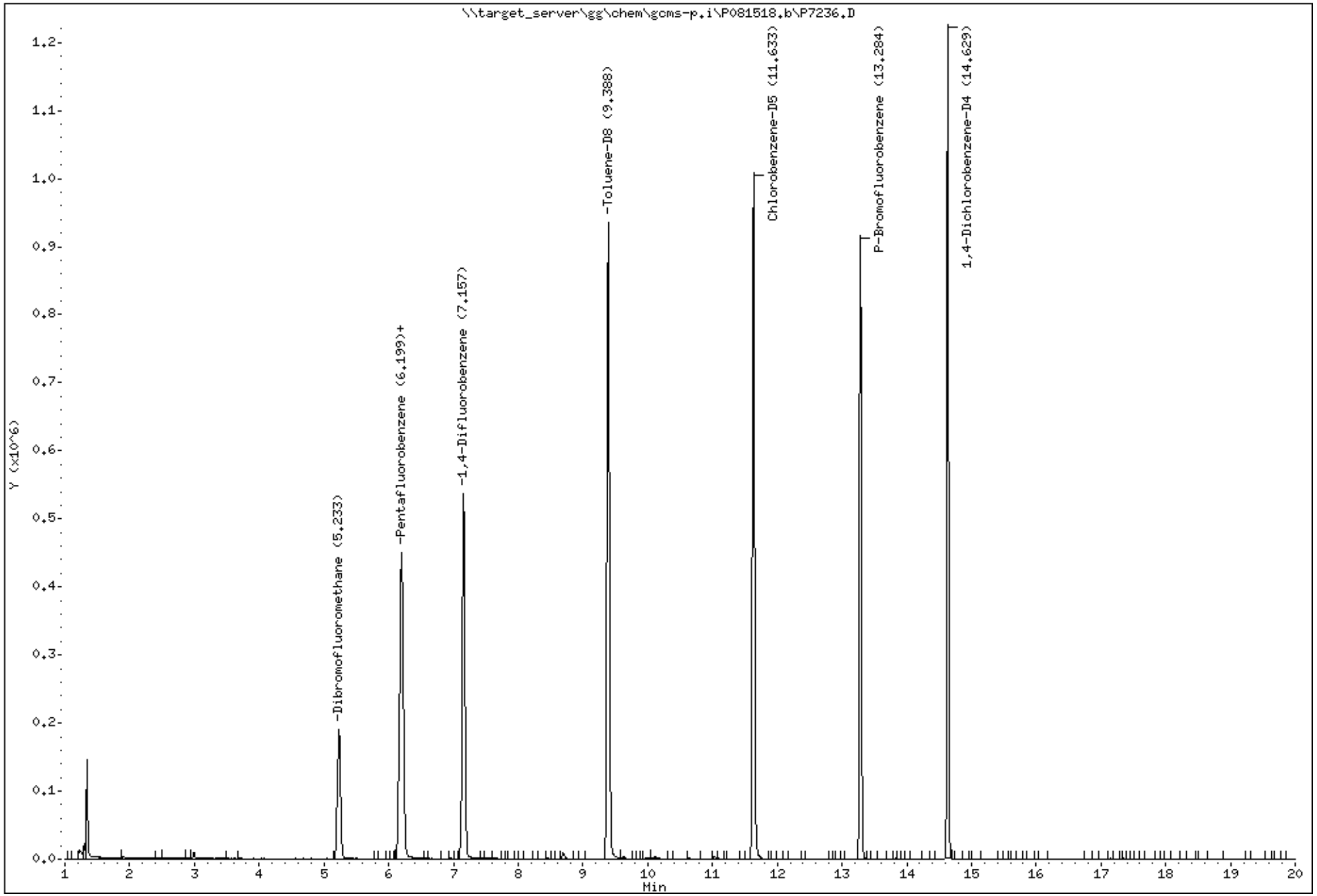
Data file : \\target_server\gg\chem\gcms-p.i\P081518.b\P7236.D
Lab Smp Id: SL7420-1DLRA Client Smp ID: HAAP-IDW-SOIL-08061
Inj Date : 15-AUG-2018 09:39
Operator : HG Inst ID: gcms-p.i
Smp Info : SL7420-1DLRA
Misc Info : WG234446,WG234067-4
Comment   : 5030/1311
Method   : \\target_server\gg\chem\gcms-p.i\P081518.b\P8A05(85)D.m
Meth Date : 20-Aug-2018 14:47 gcms-p.i Quant Type: ISTD
Cal Date : 11-AUG-2018 13:49 Cal File: P7170.D
Als bottle: 5 QC Sample: Blank
Dil Factor: 20.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf/Vo * CpndVariable

Name	Value	Description
DF	20.000	Dilution Factor
Vo	5.000	sample purged
Uf	1.000	Dilution Factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
$ 34 Dibromofluoromethane	113	5.233	5.227	(0.845)	197784	51.1568	10.2	
* 41 Pentafluorobenzene	168	6.191	6.185	(1.000)	379586	50.0000		
$ 42 1,2-Dichloroethane-D4	65	6.212	6.207	(1.003)	269000	52.6129	10.5	
* 48 1,4-Difluorobenzene	114	7.156	7.151	(1.000)	693296	50.0000		
$ 58 Toluene-D8	98	9.387	9.389	(1.312)	874688	50.2693	10.0	
* 68 Chlorobenzene-D5	117	11.632	11.634	(1.000)	712564	50.0000		
$ 77 P-Bromofluorobenzene	95	13.284	13.286	(1.856)	382556	50.1918	10.0	
* 93 1,4-Dichlorobenzene-D4	152	14.628	14.630	(1.000)	342757	50.0000		

Data File: \\target_server\gg\chem\gcms-p.i\P081518.b\P7236.D
Date : 15-AUG-2018 09:39
Client ID: HAAP-IDW-SOIL-08061
Instrument: gcms-p.i
Sample Info: SL7420-1DLRA



Katahdin Analytical Services 1000016

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL7420-2DL
Client ID: CHAAP-IDW-SOIL-080618-N
Project: Cornhusker Army Ammunition Plant
SDG: SL7420
Lab File ID: P7220.D

Sample Date: 06-AUG-18
Received Date: 08-AUG-18
Extract Date: 14-AUG-18
Extracted By: HG
Extraction Method: 5030/1311
Lab Prep Batch: WG234298

Analysis Date: 14-AUG-18
Analyst: HG
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-AUG-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzene	U	10	ug/L	20	5	100	5.2	10.
Carbon Tetrachloride	U	10	ug/L	20	5	100	4.4	10.
Chlorobenzene	U	10	ug/L	20	5	100	4.4	10.
Chloroform	U	10	ug/L	20	5	100	6.4	10.
1,2-Dichloroethane	U	10	ug/L	20	5	100	4.0	10.
1,1-Dichloroethene	U	10	ug/L	20	5	100	7.0	10.
2-Butanone	U	50	ug/L	20	15	300	26.	50.
Tetrachloroethene	U	10	ug/L	20	5	100	8.0	10.
Trichloroethene	U	10	ug/L	20	5	100	5.6	10.
Vinyl Chloride	U	20	ug/L	20	5	100	5.0	20.
1,2-Dichloroethane-D4		111.	%					
Toluene-D8		102.	%					
p-Bromofluorobenzene		101.	%					
Dibromofluoromethane		108.	%					

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Data File: \\target_server\gg\chem\gcms-p.i\P081418.b\P7220.D
Report Date: 20-Aug-2018 14:43

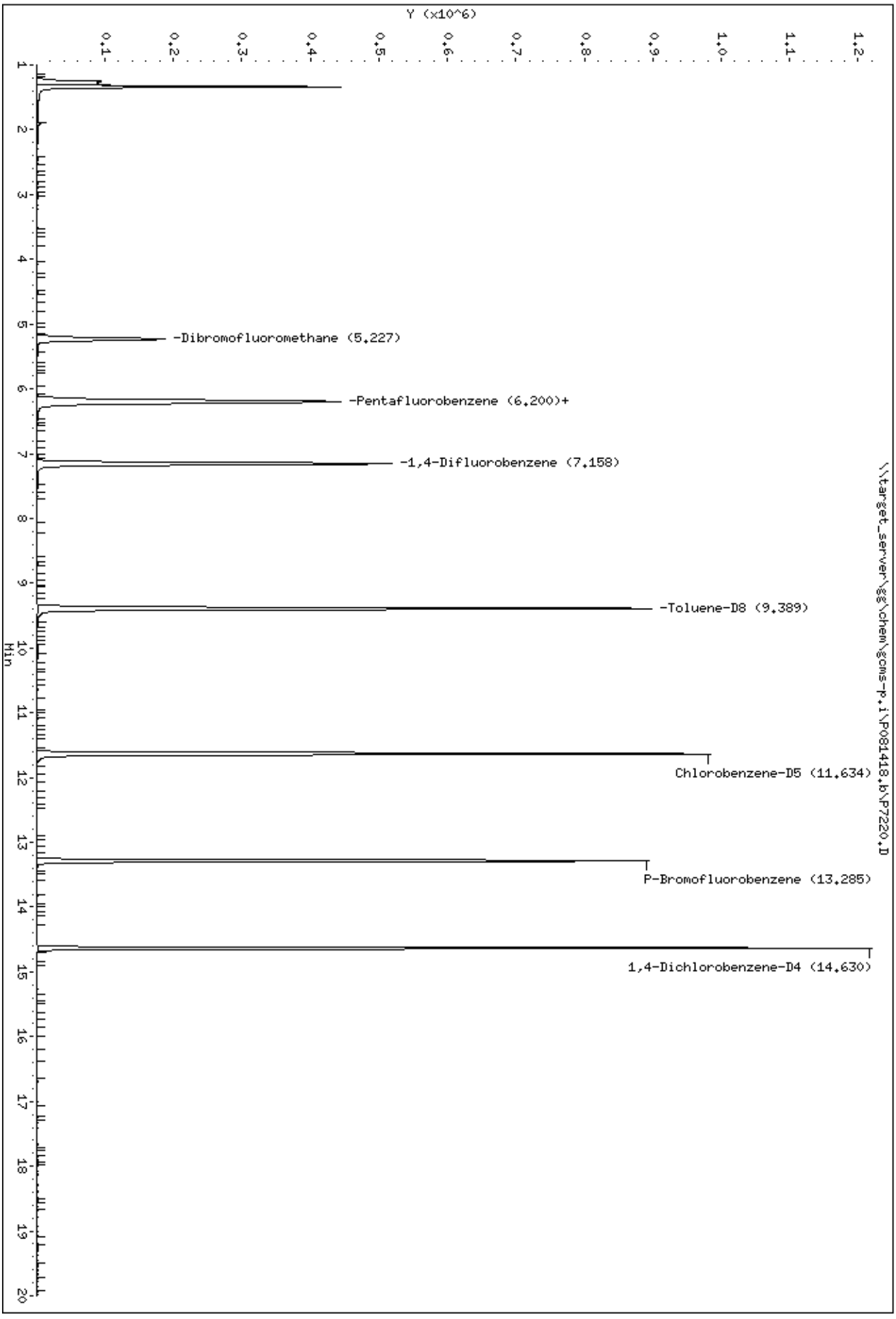
Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-p.i\P081418.b\P7220.D
Lab Smp Id: SL7420-2DL Client Smp ID: HAAP-IDW-SOIL-08061
Inj Date : 14-AUG-2018 14:41
Operator : HG Inst ID: gcms-p.i
Smp Info : SL7420-2DL
Misc Info : WG234298,WG234067-4
Comment   : 5030/1311
Method   : \\target_server\gg\chem\gcms-p.i\P081418.b\P8A05(85)D.m
Meth Date : 20-Aug-2018 14:40 tcote Quant Type: ISTD
Cal Date : 11-AUG-2018 13:49 Cal File: P7170.D
Als bottle: 14
Dil Factor: 20.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: MIS_GUEST

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	20.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
$ 34 Dibromofluoromethane	113	5.227	5.227	(0.844)	197275	54.1030	54.1	
* 41 Pentafluorobenzene	168	6.192	6.185	(1.000)	357992	50.0000		
$ 42 1,2-Dichloroethane-D4	65	6.213	6.207	(1.003)	267331	55.4404	55.4	
* 48 1,4-Difluorobenzene	114	7.157	7.151	(1.000)	667928	50.0000		
$ 58 Toluene-D8	98	9.388	9.389	(1.312)	853583	50.9195	50.9	
* 68 Chlorobenzene-D5	117	11.633	11.634	(1.000)	689921	50.0000		
$ 77 P-Bromofluorobenzene	95	13.285	13.286	(1.856)	370435	50.4474	50.4	
* 93 1,4-Dichlorobenzene-D4	152	14.629	14.630	(1.000)	330562	50.0000		


Data File: \\target_server\gg\chem\gcms-p.i\P081418.b\P7220.D
Date : 14-AUG-2018 14:41
Client ID: HAAP-IDW-SOIL-08061
Sample Info: SL7420-2DL
Instrument: gcms-p.i
\\target_server\gg\chem\gcms-p.i\P081418.b\P7220.D
Y (x10^6)
Min
-Dibromofluoromethane (5.227)
-Pentafluorobenzene (6.200)+
-1,4-Difluorobenzene (7.158)
-Toluene-D8 (9.389)
Chlorobenzene-D5 (11.634)
P-Bromofluorobenzene (13.285)
1,4-Dichlorobenzene-D4 (14.630)

Standards Data Section

Katahdin
ANALYTICAL SERVICES

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL7420
Project : Cornhusker Army Ammunition Plant
Instrument ID: GCMS-P
Lab File IDs : P7170.D P7169.D P7168.D P7167.D P7172.D P7171.D
Column ID:
Calibration Date(s): 11-AUG-18 12:12, 11-AUG-18 14:53

	1.0000 Level 1	5.0000 Level 2	20.0000 Level 3	50.0000 Level 4	100.0000 Level 5	150.0000 Level 6	New Crv	b	m1	m2	%RSD	Max %RSD	
Vinyl chloride	0.39913	0.46222	0.45202	0.42624	0.43583	0.44020	AVG		0.43594		5.04275	15.00000	O
1,1-Dichloroethene	0.28350	0.35360	0.35999	0.32143	0.32375	0.31976	AVG		0.32700		8.41051	15.00000	O
Chloroform	0.74942	0.89977	0.90368	0.84310	0.84100	0.86835	AVG		0.85089		6.63491	15.00000	O
Carbon Tetrachloride	0.31773	0.40780	0.41669	0.39973	0.38611	0.38550	AVG		0.38559		9.18045	15.00000	O
2-Butanone	0.12729	0.18022	0.17375	0.16943	0.17744	0.15596	AVG		0.16402		12.1339(	15.00000	O
Benzene	0.90260	1.15773	1.17920	1.09061	1.05824	1.05484	AVG		1.07387		9.15716	15.00000	O
1,2-Dichloroethane	0.39843	0.37721	0.36047	0.34108	0.32920	0.33762	AVG		0.35733		7.44479	15.00000	O
Trichloroethene	0.25151	0.30367	0.29585	0.27393	0.26834	0.26729	AVG		0.27677		7.03378	15.00000	O
Tetrachloroethene	0.19322	0.24581	0.23783	0.22140	0.21276	0.20944	AVG		0.22008		8.78025	15.00000	O
Chlorobenzene	0.65814	0.82734	0.77509	0.72185	0.71399	0.69931	AVG		0.73262		8.16619	15.00000	O
Dibromofluoromethane	0.50623	0.50400	0.50473	0.50064	0.51662	0.52340	AVG		0.50927		1.72478	15.00000	
1,2-Dichloroethane-D4	0.69501	0.68033	0.65058	0.66560	0.66528	0.68404	AVG		0.67347		2.37165	15.00000	
Toluene-D8	1.24906	1.25057	1.25858	1.25790	1.25419	1.25898	AVG		1.25488		0.34289	15.00000	
P-Bromofluorobenzene	0.54238	0.54218	0.54576	0.55135	0.55717	0.55927	AVG		0.54968		1.35101	15.00000	

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
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Data File: \\target_server\gg\chem\gcms-p.i\P081118.b\P7173.D
Report Date: 20-Aug-2018 14:30

Katahdin Analytical Services

RECOVERY REPORT

Client Name: Client SDG: SDGa02236
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: WG234067-7
Level: LOW Operator: HG
Data Type: MS DATA SampleType: LCS
SpikeList File: IND_CHECK.spk Quant Type: ISTD
Sublist File: all.sub
Method File: \\target_server\gg\chem\gcms-p.i\P081118.b\P8A05(85)D.m
Misc Info: WG234067,WG234067-4,SL7420-1

	SPIKE	COMPOUND	CONC ADDED ug/l	CONC RECOVERED ug/l	% RECOVERED	LIMITS
	1	Dichlorodifluorome	50.0	53.9	107.72	80-120
	2	Chloromethane	50.0	54.2	108.35	80-120
	3	Vinyl chloride	50.0	55.0	110.07	80-120
	4	Bromomethane	50.0	50.2	100.32	80-120
	5	Chloroethane	50.0	62.8	125.53*	80-120
	6	Trichlorofluoromet	50.0	54.3	108.55	80-120
	7	Diethyl Ether	50.0	52.2	104.31	80-120
	19	Tertiary-butyl alc	250	241	96.49	80-120
	8	1,1-Dichloroethene	50.0	51.5	103.02	80-120
	10	Carbon Disulfide	50.0	50.3	100.69	80-120
	9	Freon-113	50.0	49.0	97.95	80-120
	11	Iodomethane	50.0	49.1	98.22	80-120
	12	Acrolein	250	254	101.44	80-120
	14	Methylene Chloride	50.0	51.5	102.94	80-120
	15	Acetone	50.0	52.2	104.34	80-120
	45	Isobutyl Alcohol	1000	1030	102.81	80-120
	16	trans-1,2-Dichloro	50.0	51.0	102.02	80-120
	13	Allyl Chloride	50.0	49.4	98.85	80-120
	18	Methyl tert-butyl	50.0	58.8	117.50	80-120
	20	Acetonitrile	500	467	93.41	80-120
	21	Di-isopropyl ether	50.0	52.0	103.93	80-120
	22	Chloroprene	50.0	50.8	101.70	80-120
	39	Propionitrile	500	480	96.03	80-120
	40	Methacrylonitrile	500	485	97.08	80-120
	23	1,1-Dichloroethane	50.0	53.6	107.17	80-120
	24	Acrylonitrile	250	246	98.24	80-120
	25	Ethyl tertiary-but	50.0	52.4	104.90	80-120
	26	Vinyl Acetate	50.0	57.0	114.03	80-120
	27	cis-1,2-Dichloroet	50.0	52.0	104.06	80-120
M	97	1,2-Dichloroethyle	100	103	103.04	80-120
	52	Methyl Methacrylat	50.0	50.6	101.25	80-120
	28	2,2-Dichloropropan	50.0	49.0	97.96	80-120
	29	Bromochloromethane	50.0	60.4	120.83*	80-120
	31	Chloroform	50.0	51.4	102.74	80-120
	32	Carbon Tetrachlori	50.0	50.3	100.65	80-120
	33	Tetrahydrofuran	50.0	54.6	109.10	80-120
	35	1,1,1-Trichloroeth	50.0	50.5	100.96	80-120
	37	1,1-Dichloropropen	50.0	52.1	104.22	80-120
	36	2-Butanone	50.0	51.2	102.34	80-120
	38	Benzene	50.0	52.2	104.46	80-120

Data File: \\target_server\gg\chem\gcms-p.i\P081118.b\P7173.D
Report Date: 20-Aug-2018 14:30

	SPIKE COMPOUND	CONC ADDED ug/l	CONC RECOVERED ug/l	% RECOVERED	LIMITS
	30 Cyclohexane	50.0	59.0	118.06	80-120
	53 Ethyl Methacrylate	50.0	52.3	104.68	80-120
	43 Tertiary-amyl meth	50.0	50.0	99.91	80-120
	44 1,2-Dichloroethane	50.0	49.5	98.96	80-120
	47 Trichloroethene	50.0	51.4	102.75	80-120
	49 Dibromomethane	50.0	50.9	101.76	80-120
	50 1,2-Dichloropropan	50.0	53.0	106.05	80-120
	51 Bromodichlorometha	50.0	53.8	107.65	80-120
	57 cis-1,3-dichloropr	50.0	52.5	105.09	80-120
	54 1,4-Dioxane	1000	829	82.88	80-120
	56 2-Chloroethylviny	50.0	0.00	*	80-120
	59 Toluene	50.0	52.1	104.20	80-120
	61 4-methyl-2-pentano	50.0	45.0	90.01	80-120
	60 Tetrachloroethene	50.0	50.7	101.49	80-120
	62 trans-1,3-Dichloro	50.0	53.4	106.75	80-120
	63 1,1,2-Trichloroeth	50.0	53.2	106.38	80-120
	64 Dibromochlorometha	50.0	53.4	106.80	80-120
	65 1,3-Dichloropropan	50.0	51.0	102.10	80-120
	66 1,2-Dibromoethane	50.0	52.4	104.82	80-120
	67 2-Hexanone	50.0	46.5	93.02	80-120
	69 Chlorobenzene	50.0	51.3	102.60	80-120
	70 Ethylbenzene	50.0	52.5	104.95	80-120
	71 1,1,1,2-Tetrachlor	50.0	53.0	105.98	80-120
M	105 Xylenes (total)	150	160	106.37	80-120
	72 m+p-Xylenes	100	105	105.30	80-120
	73 o-Xylene	50.0	54.2	108.51	80-120
	74 Styrene	50.0	51.7	103.40	80-120
	75 Bromoform	50.0	51.0	102.10	80-120
	76 Isopropylbenzene	50.0	55.8	111.52	80-120
	78 cis-1,4-Dichloro-2	50.0	44.3	88.54	80-120
	85 trans-1,4-Dichloro	50.0	44.9	89.82	80-120
	79 Bromobenzene	50.0	50.9	101.73	80-120
	80 N-Propylbenzene	50.0	52.1	104.18	80-120
	81 1,1,2,2-Tetrachlor	50.0	52.3	104.57	80-120
	84 1,3,5-Trimethylben	50.0	53.4	106.75	80-120
	82 2-Chlorotoluene	50.0	51.6	103.16	80-120
	83 1,2,3-Trichloropro	50.0	48.6	97.26	80-120
	86 4-Chlorotoluene	50.0	51.3	102.53	80-120
	87 tert-Butylbenzene	50.0	52.0	104.07	80-120
	88 Pentachloroethane	50.0	48.6	97.28	80-120
	89 1,2,4-Trimethylben	50.0	53.2	106.38	80-120
	91 P-Isopropyltoluene	50.0	52.8	105.62	80-120
	92 1,3-Dichlorobenzen	50.0	51.5	103.03	80-120
	94 1,4-Dichlorobenzen	50.0	49.0	98.07	80-120
	96 N-Butylbenzene	50.0	52.9	105.75	80-120
	90 sec-Butylbenzene	50.0	54.0	107.94	80-120
	98 1,2-Dichlorobenzen	50.0	51.6	103.20	80-120
	99 1,2-Dibromo-3-Chlo	50.0	46.4	92.91	80-120
	100 1,3,5-Trichloroben	50.0	48.0	96.06	80-120
	101 Hexachlorobutadien	50.0	49.0	97.99	80-120
	102 1,2,4-Trichloroben	50.0	50.9	101.82	80-120
	95 1,2,3-Trimethylben	50.0	46.2	92.44	80-120
	103 Naphthalene	50.0	59.4	118.79	80-120
	104 1,2,3-Trichloroben	50.0	55.1	110.21	80-120

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	SPIKE COMPOUND	CONC ADDED ug/l	CONC RECOVERED ug/l	% RECOVERED	LIMITS
	17 Methyl Acetate	50.0	46.9	93.81	80-120
	46 Methylcyclohexane	50.0	51.3	102.53	80-120
M	55 Total Alkylbenzene	350	370	105.81	80-120

	SURROGATE COMPOUND	AMOUNT ADDED ug/l	AMOUNT RECOVERED ug/l	% RECOVERED	LIMITS
$	34 Dibromofluorometha	50.0	49.9	99.86	68-128
$	42 1,2-Dichloroethane	50.0	48.9	97.77	67-135
$	58 Toluene-D8	50.0	50.0	100.06	65-128
$	77 P-Bromofluorobenze	50.0	49.7	99.49	56-133

Data File: \\target_server\gg\chem\gcms-p.i\P081118.b\P7173.D
Report Date: 20-Aug-2018 14:30

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-p.i\P081118.b\P7173.D
Lab Smp Id: WG234067-7
Inj Date : 11-AUG-2018 15:25
Operator : HG   Inst ID: gcms-p.i
Smp Info : WG234067-7,SL7420
Misc Info : WG234067,WG234067-4,SL7420-1
Comment   : SW846 5030
Method   : \\target_server\gg\chem\gcms-p.i\P081118.b\P8A05(85)D.m
Meth Date : 13-Aug-2018 07:56 TCOTE   Quant Type: ISTD
Cal Date : 11-AUG-2018 13:49   Cal File: P7170.D
Als bottle: 8   QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.450	1.452	(0.234)	286283	53.8604	53.9	
2	Chloromethane	50	1.593	1.595	(0.257)	181653	54.1744	54.2	
3	Vinyl chloride	62	1.651	1.652	(0.267)	204670	55.0346	55.0	
4	Bromomethane	94	1.887	1.888	(0.305)	84415	50.1587	50.2	
5	Chloroethane	64	1.972	1.967	(0.319)	110986	62.7632	62.8(R)	
6	Trichlorofluoromethane	101	2.080	2.073	(0.336)	285485	54.2770	54.3	
7	Diethyl Ether	59	2.316	2.317	(0.374)	107210	52.1544	52.2	
8	1,1-Dichloroethene	96	2.480	2.475	(0.401)	143698	51.5118	51.5	
9	Freon-113	151	2.509	2.503	(0.405)	113652	48.9753	49.0	
10	Carbon Disulfide	76	2.509	2.510	(0.405)	373898	50.3453	50.3	
11	Iodomethane	142	2.609	2.603	(0.421)	133989	49.1104	49.1	
12	Acrolein	56	2.773	2.775	(0.448)	117645	253.605	254	
13	Allyl Chloride	41	2.888	2.889	(0.466)	261511	49.4248	49.4	
14	Methylene Chloride	84	2.995	2.989	(0.484)	204961	51.4678	51.5	
15	Acetone	43	3.045	3.047	(0.492)	52813	52.1715	52.2	
16	trans-1,2-Dichloroethene	96	3.138	3.139	(0.507)	213085	51.0124	51.0	
17	Methyl Acetate	43	3.159	3.161	(0.510)	117733	46.9049	46.9	
18	Methyl tert-butyl ether	73	3.252	3.247	(0.525)	538558	58.7525	58.8	
19	Tertiary-butyl alcohol	59	3.359	3.361	(0.543)	83141	241.231	241	
20	Acetonitrile	41	3.531	3.533	(0.570)	208670	467.047	467	
21	Di-isopropyl ether	45	3.660	3.661	(0.591)	519250	51.9635	52.0	
22	Chloroprene	53	3.781	3.776	(0.611)	320080	50.8484	50.8	
23	1,1-Dichloroethane	63	3.810	3.804	(0.615)	374621	53.5827	53.6	
24	Acrylonitrile	52	3.889	3.890	(0.628)	266683	245.593	246	

Data File: \\target_server\gg\chem\gcms-p.i\P081118.b\P7173.D
Report Date: 20-Aug-2018 14:30

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
	25 Ethyl tertiary-butyl ether	59	4.110	4.105	(0.664)	517658	52.4513	52.4	
	26 Vinyl Acetate	43	4.139	4.133	(0.578)	383535	57.0174	57.0	
	27 cis-1,2-Dichloroethene	96	4.511	4.505	(0.729)	221551	52.0279	52.0	
	28 2,2-Dichloropropane	77	4.661	4.655	(0.753)	309571	48.9805	49.0	
	29 Bromochloromethane	128	4.797	4.798	(0.775)	89931	60.4171	60.4(R)	
	30 Cyclohexane	56	4.775	4.770	(0.771)	346514	59.0305	59.0	
	31 Chloroform	83	4.932	4.927	(0.797)	372896	51.3718	51.4	
	32 Carbon Tetrachloride	117	5.111	5.113	(0.714)	299095	50.3246	50.3	
	33 Tetrahydrofuran	42	5.176	5.177	(0.836)	44250	54.5519	54.6	
$	34 Dibromofluoromethane	113	5.233	5.227	(0.845)	216923	49.9306	49.9	
	35 1,1,1-Trichloroethane	97	5.240	5.242	(0.846)	354559	50.4782	50.5	
	36 2-Butanone	43	5.476	5.470	(0.885)	71597	51.1704	51.2	
	37 1,1-Dichloropropene	75	5.454	5.456	(0.762)	312518	52.1124	52.1	
	38 Benzene	78	5.926	5.921	(0.828)	864542	52.2319	52.2	
	39 Propionitrile	54	6.034	6.035	(0.975)	237976	480.139	480	
	40 Methacrylonitrile	41	6.069	6.064	(0.980)	945048	485.376	485	
*	41 Pentafluorobenzene	168	6.191	6.185	(1.000)	426541	50.0000		
$	42 1,2-Dichloroethane-D4	65	6.212	6.207	(1.003)	280844	48.8827	48.9	
	43 Tertiary-amyl methyl ether	73	6.227	6.214	(1.006)	464068	49.9547	50.0	
	44 1,2-Dichloroethane	62	6.341	6.343	(0.886)	272525	49.4804	49.5	
	45 Isobutyl Alcohol	43	6.556	6.557	(1.059)	105691	1028.12	1030	
	46 Methylcyclohexane	83	6.992	6.986	(1.129)	402637	51.2650	51.3	
	47 Trichloroethene	95	7.049	7.043	(0.985)	219165	51.3759	51.4	
*	48 1,4-Difluorobenzene	114	7.156	7.151	(1.000)	770671	50.0000		
	49 Dibromomethane	93	7.771	7.766	(1.086)	114816	50.8805	50.9	
	50 1,2-Dichloropropane	63	7.950	7.944	(1.111)	185694	53.0272	53.0	
	51 Bromodichloromethane	83	8.093	8.095	(1.131)	275946	53.8238	53.8	
	52 Methyl Methacrylate	41	8.443	8.438	(1.180)	141488	50.6261	50.6	
	53 Ethyl Methacrylate	69	10.445	10.447	(1.460)	251789	52.3410	52.3	
	54 1,4-Dioxane	88	8.443	8.445	(1.180)	50685	828.845	829	
M	55 Total Alkylbenzenes	100				6933931	370.347	370	
	57 cis-1,3-dichloropropene	75	9.115	9.110	(1.274)	337642	52.5470	52.5	
$	58 Toluene-D8	98	9.387	9.389	(1.312)	967702	50.0312	50.0	
	59 Toluene	92	9.466	9.460	(1.323)	574390	52.1001	52.1	
	60 Tetrachloroethene	164	10.009	10.011	(0.860)	173017	50.7428	50.7	
	61 4-methyl-2-pentanone	43	10.102	10.104	(1.412)	147005	45.0058	45.0	
	62 trans-1,3-Dichloropropene	75	10.131	10.132	(1.416)	305630	53.3731	53.4	
	63 1,1,2-Trichloroethane	83	10.352	10.354	(1.447)	138762	53.1918	53.2	
	64 Dibromochloromethane	129	10.581	10.583	(0.910)	197044	53.4005	53.4	
	65 1,3-Dichloropropane	76	10.731	10.726	(0.923)	319836	51.0520	51.0	
	66 1,2-Dibromoethane	107	10.874	10.876	(1.520)	168442	52.4080	52.4	
	67 2-Hexanone	43	11.332	11.326	(0.974)	106246	46.5088	46.5	
*	68 Chlorobenzene-D5	117	11.632	11.634	(1.000)	774656	50.0000		
	69 Chlorobenzene	112	11.654	11.655	(1.002)	582294	51.3008	51.3	
	70 Ethylbenzene	91	11.732	11.734	(1.009)	1094469	52.4748	52.5	
	71 1,1,1,2-Tetrachloroethane	131	11.768	11.770	(1.012)	205373	52.9897	53.0	
	72 m+p-Xylenes	91	11.954	11.956	(1.028)	1687210	105.303	105	
	73 o-Xylene	91	12.526	12.528	(1.077)	853114	54.2530	54.2	
	74 Styrene	104	12.605	12.606	(1.084)	630701	51.6981	51.7	
	75 Bromoform	173	12.597	12.599	(1.083)	111846	51.0522	51.0	
	76 Isopropylbenzene	105	12.955	12.949	(0.886)	1057521	55.7589	55.8	
$	77 P-Bromofluorobenzene	95	13.284	13.286	(1.856)	421471	49.7457	49.7	
	78 cis-1,4-Dichloro-2-Butene	53	13.405	13.407	(0.916)	72159	44.2725	44.3	
	79 Bromobenzene	156	13.384	13.386	(0.915)	215085	50.8640	50.9	

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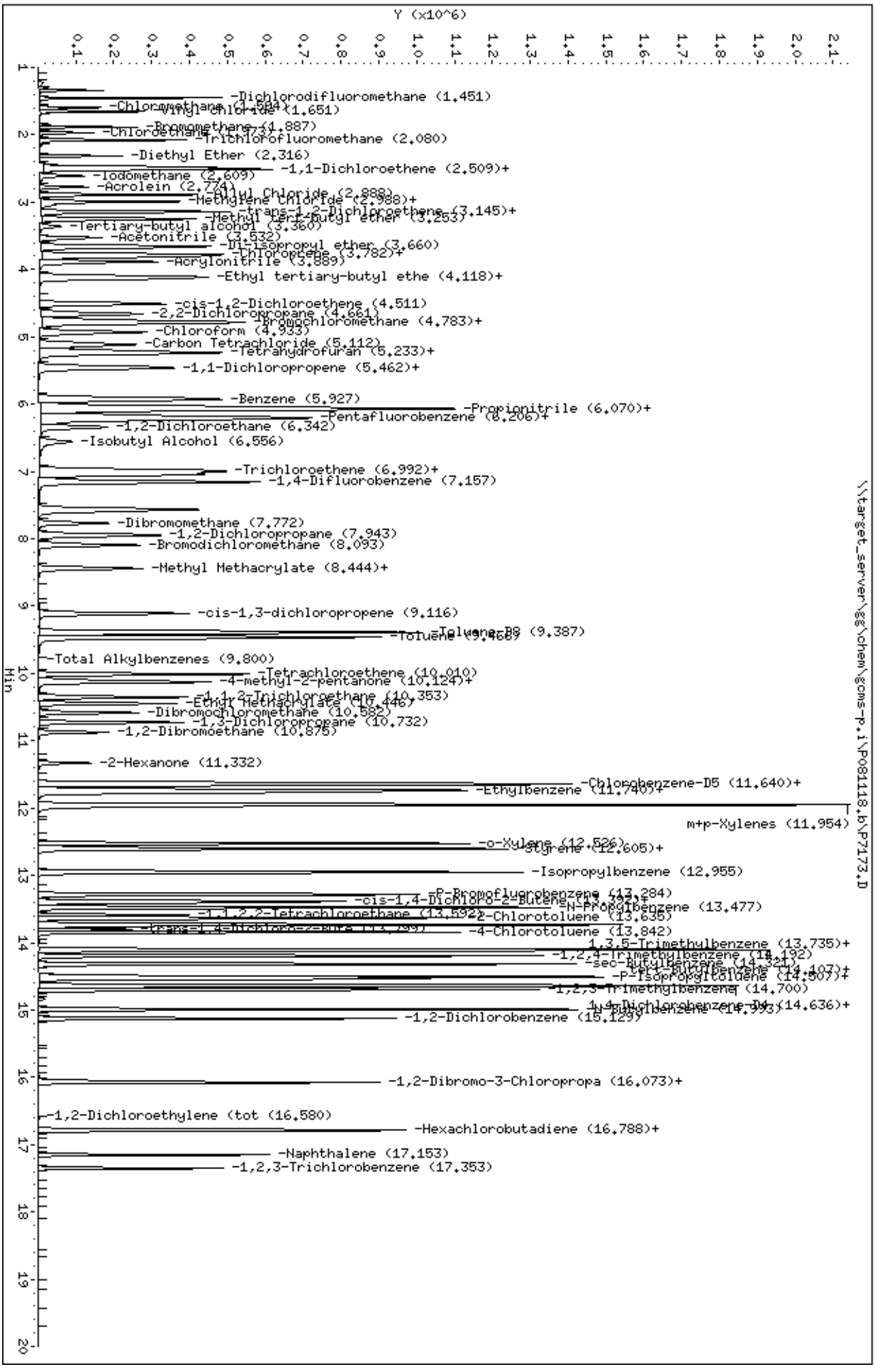
			QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)	REVIEW CODE
	80	N-Propylbenzene	91	13.477	13.479	(0.921)	1283433	52.0896	52.1	
	81	1,1,2,2-Tetrachloroethane	83	13.591	13.586	(0.929)	217795	52.2867	52.3	
	82	2-Chlorotoluene	91	13.634	13.636	(0.932)	745497	51.5795	51.6	
	83	1,2,3-Trichloropropane	75	13.720	13.722	(0.938)	189790	48.6322	48.6	
	84	1,3,5-Trimethylbenzene	105	13.734	13.736	(0.939)	876781	53.3740	53.4	
	85	trans-1,4-Dichloro-2-Butene	53	13.799	13.800	(0.943)	58527	44.9099	44.9	
	86	4-Chlorotoluene	91	13.842	13.843	(0.946)	781305	51.2645	51.3	
	87	tert-Butylbenzene	119	14.106	14.108	(0.964)	867003	52.0337	52.0	
	88	Pentachloroethane	165	14.106	14.108	(0.964)	102916	48.6417	48.6	
	89	1,2,4-Trimethylbenzene	105	14.192	14.194	(0.970)	876033	53.1919	53.2	
	90	sec-Butylbenzene	105	14.321	14.315	(0.979)	1143236	53.9694	54.0	
	91	P-Isopropyltoluene	119	14.506	14.501	(0.992)	1007629	52.8119	52.8	
	92	1,3-Dichlorobenzene	146	14.535	14.537	(0.994)	440069	51.5158	51.5	
*	93	1,4-Dichlorobenzene-D4	152	14.628	14.630	(1.000)	387033	50.0000		
	94	1,4-Dichlorobenzene	146	14.649	14.651	(1.001)	432579	49.0354	49.0	
	95	1,2,3-Trimethylbenzene	105	14.700	14.701	(1.005)	842466	46.2202	46.2	
	96	N-Butylbenzene	91	14.993	14.987	(1.025)	879816	52.8763	52.9	
M	97	1,2-Dichloroethylene (total)	96				434636	103.040	103	
	98	1,2-Dichlorobenzene	146	15.129	15.130	(1.034)	399335	51.6019	51.6	
	99	1,2-Dibromo-3-Chloropropane	157	16.044	16.045	(1.097)	40334	46.4529	46.4	
	100	1,3,5-Trichlorobenzene	180	16.080	16.081	(1.099)	281664	48.0285	48.0	
	101	Hexachlorobutadiene	225	16.773	16.782	(1.147)	127396	48.9961	49.0	
	102	1,2,4-Trichlorobenzene	180	16.795	16.796	(1.148)	203432	50.9122	50.9	
	103	Naphthalene	128	17.152	17.154	(1.173)	450034	59.3928	59.4	
	104	1,2,3-Trichlorobenzene	180	17.352	17.354	(1.186)	140834	55.1065	55.1	
M	105	Xylenes (total)	106				2540324	159.556	160	

QC Flag Legend

R - Spike/Surrogate failed recovery limits.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Date : 11-AUG-2018 15:25
Client ID:
Sample Info: WG234067-7,SL7420
Purge Volume: 5.0
Column phase: RTX-VMS
Instrument: gcms-p.i
Operator: HG
Column diameter: 0.18
Y (x10^6)
Min
\\target_server\gg\chem\gcms-p.i\P081118.b\P7173.D
-Dichlorodifluoromethane (1.451)
-Chloromethane (1.504)
-Vinyl Chloride (1.651)
-Bromomethane (1.887)
-Chloroethane (1.947)
-Trichlorofluoromethane (2.080)
-Diethyl Ether (2.316)
-1,1-Dichloroethene (2.509)+
-Iodomethane (2.609)
-Acrolein (2.774)
-Allyl Chloride (2.888)
-Methylene Chloride (2.988)+
-trans-1,2-Dichloroethene (3.145)+
-Methyl tertiary-butyl ether (3.253)
-Tertiary-butyl alcohol (3.360)
-Acetonitrile (3.532)
-Di-isopropyl ether (3.660)
-Chloroprene (3.782)+
-Acrylonitrile (3.889)
-Ethyl tertiary-butyl ethe (4.118)+
-cis-1,2-Dichloroethene (4.511)
-2,2-Dichloropropane (4.661)
-Bromochloromethane (4.783)+
-Chloroform (4.933)
-Carbon Tetrachloride (5.112)
-Tetrahydrofuran (5.233)+
-1,1-Dichloropropene (5.462)+
-Benzene (5.927)
-Propionitrile (6.070)+
-Pentafluorobenzene (6.206)+
-1,2-Dichloroethane (6.342)
-Isobutyl Alcohol (6.556)
-Trichloroethene (6.992)+
-1,4-Difluorobenzene (7.157)
-Dibromomethane (7.772)
-1,2-Dichloropropane (7.943)
-Bromodichloromethane (8.093)
-Methyl Methacrylate (8.444)+
-cis-1,3-dichloropropene (9.116)
-Toluene-D8 (9.387)
-Toluene (9.469)
-Total Alkylbenzenes (9.800)
-Tetrachloroethene (10.010)
-4-methyl-2-pentanone (10.124)+
-1,1,2-Trichloroethane (10.353)
-Ethyl Methacrylate (10.446)
-Dibromochloromethane (10.582)
-1,3-Dichloropropane (10.732)
-1,2-Dibromoethane (10.875)
-2-Hexanone (11.332)
-Chlorobenzene-D5 (11.640)+
-Ethylbenzene (11.740)+
m+p-Xylenes (11.954)
-o-Xylene (12.526)
-Styrene (12.605)+
-Isopropylbenzene (12.955)
-P-Bromofluorobenzene (13.284)
-cis-1,4-Dichloro-2-Butene (13.392)+
-N-Propylbenzene (13.477)
-1,1,2,2-Tetrachloroethane (13.592)
-2-Chlorotoluene (13.635)
-trans-1,4-Dichloro-2-Butene (13.799)
-4-Chlorotoluene (13.842)
-1,3,5-Trimethylbenzene (13.735)+
-1,2,4-Trimethylbenzene (14.192)
-sec-Butylbenzene (14.321)
-tert-Butylbenzene (14.407)+
-P-Isopropyltoluene (14.507)+
-1,2,3-Trimethylbenzene (14.700)
-1,4-Dichlorobenzene-D4 (14.636)+
-N-Butylbenzene (14.993)
-1,2-Dichlorobenzene (15.129)
-1,2-Dibromo-3-Chloropropa (16.073)+
-1,2-Dichloroethylene (tot (16.580)
-Hexachlorobutadiene (16.788)+
-Naphthalene (17.153)
-1,2,3-Trichlorobenzene (17.353)

Data File: \\target_server\gg\chem\gcms-p.i\P081118.b\P7167.D
Report Date: 20-Aug-2018 14:32

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-p.i\P081118.b\P7167.D
Lab Smp Id: WG234067-4
Inj Date : 11-AUG-2018 12:12
Operator : HG   Inst ID: gcms-p.i
Smp Info : WG234067-4
Misc Info :
Comment   : SW846 5030
Method   : \\target_server\gg\chem\gcms-p.i\P081118.b\P8A05(85)D.m
Meth Date : 13-Aug-2018 07:56 TCOTE   Quant Type: ISTD
Cal Date : 07-AUG-2018 14:57   Cal File: P7089.D
Als bottle: 2   Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.452	1.452	(0.235)	271969	50.0000	(a)	
2	Chloromethane	50	1.595	1.595	(0.258)	159240	50.0000	(a)	
3	Vinyl chloride	62	1.652	1.652	(0.267)	184116	50.0000	(a)	
4	Bromomethane	94	1.888	1.888	(0.305)	75277	50.0000	(a)	
5	Chloroethane	64	1.966	1.967	(0.318)	98931	50.0000	(a)	
6	Trichlorofluoromethane	101	2.074	2.073	(0.335)	254118	50.0000	(a)	
7	Diethyl Ether	59	2.317	2.317	(0.375)	99796	50.0000	(a)	
8	1,1-Dichloroethene	96	2.474	2.475	(0.400)	138841	50.0000	(a)	
9	Freon-113	151	2.503	2.503	(0.405)	109792	50.0000	(a)	
10	Carbon Disulfide	76	2.510	2.510	(0.406)	366304	50.0000	(a)	
11	Iodomethane	142	2.603	2.603	(0.421)	153048	50.0000	(a)	
12	Acrolein	56	2.774	2.775	(0.449)	117611	250.000	(a)	
13	Allyl Chloride	41	2.889	2.889	(0.467)	259535	50.0000	(a)	
14	Methylene Chloride	84	2.989	2.989	(0.483)	201520	50.0000	(a)	
15	Acetone	43	3.046	3.047	(0.493)	252464	250.000	(a)	
16	trans-1,2-Dichloroethene	96	3.139	3.139	(0.508)	206995	50.0000	(a)	
17	Methyl Acetate	43	3.160	3.161	(0.511)	122511	50.0000	(a)	
18	Methyl tert-butyl ether	73	3.246	3.247	(0.525)	481937	50.0000	(a)	
19	Tertiary-butyl alcohol	59	3.361	3.361	(0.543)	81988	250.000	(a)	
20	Acetonitrile	41	3.532	3.533	(0.571)	209992	500.000	(a)	
21	Di-isopropyl ether	45	3.661	3.661	(0.592)	486251	50.0000	(a)	
22	Chloroprene	53	3.775	3.776	(0.610)	310764	50.0000	(a)	
23	1,1-Dichloroethane	63	3.804	3.804	(0.615)	351153	50.0000	(a)	
24	Acrylonitrile	52	3.890	3.890	(0.629)	270329	250.000	(a)	

Data File: \\target_server\gg\chem\gcms-p.i\P081118.b\P7167.D
Report Date: 20-Aug-2018 14:32

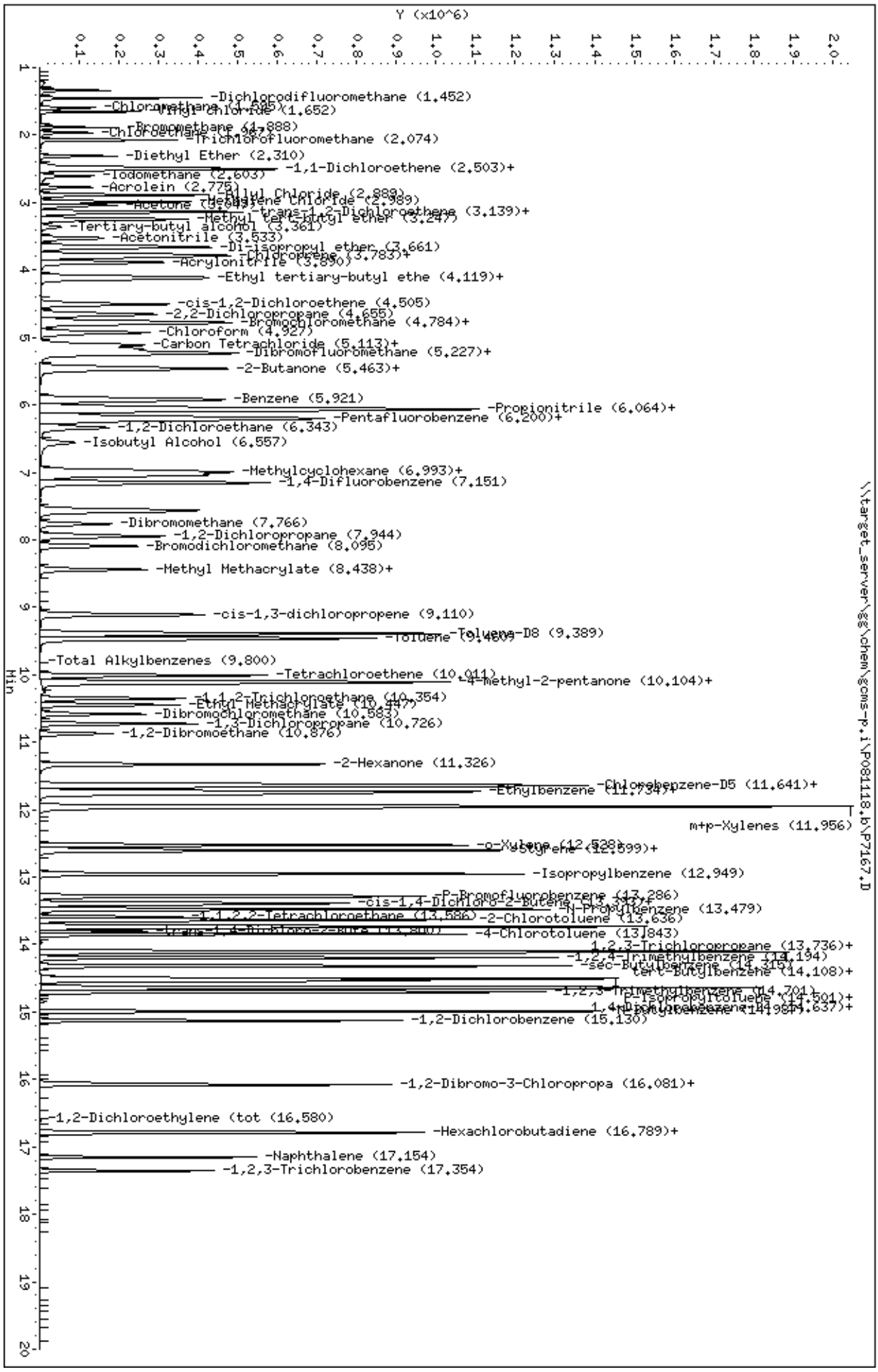
			QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	25	Ethyl tertiary-butyl ether	59	4.104	4.105	(0.664)	491125	50.0000	(a)	
	26	Vinyl Acetate	43	4.133	4.133	(0.578)	359377	50.0000	(a)	
	27	cis-1,2-Dichloroethene	96	4.505	4.505	(0.728)	213988	50.0000	(a)	
	28	2,2-Dichloropropane	77	4.655	4.655	(0.753)	338327	50.0000	(a)	
	29	Bromochloromethane	128	4.798	4.798	(0.776)	83446	50.0000	(a)	
	30	Cyclohexane	56	4.769	4.770	(0.771)	306880	50.0000	(a)	
	31	Chloroform	83	4.927	4.927	(0.797)	364178	50.0000	(a)	
	32	Carbon Tetrachloride	117	5.112	5.113	(0.715)	304484	50.0000	(a)	
	33	Tetrahydrofuran	42	5.177	5.177	(0.837)	218465	250.000	(a)	
$	34	Dibromofluoromethane	113	5.227	5.227	(0.845)	216255	50.0000	(a)	
	35	1,1,1-Trichloroethane	97	5.241	5.242	(0.847)	362660	50.0000	(a)	
	36	2-Butanone	43	5.470	5.470	(0.884)	365925	250.000	(a)	
	37	1,1-Dichloropropene	75	5.456	5.456	(0.763)	304584	50.0000	(a)	
	38	Benzene	78	5.920	5.921	(0.828)	830747	50.0000	(a)	
	39	Propionitrile	54	6.035	6.035	(0.976)	239721	500.000	(a)	
	40	Methacrylonitrile	41	6.063	6.064	(0.980)	946313	500.000	(a)	
*	41	Pentafluorobenzene	168	6.185	6.185	(1.000)	431953	50.0000		
$	42	1,2-Dichloroethane-D4	65	6.206	6.207	(1.003)	287508	50.0000	(a)	
	43	Tertiary-amyl methyl ether	73	6.214	6.214	(1.005)	451029	50.0000	(a)	
	44	1,2-Dichloroethane	62	6.342	6.343	(0.887)	259807	50.0000	(a)	
	45	Isobutyl Alcohol	43	6.557	6.557	(1.060)	114135	1000.00	(a)	
	46	Methylcyclohexane	83	6.986	6.986	(1.129)	392471	50.0000	(a)	
	47	Trichloroethene	95	7.043	7.043	(0.985)	208662	50.0000	(a)	
*	48	1,4-Difluorobenzene	114	7.150	7.151	(1.000)	761727	50.0000		
	49	Dibromomethane	93	7.765	7.766	(1.086)	110983	50.0000	(a)	
	50	1,2-Dichloropropane	63	7.944	7.944	(1.111)	176065	50.0000	(a)	
	51	Bromodichloromethane	83	8.094	8.095	(1.132)	260045	50.0000	(a)	
	52	Methyl Methacrylate	41	8.437	8.438	(1.180)	142174	50.0000	(a)	
	53	Ethyl Methacrylate	69	10.446	10.447	(1.461)	247906	50.0000	(a)	
	54	1,4-Dioxane	88	8.444	8.445	(1.181)	48796	1000.00	(a)	
M	55	Total Alkylbenzenes	100				6735329	50.0000	(a)	
	57	cis-1,3-dichloropropene	75	9.109	9.110	(1.274)	334013	50.0000	(a)	
$	58	Toluene-D8	98	9.388	9.389	(1.313)	958178	50.0000	(a)	
	59	Toluene	92	9.460	9.460	(1.323)	551648	50.0000	(a)	
	60	Tetrachloroethene	164	10.010	10.011	(0.860)	170506	50.0000	(a)	
	61	4-methyl-2-pentanone	43	10.103	10.104	(1.413)	778889	250.000	(a)	
	62	trans-1,3-Dichloropropene	75	10.132	10.132	(1.417)	294767	50.0000	(a)	
	63	1,1,2-Trichloroethane	83	10.353	10.354	(1.448)	132484	50.0000	(a)	
	64	Dibromochloromethane	129	10.582	10.583	(0.910)	190864	50.0000	(a)	
	65	1,3-Dichloropropane	76	10.725	10.726	(0.922)	317118	50.0000	(a)	
	66	1,2-Dibromoethane	107	10.875	10.876	(1.521)	165083	50.0000	(a)	
	67	2-Hexanone	43	11.326	11.326	(0.974)	549724	250.000	(a)	
*	68	Chlorobenzene-D5	117	11.633	11.634	(1.000)	770111	50.0000		
	69	Chlorobenzene	112	11.655	11.655	(1.002)	555904	50.0000	(a)	
	70	Ethylbenzene	91	11.733	11.734	(1.009)	1055769	50.0000	(a)	
	71	1,1,1,2-Tetrachloroethane	131	11.769	11.770	(1.012)	198505	50.0000	(a)	
	72	m+p-Xylenes	91	11.955	11.956	(1.028)	1642680	100.000	(a)	
	73	o-Xylene	91	12.527	12.528	(1.077)	824994	50.0000	(a)	
	74	Styrene	104	12.606	12.606	(1.084)	605520	50.0000	(a)	
	75	Bromoform	173	12.599	12.599	(1.083)	110659	50.0000	(a)	
	76	Isopropylbenzene	105	12.949	12.949	(0.885)	977346	50.0000	(a)	
$	77	P-Bromofluorobenzene	95	13.285	13.286	(1.858)	419975	50.0000	(a)	
	78	cis-1,4-Dichloro-2-Butene	53	13.407	13.407	(0.916)	77816	50.0000	(a)	
	79	Bromobenzene	156	13.385	13.386	(0.915)	207016	50.0000	(a)	

Data File: \\target_server\gg\chem\gcms-p.i\P081118.b\P7167.D
Report Date: 20-Aug-2018 14:32

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	80 N-Propylbenzene	91	13.478	13.479	(0.921)	1248190	50.0000	(a)	
	81 1,1,2,2-Tetrachloroethane	83	13.585	13.586	(0.929)	207650	50.0000	(a)	
	82 2-Chlorotoluene	91	13.635	13.636	(0.932)	724512	50.0000	(a)	
	83 1,2,3-Trichloropropane	75	13.721	13.722	(0.938)	195818	50.0000	(a)	
	84 1,3,5-Trimethylbenzene	105	13.735	13.736	(0.939)	852946	50.0000	(a)	
	85 trans-1,4-Dichloro-2-Butene	53	13.800	13.800	(0.943)	62917	50.0000	(a)	
	86 4-Chlorotoluene	91	13.843	13.843	(0.946)	751530	50.0000	(a)	
	87 tert-Butylbenzene	119	14.107	14.108	(0.964)	847116	50.0000	(a)	
	88 Pentachloroethane	165	14.107	14.108	(0.964)	103802	50.0000	(a)	
	89 1,2,4-Trimethylbenzene	105	14.193	14.194	(0.970)	841251	50.0000	(a)	
	90 sec-Butylbenzene	105	14.315	14.315	(0.978)	1088448	50.0000	(a)	
	91 P-Isopropyltoluene	119	14.501	14.501	(0.991)	992112	50.0000	(a)	
	92 1,3-Dichlorobenzene	146	14.536	14.537	(0.994)	417908	50.0000	(a)	
*	93 1,4-Dichlorobenzene-D4	152	14.629	14.630	(1.000)	384502	50.0000		
	94 1,4-Dichlorobenzene	146	14.651	14.651	(1.001)	420835	50.0000	(a)	
	95 1,2,3-Trimethylbenzene	105	14.701	14.701	(1.005)	824846	50.0000	(a)	
	96 N-Butylbenzene	91	14.987	14.987	(1.024)	865266	50.0000	(a)	
M	97 1,2-Dichloroethylene (total)	96				420983	50.0000	(a)	
	98 1,2-Dichlorobenzene	146	15.130	15.130	(1.034)	381786	50.0000	(a)	
	99 1,2-Dibromo-3-Chloropropane	157	16.045	16.045	(1.097)	39913	50.0000	(a)	
	100 1,3,5-Trichlorobenzene	180	16.081	16.081	(1.099)	275251	50.0000	(a)	
	101 Hexachlorobutadiene	225	16.781	16.782	(1.147)	129431	50.0000	(a)	
	102 1,2,4-Trichlorobenzene	180	16.796	16.796	(1.148)	191839	50.0000	(a)	
	103 Naphthalene	128	17.153	17.154	(1.173)	401771	50.0000	(a)	
	104 1,2,3-Trichlorobenzene	180	17.353	17.354	(1.186)	130145	50.0000	(a)	
M	105 Xylenes (total)	106				2467674	150.000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).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Sample Info: WG234067-4
Purge Volume: 5.0
Column phase: RTX-VMS
Instrument: gcms-p.i
Operator: HG
Column diameter: 0.18
\\target_server\gg\chem\gcms-p.i\P081118.b\P7167.D
Y (x10^6)
Min
-Dichlorodifluoromethane (1.452)
-Chloromethane (1.595)
-Vinyl chloride (1.652)
-Bromomethane (1.888)
-Chloroethane (1.967)
-Trichlorofluoromethane (2.074)
-Diethyl Ether (2.310)
-1,1-Dichloroethene (2.503)+
-Iodomethane (2.603)
-Acrolein (2.775)
-Allyl Chloride (2.889)
-Methylene Chloride (2.989)
-Acetone (3.043)
-trans-1,2-Dichloroethene (3.139)+
-Methyl tert-butyl ether (3.247)
-Tertiary-butyl alcohol (3.361)
-Acetonitrile (3.533)
-Di-isopropyl ether (3.661)
-Chloroprene (3.783)+
-Acrylonitrile (3.890)
-Ethyl tertiary-butyl ethe (4.119)+
-cis-1,2-Dichloroethene (4.505)
-2,2-Dichloropropane (4.655)
-Bromochloromethane (4.784)+
-Chloroform (4.927)
-Carbon Tetrachloride (5.113)+
-Dibromofluoromethane (5.227)+
-2-Butanone (5.463)+
-Benzene (5.921)
-Propionitrile (6.064)+
-Pentafluorobenzene (6.200)+
-1,2-Dichloroethane (6.343)
-Isobutyl Alcohol (6.557)
-Methylcyclohexane (6.993)+
-1,4-Difluorobenzene (7.151)
-Dibromomethane (7.766)
-1,2-Dichloropropane (7.944)
-Bromodichloromethane (8.095)
-Methyl Methacrylate (8.438)+
-cis-1,3-dichloropropene (9.110)
-Toluene-D8 (9.389)
-Toluene (9.460)
-Total Alkylbenzenes (9.800)
-Tetrachloroethene (10.011)
-4-methyl-2-pentanone (10.104)+
-1,1,2-Trichloroethane (10.354)
-Ethyl Methacrylate (10.447)
-Dibromochloromethane (10.583)
-1,3-Dichloropropane (10.726)
-1,2-Dibromoethane (10.876)
-2-Hexanone (11.326)
-Chlorobenzene-D5 (11.641)+
-Ethylbenzene (11.734)
m+p-Xylenes (11.956)
-o-Xylene (12.538)
-Styrene (12.599)+
-Isopropylbenzene (12.949)
-P-Bromofluorobenzene (13.286)
-cis-1,4-Dichloro-2-Butene (13.332)+
-N-Propylbenzene (13.479)
-1,1,2,2-Tetrachloroethane (13.586)
-2-Chlorotoluene (13.636)
-trans-1,4-Dichloro-2-Bute (13.800)
-4-Chlorotoluene (13.843)
-1,2,3-Trichloropropane (13.736)+
-1,2,4-Trimethylbenzene (14.194)
-sec-Butylbenzene (14.316)
-tert-Butylbenzene (14.108)+
-1,2,3-Trimethylbenzene (14.701)
-P-Isopropyltoluene (14.501)+
-1,4-Dichlorobenzene (14.637)+
-1,2-Dichlorobenzene (15.130)
-1,2-Dibromo-3-Chloropropa (16.081)+
-1,2-Dichloroethylene (tot (16.580)
-Hexachlorobutadiene (16.789)+
-Naphthalene (17.154)
-1,2,3-Trichlorobenzene (17.354)

Data File: \\target_server\gg\chem\gcms-p.i\P081118.b\P7168.D
Report Date: 20-Aug-2018 14:32

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-p.i\P081118.b\P7168.D
Lab Smp Id: WG234067-3
Inj Date : 11-AUG-2018 12:44
Operator : HG Inst ID: gcms-p.i
Smp Info : WG234067-3
Misc Info :
Comment : SW846 5030
Method : \\target_server\gg\chem\gcms-p.i\P081118.b\P8A05(85)D.m
Meth Date : 13-Aug-2018 07:56 TCOTE Quant Type: ISTD
Cal Date : 11-AUG-2018 12:44 Cal File: P7168.D
Als bottle: 3 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: MIS_GUEST

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

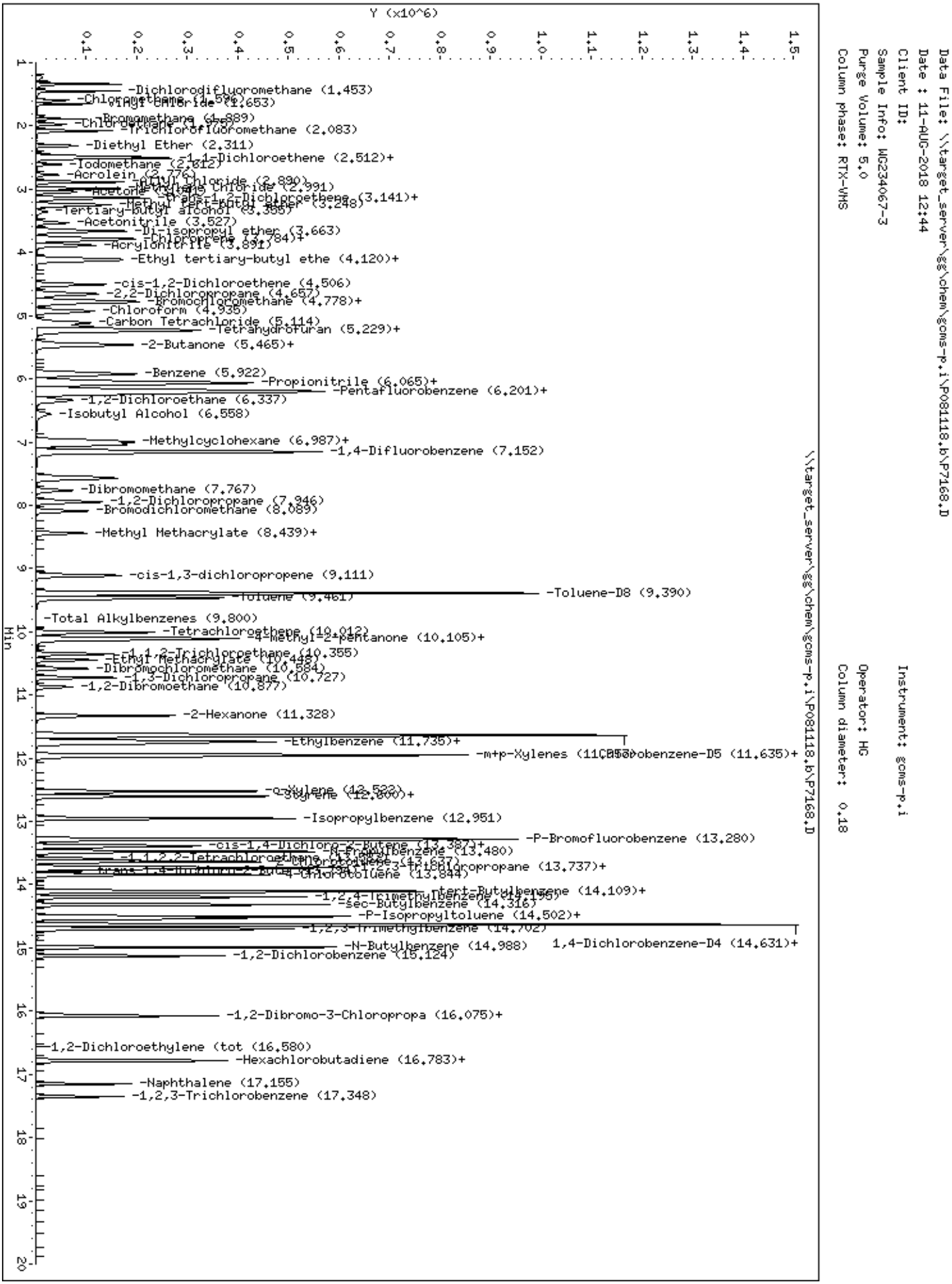
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.453	1.452	(0.235)	108902	20.0000	20.1	
2	Chloromethane	50	1.596	1.595	(0.258)	67859	20.0000	20.8	
3	Vinyl chloride	62	1.653	1.652	(0.267)	77085	20.0000	20.6	
4	Bromomethane	94	1.889	1.888	(0.305)	35096	20.0000	21.6	
5	Chloroethane	64	1.975	1.967	(0.319)	43927	20.0000	21.2	
6	Trichlorofluoromethane	101	2.082	2.073	(0.337)	110109	20.0000	20.9	
7	Diethyl Ether	59	2.311	2.317	(0.374)	42057	20.0000	20.6	
8	1,1-Dichloroethene	96	2.482	2.475	(0.401)	61391	20.0000	21.1	
9	Freon-113	151	2.511	2.503	(0.406)	46056	20.0000	20.6	
10	Carbon Disulfide	76	2.511	2.510	(0.406)	161839	20.0000	21.1	
11	Iodomethane	142	2.611	2.603	(0.422)	56242	20.0000	19.1	
12	Acrolein	56	2.776	2.775	(0.449)	36261	100.000	100	
13	Allyl Chloride	41	2.890	2.889	(0.467)	108760	20.0000	20.6	
14	Methylene Chloride	84	2.990	2.989	(0.483)	88287	20.0000	21.4	
15	Acetone	43	3.040	3.047	(0.491)	106014	100.000	103	
16	trans-1,2-Dichloroethene	96	3.140	3.139	(0.508)	88878	20.0000	20.8	
17	Methyl Acetate	43	3.155	3.161	(0.510)	47528	20.0000	19.8	
18	Methyl tert-butyl ether	73	3.247	3.247	(0.525)	193504	20.0000	20.2	
19	Tertiary-butyl alcohol	59	3.355	3.361	(0.542)	30405	100.000	100	
20	Acetonitrile	41	3.526	3.533	(0.570)	84481	200.000	202	
21	Di-isopropyl ether	45	3.662	3.661	(0.592)	198914	20.0000	20.4	
22	Chloroprene	53	3.777	3.776	(0.611)	126012	20.0000	20.3	
23	1,1-Dichloroethane	63	3.805	3.804	(0.615)	151736	20.0000	20.9	

Data File: \\target_server\gg\chem\gcms-p.i\P081118.b\P7168.D
Report Date: 20-Aug-2018 14:32

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
	24 Acrylonitrile	52	3.891	3.890	(0.629)	102791	100.000	98.1	
	25 Ethyl tertiary-butyl ether	59	4.105	4.105	(0.664)	195505	20.0000	20.1	
	26 Vinyl Acetate	43	4.134	4.133	(0.578)	141669	20.0000	20.0	
	27 cis-1,2-Dichloroethene	96	4.506	4.505	(0.728)	90849	20.0000	20.7	
	28 2,2-Dichloropropane	77	4.663	4.655	(0.754)	136077	20.0000	20.2	
	29 Bromochloromethane	128	4.799	4.798	(0.776)	35480	20.0000	20.7	
	30 Cyclohexane	56	4.770	4.770	(0.771)	127518	20.0000	20.5	
	31 Chloroform	83	4.935	4.927	(0.798)	154110	20.0000	20.7	
	32 Carbon Tetrachloride	117	5.114	5.113	(0.715)	125334	20.0000	20.4	
	33 Tetrahydrofuran	42	5.178	5.177	(0.837)	85344	100.000	99.5	
$	34 Dibromofluoromethane	113	5.228	5.227	(0.845)	215184	50.0000	50.2	
	35 1,1,1-Trichloroethane	97	5.242	5.242	(0.847)	150536	20.0000	20.5	
	36 2-Butanone	43	5.471	5.470	(0.884)	148154	100.000	101	
	37 1,1-Dichloropropene	75	5.457	5.456	(0.763)	127493	20.0000	20.6	
	38 Benzene	78	5.922	5.921	(0.828)	354683	20.0000	20.8	
	39 Propionitrile	54	6.029	6.035	(0.975)	93068	200.000	198	
	40 Methacrylonitrile	41	6.065	6.064	(0.980)	368664	200.000	199	
*	41 Pentafluorobenzene	168	6.186	6.185	(1.000)	426338	50.0000		
$	42 1,2-Dichloroethane-D4	65	6.208	6.207	(1.003)	277367	50.0000	49.4	
	43 Tertiary-amyl methyl ether	73	6.215	6.214	(1.005)	171500	20.0000	19.6	
	44 1,2-Dichloroethane	62	6.336	6.343	(0.886)	108423	20.0000	20.6	
	45 Isobutyl Alcohol	43	6.558	6.557	(1.060)	35332	400.000	352	
	46 Methylcyclohexane	83	6.987	6.986	(1.129)	156427	20.0000	20.1	
	47 Trichloroethene	95	7.044	7.043	(0.985)	88987	20.0000	20.8	
*	48 1,4-Difluorobenzene	114	7.151	7.151	(1.000)	751955	50.0000		
	49 Dibromomethane	93	7.766	7.766	(1.086)	45237	20.0000	20.3	
	50 1,2-Dichloropropane	63	7.945	7.944	(1.111)	73413	20.0000	20.5	
	51 Bromodichloromethane	83	8.088	8.095	(1.131)	108611	20.0000	20.6	
	52 Methyl Methacrylate	41	8.438	8.438	(1.180)	50802	20.0000	18.8	
	53 Ethyl Methacrylate	69	10.441	10.447	(1.460)	88518	20.0000	18.8	
	54 1,4-Dioxane	88	8.438	8.445	(1.180)	20407	400.000	411	
M	55 Total Alkylbenzenes	100				2794353	20.0000	145	
	57 cis-1,3-dichloropropene	75	9.111	9.110	(1.274)	134886	20.0000	20.2	
$	58 Toluene-D8	98	9.389	9.389	(1.313)	946393	50.0000	50.0	
	59 Toluene	92	9.461	9.460	(1.323)	235185	20.0000	20.8	
	60 Tetrachloroethene	164	10.011	10.011	(0.861)	72126	20.0000	20.7	
	61 4-methyl-2-pentanone	43	10.104	10.104	(1.413)	298156	100.000	98.4	
	62 trans-1,3-Dichloropropene	75	10.126	10.132	(1.416)	116342	20.0000	20.0	
	63 1,1,2-Trichloroethane	83	10.355	10.354	(1.448)	54124	20.0000	20.3	
	64 Dibromochloromethane	129	10.584	10.583	(0.910)	76046	20.0000	20.1	
	65 1,3-Dichloropropane	76	10.727	10.726	(0.922)	129093	20.0000	20.3	
	66 1,2-Dibromoethane	107	10.877	10.876	(1.521)	64923	20.0000	20.0	
	67 2-Hexanone	43	11.327	11.326	(0.974)	207541	100.000	97.9	
*	68 Chlorobenzene-D5	117	11.635	11.634	(1.000)	758166	50.0000		
	69 Chlorobenzene	112	11.656	11.655	(1.002)	235058	20.0000	20.7	
	70 Ethylbenzene	91	11.735	11.734	(1.009)	443488	20.0000	20.6	
	71 1,1,1,2-Tetrachloroethane	131	11.770	11.770	(1.012)	81452	20.0000	20.4	
	72 m+p-Xylenes	91	11.956	11.956	(1.028)	696587	40.0000	41.5	
	73 o-Xylene	91	12.521	12.528	(1.076)	343581	20.0000	20.6	
	74 Styrene	104	12.607	12.606	(1.084)	250293	20.0000	20.5	
	75 Bromoform	173	12.600	12.599	(1.083)	42126	20.0000	19.7	
	76 Isopropylbenzene	105	12.950	12.949	(0.885)	412876	20.0000	20.9	
$	77 P-Bromofluorobenzene	95	13.279	13.286	(1.857)	410388	50.0000	49.7	
	78 cis-1,4-Dichloro-2-Butene	53	13.401	13.407	(0.916)	27128	20.0000	19.0	

Data File: \\target_server\gg\chem\gcms-p.i\P081118.b\P7168.D
Report Date: 20-Aug-2018 14:32

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	79 Bromobenzene	156	13.386	13.386	(0.915)	86350	20.0000	20.8	
	80 N-Propylbenzene	91	13.479	13.479	(0.921)	525136	20.0000	20.9	
	81 1,1,2,2-Tetrachloroethane	83	13.587	13.586	(0.929)	81812	20.0000	20.3	
	82 2-Chlorotoluene	91	13.637	13.636	(0.932)	303050	20.0000	20.8	
	83 1,2,3-Trichloropropane	75	13.722	13.722	(0.938)	76554	20.0000	20.1	
	84 1,3,5-Trimethylbenzene	105	13.737	13.736	(0.939)	351838	20.0000	20.7	
	85 trans-1,4-Dichloro-2-Butene	53	13.794	13.800	(0.943)	22552	20.0000	19.3	
	86 4-Chlorotoluene	91	13.844	13.843	(0.946)	316928	20.0000	20.9	
	87 tert-Butylbenzene	119	14.109	14.108	(0.964)	351072	20.0000	20.7	
	88 Pentachloroethane	165	14.109	14.108	(0.964)	40137	20.0000	20.0	
	89 1,2,4-Trimethylbenzene	105	14.194	14.194	(0.970)	346770	20.0000	20.7	
	90 sec-Butylbenzene	105	14.316	14.315	(0.978)	455465	20.0000	20.8	
	91 P-Isopropyltoluene	119	14.502	14.501	(0.991)	408622	20.0000	20.7	
	92 1,3-Dichlorobenzene	146	14.538	14.537	(0.994)	172874	20.0000	20.7	
*	93 1,4-Dichlorobenzene-D4	152	14.630	14.630	(1.000)	370317	50.0000		
	94 1,4-Dichlorobenzene	146	14.645	14.651	(1.001)	173971	20.0000	20.7	
	95 1,2,3-Trimethylbenzene	105	14.702	14.701	(1.005)	327533	20.0000	20.3	
	96 N-Butylbenzene	91	14.988	14.987	(1.024)	355450	20.0000	20.6	
M	97 1,2-Dichloroethylene (total)	96				179727	20.0000	41.6	
	98 1,2-Dichlorobenzene	146	15.131	15.130	(1.034)	155583	20.0000	20.6	
	99 1,2-Dibromo-3-Chloropropane	157	16.046	16.045	(1.097)	15417	20.0000	20.0	
	100 1,3,5-Trichlorobenzene	180	16.075	16.081	(1.099)	108786	20.0000	20.2	
	101 Hexachlorobutadiene	225	16.776	16.782	(1.147)	53990	20.0000	20.8	
	102 1,2,4-Trichlorobenzene	180	16.797	16.796	(1.148)	73108	20.0000	19.8	
	103 Naphthalene	128	17.154	17.154	(1.173)	143740	20.0000	20.0	
	104 1,2,3-Trichlorobenzene	180	17.348	17.354	(1.186)	51117	20.0000	20.2	
M	105 Xylenes (total)	106				1040168	60.0000	62.0	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Date : 11-AUG-2018 12:44
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Sample Info: WG234067-3
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Instrument: gcms-p.i
Operator: HG
Column diameter: 0.18
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Y (x10^6)
Min
-Dichlorodifluoromethane (1.453)
-Chloromethane (1.596)
-Vinyl Chloride (1.653)
-Bromomethane (1.889)
-Chloroethane (1.773)
-Trichlorofluoromethane (2.083)
-Diethyl Ether (2.311)
-1,1-Dichloroethene (2.512)+
-Iodomethane (2.612)
-Acrolein (2.776)
-Allyl Chloride (2.890)
-Methylene Chloride (2.991)
-Acetone (3.141)+
-trans-1,2-Dichloroethene (3.141)+
-Methyl tert-butyl ether (3.248)
-Tertiary-butyl alcohol (3.355)
-Acetonitrile (3.527)
-Di-isopropyl ether (3.663)
-Chloroprene (3.784)+
-Acrylonitrile (3.891)
-Ethyl tertiary-butyl ethe (4.120)+
-cis-1,2-Dichloroethene (4.506)
-2,2-Dichloropropane (4.657)
-Bromochloromethane (4.778)+
-Chloroform (4.935)
-Carbon Tetrachloride (5.114)
-Tetrahydrofuran (5.229)+
-2-Butanone (5.465)+
-Benzene (5.922)
-Propionitrile (6.065)+
-Pentafluorobenzene (6.201)+
-1,2-Dichloroethane (6.337)
-Isobutyl Alcohol (6.558)
-Methylcyclohexane (6.987)+
-1,4-Difluorobenzene (7.152)
-Dibromomethane (7.767)
-1,2-Dichloropropane (7.946)
-Bromodichloromethane (8.089)
-Methyl Methacrylate (8.439)+
-cis-1,3-dichloropropene (9.111)
-Toluene-D8 (9.390)
-Toluene (9.461)
-Total Alkylbenzenes (9.800)
-Tetrachloroethene (10.012)
-4-methyl-2-pentanone (10.105)+
-1,1,2-Trichloroethane (10.355)
-Ethyl Methacrylate (10.448)
-Dibromochloromethane (10.584)
-1,3-Dichloropropane (10.727)
-1,2-Dibromoethane (10.877)
-2-Hexanone (11.328)
-Ethylbenzene (11.735)+
-m+p-Xylenes (11.853)
-Chlorobenzene-D5 (11.635)+
-o-Xylene (12.522)
-Styrene (12.600)+
-Isopropylbenzene (12.951)
-P-Bromofluorobenzene (13.280)
-cis-1,4-Dichloro-2-Butene (13.387)+
-N-Propylbenzene (13.480)
-1,1,2,2-Tetrachloroethane (13.637)
-2-Chlorotoluene (13.637)
-1,2,3-Trichloropropane (13.737)+
trans-1,4-Dichloro-2-Butene (13.844)
-4-Chlorotoluene (13.844)
-tert-Butylbenzene (14.109)+
-1,2,4-Trimethylbenzene (14.195)
-sec-Butylbenzene (14.316)
-P-Isopropyltoluene (14.502)+
-1,2,3-Trimethylbenzene (14.702)
-N-Butylbenzene (14.988)
1,4-Dichlorobenzene-D4 (14.631)+
-1,2-Dichlorobenzene (15.124)
-1,2-Dibromo-3-Chloropropa (16.075)+
-1,2-Dichloroethylene (tot (16.580)
-Hexachlorobutadiene (16.783)+
-Naphthalene (17.155)
-1,2,3-Trichlorobenzene (17.348)

Data File: \\target_server\gg\chem\gcms-p.i\P081118.b\P7169.D
Report Date: 20-Aug-2018 14:32

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-p.i\P081118.b\P7169.D
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Inj Date : 11-AUG-2018 13:16
Operator : HG   Inst ID: gcms-p.i
Smp Info : WG234067-2
Misc Info :
Comment   : SW846 5030
Method   : \\target_server\gg\chem\gcms-p.i\P081118.b\P8A05(85)D.m
Meth Date : 13-Aug-2018 07:56 TCOTE   Quant Type: ISTD
Cal Date : 11-AUG-2018 13:16   Cal File: P7169.D
Als bottle: 4   Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12
Processing Host: MIS_GUEST

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.450	1.452	(0.235)	27686	5.00000	5.3	
2	Chloromethane	50	1.593	1.595	(0.258)	17813	5.00000	5.4	
3	Vinyl chloride	62	1.650	1.652	(0.267)	19459	5.00000	5.3	
4	Bromomethane	94	1.886	1.888	(0.305)	9346	5.00000	5.7	
5	Chloroethane	64	1.979	1.967	(0.320)	11501	5.00000	6.6	
6	Trichlorofluoromethane	101	2.079	2.073	(0.336)	27165	5.00000	5.2	
7	Diethyl Ether	59	2.315	2.317	(0.374)	10027	5.00000	4.9	
8	1,1-Dichloroethene	96	2.480	2.475	(0.401)	14886	5.00000	5.4	
9	Freon-113	151	2.501	2.503	(0.405)	11291	5.00000	4.9	
10	Carbon Disulfide	76	2.508	2.510	(0.406)	38739	5.00000	5.3	
11	Iodomethane	142	2.608	2.603	(0.422)	10601	5.00000	3.4	
12	Acrolein	56	2.773	2.775	(0.448)	11383	25.0000	30.2	
13	Allyl Chloride	41	2.887	2.889	(0.467)	26767	5.00000	5.1	
14	Methylene Chloride	84	2.994	2.989	(0.484)	24415	5.00000	5.2	
15	Acetone	43	3.045	3.047	(0.492)	29417	25.0000	29.4	
16	trans-1,2-Dichloroethene	96	3.145	3.139	(0.509)	22008	5.00000	5.3	
17	Methyl Acetate	43	3.159	3.161	(0.511)	12839	5.00000	5.3	
18	Methyl tert-butyl ether	73	3.252	3.247	(0.526)	44716	5.00000	4.9	
19	Tertiary-butyl alcohol	59	3.359	3.361	(0.543)	8659	25.0000	28.8	
20	Acetonitrile	41	3.531	3.533	(0.571)	23346	50.0000	52.9	
21	Di-isopropyl ether	45	3.659	3.661	(0.592)	46073	5.00000	4.7	
22	Chloroprene	53	3.774	3.776	(0.610)	30945	5.00000	5.0	
23	1,1-Dichloroethane	63	3.810	3.804	(0.616)	36826	5.00000	5.3	

Data File: \\target_server\gg\chem\gcms-p.i\P081118.b\P7169.D
Report Date: 20-Aug-2018 14:32

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3:01 pm, Aug 20, 2018

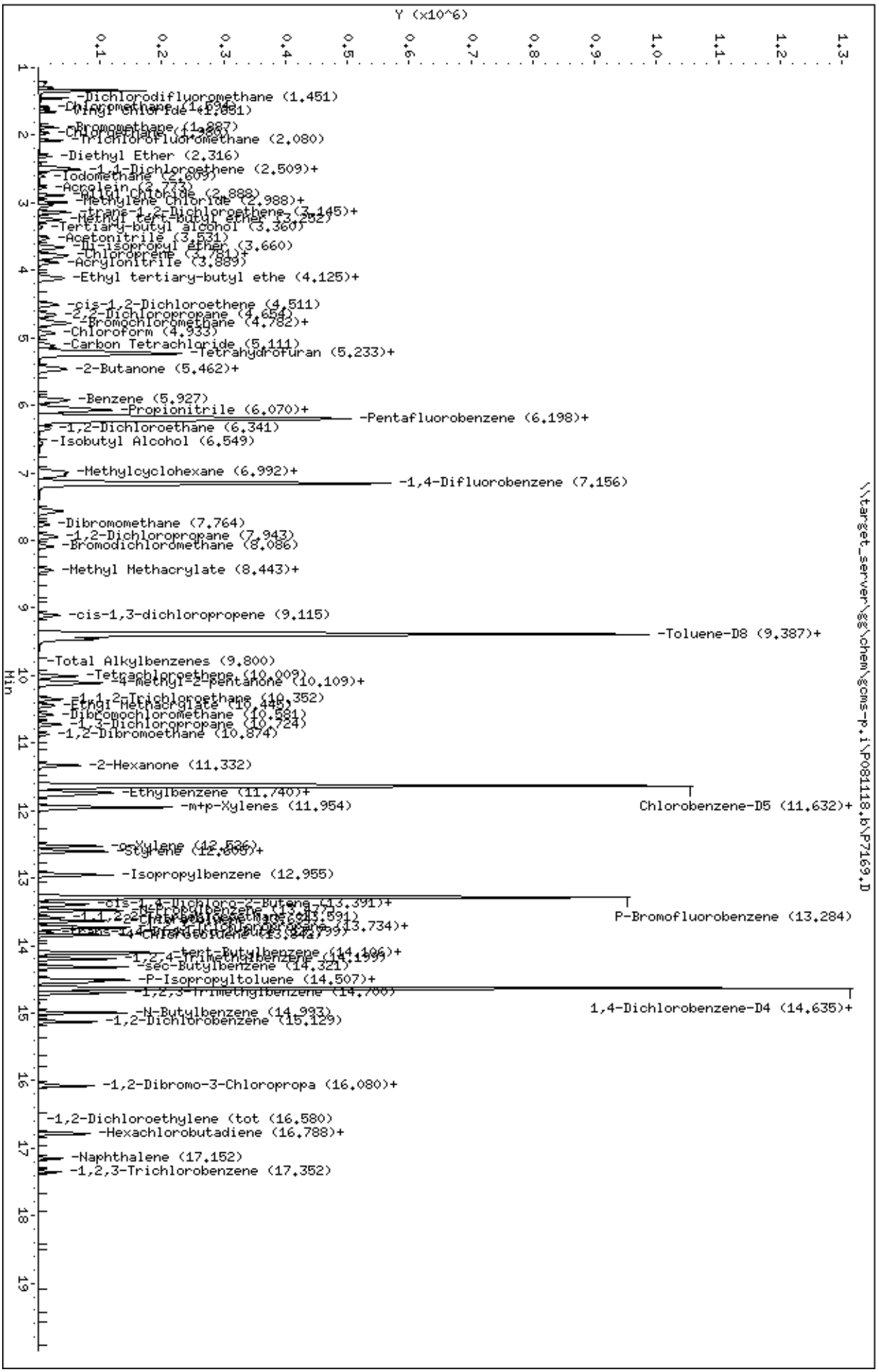
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	24 Acrylonitrile	52	3.888	3.890	(0.629)	26781	25.0000	25.0	
	25 Ethyl tertiary-butyl ether	59	4.110	4.105	(0.665)	46531	5.00000	4.8	
	26 Vinyl Acetate	43	4.138	4.133	(0.578)	31971	5.00000	4.7	
	27 cis-1,2-Dichloroethene	96	4.510	4.505	(0.729)	22018	5.00000	5.2	
	28 2,2-Dichloropropane	77	4.660	4.655	(0.754)	33451	5.00000	5.4	
	29 Bromochloromethane	128	4.796	4.798	(0.776)	8405	5.00000	5.6	
	30 Cyclohexane	56	4.775	4.770	(0.772)	30437	5.00000	5.2	
	31 Chloroform	83	4.932	4.927	(0.798)	37879	5.00000	5.3	
	32 Carbon Tetrachloride	117	5.111	5.113	(0.714)	30528	5.00000	5.3	
	33 Tetrahydrofuran	42	5.182	5.177	(0.838)	20338	25.0000	25.4	
$	34 Dibromofluoromethane	113	5.232	5.227	(0.846)	212176	50.0000	49.5	
	35 1,1,1-Trichloroethane	97	5.232	5.242	(0.846)	37323	5.00000	5.4	
	36 2-Butanone	43	5.476	5.470	(0.886)	37935	25.0000	27.5	
	37 1,1-Dichloropropene	75	5.454	5.456	(0.762)	30641	5.00000	5.2	
	38 Benzene	78	5.926	5.921	(0.828)	86669	5.00000	5.4	
	39 Propionitrile	54	6.033	6.035	(0.976)	25378	50.0000	51.9	
	40 Methacrylonitrile	41	6.069	6.064	(0.982)	100467	50.0000	52.3	
*	41 Pentafluorobenzene	168	6.183	6.185	(1.000)	420986	50.0000		
$	42 1,2-Dichloroethane-D4	65	6.212	6.207	(1.005)	286408	50.0000	50.5	
	43 Tertiary-amyl methyl ether	73	6.219	6.214	(1.006)	42429	5.00000	4.7	
	44 1,2-Dichloroethane	62	6.341	6.343	(0.886)	28238	5.00000	5.3	
	45 Isobutyl Alcohol	43	6.570	6.557	(1.062)	9197	100.000	90.6(M)	M9
	46 Methylcyclohexane	83	6.991	6.986	(1.131)	37963	5.00000	4.9	
	47 Trichloroethene	95	7.041	7.043	(0.984)	22733	5.00000	5.5	
*	48 1,4-Difluorobenzene	114	7.156	7.151	(1.000)	748609	50.0000		
	49 Dibromomethane	93	7.771	7.766	(1.086)	11284	5.00000	5.1	
	50 1,2-Dichloropropane	63	7.950	7.944	(1.111)	17721	5.00000	5.2	
	51 Bromodichloromethane	83	8.085	8.095	(1.130)	25377	5.00000	5.1	
	52 Methyl Methacrylate	41	8.443	8.438	(1.180)	12051	5.00000	4.7	
	53 Ethyl Methacrylate	69	10.445	10.447	(1.460)	21223	5.00000	5.1	
	54 1,4-Dioxane	88	8.443	8.445	(1.180)	6247	100.000	105	
M	55 Total Alkylbenzenes	100				682442	5.00000	38.6	
	57 cis-1,3-dichloropropene	75	9.108	9.110	(1.273)	30881	5.00000	4.9	
$	58 Toluene-D8	98	9.387	9.389	(1.312)	936185	50.0000	49.8	
	59 Toluene	92	9.465	9.460	(1.323)	57700	5.00000	5.4	
	60 Tetrachloroethene	164	10.009	10.011	(0.860)	18293	5.00000	5.6	
	61 4-methyl-2-pentanone	43	10.102	10.104	(1.412)	77991	25.0000	27.9	
	62 trans-1,3-Dichloropropene	75	10.130	10.132	(1.416)	27713	5.00000	5.0	
	63 1,1,2-Trichloroethane	83	10.352	10.354	(1.447)	13650	5.00000	5.4	
	64 Dibromochloromethane	129	10.581	10.583	(0.910)	18741	5.00000	5.3	
	65 1,3-Dichloropropane	76	10.724	10.726	(0.922)	32479	5.00000	5.4	
	66 1,2-Dibromoethane	107	10.881	10.876	(1.521)	16549	5.00000	5.3(T)	
	67 2-Hexanone	43	11.332	11.326	(0.974)	54555	25.0000	28.2	
*	68 Chlorobenzene-D5	117	11.632	11.634	(1.000)	744200	50.0000		
	69 Chlorobenzene	112	11.653	11.655	(1.002)	61571	5.00000	5.6	
	70 Ethylbenzene	91	11.739	11.734	(1.009)	110395	5.00000	5.5	
	71 1,1,1,2-Tetrachloroethane	131	11.768	11.770	(1.012)	20217	5.00000	5.4	
	72 m+p-Xylenes	91	11.954	11.956	(1.028)	174349	10.0000	11.3	
	73 o-Xylene	91	12.526	12.528	(1.077)	80601	5.00000	5.3	
	74 Styrene	104	12.604	12.606	(1.084)	59162	5.00000	5.3	
	75 Bromoform	173	12.597	12.599	(1.083)	11072	5.00000	5.5	
	76 Isopropylbenzene	105	12.955	12.949	(0.885)	96981	5.00000	5.4	
$	77 P-Bromofluorobenzene	95	13.284	13.286	(1.856)	405879	50.0000	49.3	
	78 cis-1,4-Dichloro-2-Butene	53	13.405	13.407	(0.916)	7543	5.00000	4.9	

Data File: \\target_server\gg\chem\gcms-p.i\P081118.b\P7169.D
Report Date: 20-Aug-2018 14:32

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	79 Bromobenzene	156	13.384	13.386	(0.915)	22247	5.00000	5.5	
	80 N-Propylbenzene	91	13.477	13.479	(0.921)	132927	5.00000	5.7	
	81 1,1,2,2-Tetrachloroethane	83	13.591	13.586	(0.929)	23407	5.00000	5.1	
	82 2-Chlorotoluene	91	13.634	13.636	(0.932)	77853	5.00000	5.7	
	83 1,2,3-Trichloropropane	75	13.720	13.722	(0.937)	22131	5.00000	6.0	
	84 1,3,5-Trimethylbenzene	105	13.741	13.736	(0.939)	86052	5.00000	5.5	
	85 trans-1,4-Dichloro-2-Butene	53	13.798	13.800	(0.943)	6084	5.00000	4.9	
	86 4-Chlorotoluene	91	13.841	13.843	(0.946)	81179	5.00000	5.6	
	87 tert-Butylbenzene	119	14.106	14.108	(0.964)	86222	5.00000	5.4	
	88 Pentachloroethane	165	14.113	14.108	(0.964)	10470	5.00000	4.8	
	89 1,2,4-Trimethylbenzene	105	14.199	14.194	(0.970)	84563	5.00000	5.5	
	90 sec-Butylbenzene	105	14.320	14.315	(0.979)	112307	5.00000	5.6	
	91 P-Isopropyltoluene	119	14.506	14.501	(0.991)	97830	5.00000	5.5	
	92 1,3-Dichlorobenzene	146	14.535	14.537	(0.993)	46276	5.00000	5.7	
*	93 1,4-Dichlorobenzene-D4	152	14.635	14.630	(1.000)	367751	50.0000		
	94 1,4-Dichlorobenzene	146	14.649	14.651	(1.001)	47423	5.00000	5.6	
	95 1,2,3-Trimethylbenzene	105	14.699	14.701	(1.004)	90230	5.00000	5.2	
	96 N-Butylbenzene	91	14.992	14.987	(1.024)	82541	5.00000	5.4	
M	97 1,2-Dichloroethylene (total)	96				44026	5.00000	10.6	
	98 1,2-Dichlorobenzene	146	15.128	15.130	(1.034)	41734	5.00000	5.7	
	99 1,2-Dibromo-3-Chloropropane	157	16.051	16.045	(1.097)	3969	5.00000	5.7	
	100 1,3,5-Trichlorobenzene	180	16.079	16.081	(1.099)	27872	5.00000	5.0	
	101 Hexachlorobutadiene	225	16.780	16.782	(1.147)	13913	5.00000	5.6	
	102 1,2,4-Trichlorobenzene	180	16.794	16.796	(1.148)	15805	5.00000	4.6	
	103 Naphthalene	128	17.152	17.154	(1.172)	31118	5.00000	5.6	
	104 1,2,3-Trichlorobenzene	180	17.352	17.354	(1.186)	11009	5.00000	4.6	
M	105 Xylenes (total)	106				254950	15.0000	16.7	

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.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19
-Dichlorodifluoromethane (1,451)
-Chloromethane (1,696)
-Vinyl Chloride (1,881)
-Bromomethane (1,887)
-Chloroethane (2,380)
-Trichlorofluoromethane (2,080)
-Diethyl Ether (2,316)
-1,1-Dichloroethene (2,509)+
-Iodomethane (2,609)
-Acrolein (2,775)
-Allyl Chloride (2,888)
-Methylene Chloride (2,988)+
-trans-1,2-Dichloroethene (3,145)+
-Methyl tert-butyl ether (3,252)
-Tertiary-butyl alcohol (3,360)
-Acetonitrile (3,531)
-Di-isopropyl ether (3,660)
-Chloroprene (3,781)+
-Acrylonitrile (3,889)
-Ethyl tertiary-butyl ethe (4,125)+
-cis-1,2-Dichloroethene (4,511)
-2,2-Dichloropropane (4,654)
-Bromochloromethane (4,782)+
-Chloroform (4,933)
-Carbon Tetrachloride (5,111)
-Tetrahydrofuran (5,233)+
-2-Butanone (5,462)+
-Benzene (5,927)
-Propionitrile (6,070)+
-Pentafluorobenzene (6,198)+
-1,2-Dichloroethane (6,341)
-Isobutyl Alcohol (6,549)
-Methylcyclohexane (6,992)+
-1,4-Difluorobenzene (7,156)
-Dibromomethane (7,764)
-1,2-Dichloropropane (7,943)
-Bromodichloromethane (8,086)
-Methyl Methacrylate (8,443)+
-cis-1,3-dichloropropene (9,115)
-Toluene-D8 (9,387)+
-Total Alkylbenzenes (9,800)
-Tetrachloroethene (10,009)
-4-Methyl-2-pentanone (10,109)+
-1,1,2-Trichloroethane (10,352)
-Ethyl Methacrylate (10,445)
-Dibromochloromethane (10,581)
-1,3-Dichloropropane (10,724)
-1,2-Dibromoethane (10,874)
-2-Hexanone (11,332)
-Ethylbenzene (11,740)+
-m+p-Xylenes (11,954)
Chlorobenzene-D5 (11,632)+
-o-Xylene (12,536)
-Styrene (12,609)+
-Isopropylbenzene (12,955)
-cis-1,4-Dichloro-2-Butene (13,391)+
P-Bromofluorobenzene (13,284)
-trans-1,4-Dichloro-2-Butene (13,734)+
-tert-Butylbenzene (14,406)+
-1,2,4-Trimethylbenzene (14,499)
-sec-Butylbenzene (14,321)
-P-Isopropyltoluene (14,507)+
-1,2,3-Trimethylbenzene (14,700)
1,4-Dichlorobenzene-D4 (14,635)+
-N-Butylbenzene (14,933)
-1,2-Dichlorobenzene (15,129)
-1,2-Dibromo-3-Chloropropa (16,080)+
-1,2-Dichloroethylene (tot (16,580)
-Hexachlorobutadiene (16,788)+
-Naphthalene (17,152)
-1,2,3-Trichlorobenzene (17,352)
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Client ID:
Sample Info: WG234067-2
Purge Volume: 5.0
Column phase: RTX-VMS
Instrument: gcms-p.i
Operator: HG
Column diameter: 0.18

Data File: \\target_server\gg\chem\gcms-p.i\P081118.b\P7170.D
Report Date: 20-Aug-2018 14:32

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-p.i\P081118.b\P7170.D
Lab Smp Id: WG234067-1
Inj Date : 11-AUG-2018 13:49
Operator : HG Inst ID: gcms-p.i
Smp Info : WG234067-1
Misc Info :
Comment : SW846 5030
Method : \\target_server\gg\chem\gcms-p.i\P081118.b\P8A05(85)D.m
Meth Date : 13-Aug-2018 07:56 TCOTE Quant Type: ISTD
Cal Date : 11-AUG-2018 13:49 Cal File: P7170.D
Als bottle: 5 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: MIS_GUEST

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

TTC
3:01 pm, Aug 20, 2018

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.451	1.452	(0.234)	4591	1.00000	0.89(a)	
2	Chloromethane	50	1.594	1.595	(0.257)	3380	1.00000	1.0	
3	Vinyl chloride	62	1.651	1.652	(0.267)	3293	1.00000	0.92(a)	
4	Bromomethane	94	1.887	1.888	(0.305)	1754	1.00000	1.1(M)	M6
5	Chloroethane	64	1.980	1.967	(0.320)	2087	1.00000	1.2	
6	Trichlorofluoromethane	101	2.080	2.073	(0.336)	4822	1.00000	0.95(a)	
7	Diethyl Ether	59	2.316	2.317	(0.374)	1951	1.00000	0.98(a)	
8	1,1-Dichloroethene	96	2.480	2.475	(0.401)	2339	1.00000	0.87(a)	
9	Freon-113	151	2.509	2.503	(0.405)	2453	1.00000	1.1	
10	Carbon Disulfide	76	2.509	2.510	(0.405)	6597	1.00000	0.92(a)	
11	Iodomethane	142	2.609	2.603	(0.421)	1803	1.00000	0.081(a)	
12	Acrolein	56	2.781	2.775	(0.449)	2598	5.00000	13.2	
13	Allyl Chloride	41	2.888	2.889	(0.466)	5317	1.00000	1.0	
14	Methylene Chloride	84	2.995	2.989	(0.484)	6559	1.00000	0.65(a)	
15	Acetone	43	3.045	3.047	(0.492)	4623	5.00000	4.7(a)	
16	trans-1,2-Dichloroethene	96	3.138	3.139	(0.507)	3860	1.00000	0.96(a)	
17	Methyl Acetate	43	3.160	3.161	(0.510)	2725	1.00000	1.1(M)	M6
18	Methyl tert-butyl ether	73	3.253	3.247	(0.525)	7067	1.00000	0.80(a)	
19	Tertiary-butyl alcohol	59	3.353	3.361	(0.542)	2246	5.00000	14.1	
20	Acetonitrile	41	3.524	3.533	(0.569)	5299	10.0000	12.3(a)	
21	Di-isopropyl ether	45	3.660	3.661	(0.591)	9972	1.00000	1.0	
22	Chloroprene	53	3.774	3.776	(0.610)	6148	1.00000	1.0	
23	1,1-Dichloroethane	63	3.810	3.804	(0.615)	6009	1.00000	0.89(a)	

Data File: \\target_server\gg\chem\gcms-p.i\P081118.b\P7170.D
Report Date: 20-Aug-2018 14:32

TTC

3:01 pm, Aug 20, 2018

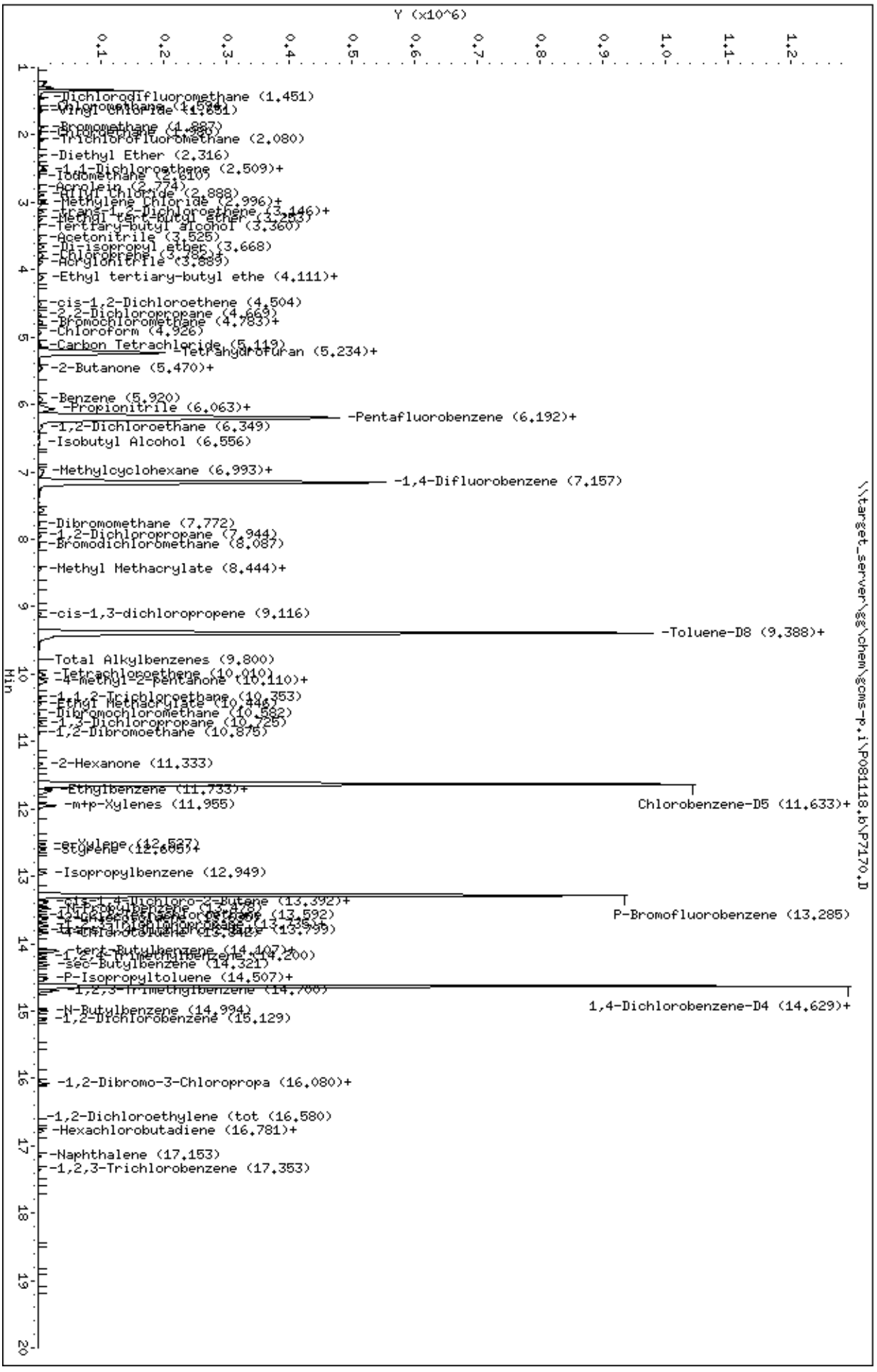
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	24 Acrylonitrile	52	3.882	3.890	(0.627)	5821	5.00000	5.5	
	25 Ethyl tertiary-butyl ether	59	4.111	4.105	(0.664)	9137	1.00000	0.96(a)	
	26 Vinyl Acetate	43	4.139	4.133	(0.578)	4899	1.00000	0.76(aM)	M6
	27 cis-1,2-Dichloroethene	96	4.504	4.505	(0.727)	3681	1.00000	0.89(a)	
	28 2,2-Dichloropropane	77	4.668	4.655	(0.754)	4771	1.00000	0.78(Ta)	
	29 Bromochloromethane	128	4.804	4.798	(0.776)	1010	1.00000	0.69(a)	
	30 Cyclohexane	56	4.775	4.770	(0.771)	4210	1.00000	0.74(a)	
	31 Chloroform	83	4.926	4.927	(0.796)	6183	1.00000	0.88(a)	
	32 Carbon Tetrachloride	117	5.112	5.113	(0.714)	4697	1.00000	0.82(a)	
	33 Tetrahydrofuran	42	5.190	5.177	(0.838)	3088	5.00000	3.9(a)	
$	34 Dibromofluoromethane	113	5.226	5.227	(0.844)	208828	50.0000	49.7	
	35 1,1,1-Trichloroethane	97	5.233	5.242	(0.845)	5495	1.00000	0.81(a)	
	36 2-Butanone	43	5.483	5.470	(0.886)	5251	5.00000	3.9(a)	
	37 1,1-Dichloropropene	75	5.455	5.456	(0.762)	4697	1.00000	0.82(a)	
	38 Benzene	78	5.920	5.921	(0.827)	13343	1.00000	0.84(a)	
	39 Propionitrile	54	6.034	6.035	(0.975)	5681	10.0000	11.8	
	40 Methacrylonitrile	41	6.077	6.064	(0.982)	21435	10.0000	11.4	
*	41 Pentafluorobenzene	168	6.191	6.185	(1.000)	412519	50.0000		
$	42 1,2-Dichloroethane-D4	65	6.213	6.207	(1.003)	286703	50.0000	51.6	
	43 Tertiary-amyl methyl ether	73	6.213	6.214	(1.003)	9822	1.00000	1.1(M)	M6
	44 1,2-Dichloroethane	62	6.349	6.343	(0.887)	5890	1.00000	1.1	
	45 Isobutyl Alcohol	43	6.556	6.557	(1.059)	1790	20.0000	18.0(Ta)	
	46 Methylcyclohexane	83	6.992	6.986	(1.129)	7388	1.00000	0.97(a)	
	47 Trichloroethene	95	7.049	7.043	(0.985)	3718	1.00000	0.91(a)	
*	48 1,4-Difluorobenzene	114	7.156	7.151	(1.000)	739146	50.0000		
	49 Dibromomethane	93	7.764	7.766	(1.085)	2087	1.00000	0.96(a)	
	50 1,2-Dichloropropane	63	7.943	7.944	(1.110)	2833	1.00000	0.84(Ta)	
	51 Bromodichloromethane	83	8.086	8.095	(1.130)	3922	1.00000	0.80(Ta)	
	52 Methyl Methacrylate	41	8.444	8.438	(1.180)	2727	1.00000	1.5	
	53 Ethyl Methacrylate	69	10.446	10.447	(1.460)	4161	1.00000	1.8	
	54 1,4-Dioxane	88	8.444	8.445	(1.180)	2123	20.0000	36.2	
M	55 Total Alkylbenzenes	100				89393	1.00000	5.2(a)	
	57 cis-1,3-dichloropropene	75	9.116	9.110	(1.274)	4549	1.00000	0.74(a)	
$	58 Toluene-D8	98	9.387	9.389	(1.312)	923237	50.0000	49.8	
	59 Toluene	92	9.466	9.460	(1.323)	9144	1.00000	0.86(a)	
	60 Tetrachloroethene	164	10.017	10.011	(0.861)	2861	1.00000	0.88(a)	
	61 4-methyl-2-pentanone	43	10.109	10.104	(1.413)	9324	5.00000	3.4(a)	
	62 trans-1,3-Dichloropropene	75	10.131	10.132	(1.416)	4611	1.00000	0.84(a)	
	63 1,1,2-Trichloroethane	83	10.345	10.354	(1.446)	1982	1.00000	0.79(a)	
	64 Dibromochloromethane	129	10.581	10.583	(0.910)	2581	1.00000	0.73(a)	
	65 1,3-Dichloropropane	76	10.732	10.726	(0.923)	4856	1.00000	0.81(a)	
	66 1,2-Dibromoethane	107	10.875	10.876	(1.520)	2510	1.00000	0.81(Ta)	
	67 2-Hexanone	43	11.332	11.326	(0.974)	6151	5.00000	3.2(a)	
*	68 Chlorobenzene-D5	117	11.632	11.634	(1.000)	740348	50.0000		
	69 Chlorobenzene	112	11.654	11.655	(1.002)	9745	1.00000	0.90(a)	
	70 Ethylbenzene	91	11.733	11.734	(1.009)	16839	1.00000	0.84(a)	
	71 1,1,1,2-Tetrachloroethane	131	11.768	11.770	(1.012)	2813	1.00000	0.76(a)	
	72 m+p-Xylenes	91	11.954	11.956	(1.028)	24147	2.00000	1.6(a)	
	73 o-Xylene	91	12.526	12.528	(1.077)	10406	1.00000	0.69(a)	
	74 Styrene	104	12.605	12.606	(1.084)	7576	1.00000	0.68(a)	
	75 Bromoform	173	12.598	12.599	(1.083)	1358	1.00000	0.68(a)	
	76 Isopropylbenzene	105	12.948	12.949	(0.885)	13160	1.00000	0.75(a)	
$	77 P-Bromofluorobenzene	95	13.284	13.286	(1.856)	400899	50.0000	49.3	
	78 cis-1,4-Dichloro-2-Butene	53	13.406	13.407	(0.916)	1966	1.00000	1.3	

Data File: \\target_server\gg\chem\gcms-p.i\P081118.b\P7170.D
Report Date: 20-Aug-2018 14:32

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
	79 Bromobenzene	156	13.391	13.386	(0.915)	3506	1.00000	0.90(a)	
	80 N-Propylbenzene	91	13.477	13.479	(0.921)	18674	1.00000	0.82(a)	
	81 1,1,2,2-Tetrachloroethane	83	13.592	13.586	(0.929)	3208	1.00000	(a)	
	82 2-Chlorotoluene	91	13.635	13.636	(0.932)	10954	1.00000	0.82(a)	
	83 1,2,3-Trichloropropane	75	13.713	13.722	(0.937)	3079	1.00000	0.85(a)	
	84 1,3,5-Trimethylbenzene	105	13.742	13.736	(0.939)	11120	1.00000	0.73(a)	
	85 trans-1,4-Dichloro-2-Butene	53	13.799	13.800	(0.943)	1458	1.00000	1.2	
	86 4-Chlorotoluene	91	13.849	13.843	(0.946)	12216	1.00000	0.87(a)	
	87 tert-Butylbenzene	119	14.106	14.108	(0.964)	12782	1.00000	0.83(a)	
	88 Pentachloroethane	165	14.114	14.108	(0.964)	2857	1.00000	1.4	
	89 1,2,4-Trimethylbenzene	105	14.192	14.194	(0.970)	10321	1.00000	0.69(a)	
	90 sec-Butylbenzene	105	14.321	14.315	(0.979)	14901	1.00000	0.76(a)	
	91 P-Isopropyltoluene	119	14.507	14.501	(0.991)	11759	1.00000	0.68(a)	
	92 1,3-Dichlorobenzene	146	14.535	14.537	(0.993)	7139	1.00000	0.90(a)	
*	93 1,4-Dichlorobenzene-D4	152	14.636	14.630	(1.000)	357455	50.0000		
	94 1,4-Dichlorobenzene	146	14.650	14.651	(1.001)	8152	1.00000	1.0	
	95 1,2,3-Trimethylbenzene	105	14.700	14.701	(1.004)	21634	1.00000	1.3	
	96 N-Butylbenzene	91	14.993	14.987	(1.024)	9836	1.00000	0.66(a)	
M	97 1,2-Dichloroethylene (total)	96				7541	1.00000	1.8(a)	
	98 1,2-Dichlorobenzene	146	15.129	15.130	(1.034)	6169	1.00000	0.86(a)	
	99 1,2-Dibromo-3-Chloropropane	157	16.051	16.045	(1.097)	319	1.00000	0.47(a)	
	100 1,3,5-Trichlorobenzene	180	16.080	16.081	(1.099)	6294	1.00000	1.2	
	101 Hexachlorobutadiene	225	16.781	16.782	(1.147)	2109	1.00000	0.88(a)	
	102 1,2,4-Trichlorobenzene	180	16.795	16.796	(1.148)	1828	1.00000	1.0	
	103 Naphthalene	128	17.152	17.154	(1.172)	5005	1.00000	3.0	
	104 1,2,3-Trichlorobenzene	180	17.353	17.354	(1.186)	1776	1.00000	1.2	
M	105 Xylenes (total)	106				34553	5.00000	2.3(a)	

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.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0.3
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Min
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15
16
17
18
19
20
-Dichlorodifluoromethane (1.451)
-Chloromethane (1.594)
-Vinyl Chloride (1.651)
-Bromomethane (1.887)
-Chloroethane (1.968)
-Trichlorofluoromethane (2.080)
-Diethyl Ether (2.316)
-1,1-Dichloroethene (2.509)+
-Iodomethane (2.610)
-Acrolein (2.774)
-Allyl Chloride (2.888)
-Methylene Chloride (2.996)+
-trans-1,2-Dichloroethene (3.146)+
-Methyl tert-butyl ether (3.283)
-Tertiary-butyl alcohol (3.360)
-Acetonitrile (3.525)
-Di-isopropyl ether (3.668)
-Chloroprene (3.782)+
-Acrylonitrile (3.889)
-Ethyl tertiary-butyl ethe (4.111)+
-cis-1,2-Dichloroethene (4.504)
-2,2-Dichloropropane (4.669)
-Bromochloromethane (4.783)+
-Chloroform (4.926)
-Carbon Tetrachloride (5.119)
-Tetrahydrofuran (5.234)+
-2-Butanone (5.470)+
-Benzene (5.920)
-Propionitrile (6.063)+
-Pentafluorobenzene (6.192)+
-1,2-Dichloroethane (6.349)
-Isobutyl Alcohol (6.556)
-Methylcyclohexane (6.993)+
-1,4-Difluorobenzene (7.157)
-Dibromomethane (7.772)
-1,2-Dichloropropane (7.944)
-Bromodichloromethane (8.087)
-Methyl Methacrylate (8.444)+
-cis-1,3-dichloropropene (9.116)
-Toluene-D8 (9.388)+
-Total Alkylbenzenes (9.800)
-Tetrachloroethene (10.010)
-4-Methyl-2-pentanone (10.110)+
-1,1,2-Trichloroethane (10.353)
-Ethyl Methacrylate (10.446)
-Dibromochloromethane (10.582)
-1,3-Dichloropropane (10.725)
-1,2-Dibromoethane (10.875)
-2-Hexanone (11.333)
-Ethylbenzene (11.733)+
-m+p-Xylenes (11.955)
Chlorobenzene-D5 (11.633)+
-oXylene (12.527)
-Styrene (12.605)+
-Isopropylbenzene (12.949)
-cis-1,4-Dichloro-2-Butene (13.392)+
-Bromobenzene (13.478)
-1,1,2,2-Tetrachloroethane (13.592)
-1,2,3-Trichloropropane (13.736)+
-4-Chlorotoluene (13.942)+
P-Bromofluorobenzene (13.285)
-tert-Butylbenzene (14.107)+
-1,2,4-Trimethylbenzene (14.200)
-sec-Butylbenzene (14.321)
-P-Isopropyltoluene (14.507)+
-1,2,3-Trimethylbenzene (14.700)
-N-Butylbenzene (14.994)
-1,2-Dichlorobenzene (15.129)
1,4-Dichlorobenzene-D4 (14.629)+
-1,2-Dibromo-3-Chloropropa (16.080)+
-1,2-Dichloroethylene (tot (16.580)
-Hexachlorobutadiene (16.781)+
-Naphthalene (17.153)
-1,2,3-Trichlorobenzene (17.353)
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Sample Info: WG234067-1
Purge Volume: 5.0
Column phase: RTX-VMS
Instrument: gcms-p.i
Operator: HG
Column diameter: 0.18

Data File: \\target_server\gg\chem\gcms-p.i\P081118.b\P7171.D
Report Date: 20-Aug-2018 14:32

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-p.i\P081118.b\P7171.D
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Inj Date : 11-AUG-2018 14:21
Operator : HG Inst ID: gcms-p.i
Smp Info : WG234067-6
Misc Info :
Comment : SW846 5030
Method : \\target_server\gg\chem\gcms-p.i\P081118.b\P8A05(85)D.m
Meth Date : 13-Aug-2018 07:56 TCOTE Quant Type: ISTD
Cal Date : 11-AUG-2018 14:21 Cal File: P7171.D
Als bottle: 6 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: MIS_GUEST

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.451	1.452	(0.235)	785677	150.000	154(A)	
2	Chloromethane	50	1.594	1.595	(0.258)	472020	150.000	145	
3	Vinyl chloride	62	1.651	1.652	(0.267)	540538	150.000	151(A)	
4	Bromomethane	94	1.887	1.888	(0.305)	223621	150.000	139	
5	Chloroethane	64	1.966	1.967	(0.318)	118318	150.000	65.2	
6	Trichlorofluoromethane	101	2.073	2.073	(0.335)	773684	150.000	153(A)	
7	Diethyl Ether	59	2.316	2.317	(0.375)	299365	150.000	153(A)	
8	1,1-Dichloroethene	96	2.474	2.475	(0.400)	392639	150.000	146	
9	Freon-113	151	2.502	2.503	(0.405)	331975	150.000	149	
10	Carbon Disulfide	76	2.509	2.510	(0.406)	1050632	150.000	147	
11	Iodomethane	142	2.602	2.603	(0.421)	386957	150.000	148	
12	Acrolein	56	2.774	2.775	(0.449)	330485	750.000	749	
13	Allyl Chloride	41	2.888	2.889	(0.467)	719869	150.000	142	
14	Methylene Chloride	84	2.989	2.989	(0.483)	565308	150.000	150	
15	Acetone	43	3.046	3.047	(0.493)	639822	750.000	654	
16	trans-1,2-Dichloroethene	96	3.139	3.139	(0.508)	579700	150.000	144	
17	Methyl Acetate	43	3.160	3.161	(0.511)	332175	150.000	143	
18	Methyl tert-butyl ether	73	3.246	3.247	(0.525)	1397481	150.000	161(A)	
19	Tertiary-butyl alcohol	59	3.360	3.361	(0.543)	201499	750.000	750	
20	Acetonitrile	41	3.532	3.533	(0.571)	558581	1500.00	1300	
21	Di-isopropyl ether	45	3.661	3.661	(0.592)	1493911	150.000	157(A)	
22	Chloroprene	53	3.775	3.776	(0.610)	905301	150.000	150(A)	
23	1,1-Dichloroethane	63	3.811	3.804	(0.616)	977200	150.000	146	

Data File: \\target_server\gg\chem\gcms-p.i\P081118.b\P7171.D
Report Date: 20-Aug-2018 14:32

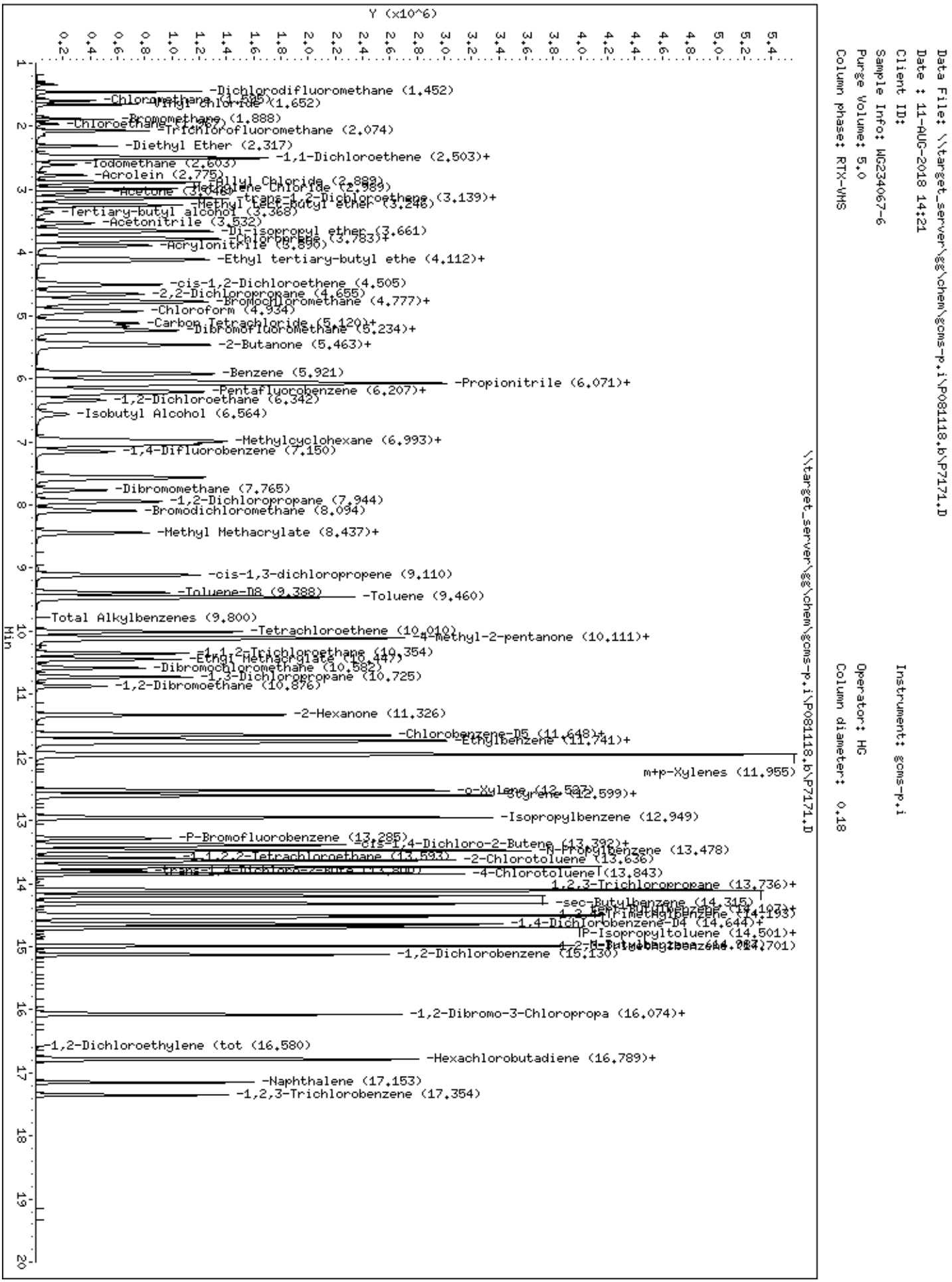
			QUANT SIG					AMOUNTS		
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	24	Acrylonitrile	52	3.889	3.890	(0.629)	737133	750.000	710	
	25	Ethyl tertiary-butyl ether	59	4.104	4.105	(0.664)	1499750	150.000	160(A)	
	26	Vinyl Acetate	43	4.133	4.133	(0.578)	1013473	150.000	149	
	27	cis-1,2-Dichloroethene	96	4.512	4.505	(0.729)	610237	150.000	149	
	28	2,2-Dichloropropane	77	4.662	4.655	(0.754)	908095	150.000	150(A)	
	29	Bromochloromethane	128	4.805	4.798	(0.777)	204122	150.000	140	
	30	Cyclohexane	56	4.776	4.770	(0.772)	874768	150.000	157(A)	
	31	Chloroform	83	4.933	4.927	(0.798)	1066284	150.000	153(A)	
	32	Carbon Tetrachloride	117	5.112	5.113	(0.715)	862638	150.000	150(A)	
	33	Tetrahydrofuran	42	5.169	5.177	(0.836)	574589	750.000	753(A)	
$	34	Dibromofluoromethane	113	5.234	5.227	(0.846)	214233	50.0000	51.5	
	35	1,1,1-Trichloroethane	97	5.241	5.242	(0.847)	1022190	150.000	152(A)	
	36	2-Butanone	43	5.470	5.470	(0.884)	957575	750.000	725	
	37	1,1-Dichloropropene	75	5.455	5.456	(0.763)	872307	150.000	151(A)	
	38	Benzene	78	5.920	5.921	(0.828)	2360433	150.000	147	
	39	Propionitrile	54	6.042	6.035	(0.977)	631884	1500.00	1330	
	40	Methacrylonitrile	41	6.070	6.064	(0.982)	2572972	1500.00	1370	
*	41	Pentafluorobenzene	168	6.185	6.185	(1.000)	409312	50.0000		
$	42	1,2-Dichloroethane-D4	65	6.213	6.207	(1.005)	279987	50.0000	50.7	
	43	Tertiary-amyl methyl ether	73	6.220	6.214	(1.006)	1401549	150.000	163(A)	
	44	1,2-Dichloroethane	62	6.342	6.343	(0.887)	755498	150.000	140	
	45	Isobutyl Alcohol	43	6.564	6.557	(1.061)	304290	3000.00	3630(A)	
	46	Methylcyclohexane	83	6.993	6.986	(1.131)	1152759	150.000	154(A)	
	47	Trichloroethene	95	7.043	7.043	(0.985)	598129	150.000	144	
*	48	1,4-Difluorobenzene	114	7.150	7.151	(1.000)	745906	50.0000		
	49	Dibromomethane	93	7.765	7.766	(1.086)	325452	150.000	149	
	50	1,2-Dichloropropane	63	7.944	7.944	(1.111)	518260	150.000	153(A)	
	51	Bromodichloromethane	83	8.094	8.095	(1.132)	781366	150.000	158(A)	
	52	Methyl Methacrylate	41	8.437	8.438	(1.180)	418340	150.000	150(A)	
	53	Ethyl Methacrylate	69	10.446	10.447	(1.461)	758124	150.000	150(A)	
	54	1,4-Dioxane	88	8.444	8.445	(1.181)	115954	3000.00	1890	
M	55	Total Alkylbenzenes	100				18667633	150.000	1020	
	57	cis-1,3-dichloropropene	75	9.109	9.110	(1.274)	1001448	150.000	163(A)	
$	58	Toluene-D8	98	9.388	9.389	(1.313)	939080	50.0000	50.2	
	59	Toluene	92	9.459	9.460	(1.323)	1549430	150.000	145	
	60	Tetrachloroethene	164	10.010	10.011	(0.860)	473585	150.000	142	
	61	4-methyl-2-pentanone	43	10.103	10.104	(1.413)	2011939	750.000	735	
	62	trans-1,3-Dichloropropene	75	10.132	10.132	(1.417)	864274	150.000	157(A)	
	63	1,1,2-Trichloroethane	83	10.353	10.354	(1.448)	388676	150.000	154(A)	
	64	Dibromochloromethane	129	10.582	10.583	(0.910)	571334	150.000	161(A)	
	65	1,3-Dichloropropane	76	10.725	10.726	(0.922)	922747	150.000	152(A)	
	66	1,2-Dibromoethane	107	10.875	10.876	(1.521)	473864	150.000	153(A)	
	67	2-Hexanone	43	11.326	11.326	(0.974)	1436594	750.000	749	
*	68	Chlorobenzene-D5	117	11.633	11.634	(1.000)	753731	50.0000		
	69	Chlorobenzene	112	11.654	11.655	(1.002)	1581283	150.000	142	
	70	Ethylbenzene	91	11.733	11.734	(1.009)	2907680	150.000	143	
	71	1,1,1,2-Tetrachloroethane	131	11.769	11.770	(1.012)	580502	150.000	155(A)	
	72	m+p-Xylenes	91	11.955	11.956	(1.028)	4427778	300.000	283	
	73	o-Xylene	91	12.527	12.528	(1.077)	2347085	150.000	155(A)	
	74	Styrene	104	12.605	12.606	(1.084)	1767525	150.000	158(A)	
	75	Bromoform	173	12.598	12.599	(1.083)	315070	150.000	158(A)	
	76	Isopropylbenzene	105	12.949	12.949	(0.885)	2750455	150.000	147	
$	77	P-Bromofluorobenzene	95	13.285	13.286	(1.858)	417161	50.0000	51.0	
	78	cis-1,4-Dichloro-2-Butene	53	13.406	13.407	(0.916)	225279	150.000	138	

Data File: \\target_server\gg\chem\gcms-p.i\P081118.b\P7171.D
Report Date: 20-Aug-2018 14:32

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	79 Bromobenzene	156	13.385	13.386	(0.915)	603838	150.000	144	
	80 N-Propylbenzene	91	13.478	13.479	(0.921)	3411627	150.000	139	
	81 1,1,2,2-Tetrachloroethane	83	13.585	13.586	(0.929)	583572	150.000	149	
	82 2-Chlorotoluene	91	13.635	13.636	(0.932)	2051657	150.000	143	
	83 1,2,3-Trichloropropane	75	13.721	13.722	(0.938)	534509	150.000	138	
	84 1,3,5-Trimethylbenzene	105	13.735	13.736	(0.939)	2385065	150.000	147	
	85 trans-1,4-Dichloro-2-Butene	53	13.800	13.800	(0.943)	183279	150.000	142	
	86 4-Chlorotoluene	91	13.842	13.843	(0.946)	2150421	150.000	142	
	87 tert-Butylbenzene	119	14.107	14.108	(0.964)	2362747	150.000	143	
	88 Pentachloroethane	165	14.114	14.108	(0.965)	312934	150.000	136	
	89 1,2,4-Trimethylbenzene	105	14.193	14.194	(0.970)	2389301	150.000	151(A)	
	90 sec-Butylbenzene	105	14.314	14.315	(0.978)	3002175	150.000	143	
	91 P-Isopropyltoluene	119	14.500	14.501	(0.991)	2730242	150.000	148	
	92 1,3-Dichlorobenzene	146	14.536	14.537	(0.994)	1195964	150.000	141	
*	93 1,4-Dichlorobenzene-D4	152	14.629	14.630	(1.000)	383036	50.0000		
	94 1,4-Dichlorobenzene	146	14.650	14.651	(1.001)	1211108	150.000	137	
	95 1,2,3-Trimethylbenzene	105	14.700	14.701	(1.005)	2429711	150.000	133	
	96 N-Butylbenzene	91	14.986	14.987	(1.024)	2386476	150.000	150(A)	
M	97 1,2-Dichloroethylene (total)	96				1189937	150.000	293	
	98 1,2-Dichlorobenzene	146	15.129	15.130	(1.034)	1110427	150.000	145	
	99 1,2-Dibromo-3-Chloropropane	157	16.045	16.045	(1.097)	112330	150.000	160(A)	
	100 1,3,5-Trichlorobenzene	180	16.080	16.081	(1.099)	826911	150.000	142	
	101 Hexachlorobutadiene	225	16.774	16.782	(1.147)	361333	150.000	140	
	102 1,2,4-Trichlorobenzene	180	16.795	16.796	(1.148)	586793	150.000	150(A)	
	103 Naphthalene	128	17.153	17.154	(1.173)	1188954	150.000	150	
	104 1,2,3-Trichlorobenzene	180	17.353	17.354	(1.186)	402546	150.000	150(A)	
M	105 Xylenes (total)	106				6774863	150.000	438	

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.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Client ID:
Sample Info: WG234067-6
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Column phase: RTX-VMS
Instrument: gcms-p.i
Operator: HG
Column diameter: 0.18
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Y (x10^6)
Min
-Dichlorodifluoromethane (1.452)
-Chloromethane (1.585)
-Vinyl chloride (1.652)
-Bromomethane (1.888)
-Chloroethane (1.967)
-Trichlorofluoromethane (2.074)
-Diethyl Ether (2.317)
-1,1-Dichloroethene (2.503)+
-Iodomethane (2.603)
-Acrolein (2.775)
-Allyl Chloride (2.889)
-Acetone (3.048)
-Methylene Chloride (2.989)
-trans-1,2-Dichloroethene (3.139)+
-Methyl tert-butyl ether (3.248)
-Tertiary-butyl alcohol (3.368)
-Acetonitrile (3.532)
-Di-isopropyl ether (3.661)
-Chloroprene (3.783)+
-Acrylonitrile (3.896)
-Ethyl tertiary-butyl ethe (4.112)+
-cis-1,2-Dichloroethene (4.505)
-2,2-Dichloropropane (4.655)
-Bromochloromethane (4.777)+
-Chloroform (4.934)
-Carbon Tetrachloride (5.120)+
-Dibromofluoromethane (5.234)+
-2-Butanone (5.463)+
-Benzene (5.921)
-Propionitrile (6.071)+
-Pentafluorobenzene (6.207)+
-1,2-Dichloroethane (6.342)
-Isobutyl Alcohol (6.564)
-Methylcyclohexane (6.993)+
-1,4-Difluorobenzene (7.150)
-Dibromomethane (7.765)
-1,2-Dichloropropane (7.944)
-Bromodichloromethane (8.094)
-Methyl Methacrylate (8.437)+
-cis-1,3-dichloropropene (9.110)
-Toluene-D8 (9.388)
-Toluene (9.460)
-Total Alkylbenzenes (9.800)
-Tetrachloroethene (10.010)
-4-methyl-2-pentanone (10.111)+
-1,1,2-Trichloroethane (10.354)
-Ethyl Methacrylate (10.447)
-Dibromochloromethane (10.582)
-1,3-Dichloropropane (10.725)
-1,2-Dibromoethane (10.876)
-2-Hexanone (11.326)
-Chlorobenzene-D5 (11.648)+
-Ethylbenzene (11.741)+
m+p-Xylenes (11.955)
-o-Xylene (12.507)
-Styrene (12.599)+
-Isopropylbenzene (12.949)
-P-Bromofluorobenzene (13.285)
-cis-1,4-Dichloro-2-Butene (13.392)+
-N-Propylbenzene (13.478)
-1,1,2,2-Tetrachloroethane (13.593)
-2-Chlorotoluene (13.636)
-trans-1,4-Dichloro-2-Bute (13.800)
-4-Chlorotoluene (13.843)
-1,2,3-Trichloropropane (13.736)+
-sec-Butylbenzene (14.315)
-tert-Butylbenzene (14.107)+
-1,4-Dichlorobenzene-D4 (14.644)+
-P-Isopropyltoluene (14.501)+
-1,2-Dichlorobenzene (15.130)
-1,2-Dibromo-3-Chloropropa (16.074)+
-1,2-Dichloroethylene (tot (16.580)
-Hexachlorobutadiene (16.789)+
-Naphthalene (17.153)
-1,2,3-Trichlorobenzene (17.354)

Data File: \\target_server\gg\chem\gcms-p.i\P081118.b\P7172.D
Report Date: 20-Aug-2018 14:32

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-p.i\P081118.b\P7172.D
Lab Smp Id: WG234067-5
Inj Date : 11-AUG-2018 14:53
Operator : HG   Inst ID: gcms-p.i
Smp Info : WG234067-5
Misc Info :
Comment   : SW846 5030
Method   : \\target_server\gg\chem\gcms-p.i\P081118.b\P8A05(85)D.m
Meth Date : 13-Aug-2018 07:56 TCOTE   Quant Type: ISTD
Cal Date : 11-AUG-2018 14:53   Cal File: P7172.D
Als bottle: 7   Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12
Processing Host: MIS_GUEST

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

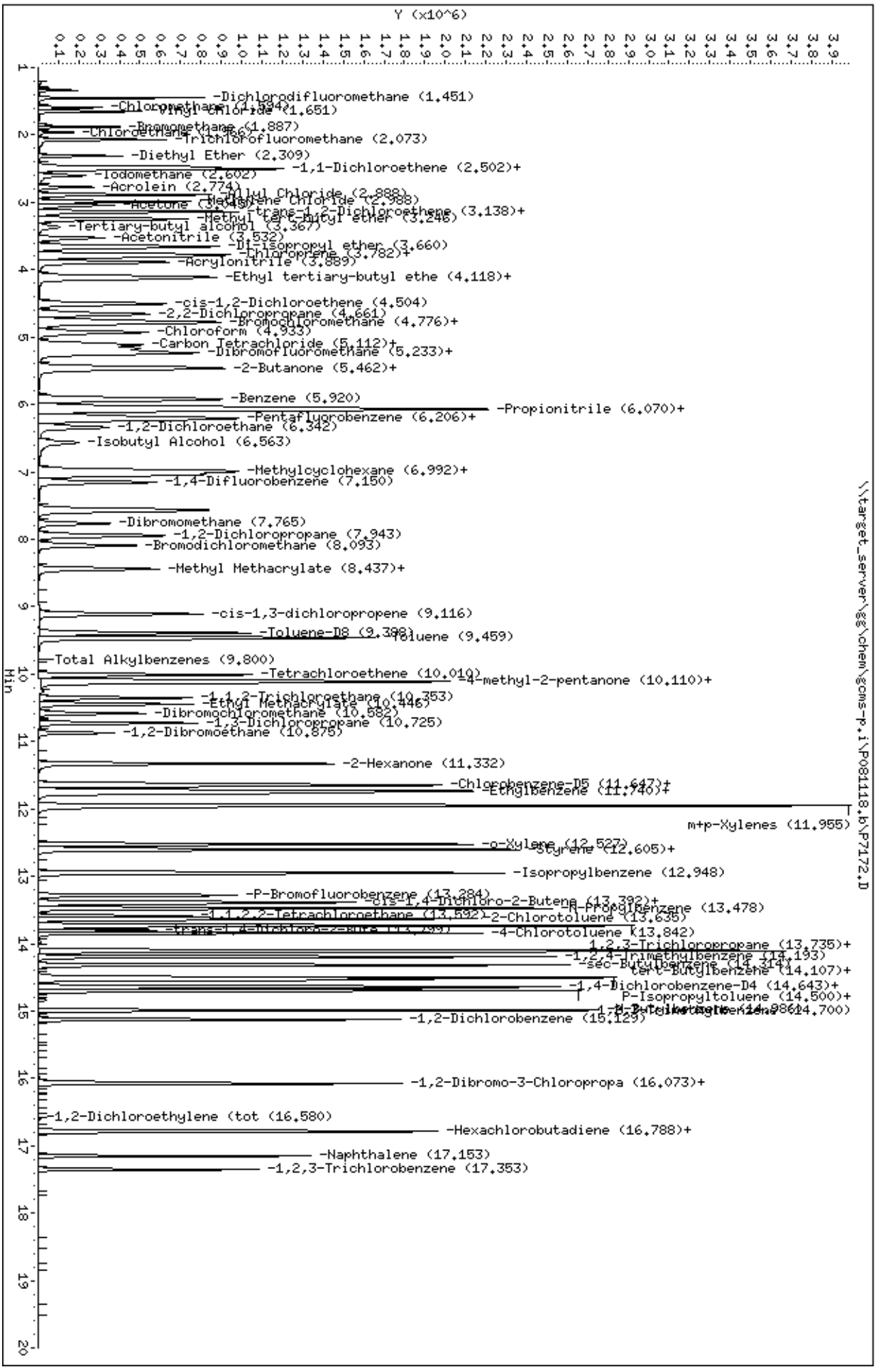
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.450	1.452	(0.235)	516873	100.000	98.9	
2	Chloromethane	50	1.593	1.595	(0.258)	314176	100.000	95.3	
3	Vinyl chloride	62	1.651	1.652	(0.267)	365549	100.000	100	
4	Bromomethane	94	1.887	1.888	(0.305)	156759	100.000	96.2	
5	Chloroethane	64	1.965	1.967	(0.318)	112897	100.000	64.9	
6	Trichlorofluoromethane	101	2.073	2.073	(0.335)	507950	100.000	98.2	
7	Diethyl Ether	59	2.309	2.317	(0.373)	209425	100.000	104	
8	1,1-Dichloroethene	96	2.473	2.475	(0.400)	271545	100.000	99.0	
9	Freon-113	151	2.502	2.503	(0.405)	228164	100.000	100	
10	Carbon Disulfide	76	2.509	2.510	(0.406)	713762	100.000	97.8	
11	Iodomethane	142	2.602	2.603	(0.421)	262294	100.000	98.4	
12	Acrolein	56	2.773	2.775	(0.449)	244924	500.000	522	
13	Allyl Chloride	41	2.888	2.889	(0.467)	516900	100.000	99.4	
14	Methylene Chloride	84	2.988	2.989	(0.483)	386507	100.000	99.7	
15	Acetone	43	3.045	3.047	(0.492)	481118	500.000	483	
16	trans-1,2-Dichloroethene	96	3.138	3.139	(0.507)	398238	100.000	97.0	
17	Methyl Acetate	43	3.159	3.161	(0.511)	249350	100.000	104	
18	Methyl tert-butyl ether	73	3.245	3.247	(0.525)	956097	100.000	106	
19	Tertiary-butyl alcohol	59	3.374	3.361	(0.546)	169358	500.000	554	
20	Acetonitrile	41	3.531	3.533	(0.571)	427033	1000.00	972	
21	Di-isopropyl ether	45	3.660	3.661	(0.592)	1020178	100.000	104	
22	Chloroprene	53	3.774	3.776	(0.610)	630292	100.000	102	
23	1,1-Dichloroethane	63	3.803	3.804	(0.615)	684174	100.000	99.5	

Data File: \\target_server\gg\chem\gcms-p.i\P081118.b\P7172.D
Report Date: 20-Aug-2018 14:32

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
	24 Acrylonitrile	52	3.889	3.890	(0.629)	543563	500.000	509	
	25 Ethyl tertiary-butyl ether	59	4.110	4.105	(0.665)	1026529	100.000	106	
	26 Vinyl Acetate	43	4.132	4.133	(0.577)	706343	100.000	102	
	27 cis-1,2-Dichloroethene	96	4.504	4.505	(0.728)	420000	100.000	100	
	28 2,2-Dichloropropane	77	4.661	4.655	(0.754)	630466	100.000	101	
	29 Bromochloromethane	128	4.804	4.798	(0.777)	147684	100.000	99.1	
	30 Cyclohexane	56	4.768	4.770	(0.771)	607885	100.000	105	
	31 Chloroform	83	4.925	4.927	(0.796)	705379	100.000	98.8	
	32 Carbon Tetrachloride	117	5.111	5.113	(0.714)	587371	100.000	100	
	33 Tetrahydrofuran	42	5.169	5.177	(0.836)	437005	500.000	548	
$	34 Dibromofluoromethane	113	5.233	5.227	(0.846)	216657	50.0000	50.7	
	35 1,1,1-Trichloroethane	97	5.233	5.242	(0.846)	698554	100.000	101	
	36 2-Butanone	43	5.476	5.470	(0.886)	744127	500.000	541	
	37 1,1-Dichloropropene	75	5.455	5.456	(0.762)	599178	100.000	101	
	38 Benzene	78	5.919	5.921	(0.827)	1609846	100.000	98.5	
	39 Propionitrile	54	6.041	6.035	(0.977)	485881	1000.00	997	
	40 Methacrylonitrile	41	6.069	6.064	(0.982)	1896996	1000.00	991	
*	41 Pentafluorobenzene	168	6.184	6.185	(1.000)	419371	50.0000		
$	42 1,2-Dichloroethane-D4	65	6.205	6.207	(1.003)	278998	50.0000	49.4	
	43 Tertiary-amyl methyl ether	73	6.220	6.214	(1.006)	959737	100.000	107	
	44 1,2-Dichloroethane	62	6.341	6.343	(0.886)	500791	100.000	92.1	
	45 Isobutyl Alcohol	43	6.563	6.557	(1.061)	244416	2000.00	2660	
	46 Methylcyclohexane	83	6.985	6.986	(1.129)	806965	100.000	104	
	47 Trichloroethene	95	7.042	7.043	(0.984)	408216	100.000	97.0	
*	48 1,4-Difluorobenzene	114	7.156	7.151	(1.000)	760626	50.0000		
	49 Dibromomethane	93	7.764	7.766	(1.085)	220546	100.000	99.0	
	50 1,2-Dichloropropane	63	7.943	7.944	(1.110)	346847	100.000	100	
	51 Bromodichloromethane	83	8.086	8.095	(1.130)	516880	100.000	102	
	52 Methyl Methacrylate	41	8.436	8.438	(1.179)	304214	100.000	105	
	53 Ethyl Methacrylate	69	10.445	10.447	(1.460)	531064	100.000	103	
	54 1,4-Dioxane	88	8.443	8.445	(1.180)	99346	2000.00	1650	
M	55 Total Alkylbenzenes	100				13137714	100.000	712	
	57 cis-1,3-dichloropropene	75	9.115	9.110	(1.274)	679333	100.000	107	
$	58 Toluene-D8	98	9.387	9.389	(1.312)	953968	50.0000	50.0	
	59 Toluene	92	9.459	9.460	(1.322)	1070600	100.000	98.4	
	60 Tetrachloroethene	164	10.009	10.011	(0.860)	326491	100.000	96.7	
	61 4-methyl-2-pentanone	43	10.102	10.104	(1.412)	1535253	500.000	541	
	62 trans-1,3-Dichloropropene	75	10.131	10.132	(1.416)	588682	100.000	104	
	63 1,1,2-Trichloroethane	83	10.352	10.354	(1.447)	260925	100.000	101	
	64 Dibromochloromethane	129	10.581	10.583	(0.910)	386074	100.000	106	
	65 1,3-Dichloropropane	76	10.724	10.726	(0.922)	638801	100.000	103	
	66 1,2-Dibromoethane	107	10.874	10.876	(1.520)	328518	100.000	104	
	67 2-Hexanone	43	11.332	11.326	(0.974)	1100260	500.000	552	
*	68 Chlorobenzene-D5	117	11.632	11.634	(1.000)	767268	50.0000		
	69 Chlorobenzene	112	11.654	11.655	(1.002)	1095644	100.000	97.4	
	70 Ethylbenzene	91	11.732	11.734	(1.009)	2052344	100.000	99.3	
	71 1,1,1,2-Tetrachloroethane	131	11.768	11.770	(1.012)	393202	100.000	102	
	72 m+p-Xylenes	91	11.954	11.956	(1.028)	3143155	200.000	198	
	73 o-Xylene	91	12.526	12.528	(1.077)	1629183	100.000	105	
	74 Styrene	104	12.605	12.606	(1.084)	1216344	100.000	106	
	75 Bromoform	173	12.598	12.599	(1.083)	221280	100.000	107	
	76 Isopropylbenzene	105	12.948	12.949	(0.885)	1929057	100.000	102	
$	77 P-Bromofluorobenzene	95	13.284	13.286	(1.856)	423800	50.0000	50.7	
	78 cis-1,4-Dichloro-2-Butene	53	13.406	13.407	(0.916)	155603	100.000	95.8	

Data File: \\target_server\gg\chem\gcms-p.i\P081118.b\P7172.D
Report Date: 20-Aug-2018 14:32

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	79 Bromobenzene	156	13.384	13.386	(0.915)	413169	100.000	98.0	
	80 N-Propylbenzene	91	13.477	13.479	(0.921)	2400352	100.000	97.7	
	81 1,1,2,2-Tetrachloroethane	83	13.591	13.586	(0.929)	419151	100.000	104	
	82 2-Chlorotoluene	91	13.634	13.636	(0.932)	1418302	100.000	98.4	
	83 1,2,3-Trichloropropane	75	13.720	13.722	(0.938)	386725	100.000	99.4	
	84 1,3,5-Trimethylbenzene	105	13.734	13.736	(0.939)	1673060	100.000	102	
	85 trans-1,4-Dichloro-2-Butene	53	13.799	13.800	(0.943)	127603	100.000	98.2	
	86 4-Chlorotoluene	91	13.842	13.843	(0.946)	1490344	100.000	98.1	
	87 tert-Butylbenzene	119	14.106	14.108	(0.964)	1661479	100.000	100	
	88 Pentachloroethane	165	14.113	14.108	(0.965)	212367	100.000	93.2	
	89 1,2,4-Trimethylbenzene	105	14.192	14.194	(0.970)	1653193	100.000	103	
	90 sec-Butylbenzene	105	14.314	14.315	(0.978)	2131732	100.000	101	
	91 P-Isopropyltoluene	119	14.499	14.501	(0.991)	1933774	100.000	104	
	92 1,3-Dichlorobenzene	146	14.535	14.537	(0.994)	825342	100.000	96.9	
*	93 1,4-Dichlorobenzene-D4	152	14.628	14.630	(1.000)	385750	50.0000		
	94 1,4-Dichlorobenzene	146	14.650	14.651	(1.001)	837268	100.000	95.2	
	95 1,2,3-Trimethylbenzene	105	14.700	14.701	(1.005)	1680264	100.000	92.5	
	96 N-Butylbenzene	91	14.986	14.987	(1.024)	1684124	100.000	104	
M	97 1,2-Dichloroethylene (total)	96				818238	100.000	197	
	98 1,2-Dichlorobenzene	146	15.129	15.130	(1.034)	764692	100.000	99.1	
	99 1,2-Dibromo-3-Chloropropane	157	16.044	16.045	(1.097)	84931	100.000	116	
	100 1,3,5-Trichlorobenzene	180	16.080	16.081	(1.099)	569036	100.000	97.4	
	101 Hexachlorobutadiene	225	16.773	16.782	(1.147)	251931	100.000	97.2	
	102 1,2,4-Trichlorobenzene	180	16.795	16.796	(1.148)	418876	100.000	105	
	103 Naphthalene	128	17.152	17.154	(1.173)	985283	100.000	113	
	104 1,2,3-Trichlorobenzene	180	17.352	17.354	(1.186)	308068	100.000	110	
M	105 Xylenes (total)	106				4772338	100.000	303	


Data File: \\target_server\gg\chem\gcms-p.i\P081118.b\P7172.D
Date : 11-AUG-2018 14:53
Client ID:
Sample Info: WG234067-5
Purge Volume: 5.0
Column phase: RTX-VMS
Instrument: gcms-p.i
Operator: HG
Column diameter: 0.18
Y (x10^6)
Min
\\target_server\gg\chem\gcms-p.i\P081118.b\P7172.D
-Dichlorodifluoromethane (1.451)
-Chloromethane (1.594)
Vinyl Chloride (1.651)
-Bromomethane (1.887)
-Chloroethane (1.966)
-Trichlorofluoromethane (2.073)
-Diethyl Ether (2.309)
-1,1-Dichloroethene (2.502)+
-Iodomethane (2.602)
-Acrolein (2.774)
-Allyl Chloride (2.888)
-Methylene Chloride (2.988)
-Acetone (3.048)
-trans-1,2-Dichloroethene (3.138)+
-Methyl tert-butyl ether (3.246)
-Tertiary-butyl alcohol (3.367)
-Acetonitrile (3.532)
-Di-isopropyl ether (3.660)
-Chloroprene (3.782)+
-Acrylonitrile (3.889)
-Ethyl tertiary-butyl ethe (4.118)+
-cis-1,2-Dichloroethene (4.504)
-2,2-Dichloropropane (4.661)
-Bromochloromethane (4.776)+
-Chloroform (4.933)
-Carbon Tetrachloride (5.112)+
-Dibromofluoromethane (5.233)+
-2-Butanone (5.462)+
-Benzene (5.920)
-Propionitrile (6.070)+
-Pentafluorobenzene (6.206)+
-1,2-Dichloroethane (6.342)
-Isobutyl Alcohol (6.563)
-Methylcyclohexane (6.992)+
-1,4-Difluorobenzene (7.150)
-Dibromomethane (7.765)
-1,2-Dichloropropane (7.943)
-Bromodichloromethane (8.093)
-Methyl Methacrylate (8.437)+
-cis-1,3-dichloropropene (9.116)
-Toluene-D8 (9.398)
Toluene (9.459)
-Total Alkylbenzenes (9.800)
-Tetrachloroethene (10.010)
-4-methyl-2-pentanone (10.110)+
-1,1,2-Trichloroethane (10.353)
-Ethyl Methacrylate (10.446)
-Dibromochloromethane (10.582)
-1,3-Dichloropropane (10.725)
-1,2-Dibromoethane (10.875)
-2-Hexanone (11.332)
-Chlorobenzene-D5 (11.647)+
-Ethylbenzene (11.740)+
m+p-Xylenes (11.955)
-o-Xylene (12.527)
Styrene (12.605)+
-Isopropylbenzene (12.948)
-P-Bromofluorobenzene (13.284)
-cis-1,4-Dichloro-2-Butene (13.392)+
-n-Propylbenzene (13.478)
-1,1,2,2-Tetrachloroethane (13.592)
-2-Chlorotoluene (13.635)
-trans-1,4-Dichloro-2-Bute (13.799)
-4-Chlorotoluene (13.842)
1,2,3-Trichloropropane (13.735)+
-1,2,4-Trimethylbenzene (14.193)
-sec-Butylbenzene (14.314)
tert-Butylbenzene (14.107)+
-1,4-Dichlorobenzene-D4 (14.643)+
P-Isopropyltoluene (14.500)+
-1,2-Dichlorobenzene (15.129)
-1,2-Dibromo-3-Chloropropa (16.073)+
-1,2-Dichloroethylene (tot (16.580)
-Hexachlorobutadiene (16.788)+
-Naphthalene (17.153)
-1,2,3-Trichlorobenzene (17.353)

Katahdin
ANALYTICAL SERVICES

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL7420
Lab ID : WG234298-4
Analytical Date: 08/14/18 07:26
Lab File ID : P7207.D
Instrument ID: GCMS-P
Initial Calibration Date(s): 08/11/18 12:12 08/11/18 14:53
Column ID:

	Compound	$\overline{\text{RRF}}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
3	Vinyl chloride	0.43594	0.43007	0.43007	0.010	-1.34571	20.00000	Averaged
8	1,1-Dichloroethene	0.32700	0.30005	0.30005	0.100	-8.24305	20.00000	Averaged
31	Chloroform	0.85089	0.80926	0.80926	0.010	-4.89217	20.00000	Averaged
32	Carbon Tetrachloride	0.38559	0.35794	0.35794	0.010	-7.17043	20.00000	Averaged
36	2-Butanone	0.16402	0.17946	0.17946	0.010	9.41716	20.00000	Averaged
38	Benzene	1.07387	1.02599	1.02599	0.010	-4.45868	20.00000	Averaged
44	1,2-Dichloroethane	0.35733	0.32272	0.32272	0.010	-9.68702	20.00000	Averaged
47	Trichloroethene	0.27677	0.25716	0.25716	0.010	-7.08269	20.00000	Averaged
60	Tetrachloroethene	0.22008	0.20252	0.20252	0.010	-7.97576	20.00000	Averaged
69	Chlorobenzene	0.73262	0.67098	0.67098	0.300	-8.41329	20.00000	Averaged
34	Dibromofluoromethane	0.50927	0.51845	0.51845	0.010	1.80228	20.00000	Averaged
42	1,2-Dichloroethane-D4	0.67347	0.66924	0.66924	0.010	-0.62873	20.00000	Averaged
58	Toluene-D8	1.25488	1.25931	1.25931	0.010	0.35315	20.00000	Averaged
77	P-Bromofluorobenzene	0.54968	0.55773	0.55773	0.010	1.46373	20.00000	Averaged

*** = Compound out of QC criteria**

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sales@katahdinlab.com

Data File: \\target_server\gg\chem\gcms-p.i\P081418.b\P7207.D
Report Date: 20-Aug-2018 14:39

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-p.i\P081418.b\P7207.D
Lab Smp Id: WG234298-4
Inj Date : 14-AUG-2018 07:26
Operator : HG   Inst ID: gcms-p.i
Smp Info : WG234298-4,SL7420
Misc Info : WG234298,WG234067-4,SL7420-2
Comment   : SW846 5030
Method   : \\target_server\gg\chem\gcms-p.i\P081418.b\P8A05(85)D.m
Meth Date : 20-Aug-2018 14:37 gcms-p.i   Quant Type: ISTD
Cal Date : 11-AUG-2018 13:49   Cal File: P7170.D
Als bottle: 1   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.453	1.452	(0.235)	268119	50.0000	51.2	
2	Chloromethane	50	1.596	1.595	(0.258)	154883	50.0000	46.9	
3	Vinyl chloride	62	1.653	1.652	(0.267)	180652	50.0000	49.3	
4	Bromomethane	94	1.882	1.888	(0.304)	72432	50.0000	43.7	
5	Chloroethane	64	1.968	1.967	(0.318)	97527	50.0000	56.0	
6	Trichlorofluoromethane	101	2.075	2.073	(0.335)	246339	50.0000	47.6	
7	Diethyl Ether	59	2.311	2.317	(0.374)	101245	50.0000	50.0	
8	1,1-Dichloroethene	96	2.475	2.475	(0.400)	126035	50.0000	45.9	
9	Freon-113	151	2.504	2.503	(0.405)	102797	50.0000	45.0	
10	Carbon Disulfide	76	2.511	2.510	(0.406)	331385	50.0000	45.3	
11	Iodomethane	142	2.604	2.603	(0.421)	139752	50.0000	52.0	
12	Acrolein	56	2.776	2.775	(0.449)	118104	250.000	258	
13	Allyl Chloride	41	2.890	2.889	(0.467)	251186	50.0000	48.2	
14	Methylene Chloride	84	2.990	2.989	(0.483)	195417	50.0000	49.8	
15	Acetone	43	3.040	3.047	(0.491)	244831	250.000	246	
16	trans-1,2-Dichloroethene	96	3.140	3.139	(0.508)	193729	50.0000	47.1	
17	Methyl Acetate	43	3.155	3.161	(0.510)	127968	50.0000	51.8	
18	Methyl tert-butyl ether	73	3.248	3.247	(0.525)	471162	50.0000	52.2	
19	Tertiary-butyl alcohol	59	3.362	3.361	(0.543)	81132	250.000	239	
20	Acetonitrile	41	3.526	3.533	(0.570)	216536	500.000	492	
21	Di-isopropyl ether	45	3.655	3.661	(0.591)	481107	50.0000	48.9	
22	Chloroprene	53	3.777	3.776	(0.611)	292495	50.0000	47.2	
23	1,1-Dichloroethane	63	3.805	3.804	(0.615)	333033	50.0000	48.4	
24	Acrylonitrile	52	3.884	3.890	(0.628)	275048	250.000	257	

Data File: \\target_server\gg\chem\gcms-p.i\P081418.b\P7207.D
Report Date: 20-Aug-2018 14:39

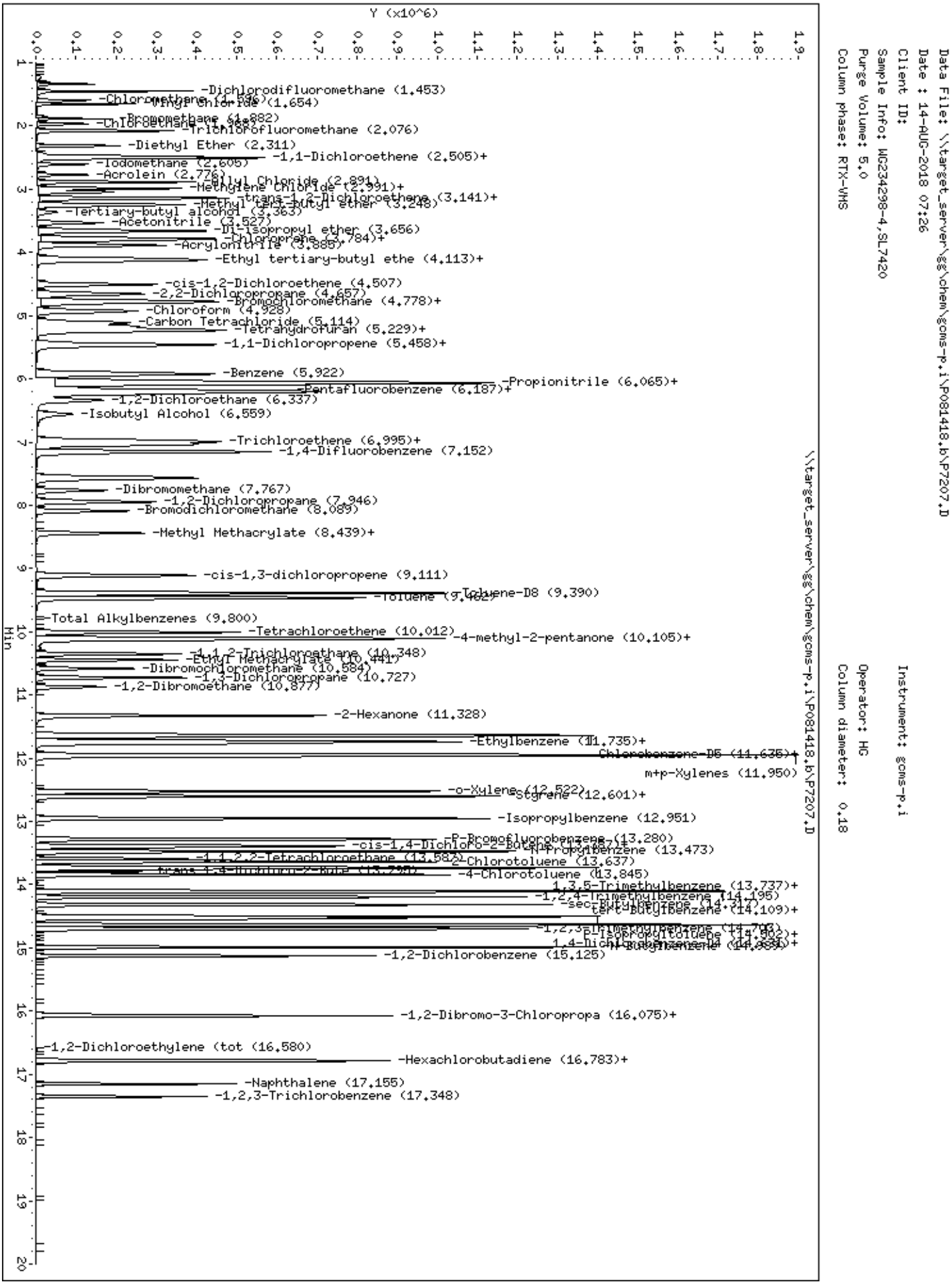
							AMOUNTS		
		QUANT SIG					CAL-AMT	ON-COL	
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/l)	(ug/l)	REVIEW CODE
	25 Ethyl tertiary-butyl ether	59	4.106	4.105	(0.664)	491412	50.0000	50.6	
	26 Vinyl Acetate	43	4.134	4.133	(0.578)	350729	50.0000	52.4	
	27 cis-1,2-Dichloroethene	96	4.506	4.505	(0.728)	201711	50.0000	48.1	
	28 2,2-Dichloropropane	77	4.656	4.655	(0.753)	303919	50.0000	48.8	
	29 Bromochloromethane	128	4.799	4.798	(0.776)	80930	50.0000	55.0	
	30 Cyclohexane	56	4.771	4.770	(0.771)	284131	50.0000	49.2	
	31 Chloroform	83	4.928	4.927	(0.797)	339928	50.0000	47.6	
	32 Carbon Tetrachloride	117	5.114	5.113	(0.715)	274338	50.0000	46.4	
	33 Tetrahydrofuran	42	5.171	5.177	(0.836)	221752	250.000	278	
$	34 Dibromofluoromethane	113	5.228	5.227	(0.845)	217773	50.0000	50.9	
	35 1,1,1-Trichloroethane	97	5.235	5.242	(0.846)	327667	50.0000	47.4	
	36 2-Butanone	43	5.471	5.470	(0.884)	376912	250.000	274	
	37 1,1-Dichloropropene	75	5.457	5.456	(0.763)	281511	50.0000	47.2	
	38 Benzene	78	5.922	5.921	(0.828)	786345	50.0000	47.8	
	39 Propionitrile	54	6.036	6.035	(0.976)	249063	500.000	510	
	40 Methacrylonitrile	41	6.065	6.064	(0.980)	986989	500.000	515	
*	41 Pentafluorobenzene	168	6.186	6.185	(1.000)	420048	50.0000		
$	42 1,2-Dichloroethane-D4	65	6.208	6.207	(1.003)	281112	50.0000	49.7	
	43 Tertiary-amyl methyl ether	73	6.215	6.214	(1.005)	445852	50.0000	48.7	
	44 1,2-Dichloroethane	62	6.336	6.343	(0.886)	247340	50.0000	45.2	
	45 Isobutyl Alcohol	43	6.558	6.557	(1.060)	114555	1000.00	1130	
	46 Methylcyclohexane	83	6.987	6.986	(1.129)	372160	50.0000	48.1	
	47 Trichloroethene	95	7.044	7.043	(0.985)	197097	50.0000	46.4	
*	48 1,4-Difluorobenzene	114	7.152	7.151	(1.000)	766426	50.0000		
	49 Dibromomethane	93	7.767	7.766	(1.086)	108215	50.0000	48.2	
	50 1,2-Dichloropropane	63	7.945	7.944	(1.111)	168842	50.0000	48.5	
	51 Bromodichloromethane	83	8.088	8.095	(1.131)	243475	50.0000	47.8	
	52 Methyl Methacrylate	41	8.439	8.438	(1.180)	141162	50.0000	50.8	
	53 Ethyl Methacrylate	69	10.441	10.447	(1.460)	248895	50.0000	52.0	
	54 1,4-Dioxane	88	8.439	8.445	(1.180)	47759	1000.00	785	
M	55 Total Alkylbenzenes	100				6280117	50.0000	(a)	
	57 cis-1,3-dichloropropene	75	9.111	9.110	(1.274)	317587	50.0000	49.7	
$	58 Toluene-D8	98	9.390	9.389	(1.313)	965168	50.0000	50.2	
	59 Toluene	92	9.461	9.460	(1.323)	517818	50.0000	47.2	
	60 Tetrachloroethene	164	10.012	10.011	(0.861)	159269	50.0000	46.0	
	61 4-methyl-2-pentanone	43	10.105	10.104	(1.413)	776537	250.000	237	
	62 trans-1,3-Dichloropropene	75	10.126	10.132	(1.416)	280481	50.0000	49.2	
	63 1,1,2-Trichloroethane	83	10.348	10.354	(1.447)	129899	50.0000	50.1	
	64 Dibromochloromethane	129	10.584	10.583	(0.910)	179152	50.0000	47.8	
	65 1,3-Dichloropropane	76	10.727	10.726	(0.923)	307030	50.0000	48.3	
	66 1,2-Dibromoethane	107	10.877	10.876	(1.521)	159747	50.0000	50.0	
	67 2-Hexanone	43	11.327	11.326	(0.974)	549887	250.000	232	
*	68 Chlorobenzene-D5	117	11.628	11.634	(1.000)	786418	50.0000		
	69 Chlorobenzene	112	11.656	11.655	(1.002)	527673	50.0000	45.8	
	70 Ethylbenzene	91	11.735	11.734	(1.009)	988778	50.0000	46.7	
	71 1,1,1,2-Tetrachloroethane	131	11.771	11.770	(1.012)	185823	50.0000	47.2	
	72 m+p-Xylenes	91	11.949	11.956	(1.028)	1537792	100.000	94.5	
	73 o-Xylene	91	12.521	12.528	(1.077)	773017	50.0000	48.4	
	74 Styrene	104	12.600	12.606	(1.084)	575544	50.0000	46.4	
	75 Bromoform	173	12.600	12.599	(1.084)	103594	50.0000	46.6	
	76 Isopropylbenzene	105	12.950	12.949	(0.885)	910290	50.0000	47.2	
$	77 P-Bromofluorobenzene	95	13.279	13.286	(1.857)	427459	50.0000	50.7	
	78 cis-1,4-Dichloro-2-Butene	53	13.408	13.407	(0.916)	76978	50.0000	46.5	
	79 Bromobenzene	156	13.387	13.386	(0.915)	197999	50.0000	46.1	

Data File: \\target_server\gg\chem\gcms-p.i\P081418.b\P7207.D
Report Date: 20-Aug-2018 14:39

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
80	N-Propylbenzene	91	13.472	13.479	(0.921)	1160292	50.0000	46.3	
81	1,1,2,2-Tetrachloroethane	83	13.587	13.586	(0.929)	205974	50.0000	48.7	
82	2-Chlorotoluene	91	13.637	13.636	(0.932)	678590	50.0000	46.2	
83	1,2,3-Trichloropropane	75	13.723	13.722	(0.938)	190631	50.0000	48.1	
84	1,3,5-Trimethylbenzene	105	13.737	13.736	(0.939)	796901	50.0000	47.7	
85	trans-1,4-Dichloro-2-Butene	53	13.794	13.800	(0.943)	62869	50.0000	47.5	
86	4-Chlorotoluene	91	13.844	13.843	(0.946)	713412	50.0000	46.1	
87	tert-Butylbenzene	119	14.102	14.108	(0.964)	788633	50.0000	46.6	
88	Pentachloroethane	165	14.109	14.108	(0.964)	99250	50.0000	46.2	
89	1,2,4-Trimethylbenzene	105	14.194	14.194	(0.970)	789852	50.0000	47.1	
90	sec-Butylbenzene	105	14.316	14.315	(0.978)	1017821	50.0000	47.3	
91	P-Isopropyltoluene	119	14.502	14.501	(0.991)	918543	50.0000	47.2	
92	1,3-Dichlorobenzene	146	14.538	14.537	(0.994)	393776	50.0000	45.4	
* 93	1,4-Dichlorobenzene-D4	152	14.631	14.630	(1.000)	393252	50.0000		
94	1,4-Dichlorobenzene	146	14.645	14.651	(1.001)	394216	50.0000	44.0	
95	1,2,3-Trimethylbenzene	105	14.702	14.701	(1.005)	793605	50.0000	42.8	
96	N-Butylbenzene	91	14.988	14.987	(1.024)	808075	50.0000	47.7	
M 97	1,2-Dichloroethylene (total)	96				395440	50.0000	(a)	
98	1,2-Dichlorobenzene	146	15.124	15.130	(1.034)	366360	50.0000	46.6	
99	1,2-Dibromo-3-Chloropropane	157	16.046	16.045	(1.097)	37574	50.0000	42.4	
100	1,3,5-Trichlorobenzene	180	16.075	16.081	(1.099)	265947	50.0000	44.6	
101	Hexachlorobutadiene	225	16.776	16.782	(1.147)	117542	50.0000	44.5	
102	1,2,4-Trichlorobenzene	180	16.797	16.796	(1.148)	181587	50.0000	44.8	
103	Naphthalene	128	17.155	17.154	(1.173)	378911	50.0000	49.2	
104	1,2,3-Trichlorobenzene	180	17.355	17.354	(1.186)	123808	50.0000	47.7	
M 105	Xylenes (total)	106				2310809	150.000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).


Data File: \\target_server\gg\chem\gcms-p.i\P081418.b\P7207.D
Date : 14-AUG-2018 07:26
Client ID:
Sample Info: WG234298-4,SL7420
Purge Volume: 5.0
Column phase: RTX-VMS
Instrument: gcms-p.i
Operator: HG
Column diameter: 0.18
Y (x10^6)
Min
\\target_server\gg\chem\gcms-p.i\P081418.b\P7207.D
-Dichlorodifluoromethane (1.453)
-Chloromethane (1.596)
-Vinyl Chloride (1.654)
-Bromomethane (1.882)
-Chloroethane (1.968)
-Trichlorofluoromethane (2.076)
-Diethyl Ether (2.311)
-1,1-Dichloroethene (2.505)+
-Iodomethane (2.605)
-Acrolein (2.776)
-Allyl Chloride (2.891)
-Methylene Chloride (2.991)+
-trans-1,2-Dichloroethene (3.141)+
-Methyl tert-butyl ether (3.248)
-Tertiary-butyl alcohol (3.363)
-Acetonitrile (3.527)
-Di-isopropyl ether (3.656)
-Chloroprene (3.784)+
-Acrylonitrile (3.885)
-Ethyl tertiary-butyl ethe (4.113)+
-cis-1,2-Dichloroethene (4.507)
-2,2-Dichloropropane (4.657)
-Bromochloromethane (4.778)+
-Chloroform (4.928)
-Carbon Tetrachloride (5.114)
-Tetrahydrofuran (5.229)+
-1,1-Dichloropropene (5.458)+
-Benzene (5.922)
-Propionitrile (6.065)+
-Pentafluorobenzene (6.187)+
-1,2-Dichloroethane (6.337)
-Isobutyl Alcohol (6.559)
-Trichloroethene (6.995)+
-1,4-Difluorobenzene (7.152)
-Dibromomethane (7.767)
-1,2-Dichloropropane (7.946)
-Bromodichloromethane (8.089)
-Methyl Methacrylate (8.439)+
-cis-1,3-dichloropropene (9.111)
-Toluene-D8 (9.390)
-Toluene (9.462)
-Total Alkylbenzenes (9.800)
-Tetrachloroethene (10.012)
-4-methyl-2-pentanone (10.105)+
-1,1,2-Trichloroethane (10.348)
-Ethyl Methacrylate (10.441)
-Dibromochloromethane (10.584)
-1,3-Dichloropropane (10.727)
-1,2-Dibromoethane (10.877)
-2-Hexanone (11.328)
-Ethylbenzene (11.735)+
Chlorobenzene-D5 (11.635)+
m+p-Xylenes (11.950)
-o-Xylene (12.522)
-Styrene (12.601)+
-Isopropylbenzene (12.951)
-P-Bromofluorobenzene (13.280)
-cis-1,4-Dichloro-2-Butene (13.687)+
-N-Propylbenzene (13.473)
-1,1,2,2-Tetrachloroethane (13.587)
-2-Chlorotoluene (13.637)
-trans-1,4-Dichloro-2-Butene (13.795)
-4-Chlorotoluene (13.845)
1,3,5-Trimethylbenzene (13.737)+
-1,2,4-Trimethylbenzene (14.195)
-sec-Butylbenzene (14.317)
tert-Butylbenzene (14.109)+
-1,2,3-Trimethylbenzene (14.703)
P-Isopropyltoluene (14.502)+
1,4-Dichlorobenzene-D4 (14.631)+
-N-Butylbenzene (14.989)
-1,2-Dichlorobenzene (15.125)
-1,2-Dibromo-3-Chloropropa (16.075)+
-1,2-Dichloroethylene (tot (16.580)
-Hexachlorobutadiene (16.783)+
-Naphthalene (17.155)
-1,2,3-Trichlorobenzene (17.348)

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL7420
Lab ID : WG234298-5
Analytical Date: 08/14/18 18:26
Lab File ID : P7227.D
Instrument ID: GCMS-P
Initial Calibration Date(s): 08/11/18 12:12 08/11/18 14:53
Column ID:

	Compound	$\overline{RRF}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type	
3	Vinyl chloride	0.43594	0.46765	0.46765	0.010	7.27455	50.00000	Averaged	
8	1,1-Dichloroethene	0.32700	0.34003	0.34003	0.100	3.98272	50.00000	Averaged	
31	Chloroform	0.85089	0.85317	0.85317	0.010	0.26783	50.00000	Averaged	
32	Carbon Tetrachloride	0.38559	0.37869	0.37869	0.010	-1.79134	50.00000	Averaged	
36	2-Butanone	0.16402	0.15088	0.15088	0.010	-8.01027	50.00000	Averaged	
38	Benzene	1.07387	1.06841	1.06841	0.010	-0.50840	50.00000	Averaged	
44	1,2-Dichloroethane	0.35733	0.34290	0.34290	0.010	-4.03930	50.00000	Averaged	
47	Trichloroethene	0.27677	0.28336	0.28336	0.010	2.38411	50.00000	Averaged	
60	Tetrachloroethene	0.22008	0.36417	0.36417	0.010	65.47492	50.00000	Averaged	*
69	Chlorobenzene	0.73262	0.72142	0.72142	0.300	-1.52923	50.00000	Averaged	
34	Dibromofluoromethane	0.50927	0.51553	0.51553	0.010	1.22878	50.00000	Averaged	
42	1,2-Dichloroethane-D4	0.67347	0.66639	0.66639	0.010	-1.05221	50.00000	Averaged	
58	Toluene-D8	1.25488	1.27118	1.27118	0.010	1.29867	50.00000	Averaged	
77	P-Bromofluorobenzene	0.54968	0.57029	0.57029	0.010	3.74813	50.00000	Averaged	

*** = Compound out of QC criteria**

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sales@katahdinlab.com

Data File: \\target_server\gg\chem\gcms-p.i\P081418.b\P7227.D
Report Date: 20-Aug-2018 14:41

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-p.i\P081418.b\P7227.D
Lab Smp Id: WG234298-5
Inj Date : 14-AUG-2018 18:26
Operator : HG   Inst ID: gcms-p.i
Smp Info : WG234298-5,SL7420
Misc Info : WG234298,WG234067-4,SL7420-2
Comment   : SW846 5030
Method   : \\target_server\gg\chem\gcms-p.i\P081418.b\P8A05(85)D.m
Meth Date : 20-Aug-2018 14:40 tcote   Quant Type: ISTD
Cal Date : 11-AUG-2018 13:49   Cal File: P7170.D
Als bottle: 21   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.452	1.452	(0.235)	256277	50.0000	51.7	
2	Chloromethane	50	1.595	1.595	(0.258)	161639	50.0000	51.7	
3	Vinyl chloride	62	1.659	1.652	(0.268)	185935	50.0000	53.6	
4	Bromomethane	94	1.888	1.888	(0.305)	73685	50.0000	47.0	
5	Chloroethane	64	1.981	1.967	(0.320)	110107	50.0000	66.8	
6	Trichlorofluoromethane	101	2.081	2.073	(0.337)	263330	50.0000	53.7	
7	Diethyl Ether	59	2.317	2.317	(0.375)	102650	50.0000	53.6	
8	1,1-Dichloroethene	96	2.481	2.475	(0.401)	135192	50.0000	52.0	
9	Freon-113	151	2.510	2.503	(0.406)	103294	50.0000	47.8	
10	Carbon Disulfide	76	2.517	2.510	(0.407)	355358	50.0000	51.3	
11	Iodomethane	142	2.610	2.603	(0.422)	124196	50.0000	48.8	
12	Acrolein	56	2.775	2.775	(0.449)	64663	250.000	150	
13	Allyl Chloride	41	2.896	2.889	(0.468)	224055	50.0000	45.4	
14	Methylene Chloride	84	2.996	2.989	(0.484)	191016	50.0000	51.4	
15	Acetone	43	3.046	3.047	(0.493)	206793	250.000	219	
16	trans-1,2-Dichloroethene	96	3.146	3.139	(0.509)	188812	50.0000	48.5	
17	Methyl Acetate	43	3.161	3.161	(0.511)	105050	50.0000	44.9	
18	Methyl tert-butyl ether	73	3.254	3.247	(0.526)	428527	50.0000	50.2	
19	Tertiary-butyl alcohol	59	3.354	3.361	(0.542)	52875	250.000	164	
20	Acetonitrile	41	3.532	3.533	(0.571)	174013	500.000	418	
21	Di-isopropyl ether	45	3.661	3.661	(0.592)	458831	50.0000	49.3	
22	Chloroprene	53	3.776	3.776	(0.610)	280641	50.0000	47.8	
23	1,1-Dichloroethane	63	3.811	3.804	(0.616)	329936	50.0000	50.6	
24	Acrylonitrile	52	3.890	3.890	(0.629)	231617	250.000	229	

Data File: \\target_server\gg\chem\gcms-p.i\P081418.b\P7227.D
Report Date: 20-Aug-2018 14:41

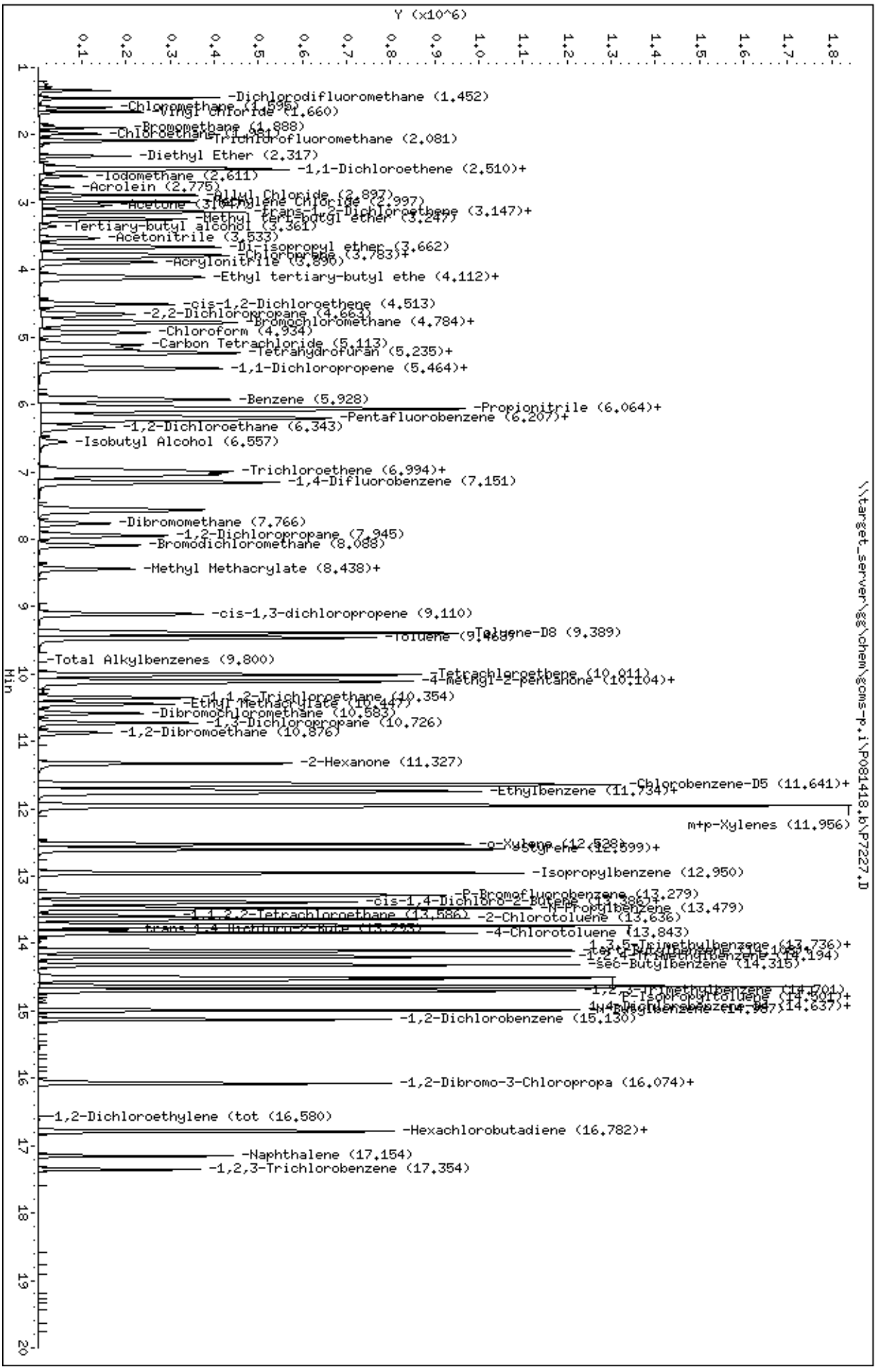
			QUANT SIG					AMOUNTS		
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	25	Ethyl tertiary-butyl ether	59	4.112	4.105	(0.665)	459253	50.0000	49.9	
	26	Vinyl Acetate	43	4.140	4.133	(0.579)	223195	50.0000	35.8	
	27	cis-1,2-Dichloroethene	96	4.512	4.505	(0.730)	199687	50.0000	50.3	
	28	2,2-Dichloropropane	77	4.662	4.655	(0.754)	242094	50.0000	41.1	
	29	Bromochloromethane	128	4.805	4.798	(0.777)	79585	50.0000	57.2	
	30	Cyclohexane	56	4.777	4.770	(0.772)	279750	50.0000	51.1	
	31	Chloroform	83	4.934	4.927	(0.798)	339211	50.0000	50.1	
	32	Carbon Tetrachloride	117	5.113	5.113	(0.715)	270559	50.0000	49.1	
	33	Tetrahydrofuran	42	5.177	5.177	(0.837)	177503	250.000	235	
$	34	Dibromofluoromethane	113	5.234	5.227	(0.846)	204969	50.0000	50.6	
	35	1,1,1-Trichloroethane	97	5.241	5.242	(0.847)	326689	50.0000	49.9	
	36	2-Butanone	43	5.470	5.470	(0.884)	299938	250.000	230	
	37	1,1-Dichloropropene	75	5.456	5.456	(0.763)	276059	50.0000	49.6	
	38	Benzene	78	5.928	5.921	(0.829)	763345	50.0000	49.7	
	39	Propionitrile	54	6.035	6.035	(0.976)	198348	500.000	429	
	40	Methacrylonitrile	41	6.064	6.064	(0.980)	832940	500.000	459	
*	41	Pentafluorobenzene	168	6.185	6.185	(1.000)	397591	50.0000		
$	42	1,2-Dichloroethane-D4	65	6.214	6.207	(1.005)	264949	50.0000	49.5	
	43	Tertiary-amyl methyl ether	73	6.221	6.214	(1.006)	409955	50.0000	47.3	
	44	1,2-Dichloroethane	62	6.342	6.343	(0.887)	244991	50.0000	48.0	
	45	Isobutyl Alcohol	43	6.550	6.557	(1.059)	74189	1000.00	774	
	46	Methylcyclohexane	83	6.993	6.986	(1.131)	349768	50.0000	47.8	
	47	Trichloroethene	95	7.043	7.043	(0.985)	202455	50.0000	51.2	
*	48	1,4-Difluorobenzene	114	7.150	7.151	(1.000)	714468	50.0000		
	49	Dibromomethane	93	7.765	7.766	(1.086)	103935	50.0000	49.7	
	50	1,2-Dichloropropane	63	7.944	7.944	(1.111)	163794	50.0000	50.4	
	51	Bromodichloromethane	83	8.094	8.095	(1.132)	244631	50.0000	51.5	
	52	Methyl Methacrylate	41	8.437	8.438	(1.180)	119045	50.0000	45.9	
	53	Ethyl Methacrylate	69	10.447	10.447	(1.461)	217457	50.0000	48.8	
	54	1,4-Dioxane	88	8.437	8.445	(1.180)	29362	1000.00	518	
M	55	Total Alkylbenzenes	100				5973019	50.0000	(a)	
	57	cis-1,3-dichloropropene	75	9.110	9.110	(1.274)	304634	50.0000	51.1	
$	58	Toluene-D8	98	9.388	9.389	(1.313)	908214	50.0000	50.6	
	59	Toluene	92	9.467	9.460	(1.324)	504186	50.0000	49.3	
	60	Tetrachloroethene	164	10.010	10.011	(0.860)	268720	50.0000	82.7	
	61	4-methyl-2-pentanone	43	10.103	10.104	(1.413)	648645	250.000	210	
	62	trans-1,3-Dichloropropene	75	10.132	10.132	(1.417)	264579	50.0000	49.8	
	63	1,1,2-Trichloroethane	83	10.354	10.354	(1.448)	123547	50.0000	51.1	
	64	Dibromochloromethane	129	10.582	10.583	(0.910)	174316	50.0000	49.6	
	65	1,3-Dichloropropane	76	10.725	10.726	(0.922)	294865	50.0000	49.4	
	66	1,2-Dibromoethane	107	10.876	10.876	(1.521)	147200	50.0000	49.4	
	67	2-Hexanone	43	11.326	11.326	(0.974)	439059	250.000	195	
*	68	Chlorobenzene-D5	117	11.634	11.634	(1.000)	737891	50.0000		
	69	Chlorobenzene	112	11.655	11.655	(1.002)	532327	50.0000	49.2	
	70	Ethylbenzene	91	11.734	11.734	(1.009)	957730	50.0000	48.2	
	71	1,1,1,2-Tetrachloroethane	131	11.769	11.770	(1.012)	184811	50.0000	50.1	
	72	m+p-Xylenes	91	11.955	11.956	(1.028)	1502561	100.000	98.4	
	73	o-Xylene	91	12.527	12.528	(1.077)	757960	50.0000	50.6	
	74	Styrene	104	12.606	12.606	(1.084)	565781	50.0000	48.7	
	75	Bromoform	173	12.599	12.599	(1.083)	97630	50.0000	46.8	
	76	Isopropylbenzene	105	12.949	12.949	(0.885)	887658	50.0000	48.7	
$	77	P-Bromofluorobenzene	95	13.278	13.286	(1.857)	407452	50.0000	51.9	
	78	cis-1,4-Dichloro-2-Butene	53	13.407	13.407	(0.916)	61347	50.0000	39.1	
	79	Bromobenzene	156	13.385	13.386	(0.915)	193267	50.0000	47.5	

Data File: \\target_server\gg\chem\gcms-p.i\P081418.b\P7227.D
Report Date: 20-Aug-2018 14:41

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
80	N-Propylbenzene	91	13.478	13.479	(0.921)	1123732	50.0000	47.4	
81	1,1,2,2-Tetrachloroethane	83	13.586	13.586	(0.929)	170244	50.0000	42.5	
82	2-Chlorotoluene	91	13.636	13.636	(0.932)	658366	50.0000	47.4	
83	1,2,3-Trichloropropane	75	13.721	13.722	(0.938)	169899	50.0000	45.3	
84	1,3,5-Trimethylbenzene	105	13.736	13.736	(0.939)	770584	50.0000	48.8	
85	trans-1,4-Dichloro-2-Butene	53	13.793	13.800	(0.943)	49235	50.0000	39.3	
86	4-Chlorotoluene	91	13.843	13.843	(0.946)	691667	50.0000	47.2	
87	tert-Butylbenzene	119	14.108	14.108	(0.964)	694797	50.0000	43.4	
88	Pentachloroethane	165	14.108	14.108	(0.964)	10616	50.0000	5.1	
89	1,2,4-Trimethylbenzene	105	14.193	14.194	(0.970)	762559	50.0000	48.0	
90	sec-Butylbenzene	105	14.315	14.315	(0.978)	979981	50.0000	48.1	
91	P-Isopropyltoluene	119	14.501	14.501	(0.991)	881483	50.0000	47.9	
92	1,3-Dichlorobenzene	146	14.537	14.537	(0.994)	381876	50.0000	46.5	
* 93	1,4-Dichlorobenzene-D4	152	14.629	14.630	(1.000)	372188	50.0000		
94	1,4-Dichlorobenzene	146	14.644	14.651	(1.001)	388607	50.0000	45.8	
95	1,2,3-Trimethylbenzene	105	14.701	14.701	(1.005)	762463	50.0000	43.5	
96	N-Butylbenzene	91	14.987	14.987	(1.024)	759883	50.0000	47.4	
M 97	1,2-Dichloroethylene (total)	96				388499	50.0000	(a)	
98	1,2-Dichlorobenzene	146	15.130	15.130	(1.034)	354731	50.0000	47.7	
99	1,2-Dibromo-3-Chloropropane	157	16.045	16.045	(1.097)	32703	50.0000	38.9	
100	1,3,5-Trichlorobenzene	180	16.081	16.081	(1.099)	245050	50.0000	43.4	
101	Hexachlorobutadiene	225	16.775	16.782	(1.147)	108183	50.0000	43.3	
102	1,2,4-Trichlorobenzene	180	16.796	16.796	(1.148)	167634	50.0000	43.7	
103	Naphthalene	128	17.153	17.154	(1.173)	326553	50.0000	44.8	
104	1,2,3-Trichlorobenzene	180	17.354	17.354	(1.186)	108791	50.0000	44.3	
M 105	Xylenes (total)	106				2260521	150.000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).


Data File: \\target_server\gg\chem\gcms-p.i\P081418.b\P7227.D
Date : 14-AUG-2018 18:26
Client ID:
Sample Info: WG234298-5,SL7420
Purge Volume: 5.0
Column phase: RTX-VMS
Instrument: gcms-p.i
Operator: HG
Column diameter: 0.18
Y (x10^6)
Min
\\target_server\gg\chem\gcms-p.i\P081418.b\P7227.D
-Dichlorodifluoromethane (1.452)
-Chloromethane (1.595)
-Vinyl Chloride (1.660)
-Bromomethane (1.888)
-Chloroethane (1.981)
-Trichlorofluoromethane (2.081)
-Diethyl Ether (2.317)
-1,1-Dichloroethene (2.510)+
-Iodomethane (2.611)
-Acrolein (2.775)
-Allyl Chloride (2.897)
-Acetone (3.007)
-Methylene Chloride (2.997)
-trans-1,2-Dichloroethene (3.147)+
-Methyl tert-butyl ether (3.247)
-Tertiary-butyl alcohol (3.361)
-Acetonitrile (3.533)
-Di-isopropyl ether (3.662)
-Chloroprene (3.783)+
-Acrylonitrile (3.896)
-Ethyl tertiary-butyl ethe (4.112)+
-cis-1,2-Dichloroethene (4.513)
-2,2-Dichloropropane (4.663)
-Bromochloromethane (4.784)+
-Chloroform (4.934)
-Carbon Tetrachloride (5.113)
-Tetrahydrofuran (5.235)+
-1,1-Dichloropropene (5.464)+
-Benzene (5.928)
-Propionitrile (6.064)+
-Pentafluorobenzene (6.207)+
-1,2-Dichloroethane (6.343)
-Isobutyl Alcohol (6.557)
-Trichloroethene (6.994)+
-1,4-Difluorobenzene (7.151)
-Dibromomethane (7.766)
-1,2-Dichloropropane (7.945)
-Bromodichloromethane (8.088)
-Methyl Methacrylate (8.438)+
-cis-1,3-dichloropropene (9.110)
-Toluene (9.469)
-Toluene-D8 (9.389)
-Total Alkylbenzenes (9.800)
-Tetrachloroethene (10.011)
-4-Methyl-2-pentanone (10.104)+
-1,1,2-Trichloroethane (10.354)
-Ethyl Methacrylate (10.447)
-Dibromochloromethane (10.583)
-1,3-Dichloropropane (10.726)
-1,2-Dibromoethane (10.876)
-2-Hexanone (11.327)
-Chlorobenzene-D5 (11.641)+
-Ethylbenzene (11.734)+
m+p-Xylenes (11.956)
-o-Xylene (12.528)
-Styrene (12.599)+
-Isopropylbenzene (12.950)
-P-Bromofluorobenzene (13.279)
-cis-1,4-Dichloro-2-Butene (13.386)+
-N-Propylbenzene (13.479)
-1,1,2,2-Tetrachloroethane (13.586)
-2-Chlorotoluene (13.636)
-4-Chlorotoluene (13.843)
-1,3,5-Trimethylbenzene (13.736)+
-tert-Butylbenzene (14.037)+
-1,2,4-Trimethylbenzene (14.194)
-sec-Butylbenzene (14.315)
-1,2,3-Trimethylbenzene (14.701)
-P-Isopropyltoluene (14.501)+
-1,4-Dichlorobenzene-D4 (14.637)+
-1,2-Dichlorobenzene (15.130)
-1,2-Dibromo-3-Chloropropa (16.074)+
-1,2-Dichloroethylene (tot (16.580)
-Hexachlorobutadiene (16.782)+
-Naphthalene (17.154)
-1,2,3-Trichlorobenzene (17.354)

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL7420
Lab ID : WG234298-8
Analytical Date: 08/14/18 18:58
Lab File ID : P7228.D
Instrument ID: GCMS-P
Initial Calibration Date(s): 08/11/18 12:12 08/11/18 14:53
Column ID:

	Compound	$\overline{RRF}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
3	Vinyl chloride	0.43594	0.51531	0.51531	0.010	18.20589	50.00000	Averaged
8	1,1-Dichloroethene	0.32700	0.37579	0.37579	0.100	14.91989	50.00000	Averaged
31	Chloroform	0.85089	0.94290	0.94290	0.010	10.81418	50.00000	Averaged
32	Carbon Tetrachloride	0.38559	0.41945	0.41945	0.010	8.77949	50.00000	Averaged
36	2-Butanone	0.16402	0.15826	0.15826	0.010	-3.50726	50.00000	Averaged
38	Benzene	1.07387	1.17527	1.17527	0.010	9.44255	50.00000	Averaged
44	1,2-Dichloroethane	0.35733	0.36245	0.36245	0.010	1.43316	50.00000	Averaged
47	Trichloroethene	0.27677	0.29409	0.29409	0.010	6.25876	50.00000	Averaged
60	Tetrachloroethene	0.22008	0.22985	0.22985	0.010	4.43846	50.00000	Averaged
69	Chlorobenzene	0.73262	0.76868	0.76868	0.300	4.92173	50.00000	Averaged
34	Dibromofluoromethane	0.50927	0.51474	0.51474	0.010	1.07371	50.00000	Averaged
42	1,2-Dichloroethane-D4	0.67347	0.66044	0.66044	0.010	-1.93526	50.00000	Averaged
58	Toluene-D8	1.25488	1.25742	1.25742	0.010	0.20244	50.00000	Averaged
77	P-Bromofluorobenzene	0.54968	0.55957	0.55957	0.010	1.79900	50.00000	Averaged

*** = Compound out of QC criteria**

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sales@katahdinlab.com

Data File: \\target_server\gg\chem\gcms-p.i\P081418.b\P7228.D
Report Date: 20-Aug-2018 15:28

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-p.i\P081418.b\P7228.D
Lab Smp Id: WG234298-8
Inj Date : 14-AUG-2018 18:58
Operator : HG   Inst ID: gcms-p.i
Smp Info : WG234298-8,SL7420
Misc Info : WG234298,WG234067-4,SL7420-2
Comment   : SW846 5030
Method   : \\target_server\gg\chem\gcms-p.i\P081418.b\P8A05(85)D.m
Meth Date : 20-Aug-2018 15:28 gcms-p.i   Quant Type: ISTD
Cal Date : 11-AUG-2018 13:49   Cal File: P7170.D
Als bottle: 22   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.452	1.452	(0.235)	285341	50.0000	57.8	
2	Chloromethane	50	1.595	1.595	(0.258)	179200	50.0000	57.6	
3	Vinyl chloride	62	1.653	1.652	(0.267)	204095	50.0000	59.1	
4	Bromomethane	94	1.889	1.888	(0.305)	78832	50.0000	50.4	
5	Chloroethane	64	1.974	1.967	(0.319)	119771	50.0000	72.9	
6	Trichlorofluoromethane	101	2.082	2.073	(0.336)	285362	50.0000	58.4	
7	Diethyl Ether	59	2.318	2.317	(0.374)	107794	50.0000	56.5	
8	1,1-Dichloroethene	96	2.482	2.475	(0.401)	148838	50.0000	57.4	
9	Freon-113	151	2.511	2.503	(0.405)	115267	50.0000	53.5	
10	Carbon Disulfide	76	2.518	2.510	(0.407)	394191	50.0000	57.2	
11	Iodomethane	142	2.611	2.603	(0.422)	128116	50.0000	50.6	
12	Acrolein	56	2.775	2.775	(0.448)	98574	250.000	229	
13	Allyl Chloride	41	2.890	2.889	(0.467)	243638	50.0000	49.6	
14	Methylene Chloride	84	2.997	2.989	(0.484)	204701	50.0000	55.4	
15	Acetone	43	3.047	3.047	(0.492)	214977	250.000	229	
16	trans-1,2-Dichloroethene	96	3.147	3.139	(0.508)	209842	50.0000	54.1	
17	Methyl Acetate	43	3.161	3.161	(0.511)	113928	50.0000	48.9	
18	Methyl tert-butyl ether	73	3.247	3.247	(0.524)	457878	50.0000	53.8	
19	Tertiary-butyl alcohol	59	3.354	3.361	(0.542)	58128	250.000	182	
20	Acetonitrile	41	3.533	3.533	(0.571)	183439	500.000	442	
21	Di-isopropyl ether	45	3.662	3.661	(0.591)	505803	50.0000	54.5	
22	Chloroprene	53	3.776	3.776	(0.610)	316925	50.0000	54.2	
23	1,1-Dichloroethane	63	3.812	3.804	(0.616)	357672	50.0000	55.1	
24	Acrylonitrile	52	3.891	3.890	(0.628)	247807	250.000	246	

Data File: \\target_server\gg\chem\gcms-p.i\P081418.b\P7228.D
Report Date: 20-Aug-2018 15:28

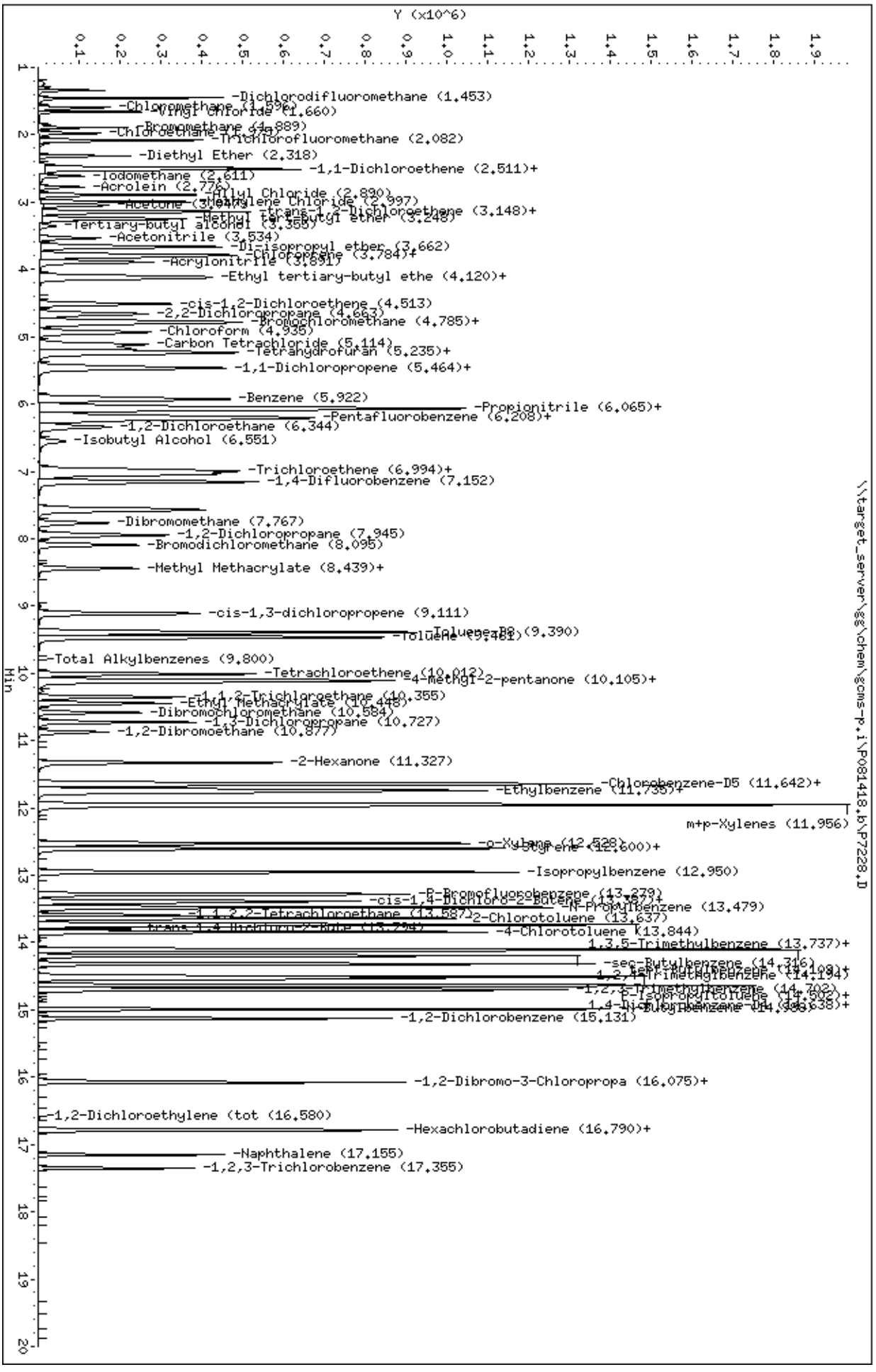
							AMOUNTS		
		QUANT SIG					CAL-AMT	ON-COL	
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/l)	(ug/l)	REVIEW CODE
	25 Ethyl tertiary-butyl ether	59	4.112	4.105	(0.664)	498930	50.0000	54.4	
	26 Vinyl Acetate	43	4.141	4.133	(0.579)	345366	50.0000	55.1	
	27 cis-1,2-Dichloroethene	96	4.513	4.505	(0.729)	216451	50.0000	54.7	
	28 2,2-Dichloropropane	77	4.663	4.655	(0.753)	299339	50.0000	51.0	
	29 Bromochloromethane	128	4.806	4.798	(0.776)	82252	50.0000	59.5	
	30 Cyclohexane	56	4.777	4.770	(0.771)	312728	50.0000	57.4	
	31 Chloroform	83	4.935	4.927	(0.797)	373450	50.0000	55.4	
	32 Carbon Tetrachloride	117	5.113	5.113	(0.715)	301303	50.0000	54.4	
	33 Tetrahydrofuran	42	5.178	5.177	(0.836)	188664	250.000	250	
$	34 Dibromofluoromethane	113	5.235	5.227	(0.845)	203869	50.0000	50.5	
	35 1,1,1-Trichloroethane	97	5.242	5.242	(0.846)	359781	50.0000	55.2	
	36 2-Butanone	43	5.471	5.470	(0.883)	313412	250.000	241	
	37 1,1-Dichloropropene	75	5.457	5.456	(0.763)	305954	50.0000	54.7	
	38 Benzene	78	5.921	5.921	(0.828)	844238	50.0000	54.7	
	39 Propionitrile	54	6.036	6.035	(0.975)	211160	500.000	459	
	40 Methacrylonitrile	41	6.064	6.064	(0.979)	899458	500.000	498	
*	41 Pentafluorobenzene	168	6.193	6.185	(1.000)	396064	50.0000		
$	42 1,2-Dichloroethane-D4	65	6.207	6.207	(1.002)	261576	50.0000	49.0	
	43 Tertiary-amyl methyl ether	73	6.222	6.214	(1.005)	438708	50.0000	50.8	
	44 1,2-Dichloroethane	62	6.343	6.343	(0.887)	260364	50.0000	50.7	
	45 Isobutyl Alcohol	43	6.558	6.557	(1.059)	75403	1000.00	790	
	46 Methylcyclohexane	83	6.994	6.986	(1.129)	404361	50.0000	55.4	
	47 Trichloroethene	95	7.044	7.043	(0.985)	211254	50.0000	53.1	
*	48 1,4-Difluorobenzene	114	7.151	7.151	(1.000)	718335	50.0000		
	49 Dibromomethane	93	7.773	7.766	(1.087)	108975	50.0000	51.8	
	50 1,2-Dichloropropane	63	7.945	7.944	(1.111)	177663	50.0000	54.4	
	51 Bromodichloromethane	83	8.095	8.095	(1.132)	258985	50.0000	54.2	
	52 Methyl Methacrylate	41	8.438	8.438	(1.180)	129562	50.0000	49.7	
	53 Ethyl Methacrylate	69	10.440	10.447	(1.460)	236799	50.0000	52.8	
	54 1,4-Dioxane	88	8.445	8.445	(1.181)	33320	1000.00	584	
M	55 Total Alkylbenzenes	100				6674471	50.0000	(a)	
	57 cis-1,3-dichloropropene	75	9.110	9.110	(1.274)	329128	50.0000	55.0	
$	58 Toluene-D8	98	9.389	9.389	(1.313)	903248	50.0000	50.1	
	59 Toluene	92	9.461	9.460	(1.323)	551009	50.0000	53.6	
	60 Tetrachloroethene	164	10.011	10.011	(0.860)	169358	50.0000	52.2	
	61 4-methyl-2-pentanone	43	10.104	10.104	(1.413)	668744	250.000	216	
	62 trans-1,3-Dichloropropene	75	10.133	10.132	(1.417)	282488	50.0000	52.9	
	63 1,1,2-Trichloroethane	83	10.347	10.354	(1.447)	130327	50.0000	53.6	
	64 Dibromochloromethane	129	10.583	10.583	(0.910)	183856	50.0000	52.4	
	65 1,3-Dichloropropane	76	10.726	10.726	(0.922)	312961	50.0000	52.5	
	66 1,2-Dibromoethane	107	10.876	10.876	(1.521)	155934	50.0000	52.0	
	67 2-Hexanone	43	11.327	11.326	(0.974)	456025	250.000	203	
*	68 Chlorobenzene-D5	117	11.634	11.634	(1.000)	736834	50.0000		
	69 Chlorobenzene	112	11.656	11.655	(1.002)	566388	50.0000	52.5	
	70 Ethylbenzene	91	11.734	11.734	(1.009)	1048136	50.0000	52.8	
	71 1,1,1,2-Tetrachloroethane	131	11.770	11.770	(1.012)	196908	50.0000	53.4	
	72 m+p-Xylenes	91	11.956	11.956	(1.028)	1632588	100.000	107	
	73 o-Xylene	91	12.528	12.528	(1.077)	822821	50.0000	55.0	
	74 Styrene	104	12.607	12.606	(1.084)	608730	50.0000	52.5	
	75 Bromoform	173	12.599	12.599	(1.083)	102511	50.0000	49.2	
	76 Isopropylbenzene	105	12.950	12.949	(0.885)	976800	50.0000	53.8	
$	77 P-Bromofluorobenzene	95	13.279	13.286	(1.857)	401961	50.0000	50.9	
	78 cis-1,4-Dichloro-2-Butene	53	13.400	13.407	(0.916)	66357	50.0000	42.5	
	79 Bromobenzene	156	13.386	13.386	(0.915)	205485	50.0000	50.8	

Data File: \\target_server\gg\chem\gcms-p.i\P081418.b\P7228.D
Report Date: 20-Aug-2018 15:28

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	80 N-Propylbenzene	91	13.479	13.479	(0.921)	1236146	50.0000	52.4	
	81 1,1,2,2-Tetrachloroethane	83	13.586	13.586	(0.929)	194345	50.0000	48.7	
	82 2-Chlorotoluene	91	13.636	13.636	(0.932)	717057	50.0000	51.8	
	83 1,2,3-Trichloropropane	75	13.722	13.722	(0.938)	178048	50.0000	47.7	
	84 1,3,5-Trimethylbenzene	105	13.736	13.736	(0.939)	842970	50.0000	53.6	
	85 trans-1,4-Dichloro-2-Butene	53	13.794	13.800	(0.943)	56379	50.0000	45.2	
	86 4-Chlorotoluene	91	13.844	13.843	(0.946)	745802	50.0000	51.1	
	87 tert-Butylbenzene	119	14.108	14.108	(0.964)	838579	50.0000	52.6	
	88 Pentachloroethane	165	14.108	14.108	(0.964)	104774	50.0000	51.7	
	89 1,2,4-Trimethylbenzene	105	14.194	14.194	(0.970)	836143	50.0000	53.0	
	90 sec-Butylbenzene	105	14.316	14.315	(0.978)	1093398	50.0000	53.9	
	91 P-Isopropyltoluene	119	14.501	14.501	(0.991)	982423	50.0000	53.8	
	92 1,3-Dichlorobenzene	146	14.537	14.537	(0.994)	413894	50.0000	50.6	
*	93 1,4-Dichlorobenzene-D4	152	14.630	14.630	(1.000)	370455	50.0000		
	94 1,4-Dichlorobenzene	146	14.644	14.651	(1.001)	415813	50.0000	49.2	
	95 1,2,3-Trimethylbenzene	105	14.702	14.701	(1.005)	836218	50.0000	47.9	
	96 N-Butylbenzene	91	14.988	14.987	(1.024)	844812	50.0000	53.0	
M	97 1,2-Dichloroethylene (total)	96				426293	50.0000	(a)	
	98 1,2-Dichlorobenzene	146	15.131	15.130	(1.034)	381670	50.0000	51.5	
	99 1,2-Dibromo-3-Chloropropane	157	16.046	16.045	(1.097)	33813	50.0000	40.4	
	100 1,3,5-Trichlorobenzene	180	16.074	16.081	(1.099)	268645	50.0000	47.8	
	101 Hexachlorobutadiene	225	16.775	16.782	(1.147)	122956	50.0000	49.4	
	102 1,2,4-Trichlorobenzene	180	16.797	16.796	(1.148)	176151	50.0000	46.1	
	103 Naphthalene	128	17.154	17.154	(1.173)	340896	50.0000	47.0	
	104 1,2,3-Trichlorobenzene	180	17.354	17.354	(1.186)	112494	50.0000	46.0	
M	105 Xylenes (total)	106				2455409	150.000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).


Data File: \\target_server\gg\chem\gcms-p.i\P081418.b\P7228.D
Date : 14-AUG-2018 18:58
Client ID:
Sample Info: WG234298-8,SL7420
Purge Volume: 5.0
Column phase: RTX-VMS
Instrument: gcms-p.i
Operator: HG
Column diameter: 0.18
Y (x10^6)
Min
\\target_server\gg\chem\gcms-p.i\P081418.b\P7228.D
-Dichlorodifluoromethane (1.453)
-Chloromethane (1.596)
-Vinyl Chloride (1.660)
-Bromomethane (1.889)
-Chloroethane (1.947)
-Trichlorofluoromethane (2.082)
-Diethyl Ether (2.318)
-1,1-Dichloroethene (2.511)+
-Iodomethane (2.611)
-Acrolein (2.776)
-Allyl Chloride (2.890)
-Acetone (3.047)
-Methylene Chloride (2.997)
-Methyl trans-1,2-Dichloroethene (3.148)+
-Tertiary-butyl alcohol (3.355)
-Methyl tert-butyl ether (3.248)
-Acetonitrile (3.534)
-Di-isopropyl ether (3.662)
-Chloroprene (3.784)+
-Acrylonitrile (3.891)
-Ethyl tertiary-butyl ethe (4.120)+
-cis-1,2-Dichloroethene (4.513)
-2,2-Dichloropropane (4.663)
-Bromochloromethane (4.785)+
-Chloroform (4.936)
-Carbon Tetrachloride (5.114)
-Tetrahydrofuran (5.235)+
-1,1-Dichloropropene (5.464)+
-Benzene (5.922)
-Propionitrile (6.065)+
-Pentafluorobenzene (6.208)+
-1,2-Dichloroethane (6.344)
-Isobutyl Alcohol (6.551)
-Trichloroethene (6.994)+
-1,4-Difluorobenzene (7.152)
-Dibromomethane (7.767)
-1,2-Dichloropropane (7.945)
-Bromodichloromethane (8.095)
-Methyl Methacrylate (8.439)+
-cis-1,3-dichloropropene (9.111)
-Toluene-D8 (9.390)
-Toluene (9.481)
-Total Alkylbenzenes (9.800)
-Tetrachloroethene (10.012)
-4-methyl-2-pentanone (10.105)+
-1,1,2-Trichloroethane (10.355)
-Ethyl Methacrylate (10.448)
-Dibromochloromethane (10.584)
-1,3-Dichloropropane (10.727)
-1,2-Dibromoethane (10.877)
-2-Hexanone (11.327)
-Chlorobenzene-D5 (11.642)+
-Ethylbenzene (11.736)+
m+p-Xylenes (11.956)
-o-Xylene (12.528)
-Styrene (12.600)+
-Isopropylbenzene (12.950)
-p-Bromofluorobenzene (13.279)
-cis-1,4-Dichloro-2-Butene (13.287)+
-N-Propylbenzene (13.479)
-1,1,2,2-Tetrachloroethane (13.587)
-2-Chlorotoluene (13.637)
-trans-1,4-Dichloro-2-Bute (13.294)
-4-Chlorotoluene (13.844)
1,3,5-Trimethylbenzene (13.737)+
-sec-Butylbenzene (14.316)
-tert-Butylbenzene (14.109)+
1,2,4-Trimethylbenzene (14.194)
-1,2,3-Trimethylbenzene (14.702)
-p-Isopropyltoluene (14.502)+
1,4-Dichlorobenzene-D4 (14.538)+
-1,4-Dichlorobenzene (14.588)
-1,2-Dichlorobenzene (15.131)
-1,2-Dibromo-3-Chloropropa (16.075)+
-1,2-Dichloroethylene (tot (16.580)
-Hexachlorobutadiene (16.790)+
-Naphthalene (17.155)
-1,2,3-Trichlorobenzene (17.355)

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL7420
Lab ID : WG234298-9
Analytical Date: 08/14/18 19:30
Lab File ID : P7229.D
Instrument ID: GCMS-P
Initial Calibration Date(s): 08/11/18 12:12 08/11/18 14:53
Column ID:

	Compound	$\overline{RRF}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
3	Vinyl chloride	0.43594	0.48425	0.48425	0.010	11.08229	50.00000	Averaged
8	1,1-Dichloroethene	0.32700	0.35648	0.35648	0.100	9.01290	50.00000	Averaged
31	Chloroform	0.85089	0.91794	0.91794	0.010	7.88000	50.00000	Averaged
32	Carbon Tetrachloride	0.38559	0.39806	0.39806	0.010	3.23268	50.00000	Averaged
36	2-Butanone	0.16402	0.15837	0.15837	0.010	-3.44036	50.00000	Averaged
38	Benzene	1.07387	1.12906	1.12906	0.010	5.13943	50.00000	Averaged
44	1,2-Dichloroethane	0.35733	0.35689	0.35689	0.010	-0.12535	50.00000	Averaged
47	Trichloroethene	0.27677	0.28262	0.28262	0.010	2.11446	50.00000	Averaged
60	Tetrachloroethene	0.22008	0.21507	0.21507	0.010	-2.27657	50.00000	Averaged
69	Chlorobenzene	0.73262	0.75004	0.75004	0.300	2.37801	50.00000	Averaged
34	Dibromofluoromethane	0.50927	0.51832	0.51832	0.010	1.77777	50.00000	Averaged
42	1,2-Dichloroethane-D4	0.67347	0.66616	0.66616	0.010	-1.08514	50.00000	Averaged
58	Toluene-D8	1.25488	1.26069	1.26069	0.010	0.46329	50.00000	Averaged
77	P-Bromofluorobenzene	0.54968	0.56165	0.56165	0.010	2.17722	50.00000	Averaged

*** = Compound out of QC criteria**

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P.O. Box 540, Scarborough, ME 04070
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http://katahdinlab.com
sales@katahdinlab.com

Data File: \\target_server\gg\chem\gcms-p.i\P081418.b\P7229.D
Report Date: 20-Aug-2018 15:28

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-p.i\P081418.b\P7229.D
Lab Smp Id: WG234298-9
Inj Date : 14-AUG-2018 19:30
Operator : HG   Inst ID: gcms-p.i
Smp Info : WG234298-9,SL7420
Misc Info : WG234298,WG234067-4,SL7420-2
Comment   : SW846 5030
Method   : \\target_server\gg\chem\gcms-p.i\P081418.b\P8A05(85)D.m
Meth Date : 20-Aug-2018 15:28 gcms-p.i   Quant Type: ISTD
Cal Date : 11-AUG-2018 13:49   Cal File: P7170.D
Als bottle: 23   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.451	1.452	(0.234)	274816	50.0000	54.4	
2	Chloromethane	50	1.594	1.595	(0.257)	175647	50.0000	55.1	
3	Vinyl chloride	62	1.658	1.652	(0.268)	196219	50.0000	55.5	
4	Bromomethane	94	1.894	1.888	(0.306)	78577	50.0000	49.1	
5	Chloroethane	64	1.980	1.967	(0.320)	115192	50.0000	68.6	
6	Trichlorofluoromethane	101	2.087	2.073	(0.337)	277654	50.0000	55.6	
7	Diethyl Ether	59	2.316	2.317	(0.374)	114629	50.0000	58.7	
8	1,1-Dichloroethene	96	2.480	2.475	(0.401)	144444	50.0000	54.5	
9	Freon-113	151	2.509	2.503	(0.405)	112460	50.0000	51.0	
10	Carbon Disulfide	76	2.516	2.510	(0.406)	387519	50.0000	54.9	
11	Iodomethane	142	2.609	2.603	(0.421)	130535	50.0000	50.4	
12	Acrolein	56	2.773	2.775	(0.448)	100576	250.000	228	
13	Allyl Chloride	41	2.895	2.889	(0.468)	247495	50.0000	49.2	
14	Methylene Chloride	84	2.995	2.989	(0.484)	207851	50.0000	55.0	
15	Acetone	43	3.045	3.047	(0.492)	211691	250.000	220	
16	trans-1,2-Dichloroethene	96	3.145	3.139	(0.508)	206416	50.0000	52.0	
17	Methyl Acetate	43	3.159	3.161	(0.510)	112085	50.0000	47.0	
18	Methyl tert-butyl ether	73	3.252	3.247	(0.525)	474286	50.0000	54.5	
19	Tertiary-butyl alcohol	59	3.360	3.361	(0.543)	62273	250.000	190	
20	Acetonitrile	41	3.531	3.533	(0.570)	189837	500.000	447	
21	Di-isopropyl ether	45	3.660	3.661	(0.591)	522653	50.0000	55.0	
22	Chloroprene	53	3.781	3.776	(0.611)	314461	50.0000	52.6	
23	1,1-Dichloroethane	63	3.810	3.804	(0.615)	359705	50.0000	54.2	
24	Acrylonitrile	52	3.889	3.890	(0.628)	249272	250.000	242	

Data File: \\target_server\gg\chem\gcms-p.i\P081418.b\P7229.D
Report Date: 20-Aug-2018 15:28

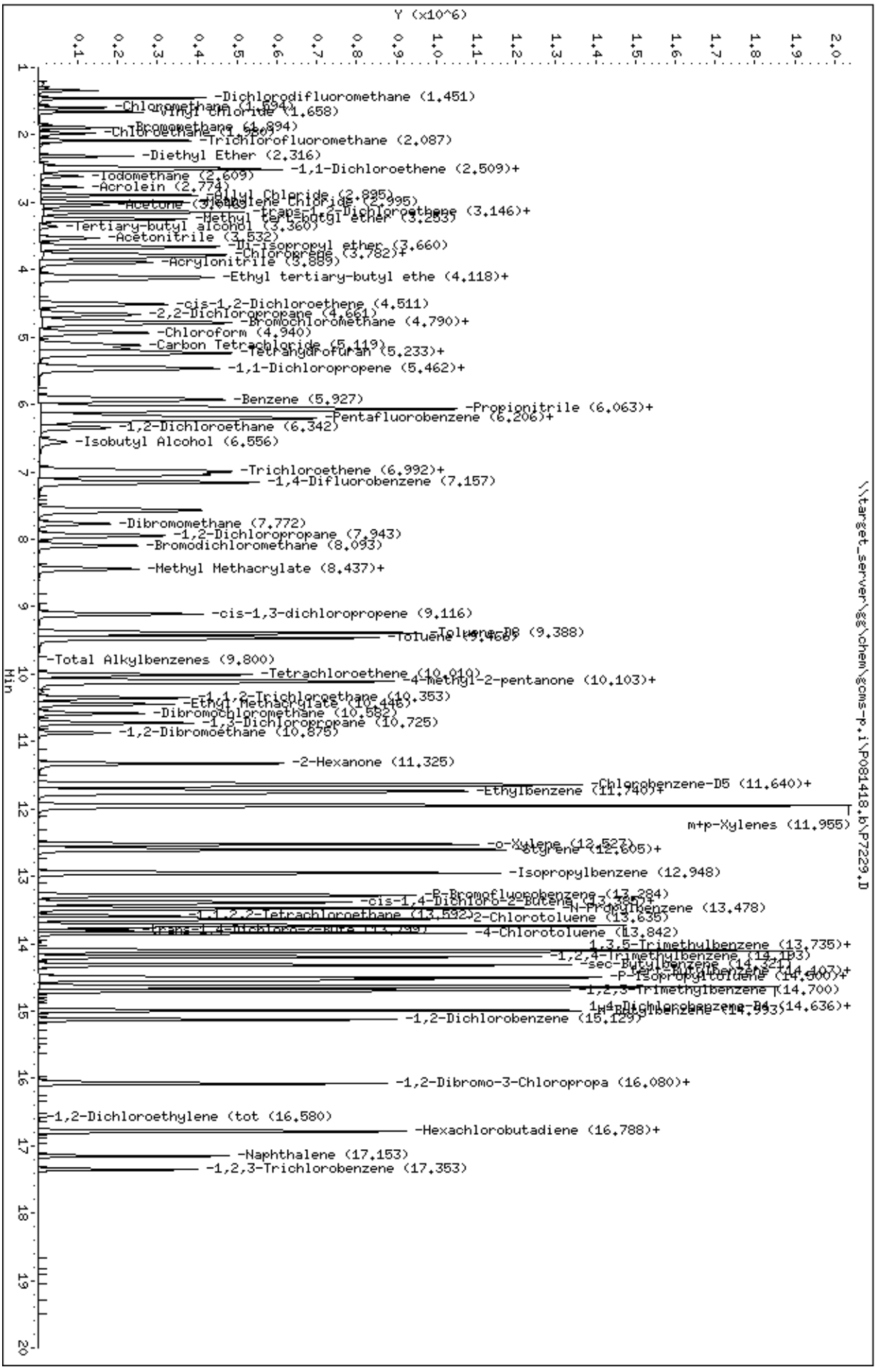
			QUANT SIG					AMOUNTS		
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	25	Ethyl tertiary-butyl ether	59	4.110	4.105	(0.664)	519522	50.0000	55.4	
	26	Vinyl Acetate	43	4.139	4.133	(0.578)	351862	50.0000	54.3	
	27	cis-1,2-Dichloroethene	96	4.511	4.505	(0.729)	219460	50.0000	54.2	
	28	2,2-Dichloropropane	77	4.668	4.655	(0.754)	297731	50.0000	49.6	
	29	Bromochloromethane	128	4.804	4.798	(0.776)	85326	50.0000	60.3	
	30	Cyclohexane	56	4.775	4.770	(0.771)	306566	50.0000	55.0	
	31	Chloroform	83	4.933	4.927	(0.797)	371947	50.0000	53.9	
	32	Carbon Tetrachloride	117	5.119	5.113	(0.715)	295282	50.0000	51.6	
	33	Tetrahydrofuran	42	5.176	5.177	(0.836)	193616	250.000	251	
$	34	Dibromofluoromethane	113	5.233	5.227	(0.845)	210024	50.0000	50.9	
	35	1,1,1-Trichloroethane	97	5.240	5.242	(0.846)	350612	50.0000	52.5	
	36	2-Butanone	43	5.476	5.470	(0.885)	320863	250.000	241	
	37	1,1-Dichloropropene	75	5.462	5.456	(0.763)	299400	50.0000	51.9	
	38	Benzene	78	5.927	5.921	(0.828)	837544	50.0000	52.6	
	39	Propionitrile	54	6.041	6.035	(0.976)	218462	500.000	464	
	40	Methacrylonitrile	41	6.070	6.064	(0.980)	911178	500.000	493	
*	41	Pentafluorobenzene	168	6.191	6.185	(1.000)	405199	50.0000		
$	42	1,2-Dichloroethane-D4	65	6.213	6.207	(1.003)	269929	50.0000	49.4	
	43	Tertiary-amyl methyl ether	73	6.220	6.214	(1.005)	464386	50.0000	52.6	
	44	1,2-Dichloroethane	62	6.341	6.343	(0.886)	264740	50.0000	49.9	
	45	Isobutyl Alcohol	43	6.556	6.557	(1.059)	86600	1000.00	887	
	46	Methylcyclohexane	83	6.992	6.986	(1.129)	392367	50.0000	52.6	
	47	Trichloroethene	95	7.042	7.043	(0.984)	209648	50.0000	51.0	
*	48	1,4-Difluorobenzene	114	7.156	7.151	(1.000)	741806	50.0000		
	49	Dibromomethane	93	7.771	7.766	(1.086)	111877	50.0000	51.5	
	50	1,2-Dichloropropane	63	7.950	7.944	(1.111)	180395	50.0000	53.5	
	51	Bromodichloromethane	83	8.093	8.095	(1.131)	262614	50.0000	53.2	
	52	Methyl Methacrylate	41	8.436	8.438	(1.179)	132543	50.0000	49.3	
	53	Ethyl Methacrylate	69	10.445	10.447	(1.460)	243110	50.0000	52.5	
	54	1,4-Dioxane	88	8.443	8.445	(1.180)	36869	1000.00	626	
M	55	Total Alkylbenzenes	100				6631071	50.0000	(a)	
	57	cis-1,3-dichloropropene	75	9.115	9.110	(1.274)	343713	50.0000	55.6	
$	58	Toluene-D8	98	9.387	9.389	(1.312)	935189	50.0000	50.2	
	59	Toluene	92	9.466	9.460	(1.323)	551423	50.0000	52.0	
	60	Tetrachloroethene	164	10.009	10.011	(0.860)	163341	50.0000	48.9	
	61	4-methyl-2-pentanone	43	10.102	10.104	(1.412)	688780	250.000	216	
	62	trans-1,3-Dichloropropene	75	10.131	10.132	(1.416)	287802	50.0000	52.2	
	63	1,1,2-Trichloroethane	83	10.352	10.354	(1.447)	134369	50.0000	53.5	
	64	Dibromochloromethane	129	10.581	10.583	(0.910)	189597	50.0000	52.4	
	65	1,3-Dichloropropane	76	10.724	10.726	(0.922)	322948	50.0000	52.6	
	66	1,2-Dibromoethane	107	10.874	10.876	(1.520)	162421	50.0000	52.5	
	67	2-Hexanone	43	11.325	11.326	(0.974)	467835	250.000	202	
*	68	Chlorobenzene-D5	117	11.632	11.634	(1.000)	759488	50.0000		
	69	Chlorobenzene	112	11.654	11.655	(1.002)	569648	50.0000	51.2	
	70	Ethylbenzene	91	11.732	11.734	(1.009)	1048978	50.0000	51.3	
	71	1,1,1,2-Tetrachloroethane	131	11.768	11.770	(1.012)	201023	50.0000	52.9	
	72	m+p-Xylenes	91	11.954	11.956	(1.028)	1635181	100.000	104	
	73	o-Xylene	91	12.526	12.528	(1.077)	826489	50.0000	53.6	
	74	Styrene	104	12.605	12.606	(1.084)	615414	50.0000	51.4	
	75	Bromoform	173	12.598	12.599	(1.083)	104316	50.0000	48.6	
	76	Isopropylbenzene	105	12.948	12.949	(0.885)	973896	50.0000	52.2	
$	77	P-Bromofluorobenzene	95	13.284	13.286	(1.856)	416637	50.0000	51.1	
	78	cis-1,4-Dichloro-2-Butene	53	13.406	13.407	(0.916)	67632	50.0000	42.2	
	79	Bromobenzene	156	13.384	13.386	(0.915)	211735	50.0000	50.9	

Data File: \\target_server\gg\chem\gcms-p.i\P081418.b\P7229.D
Report Date: 20-Aug-2018 15:28

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
80	N-Propylbenzene	91	13.477	13.479	(0.921)	1223984	50.0000	50.5	
81	1,1,2,2-Tetrachloroethane	83	13.591	13.586	(0.929)	199700	50.0000	48.8	
82	2-Chlorotoluene	91	13.634	13.636	(0.932)	722692	50.0000	50.9	
83	1,2,3-Trichloropropane	75	13.720	13.722	(0.938)	180050	50.0000	46.9	
84	1,3,5-Trimethylbenzene	105	13.734	13.736	(0.939)	842385	50.0000	52.2	
85	trans-1,4-Dichloro-2-Butene	53	13.799	13.800	(0.943)	50420	50.0000	39.4	
86	4-Chlorotoluene	91	13.842	13.843	(0.946)	753756	50.0000	50.3	
87	tert-Butylbenzene	119	14.106	14.108	(0.964)	840744	50.0000	51.3	
88	Pentachloroethane	165	14.113	14.108	(0.965)	107140	50.0000	51.5	
89	1,2,4-Trimethylbenzene	105	14.192	14.194	(0.970)	841065	50.0000	51.9	
90	sec-Butylbenzene	105	14.321	14.315	(0.979)	1082572	50.0000	52.0	
91	P-Isopropyltoluene	119	14.500	14.501	(0.991)	967775	50.0000	51.6	
92	1,3-Dichlorobenzene	146	14.535	14.537	(0.994)	419791	50.0000	50.0	
* 93	1,4-Dichlorobenzene-D4	152	14.628	14.630	(1.000)	380501	50.0000		
94	1,4-Dichlorobenzene	146	14.650	14.651	(1.001)	423220	50.0000	48.8	
95	1,2,3-Trimethylbenzene	105	14.700	14.701	(1.005)	848152	50.0000	47.3	
96	N-Butylbenzene	91	14.993	14.987	(1.025)	832546	50.0000	50.8	
M 97	1,2-Dichloroethylene (total)	96				425876	50.0000	(a)	
98	1,2-Dichlorobenzene	146	15.129	15.130	(1.034)	386971	50.0000	50.9	
99	1,2-Dibromo-3-Chloropropane	157	16.051	16.045	(1.097)	34108	50.0000	39.7	
100	1,3,5-Trichlorobenzene	180	16.080	16.081	(1.099)	273586	50.0000	47.4	
101	Hexachlorobutadiene	225	16.780	16.782	(1.147)	123902	50.0000	48.5	
102	1,2,4-Trichlorobenzene	180	16.795	16.796	(1.148)	182003	50.0000	46.4	
103	Naphthalene	128	17.152	17.154	(1.173)	350304	50.0000	47.0	
104	1,2,3-Trichlorobenzene	180	17.352	17.354	(1.186)	116246	50.0000	46.3	
M 105	Xylenes (total)	106				2461670	150.000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).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Client ID:
Sample Info: WG234298-9,SL7420
Purge Volume: 5.0
Column phase: RTX-VMS
Instrument: gcms-p.i
Operator: HG
Column diameter: 0.18
\\target_server\gg\chem\gcms-p.i\P081418.b\P7229.D
Y (x10^6)
Min
-Dichlorodifluoromethane (1.451)
-Chloromethane (1.694)
-Vinyl Chloride (1.658)
-Bromomethane (1.894)
-Chloroethane (1.960)
-Trichlorofluoromethane (2.087)
-Diethyl Ether (2.316)
-1,1-Dichloroethene (2.509)+
-Iodomethane (2.609)
-Acrolein (2.774)
-Allyl Chloride (2.895)
-Acetone (2.960)
-Methylene Chloride (2.995)
-trans-1,2-Dichloroethene (3.146)+
-Methyl tert-butyl ether (3.253)
-Tertiary-butyl alcohol (3.360)
-Acetonitrile (3.532)
-Di-isopropyl ether (3.660)
-Chloroprene (3.782)+
-Acrylonitrile (3.889)
-Ethyl tertiary-butyl ethe (4.118)+
-cis-1,2-Dichloroethene (4.511)
-2,2-Dichloropropane (4.661)
-Bromochloromethane (4.790)+
-Chloroform (4.940)
-Carbon Tetrachloride (5.119)
-Tetrahydrofuran (5.233)+
-1,1-Dichloropropene (5.462)+
-Benzene (5.927)
-Propionitrile (6.063)+
-Pentafluorobenzene (6.206)+
-1,2-Dichloroethane (6.342)
-Isobutyl Alcohol (6.556)
-Trichloroethene (6.992)+
-1,4-Difluorobenzene (7.157)
-Dibromomethane (7.772)
-1,2-Dichloropropane (7.943)
-Bromodichloromethane (8.093)
-Methyl Methacrylate (8.437)+
-cis-1,3-dichloropropene (9.116)
-Toluene-D8 (9.388)
-Toluene (9.460)
-Total Alkylbenzenes (9.800)
-Tetrachloroethene (10.010)
-4-methyl-2-pentanone (10.103)+
-1,1,2-Trichloroethane (10.353)
-Ethyl Methacrylate (10.446)
-Dibromochloromethane (10.582)
-1,3-Dichloropropane (10.725)
-1,2-Dibromoethane (10.875)
-2-Hexanone (11.325)
-Chlorobenzene-D5 (11.640)+
-Ethylbenzene (11.740)+
m+p-Xylenes (11.955)
-o-Xylene (12.527)
-Styrene (12.605)+
-Isopropylbenzene (12.948)
-Bromofluorobenzene (13.284)
-cis-1,4-Dichloro-2-Butene (13.385)+
-N-Propylbenzene (13.478)
-1,1,2,2-Tetrachloroethane (13.592)
-2-Chlorotoluene (13.635)
-trans-1,4-Dichloro-2-Bute (13.799)
-4-Chlorotoluene (13.842)
-1,3,5-Trimethylbenzene (13.735)+
-1,2,4-Trimethylbenzene (14.103)
-sec-Butylbenzene (14.221)
-P-Isopropyltoluene (14.500)+
-1,2,3-Trimethylbenzene (14.700)
-1,4-Dichlorobenzene-D4 (14.636)+
-1,2-Dichlorobenzene (15.129)
-1,2-Dibromo-3-Chloropropa (16.080)+
-1,2-Dichloroethylene (tot (16.580)
-Hexachlorobutadiene (16.788)+
-Naphthalene (17.153)
-1,2,3-Trichlorobenzene (17.353)

Katahdin
ANALYTICAL SERVICES

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL7420
Lab ID : WG234446-4
Analytical Date: 08/15/18 07:05
Lab File ID : P7232.D
Instrument ID: GCMS-P
Initial Calibration Date(s): 08/11/18 12:12 08/11/18 14:53
Column ID:

	Compound	$\overline{RRF}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
3	Vinyl chloride	0.43594	0.44544	0.44544	0.010	2.17922	20.00000	Averaged
8	1,1-Dichloroethene	0.32700	0.33181	0.33181	0.100	1.47002	20.00000	Averaged
31	Chloroform	0.85089	0.86482	0.86482	0.010	1.63807	20.00000	Averaged
32	Carbon Tetrachloride	0.38559	0.39469	0.39469	0.010	2.35961	20.00000	Averaged
36	2-Butanone	0.16402	0.15374	0.15374	0.010	-6.26232	20.00000	Averaged
38	Benzene	1.07387	1.09188	1.09188	0.010	1.67688	20.00000	Averaged
44	1,2-Dichloroethane	0.35733	0.34389	0.34389	0.010	-3.76228	20.00000	Averaged
47	Trichloroethene	0.27677	0.27433	0.27433	0.010	-0.87876	20.00000	Averaged
60	Tetrachloroethene	0.22008	0.21465	0.21465	0.010	-2.46540	20.00000	Averaged
69	Chlorobenzene	0.73262	0.71485	0.71485	0.300	-2.42531	20.00000	Averaged
34	Dibromofluoromethane	0.50927	0.51596	0.51596	0.010	1.31367	20.00000	Averaged
42	1,2-Dichloroethane-D4	0.67347	0.65739	0.65739	0.010	-2.38729	20.00000	Averaged
58	Toluene-D8	1.25488	1.26318	1.26318	0.010	0.66171	20.00000	Averaged
77	P-Bromofluorobenzene	0.54968	0.56723	0.56723	0.010	3.19230	20.00000	Averaged

*** = Compound out of QC criteria**

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://katahdinlab.com
sales@katahdinlab.com

Data File: \\target_server\gg\chem\gcms-p.i\P081518.b\P7232.D
Report Date: 20-Aug-2018 14:47

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-p.i\P081518.b\P7232.D
Lab Smp Id: WG234446-4
Inj Date : 15-AUG-2018 07:05
Operator : HG   Inst ID: gcms-p.i
Smp Info : WG234446-4,SL7420
Misc Info : WG234446,WG234067-4,SL7420-1
Comment   : SW846 5030
Method   : \\target_server\gg\chem\gcms-p.i\P081518.b\P8A05(85)D.m
Meth Date : 20-Aug-2018 14:47 gcms-p.i   Quant Type: ISTD
Cal Date : 11-AUG-2018 13:49   Cal File: P7170.D
Als bottle: 1   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.451	1.452	(0.235)	272416	50.0000	53.4	
2	Chloromethane	50	1.594	1.595	(0.258)	158204	50.0000	49.2	
3	Vinyl chloride	62	1.651	1.652	(0.267)	182312	50.0000	51.1	
4	Bromomethane	94	1.887	1.888	(0.305)	78179	50.0000	48.4	
5	Chloroethane	64	1.973	1.967	(0.319)	107568	50.0000	63.4	
6	Trichlorofluoromethane	101	2.080	2.073	(0.336)	269543	50.0000	53.4	
7	Diethyl Ether	59	2.316	2.317	(0.375)	105554	50.0000	53.5	
8	1,1-Dichloroethene	96	2.480	2.475	(0.401)	135805	50.0000	50.7	
9	Freon-113	151	2.509	2.503	(0.406)	110876	50.0000	49.8	
10	Carbon Disulfide	76	2.509	2.510	(0.406)	364767	50.0000	51.2	
11	Iodomethane	142	2.609	2.603	(0.422)	139050	50.0000	53.2	
12	Acrolein	56	2.774	2.775	(0.449)	101301	250.000	228	
13	Allyl Chloride	41	2.888	2.889	(0.467)	252474	50.0000	49.7	
14	Methylene Chloride	84	2.995	2.989	(0.484)	197455	50.0000	51.7	
15	Acetone	43	3.045	3.047	(0.492)	210148	250.000	216	
16	trans-1,2-Dichloroethene	96	3.138	3.139	(0.508)	199554	50.0000	49.8	
17	Methyl Acetate	43	3.160	3.161	(0.511)	110241	50.0000	45.8	
18	Methyl tert-butyl ether	73	3.246	3.247	(0.525)	449003	50.0000	51.0	
19	Tertiary-butyl alcohol	59	3.360	3.361	(0.543)	56905	250.000	172	
20	Acetonitrile	41	3.532	3.533	(0.571)	179652	500.000	419	
21	Di-isopropyl ether	45	3.660	3.661	(0.592)	484828	50.0000	50.6	
22	Chloroprene	53	3.775	3.776	(0.610)	301254	50.0000	49.9	
23	1,1-Dichloroethane	63	3.810	3.804	(0.616)	342848	50.0000	51.1	
24	Acrylonitrile	52	3.889	3.890	(0.629)	244390	250.000	234	

Data File: \\target_server\gg\chem\gcms-p.i\P081518.b\P7232.D
Report Date: 20-Aug-2018 14:47

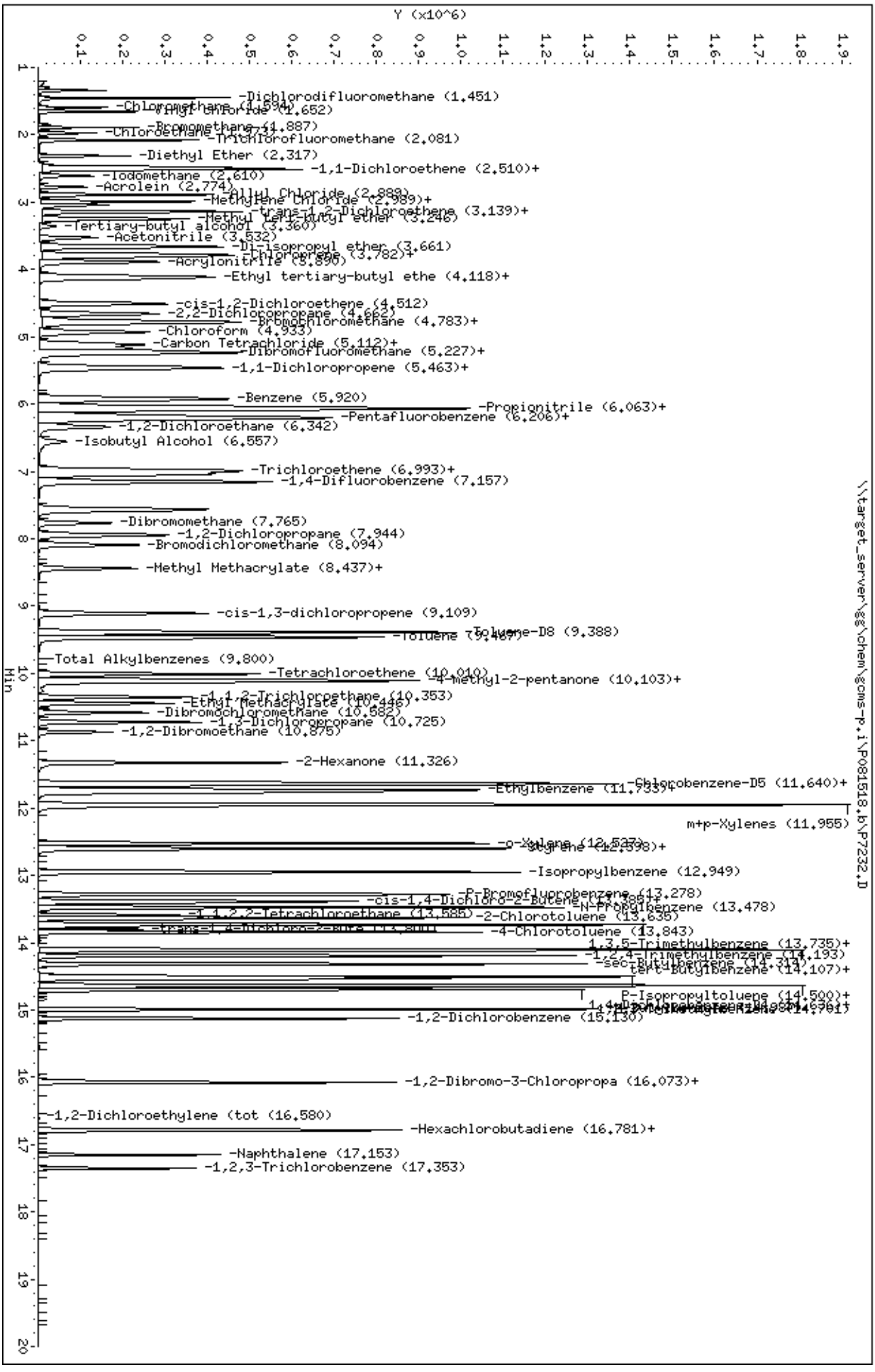
			QUANT SIG					AMOUNTS		
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	25	Ethyl tertiary-butyl ether	59	4.111	4.105	(0.665)	481834	50.0000	50.9	
	26	Vinyl Acetate	43	4.132	4.133	(0.577)	334985	50.0000	52.1	
	27	cis-1,2-Dichloroethene	96	4.511	4.505	(0.729)	204812	50.0000	50.1	
	28	2,2-Dichloropropane	77	4.661	4.655	(0.754)	322713	50.0000	53.2	
	29	Bromochloromethane	128	4.804	4.798	(0.777)	82699	50.0000	57.8	
	30	Cyclohexane	56	4.768	4.770	(0.771)	294336	50.0000	52.2	
	31	Chloroform	83	4.933	4.927	(0.798)	353959	50.0000	50.8	
	32	Carbon Tetrachloride	117	5.119	5.113	(0.715)	290709	50.0000	51.2	
	33	Tetrahydrofuran	42	5.169	5.177	(0.836)	187321	250.000	241	
$	34	Dibromofluoromethane	113	5.226	5.227	(0.845)	211174	50.0000	50.6	
	35	1,1,1-Trichloroethane	97	5.240	5.242	(0.847)	341909	50.0000	50.7	
	36	2-Butanone	43	5.469	5.470	(0.884)	314626	250.000	234	
	37	1,1-Dichloropropene	75	5.455	5.456	(0.762)	288454	50.0000	50.3	
	38	Benzene	78	5.920	5.921	(0.827)	804219	50.0000	50.8	
	39	Propionitrile	54	6.034	6.035	(0.976)	205939	500.000	433	
	40	Methacrylonitrile	41	6.070	6.064	(0.982)	882033	500.000	472	
*	41	Pentafluorobenzene	168	6.184	6.185	(1.000)	409284	50.0000		
$	42	1,2-Dichloroethane-D4	65	6.213	6.207	(1.005)	269061	50.0000	48.8	
	43	Tertiary-amyl methyl ether	73	6.220	6.214	(1.006)	439706	50.0000	49.3	
	44	1,2-Dichloroethane	62	6.342	6.343	(0.886)	253291	50.0000	48.1	
	45	Isobutyl Alcohol	43	6.563	6.557	(1.061)	75564	1000.00	766	
	46	Methylcyclohexane	83	6.992	6.986	(1.131)	385436	50.0000	51.1	
	47	Trichloroethene	95	7.042	7.043	(0.984)	202060	50.0000	49.6	
*	48	1,4-Difluorobenzene	114	7.157	7.151	(1.000)	736547	50.0000		
	49	Dibromomethane	93	7.772	7.766	(1.086)	107792	50.0000	50.0	
	50	1,2-Dichloropropane	63	7.943	7.944	(1.110)	172775	50.0000	51.6	
	51	Bromodichloromethane	83	8.093	8.095	(1.131)	252927	50.0000	51.6	
	52	Methyl Methacrylate	41	8.437	8.438	(1.179)	128213	50.0000	48.0	
	53	Ethyl Methacrylate	69	10.446	10.447	(1.460)	231462	50.0000	50.3	
	54	1,4-Dioxane	88	8.437	8.445	(1.179)	31583	1000.00	540	
M	55	Total Alkylbenzenes	100				6410415	50.0000	(a)	
	57	cis-1,3-dichloropropene	75	9.109	9.110	(1.273)	330693	50.0000	53.8	
$	58	Toluene-D8	98	9.387	9.389	(1.312)	930393	50.0000	50.3	
	59	Toluene	92	9.466	9.460	(1.323)	528366	50.0000	50.1	
	60	Tetrachloroethene	164	10.010	10.011	(0.860)	162346	50.0000	48.8	
	61	4-methyl-2-pentanone	43	10.102	10.104	(1.412)	671987	250.000	212	
	62	trans-1,3-Dichloropropene	75	10.131	10.132	(1.416)	284836	50.0000	52.0	
	63	1,1,2-Trichloroethane	83	10.346	10.354	(1.446)	129491	50.0000	51.9	
	64	Dibromochloromethane	129	10.582	10.583	(0.910)	184808	50.0000	51.3	
	65	1,3-Dichloropropane	76	10.725	10.726	(0.922)	311544	50.0000	50.9	
	66	1,2-Dibromoethane	107	10.875	10.876	(1.519)	154381	50.0000	50.2	
	67	2-Hexanone	43	11.325	11.326	(0.974)	453567	250.000	197	
*	68	Chlorobenzene-D5	117	11.633	11.634	(1.000)	756323	50.0000		
	69	Chlorobenzene	112	11.654	11.655	(1.002)	540659	50.0000	48.8	
	70	Ethylbenzene	91	11.733	11.734	(1.009)	1013808	50.0000	49.8	
	71	1,1,1,2-Tetrachloroethane	131	11.768	11.770	(1.012)	193823	50.0000	51.2	
	72	m+p-Xylenes	91	11.954	11.956	(1.028)	1571872	100.000	100	
	73	o-Xylene	91	12.526	12.528	(1.077)	796083	50.0000	51.8	
	74	Styrene	104	12.605	12.606	(1.084)	587701	50.0000	49.3	
	75	Bromoform	173	12.598	12.599	(1.083)	102559	50.0000	47.9	
	76	Isopropylbenzene	105	12.948	12.949	(0.885)	929785	50.0000	49.7	
$	77	P-Bromofluorobenzene	95	13.277	13.286	(1.855)	417793	50.0000	51.6	
	78	cis-1,4-Dichloro-2-Butene	53	13.406	13.407	(0.916)	70075	50.0000	43.6	
	79	Bromobenzene	156	13.384	13.386	(0.915)	202799	50.0000	48.6	

Data File: \\target_server\gg\chem\gcms-p.i\P081518.b\P7232.D
Report Date: 20-Aug-2018 14:47

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
80	N-Propylbenzene	91	13.477	13.479	(0.921)	1186394	50.0000	48.8	
81	1,1,2,2-Tetrachloroethane	83	13.585	13.586	(0.929)	193079	50.0000	47.0	
82	2-Chlorotoluene	91	13.635	13.636	(0.932)	690946	50.0000	48.5	
83	1,2,3-Trichloropropane	75	13.720	13.722	(0.938)	177488	50.0000	46.1	
84	1,3,5-Trimethylbenzene	105	13.735	13.736	(0.939)	812900	50.0000	50.2	
85	trans-1,4-Dichloro-2-Butene	53	13.799	13.800	(0.943)	56910	50.0000	44.3	
86	4-Chlorotoluene	91	13.842	13.843	(0.946)	727368	50.0000	48.4	
87	tert-Butylbenzene	119	14.107	14.108	(0.964)	804519	50.0000	49.0	
88	Pentachloroethane	165	14.114	14.108	(0.965)	102714	50.0000	49.2	
89	1,2,4-Trimethylbenzene	105	14.192	14.194	(0.970)	809474	50.0000	49.8	
90	sec-Butylbenzene	105	14.314	14.315	(0.978)	1040525	50.0000	49.8	
91	P-Isopropyltoluene	119	14.500	14.501	(0.991)	941108	50.0000	49.9	
92	1,3-Dichlorobenzene	146	14.536	14.537	(0.994)	403945	50.0000	47.9	
* 93	1,4-Dichlorobenzene-D4	152	14.629	14.630	(1.000)	381735	50.0000		
94	1,4-Dichlorobenzene	146	14.650	14.651	(1.001)	408785	50.0000	47.0	
95	1,2,3-Trimethylbenzene	105	14.700	14.701	(1.005)	806390	50.0000	44.8	
96	N-Butylbenzene	91	14.986	14.987	(1.024)	815495	50.0000	49.6	
M 97	1,2-Dichloroethylene (total)	96				404366	50.0000	(a)	
98	1,2-Dichlorobenzene	146	15.129	15.130	(1.034)	368815	50.0000	48.3	
99	1,2-Dibromo-3-Chloropropane	157	16.044	16.045	(1.097)	32528	50.0000	37.6	
100	1,3,5-Trichlorobenzene	180	16.080	16.081	(1.099)	265172	50.0000	45.8	
101	Hexachlorobutadiene	225	16.774	16.782	(1.147)	119421	50.0000	46.6	
102	1,2,4-Trichlorobenzene	180	16.795	16.796	(1.148)	172201	50.0000	43.8	
103	Naphthalene	128	17.153	17.154	(1.173)	309519	50.0000	41.4	
104	1,2,3-Trichlorobenzene	180	17.353	17.354	(1.186)	105916	50.0000	42.0	
M 105	Xylenes (total)	106				2367955	150.000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).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Date : 15-AUG-2018 07:05
Client ID:
Sample Info: WG234446-4,SL7420
Purge Volume: 5.0
Column phase: RTX-VMS
Instrument: gcms-p.i
Operator: HG
Column diameter: 0.18
\\target_server\gg\chem\gcms-p.i\P081518.b\P7232.D
Y (x10^6)
Min
-Dichlorodifluoromethane (1.451)
-Chloromethane (1.594)
Vinyl chloride (1.652)
-Bromomethane (1.887)
-Chloroethane (1.944)
-Trichlorofluoromethane (2.081)
-Diethyl Ether (2.317)
-1,1-Dichloroethene (2.510)+
-Iodomethane (2.610)
-Acrolein (2.774)
-Allyl Chloride (2.889)
-Methylene Chloride (2.989)+
-trans-1,2-Dichloroethene (3.139)+
-Methyl tert-butyl ether (3.246)
-Tertiary-butyl alcohol (3.360)
-Acetonitrile (3.532)
-Di-isopropyl ether (3.661)
-Chloroprene (3.782)+
-Acrylonitrile (3.890)
-Ethyl tertiary-butyl ethe (4.118)+
-cis-1,2-Dichloroethene (4.512)
-2,2-Dichloropropane (4.662)
-Bromochloromethane (4.783)+
-Chloroform (4.933)
-Carbon Tetrachloride (5.112)+
-Dibromofluoromethane (5.227)+
-1,1-Dichloropropene (5.463)+
-Benzene (5.920)
-Propionitrile (6.063)+
-Pentafluorobenzene (6.206)+
-1,2-Dichloroethane (6.342)
-Isobutyl Alcohol (6.557)
-Trichloroethene (6.993)+
-1,4-Difluorobenzene (7.157)
-Dibromomethane (7.765)
-1,2-Dichloropropane (7.944)
-Bromodichloromethane (8.094)
-Methyl Methacrylate (8.437)+
-cis-1,3-dichloropropene (9.109)
-Toluene-D8 (9.388)
-Toluene (9.467)
-Total Alkylbenzenes (9.800)
-Tetrachloroethene (10.010)
-4-methyl-2-pentanone (10.103)+
-1,1,2-Trichloroethane (10.353)
-Ethyl Methacrylate (10.446)
-Dibromochloromethane (10.582)
-1,3-Dichloropropane (10.725)
-1,2-Dibromoethane (10.875)
-2-Hexanone (11.326)
-Chlorobenzene-D5 (11.640)+
-Ethylbenzene (11.733)+
m+p-Xylenes (11.955)
-o-Xylene (12.537)
-Styrene (12.598)+
-Isopropylbenzene (12.949)
-P-Bromofluorobenzene (13.278)
-cis-1,4-Dichloro-2-Butene (13.388)+
-N-Propylbenzene (13.478)
-1,1,2,2-Tetrachloroethane (13.585)
-2-Chlorotoluene (13.635)
-trans-1,4-Dichloro-2-Bute (13.800)+
-4-Chlorotoluene (13.843)
-1,3,5-Trimethylbenzene (13.735)+
-1,2,4-Trimethylbenzene (14.193)
-sec-Butylbenzene (14.319)
-tert-Butylbenzene (14.107)+
-P-Isopropyltoluene (14.500)+
-1,2-Dichlorobenzene (15.130)
-1,2-Dibromo-3-Chloropropa (16.073)+
-1,2-Dichloroethylene (tot (16.580)
-Hexachlorobutadiene (16.781)+
-Naphthalene (17.153)
-1,2,3-Trichlorobenzene (17.353)

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL7420
Lab ID : WG234446-5
Analytical Date: 08/15/18 10:11
Lab File ID : P7237.D
Instrument ID: GCMS-P
Initial Calibration Date(s): 08/11/18 12:12 08/11/18 14:53
Column ID:

	Compound	$\overline{RRF}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
3	Vinyl chloride	0.43594	0.43020	0.43020	0.010	-1.31716	50.00000	Averaged
8	1,1-Dichloroethene	0.32700	0.32121	0.32121	0.100	-1.77196	50.00000	Averaged
31	Chloroform	0.85089	0.82844	0.82844	0.010	-2.63824	50.00000	Averaged
32	Carbon Tetrachloride	0.38559	0.37749	0.37749	0.010	-2.10142	50.00000	Averaged
36	2-Butanone	0.16402	0.14669	0.14669	0.010	-10.56498	50.00000	Averaged
38	Benzene	1.07387	1.05894	1.05894	0.010	-1.38995	50.00000	Averaged
44	1,2-Dichloroethane	0.35733	0.33172	0.33172	0.010	-7.16677	50.00000	Averaged
47	Trichloroethene	0.27677	0.26389	0.26389	0.010	-4.65246	50.00000	Averaged
60	Tetrachloroethene	0.22008	0.20096	0.20096	0.010	-8.68521	50.00000	Averaged
69	Chlorobenzene	0.73262	0.67983	0.67983	0.300	-7.20539	50.00000	Averaged
34	Dibromofluoromethane	0.50927	0.51534	0.51534	0.010	1.19128	50.00000	Averaged
42	1,2-Dichloroethane-D4	0.67347	0.67143	0.67143	0.010	-0.30338	50.00000	Averaged
58	Toluene-D8	1.25488	1.27271	1.27271	0.010	1.42127	50.00000	Averaged
77	P-Bromofluorobenzene	0.54968	0.57702	0.57702	0.010	4.97260	50.00000	Averaged

*** = Compound out of QC criteria**

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sales@katahdinlab.com

Data File: \\target_server\gg\chem\gcms-p.i\P081518.b\P7237.D
Report Date: 20-Aug-2018 14:47

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-p.i\P081518.b\P7237.D
Lab Smp Id: WG234446-5
Inj Date : 15-AUG-2018 10:11
Operator : HG   Inst ID: gcms-p.i
Smp Info : WG234446-5,SL7420
Misc Info : WG234446,WG234067-4,SL7420-1
Comment   : SW846 5030
Method   : \\target_server\gg\chem\gcms-p.i\P081518.b\P8A05(85)D.m
Meth Date : 20-Aug-2018 14:46 tcote   Quant Type: ISTD
Cal Date : 11-AUG-2018 13:49   Cal File: P7170.D
Als bottle: 6   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.451	1.452	(0.235)	247060	50.0000	49.6	
2	Chloromethane	50	1.594	1.595	(0.258)	151148	50.0000	48.2	
3	Vinyl chloride	62	1.651	1.652	(0.267)	171757	50.0000	49.3	
4	Bromomethane	94	1.887	1.888	(0.305)	71747	50.0000	45.5	
5	Chloroethane	64	1.980	1.967	(0.320)	104559	50.0000	63.2	
6	Trichlorofluoromethane	101	2.080	2.073	(0.336)	251505	50.0000	51.1	
7	Diethyl Ether	59	2.316	2.317	(0.375)	95133	50.0000	49.4	
8	1,1-Dichloroethene	96	2.481	2.475	(0.401)	128243	50.0000	49.1	
9	Freon-113	151	2.509	2.503	(0.406)	100430	50.0000	46.2	
10	Carbon Disulfide	76	2.509	2.510	(0.406)	337652	50.0000	48.6	
11	Iodomethane	142	2.610	2.603	(0.422)	126171	50.0000	49.4	
12	Acrolein	56	2.774	2.775	(0.449)	94605	250.000	218	
13	Allyl Chloride	41	2.888	2.889	(0.467)	226439	50.0000	45.7	
14	Methylene Chloride	84	2.996	2.989	(0.484)	187595	50.0000	50.3	
15	Acetone	43	3.046	3.047	(0.493)	200089	250.000	211	
16	trans-1,2-Dichloroethene	96	3.139	3.139	(0.508)	182280	50.0000	46.6	
17	Methyl Acetate	43	3.160	3.161	(0.511)	100255	50.0000	42.7	
18	Methyl tert-butyl ether	73	3.246	3.247	(0.525)	410527	50.0000	47.8	
19	Tertiary-butyl alcohol	59	3.360	3.361	(0.543)	49571	250.000	154	
20	Acetonitrile	41	3.532	3.533	(0.571)	160524	500.000	384	
21	Di-isopropyl ether	45	3.661	3.661	(0.592)	437946	50.0000	46.8	
22	Chloroprene	53	3.775	3.776	(0.610)	273504	50.0000	46.4	
23	1,1-Dichloroethane	63	3.811	3.804	(0.616)	318406	50.0000	48.6	
24	Acrylonitrile	52	3.889	3.890	(0.629)	224502	250.000	221	

Data File: \\target_server\gg\chem\gcms-p.i\P081518.b\P7237.D
Report Date: 20-Aug-2018 14:47

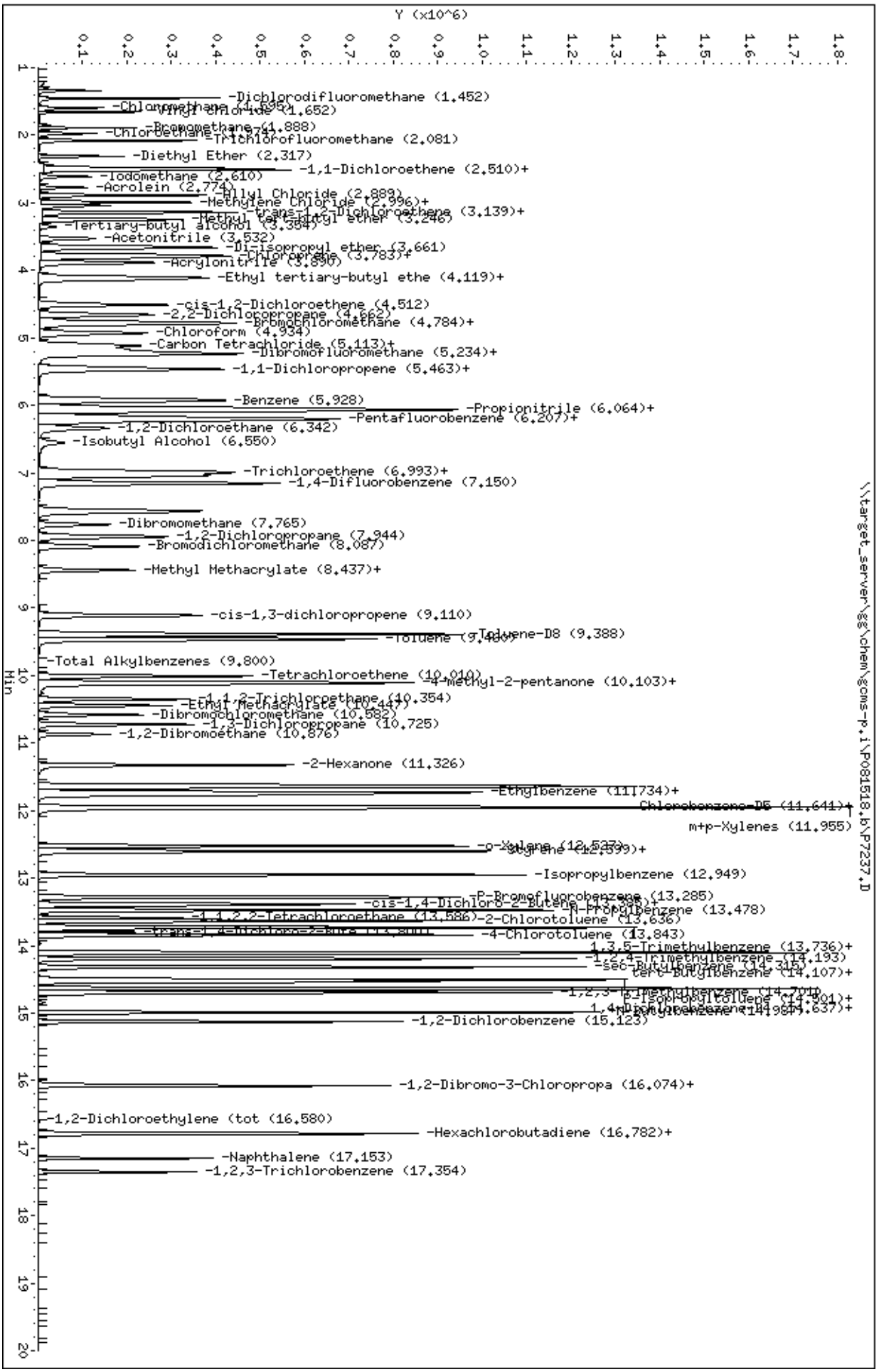
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	25 Ethyl tertiary-butyl ether	59	4.111	4.105	(0.665)	440273	50.0000	47.6	
	26 Vinyl Acetate	43	4.133	4.133	(0.578)	309155	50.0000	49.6	
	27 cis-1,2-Dichloroethene	96	4.511	4.505	(0.729)	190443	50.0000	47.8	
	28 2,2-Dichloropropane	77	4.654	4.655	(0.753)	296820	50.0000	50.2	
	29 Bromochloromethane	128	4.797	4.798	(0.776)	76376	50.0000	54.6	
	30 Cyclohexane	56	4.776	4.770	(0.772)	268995	50.0000	49.0	
	31 Chloroform	83	4.926	4.927	(0.797)	330754	50.0000	48.7	
	32 Carbon Tetrachloride	117	5.112	5.113	(0.715)	269818	50.0000	48.9	
	33 Tetrahydrofuran	42	5.169	5.177	(0.836)	175437	250.000	231	
$	34 Dibromofluoromethane	113	5.234	5.227	(0.846)	205748	50.0000	50.6	
	35 1,1,1-Trichloroethane	97	5.241	5.242	(0.847)	321717	50.0000	48.9	
	36 2-Butanone	43	5.470	5.470	(0.884)	292825	250.000	224	
	37 1,1-Dichloropropene	75	5.455	5.456	(0.763)	268446	50.0000	48.3	
	38 Benzene	78	5.920	5.921	(0.828)	756899	50.0000	49.3	
	39 Propionitrile	54	6.034	6.035	(0.976)	187437	500.000	404	
	40 Methacrylonitrile	41	6.063	6.064	(0.980)	821198	500.000	450	
*	41 Pentafluorobenzene	168	6.185	6.185	(1.000)	399250	50.0000		
$	42 1,2-Dichloroethane-D4	65	6.206	6.207	(1.003)	268068	50.0000	49.8	
	43 Tertiary-amyl methyl ether	73	6.220	6.214	(1.006)	400440	50.0000	46.0	
	44 1,2-Dichloroethane	62	6.342	6.343	(0.887)	237106	50.0000	46.4	
	45 Isobutyl Alcohol	43	6.556	6.557	(1.060)	69355	1000.00	721	
	46 Methylcyclohexane	83	6.993	6.986	(1.131)	347222	50.0000	47.2	
	47 Trichloroethene	95	7.043	7.043	(0.985)	188620	50.0000	47.7	
*	48 1,4-Difluorobenzene	114	7.150	7.151	(1.000)	714768	50.0000		
	49 Dibromomethane	93	7.765	7.766	(1.086)	100409	50.0000	48.0	
	50 1,2-Dichloropropane	63	7.944	7.944	(1.111)	158802	50.0000	48.9	
	51 Bromodichloromethane	83	8.087	8.095	(1.131)	235188	50.0000	49.5	
	52 Methyl Methacrylate	41	8.437	8.438	(1.180)	118717	50.0000	45.8	
	53 Ethyl Methacrylate	69	10.446	10.447	(1.461)	211022	50.0000	47.3	
	54 1,4-Dioxane	88	8.444	8.445	(1.181)	25975	1000.00	458	
M	55 Total Alkylbenzenes	100				6024566	50.0000	(a)	
	57 cis-1,3-dichloropropene	75	9.109	9.110	(1.274)	300859	50.0000	50.5	
$	58 Toluene-D8	98	9.388	9.389	(1.313)	909695	50.0000	50.7	
	59 Toluene	92	9.459	9.460	(1.323)	495332	50.0000	48.4	
	60 Tetrachloroethene	164	10.010	10.011	(0.860)	149459	50.0000	45.6	
	61 4-methyl-2-pentanone	43	10.103	10.104	(1.413)	636620	250.000	206	
	62 trans-1,3-Dichloropropene	75	10.131	10.132	(1.417)	267008	50.0000	50.3	
	63 1,1,2-Trichloroethane	83	10.353	10.354	(1.448)	119777	50.0000	49.5	
	64 Dibromochloromethane	129	10.582	10.583	(0.910)	169713	50.0000	47.9	
	65 1,3-Dichloropropane	76	10.725	10.726	(0.922)	288419	50.0000	48.0	
	66 1,2-Dibromoethane	107	10.875	10.876	(1.521)	143020	50.0000	48.0	
	67 2-Hexanone	43	11.326	11.326	(0.974)	434244	250.000	191	
*	68 Chlorobenzene-D5	117	11.633	11.634	(1.000)	743713	50.0000		
	69 Chlorobenzene	112	11.654	11.655	(1.002)	505600	50.0000	46.4	
	70 Ethylbenzene	91	11.733	11.734	(1.009)	950583	50.0000	47.5	
	71 1,1,1,2-Tetrachloroethane	131	11.769	11.770	(1.012)	178672	50.0000	48.0	
	72 m+p-Xylenes	91	11.955	11.956	(1.028)	1475140	100.000	95.9	
	73 o-Xylene	91	12.527	12.528	(1.077)	740629	50.0000	49.0	
	74 Styrene	104	12.605	12.606	(1.084)	545458	50.0000	46.5	
	75 Bromoform	173	12.598	12.599	(1.083)	94421	50.0000	44.9	
	76 Isopropylbenzene	105	12.949	12.949	(0.885)	879292	50.0000	47.2	
$	77 P-Bromofluorobenzene	95	13.285	13.286	(1.858)	412434	50.0000	52.5	
	78 cis-1,4-Dichloro-2-Butene	53	13.406	13.407	(0.916)	65009	50.0000	40.6	
	79 Bromobenzene	156	13.385	13.386	(0.915)	187147	50.0000	45.1	

Data File: \\target_server\gg\chem\gcms-p.i\P081518.b\P7237.D
Report Date: 20-Aug-2018 14:47

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	80 N-Propylbenzene	91	13.478	13.479	(0.921)	1119744	50.0000	46.3	
	81 1,1,2,2-Tetrachloroethane	83	13.585	13.586	(0.929)	180118	50.0000	44.0	
	82 2-Chlorotoluene	91	13.635	13.636	(0.932)	651535	50.0000	45.9	
	83 1,2,3-Trichloropropane	75	13.721	13.722	(0.938)	167567	50.0000	43.7	
	84 1,3,5-Trimethylbenzene	105	13.735	13.736	(0.939)	764393	50.0000	47.4	
	85 trans-1,4-Dichloro-2-Butene	53	13.800	13.800	(0.943)	53954	50.0000	42.2	
	86 4-Chlorotoluene	91	13.842	13.843	(0.946)	678922	50.0000	45.4	
	87 tert-Butylbenzene	119	14.107	14.108	(0.964)	754339	50.0000	46.1	
	88 Pentachloroethane	165	14.107	14.108	(0.964)	96909	50.0000	46.6	
	89 1,2,4-Trimethylbenzene	105	14.193	14.194	(0.970)	750691	50.0000	46.3	
	90 sec-Butylbenzene	105	14.314	14.315	(0.978)	983126	50.0000	47.3	
	91 P-Isopropyltoluene	119	14.500	14.501	(0.991)	885735	50.0000	47.1	
	92 1,3-Dichlorobenzene	146	14.536	14.537	(0.994)	379769	50.0000	45.3	
*	93 1,4-Dichlorobenzene-D4	152	14.629	14.630	(1.000)	380055	50.0000		
	94 1,4-Dichlorobenzene	146	14.650	14.651	(1.001)	384069	50.0000	44.3	
	95 1,2,3-Trimethylbenzene	105	14.700	14.701	(1.005)	749010	50.0000	41.8	
	96 N-Butylbenzene	91	14.986	14.987	(1.024)	766538	50.0000	46.8	
M	97 1,2-Dichloroethylene (total)	96				372723	50.0000	(a)	
	98 1,2-Dichlorobenzene	146	15.129	15.130	(1.034)	346885	50.0000	45.6	
	99 1,2-Dibromo-3-Chloropropane	157	16.045	16.045	(1.097)	30539	50.0000	35.4	
	100 1,3,5-Trichlorobenzene	180	16.080	16.081	(1.099)	245333	50.0000	42.6	
	101 Hexachlorobutadiene	225	16.774	16.782	(1.147)	110826	50.0000	43.4	
	102 1,2,4-Trichlorobenzene	180	16.795	16.796	(1.148)	161657	50.0000	41.3	
	103 Naphthalene	128	17.153	17.154	(1.173)	292367	50.0000	39.3	
	104 1,2,3-Trichlorobenzene	180	17.353	17.354	(1.186)	104457	50.0000	41.6	
M	105 Xylenes (total)	106				2215769	150.000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).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Date : 15-AUG-2018 10:11
Client ID:
Sample Info: WG234446-5,SL7420
Purge Volume: 5.0
Column phase: RTX-VMS
Instrument: gcms-p.i
Operator: HG
Column diameter: 0.18
\\target_server\gg\chem\gcms-p.i\P081518.b\P7237.D
Y (x10^6)
Min
-Dichlorodifluoromethane (1.452)
-Chloromethane (1.695)
-Vinyl Chloride (1.652)
-Bromomethane (1.888)
-Chloroethane (1.941)
-Trichlorofluoromethane (2.081)
-Diethyl Ether (2.317)
-1,1-Dichloroethene (2.510)+
-Iodomethane (2.610)
-Acrolein (2.774)
-Allyl Chloride (2.888)
-Methylene Chloride (2.996)+
-trans-1,2-Dichloroethene (3.139)+
-Methyl tert-butyl ether (3.246)
-Tertiary-butyl alcohol (3.384)
-Acetonitrile (3.532)
-Di-isopropyl ether (3.661)
-Chloroprene (3.783)+
-Acrylonitrile (3.890)
-Ethyl tertiary-butyl ethe (4.119)+
-cis-1,2-Dichloroethene (4.512)
-2,2-Dichloropropane (4.662)
-Bromochloromethane (4.784)+
-Chloroform (4.934)
-Carbon Tetrachloride (5.113)+
-Dibromofluoromethane (5.234)+
-1,1-Dichloropropene (5.463)+
-Benzene (5.928)
-Propionitrile (6.064)+
-Pentafluorobenzene (6.207)+
-1,2-Dichloroethane (6.342)
-Isobutyl Alcohol (6.550)
-Trichloroethene (6.993)+
-1,4-Difluorobenzene (7.150)
-Dibromomethane (7.765)
-1,2-Dichloropropane (7.944)
-Bromodichloromethane (8.087)
-Methyl Methacrylate (8.437)+
-cis-1,3-dichloropropene (9.110)
Toluene-D8 (9.388)
-Toluene (9.480)+
-Total Alkylbenzenes (9.800)
-Tetrachloroethene (10.010)
-4-methyl-2-pentanone (10.103)+
-1,1,2-Trichloroethane (10.354)
-Ethyl Methacrylate (10.447)
-Dibromochloromethane (10.582)
-1,3-Dichloropropane (10.725)
-1,2-Dibromoethane (10.876)
-2-Hexanone (11.326)
-Ethylbenzene (11.734)+
Chlorobenzene-D5 (11.641)+
m+p-Xylenes (11.955)
-o-Xylene (12.537)
-Styrene (12.599)+
-Isopropylbenzene (12.949)
-P-Bromofluorobenzene (13.285)
-cis-1,4-Dichloro-2-Butene (13.398)+
-n-Propylbenzene (13.478)
-1,1,2,2-Tetrachloroethane (13.586)
-2-Chlorotoluene (13.636)
-trans-1,4-Dichloro-2-Bute (13.800)+
-4-Chlorotoluene (13.843)
-1,3,5-Trimethylbenzene (13.736)+
-1,2,4-Trimethylbenzene (14.193)
-sec-Butylbenzene (14.240)
-tert-Butylbenzene (14.107)+
-1,2,3-Trimethylbenzene (14.701)
-p-Isopropyltoluene (14.501)+
-1,4-Dichlorobenzene (14.986)+
-1,3-Dichlorobenzene (14.637)+
-1,2-Dichlorobenzene (15.123)
-1,2-Dibromo-3-Chloropropa (16.074)+
-1,2-Dichloroethylene (tot (16.580)
-Hexachlorobutadiene (16.782)+
-Naphthalene (17.153)
-1,2,3-Trichlorobenzene (17.354)

Data File: \\target_server\gg\chem\gcms-p.i\P081118.b\PB112.D

Date : 11-AUG-2018 10:25

Client ID:

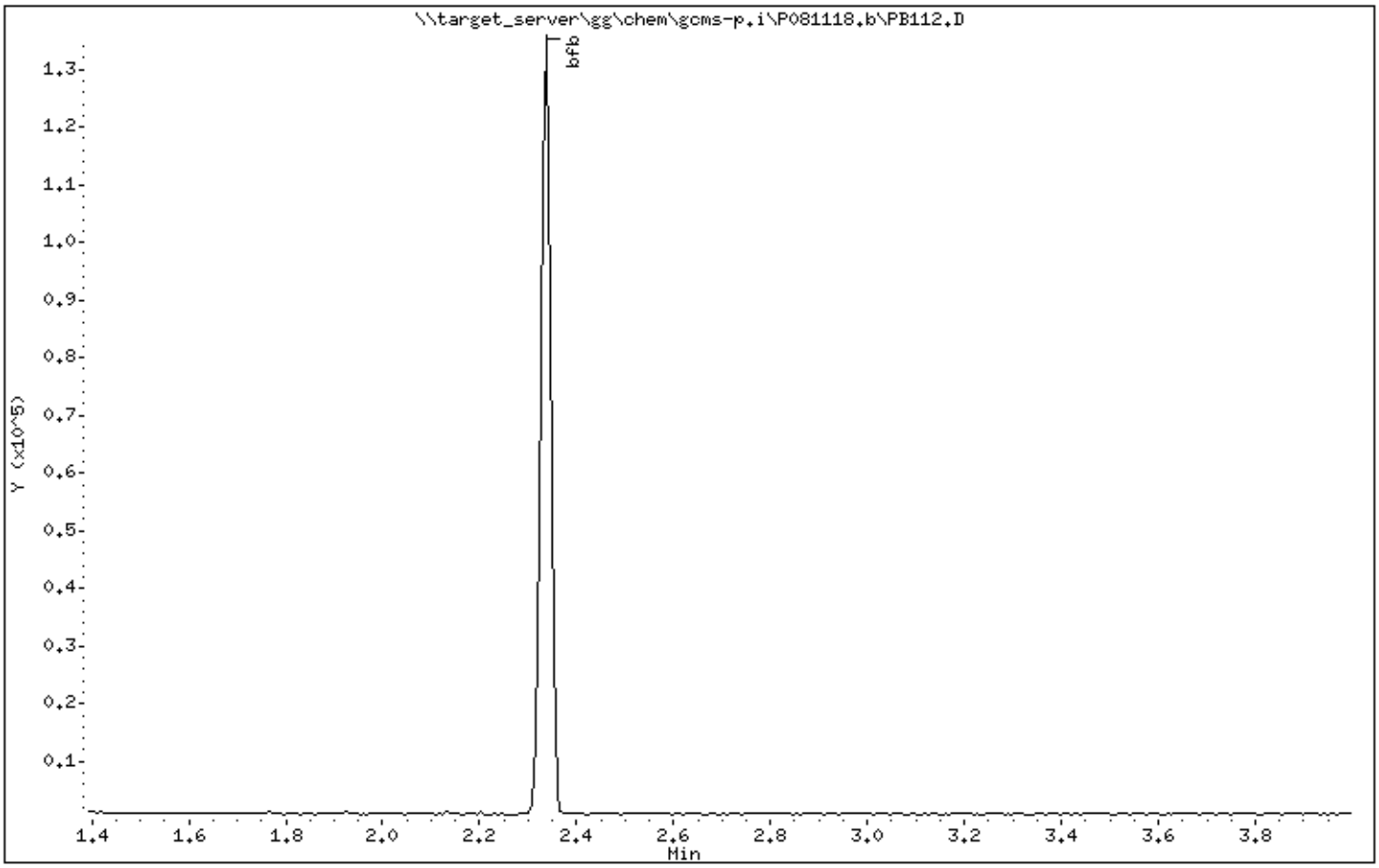
Instrument: gcms-p.i

Sample Info: WG234067-10,SL7420

Operator: HG

Column phase: RTX-VMS

Column diameter: 0.18



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Date : 11-AUG-2018 10:25

Client ID:

Instrument: gcms-p.i

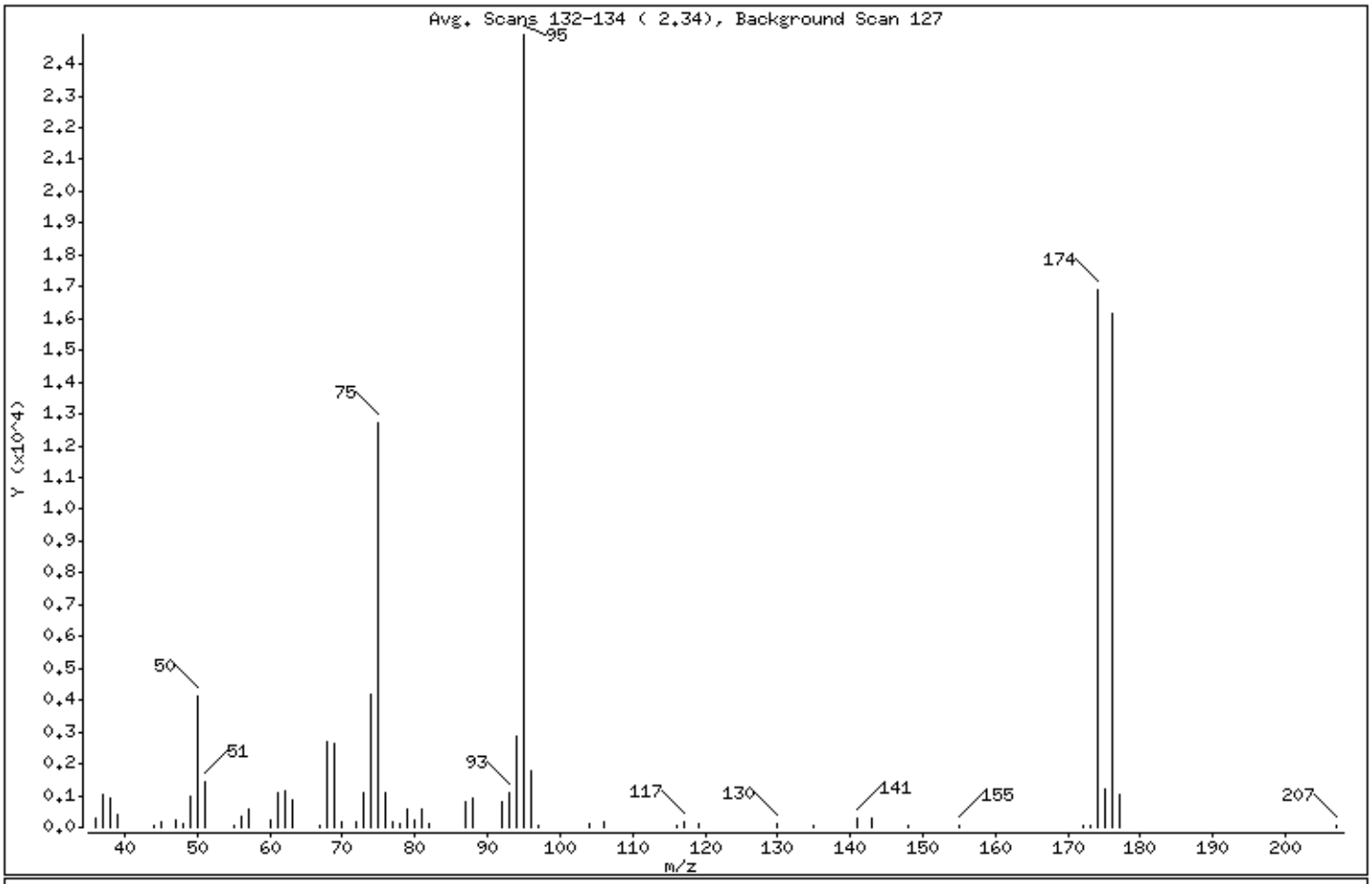
Sample Info: WG234067-10,SL7420

Operator: HG

Column phase: RTX-VMS

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.63
75	30.00 - 60.00% of mass 95	51.12
96	5.00 - 9.00% of mass 95	7.02
173	Less than 2.00% of mass 174	0.27 (0.40)
174	Greater than 50.00% of mass 95	67.80
175	5.00 - 9.00% of mass 174	4.92 (7.26)
176	95.00 - 101.00% of mass 174	64.73 (95.47)
177	5.00 - 9.00% of mass 176	4.17 (6.44)

Data File: \\target_server\gg\chem\gcms-p.i\P081118.b\PB112.D

Date : 11-AUG-2018 10:25

Client ID:

Instrument: gcms-p.i

Sample Info: WG234067-10,SL7420

Operator: HG

Column phase: RTX-VMS

Column diameter: 0.18

Data File: PB112.D
Spectrum: Avg. Scans 132-134 (2.34), Background Scan 127
Location of Maximum: 95.00
Number of points: 59

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	258	61.00	1115	80.00	204	119.00	135
37.00	1011	62.00	1169	81.00	592	130.00	86
38.00	901	63.00	843	82.00	135	135.00	34
39.00	380	67.00	49	87.00	785	141.00	264
44.00	41	68.00	2716	88.00	924	143.00	264
45.00	191	69.00	2612	92.00	816	148.00	35
47.00	207	70.00	193	93.00	1067	155.00	34
48.00	104	72.00	149	94.00	2858	172.00	44
49.00	965	73.00	1117	95.00	24920	173.00	68
50.00	4145	74.00	4180	96.00	1750	174.00	16896
51.00	1427	75.00	12738	97.00	33	175.00	1227
55.00	69	76.00	1108	104.00	90	176.00	16130
56.00	332	77.00	194	106.00	159	177.00	1038
57.00	552	78.00	122	116.00	69	207.00	34
60.00	225	79.00	553	117.00	160		

Data File: \\target_server\gg\chem\gcms-p.i\P081418.b\PB114a.D

Date : 14-AUG-2018 07:00

Client ID:

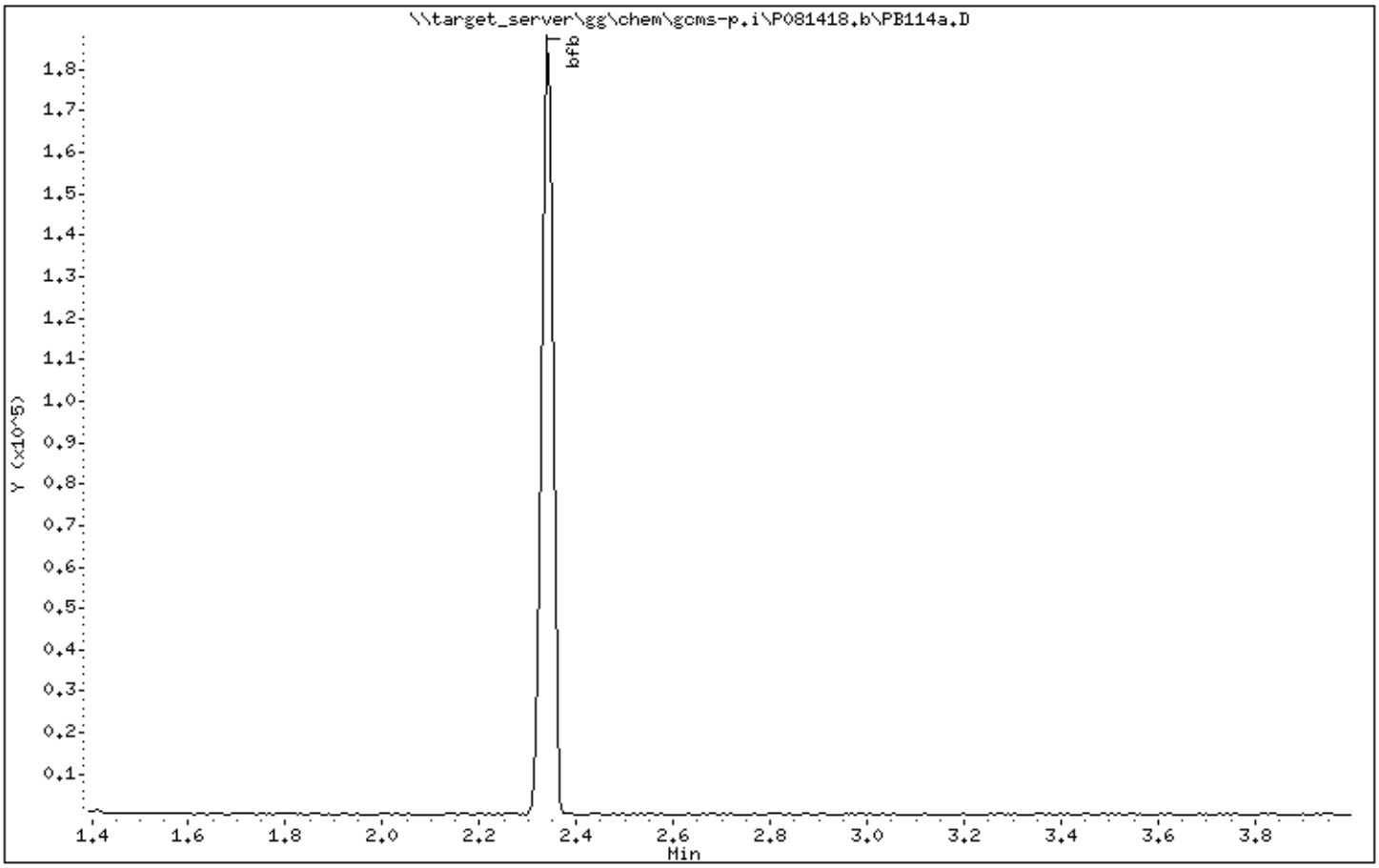
Instrument: gcms-p.i

Sample Info: WG234298-3,SL7420

Operator: HG

Column phase: RTX-VMS

Column diameter: 0.18



Data File: \\target_server\gg\chem\gcms-p.i\P081418.b\PB114a.D

Date : 14-AUG-2018 07:00

Client ID:

Instrument: gcms-p.i

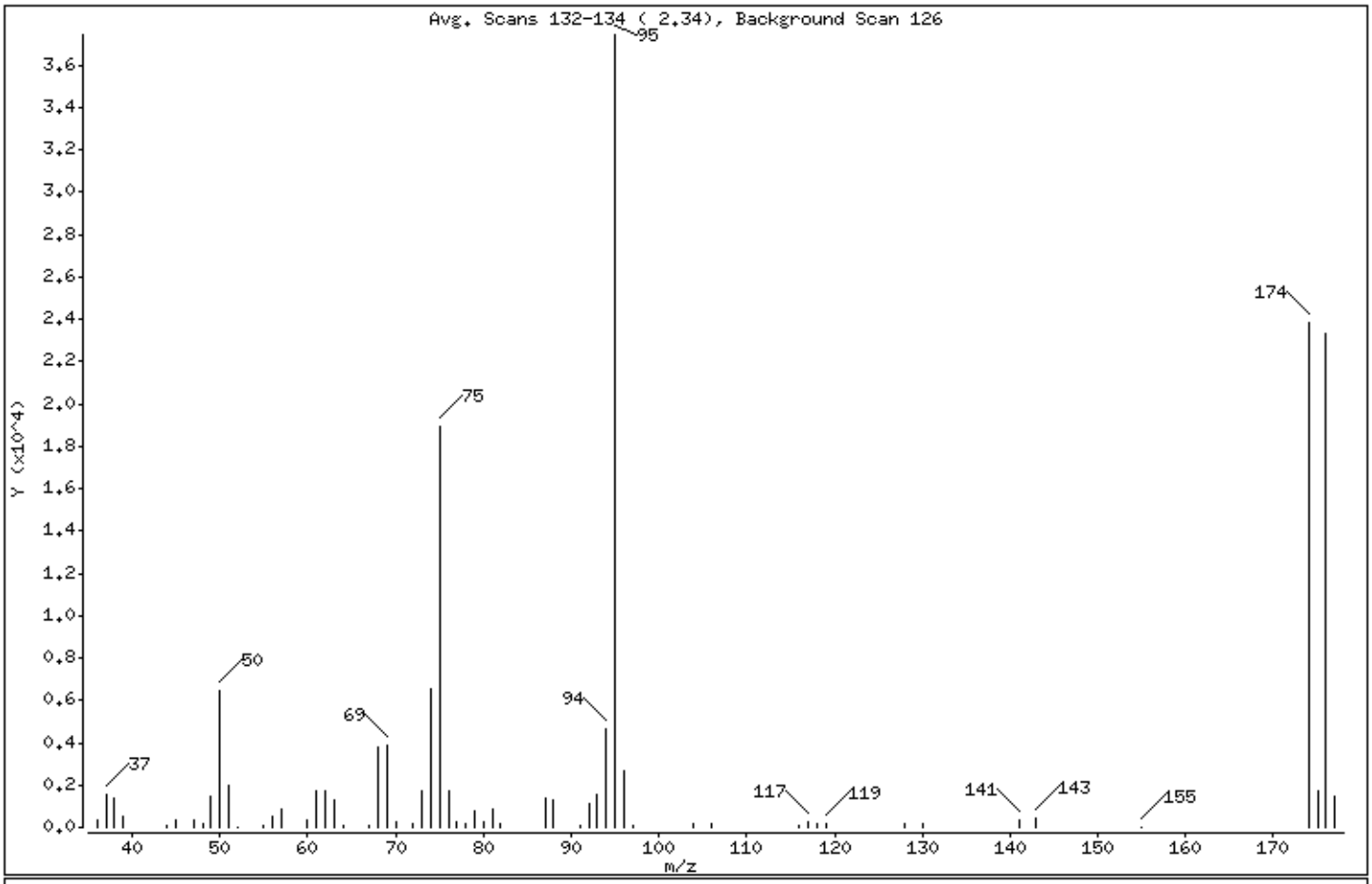
Sample Info: WG234298-3,SL7420

Operator: HG

Column phase: RTX-VMS

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.29
75	30.00 - 60.00% of mass 95	50.49
96	5.00 - 9.00% of mass 95	7.14
173	Less than 2.00% of mass 174	0.00 (0.00)
174	Greater than 50.00% of mass 95	63.63
175	5.00 - 9.00% of mass 174	4.67 (7.35)
176	95.00 - 101.00% of mass 174	62.22 (97.78)
177	5.00 - 9.00% of mass 176	4.00 (6.43)

Data File: \\target_server\gg\chem\gcms-p.i\P081418.b\PB114a.D

Date : 14-AUG-2018 07:00

Client ID:

Instrument: gcms-p.i

Sample Info: WG234298-3,SL7420

Operator: HG

Column phase: RTX-VMS

Column diameter: 0.18

Data File: PB114a.D
Spectrum: Avg. Scans 132-134 (2.34), Background Scan 126
Location of Maximum: 95.00
Number of points: 59

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	319	60.00	313	78.00	150	106.00	152
37.00	1560	61.00	1688	79.00	797	116.00	56
38.00	1417	62.00	1696	80.00	237	117.00	239
39.00	543	63.00	1252	81.00	864	118.00	142
44.00	51	64.00	95	82.00	164	119.00	186
45.00	333	67.00	107	87.00	1346	128.00	152
47.00	370	68.00	3770	88.00	1279	130.00	146
48.00	203	69.00	3832	91.00	92	141.00	306
49.00	1486	70.00	287	92.00	1099	143.00	403
50.00	6473	72.00	185	93.00	1518	155.00	38
51.00	1994	73.00	1710	94.00	4614	174.00	23824
52.00	43	74.00	6516	95.00	37440	175.00	1750
55.00	70	75.00	18904	96.00	2675	176.00	23296
56.00	476	76.00	1761	97.00	107	177.00	1498
57.00	827	77.00	238	104.00	157		

Data File: \\target_server\gg\chem\gcms-p.i\P081518.b\PB115a.D

Date : 15-AUG-2018 06:41

Client ID:

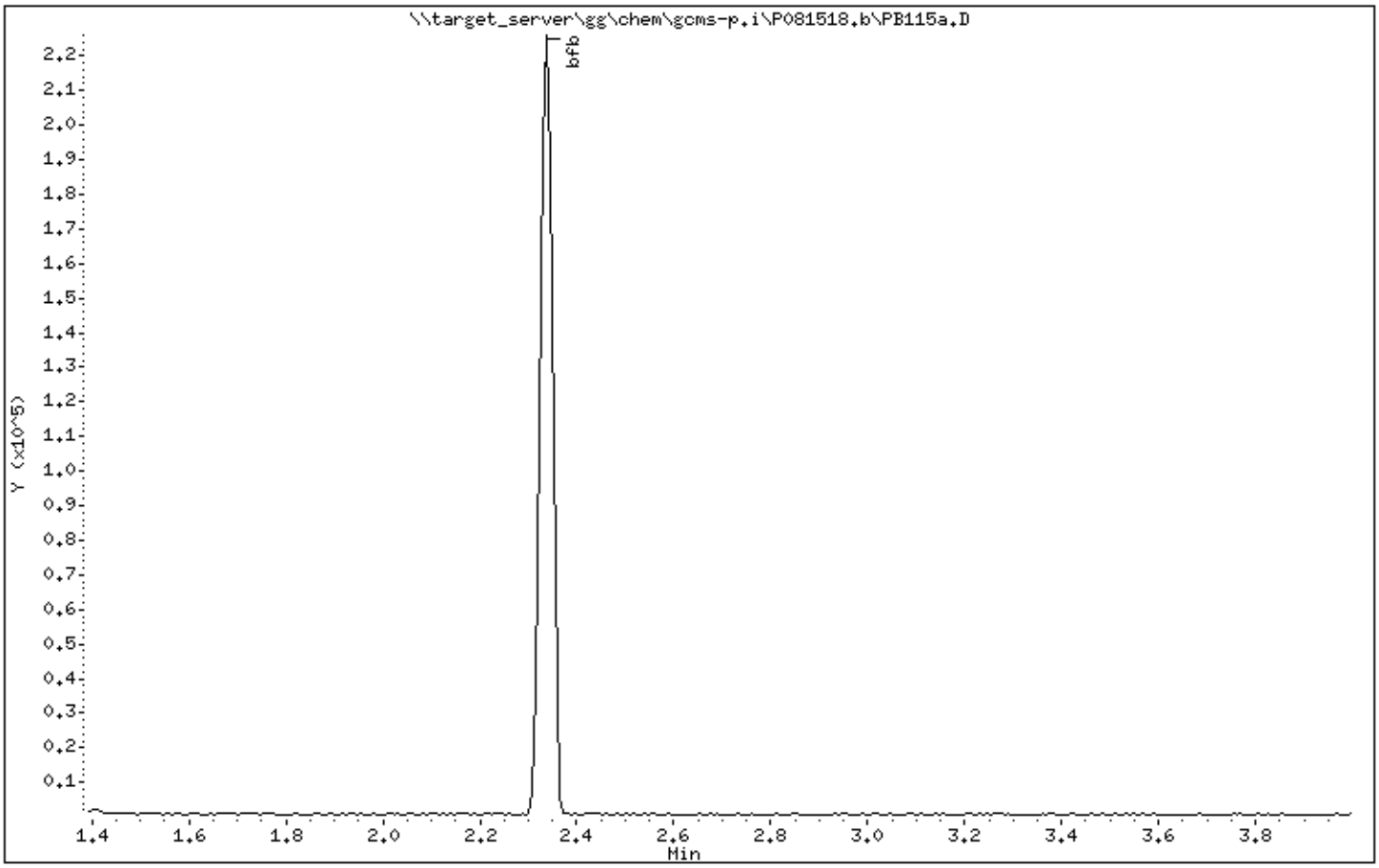
Instrument: gcms-p.i

Sample Info: WG234446-3,SL7420

Operator: HG

Column phase: RTX-VMS

Column diameter: 0.18



Data File: \\target_server\gg\chem\gcms-p.i\P081518.b\PB115a.D

Date : 15-AUG-2018 06:41

Client ID:

Instrument: gcms-p.i

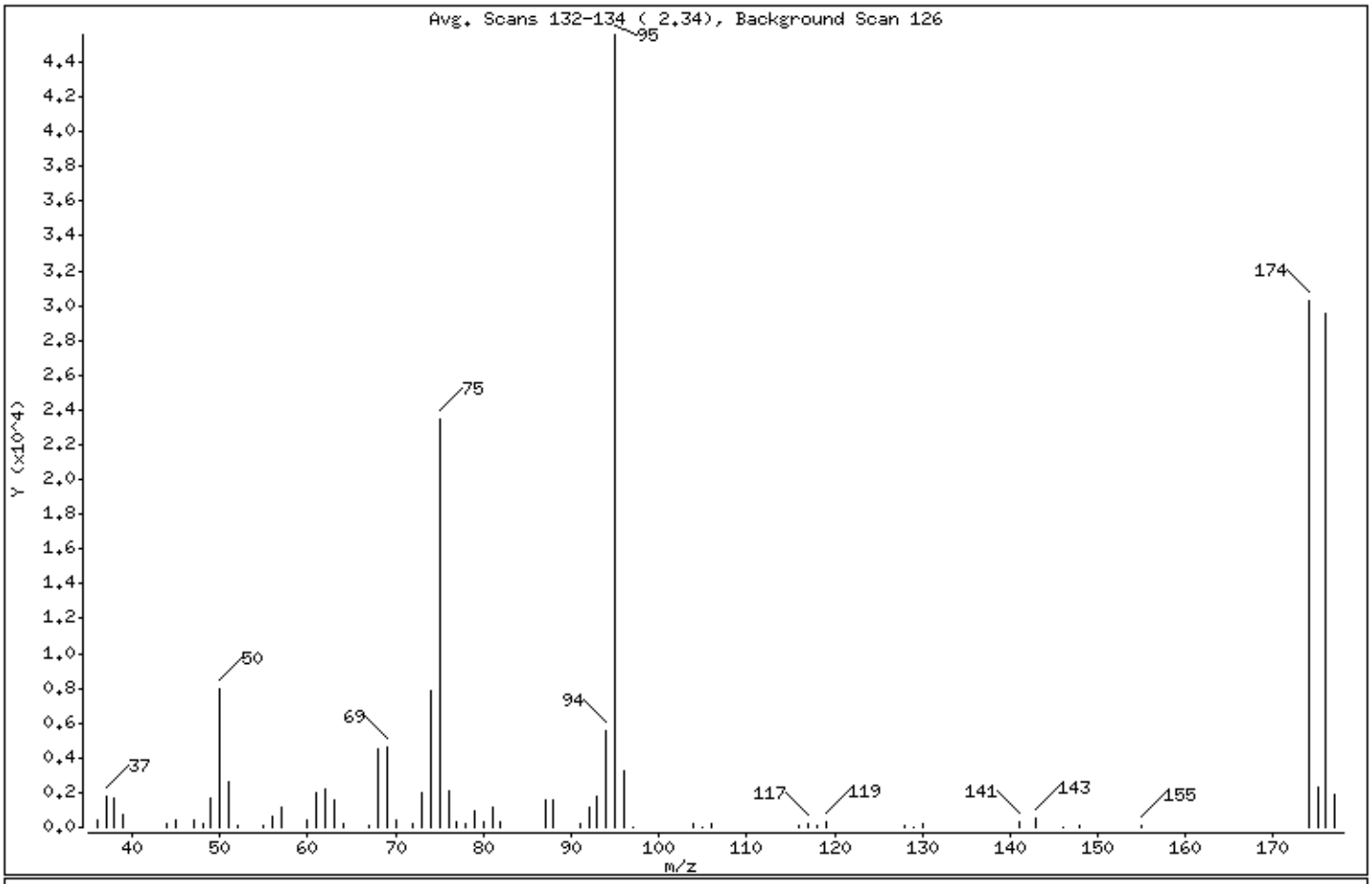
Sample Info: WG234446-3,SL7420

Operator: HG

Column phase: RTX-VMS

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.44
75	30.00 - 60.00% of mass 95	51.47
96	5.00 - 9.00% of mass 95	7.15
173	Less than 2.00% of mass 174	0.00 (0.00)
174	Greater than 50.00% of mass 95	66.36
175	5.00 - 9.00% of mass 174	5.05 (7.60)
176	95.00 - 101.00% of mass 174	64.87 (97.75)
177	5.00 - 9.00% of mass 176	4.22 (6.51)

Date : 15-AUG-2018 06:41

Client ID: Instrument: gcms-p.i

Sample Info: WG234446-3,SL7420

Operator: HG

Column phase: RTX-VMS Column diameter: 0.18

Data File: PB115a.D
Spectrum: Avg. Scans 132-134 (2.34), Background Scan 126
Location of Maximum: 95.00
Number of points: 63

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	406	61.00	1973	80.00	311	117.00	246
37.00	1762	62.00	2176	81.00	1147	118.00	128
38.00	1700	63.00	1580	82.00	273	119.00	269
39.00	684	64.00	174	87.00	1611	128.00	142
44.00	159	67.00	98	88.00	1550	129.00	49
45.00	417	68.00	4527	91.00	175	130.00	201
47.00	408	69.00	4604	92.00	1172	141.00	358
48.00	219	70.00	379	93.00	1795	143.00	509
49.00	1717	72.00	242	94.00	5584	146.00	52
50.00	7949	73.00	1940	95.00	45568	148.00	115
51.00	2595	74.00	7823	96.00	3256	155.00	122
52.00	123	75.00	23456	97.00	51	174.00	30240
55.00	126	76.00	2045	104.00	196	175.00	2299
56.00	669	77.00	266	105.00	37	176.00	29560
57.00	1155	78.00	190	106.00	196	177.00	1924
60.00	401	79.00	988	116.00	93		

Raw QC Data Section

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client:
Lab ID: WG234298-2
Client ID: Method Blank Sample
Project:
SDG: SL7420
Lab File ID: P7210.D

Sample Date:
Received Date:
Extract Date: 14-AUG-18
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG234298

Analysis Date: 14-AUG-18
Analyst: HG
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-AUG-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzene	U	0.50	ug/L	1	5	5.0	0.26	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	5	5.0	0.22	0.50
Chlorobenzene	U	0.50	ug/L	1	5	5.0	0.22	0.50
Chloroform	U	0.50	ug/L	1	5	5.0	0.32	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	5	5.0	0.20	0.50
1,1-Dichloroethene	U	0.50	ug/L	1	5	5.0	0.35	0.50
2-Butanone	U	2.5	ug/L	1	15	15.	1.3	2.5
Tetrachloroethene	U	0.50	ug/L	1	5	5.0	0.40	0.50
Trichloroethene	U	0.50	ug/L	1	5	5.0	0.28	0.50
Vinyl Chloride	U	1.0	ug/L	1	5	5.0	0.25	1.0
1,2-Dichloroethane-D4		104.	%					
Toluene-D8		100.	%					
p-Bromofluorobenzene		100.	%					
Dibromofluoromethane		102.	%					

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Data File: \\target_server\gg\chem\gcms-p.i\P081418.b\P7210.D
Report Date: 20-Aug-2018 14:39

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-p.i\P081418.b\P7210.D
Lab Smp Id: WG234298-2
Inj Date : 14-AUG-2018 09:19
Operator : HG   Inst ID: gcms-p.i
Smp Info : WG234298-2,SL7420
Misc Info : WG234298,WG234067-4,SL7420-2
Comment   : SW846 5030
Method   : \\target_server\gg\chem\gcms-p.i\P081418.b\P8A05(85)D.m
Meth Date : 20-Aug-2018 14:37 gcms-p.i   Quant Type: ISTD
Cal Date : 11-AUG-2018 13:49   Cal File: P7170.D
Als bottle: 4   QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12

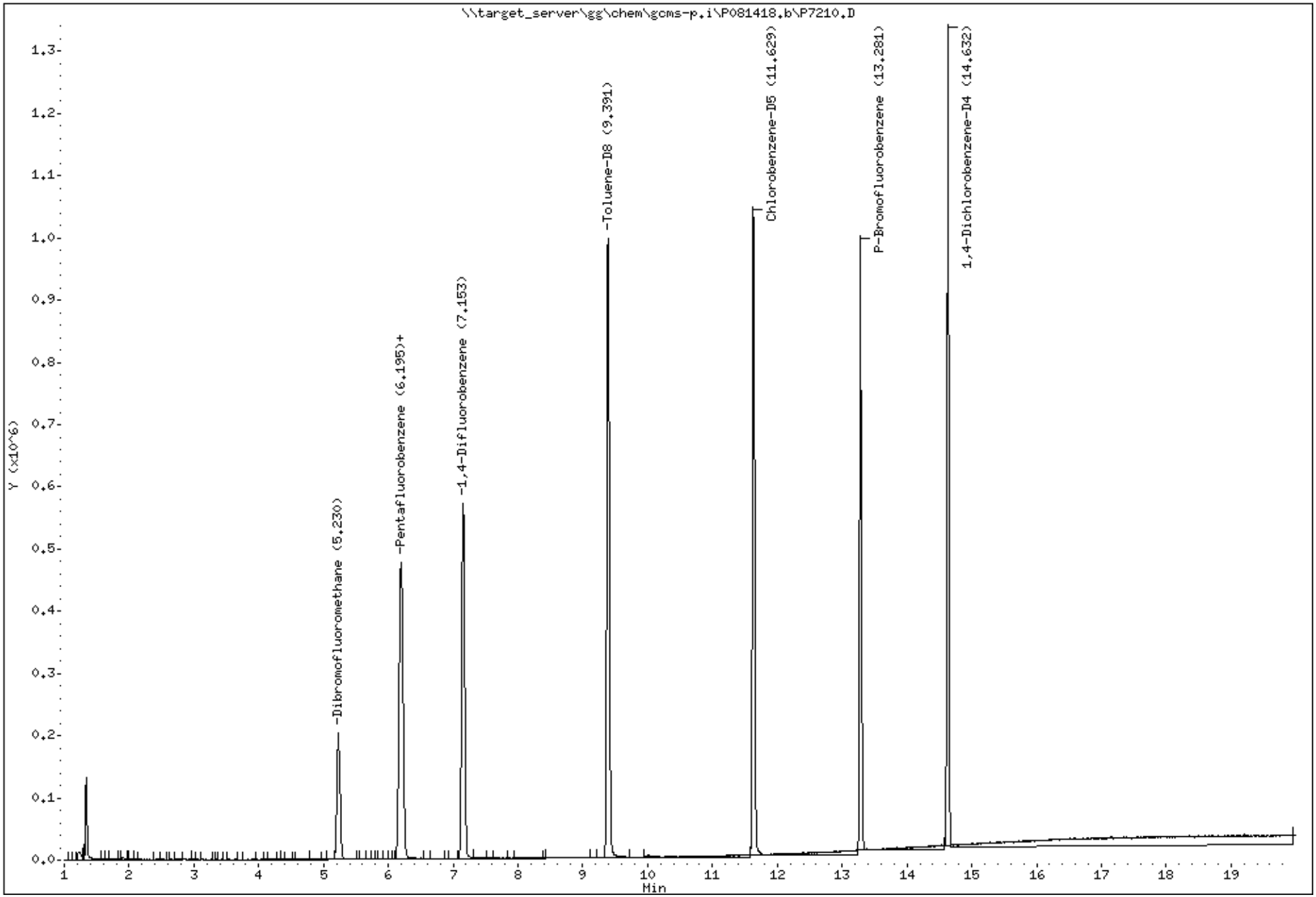
Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
$	34 Dibromofluoromethane	113	5.229	5.227	(0.845)	209728	51.0799	51.1	
*	41 Pentafluorobenzene	168	6.187	6.185	(1.000)	403115	50.0000		
$	42 1,2-Dichloroethane-D4	65	6.209	6.207	(1.003)	283535	52.2189	52.2	
*	48 1,4-Difluorobenzene	114	7.153	7.151	(1.000)	745906	50.0000		
$	58 Toluene-D8	98	9.391	9.389	(1.313)	940938	50.2626	50.3	
*	68 Chlorobenzene-D5	117	11.629	11.634	(1.000)	766728	50.0000		
$	77 P-Bromofluorobenzene	95	13.280	13.286	(1.857)	410044	50.0038	50.0	
*	93 1,4-Dichlorobenzene-D4	152	14.632	14.630	(1.000)	364542	50.0000		

Data File: \\target_server\gg\chem\gcms-p.i\P081418.b\P7210.D
Date : 14-AUG-2018 09:19
Client ID:
Sample Info: WG234298-2,SL7420

Instrument: gcms-p.i



Katahdin Analytical Services 1000095

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client:
Lab ID: WG234446-2
Client ID: Method Blank Sample
Project:
SDG: SL7420
Lab File ID: P7235.D

Sample Date:
Received Date:
Extract Date: 15-AUG-18
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG234446

Analysis Date: 15-AUG-18
Analyst: HG
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-AUG-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzene	U	0.50	ug/L	1	5	5.0	0.26	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	5	5.0	0.22	0.50
Chlorobenzene	U	0.50	ug/L	1	5	5.0	0.22	0.50
Chloroform	U	0.50	ug/L	1	5	5.0	0.32	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	5	5.0	0.20	0.50
1,1-Dichloroethene	U	0.50	ug/L	1	5	5.0	0.35	0.50
2-Butanone	U	2.5	ug/L	1	15	15.	1.3	2.5
Tetrachloroethene	U	0.50	ug/L	1	5	5.0	0.40	0.50
Trichloroethene	U	0.50	ug/L	1	5	5.0	0.28	0.50
Vinyl Chloride	U	1.0	ug/L	1	5	5.0	0.25	1.0
1,2-Dichloroethane-D4		104.	%					
Toluene-D8		100.	%					
p-Bromofluorobenzene		98.6	%					
Dibromofluoromethane		103.	%					

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Data File: \\target_server\gg\chem\gcms-p.i\P081518.b\P7235.D
Report Date: 20-Aug-2018 14:46

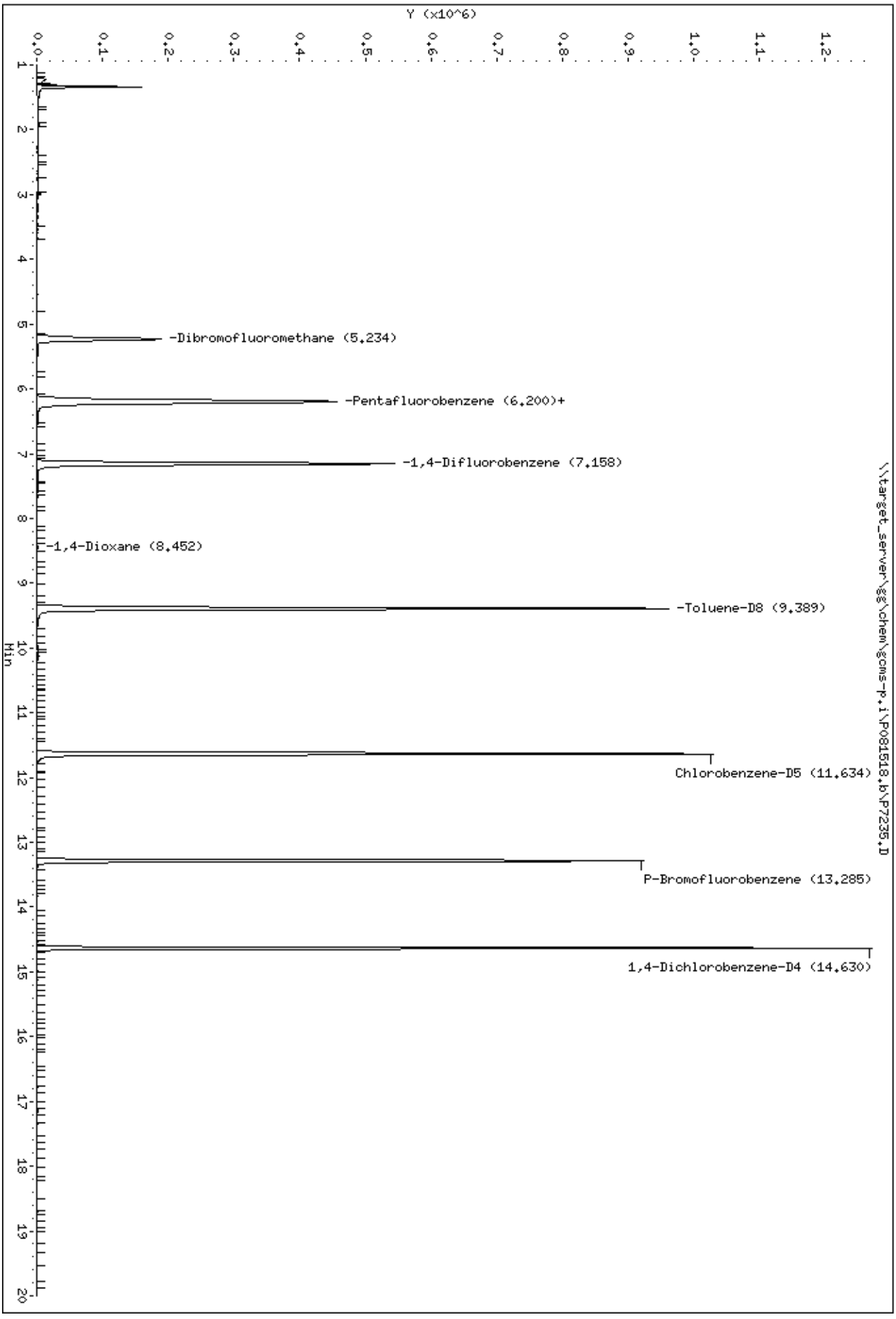
Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-p.i\P081518.b\P7235.D
Lab Smp Id: WG234446-2
Inj Date : 15-AUG-2018 09:07
Operator : HG   Inst ID: gcms-p.i
Smp Info : WG234446-2,SL7420
Misc Info : WG234446,WG234067-4,SL7420-1
Comment   : SW846 5030
Method   : \\target_server\gg\chem\gcms-p.i\P081518.b\P8A05(85)D.m
Meth Date : 20-Aug-2018 14:45 gcms-p.i   Quant Type: ISTD
Cal Date : 11-AUG-2018 13:49   Cal File: P7170.D
Als bottle: 4   QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
$	34 Dibromofluoromethane	113	5.234	5.227	(0.846)	203299	51.3954	51.4	
*	41 Pentafluorobenzene	168	6.185	6.185	(1.000)	388359	50.0000		
$	42 1,2-Dichloroethane-D4	65	6.206	6.207	(1.003)	273386	52.2629	52.3	
*	48 1,4-Difluorobenzene	114	7.157	7.151	(1.000)	712957	50.0000		
	54 1,4-Dioxane	88	8.444	8.445	(1.180)	2194	38.7825	38.8	
$	58 Toluene-D8	98	9.388	9.389	(1.312)	897455	50.1554	50.2	
*	68 Chlorobenzene-D5	117	11.633	11.634	(1.000)	727600	50.0000		
$	77 P-Bromofluorobenzene	95	13.285	13.286	(1.856)	386403	49.2985	49.3	
*	93 1,4-Dichlorobenzene-D4	152	14.629	14.630	(1.000)	350520	50.0000		


Y (x10^6)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
Min
-Dibromofluoromethane (5.234)
-Pentafluorobenzene (6.200)+
-1,4-Difluorobenzene (7.158)
-1,4-Dioxane (8.452)
-Toluene-D8 (9.389)
Chlorobenzene-D5 (11.634)
P-Bromofluorobenzene (13.285)
1,4-Dichlorobenzene-D4 (14.630)
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Data File: \\target_server\gg\chem\gcms-p.i\P081518.b\P7235.D
Date : 15-AUG-2018 09:07
Client ID:
Sample Info: WG234446-2,SL7420
Instrument: gcms-p.i

Data File: \\target_server\gg\chem\gcms-p.i\P081518.b\P7235.D

Date : 15-AUG-2018 09:07

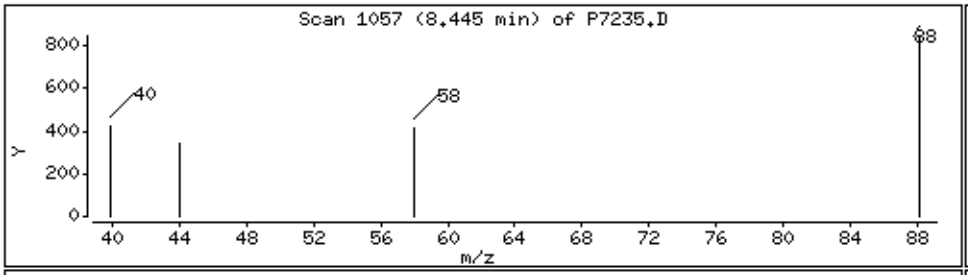
Client ID:

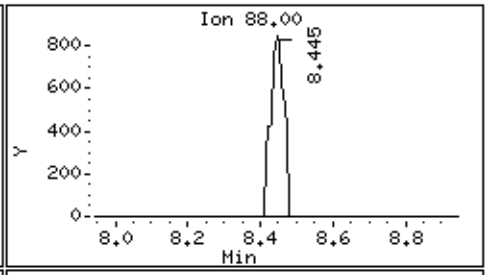
Instrument: gcms-p.i

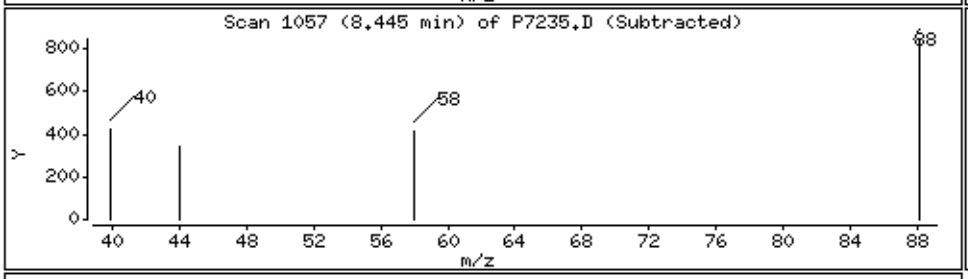
Sample Info: WG234446-2,SL7420

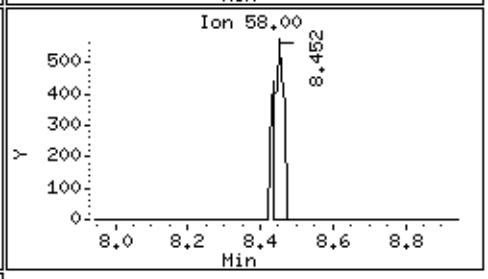
54 1,4-Dioxane

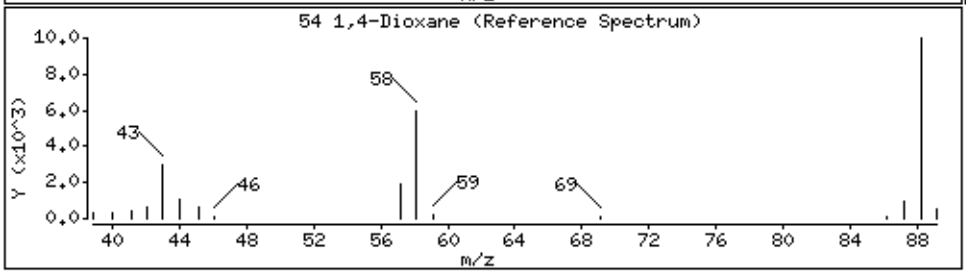
Concentration: 38.8 ug/l











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Report of Analytical Results

Client:
Lab ID: WG232889-7
Client ID: TCLP Blank
Project:
SDG: SL7420
Lab File ID: T6180.D

Sample Date:
Received Date:
Extract Date: 26-JUL-18
Extracted By: HG
Extraction Method: 5030/1311
Lab Prep Batch: WG232889

Analysis Date: 26-JUL-18
Analyst: HG
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 27-AUG-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzene	U	10	ug/L	20	5	100	5.2	10.
Carbon Tetrachloride	U	10	ug/L	20	5	100	4.4	10.
Chlorobenzene	U	10	ug/L	20	5	100	4.4	10.
Chloroform	U	10	ug/L	20	5	100	6.4	10.
1,2-Dichloroethane	U	10	ug/L	20	5	100	4.0	10.
1,1-Dichloroethene	U	10	ug/L	20	5	100	7.0	10.
2-Butanone	U	50	ug/L	20	15	300	26.	50.
Tetrachloroethene	U	10	ug/L	20	5	100	8.0	10.
Trichloroethene	U	10	ug/L	20	5	100	5.6	10.
Vinyl Chloride	U	20	ug/L	20	5	100	5.0	20.
1,2-Dichloroethane-D4	*	121.	%					
Toluene-D8		103.	%					
p-Bromofluorobenzene		104.	%					
Dibromofluoromethane		112.	%					

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Katahdin
ANALYTICAL SERVICES

LCS Recovery Report

Client:
Lab ID: WG234298-1
Client ID: LCS
Project:
SDG: SL7420
LCS File ID: P7208.D

Sample Date:
Received Date:
Extract Date: 14-AUG-18
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG234298

Analysis Date: 14-AUG-18
Analyst: HG
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-AUG-18

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
Benzene	101.	50.0	50.4	ug/L	79-120
Carbon Tetrachloride	94.6	50.0	47.3	ug/L	72-136
Chlorobenzene	98.6	50.0	49.3	ug/L	82-118
Chloroform	100.	50.0	50.0	ug/L	79-124
1,2-Dichloroethane	95.6	50.0	47.8	ug/L	73-128
1,1-Dichloroethene	96.0	50.0	48.0	ug/L	71-131
2-Butanone	109.	50.0	54.4	ug/L	56-143
Tetrachloroethene	95.8	50.0	47.9	ug/L	74-129
Trichloroethene	98.4	50.0	49.2	ug/L	79-123
Vinyl Chloride	102.	50.0	51.2	ug/L	58-137
1,2-Dichloroethane-D4	100.				81-118
Toluene-D8	100.				89-112
p-Bromofluorobenzene	101.				85-114
Dibromofluoromethane	102.				80-119

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Data File: \\target_server\gg\chem\gcms-p.i\P081418.b\P7208.D
Report Date: 20-Aug-2018 14:39

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-p.i\P081418.b\P7208.D
Lab Smp Id: WG234298-1
Inj Date : 14-AUG-2018 08:07
Operator : HG   Inst ID: gcms-p.i
Smp Info : WG234298-1,SL7420
Misc Info : WG234298,WG234067-4,SL7420-2
Comment   : SW846 5030
Method   : \\target_server\gg\chem\gcms-p.i\P081418.b\P8A05(85)D.m
Meth Date : 20-Aug-2018 14:37 gcms-p.i   Quant Type: ISTD
Cal Date : 11-AUG-2018 13:49   Cal File: P7170.D
Als bottle: 2   QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.452	1.452	(0.235)	271208	51.5036	51.5	
2	Chloromethane	50	1.595	1.595	(0.258)	165875	49.9337	49.9	
3	Vinyl chloride	62	1.652	1.652	(0.267)	188753	51.2314	51.2	
4	Bromomethane	94	1.888	1.888	(0.305)	76346	45.7904	45.8	
5	Chloroethane	64	1.967	1.967	(0.318)	105733	60.3543	60.4	
6	Trichlorofluoromethane	101	2.074	2.073	(0.335)	263104	50.4918	50.5	
7	Diethyl Ether	59	2.310	2.317	(0.374)	107392	52.7337	52.7	
8	1,1-Dichloroethene	96	2.474	2.475	(0.400)	132664	48.0032	48.0	
9	Freon-113	151	2.503	2.503	(0.405)	106956	46.5229	46.5	
10	Carbon Disulfide	76	2.510	2.510	(0.406)	345922	47.0159	47.0	
11	Iodomethane	142	2.603	2.603	(0.421)	147469	54.6268	54.6	
12	Acrolein	56	2.775	2.775	(0.449)	120147	261.432	261	
13	Allyl Chloride	41	2.889	2.889	(0.467)	260549	49.7056	49.7	
14	Methylene Chloride	84	2.989	2.989	(0.483)	204530	51.8500	51.8	
15	Acetone	43	3.046	3.047	(0.493)	52805	52.6537	52.6	
16	trans-1,2-Dichloroethene	96	3.139	3.139	(0.508)	202336	48.8942	48.9	
17	Methyl Acetate	43	3.161	3.161	(0.511)	126577	50.9022	50.9	
18	Methyl tert-butyl ether	73	3.247	3.247	(0.525)	546240	60.1504	60.2	
19	Tertiary-butyl alcohol	59	3.361	3.361	(0.543)	90207	264.192	264	
20	Acetonitrile	41	3.525	3.533	(0.570)	222127	501.837	502	
21	Di-isopropyl ether	45	3.661	3.661	(0.592)	510506	51.5684	51.6	
22	Chloroprene	53	3.776	3.776	(0.610)	301939	48.4172	48.4	
23	1,1-Dichloroethane	63	3.804	3.804	(0.615)	359978	51.9720	52.0	
24	Acrylonitrile	52	3.890	3.890	(0.629)	281781	261.935	262	

Data File: \\target_server\gg\chem\gcms-p.i\P081418.b\P7208.D
Report Date: 20-Aug-2018 14:39

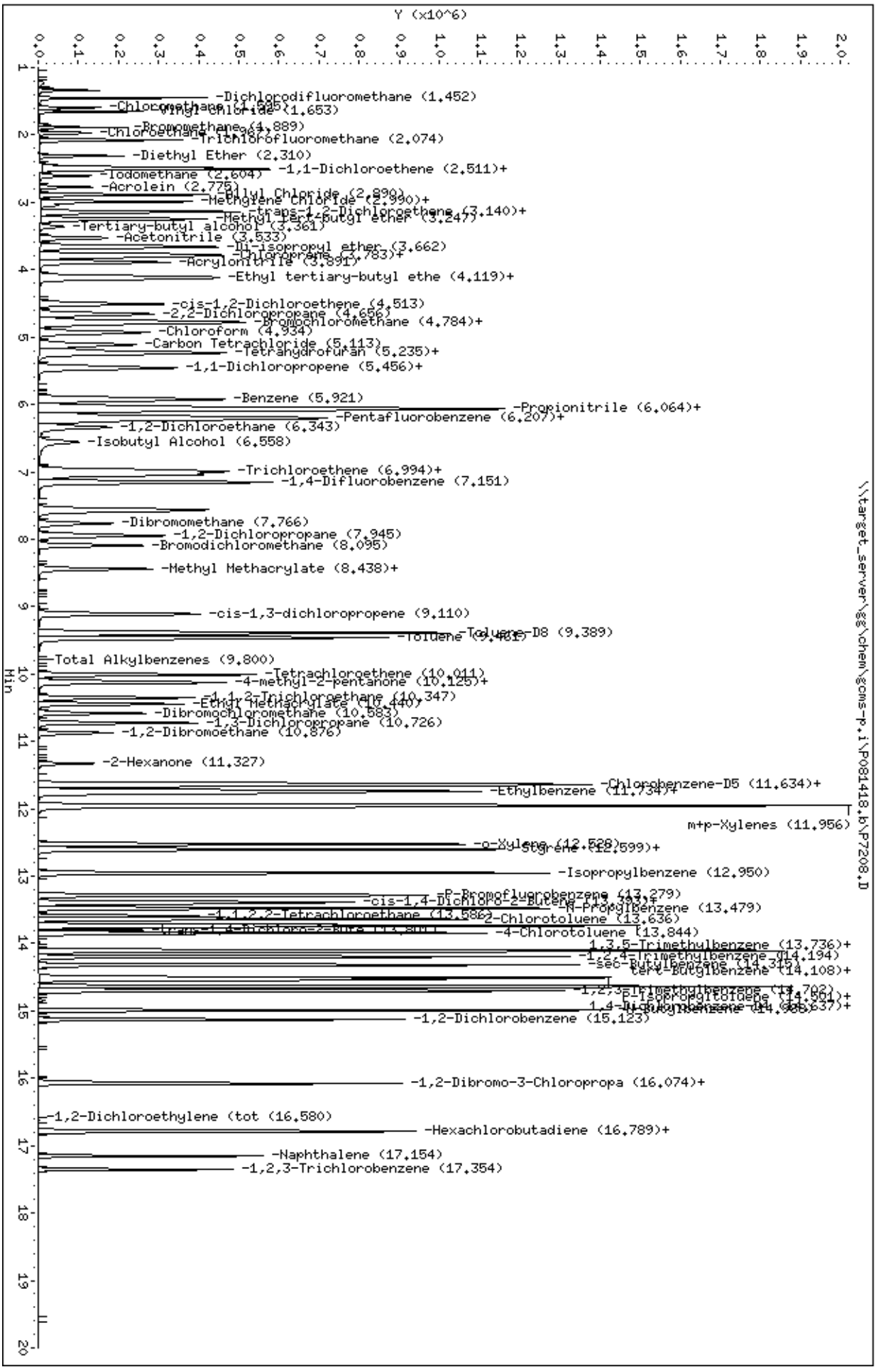
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
	25 Ethyl tertiary-butyl ether	59	4.112	4.105	(0.665)	517301	52.9075	52.9	
	26 Vinyl Acetate	43	4.133	4.133	(0.578)	393955	58.5799	58.6	
	27 cis-1,2-Dichloroethene	96	4.505	4.505	(0.728)	211053	50.0282	50.0	
	28 2,2-Dichloropropane	77	4.655	4.655	(0.753)	324617	51.8436	51.8	
	29 Bromochloromethane	128	4.798	4.798	(0.776)	90767	61.5934	61.6(R)	
	30 Cyclohexane	56	4.770	4.770	(0.771)	331633	57.0262	57.0	
	31 Chloroform	83	4.934	4.927	(0.798)	359740	50.0250	50.0	
	32 Carbon Tetrachloride	117	5.113	5.113	(0.715)	281260	47.3347	47.3	
	33 Tetrahydrofuran	42	5.177	5.177	(0.837)	46462	57.8170	57.8	
$	34 Dibromofluoromethane	113	5.227	5.227	(0.845)	218503	50.7668	50.8	
	35 1,1,1-Trichloroethane	97	5.234	5.242	(0.846)	334293	48.0401	48.0	
	36 2-Butanone	43	5.477	5.470	(0.886)	75401	54.3954	54.4	
	37 1,1-Dichloropropene	75	5.456	5.456	(0.763)	300516	50.1225	50.1	
	38 Benzene	78	5.921	5.921	(0.828)	834804	50.4468	50.4	
	39 Propionitrile	54	6.035	6.035	(0.976)	255292	519.914	520	
	40 Methacrylonitrile	41	6.064	6.064	(0.980)	1000117	518.485	518	
*	41 Pentafluorobenzene	168	6.185	6.185	(1.000)	422571	50.0000		
$	42 1,2-Dichloroethane-D4	65	6.207	6.207	(1.003)	284718	50.0225	50.0	
	43 Tertiary-amyl methyl ether	73	6.221	6.214	(1.006)	468453	50.9004	50.9	
	44 1,2-Dichloroethane	62	6.343	6.343	(0.887)	263292	47.8150	47.8	
	45 Isobutyl Alcohol	43	6.557	6.557	(1.060)	121675	1194.73	1190	
	46 Methylcyclohexane	83	6.986	6.986	(1.129)	386851	49.7178	49.7	
	47 Trichloroethene	95	7.043	7.043	(0.985)	210056	49.2519	49.2	
*	48 1,4-Difluorobenzene	114	7.151	7.151	(1.000)	770494	50.0000		
	49 Dibromomethane	93	7.765	7.766	(1.086)	115171	51.0495	51.0	
	50 1,2-Dichloropropane	63	7.944	7.944	(1.111)	181071	51.7189	51.7	
	51 Bromodichloromethane	83	8.087	8.095	(1.131)	271333	52.9362	52.9	
	52 Methyl Methacrylate	41	8.438	8.438	(1.180)	148273	53.0661	53.1	
	53 Ethyl Methacrylate	69	10.447	10.447	(1.461)	256472	53.3267	53.3	
	54 1,4-Dioxane	88	8.445	8.445	(1.181)	51502	842.399	842	
M	55 Total Alkylbenzenes	100				6663126	348.266	348	
	57 cis-1,3-dichloropropene	75	9.110	9.110	(1.274)	332102	51.6967	51.7	
$	58 Toluene-D8	98	9.389	9.389	(1.313)	968899	50.1046	50.1	
	59 Toluene	92	9.460	9.460	(1.323)	556463	50.4856	50.5	
	60 Tetrachloroethene	164	10.011	10.011	(0.860)	165165	47.8778	47.9	
	61 4-methyl-2-pentanone	43	10.104	10.104	(1.413)	150888	46.0833	46.1	
	62 trans-1,3-Dichloropropene	75	10.132	10.132	(1.417)	307930	53.7871	53.8	
	63 1,1,2-Trichloroethane	83	10.347	10.354	(1.447)	140140	53.7324	53.7	
	64 Dibromochloromethane	129	10.583	10.583	(0.910)	197238	52.8328	52.8	
	65 1,3-Dichloropropane	76	10.726	10.726	(0.922)	323629	51.0580	51.0	
	66 1,2-Dibromoethane	107	10.876	10.876	(1.521)	169006	52.5955	52.6	
	67 2-Hexanone	43	11.326	11.326	(0.974)	104577	45.3883	45.4	
*	68 Chlorobenzene-D5	117	11.634	11.634	(1.000)	783751	50.0000		
	69 Chlorobenzene	112	11.655	11.655	(1.002)	566139	49.2988	49.3	
	70 Ethylbenzene	91	11.734	11.734	(1.009)	1049972	49.7572	49.8	
	71 1,1,1,2-Tetrachloroethane	131	11.770	11.770	(1.012)	199575	50.8962	50.9	
	72 m+p-Xylenes	91	11.955	11.956	(1.028)	1633181	100.748	101	
	73 o-Xylene	91	12.527	12.528	(1.077)	821796	51.6549	51.6	
	74 Styrene	104	12.606	12.606	(1.084)	610394	49.4432	49.4	
	75 Bromoform	173	12.599	12.599	(1.083)	110424	49.8124	49.8	
	76 Isopropylbenzene	105	12.949	12.949	(0.885)	1011081	52.1807	52.2	
$	77 P-Bromofluorobenzene	95	13.278	13.286	(1.857)	429281	50.6791	50.7	
	78 cis-1,4-Dichloro-2-Butene	53	13.407	13.407	(0.916)	78714	47.2710	47.3	
	79 Bromobenzene	156	13.385	13.386	(0.915)	209642	48.5264	48.5	

Data File: \\target_server\gg\chem\gcms-p.i\P081418.b\P7208.D
Report Date: 20-Aug-2018 14:39

			QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
	80	N-Propylbenzene	91	13.478	13.479	(0.921)	1234549	49.0440	49.0	
	81	1,1,2,2-Tetrachloroethane	83	13.586	13.586	(0.929)	222328	52.2440	52.2	
	82	2-Chlorotoluene	91	13.636	13.636	(0.932)	721139	48.8371	48.8	
	83	1,2,3-Trichloropropane	75	13.722	13.722	(0.938)	198290	49.7337	49.7	
	84	1,3,5-Trimethylbenzene	105	13.736	13.736	(0.939)	839982	50.0504	50.0	
	85	trans-1,4-Dichloro-2-Butene	53	13.800	13.800	(0.943)	63147	47.4284	47.4	
	86	4-Chlorotoluene	91	13.843	13.843	(0.946)	759417	48.7726	48.8	
	87	tert-Butylbenzene	119	14.108	14.108	(0.964)	832724	48.9175	48.9	
	88	Pentachloroethane	165	14.108	14.108	(0.964)	103816	48.0260	48.0	
	89	1,2,4-Trimethylbenzene	105	14.193	14.194	(0.970)	852158	50.6007	50.6	
	90	sec-Butylbenzene	105	14.315	14.315	(0.978)	1086052	50.1836	50.2	
	91	P-Isopropyltoluene	119	14.501	14.501	(0.991)	971386	49.7589	49.8	
	92	1,3-Dichlorobenzene	146	14.537	14.537	(0.994)	426930	48.9188	48.9	
*	93	1,4-Dichlorobenzene-D4	152	14.630	14.630	(1.000)	395411	50.0000		
	94	1,4-Dichlorobenzene	146	14.651	14.651	(1.001)	424409	47.0900	47.1	
	95	1,2,3-Trimethylbenzene	105	14.701	14.701	(1.005)	826203	44.3676	44.4	
	96	N-Butylbenzene	91	14.987	14.987	(1.024)	846275	49.7108	49.7	
M	97	1,2-Dichloroethylene (total)	96				413389	98.9224	98.9	
	98	1,2-Dichlorobenzene	146	15.130	15.130	(1.034)	392804	49.6825	49.7	
	99	1,2-Dibromo-3-Chloropropane	157	16.045	16.045	(1.097)	39331	44.2334	44.2	
	100	1,3,5-Trichlorobenzene	180	16.074	16.081	(1.099)	277270	46.2775	46.3	
	101	Hexachlorobutadiene	225	16.775	16.782	(1.147)	120776	45.4659	45.5	
	102	1,2,4-Trichlorobenzene	180	16.796	16.796	(1.148)	197140	48.3200	48.3	
	103	Naphthalene	128	17.154	17.154	(1.173)	422975	54.6390	54.6	
	104	1,2,3-Trichlorobenzene	180	17.354	17.354	(1.186)	140132	53.6700	53.7	
M	105	Xylenes (total)	106				2454977	152.403	152	

QC Flag Legend

R - Spike/Surrogate failed recovery limits.


Data File: \\target_server\gg\chem\gcms-p.i\P081418.b\P7208.D
Date : 14-AUG-2018 08:07
Client ID:
Sample Info: WG234298-1,SL7420
Purge Volume: 5.0
Column phase: RTX-VMS
Instrument: gcms-p.i
Operator: HG
Column diameter: 0.18
\\target_server\gg\chem\gcms-p.i\P081418.b\P7208.D
Y (x10^6)
Min
-Dichlorodifluoromethane (1.452)
-Chloromethane (1.595)
-Vinyl Chloride (1.653)
-Bromomethane (1.889)
-Chloroethane (1.963)
-Trichlorofluoromethane (2.074)
-Diethyl Ether (2.310)
-1,1-Dichloroethene (2.511)+
-Iodomethane (2.604)
-Acrolein (2.775)
-Allyl Chloride (2.890)
-Methylene Chloride (2.990)+
-trans-1,2-Dichloroethene (3.140)+
-Methyl Tert-butyl ether (3.247)
-Tertiary-butyl alcohol (3.361)
-Acetonitrile (3.533)
-Di-isopropyl ether (3.662)
-Chloroprene (3.783)+
-Acrylonitrile (3.891)
-Ethyl tertiary-butyl ethe (4.119)+
-cis-1,2-Dichloroethene (4.513)
-2,2-Dichloropropane (4.656)
-Bromochloromethane (4.784)+
-Chloroform (4.934)
-Carbon Tetrachloride (5.113)
-Tetrahydrofuran (5.235)+
-1,1-Dichloropropene (5.456)+
-Benzene (5.921)
-Propionitrile (6.064)+
-Pentafluorobenzene (6.207)+
-1,2-Dichloroethane (6.343)
-Isobutyl Alcohol (6.558)
-Trichloroethene (6.994)+
-1,4-Difluorobenzene (7.151)
-Dibromomethane (7.766)
-1,2-Dichloropropane (7.945)
-Bromodichloromethane (8.095)
-Methyl Methacrylate (8.438)+
-cis-1,3-dichloropropene (9.110)
-Toluene-D8 (9.389)
-Toluene (9.481)
-Total Alkylbenzenes (9.800)
-Tetrachloroethene (10.011)
-4-methyl-2-pentanone (10.125)+
-1,1,2-Trichloroethane (10.347)
-Ethyl Methacrylate (10.440)
-Dibromochloromethane (10.583)
-1,3-Dichloropropane (10.726)
-1,2-Dibromoethane (10.876)
-2-Hexanone (11.327)
-Chlorobenzene-D5 (11.634)+
-Ethylbenzene (11.734)+
m+p-Xylenes (11.956)
-o-Xylene (12.508)
-Styrene (12.599)+
-Isopropylbenzene (12.950)
-P-Bromofluorobenzene (13.279)
-cis-1,4-Dichloro-2-Butene (13.393)+
-N-Propylbenzene (13.479)
-1,1,2,2-Tetrachloroethane (13.586)
-2-Chlorotoluene (13.636)
-trans-1,4-Dichloro-2-Bute (13.800)+
-4-Chlorotoluene (13.844)
-1,3,5-Trimethylbenzene (13.736)+
-1,2,4-Trimethylbenzene (14.194)
-sec-Butylbenzene (14.315)
-tert-Butylbenzene (14.108)+
-1,2,3-Trimethylbenzene (14.702)
-P-Isopropyltoluene (14.561)+
-1,4-Dichlorobenzene-D4 (14.606)+
-1,2-Dichlorobenzene (15.123)
-1,2-Dibromo-3-Chloropropa (16.074)+
-1,2-Dichloroethylene (tot (16.580)
-Hexachlorobutadiene (16.789)+
-Naphthalene (17.154)
-1,2,3-Trichlorobenzene (17.354)

Katahdin
ANALYTICAL SERVICES

LCS Recovery Report

Client:
Lab ID: WG234446-1
Client ID: LCS
Project:
SDG: SL7420
LCS File ID: P7233.D

Sample Date:
Received Date:
Extract Date: 15-AUG-18
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG234446

Analysis Date: 15-AUG-18
Analyst: HG
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-AUG-18

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
Benzene	109.	50.0	54.6	ug/L	79-120
Carbon Tetrachloride	108.	50.0	54.2	ug/L	72-136
Chlorobenzene	106.	50.0	52.9	ug/L	82-118
Chloroform	110.	50.0	54.9	ug/L	79-124
1,2-Dichloroethane	105.	50.0	52.4	ug/L	73-128
1,1-Dichloroethene	110.	50.0	54.8	ug/L	71-131
2-Butanone	99.4	50.0	49.7	ug/L	56-143
Tetrachloroethene	104.	50.0	51.8	ug/L	74-129
Trichloroethene	108.	50.0	54.1	ug/L	79-123
Vinyl Chloride	117.	50.0	58.3	ug/L	58-137
1,2-Dichloroethane-D4	99.9				81-118
Toluene-D8	101.				89-112
p-Bromofluorobenzene	103.				85-114
Dibromofluoromethane	102.				80-119

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Data File: \\target_server\gg\chem\gcms-p.i\P081518.b\P7233.D
Report Date: 20-Aug-2018 14:46

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-p.i\P081518.b\P7233.D
Lab Smp Id: WG234446-1
Inj Date : 15-AUG-2018 07:56
Operator : HG   Inst ID: gcms-p.i
Smp Info : WG234446-1,SL7420
Misc Info : WG234446,WG234067-4,SL7420-1
Comment   : SW846 5030
Method   : \\target_server\gg\chem\gcms-p.i\P081518.b\P8A05(85)D.m
Meth Date : 20-Aug-2018 14:45 gcms-p.i   Quant Type: ISTD
Cal Date : 11-AUG-2018 13:49   Cal File: P7170.D
Als bottle: 2   QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.451	1.452	(0.235)	296165	58.4724	58.5	
2	Chloromethane	50	1.594	1.595	(0.258)	179742	56.2528	56.2	
3	Vinyl chloride	62	1.651	1.652	(0.267)	206598	58.2976	58.3	
4	Bromomethane	94	1.887	1.888	(0.305)	82561	51.4807	51.5	
5	Chloroethane	64	1.973	1.967	(0.319)	117334	69.6312	69.6(R)	
6	Trichlorofluoromethane	101	2.080	2.073	(0.336)	300357	59.9257	59.9	
7	Diethyl Ether	59	2.316	2.317	(0.375)	106778	54.5105	54.5	
8	1,1-Dichloroethene	96	2.481	2.475	(0.401)	145675	54.8004	54.8	
9	Freon-113	151	2.509	2.503	(0.406)	114255	51.6676	51.7	
10	Carbon Disulfide	76	2.509	2.510	(0.406)	386519	54.6159	54.6	
11	Iodomethane	142	2.609	2.603	(0.422)	159219	61.3919	61.4	
12	Acrolein	56	2.774	2.775	(0.449)	106797	241.594	242	
13	Allyl Chloride	41	2.888	2.889	(0.467)	263166	52.1949	52.2	
14	Methylene Chloride	84	2.988	2.989	(0.483)	213215	56.2854	56.3	
15	Acetone	43	3.045	3.047	(0.492)	48127	49.8912	49.9	
16	trans-1,2-Dichloroethene	96	3.138	3.139	(0.508)	215032	54.0218	54.0	
17	Methyl Acetate	43	3.160	3.161	(0.511)	111716	46.7066	46.7	
18	Methyl tert-butyl ether	73	3.246	3.247	(0.525)	541583	62.0014	62.0(R)	
19	Tertiary-butyl alcohol	59	3.360	3.361	(0.543)	64203	195.486	195	
20	Acetonitrile	41	3.525	3.533	(0.570)	189508	445.114	445	
21	Di-isopropyl ether	45	3.660	3.661	(0.592)	503123	52.8371	52.8	
22	Chloroprene	53	3.775	3.776	(0.610)	307920	51.3334	51.3	
23	1,1-Dichloroethane	63	3.811	3.804	(0.616)	378880	56.8692	56.9	
24	Acrylonitrile	52	3.882	3.890	(0.628)	251195	242.759	243	

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Report Date: 20-Aug-2018 14:46

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
	25	Ethyl tertiary-butyl ether	59	4.104	4.105	(0.664)	500068	53.1722	53.2	
	26	Vinyl Acetate	43	4.132	4.133	(0.577)	390845	60.5099	60.5	
	27	cis-1,2-Dichloroethene	96	4.504	4.505	(0.728)	222415	54.8112	54.8	
	28	2,2-Dichloropropane	77	4.661	4.655	(0.754)	344257	57.1595	57.2	
	29	Bromochloromethane	128	4.797	4.798	(0.776)	94584	66.9133	66.9(R)	
	30	Cyclohexane	56	4.769	4.770	(0.771)	355806	63.6080	63.6	
	31	Chloroform	83	4.926	4.927	(0.797)	379686	54.8915	54.9	
	32	Carbon Tetrachloride	117	5.112	5.113	(0.714)	309258	54.1891	54.2	
	33	Tetrahydrofuran	42	5.176	5.177	(0.837)	40485	52.3762	52.4	
$	34	Dibromofluoromethane	113	5.226	5.227	(0.845)	210124	50.7552	50.8	
	35	1,1,1-Trichloroethane	97	5.241	5.242	(0.847)	363448	54.3001	54.3	
	36	2-Butanone	43	5.477	5.470	(0.886)	66316	49.7376	49.7	
	37	1,1-Dichloropropene	75	5.455	5.456	(0.762)	319516	55.4853	55.5	
	38	Benzene	78	5.920	5.921	(0.827)	867136	54.5577	54.6	
	39	Propionitrile	54	6.034	6.035	(0.976)	216338	458.046	458	
	40	Methacrylonitrile	41	6.063	6.064	(0.980)	913386	492.290	492	
*	41	Pentafluorobenzene	168	6.184	6.185	(1.000)	406460	50.0000		
$	42	1,2-Dichloroethane-D4	65	6.206	6.207	(1.003)	273458	49.9486	49.9	
	43	Tertiary-amyl methyl ether	73	6.220	6.214	(1.006)	450459	50.8853	50.9	
	44	1,2-Dichloroethane	62	6.342	6.343	(0.886)	277190	52.4112	52.4	
	45	Isobutyl Alcohol	43	6.556	6.557	(1.060)	89723	915.912	916	
	46	Methylcyclohexane	83	6.992	6.986	(1.131)	402880	53.8302	53.8	
	47	Trichloroethene	95	7.042	7.043	(0.984)	221765	54.1378	54.1	
*	48	1,4-Difluorobenzene	114	7.157	7.151	(1.000)	740030	50.0000		
	49	Dibromomethane	93	7.765	7.766	(1.085)	116421	53.7279	53.7	
	50	1,2-Dichloropropane	63	7.943	7.944	(1.110)	187183	55.6656	55.7	
	51	Bromodichloromethane	83	8.093	8.095	(1.131)	285522	57.9975	58.0	
	52	Methyl Methacrylate	41	8.437	8.438	(1.179)	133885	49.8892	49.9	
	53	Ethyl Methacrylate	69	10.446	10.447	(1.460)	238689	51.6723	51.7	
	54	1,4-Dioxane	88	8.444	8.445	(1.180)	36238	617.131	617	
M	55	Total Alkylbenzenes	100				7027985	375.904	376	
	57	cis-1,3-dichloropropene	75	9.109	9.110	(1.273)	347918	56.3882	56.4	
$	58	Toluene-D8	98	9.388	9.389	(1.312)	939515	50.5851	50.6	
	59	Toluene	92	9.466	9.460	(1.323)	573873	54.2085	54.2	
	60	Tetrachloroethene	164	10.010	10.011	(0.860)	173809	51.8263	51.8	
	61	4-methyl-2-pentanone	43	10.103	10.104	(1.412)	137440	43.9416	43.9	
	62	trans-1,3-Dichloropropene	75	10.131	10.132	(1.416)	319601	58.1239	58.1	
	63	1,1,2-Trichloroethane	83	10.353	10.354	(1.447)	142042	56.7036	56.7	
	64	Dibromochloromethane	129	10.582	10.583	(0.910)	203377	56.0373	56.0	
	65	1,3-Dichloropropane	76	10.725	10.726	(0.922)	325780	52.8692	52.9	
	66	1,2-Dibromoethane	107	10.875	10.876	(1.519)	169059	54.7779	54.8	
	67	2-Hexanone	43	11.325	11.326	(0.974)	91642	41.4383	41.4	
*	68	Chlorobenzene-D5	117	11.633	11.634	(1.000)	761932	50.0000		
	69	Chlorobenzene	112	11.654	11.655	(1.002)	590823	52.9215	52.9	
	70	Ethylbenzene	91	11.733	11.734	(1.009)	1107397	53.9813	54.0	
	71	1,1,1,2-Tetrachloroethane	131	11.769	11.770	(1.012)	210411	55.1963	55.2	
	72	m+p-Xylenes	91	11.955	11.956	(1.028)	1705317	108.210	108	
	73	o-Xylene	91	12.527	12.528	(1.077)	858792	55.5261	55.5	
	74	Styrene	104	12.605	12.606	(1.084)	636361	53.0389	53.0	
	75	Bromoform	173	12.598	12.599	(1.083)	111993	51.9773	52.0	
	76	Isopropylbenzene	105	12.948	12.949	(0.885)	1068454	56.4057	56.4	
$	77	P-Bromofluorobenzene	95	13.277	13.286	(1.855)	418512	51.4417	51.4	
	78	cis-1,4-Dichloro-2-Butene	53	13.406	13.407	(0.916)	72032	44.2498	44.2	
	79	Bromobenzene	156	13.385	13.386	(0.915)	219371	51.9424	51.9	

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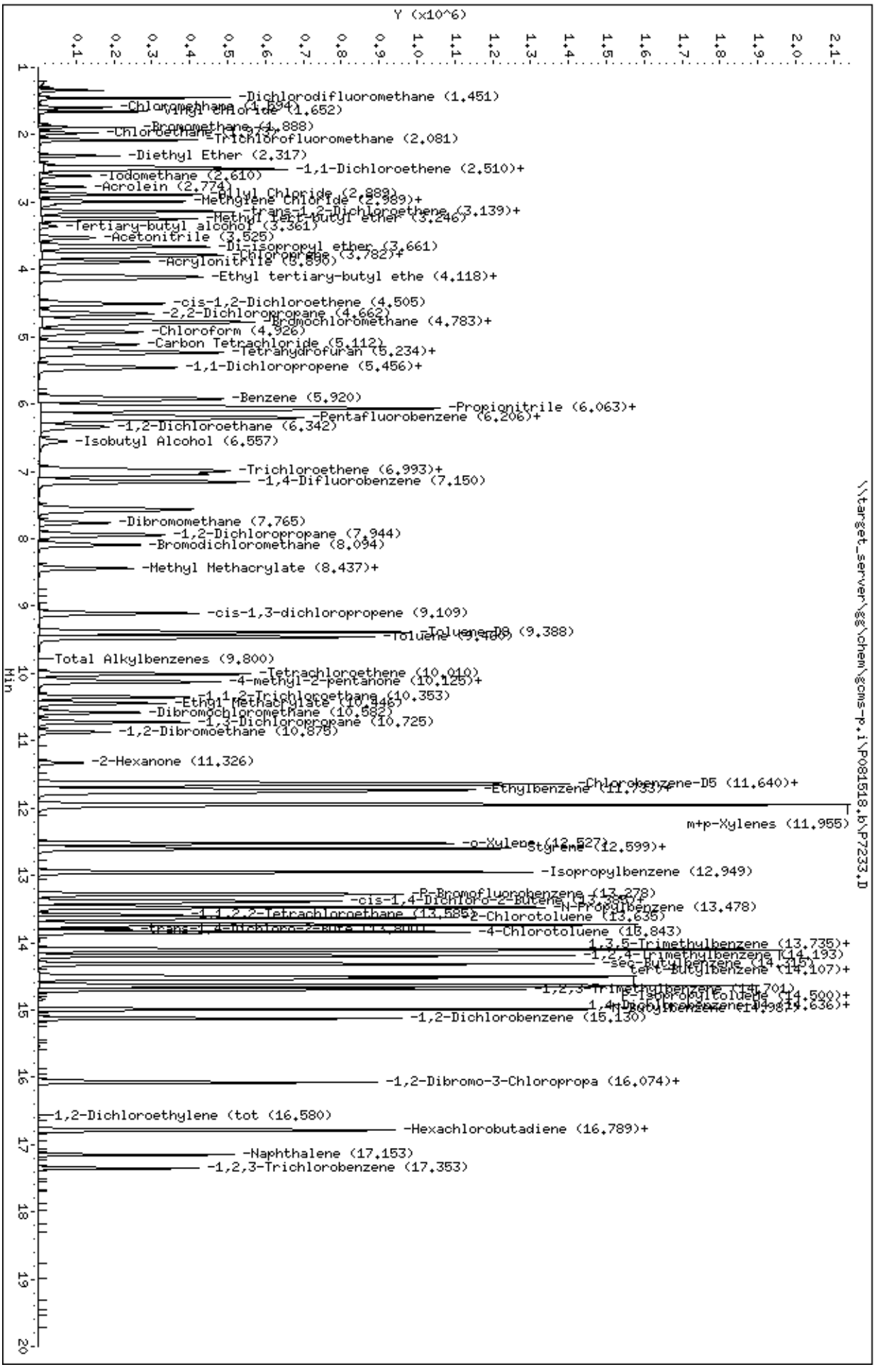
Report Date: 20-Aug-2018 14:46

			QUANT SIG					CONCENTRATIONS		
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/l)	FINAL (ug/l)	REVIEW CODE
	80	N-Propylbenzene	91	13.478	13.479	(0.921)	1303137	52.9554	53.0	
	81	1,1,2,2-Tetrachloroethane	83	13.585	13.586	(0.929)	214223	51.4934	51.5	
	82	2-Chlorotoluene	91	13.635	13.636	(0.932)	759649	52.6243	52.6	
	83	1,2,3-Trichloropropane	75	13.721	13.722	(0.938)	189194	48.5400	48.5	
	84	1,3,5-Trimethylbenzene	105	13.735	13.736	(0.939)	885756	53.9877	54.0	
	85	trans-1,4-Dichloro-2-Butene	53	13.792	13.800	(0.943)	58324	44.8101	44.8	
	86	4-Chlorotoluene	91	13.842	13.843	(0.946)	799423	52.5189	52.5	
	87	tert-Butylbenzene	119	14.107	14.108	(0.964)	878500	52.7895	52.8	
	88	Pentachloroethane	165	14.107	14.108	(0.964)	102740	48.6191	48.6	
	89	1,2,4-Trimethylbenzene	105	14.193	14.194	(0.970)	891842	54.2377	54.2	
	90	sec-Butylbenzene	105	14.314	14.315	(0.978)	1154545	54.5714	54.6	
	91	P-Isopropyltoluene	119	14.500	14.501	(0.991)	1021625	53.6324	53.6	
	92	1,3-Dichlorobenzene	146	14.536	14.537	(0.994)	449084	52.6369	52.6	
*	93	1,4-Dichlorobenzene-D4	152	14.629	14.630	(1.000)	386550	50.0000		
	94	1,4-Dichlorobenzene	146	14.650	14.651	(1.001)	444372	50.4352	50.4	
	95	1,2,3-Trimethylbenzene	105	14.700	14.701	(1.005)	827617	45.4623	45.5	
	96	N-Butylbenzene	91	14.986	14.987	(1.024)	892580	53.7298	53.7	
M	97	1,2-Dichloroethylene (total)	96				437447	108.833	109	
	98	1,2-Dichlorobenzene	146	15.129	15.130	(1.034)	405577	52.4739	52.5	
	99	1,2-Dibromo-3-Chloropropane	157	16.044	16.045	(1.097)	36281	41.6289	41.6	
	100	1,3,5-Trichlorobenzene	180	16.080	16.081	(1.099)	275017	46.9537	47.0	
	101	Hexachlorobutadiene	225	16.774	16.782	(1.147)	125718	48.4112	48.4	
	102	1,2,4-Trichlorobenzene	180	16.795	16.796	(1.148)	193004	48.3899	48.4	
	103	Naphthalene	128	17.153	17.154	(1.173)	372885	49.2727	49.3	
	104	1,2,3-Trichlorobenzene	180	17.353	17.354	(1.186)	122483	47.9858	48.0	
M	105	Xylenes (total)	106				2564109	163.736	164	

QC Flag Legend

R - Spike/Surrogate failed recovery limits.


Data File: \\target_server\gg\chem\gcms-p.i\P081518.b\P7233.D
Date : 15-AUG-2018 07:56
Client ID:
Sample Info: WG234446-1,SL7420
Purge Volume: 5.0
Column phase: RTX-VMS
Instrument: gcms-p.i
Operator: HG
Column diameter: 0.18
\\target_server\gg\chem\gcms-p.i\P081518.b\P7233.D
Y (x10^6)
Min
-Dichlorodifluoromethane (1.451)
-Chloromethane (1.594)
-Vinyl Chloride (1.652)
-Bromomethane (1.888)
-Chloroethane (1.974)
-Trichlorofluoromethane (2.081)
-Diethyl Ether (2.317)
-1,1-Dichloroethene (2.510)+
-Iodomethane (2.610)
-Acrolein (2.774)
-Allyl Chloride (2.889)
-Methylene Chloride (2.989)+
-trans-1,2-Dichloroethene (3.139)+
-Methyl tert-butyl ether (3.246)
-Tertiary-butyl alcohol (3.361)
-Acetonitrile (3.525)
-Di-isopropyl ether (3.661)
-Chloroprene (3.782)+
-Acrylonitrile (3.896)
-Ethyl tertiary-butyl ethe (4.118)+
-cis-1,2-Dichloroethene (4.505)
-2,2-Dichloropropane (4.662)
-Bromochloromethane (4.783)+
-Chloroform (4.926)
-Carbon Tetrachloride (5.112)
-Tetrahydrofuran (5.234)+
-1,1-Dichloropropene (5.456)+
-Benzene (5.920)
-Propionitrile (6.063)+
-Pentafluorobenzene (6.206)+
-1,2-Dichloroethane (6.342)
-Isobutyl Alcohol (6.557)
-Trichloroethene (6.993)+
-1,4-Difluorobenzene (7.150)
-Dibromomethane (7.765)
-1,2-Dichloropropane (7.944)
-Bromodichloromethane (8.094)
-Methyl Methacrylate (8.437)+
-cis-1,3-dichloropropene (9.109)
-Toluene-D8 (9.388)
-Toluene (9.480)
-Total Alkylbenzenes (9.800)
-Tetrachloroethene (10.010)
-4-methyl-2-pentanone (10.125)+
-1,1,2-Trichloroethane (10.353)
-Ethyl Methacrylate (10.446)
-Dibromochloromethane (10.582)
-1,3-Dichloropropane (10.725)
-1,2-Dibromoethane (10.875)
-2-Hexanone (11.326)
-Chlorobenzene-D5 (11.640)+
-Ethylbenzene (11.733)+
m+p-Xylenes (11.955)
-o-Xylene (12.527)
-Styrene (12.599)+
-Isopropylbenzene (12.949)
-p-Bromofluorobenzene (13.278)
-cis-1,4-Dichloro-2-Butene (13.360)+
-N-Propylbenzene (13.478)
-1,1,2,2-Tetrachloroethane (13.585)
-2-Chlorotoluene (13.635)
-trans-1,4-Dichloro-2-Bute (13.800)+
-4-Chlorotoluene (13.843)
-1,3,5-Trimethylbenzene (13.735)+
-1,2,4-Trimethylbenzene (14.193)
-sec-Butylbenzene (14.245)
-tert-Butylbenzene (14.107)+
-1,2,3-Trimethylbenzene (14.701)
-p-Isopropyltoluene (14.500)+
-1,4-Dichlorobenzene-D4 (14.636)+
-N-Butylbenzene (14.981)+
-1,2-Dichlorobenzene (15.130)
-1,2-Dibromo-3-Chloropropa (16.074)+
-1,2-Dichloroethylene (tot (16.580)
-Hexachlorobutadiene (16.789)+
-Naphthalene (17.153)
-1,2,3-Trichlorobenzene (17.353)

Logbooks and Supporting Documents

KATAHDIN ANALYTICAL SERVICES

VOLATILE TCLP EXTRACTION BENCH SHEET FOR SAMPLE TCLP Blnk

Balance ID: S/N 5012 Vessel ID: K

Dry Weight Determination 100%_____ <0.5% ✓ %Wet Solids_____

_____Refer to non-volatile TCLP extraction sheet, page #_____ for _____-_____

Sample description: Sand Homogeneous ✓ Non-homogeneous_____

1) Weight Container 1 + Residue _____g
2) Weight Container 1 + Waste _____g
3) Weight of Waste ((2) - (1)) _____g
4) Weight of Container 2 _____g
5) Weight of Container 2 and Filtrate _____g
6) Wt(g)/Vol(mL) of Filtrate ((5) - (4)) ___/___
7) Weight of Filter _____g
8) Wt of Filter and Wet Solid _____g
9) Wt of Wet Solid Phase ((8) - (7)) _____g
10) %Wet Solids (100*(9)/(3)) _____
11) Wt of Filter + Solid Phase Dry _____g
12) Wt of Solid Phase Dry ((11) - (7)) _____g
13) %Dry Solids (100*(12)/(3)) _____

Analyst [signature] Date 7-25-18 Sampled @ 2:28

Extraction Fluid Preparation and pH Check

Refer to the Non-Volatile TCLP/SPLP Extraction Fluid Preparation and Use Logbook located in the Metals Preparation Laboratory for the Fluid #1 Preparation documentation.

Analyst JS Date 7-10-18 Extraction Fluid Batch # PBT 1468A

pH of Fluid Today 4.90 pH Meter ID: Orion 520A S/N 7422

Filter Paper Lot #: 110153-7282

Extract Use

___ <0.5% Solids (Filter adequate sample volume) _____mL Filtered.

___ 100% Solids

10.04 g of Waste added to 200 mL of fluid (fluid volume = 20 times wt of solid sample)

___ Free Liquid present (See Equation A for amount of waste to filter)

(A) X = Desired weight of solid phase on filter * 100/ (%Wet Solid)

1) Weight Container 1 + Waste _____g
2) Weight Container 1 + Residue _____g
3) Weight of Waste Charged to ZHE ((1) - (2), or weighed directly into vessel) _____g
4) Weight of Pre-extraction Collection Device _____g
5) Weight of Device and Filtrate _____g
6) Weight ((5) - (4))/Volume (mL) of Filtrate 6a_____/_____6b
7) _____g of Solid Phase was added to 8)_____mL of Fluid #1.
((3) - (6a)) (20 * (7a))

Pressure before Tumbling 40 Pressure after Tumbling: 40 Rotation at 32 ± 2 RPM Verified ✓

Time Started Tumbling 3:15 Time Stopped: 8:15 Hours Extracted 17

Room Temp Start: 22.1 Room Temp. Min. 21.5 Room Temp. Max. 23.6

(23 ± 2°C)

Was pre-extracted filtrate recombined with extract _____YES ✓ NO

If "NO" enter volume of filtrate (6) 120

Amount of Fluid (8) _____

Analyst [signature] Date 7-26-18 Extracted @ 10:02

VOA-011 - Revision 2 – 10/19/2015

KATAHDIN ANALYTICAL SERVICES

VOLATILE TCLP EXTRACTION BENCH SHEET FOR SAMPLE SL7420 - 1A

Balance ID: S/N 5012 Vessel ID: K

TS 8-13-18

Dry Weight Determination 100% ✓ <0.5% ✓ %Wet Solids ____

____ Refer to non-volatile TCLP extraction sheet, page # ____ for ____ - ____

Sample description: Soil Homogeneous ✓ Non-homogeneous ____

1)	Weight Container 1 + Residue	____g	7)	Weight of Filter	____g
2)	Weight Container 1 + Waste	____g	8)	Wt of Filter and Wet Solid	____g
3)	Weight of Waste ((2) - (1))	____g	9)	Wt of Wet Solid Phase ((8) - (7))	____g
4)	Weight of Container 2	____g	10)	%Wet Solids (100*(9)/(3))	____
5)	Weight of Container 2 and Filtrate	____g	11)	Wt of Filter + Solid Phase Dry	____g
6)	Wt(g)/Vol(mL) of Filtrate ((5) - (4))	/	12)	Wt of Solid Phase Dry ((11) - (7))	____g
			13)	%Dry Solids (100*(12)/(3))	____

Analyst AO Date 8-13-18 Sampled @ 4:15

Extraction Fluid Preparation and pH Check

Refer to the Non-Volatile TCLP/SPLP Extraction Fluid Preparation and Use Logbook located in the Metals Preparation Laboratory for the Fluid #1 Preparation documentation.

Analyst JS Date 7-10-18 Extraction Fluid Batch # PBT1408A

pH of Fluid Today 4.91 pH Meter ID: Orion 520A S/N 7422

Extract Use Filter Paper Lot #: 110153-7282

____ <0.5% Solids (Filter adequate sample volume) ____mL Filtered.

____ 100% Solids

10.86 g of Waste added to 200 mL of fluid (fluid volume = 20 times wt of solid sample)

____ Free Liquid present (See Equation A for amount of waste to filter)

(A) X = Desired weight of solid phase on filter * 100/ (%Wet Solid)

1)	Weight Container 1 + Waste	____g
2)	Weight Container 1 + Residue	____g
3)	Weight of Waste Charged to ZHE ((1) - (2), or weighed directly into vessel)	____g
4)	Weight of Pre-extraction Collection Device	____g
5)	Weight of Device and Filtrate	____g
6)	Weight ((5) - (4))/Volume (mL) of Filtrate	6a____/____6b
7)	____g of Solid Phase was added to 8)____mL of Fluid #1. ((3) - (6a)) (20 * (7a))	

Pressure before Tumbling 40 Pressure after Tumbling: 40 Rotation at 32 ± 2 RPM Verified /

Time Started Tumbling 4:45 Time Stopped: 8:45 Hours Extracted 16

Room Temp Start: 21.4 Room Temp. Min. 20.7 Room Temp. Max. 24.1

(23 ± 2°C)

Was pre-extracted filtrate recombined with extract ____YES ✓ NO

If "NO" enter volume of filtrate (6) 120

Amount of Fluid (8) ____

Analyst AO Date 8-14-18 Filtered @ 11:15

VOA-011 - Revision 2 – 10/19/2015

KATAHDIN ANALYTICAL SERVICES

VOLATILE TCLP EXTRACTION BENCH SHEET FOR SAMPLE SL7420-2A

Balance ID: S/N 5012 Vessel ID: 6

8-13-15

Dry Weight Determination 100% ✓ <0.5% ✗ %Wet Solids ____

____ Refer to non-volatile TCLP extraction sheet, page # ____ for ____-____

Sample description: Soil Homogeneous ✓ Non-homogeneous ____

1)	Weight Container 1 + Residue	____g	7)	Weight of Filter	____g
2)	Weight Container 1 + Waste	____g	8)	Wt of Filter and Wet Solid	____g
3)	Weight of Waste ((2) - (1))	____g	9)	Wt of Wet Solid Phase ((8) - (7))	____g
4)	Weight of Container 2	____g	10)	%Wet Solids (100*(9)/(3))	____
5)	Weight of Container 2 and Filtrate	____g	11)	Wt of Filter + Solid Phase Dry	____g
6)	Wt(g)/Vol(mL) of Filtrate ((5) - (4))	___/___	12)	Wt of Solid Phase Dry ((11) - (7))	____g
			13)	%Dry Solids (100*(12)/(3))	____

Analyst [signature] Date 8-13-15

Sample @ 4:18

Extraction Fluid Preparation and pH Check

Refer to the Non-Volatile TCLP/SPLP Extraction Fluid Preparation and Use Logbook located in the Metals Preparation Laboratory for the Fluid #1 Preparation documentation.

Analyst JS Date 7-10-15 Extraction Fluid Batch # PBT 1468A

pH of Fluid Today 4.91 pH Meter ID: Orion 520A S/N 7422

Extract Use Filter Paper Lot #: 11953-7282

___ <0.5% Solids (Filter adequate sample volume) ____mL Filtered.

___ 100% Solids

11.44 g of Waste added to 200 mL of fluid (fluid volume = 20 times wt of solid sample)

___ Free Liquid present (See Equation A for amount of waste to filter)

(A) X = Desired weight of solid phase on filter * 100/ (%Wet Solid)

1)	Weight Container 1 + Waste	____g
2)	Weight Container 1 + Residue	____g
3)	Weight of Waste Charged to ZHE ((1) - (2), or weighed directly into vessel)	____g
4)	Weight of Pre-extraction Collection Device	____g
5)	Weight of Device and Filtrate	____g
6)	Weight ((5) - (4))/Volume (mL) of Filtrate	6a____/____6b
7)	____g of Solid Phase was added to 8)____mL of Fluid #1. ((3) - (6a)) (20 * (7a))	

Pressure before Tumbling 35 Pressure after Tumbling: 35 Rotation at 32 ± 2 RPM Verified ✓

Time Started Tumbling 4:45 Time Stopped: 8:45 Hours Extracted 16

Room Temp Start: 21.4 Room Temp. Min. 20.7 Room Temp. Max. 24.1

(23 ± 2°C)

Was pre-extracted filtrate recombined with extract ____YES ✓ NO

If "NO" enter volume of filtrate (6) 120

Amount of Fluid (8) ____

Analyst [signature] Date 8-14-15 Filtered @ 11:20

VOA-011 - Revision 2 – 10/19/2015

KATAHDIN ANALYTICAL SERVICES

GCMS-T INSTRUMENT RUNLOG

DATE/TIME OF BFB INJECTION: 7-26-18 9:49

SAMPLE NAME	DATAFILE	DF	ALS #	METHOD	PREP METHOD 5030	5035	1311	Criteria KAS	DoD	QAPP	pH Paper Lot #: Y/N	ANALYST	PH	KI Paper Lot # TRC	COMMENTS
VG232889-3	TB679	1	–	VOAB0BA	✓						Y			NA	
VSt&50	T6174		1	T8A05(38)							N				
VSt&50-4	75		2								Y				
LCS -1	76		3								Y				
LCSD -6	77		4								Y				
VBlankA	78		5								N				Target hits
B-2	79		6								Y				
TLLPBlk-7	80		7								Y				PBT1468A
SL6684-15DL2 B	81	100	8						4.2		Y				
-10DL2 B	82	20	9						4.2		Y				
-26DL A	83	10	10						4.2		Y				
-27DL A	84	10	11						4.2		Y				✓
-4RA B	85	1	12						4.2	*	N Y				1SS↑ RA
-25RA B	86	1	13						4.2		Y				1SS↑
SL6803-2DL B	87	20	14					✓			Y				
-4DL B	88	20	15					✓			Y				1SS↑
SL6684-26 A	89	1	16						4.2		Y				1SS↑
-27 A	90		17						4.2		Y				1SS↑
Rinse	91		18						–		N				
~~SL6471~~ SL6741-6 B	92		19						5.1		N				2SS↑
CLV1 -5	93		20								Y				21:11 ✓
2	94		21								N				
3	95		22								N				
Rinse	96		23								N				
Rinse	97		~~24~~								N				

STANDARD	CODE V1144
BFB	~~V1169A~~ 7-26-18
CAL. STD.	V1167/V1169A
LCS/MS MIX	V1152
EXTRAS MIX	V1168

STANDARD	CODE
IS MIX	V1158
SS MIX	↓

Circle Methods:

SW846 8260 — EPA 624

SW846 8260 SIM — EPA 524

SW846 8260 SIM (heated purge) — OTHER.

*TB 8-1-18

A070718

Katahdin Analytical Services 1000115

GCMS-P INSTRUMENT RUNLOG

KATAHDIN ANALYTICAL SERVICES

DATE/TIME OF BFB INJECTION: 8-11-18 1025

SAMPLE NAME	DATAFILE	DF	ALS #	METHOD	PREP METHOD 5030	PREP METHOD 5035	PREP METHOD 1311	Criteria KAS	Criteria DoD	Criteria QAPP	pH Paper Lot #: Y/N	pH Paper Lot #: ANALYST	pH Paper Lot #: PH	KI Paper Lot #: TRC	COMMENTS
WG23467-1BS	D8112	1	—	8260B/624	Y						Y	[illegible]	NA	NA	
VSTD50	D71166		1	D8A05(84)							N				
50 -4	67		2	D8A05(85)							Y				
20 -3	68		3								Y				
5 -2	69		4								Y				
1 -1	70		5								Y				
150 -6	71		6								Y				
100 -5	72		7								Y				
IntStd/LCS -7/8	73		8								Y				
VBLKA	74		9								Y				
B -9	75		10								N				Target hits
SL7178-1DL	76	100	11				✓		✓		Y				
SL7179-1DL	77	100	12				✓		✓		N				over-fill vol req
CCV 1	78	1	13		✓						N				↓
2	79		14								Y				1807 ✓
3	80		15								N				Not needed
Rmcs	81		16								N				↓
											—				

STANDARD	CODE
BFB	V1144
CAL. STD.	V1181 | V1184A
LCS/MS MIX	V1182
EXTRAS MIX	V1185

STANDARD	CODE
IS MIX	V1157
SS MIX	↓

TIC 8/13/18

Circle Methods:

SW846 8260 (circled)

SW846 8260 SIM

SW846 8260 SIM (heated purge)

OLM 04.2

OLC 03.2

EPA 624

EPA 524

KATAHDIN ANALYTICAL SERVICES

GCMS-P INSTRUMENT RUNLOG

DATE/TIME OF BFB INJECTION: 8-14-18 7:00

SAMPLE NAME	DATAFILE	DF	ALS #	METHOD	PREP METHOD 5030	PREP METHOD 5035	PREP METHOD 1311	Criteria KAS	Criteria DoD	Criteria QAPP	pH Paper Lot #: Y/N	pH Paper Lot #: ANALYST	pH Paper Lot #: PH	KI Paper Lot #: TRC	COMMENTS
WG234298-3	PB114	1	—	VOABFBA50	✓						Y	[illegible]		NA	
VStd50-4	P7207		1	P8A05(TS)							Y				
LCS -1	08		2								Y				
VBlkA	09		3								N				Target hits
↓b -2	10		4								Y				
SL7623-1A	11		5						5.9		Y		<2		
↓ -7A	12		6								Y		<2		
SL7624-8A	13		7								Y		<2		
SL7631-2DL2B	14	100	8								Y		<2		
↓ -1DL2C	15	10	9								Y		<2		
↓ -4B	16	1	10								Y		<2		
Rmice	17		11								—		—		
SL7631-4RAC	18		12								Y		<2		
SL7420-1DLA	19	20	13				✓				N		—		RA CO
↓ -2DLA	20	20	14				✓				Y		—		
SL7623-3A	21	1	15								Y		<2		
↓ -4A	22		16								Y		<2		
↓ -5A	23		17								Y		<2		
SL7623-2A	24		18								Y		<2		DL 1:10
↓ -2MSC -6	25		19								Y		<2		
↓ -2MSD3 -7	26		20								Y		<2		
CCV1 -5	27		21								Y				1826✓ PCE↑
↓ 2	28		22								Y				
↓ 3	29		23								Y				
Rmice	30		24								—				

TTC 8/15/17

STANDARD	CODE
BFB	V1144
CAL. STD.	V1185 | V1184B
LCS/MS MIX	V1182
EXTRAS MIX	V1183

STANDARD	CODE
IS MIX	V1157
SS MIX	↓

Circle Methods:

SW846 8260	OLM 04.2
SW846 8260 SIM	OLC 03.2
SW846 8260 SIM (heated purge)	EPA 624
	EPA 524

KATAHDIN ANALYTICAL SERVICES

GCMS-P INSTRUMENT RUNLOG

DATE/TIME OF BFB INJECTION: 081518 6:41

SAMPLE NAME	DATAFILE	DF	ALS #	METHOD	PREP METHOD 5030	PREP METHOD 5035	PREP METHOD 1311	Criteria KAS	Criteria DoD	Criteria QAPP	pH Paper Lot #: Y/N	pH Paper Lot #: ANALYST	pH Paper Lot #: PH	KI Paper Lot #: TRC	COMMENTS
WG234446-3	PB115	1	-1	VOABFBAR							Y	JSS			
-4	P7232	1	1	P8A05(85)D							Y				
-1	33	1	2								Y				
VBLK	34	1	3								N				
WG234446-2	35	1	4								Y				
SL7420-1DL2	36	1	5				X		5.0		Y				
CCV1	37	1	6								Y				
WG234475-4	38	1	7	P6A05(31)							Y				
-1	39	1	8								Y				
VBLK	40	1	9								N				
WG234475-2	41	1	10								Y				
SL7733-2 A	42	1	11					✓			Y		7	UD	
SL7451-1 A	43	1	12								Y		<2		
SL7461-2 A	44	1	13								Y				
-4 B	45	1	14								Y				
-6DL B	46	5	15								Y				
-8 A	47	1	16								Y				
-10 A	48	1	17								Y				
-14 A	49	1	18								Y				14:52
Rinse	50		19								=		2	2	
Rmse	51		20								=				

TBD 8-16-18

STANDARD	CODE
BFB	V1144
CAL. STD.	V1185/V1184
LCS/MS MIX	V1182
EXTRAS MIX	V1183

STANDARD	CODE
IS MIX	V1157
SS MIX	↓

Circle Methods:

SW846 8260	OLM 04.2
SW846 8260 SIM	OLC 03.2
SW846 8260 SIM (heated purge)	EPA 624
	EPA 524

TCLP SEMIVOLATILE DATA

QC Summary Section

Katahdin
ANALYTICAL SERVICES

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** Cornhusker Army Ammunition Plant **Matrix:** AQ
Lab Code: KAS **SDG:** SL7420

Client Sample ID	Lab Sample ID	Col. ID	2FBP	#	2FP	#	NBZ	#	PHL	#	TBP	#	TPH	#
CHAAP-IDW-SOIL-080618	SL7420-1		60.2		29.6		57.6		20.2		83.6		84.3	
CHAAP-IDW-SOIL-080618	SL7420-2		75.6		37.7		73.5		24.6		81.4		78.2	
Method Blank Sample	WG233966-1		66.0		37.7		66.3		26.4		79.2		80.2	
Laboratory Control S	WG233966-2		74.0		38.3		73.3		24.2		84.8		83.2	
TCLP Blank	WG233966-3		71.2		36.2		70.8		24.7		79.6		82.3	

		QC Limits
2FP	2-FLUOROPHENOL	19-119
NBZ	NITROBENZENE-D5	44-120
TBP	2,4,6-TRIBROMOPHENOL	43-140
TPH	TERPHENYL-D14	50-134
2FBP	2-FLUOROBIPHENYL	44-119
PHL	PHENOL-D6	10-90

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

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Katahdin
ANALYTICAL SERVICES

Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : U1908.D
Instrument ID : GCMS-U
Matrix : AQ

SDG : SL7420
Lab Sample ID : WG233966-1
Date Extracted : 10-AUG-18
Date Analyzed : 13-AUG-18
Time Analyzed : 11:18

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
TCLP Blank	WG233966-3	U1909.D	08/13/18	11:50
Laboratory Control S	WG233966-2	U1911.D	08/13/18	12:55
CHAAP-IDW-SOIL-080618-S	SL7420-1	U1912.D	08/13/18	13:27
CHAAP-IDW-SOIL-080618-N	SL7420-2	U1913.D	08/13/18	14:00

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ANALYTICAL SERVICES

Form 5
Semivolatile Organic Instrument Performance Check

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : UD943.D
Instrument ID : GCMS-U

SDG : SL7420
Date Analyzed : 24-JUL-18
Time Analyzed : 15:00

m/e	Ion Abundance Criteria	% Relative Abundance		
51	30.0 - 60.0% of mass 198	31.6		
68	Less than 2.0% of mass 69	0.0	0.0	1
69	Less than 100.0% of mass 198	33.7		
70	Less than 2.0% of mass 69	0.0	0.0	1
127	40.0 - 60.0% of mass 198	50.0		
197	Less than 1.0% of mass 198	0.0		
198	Base Peak, 100% relative abundance	100		
199	5.0 - 9.0% of mass 198	6.9		
275	10.0 - 30.0% of mass 198	22.7		
365	1.0 - 100.0% of mass 198	2.8		
441	0.0 - 100.0% of mass 443	9.7	83.80	2
442	40.0 - 100.0% of mass 198	59.4		
443	17.0 - 23.0% of mass 442	11.5	19.40	3

1-Value is % mass 69
2-Value is % mass 443
3-Value is % mass 442

This check applies to the following samples, LCS, MS, MSD and standards:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Initial Calibration	WG232607-4	U1763.D	07/24/18	15:19
Initial Calibration	WG232607-2	U1764.D	07/24/18	15:51
Initial Calibration	WG232607-3	U1765.D	07/24/18	16:24
Initial Calibration	WG232607-5	U1766.D	07/24/18	16:56
Initial Calibration	WG232607-6	U1767.D	07/24/18	17:28
Initial Calibration	WG232607-7	U1768.D	07/24/18	18:01
Independent Source	WG232607-8	U1769.D	07/24/18	18:34

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Katahdin
ANALYTICAL SERVICES

Form 5
Semivolatile Organic Instrument Performance Check

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : UD953.D
Instrument ID : GCMS-U

SDG : SL7420
Date Analyzed : 13-AUG-18
Time Analyzed : 10:27

m/e	Ion Abundance Criteria	% Relative Abundance		
51	30.0 - 60.0% of mass 198	33.3		
68	Less than 2.0% of mass 69	0.3	0.78	1
69	Less than 100.0% of mass 198	35.3		
70	Less than 2.0% of mass 69	0.0	0.0	1
127	40.0 - 60.0% of mass 198	50.4		
197	Less than 1.0% of mass 198	0.3		
198	Base Peak, 100% relative abundance	100		
199	5.0 - 9.0% of mass 198	6.8		
275	10.0 - 30.0% of mass 198	22.5		
365	1.0 - 100.0% of mass 198	2.8		
441	0.0 - 100.0% of mass 443	9.6	82.12	2
442	40.0 - 100.0% of mass 198	60.8		
443	17.0 - 23.0% of mass 442	11.7	19.27	3

1-Value is % mass 69
2-Value is % mass 443
3-Value is % mass 442

This check applies to the following samples, LCS, MS, MSD and standards:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Continuing Calibrati	WG233872-2	U1907.D	08/13/18	10:46
Method Blank Sample	WG233966-1	U1908.D	08/13/18	11:18
TCLP Blank	WG233966-3	U1909.D	08/13/18	11:50
Laboratory Control S	WG233966-2	U1911.D	08/13/18	12:55
CHAAP-IDW-SOIL-080618-S	SL7420-1	U1912.D	08/13/18	13:27
CHAAP-IDW-SOIL-080618-N	SL7420-2	U1913.D	08/13/18	14:00
Continuing Calibrati	WG233872-3	U1921.D	08/13/18	18:17

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Katahdin
ANALYTICAL SERVICES

Form 8
Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition I
Lab ID : WG232607-4
Lab File ID : U1763.D

SDG: SL7420
Analytical Date: 07/24/18 15:19
Instrument ID: GCMS-U

		1,4-DICHLOROBENZENE-D4			NAPHTHALENE-D8			ACENAPHTHENE-D10		
		Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
	Std .	174863		7.16		622604		8.84		345674		11.19	
	Upper Limit	349726		7.33		1245208		9.00		691348		11.35	
	Lower Limit	87431.5		6.99		311302		8.67		172837		11.02	
Client Sample ID	Lab Sample ID												
Continuing Calibrati	WG233872-2	222447		7.14		772667		8.83		409255		11.17	
Method Blank Sample	WG233966-1	229599		7.14		816773		8.81		465761		11.17	
TCLP Blank	WG233966-3	230449		7.14		822265		8.81		454394		11.17	
Laboratory Control S	WG233966-2	208264		7.14		725012		8.82		405191		11.18	
CHAAP-IDW-SOIL-08	SL7420-1	220882		7.14		772696		8.81		425222		11.17	
CHAAP-IDW-SOIL-08	SL7420-2	218893		7.14		764334		8.81		420484		11.17	
Continuing Calibrati	WG233872-3	206382		7.14		757703		8.82		423455		11.18	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 10 seconds of internal standard RT
RT Lower Limit = - 10 seconds of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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Katahdin
ANALYTICAL SERVICES

Form 8
Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition I
Lab ID : WG232607-4
Lab File ID : U1763.D

SDG: SL7420
Analytical Date: 07/24/18 15:19
Instrument ID: GCMS-U

		PHENANTHRENE-D10			CHRYSENE-D12			PERYLENE-D12		
		Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
	Std .	518646		13.19		307285		17.04		225220		20.08	
	Upper Limit	1037292		13.36		614570		17.21		450440		20.24	
	Lower Limit	259323		13.03		153642.5		16.88		112610		19.91	
Client Sample ID	Lab Sample ID												
Continuing Calibrati	WG233872-2	623845		13.18		377384		17.03		268517		20.07	
Method Blank Sample	WG233966-1	737836		13.17		539214		17.02		434820		20.06	
TCLP Blank	WG233966-3	720044		13.17		512214		17.02		410849		20.06	
Laboratory Control S	WG233966-2	666834		13.17		419984		17.02		308051		20.07	
CHAAP-IDW-SOIL-08	SL7420-1	640943		13.17		467122		17.02		392649		20.06	
CHAAP-IDW-SOIL-08	SL7420-2	650899		13.17		486661		17.02		412090		20.06	
Continuing Calibrati	WG233872-3	686013		13.18		400400		17.03		236938		20.06	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 10 seconds of internal standard RT
RT Lower Limit = - 10 seconds of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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Sample Data Section

KATAHDIN ANALYTICAL SERVICES - ORGANIC DATA QUALIFIERS

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.

* Compound recovery or percent RPD (relative percent difference) was outside of quality control limits.

D Indicates the result was obtained from analysis of a diluted sample. Surrogate recoveries may not be calculable.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

or

J Used for Pesticides, PCBs, Herbicides, Formaldehyde, Explosives and Method 504.1 analytes when there is a greater than 40% difference for detected concentrations between the two GC columns.

B Indicates the analyte was detected in the laboratory method blank analyzed concurrently with the sample.

C Indicates that the flagged compound did not meet DoD criteria in the corresponding daily calibration verification (CV).

L Indicates that the flagged compound did not meet DoD criteria in the corresponding Laboratory Control Sample (LCS) and/or Laboratory Control Sample Duplicate (LCSD) prepared and/or analyzed concurrently with the sample.

M Indicates that the flagged compound did not meet DoD criteria in the Matrix Spike and/or Matrix Spike Duplicate prepared and/or analyzed concurrently with the native sample.

N Presumptive evidence of a compound based on a mass spectral library search.

A Indicates that a tentatively identified compound is a suspected aldol-condensation product.

P Used for Pesticide/Aroclor analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. (for CLP methods only).

Katahdin Analytical Services, Inc.

Manual Integration Codes For GC/MS, GC, HPLC and/or IC

M1	Peak splitting.
M2	Well defined peaks on the shoulders of the other peaks.
M3	There is additional area due to a coeluting interferant.
M4	There are negative spikes in the baseline.
M5	There are rising or falling baselines.
M6	The software has failed to detect a peak or misidentified a peak.
M7	Excessive peak tailing.
M8	Analysis such as GRO, DRO and TPH require a baseline hold.
M9	Peak was not completely integrated as in GC/MS.
M10	Primary ion was correctly integrated, but secondary or tertiary ion needed manual integration as in GC/MS.
M11	For GC analysis, when a sample is diluted by 1:10 or more, the surrogate is set to undetected and then the area under the surrogate is manually integrated.
M12	Manual integration saved in method due to TurboChrom floating point error.

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL7420-1
Client ID: CHAAP-IDW-SOIL-080618-S
Project: Cornhusker Army Ammunition Plant
SDG: SL7420
Lab File ID: U1912.D

Sample Date: 06-AUG-18
Received Date: 08-AUG-18
Extract Date: 10-AUG-18
Extracted By: DP
Extraction Method: 3510C/1311
Lab Prep Batch: WG233966

Analysis Date: 13-AUG-18
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: AQ
% Solids: NA
Report Date: 24-AUG-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Pyridine	U	190	ug/L	1	50	250	7.5	190
1,4-Dichlorobenzene	U	38	ug/L	1	10	50.	11.	38.
2-Methylphenol	U	38	ug/L	1	10	50.	19.	38.
3&4-Methylphenol	U	38	ug/L	1	10	50.	28.	38.
Hexachloroethane	U	38	ug/L	1	10	50.	12.	38.
Nitrobenzene	U	38	ug/L	1	10	50.	16.	38.
Hexachlorobutadiene	U	38	ug/L	1	10	50.	9.0	38.
2,4,6-Trichlorophenol	U	38	ug/L	1	10	50.	14.	38.
2,4,5-Trichlorophenol	U	94	ug/L	1	25	120	18.	94.
2,4-Dinitrotoluene	U	38	ug/L	1	10	50.	11.	38.
Hexachlorobenzene	U	38	ug/L	1	10	50.	10.	38.
Pentachlorophenol	U	94	ug/L	1	25	120	12.	94.
2-Fluorophenol		29.6	%					
Phenol-D6		20.2	%					
Nitrobenzene-D5		57.6	%					
2-Fluorobiphenyl		60.2	%					
2,4,6-Tribromophenol		83.6	%					
Terphenyl-D14		84.3	%					

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Data File: \\target_server\gg\chem\gcms-u.i\U081318.b\U1912.D
Report Date: 14-Aug-2018 11:33

Katahdin Analytical Services

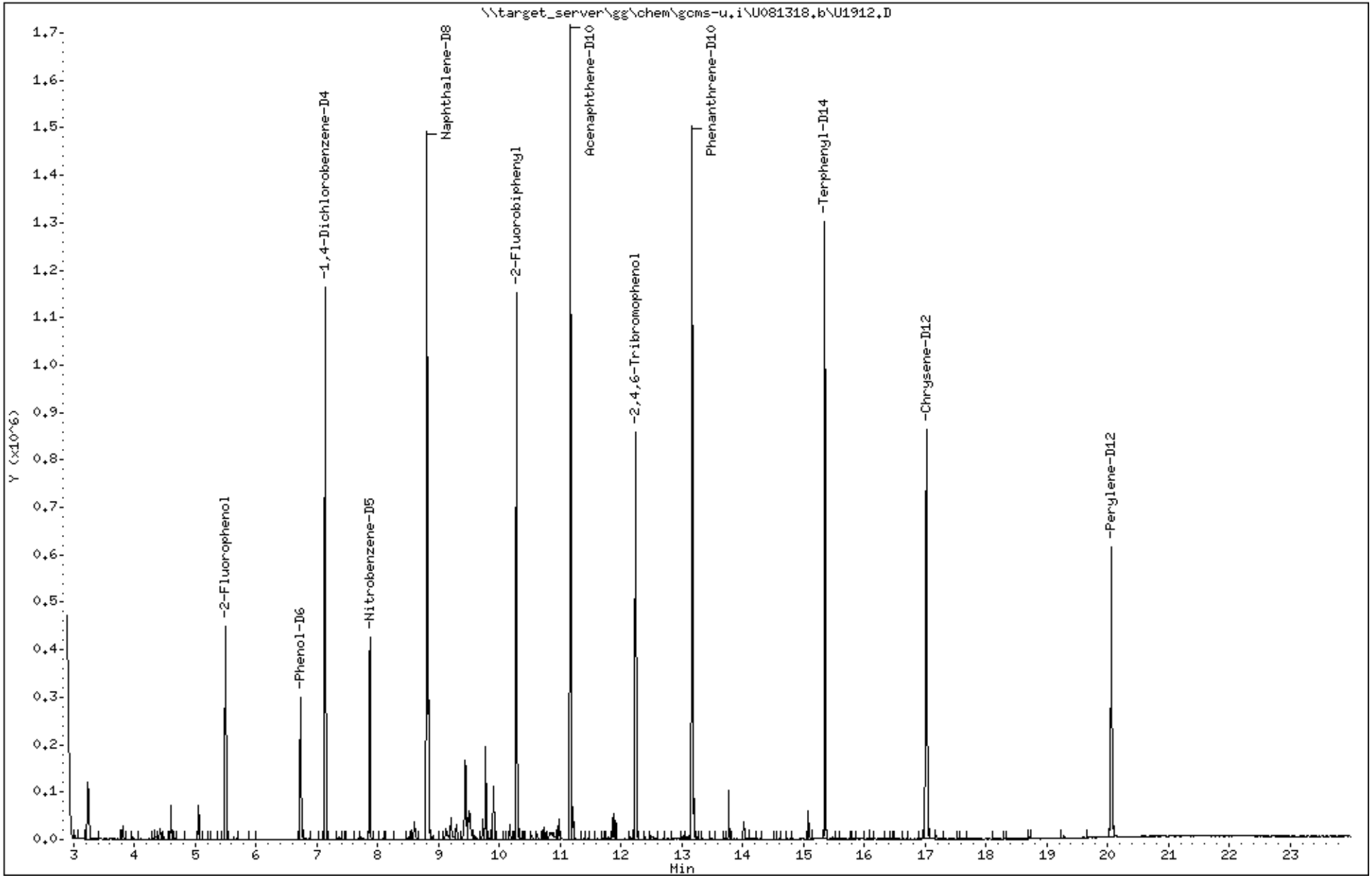
Data file : \\target_server\gg\chem\gcms-u.i\U081318.b\U1912.D
Lab Smp Id: SL7420-1 Client Smp ID: HAAP-IDW-SOIL-08061
Inj Date : 13-AUG-2018 13:27
Operator : JCG Inst ID: gcms-u.i
Smp Info : SL7420-1
Misc Info : WG233872,WG233966,WG232607-4
Comment :
Method : \\target_server\gg\chem\gcms-u.i\U081318.b\U8270C51.m
Meth Date : 14-Aug-2018 09:11 cgomez Quant Type: ISTD
Cal Date : 24-JUL-2018 18:01 Cal File: U1768.D
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DoDTCLP50.sub
Target Version: 4.12
Processing Host: KATHADIN-50E985

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	0.20000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 8 2-Fluorophenol	112	5.491	5.523	(0.769)	209912	29.5887	148	
$ 13 Phenol-D6	99	6.733	6.765	(0.943)	155723	20.1726	101	
* 21 1,4-Dichlorobenzene-D4	152	7.137	7.159	(1.000)	220882	40.0000		
$ 33 Nitrobenzene-D5	82	7.871	7.904	(0.893)	188454	28.7820	144	
* 44 Naphthalene-D8	136	8.813	8.835	(1.000)	772696	40.0000		
$ 63 2-Fluorobiphenyl	172	10.283	10.305	(0.920)	383460	30.1062	150	
* 75 Acenaphthene-D10	164	11.173	11.195	(1.000)	425222	40.0000		
$ 95 2,4,6-Tribromophenol	330	12.250	12.272	(1.096)	124595	83.5637	418	
* 111 Phenanthrene-D10	188	13.171	13.203	(1.000)	640943	40.0000		
$ 127 Terphenyl-D14	244	15.355	15.377	(0.902)	509916	42.1478	211	
* 137 Chrysene-D12	240	17.021	17.053	(1.000)	467122	40.0000		
* 146 Perylene-D12	264	20.064	20.076	(1.000)	392649	40.0000		

Data File: \\target_server\gg\chem\gcms-u.i\U081318.b\U1912.D
Date : 13-AUG-2018 13:27
Client ID: HAAP-IDW-SOIL-08061
Instrument: gcms-u.i
Sample Info: SL7420-1
Volume Injected (uL): 1.0
Operator: JCG
Column phase: ZB5-MS
Column diameter: 0.25



Katahdin Analytical Services 2000014

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL7420-2
Client ID: CHAAP-IDW-SOIL-080618-N
Project: Cornhusker Army Ammunition Plant
SDG: SL7420
Lab File ID: U1913.D

Sample Date: 06-AUG-18
Received Date: 08-AUG-18
Extract Date: 10-AUG-18
Extracted By: DP
Extraction Method: 3510C/1311
Lab Prep Batch: WG233966

Analysis Date: 13-AUG-18
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: AQ
% Solids: NA
Report Date: 24-AUG-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Pyridine	U	190	ug/L	1	50	250	7.5	190
1,4-Dichlorobenzene	U	38	ug/L	1	10	50.	11.	38.
2-Methylphenol	U	38	ug/L	1	10	50.	19.	38.
3&4-Methylphenol	U	38	ug/L	1	10	50.	28.	38.
Hexachloroethane	U	38	ug/L	1	10	50.	12.	38.
Nitrobenzene	U	38	ug/L	1	10	50.	16.	38.
Hexachlorobutadiene	U	38	ug/L	1	10	50.	9.0	38.
2,4,6-Trichlorophenol	U	38	ug/L	1	10	50.	14.	38.
2,4,5-Trichlorophenol	U	94	ug/L	1	25	120	18.	94.
2,4-Dinitrotoluene	U	38	ug/L	1	10	50.	11.	38.
Hexachlorobenzene	U	38	ug/L	1	10	50.	10.	38.
Pentachlorophenol	U	94	ug/L	1	25	120	12.	94.
2-Fluorophenol		37.7	%					
Phenol-D6		24.6	%					
Nitrobenzene-D5		73.5	%					
2-Fluorobiphenyl		75.6	%					
2,4,6-Tribromophenol		81.4	%					
Terphenyl-D14		78.2	%					

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Data File: \\target_server\gg\chem\gcms-u.i\U081318.b\U1913.D
Report Date: 14-Aug-2018 11:33

Katahdin Analytical Services

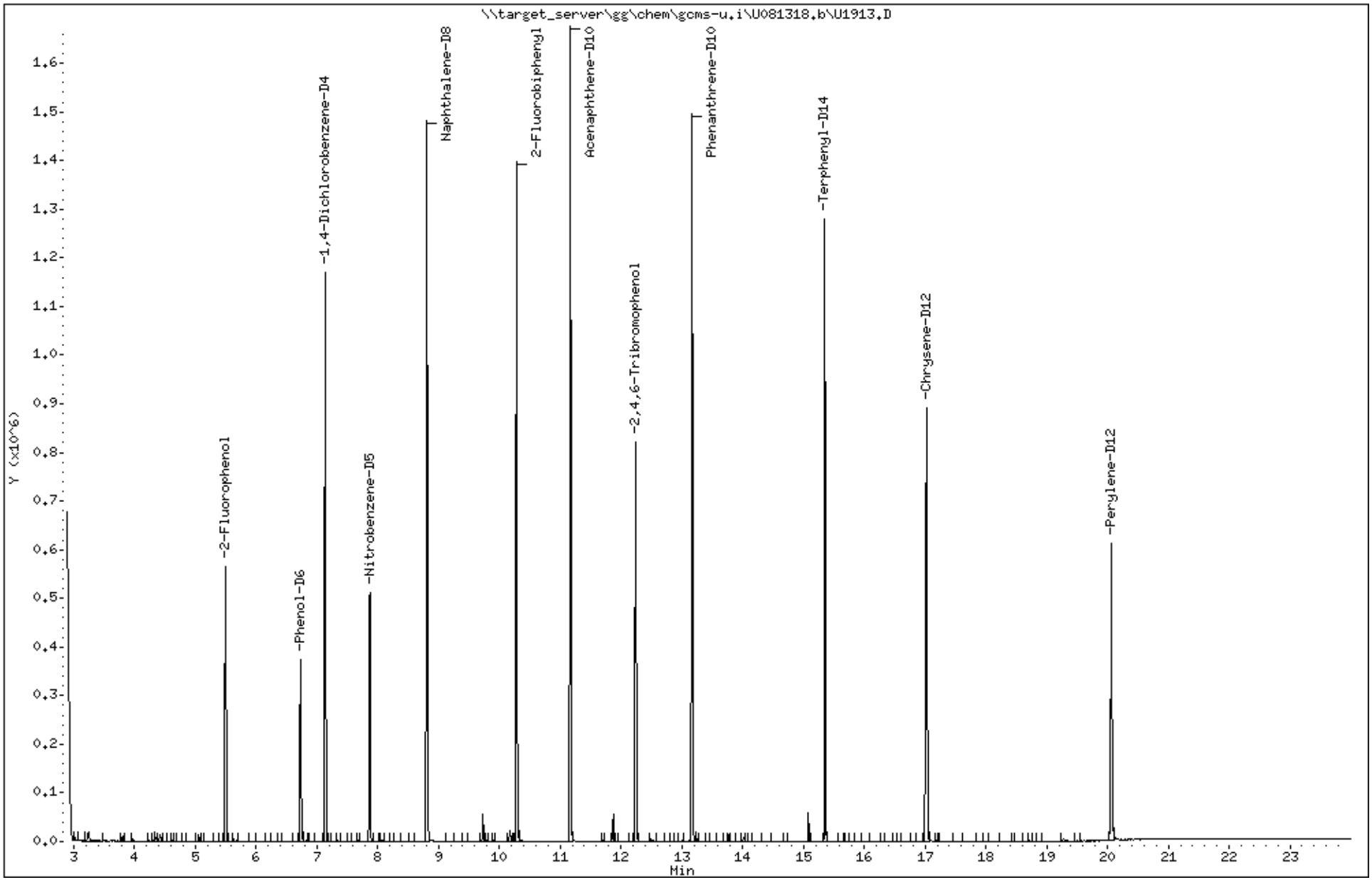
Data file : \\target_server\gg\chem\gcms-u.i\U081318.b\U1913.D
Lab Smp Id: SL7420-2 Client Smp ID: HAAP-IDW-SOIL-08061
Inj Date : 13-AUG-2018 14:00
Operator : JCG Inst ID: gcms-u.i
Smp Info : SL7420-2
Misc Info : WG233872,WG233966,WG232607-4
Comment :
Method : \\target_server\gg\chem\gcms-u.i\U081318.b\U8270C51.m
Meth Date : 14-Aug-2018 09:11 cgomez Quant Type: ISTD
Cal Date : 24-JUL-2018 18:01 Cal File: U1768.D
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DoDTCLP50.sub
Target Version: 4.12
Processing Host: V200T4

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	0.20000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 8 2-Fluorophenol	112	5.491	5.523	(0.769)	265113	37.7093	188	
$ 13 Phenol-D6	99	6.733	6.765	(0.943)	187979	24.5724	123	
* 21 1,4-Dichlorobenzene-D4	152	7.137	7.159	(1.000)	218893	40.0000		
$ 33 Nitrobenzene-D5	82	7.862	7.904	(0.892)	237978	36.7432	184	
* 44 Naphthalene-D8	136	8.814	8.835	(1.000)	764334	40.0000		
$ 63 2-Fluorobiphenyl	172	10.284	10.305	(0.920)	476435	37.8274	189	
* 75 Acenaphthene-D10	164	11.174	11.195	(1.000)	420484	40.0000		
$ 95 2,4,6-Tribromophenol	330	12.250	12.272	(1.096)	119980	81.3752	407	
* 111 Phenanthrene-D10	188	13.171	13.203	(1.000)	650899	40.0000		
$ 127 Terphenyl-D14	244	15.355	15.377	(0.902)	492532	39.0764	195	
* 137 Chrysene-D12	240	17.021	17.053	(1.000)	486661	40.0000		
* 146 Perylene-D12	264	20.064	20.076	(1.000)	412090	40.0000		

Data File: \\target_server\gg\chem\gcms-u.i\U081318.b\U1913.D
Date : 13-AUG-2018 14:00
Client ID: HAAP-IDW-SOIL-08061
Instrument: gcms-u.i
Sample Info: SL7420-2
Volume Injected (uL): 1.0
Operator: JCG
Column phase: ZB5-MS
Column diameter: 0.25



Katahdin Analytical Services 2000017

Standards Data Section

Katahdin
ANALYTICAL SERVICES

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL7420
Project : Cornhusker Army Ammunition Plant
Instrument ID: GCMS-U
Lab File IDs : U1764.D U1765.D U1763.D U1766.D U1767.D U1768.D
Column ID:
Calibration Date(s): 24-JUL-18 15:19, 24-JUL-18 18:01

	10.0000 Level 1	25.0000 Level 2	50.0000 Level 3	75.0000 Level 4	100.0000 Level 5	125.0000 Level 6	New Crv	b	m1	m2	%RSD	Max %RSD	
Pyridine	1.53166	1.48880	1.44019	1.39497	1.34510	1.41269	AVG		1.43557		4.66714	15.00000	O
1,4-Dichlorobenzene	1.43482	1.49585	1.41907	1.31650	1.26030	1.25662	AVG		1.36386		7.33025	15.00000	O
2-Methylphenol	1.05984	1.13489	1.15183	1.09246	1.05494	1.06302	AVG		1.09283		3.80894	15.00000	O
3&4-Methylphenol	1.16823	1.28353	1.25620	1.12963	1.06564	1.05644	AVG		1.15995		8.19072	15.00000	O
Hexachloroethane	0.57258	0.59335	0.58816	0.55100	0.53326	0.51648	AVG		0.55914		5.51165	15.00000	O
Nitrobenzene	0.32449	0.32416	0.32714	0.31203	0.28799	0.27884	AVG		0.30911		6.72323	15.00000	O
Hexachlorobutadiene	0.17413	0.17552	0.16949	0.15953	0.14756	0.14684	AVG		0.16218		7.94580	15.00000	O
2,4,6-Trichlorophenol	0.33770	0.36150	0.35409	0.33398	0.32514	0.31450	AVG		0.33782		5.20304	15.00000	O
2,4,5-Trichlorophenol	0.33461	0.38151	0.37672	0.37353	0.36048	0.35425	AVG		0.36352		4.81013	15.00000	O
2,4-Dinitrotoluene	0.33599	0.36436	0.35353	0.34346	0.32323	0.35143	AVG		0.34533		4.18710	15.00000	O
Hexachlorobenzene	0.22468	0.22574	0.21582	0.20164	0.19281	0.18643	AVG		0.20785		8.02403	15.00000	O
Pentachlorophenol	4003	23385	66214	95633	127055	136444	QUA	0.09650	8.51382	8.35366	0.99698	0.99000	O
2-Fluorophenol	1.35077	1.34546	1.31677	1.25192	1.20689	1.23655	AVG		1.28473		4.73902	15.00000	
Phenol-D6	1.46678	1.52876	1.46716	1.36422	1.28037	1.28038	AVG		1.39795		7.53148	15.00000	
Nitrobenzene-D5	0.34016	0.34890	0.35702	0.34211	0.32638	0.31913	AVG		0.33895		4.14658	15.00000	
2-Fluorobiphenyl	1.30761	1.34083	1.22996	1.14476	1.09957	1.06612	AVG		1.19814		9.39469	15.00000	
2,4,6-Tribromophenol	0.12437	0.14648	0.14767	0.14487	0.13646	0.14169	AVG		0.14026		6.24627	15.00000	
Terphenyl-D14	1.08099	1.06027	1.08992	1.05258	0.99495	0.93719	AVG		1.03598		5.66863	15.00000	

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

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Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\U1769.D
Report Date: 25-Jul-2018 08:02

Katahdin Analytical Services

RECOVERY REPORT

Client Name: Client SDG: 021497
Sample Matrix: LIQUID Fraction: SV
Lab Smp Id: WG232607-8
Level: LOW Operator: JCG
Data Type: MS DATA SampleType: INDCHECK
SpikeList File: INDcheck8270.spk Quant Type: ISTD
Sublist File: all_DOD50.sub
Method File: \\target_server\gg\chem\gcms-u.i\U072418.b\U8270C51.m
Misc Info: WG232607,WG232607,WG232607-4

SPIKE	COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1	1,4-Dioxane	50.0	46.0	92.09	80-120
3	Pyridine	50.0	49.6	99.24	80-120
2	N-Nitrosodimethyla	50.0	49.2	98.32	80-120
5	2-Picoline	50.0	51.6	103.11	80-120
6	N-Nitrosomethyleth	50.0	51.7	103.33	80-120
7	Methyl Methanesulf	50.0	50.5	101.00	80-120
9	N-Nitrosodiethylam	50.0	54.1	108.19	80-120
10	Ethyl Methanesulfo	50.0	52.0	103.91	80-120
11	Benzaldehyde	50.0	24.1	48.14*	80-120
12	Aniline	50.0	55.6	111.31	80-120
15	Phenol	50.0	49.8	99.56	80-120
14	Bis(2-Chloroethyl)	50.0	50.7	101.40	80-120
17	2-Chlorophenol	50.0	48.4	96.89	80-120
18	1,3-Dichlorobenzen	50.0	50.1	100.29	80-120
19	1,4-Dichlorobenzen	50.0	50.5	101.09	80-120
22	Benzyl alcohol	50.0	45.3	90.60	80-120
20	1,2-Dichlorobenzen	50.0	49.5	99.08	80-120
26	2,2'-Oxybis(1-chlo	50.0	37.1	74.13*	80-120
23	2-Methylphenol	50.0	49.1	98.19	80-120
28	Acetophenone	100	94.5	94.47	80-120
27	N-Nitrosopyrrolidi	50.0	52.8	105.58	80-120
30	N-Nitrosomorpholin	50.0	53.3	106.55	80-120
31	N-Nitroso-di-n-pro	50.0	49.5	98.92	80-120
24	3&4-Methylphenol	50.0	47.8	95.63	80-120
32	Hexachloroethane	50.0	49.4	98.88	80-120
29	o-Toluidine	50.0	50.6	101.26	80-120
34	Nitrobenzene	50.0	51.5	103.07	80-120
35	N-Nitrosopiperidin	50.0	52.3	104.53	80-120
36	Isophorone	50.0	48.5	97.08	80-120
37	2-Nitrophenol	50.0	53.6	107.20	80-120
38	2,4-Dimethylphenol	50.0	50.0	99.99	80-120
40	Bis(2-Chloroethoxy	50.0	53.8	107.51	80-120
39	O,O,O-Triethylphos	50.0	55.0	110.10	80-120
50	A,A-Dimethylphene	50.0	0.000	*	80-120
41	Benzoic acid	100	59.7	59.74*	80-120
42	2,4-Dichlorophenol	50.0	54.8	109.70	80-120
43	1,2,4-Trichloroben	50.0	50.2	100.39	80-120
45	Naphthalene	50.0	50.5	100.92	80-120
47	2,6-Dichlorophenol	50.0	54.1	108.20	80-120
46	4-Chloroaniline	50.0	49.0	98.06	80-120

Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\U1769.D
Report Date: 25-Jul-2018 08:02

SPIKE	COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
48	Hexachloropropene	50.0	53.5	106.99	80-120
49	Hexachlorobutadien	50.0	50.6	101.12	80-120
51	N-Nitroso-Di-N-But	50.0	50.9	101.75	80-120
53	Caprolactam	50.0	53.7	107.45	80-120
52	p-Phenylenediamine	50.0	0.000	*	80-120
55	Isosafrole	50.0	46.2	92.48	80-120
54	4-Chloro-3-Methylp	50.0	51.2	102.48	80-120
57	2-Methylnaphthalen	50.0	51.2	102.38	80-120
58	1-Methylnaphthalen	50.0	48.0	96.00	80-120
60	1,2,4,5-Tetrachlor	100	90.2	90.25	80-120
59	Hexachlorocyclopen	50.0	36.9	73.73*	80-120
61	2,4,6-Trichlorophe	50.0	50.6	101.18	80-120
62	2,4,5-Trichlorophe	50.0	54.1	108.21	80-120
56	Safrole	50.0	44.8	89.62	80-120
64	1,1'-Biphenyl	50.0	47.5	95.01	80-120
65	2-Chloronaphthalen	50.0	57.0	113.97	80-120
66	1-Chloronaphthalen	50.0	41.2	82.32	80-120
68	2-Nitroaniline	50.0	46.0	91.97	80-120
69	1,4-Naphthoquinone	50.0	66.4	132.84*	80-120
70	Dimethyl Phthalate	50.0	48.3	96.62	80-120
73	1,3-Dinitrobenzene	50.0	50.6	101.30	80-120
76	Acenaphthylene	50.0	46.1	92.20	80-120
72	2,6-Dinitrotoluene	50.0	49.7	99.47	80-120
74	3-Nitroaniline	50.0	51.4	102.72	80-120
78	Acenaphthene	50.0	50.2	100.49	80-120
79	2,4-Dinitrophenol	50.0	58.1	116.24	80-120
82	Dibenzofuran	50.0	50.2	100.44	80-120
80	Pentachlorobenzene	50.0	50.0	100.08	80-120
81	4-Nitrophenol	50.0	59.8	119.55	80-120
87	2,4-Dinitrotoluene	50.0	49.9	99.74	80-120
85	1-Naphthylamine	50.0	42.4	84.84	80-120
89	2-Naphthylamine	50.0	43.6	87.28	80-120
84	2,3,4,6-Tetrachlor	50.0	50.6	101.14	80-120
86	Diethylphthalate	50.0	49.2	98.34	80-120
88	Fluorene	50.0	48.9	97.87	80-120
90	4-Chlorophenyl-phe	50.0	50.0	99.92	80-120
91	O,O-diethyl-o-2-py	50.0	53.7	107.32	80-120
94	5-Nitro-O-Toluidin	50.0	52.6	105.10	80-120
97	4-Nitroaniline	50.0	49.9	99.87	80-120
93	N-Nitrosodiphenyla	100	81.8	81.85	80-120
92	4,6-Dinitro-2-Meth	50.0	54.0	107.98	80-120
98	1,2-Diphenylhydraz	50.0	48.5	96.97	80-120
96	Sulfotepp	50.0	54.4	108.82	80-120
101	Diallate	50.0	52.2	104.48	80-120
109	Phorate	50.0	41.1	82.20	80-120
100	4-Bromophenyl-phen	50.0	50.0	100.11	80-120
102	Phenacetin	50.0	51.9	103.75	80-120
107	1,3,5-Trinitrobenz	50.0	55.8	111.57	80-120
103	Hexachlorobenzene	50.0	49.7	99.38	80-120
112	Dimethoate	50.0	46.4	92.92	80-120
104	Atrazine	50.0	14.1	28.25*	80-120
105	4-Aminobiphenyl	50.0	35.9	71.80*	80-120
106	Pentachlorophenol	50.0	68.1	136.27*	80-120
110	Pronamide	50.0	52.3	104.59	80-120

Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\U1769.D
Report Date: 25-Jul-2018 08:02

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
108 Pentachloronitrobe	50.0	53.3	106.57	80-120
114 Phenanthrene	50.0	49.7	99.34	80-120
115 Disulfoton	50.0	50.2	100.51	80-120
116 Anthracene	50.0	50.9	101.76	80-120
113 Dinoseb	50.0	68.4	136.77*	80-120
117 Carbazole	50.0	52.0	104.01	80-120
119 Methyl Parathion	50.0	55.6	111.17	80-120
118 Di-n-butylphthalat	50.0	51.8	103.68	80-120
122 Ethyl Parathion	50.0	57.2	114.40	80-120
120 4-Nitroquinoline-1	50.0	56.6	113.31	80-120
121 Methapyrilene	50.0	40.0	79.93*	80-120
123 Isodrin	50.0	49.8	99.72	80-120
124 Fluoranthene	50.0	51.0	101.93	80-120
126 Benzidine	50.0	16.9	33.78*	80-120
125 Pyrene	50.0	50.0	100.05	80-120
128 Aramite	50.0	58.9	117.74	80-120
129 p-Dimethylaminoazo	50.0	58.2	116.51	80-120
130 Chlorobenzilate	50.0	51.7	103.48	80-120
133 Famphur	50.0	0.000	0.00*	80-120
136 3,3'-Dimethylbenzi	50.0	34.5	68.96*	80-120
131 Butylbenzylphthala	50.0	50.2	100.52	80-120
132 Bis(2-ethylhexyl)a	50.0	51.8	103.57	80-120
134 2-Acetylaminofluor	50.0	52.0	104.06	80-120
138 Benzo(a)anthracene	50.0	48.9	97.87	80-120
135 3,3'-Dichlorobenzi	50.0	47.0	94.04	80-120
139 Chrysene	50.0	50.4	100.73	80-120
140 bis(2-Ethylhexyl)p	50.0	52.7	105.39	80-120
142 Kepone	50.0	0.000	*	80-120
143 Di-n-octylphthalat	50.0	62.6	125.25*	80-120
144 Benzo(b)fluoranthe	50.0	51.8	103.67	80-120
145 7,12-Dimethylbenz(	50.0	53.3	106.52	80-120
147 Benzo(k)fluoranthe	50.0	52.8	105.58	80-120
141 Hexachlorophene	50.0	0.000	*	80-120
148 Benzo(a)pyrene	50.0	48.9	97.78	80-120
149 3-Methylcholanthre	50.0	52.9	105.78	80-120
151 Dibenz(a,j)acridin	50.0	46.1	92.21	80-120
150 Indeno(1,2,3-cd)py	50.0	47.1	94.14	80-120
152 Dibenzo(a,h)anthra	50.0	46.4	92.76	80-120
153 Benzo(g,h,i)peryle	50.0	46.1	92.21	80-120

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 8 2-Fluorophenol	100	0.000	*	19-119
$ 13 Phenol-D6	100	0.000	*	10-90
$ 33 Nitrobenzene-D5	50.0	0.000	*	44-120
$ 63 2-Fluorobiphenyl	50.0	0.000	*	44-119
$ 95 2,4,6-Tribromophe	100	0.000	*	43-140
$ 127 Terphenyl-D14	50.0	0.000	*	50-134

Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\U1763.D
Report Date: 25-Jul-2018 08:11

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-u.i\U072418.b\U1763.D
Lab Smp Id: WG232607-4
Inj Date : 24-JUL-2018 15:19
Operator : JCG   Inst ID: gcms-u.i
Smp Info : WG232607-4
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gcms-u.i\U072418.b\U8270C51.m
Meth Date : 25-Jul-2018 07:58 gcms-u.i   Quant Type: ISTD
Cal Date : 17-JUL-2018 13:49   Cal File: U1668.D
Als bottle: 2   Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all_DOD50.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)	REVIEW CODE
	1 1,4-Dioxane	58	3.194	3.205	(0.362)	80607	50.0000	49.8	
	3 Pyridine	79	3.660	3.660	(0.511)	314794	50.0000	50.2	
	2 N-Nitrosodimethylamine	42	3.619	3.640	(0.506)	126486	50.0000	51.1	
	4 Ethyl Methacrylate	69	4.292	4.292	(0.600)	230316	50.0000	50.4	
	5 2-Picoline	93	4.685	4.685	(0.654)	307691	50.0000	51.0	
	6 N-Nitrosomethylethylamine	88	4.851	4.851	(0.678)	126542	50.0000	51.2	
	7 Methyl Methanesulfonate	80	5.265	5.275	(0.735)	159247	50.0000	51.1	
$	8 2-Fluorophenol	112	5.513	5.523	(0.770)	287817	50.0000	51.2	
	9 N-Nitrosodiethylamine	102	5.782	5.792	(0.808)	129535	50.0000	51.3	
	10 Ethyl Methanesulfonate	79	6.196	6.206	(0.866)	199901	50.0000	51.7	
	11 Benzaldehyde	77	6.589	6.589	(0.920)	111490	50.0000	52.1	
	16 Pentachloroethane	117	6.786	6.786	(0.948)	106151	50.0000	52.9	
	12 Aniline	93	6.745	6.745	(0.942)	393481	50.0000	53.0	
	14 Bis(2-Chloroethyl)ether	93	6.838	6.848	(0.955)	247397	50.0000	51.5	
$	13 Phenol-D6	99	6.755	6.765	(0.944)	320690	50.0000	52.5	
	15 Phenol	94	6.765	6.776	(0.945)	350283	50.0000	53.8(Q)	
	17 2-Chlorophenol	128	6.900	6.910	(0.964)	285716	50.0000	51.7	
	18 1,3-Dichlorobenzene	146	7.086	7.086	(0.990)	317214	50.0000	51.8	
*	21 1,4-Dichlorobenzene-D4	152	7.159	7.159	(1.000)	174863	40.0000		
	19 1,4-Dichlorobenzene	146	7.179	7.179	(1.003)	310178	50.0000	52.0	
	20 1,2-Dichlorobenzene	146	7.376	7.376	(1.030)	287203	50.0000	51.8	

Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\U1763.D
Report Date: 25-Jul-2018 08:11

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	22 Benzyl alcohol	108	7.366	7.386	(1.029)	173711	50.0000	54.1	
	25 Bis(2-Chloroisopropyl)ether	45	7.542	7.552	(1.053)	311524	50.0000	54.0	
	26 2,2'-Oxybis(1-chloropropane)	45	7.542	7.552	(1.053)	311524	50.0000	54.0	
	23 2-Methylphenol	108	7.542	7.552	(1.053)	251766	50.0000	52.7	
	28 Acetophenone	105	7.697	7.707	(0.871)	345510	50.0000	52.2	
	32 Hexachloroethane	117	7.811	7.821	(1.091)	128559	50.0000	52.6	
	27 N-Nitrosopyrrolidine	100	7.686	7.717	(1.074)	129157	50.0000	54.4	
	29 o-Toluidine	106	7.749	7.759	(1.082)	345058	50.0000	53.9(H)	
	30 N-Nitrosomorpholine	56	7.717	7.738	(1.078)	140473	50.0000	55.3	
	31 N-Nitroso-di-n-propylamine	70	7.728	7.749	(1.080)	168125	50.0000	55.9	
	24 3&4-Methylphenol	108	7.749	7.769	(1.082)	274578	50.0000	54.1	
$	33 Nitrobenzene-D5	82	7.883	7.904	(0.892)	277854	50.0000	52.7	
	34 Nitrobenzene	77	7.914	7.924	(0.896)	254599	50.0000	52.9	
	35 N-Nitrosopiperidine	114	8.111	8.132	(0.918)	133901	50.0000	52.6	
	36 Isophorone	82	8.245	8.256	(0.933)	478261	50.0000	53.8	
	37 2-Nitrophenol	139	8.339	8.339	(0.944)	158738	50.0000	54.1	
	38 2,4-Dimethylphenol	107	8.442	8.452	(0.955)	262444	50.0000	54.7	
	40 Bis(2-Chloroethoxy)methane	93	8.546	8.556	(0.967)	362656	50.0000	55.5	
	39 O,O,O-Triethylphosphorothioat	198	8.525	8.535	(0.965)	114492	50.0000	53.3	
	42 2,4-Dichlorophenol	162	8.670	8.680	(0.981)	222974	50.0000	53.4	
	43 1,2,4-Trichlorobenzene	180	8.763	8.773	(0.992)	236866	50.0000	52.5	
*	44 Naphthalene-D8	136	8.835	8.835	(1.000)	622604	40.0000		
	41 Benzoic acid	122	8.639	8.701	(0.978)	101403	50.0000	49.0	
	45 Naphthalene	128	8.856	8.866	(1.002)	690925	50.0000	52.9	
	50 A,A-Dimethylphenethylamine	58	9.001	9.187	(1.019)	608459	50.0000	53.7(M)	M9
	48 Hexachloropropene	213	8.991	8.991	(1.018)	165105	50.0000	53.9	
	47 2,6-Dichlorophenol	162	8.970	8.980	(1.015)	204761	50.0000	54.0	
	46 4-Chloroaniline	127	8.949	8.970	(1.013)	291601	50.0000	53.0	
	49 Hexachlorobutadiene	225	9.053	9.063	(1.025)	131905	50.0000	52.2	
	51 N-Nitroso-Di-N-Butylamine	84	9.425	9.446	(1.067)	163850	50.0000	49.5(H)	
	53 Caprolactam	113	9.456	9.508	(1.070)	82574	50.0000	53.6	
	52 p-Phenylenediamine	108	9.456	9.477	(1.070)	181112	50.0000	57.5	
	55 Isosafrole	162	9.694	9.705	(1.097)	203996	50.0000	53.0	
	57 2-Methylnaphthalene	142	9.788	9.798	(1.108)	510438	50.0000	54.2	
	54 4-Chloro-3-Methylphenol	107	9.643	9.663	(1.091)	210279	50.0000	53.8	
	58 1-Methylnaphthalene	142	9.922	9.932	(1.123)	483009	50.0000	53.1	
	60 1,2,4,5-Tetrachlorobenzene	216	10.026	10.036	(0.896)	210634	50.0000	50.5	
	59 Hexachlorocyclopentadiene	237	10.026	10.036	(0.896)	119341	50.0000	53.2	
	61 2,4,6-Trichlorophenol	196	10.191	10.202	(0.911)	152998	50.0000	52.4(H)	
$	63 2-Fluorobiphenyl	172	10.305	10.305	(0.921)	531456	50.0000	51.3	
	62 2,4,5-Trichlorophenol	196	10.243	10.264	(0.916)	162780	50.0000	51.8	
	56 Safrole	104	9.694	9.705	(0.867)	109408	50.0000	51.3	
	65 2-Chloronaphthalene	127	10.440	10.450	(0.933)	217423	50.0000	55.1(H)	
	64 1,1'-Biphenyl	154	10.429	10.440	(0.932)	547458	50.0000	49.8	
	66 1-Chloronaphthalene	127	10.471	10.481	(0.936)	161934	50.0000	47.4	
	67 Diphenylether	170	10.574	10.584	(0.945)	322595	50.0000	51.2	
	68 2-Nitroaniline	65	10.595	10.616	(0.947)	126231	50.0000	45.2	
	69 1,4-Naphthoquinone	158	10.678	10.688	(0.955)	135140	50.0000	50.6	
	71 1,4-Dinitrobenzene	75	10.781	10.791	(0.964)	86599	50.0000	52.1	
	76 Acenaphthylene	152	10.998	10.998	(0.983)	710257	50.0000	52.6	
	70 Dimethyl Phthalate	163	10.874	10.895	(0.972)	499522	50.0000	50.8	
	73 1,3-Dinitrobenzene	168	10.895	10.916	(0.974)	89332	50.0000	52.1	
	72 2,6-Dinitrotoluene	165	10.936	10.947	(0.978)	124557	50.0000	51.4	
	77 1,2-Dinitrobenzene	50	10.998	11.019	(0.983)	72633	50.0000	51.6	



1:06 pm, Aug 14, 2018

Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\U1763.D
Report Date: 25-Jul-2018 08:11

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
*	75 Acenaphthene-D10	164	11.185	11.195	(1.000)	345674	40.0000		
	78 Acenaphthene	153	11.237	11.247	(1.005)	455988	50.0000	52.3	
	74 3-Nitroaniline	138	11.164	11.185	(0.998)	132110	50.0000	51.6	
	79 2,4-Dinitrophenol	184	11.319	11.340	(1.012)	55210	50.0000	50.4	
	82 Dibenzofuran	168	11.464	11.475	(1.025)	595135	50.0000	51.8	
	80 Pentachlorobenzene	250	11.423	11.433	(1.021)	184764	50.0000	51.2	
	85 1-Naphthylamine	143	11.578	11.588	(1.035)	447858	50.0000	51.9	
	87 2,4-Dinitrotoluene	165	11.485	11.506	(1.027)	152756	50.0000	51.2	
	83 2,3,5,6-Tetrachlorophenol	232	11.609	11.619	(1.038)	120784	50.0000	54.8(H)	
	89 2-Naphthylamine	143	11.692	11.713	(1.045)	400346	50.0000	51.7	
	81 4-Nitrophenol	109	11.454	11.475	(1.024)	69737	50.0000	57.7(Q)	
	84 2,3,4,6-Tetrachlorophenol	232	11.661	11.671	(1.043)	120845	50.0000	52.9	
	88 Fluorene	166	11.930	11.940	(1.067)	459164	50.0000	50.7	
	86 Diethylphthalate	149	11.826	11.847	(1.057)	509950	50.0000	51.5	
	90 4-Chlorophenyl-phenylether	204	11.951	11.951	(1.068)	227376	50.0000	53.1	
	91 O,O-diethyl-o-2-pyrazinylphos	107	11.930	11.951	(1.067)	73459	50.0000	52.5(H)	
	94 5-Nitro-O-Toluidine	152	11.971	11.992	(1.070)	134422	50.0000	50.6	
	97 4-Nitroaniline	138	11.992	12.023	(1.072)	114754	50.0000	50.6	
	92 4,6-Dinitro-2-Methylphenol	198	12.033	12.065	(0.912)	80669	50.0000	51.5	
	93 N-Nitrosodiphenylamine	169	12.116	12.127	(0.918)	432757	50.0000	54.5	
	98 1,2-Diphenylhydrazine	77	12.158	12.168	(0.922)	471104	50.0000	53.3	
	99 Azobenzene	77	12.158	12.168	(0.922)	471104	50.0000	53.3	
$	95 2,4,6-Tribromophenol	330	12.261	12.272	(1.096)	63808	50.0000	52.6	
	96 Sulfotepp	97	12.365	12.375	(0.937)	77650	50.0000	53.6	
	101 Diallate	86	12.520	12.530	(0.949)	171633	50.0000	52.9	
	100 4-Bromophenyl-phenylether	248	12.603	12.613	(0.955)	134734	50.0000	53.0	
	109 Phorate	75	12.520	12.541	(0.949)	326357	50.0000	53.4(H)	
	107 1,3,5-Trinitrobenzene	213	12.520	12.551	(0.949)	38345	50.0000	51.2(Q)	
	102 Phenacetin	108	12.582	12.613	(0.954)	212409	50.0000	52.6(H)	
	103 Hexachlorobenzene	284	12.686	12.696	(0.962)	139919	50.0000	51.9	
	112 Dimethoate	87	12.758	12.779	(0.967)	140550	50.0000	54.0	
	104 Atrazine	200	12.872	12.882	(0.976)	111579	50.0000	52.5	
	105 4-Aminobiphenyl	169	12.965	12.975	(0.983)	395418	50.0000	54.3	
	106 Pentachlorophenol	266	12.975	12.986	(0.984)	66214	50.0000	52.8	
	108 Pentachloronitrobenzene	237	12.986	12.996	(0.984)	62354	50.0000	52.7	
*	111 Phenanthrene-D10	188	13.193	13.203	(1.000)	518646	40.0000		
	110 Pronamide	173	13.089	13.100	(0.992)	223568	50.0000	52.9	
	114 Phenanthrene	178	13.224	13.234	(1.002)	616011	50.0000	52.6	
	116 Anthracene	178	13.296	13.307	(1.008)	673940	50.0000	53.9	
	115 Disulfoton	88	13.234	13.234	(1.003)	242351	50.0000	53.7(H)	
	113 Dinoseb	211	13.234	13.256	(1.003)	87973	50.0000	57.0	
	117 Carbazole	167	13.524	13.534	(1.025)	562535	50.0000	52.6	
	119 Methyl Parathion	109	13.731	13.741	(1.041)	136639	50.0000	54.4	
	118 Di-n-butylphthalate	149	14.041	14.052	(1.064)	769481	50.0000	52.2	
	120 4-Nitroquinoline-1-Oxide	190	14.279	14.290	(1.082)	21397	50.0000	51.2	
	122 Ethyl Parathion	291	14.269	14.279	(1.082)	40740	50.0000	51.9	
	121 Methapyrilene	97	14.414	14.424	(1.093)	148995	50.0000	53.4	
	123 Isodrin	193	14.621	14.621	(1.108)	75829	50.0000	51.1	
	124 Fluoranthene	202	14.828	14.838	(1.124)	610159	50.0000	50.9	
	125 Pyrene	202	15.128	15.139	(0.888)	614813	50.0000	52.5	
	126 Benzidine	184	15.035	15.045	(0.882)	192667	50.0000	59.0	
$	127 Terphenyl-D14	244	15.377	15.377	(0.902)	418645	50.0000	52.6	
	128 Aramite	185	15.480	15.490	(0.908)	43496	50.0000	53.7	
	129 p-Dimethylaminoazobenzene	225	15.584	15.584	(0.914)	101599	50.0000	53.3	

Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\U1763.D
Report Date: 25-Jul-2018 08:11

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)	REVIEW CODE
130 Chlorobenzilate	251	15.656	15.666	(0.919)	166077	50.0000	51.8	
136 3,3'-Dimethylbenzidine	212	16.080	16.091	(0.944)	172336	50.0000	53.4	
131 Butylbenzylphthalate	149	16.132	16.143	(0.947)	299903	50.0000	51.5	
132 Bis(2-ethylhexyl)adipate	129	16.308	16.318	(0.957)	260362	50.0000	53.1	
134 2-Acetylaminofluorene	181	16.505	16.525	(0.968)	145584	50.0000	55.2	
138 Benzo(a)anthracene	228	17.022	17.033	(0.999)	433911	50.0000	51.2(H)	
* 137 Chrysene-D12	240	17.043	17.053	(1.000)	307285	40.0000		
139 Chrysene	228	17.084	17.105	(1.002)	423031	50.0000	52.6	
135 3,3'-Dichlorobenzidine	252	17.012	17.022	(0.998)	123753	50.0000	54.6	
140 bis(2-Ethylhexyl)phthalate	149	17.219	17.229	(1.010)	408168	50.0000	52.5	
143 Di-n-octylphthalate	149	18.627	18.637	(0.928)	617796	50.0000	52.6	
144 Benzo(b)fluoranthene	252	19.299	19.330	(0.961)	331739	50.0000	51.5	
145 7,12-Dimethylbenz(A)Anthracen	256	19.310	19.320	(0.962)	173773	50.0000	51.4	
147 Benzo(k)fluoranthene	252	19.361	19.382	(0.964)	347759	50.0000	51.0(H)	
148 Benzo(a)pyrene	252	19.962	19.972	(0.994)	274943	50.0000	51.7	
* 146 Perylene-D12	264	20.076	20.076	(1.000)	225220	40.0000		
149 3-Methylcholanthrene	268	20.655	20.676	(1.029)	121758	50.0000	53.4	
151 Dibenz(a,j)acridine	279	21.887	21.897	(1.090)	145828	50.0000	51.2	
150 Indeno(1,2,3-cd)pyrene	276	22.259	22.270	(1.109)	161992	50.0000	51.6	
152 Dibenzo(a,h)anthracene	278	22.332	22.342	(1.112)	168017	50.0000	54.2	
153 Benzo(g,h,i)perylene	276	22.880	22.901	(1.140)	194783	50.0000	53.7	

QC Flag Legend

Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\U1763.D
Date : 24-JUL-2018 15:19
Client ID:
Sample Info: WG232607-4
Volume Injected (uL): 1.0
Column phase: ZB5-MS
Instrument: gcms-u.i
Operator: JCG
Column diameter: 0.25
\\target_server\gg\chem\gcms-u.i\U072418.b\U1763.D
Y (x10^6)
Min
-1,4-Dioxane
-Pyridine+
-Ethyl Methacrylate
-2-Picoline
-N-Nitrosomethylethylamine
-Methyl Methanesulfonate
-2-Fluorophenol
-N-Nitrosodiethylamine
-Ethyl Methanesulfonate
-Benzaldehyde
-Pentachloroethane+
-1,3-Dichlorobenzene
-1,4-Dichlorobenzene-D4+
-1,2-Dichlorobenzene+
-Bis(2-Chloroisopropyl)eth+
-N-Nitroso-di-n-propylamin+
-Nitrobenzene-D5+
-N-Nitrosopiperidine
-2-Nitrophenol
-Isophorone
-Benzoic acid
-Hexachlorobutadiene
-Caprolactam+
-1-Methylnaphthalene
-Diphenylether+
-1,4-Dinitrobenzene
-Dimethyl Phthalate+
-Acenaphthylene+
-Acenaphthene-D10+
-Acenaphthene
-2,4-Dinitrophenol
-Dibenzofuran+
-Diethylphthalate
-4-Nitroaniline+
-1,2-Diphenylhydrazine
-2,4,6-Tribromophenol
Sulfotepp
Fluorene+
-Diallate+
-Hexachlorobenzene
-Dimethoate
-Atrazine
-4-Aminobiphenyl+
-Pronamide
-Anthracene
Phenanthrene-D10+
-Carbazole
-Methyl Parathion
-Di-n-butylphthalate
-4-Nitroquinoline-1-Oxide+
-Methapyrilene
-Isodrin
-Fluoranthene
-Benzidine
-Pyrene
-Terphenyl-D14
-Aramite
-p-Dimethylaminoazobenzene
-Camphur+
-Butylbenzylphthalate
-Bis(2-ethylhexyl)adipate
-2-Acetylaminofluorene
-Chrysene-D12+
-Bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(b)fluoranthene+
-Benzo(a)pyrene
-Perylene-D12
-3-Methylcholanthrene
-Dibenz(a,j)acridine
-Benzo(g,h,i)perylene

Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\U1764.D
Report Date: 25-Jul-2018 08:11

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-u.i\U072418.b\U1764.D
Lab Smp Id: WG232607-2
Inj Date : 24-JUL-2018 15:51
Operator : JCG   Inst ID: gcms-u.i
Smp Info : WG232607-2
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gcms-u.i\U072418.b\U8270C51.m
Meth Date : 25-Jul-2018 07:58 gcms-u.i   Quant Type: ISTD
Cal Date : 24-JUL-2018 15:51   Cal File: U1764.D
Als bottle: 3   Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all_DOD50.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)	REVIEW CODE
	1 1,4-Dioxane	58	3.203	3.205	(0.363)	14441	10.0000	11.0	
	3 Pyridine	79	3.669	3.660	(0.513)	57553	10.0000	10.7(a)	
	2 N-Nitrosodimethylamine	42	3.628	3.640	(0.507)	21348	10.0000	10.0	
	4 Ethyl Methacrylate	69	4.290	4.292	(0.599)	41721	10.0000	10.6	
	5 2-Picoline	93	4.694	4.685	(0.656)	51037	10.0000	9.84(a)	
	6 N-Nitrosomethylethylamine	88	4.849	4.851	(0.678)	20405	10.0000	9.60(a)	
	7 Methyl Methanesulfonate	80	5.263	5.275	(0.735)	26734	10.0000	9.98(a)	
$	8 2-Fluorophenol	112	5.511	5.523	(0.770)	50756	10.0000	10.5	
	9 N-Nitrosodiethylamine	102	5.780	5.792	(0.808)	21013	10.0000	9.68(a)	
	10 Ethyl Methanesulfonate	79	6.184	6.206	(0.864)	32477	10.0000	9.77(a)	
	11 Benzaldehyde	77	6.588	6.589	(0.920)	24372	10.0000	13.2	
	16 Pentachloroethane	117	6.784	6.786	(0.948)	18578	10.0000	10.8	
	12 Aniline	93	6.733	6.745	(0.941)	67313	10.0000	10.6(a)	
	14 Bis(2-Chloroethyl)ether	93	6.836	6.848	(0.955)	42500	10.0000	10.3	
$	13 Phenol-D6	99	6.733	6.765	(0.941)	55115	10.0000	10.5	
	15 Phenol	94	6.753	6.776	(0.944)	58723	10.0000	10.5	
	17 2-Chlorophenol	128	6.888	6.910	(0.962)	48989	10.0000	10.3	
	18 1,3-Dichlorobenzene	146	7.084	7.086	(0.990)	56096	10.0000	10.6	
*	21 1,4-Dichlorobenzene-D4	152	7.157	7.159	(1.000)	150302	40.0000		
	19 1,4-Dichlorobenzene	146	7.178	7.179	(1.003)	53914	10.0000	10.5	
	20 1,2-Dichlorobenzene	146	7.374	7.376	(1.030)	53206	10.0000	11.2	

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Report Date: 25-Jul-2018 08:11

			QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	22	Benzyl alcohol	108	7.354	7.386	(1.027)	26287	10.0000	9.52(a)	
	25	Bis(2-Chloroisopropyl)ether	45	7.540	7.552	(1.054)	53512	10.0000	10.8	
	26	2,2'-Oxybis(1-chloropropane)	45	7.540	7.552	(1.054)	53512	10.0000	10.8	
	23	2-Methylphenol	108	7.530	7.552	(1.052)	39824	10.0000	9.70(a)	
	28	Acetophenone	105	7.685	7.707	(0.871)	56954	10.0000	10.6	
	32	Hexachloroethane	117	7.809	7.821	(1.091)	21515	10.0000	10.2	
	27	N-Nitrosopyrrolidine	100	7.654	7.717	(1.069)	19361	10.0000	9.49(a)	
	29	o-Toluidine	106	7.737	7.759	(1.081)	60143	10.0000	10.9(a)	
	30	N-Nitrosomorpholine	56	7.706	7.738	(1.077)	21841	10.0000	10.0	
	31	N-Nitroso-di-n-propylamine	70	7.706	7.749	(1.077)	27706	10.0000	10.7	
	24	3&4-Methylphenol	108	7.737	7.769	(1.081)	43897	10.0000	10.1	
$	33	Nitrobenzene-D5	82	7.881	7.904	(0.893)	42929	10.0000	10.0	
	34	Nitrobenzene	77	7.902	7.924	(0.896)	40951	10.0000	10.5	
	35	N-Nitrosopiperidine	114	8.099	8.132	(0.918)	20063	10.0000	9.71(a)	
	36	Isophorone	82	8.233	8.256	(0.933)	72177	10.0000	10.0	
	37	2-Nitrophenol	139	8.327	8.339	(0.944)	22958	10.0000	9.65(a)	
	38	2,4-Dimethylphenol	107	8.430	8.452	(0.955)	39547	10.0000	10.2	
	40	Bis(2-Chloroethoxy)methane	93	8.534	8.556	(0.967)	47595	10.0000	8.99(a)	
	39	O,O,O-Triethylphosphorothioat	198	8.513	8.535	(0.965)	17786	10.0000	10.2	
	42	2,4-Dichlorophenol	162	8.668	8.680	(0.982)	34926	10.0000	10.3	
	43	1,2,4-Trichlorobenzene	180	8.761	8.773	(0.993)	39248	10.0000	10.7	
*	44	Naphthalene-D8	136	8.823	8.835	(1.000)	504803	40.0000		
	41	Benzoic acid	122	8.554	8.701	(0.970)	8080	10.0000	9.83(a)	
	45	Naphthalene	128	8.854	8.866	(1.004)	118643	10.0000	11.2	
	48	Hexachloropropene	213	8.989	8.991	(1.019)	25190	10.0000	10.1	
	47	2,6-Dichlorophenol	162	8.958	8.980	(1.015)	32190	10.0000	10.5	
	46	4-Chloroaniline	127	8.948	8.970	(1.014)	47932	10.0000	10.7	
	49	Hexachlorobutadiene	225	9.051	9.063	(1.026)	21975	10.0000	10.7	
	51	N-Nitroso-Di-N-Butylamine	84	9.424	9.446	(1.068)	30392	10.0000	11.3	
	53	Caprolactam	113	9.413	9.508	(1.067)	11057	10.0000	8.85(a)	
	52	p-Phenylenediamine	108	9.434	9.477	(1.069)	26517	10.0000	10.4	
	55	Isosafrole	162	9.693	9.705	(1.099)	31800	10.0000	10.2	
	57	2-Methylnaphthalene	142	9.786	9.798	(1.109)	81922	10.0000	10.7	
	54	4-Chloro-3-Methylphenol	107	9.631	9.663	(1.091)	30193	10.0000	9.53(a)	
	58	1-Methylnaphthalene	142	9.920	9.932	(1.124)	78794	10.0000	10.7	
	60	1,2,4,5-Tetrachlorobenzene	216	10.024	10.036	(0.896)	35544	10.0000	11.3	
	59	Hexachlorocyclopentadiene	237	10.024	10.036	(0.896)	15154	10.0000	8.93(a)	
	61	2,4,6-Trichlorophenol	196	10.190	10.202	(0.911)	22083	10.0000	10.0(H)	
$	63	2-Fluorobiphenyl	172	10.293	10.305	(0.920)	85507	10.0000	10.9	
	62	2,4,5-Trichlorophenol	196	10.241	10.264	(0.916)	21881	10.0000	9.20(a)	
	56	Safrole	104	9.693	9.705	(0.867)	16535	10.0000	10.2	
	65	2-Chloronaphthalene	127	10.438	10.450	(0.933)	30138	10.0000	10.1(H)	
	64	1,1'-Biphenyl	154	10.428	10.440	(0.932)	95142	10.0000	9.09(a)	
	66	1-Chloronaphthalene	127	10.459	10.481	(0.935)	26213	10.0000	10.1	
	67	Diphenylether	170	10.572	10.584	(0.945)	51625	10.0000	10.8	
	68	2-Nitroaniline	65	10.593	10.616	(0.947)	21591	10.0000	10.2(aQ)	
	71	1,4-Dinitrobenzene	75	10.769	10.791	(0.963)	10933	10.0000	8.69(a)	
	76	Acenaphthylene	152	10.986	10.998	(0.982)	114108	10.0000	11.2	
	70	Dimethyl Phthalate	163	10.862	10.895	(0.971)	79055	10.0000	10.6(M)	M6
	73	1,3-Dinitrobenzene	168	10.883	10.916	(0.973)	12246	10.0000	9.44(a)	
	72	2,6-Dinitrotoluene	165	10.924	10.947	(0.977)	18249	10.0000	9.95(a)	
	77	1,2-Dinitrobenzene	50	10.986	11.019	(0.982)	10515	10.0000	9.87(a)	
*	75	Acenaphthene-D10	164	11.183	11.195	(1.000)	261567	40.0000		
	78	Acenaphthene	153	11.225	11.247	(1.004)	70356	10.0000	10.7	



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							AMOUNTS		
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	74 3-Nitroaniline	138	11.152	11.185	(0.997)	18072	10.0000	9.34(a)	
	79 2,4-Dinitrophenol	184	11.297	11.340	(1.010)	2617	10.0000	7.50(aM)	M6
	82 Dibenzofuran	168	11.463	11.475	(1.025)	97692	10.0000	11.2	
	80 Pentachlorobenzene	250	11.421	11.433	(1.021)	28904	10.0000	10.6	
	85 1-Naphthylamine	143	11.566	11.588	(1.034)	65451	10.0000	10.0	
	87 2,4-Dinitrotoluene	165	11.473	11.506	(1.026)	21971	10.0000	9.73(a)	
	83 2,3,5,6-Tetrachlorophenol	232	11.597	11.619	(1.037)	14436	10.0000	8.66(aH)	
	89 2-Naphthylamine	143	11.680	11.713	(1.044)	53618	10.0000	9.15(a)	
	81 4-Nitrophenol	109	11.432	11.475	(1.022)	8399	10.0000	9.18(aQ)	
	84 2,3,4,6-Tetrachlorophenol	232	11.649	11.671	(1.042)	16227	10.0000	9.40(a)	
	88 Fluorene	166	11.918	11.940	(1.066)	78369	10.0000	11.4	
	86 Diethylphthalate	149	11.815	11.847	(1.056)	80236	10.0000	10.7	
	90 4-Chlorophenyl-phenylether	204	11.939	11.951	(1.068)	36268	10.0000	11.2	
	91 O,O-diethyl-o-2-pyrazinylphos	107	11.918	11.951	(1.066)	11542	10.0000	10.9(aH)	
	94 5-Nitro-O-Toluidine	152	11.959	11.992	(1.069)	19421	10.0000	9.67(aQ)	
	97 4-Nitroaniline	138	11.970	12.023	(1.070)	16272	10.0000	9.47(a)	
	92 4,6-Dinitro-2-Methylphenol	198	12.022	12.065	(0.912)	7801	10.0000	8.02(a)	
	93 N-Nitrosodiphenylamine	169	12.104	12.127	(0.918)	65072	10.0000	10.6	
	98 1,2-Diphenylhydrazine	77	12.146	12.168	(0.921)	73298	10.0000	10.8(a)	
	99 Azobenzene	77	12.146	12.168	(0.921)	73298	10.0000	10.8(a)	
$	95 2,4,6-Tribromophenol	330	12.260	12.272	(1.096)	8133	10.0000	8.87	
	96 Sulfotepp	97	12.363	12.375	(0.938)	11493	10.0000	10.3	
	101 Diallate	86	12.508	12.530	(0.949)	27503	10.0000	11.0	
	100 4-Bromophenyl-phenylether	248	12.601	12.613	(0.956)	21120	10.0000	10.8	
	109 Phorate	75	12.518	12.541	(0.950)	49864	10.0000	10.6(H)	
	107 1,3,5-Trinitrobenzene	213	12.498	12.551	(0.948)	4696	10.0000	8.14(aQ)	
	102 Phenacetin	108	12.549	12.613	(0.952)	32153	10.0000	10.3(H)	
	103 Hexachlorobenzene	284	12.684	12.696	(0.962)	22419	10.0000	10.8	
	112 Dimethoate	87	12.736	12.779	(0.966)	23399	10.0000	11.7	
	104 Atrazine	200	12.860	12.882	(0.976)	19899	10.0000	8.99(a)	
	105 4-Aminobiphenyl	169	12.953	12.975	(0.983)	65612	10.0000	11.7	
	106 Pentachlorophenol	266	12.963	12.986	(0.984)	4003	10.0000	7.31(a)	
	108 Pentachloronitrobenzene	237	12.974	12.996	(0.984)	9528	10.0000	10.5	
*	111 Phenanthrene-D10	188	13.181	13.203	(1.000)	399120	40.0000		
	110 Pronamide	173	13.067	13.100	(0.991)	33664	10.0000	10.3	
	114 Phenanthrene	178	13.212	13.234	(1.002)	105803	10.0000	11.7	
	116 Anthracene	178	13.284	13.307	(1.008)	107324	10.0000	11.2	
	115 Disulfoton	88	13.222	13.234	(1.003)	40106	10.0000	11.5(H)	
	113 Dinoseb	211	13.232	13.256	(1.004)	8251	10.0000	6.95(a)	
	117 Carbazole	167	13.512	13.534	(1.025)	89997	10.0000	10.9	
	119 Methyl Parathion	109	13.719	13.741	(1.041)	21303	10.0000	11.0	
	118 Di-n-butylphthalate	149	14.040	14.052	(1.065)	131340	10.0000	11.6	
	122 Ethyl Parathion	291	14.267	14.279	(1.082)	5902	10.0000	9.78(a)	
	123 Isodrin	193	14.619	14.621	(1.109)	12388	10.0000	10.8	
	124 Fluoranthene	202	14.816	14.838	(1.124)	108717	10.0000	11.8	
	125 Pyrene	202	15.116	15.139	(0.888)	108053	10.0000	10.2	
$	127 Terphenyl-D14	244	15.365	15.377	(0.902)	75261	10.0000	10.4	
	128 Aramite	185	15.478	15.490	(0.909)	6447	10.0000	8.78(a)	
	129 p-Dimethylaminoazobenzene	225	15.572	15.584	(0.914)	14445	10.0000	8.36(a)	
	130 Chlorobenzilate	251	15.654	15.666	(0.919)	28084	10.0000	9.67(a)	
	131 Butylbenzylphthalate	149	16.131	16.143	(0.947)	52725	10.0000	9.99(a)	
	132 Bis(2-ethylhexyl)adipate	129	16.306	16.318	(0.957)	39239	10.0000	8.83(a)	
	134 2-Acetylaminofluorene	181	16.493	16.525	(0.968)	17431	10.0000	7.29(a)	
	138 Benzo(a)anthracene	228	17.010	17.033	(0.999)	80018	10.0000	10.4(H)	



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Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\U1764.D
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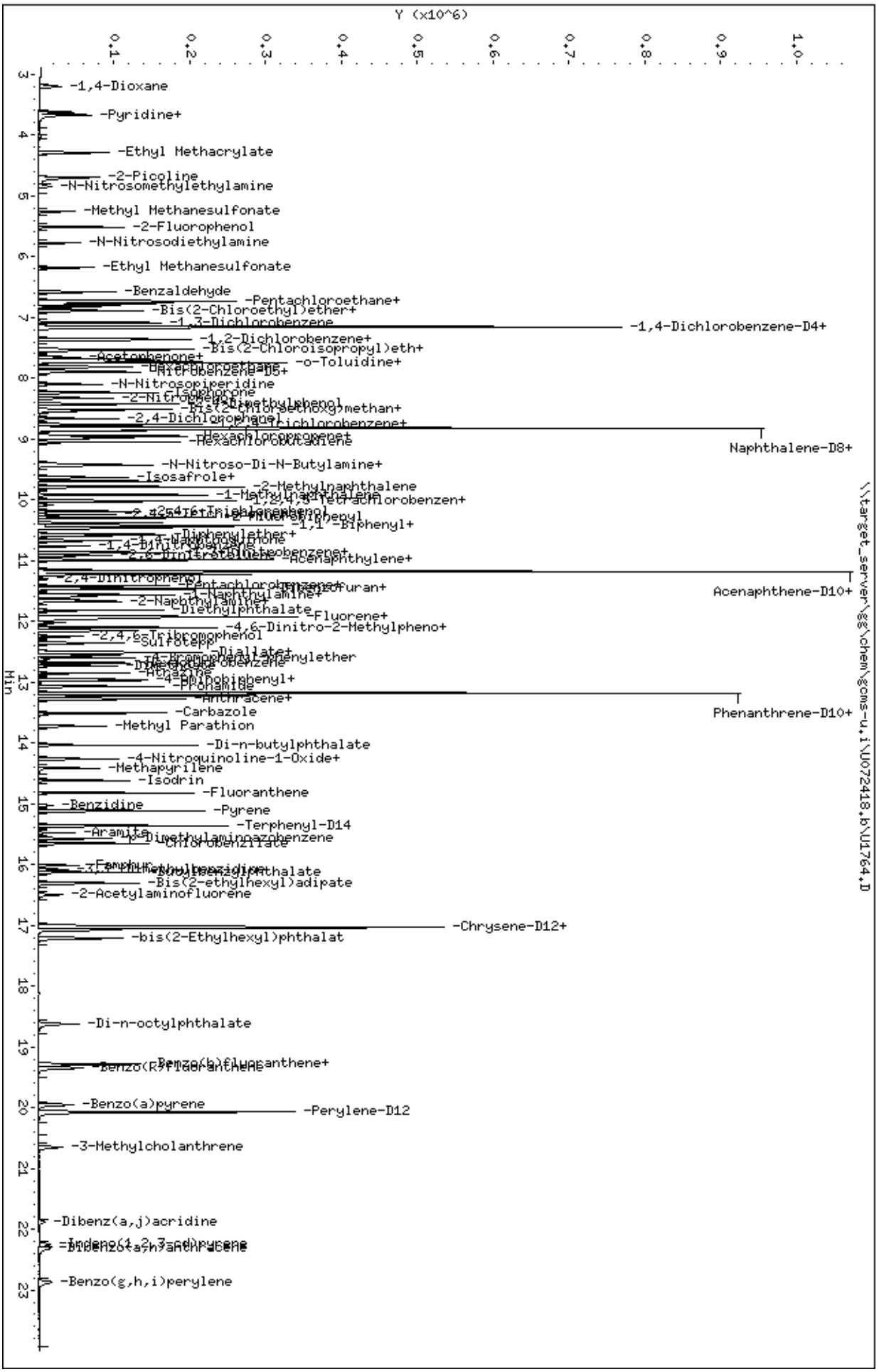
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)	REVIEW CODE
* 137 Chrysene-D12	240	17.031	17.053	(1.000)	278488	40.0000		
139 Chrysene	228	17.083	17.105	(1.003)	75492	10.0000	10.4	
135 3,3'-Dichlorobenzidine	252	17.010	17.022	(0.999)	17571	10.0000	8.55(a)	
140 bis(2-Ethylhexyl)phthalate	149	17.217	17.229	(1.011)	67123	10.0000	9.52(a)	
143 Di-n-octylphthalate	149	18.625	18.637	(0.928)	88164	10.0000	7.51(a)	
144 Benzo(b)fluoranthene	252	19.287	19.330	(0.961)	60407	10.0000	9.37(a)	
145 7,12-Dimethylbenz(A)Anthracen	256	19.287	19.320	(0.961)	31537	10.0000	9.32(a)	
147 Benzo(k)fluoranthene	252	19.349	19.382	(0.964)	65939	10.0000	9.66(aH)	
148 Benzo(a)pyrene	252	19.960	19.972	(0.994)	45483	10.0000	8.54(a)	
* 146 Perylene-D12	264	20.074	20.076	(1.000)	225437	40.0000		
149 3-Methylcholanthrene	268	20.654	20.676	(1.029)	18765	10.0000	8.23(a)	
151 Dibenz(a,j)acridine	279	21.875	21.897	(1.090)	18816	10.0000	8.24(a)	
150 Indeno(1,2,3-cd)pyrene	276	22.247	22.270	(1.108)	20470	10.0000	8.63(a)	
152 Dibenzo(a,h)anthracene	278	22.320	22.342	(1.112)	22704	10.0000	7.31(a)	
153 Benzo(g,h,i)perylene	276	22.868	22.901	(1.139)	31571	10.0000	8.69(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.


Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\U1764.D
Date : 24-JUL-2018 15:51
Client ID:
Sample Info: WG232607-2
Volume Injected (uL): 1.0
Column phase: ZB5-MS
Instrument: gcms-u.i
Operator: JCG
Column diameter: 0.25
\\target_server\gg\chem\gcms-u.i\U072418.b\U1764.D
Y (x10^6)
Min
-1,4-Dioxane
-Pyridine+
-Ethyl Methacrylate
-2-Picoline
-N-Nitrosomethylethylamine
-Methyl Methanesulfonate
-2-Fluorophenol
-N-Nitrosodiethylamine
-Ethyl Methanesulfonate
-Benzaldehyde
-Pentachloroethane+
-Bis(2-Chloroethyl)ether+
-1,3-Dichlorobenzene
-1,4-Dichlorobenzene-D4+
-1,2-Dichlorobenzene+
-Bis(2-Chloroisopropyl)eth+
-Acetophenone+
-o-Toluidine+
-N-Nitrosopiperidine
-Isophorone
-2-Nitrophenol
-2,4-Dimethylphenol
-Bis(2-Chloroethoxy)methan+
-2,4-Dichlorophenol
-1,2,4-Trichlorobenzene+
-Hexachlorocyclopentadiene
-Hexachlorobutadiene
Naphthalene-D8+
-N-Nitroso-Di-N-Butylamine+
-Isosafrole+
-2-Methylnaphthalene
-1-Methylnaphthalene
-1,2,4,5-Tetrachlorobenzen+
-2,4,6-Trichlorophenol
-2-Fluorobiphenyl
-1,1'-Biphenyl+
-Diphenylether+
-1,4-Dinitrobenzene
-1,4-Dinitrotoluene
-2,6-Dinitrotoluene
-Acenaphthylene+
Acenaphthene-D10+
-2,4-Dinitrophenol
-Pentachlorobenzene+
-Dibenzofuran+
-1-Naphthylamine+
-2-Naphthylamine+
-Diethylphthalate
-Fluorene+
-4,6-Dinitro-2-Methylpheno+
-2,4,6-Tribromophenol
-Sulfotepp
-Diallate+
-4-Bromophenyl-phenylether
-Dimethoate
-Hexachlorobenzene
-Atrazine
-4-Nitrophenol
-Pronamide
-Phenanthrene-D10+
-Anthracene+
-Carbazole
-Methyl Parathion
-Di-n-butylphthalate
-4-Nitroquinoline-1-Oxide+
-Methapyrilene
-Isodrin
-Fluoranthene
-Benzidine
-Pyrene
-Terphenyl-D14
-Aramite
-p-Dimethylaminoazobenzene
-Chlorobenzilate
-Famphur
-Butylbenzylphthalate
-Bis(2-ethylhexyl)adipate
-2-Acetylaminofluorene
-Chrysene-D12+
-bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(b)fluoranthene+
-Benzo(k)fluoranthene
-Benzo(a)pyrene
-Perylene-D12
-3-Methylcholanthrene
-Dibenz(a,j)acridine
-Indeno(1,2,3-cd)pyrene
-Dibenz(a,h)anthracene
-Benzo(g,h,i)perylene

Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\U1765.D
Report Date: 25-Jul-2018 08:11

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-u.i\U072418.b\U1765.D
Lab Smp Id: WG232607-3
Inj Date : 24-JUL-2018 16:24
Operator : JCG   Inst ID: gcms-u.i
Smp Info : WG232607-3
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gcms-u.i\U072418.b\U8270C51.m
Meth Date : 25-Jul-2018 07:58 gcms-u.i   Quant Type: ISTD
Cal Date : 24-JUL-2018 16:24   Cal File: U1765.D
Als bottle: 4   Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all_DOD50.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	1 1,4-Dioxane	58	3.204	3.205	(0.363)	38528	25.0000	25.4	
	3 Pyridine	79	3.659	3.660	(0.511)	153110	25.0000	25.9(a)	
	2 N-Nitrosodimethylamine	42	3.618	3.640	(0.506)	62100	25.0000	26.7	
	4 Ethyl Methacrylate	69	4.291	4.292	(0.599)	111875	25.0000	26.0	
	5 2-Picoline	93	4.684	4.685	(0.654)	144910	25.0000	25.5	
	6 N-Nitrosomethylethylamine	88	4.850	4.851	(0.678)	59857	25.0000	25.7	
	7 Methyl Methanesulfonate	80	5.253	5.275	(0.734)	76025	25.0000	25.9	
$	8 2-Fluorophenol	112	5.512	5.523	(0.770)	138369	25.0000	26.2	
	9 N-Nitrosodiethylamine	102	5.771	5.792	(0.806)	60834	25.0000	25.6	
	10 Ethyl Methanesulfonate	79	6.185	6.206	(0.864)	94272	25.0000	25.9	
	11 Benzaldehyde	77	6.589	6.589	(0.920)	61303	25.0000	30.4	
	16 Pentachloroethane	117	6.785	6.786	(0.948)	50559	25.0000	26.8	
	12 Aniline	93	6.733	6.745	(0.941)	188285	25.0000	27.0	
	14 Bis(2-Chloroethyl)ether	93	6.837	6.848	(0.955)	117385	25.0000	26.0	
$	13 Phenol-D6	99	6.744	6.765	(0.942)	157220	25.0000	27.3	
	15 Phenol	94	6.754	6.776	(0.944)	169290	25.0000	27.6	
	17 2-Chlorophenol	128	6.889	6.910	(0.962)	136418	25.0000	26.2	
	18 1,3-Dichlorobenzene	146	7.085	7.086	(0.990)	156474	25.0000	27.1	
*	21 1,4-Dichlorobenzene-D4	152	7.158	7.159	(1.000)	164546	40.0000		
	19 1,4-Dichlorobenzene	146	7.179	7.179	(1.003)	153835	25.0000	27.4	
	20 1,2-Dichlorobenzene	146	7.375	7.376	(1.030)	145639	25.0000	27.9	

Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\U1765.D
Report Date: 25-Jul-2018 08:11

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	22 Benzyl alcohol	108	7.354	7.386	(1.027)	81648	25.0000	27.0	
	25 Bis(2-Chloroisopropyl)ether	45	7.541	7.552	(1.053)	149746	25.0000	27.6	
	26 2,2'-Oxybis(1-chloropropane)	45	7.541	7.552	(1.053)	149746	25.0000	27.6	
	23 2-Methylphenol	108	7.530	7.552	(1.052)	116714	25.0000	26.0	
	28 Acetophenone	105	7.696	7.707	(0.872)	164231	25.0000	26.5	
	32 Hexachloroethane	117	7.810	7.821	(1.091)	61021	25.0000	26.5	
	27 N-Nitrosopyrrolidine	100	7.665	7.717	(1.071)	58647	25.0000	26.3	
	29 o-Toluidine	106	7.737	7.759	(1.081)	173157	25.0000	28.7	
	30 N-Nitrosomorpholine	56	7.706	7.738	(1.077)	66046	25.0000	27.6	
	31 N-Nitroso-di-n-propylamine	70	7.717	7.749	(1.078)	83282	25.0000	29.4	
	24 3&4-Methylphenol	108	7.737	7.769	(1.081)	132000	25.0000	27.7	
$	33 Nitrobenzene-D5	82	7.882	7.904	(0.893)	127165	25.0000	25.7	
	34 Nitrobenzene	77	7.903	7.924	(0.896)	118148	25.0000	26.2	
	35 N-Nitrosopiperidine	114	8.100	8.132	(0.918)	60196	25.0000	25.2	
	36 Isophorone	82	8.234	8.256	(0.933)	212184	25.0000	25.5	
	37 2-Nitrophenol	139	8.327	8.339	(0.944)	70068	25.0000	25.5	
	38 2,4-Dimethylphenol	107	8.431	8.452	(0.955)	120077	25.0000	26.7	
	40 Bis(2-Chloroethoxy)methane	93	8.534	8.556	(0.967)	166004	25.0000	27.1	
	39 O,O,O-Triethylphosphorothioat	198	8.514	8.535	(0.965)	53009	25.0000	26.3	
	42 2,4-Dichlorophenol	162	8.669	8.680	(0.982)	103652	25.0000	26.5	
	43 1,2,4-Trichlorobenzene	180	8.762	8.773	(0.993)	113030	25.0000	26.7	
*	44 Naphthalene-D8	136	8.824	8.835	(1.000)	583164	40.0000		
	41 Benzoic acid	122	8.586	8.701	(0.973)	44180	25.0000	25.8	
	45 Naphthalene	128	8.855	8.866	(1.004)	340006	25.0000	27.8	
	50 A,A-Dimethylphenethylamine	58	8.866	9.187	(1.005)	258221	25.0000	24.3(aM)	M9
	48 Hexachloropropene	213	8.990	8.991	(1.019)	75748	25.0000	26.4	
	47 2,6-Dichlorophenol	162	8.959	8.980	(1.015)	97052	25.0000	27.4	
	46 4-Chloroaniline	127	8.948	8.970	(1.014)	144856	25.0000	28.1	
	49 Hexachlorobutadiene	225	9.052	9.063	(1.026)	63973	25.0000	27.0	
	51 N-Nitroso-Di-N-Butylamine	84	9.424	9.446	(1.068)	92162	25.0000	29.7	
	53 Caprolactam	113	9.424	9.508	(1.068)	35570	25.0000	24.6	
	52 p-Phenylenediamine	108	9.445	9.477	(1.070)	85724	25.0000	29.1	
	55 Isosafrole	162	9.694	9.705	(1.099)	95810	25.0000	26.6	
	57 2-Methylnaphthalene	142	9.787	9.798	(1.109)	240822	25.0000	27.3	
	54 4-Chloro-3-Methylphenol	107	9.631	9.663	(1.091)	93747	25.0000	25.6	
	58 1-Methylnaphthalene	142	9.921	9.932	(1.124)	231583	25.0000	27.2	
	60 1,2,4,5-Tetrachlorobenzene	216	10.025	10.036	(0.896)	101663	25.0000	27.8	
	59 Hexachlorocyclopentadiene	237	10.025	10.036	(0.896)	51632	25.0000	26.3	
	61 2,4,6-Trichlorophenol	196	10.190	10.202	(0.911)	68395	25.0000	26.8	
$	63 2-Fluorobiphenyl	172	10.294	10.305	(0.920)	253680	25.0000	28.0	
	62 2,4,5-Trichlorophenol	196	10.242	10.264	(0.916)	72180	25.0000	26.2	
	56 Safrole	104	9.694	9.705	(0.867)	50422	25.0000	27.0	
	65 2-Chloronaphthalene	127	10.439	10.450	(0.933)	88772	25.0000	25.7	
	64 1,1'-Biphenyl	154	10.428	10.440	(0.932)	274269	25.0000	24.8	
	66 1-Chloronaphthalene	127	10.470	10.481	(0.936)	80591	25.0000	26.9	
	67 Diphenylether	170	10.573	10.584	(0.945)	151181	25.0000	27.4	
	68 2-Nitroaniline	65	10.594	10.616	(0.947)	67859	25.0000	27.7	
	69 1,4-Naphthoquinone	158	10.677	10.688	(0.955)	75370	25.0000	25.4	
	71 1,4-Dinitrobenzene	75	10.770	10.791	(0.963)	36273	25.0000	24.9	
	76 Acenaphthylene	152	10.987	10.998	(0.982)	325909	25.0000	27.5	
	70 Dimethyl Phthalate	163	10.863	10.895	(0.971)	233487	25.0000	27.1	
	73 1,3-Dinitrobenzene	168	10.884	10.916	(0.973)	37736	25.0000	25.1	
	72 2,6-Dinitrotoluene	165	10.925	10.947	(0.977)	55819	25.0000	26.3	
	77 1,2-Dinitrobenzene	50	10.987	11.019	(0.982)	32749	25.0000	26.6	



1:06 pm, Aug 14, 2018

Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\U1765.D
Report Date: 25-Jul-2018 08:11

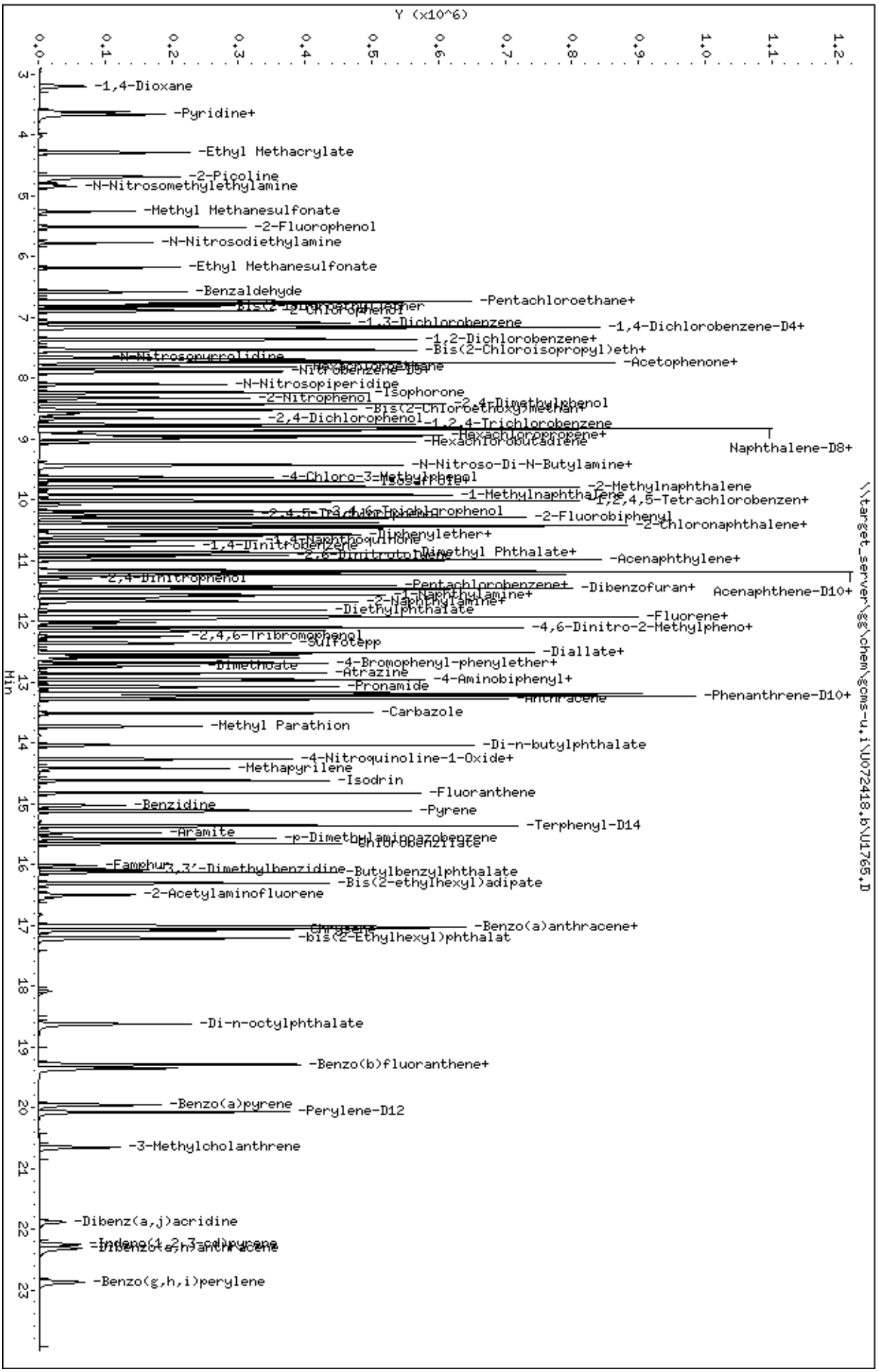
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
*	75 Acenaphthene-D10	164	11.184	11.195	(1.000)	302715	40.0000		
	78 Acenaphthene	153	11.225	11.247	(1.004)	212809	25.0000	27.9	
	74 3-Nitroaniline	138	11.153	11.185	(0.997)	58172	25.0000	26.0	
	79 2,4-Dinitrophenol	184	11.308	11.340	(1.011)	17592	25.0000	21.8(a)	
	82 Dibenzofuran	168	11.463	11.475	(1.025)	283596	25.0000	28.2	
	80 Pentachlorobenzene	250	11.422	11.433	(1.021)	85295	25.0000	27.0	
	85 1-Naphthylamine	143	11.567	11.588	(1.034)	196809	25.0000	26.0	
	87 2,4-Dinitrotoluene	165	11.474	11.506	(1.026)	68935	25.0000	26.4	
	83 2,3,5,6-Tetrachlorophenol	232	11.598	11.619	(1.037)	50261	25.0000	26.0	
	89 2-Naphthylamine	143	11.681	11.713	(1.044)	175565	25.0000	25.9	
	81 4-Nitrophenol	109	11.432	11.475	(1.022)	28872	25.0000	27.3(Q)	
	84 2,3,4,6-Tetrachlorophenol	232	11.660	11.671	(1.043)	50656	25.0000	25.3	
	88 Fluorene	166	11.929	11.940	(1.067)	225232	25.0000	28.4	
	86 Diethylphthalate	149	11.826	11.847	(1.057)	235188	25.0000	27.1	
	90 4-Chlorophenyl-phenylether	204	11.940	11.951	(1.068)	107600	25.0000	28.7	
	91 O,O-diethyl-o-2-pyrazinylphos	107	11.919	11.951	(1.066)	35075	25.0000	28.6	
	94 5-Nitro-O-Toluidine	152	11.960	11.992	(1.069)	60368	25.0000	26.0	
	97 4-Nitroaniline	138	11.981	12.023	(1.071)	51156	25.0000	25.7	
	92 4,6-Dinitro-2-Methylphenol	198	12.022	12.065	(0.912)	31535	25.0000	23.5(a)	
	93 N-Nitrosodiphenylamine	169	12.105	12.127	(0.918)	191835	25.0000	27.0	
	98 1,2-Diphenylhydrazine	77	12.157	12.168	(0.922)	219748	25.0000	27.8	
	99 Azobenzene	77	12.157	12.168	(0.922)	219748	25.0000	27.8	
$	95 2,4,6-Tribromophenol	330	12.260	12.272	(1.096)	27713	25.0000	26.1	
	96 Sulfotepp	97	12.354	12.375	(0.937)	34656	25.0000	26.7	
	101 Diallate	86	12.509	12.530	(0.949)	80017	25.0000	27.5	
	100 4-Bromophenyl-phenylether	248	12.602	12.613	(0.956)	63035	25.0000	27.7	
	109 Phorate	75	12.519	12.541	(0.950)	153564	25.0000	28.1	
	107 1,3,5-Trinitrobenzene	213	12.509	12.551	(0.949)	18110	25.0000	27.0(Q)	
	102 Phenacetin	108	12.561	12.613	(0.953)	96964	25.0000	26.8	
	103 Hexachlorobenzene	284	12.685	12.696	(0.962)	65572	25.0000	27.2	
	112 Dimethoate	87	12.747	12.779	(0.967)	67585	25.0000	29.0	
	104 Atrazine	200	12.861	12.882	(0.976)	55714	25.0000	24.6	
	105 4-Aminobiphenyl	169	12.954	12.975	(0.983)	187271	25.0000	28.7	
	106 Pentachlorophenol	266	12.964	12.986	(0.984)	23385	25.0000	21.8(a)	
	108 Pentachloronitrobenzene	237	12.975	12.996	(0.984)	28253	25.0000	26.7	
*	111 Phenanthrene-D10	188	13.182	13.203	(1.000)	464752	40.0000		
	110 Pronamide	173	13.078	13.100	(0.992)	103625	25.0000	27.4	
	114 Phenanthrene	178	13.213	13.234	(1.002)	297801	25.0000	28.4	
	116 Anthracene	178	13.285	13.307	(1.008)	310343	25.0000	27.7	
	115 Disulfoton	88	13.223	13.234	(1.003)	115601	25.0000	28.6	
	113 Dinoseb	211	13.233	13.256	(1.004)	37217	25.0000	26.9	
	117 Carbazole	167	13.513	13.534	(1.025)	262484	25.0000	27.4	
	119 Methyl Parathion	109	13.720	13.741	(1.041)	65228	25.0000	29.0	
	118 Di-n-butylphthalate	149	14.041	14.052	(1.065)	381916	25.0000	28.9	
	120 4-Nitroquinoline-1-Oxide	190	14.268	14.290	(1.082)	7784	25.0000	23.1(a)	
	122 Ethyl Parathion	291	14.268	14.279	(1.082)	19564	25.0000	27.8	
	121 Methapyrilene	97	14.413	14.424	(1.093)	76945	25.0000	27.2	
	123 Isodrin	193	14.620	14.621	(1.109)	36521	25.0000	27.5	
	124 Fluoranthene	202	14.827	14.838	(1.125)	307767	25.0000	28.6	
	125 Pyrene	202	15.117	15.139	(0.887)	309147	25.0000	25.6	
	126 Benzidine	184	15.034	15.045	(0.882)	85055	25.0000	25.3(a)	
$	127 Terphenyl-D14	244	15.365	15.377	(0.902)	209861	25.0000	25.6	
	128 Aramite	185	15.479	15.490	(0.908)	21551	25.0000	25.8	
	129 p-Dimethylaminoazobenzene	225	15.572	15.584	(0.914)	48430	25.0000	24.6	

Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\U1765.D
Report Date: 25-Jul-2018 08:11

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)	REVIEW CODE
130	Chlorobenzilate	251	15.655	15.666	(0.919)	83581	25.0000	25.3	
136	3,3'-Dimethylbenzidine	212	16.080	16.091	(0.944)	86251	25.0000	26.0	
131	Butylbenzylphthalate	149	16.131	16.143	(0.947)	159055	25.0000	26.5	
132	Bis(2-ethylhexyl)adipate	129	16.307	16.318	(0.957)	125001	25.0000	24.7	
134	2-Acetylaminofluorene	181	16.494	16.525	(0.968)	67662	25.0000	24.9	
138	Benzo(a)anthracene	228	17.021	17.033	(0.999)	232095	25.0000	26.6	
* 137	Chrysene-D12	240	17.042	17.053	(1.000)	316691	40.0000		
139	Chrysene	228	17.084	17.105	(1.002)	218950	25.0000	26.4	
135	3,3'-Dichlorobenzidine	252	17.011	17.022	(0.998)	61075	25.0000	26.1	
140	bis(2-Ethylhexyl)phthalate	149	17.218	17.229	(1.010)	204446	25.0000	25.5	
143	Di-n-octylphthalate	149	18.626	18.637	(0.928)	302703	25.0000	24.1	
144	Benzo(b)fluoranthene	252	19.288	19.330	(0.961)	175795	25.0000	25.5	
145	7,12-Dimethylbenz(A)Anthracen	256	19.299	19.320	(0.961)	95015	25.0000	26.3	
147	Benzo(k)fluoranthene	252	19.350	19.382	(0.964)	196818	25.0000	27.0(H)	
148	Benzo(a)pyrene	252	19.961	19.972	(0.994)	143919	25.0000	25.3	
* 146	Perylene-D12	264	20.075	20.076	(1.000)	240660	40.0000		
149	3-Methylcholanthrene	268	20.654	20.676	(1.029)	61179	25.0000	25.1	
151	Dibenz(a,j)acridine	279	21.876	21.897	(1.090)	64525	25.0000	22.3	
150	Indeno(1,2,3-cd)pyrene	276	22.248	22.270	(1.108)	69258	25.0000	22.1	
152	Dibenzo(a,h)anthracene	278	22.321	22.342	(1.112)	76854	25.0000	23.2	
153	Benzo(g,h,i)perylene	276	22.869	22.901	(1.139)	93738	25.0000	24.2	

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.


Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\U1765.D
Date : 24-JUL-2018 16:24
Client ID:
Sample Info: WG232607-3
Volume Injected (uL): 1.0
Column phase: ZB5-MS
Instrument: gcms-u.i
Operator: JCG
Column diameter: 0.25
\\target_server\gg\chem\gcms-u.i\U072418.b\U1765.D
Y (x10^6)
Min
-1,4-Dioxane
-Pyridine+
-Ethyl Methacrylate
-2-Picoline
-N-Nitrosomethylethylamine
-Methyl Methanesulfonate
-2-Fluorophenol
-N-Nitrosodiethylamine
-Ethyl Methanesulfonate
-Benzaldehyde
-Pentachloroethane+
-1,3-Dichlorobenzene
-1,4-Dichlorobenzene-D4+
-1,2-Dichlorobenzene+
-Bis(2-Chloroisopropyl)eth+
-Acetophenone+
-N-Nitrosopyrrolidine
-Isophorone
-N-Nitrosopiperidine
-2-Nitrophenol
-2,4-Dimethylphenol
-2,4-Dichlorophenol
-1,2,4-Trichlorobenzene
-Hexachloropropene+
-Hexachlorobutadiene
Naphthalene-D8+
-N-Nitroso-Di-N-Butylamine+
-2-Methylnaphthalene
-1-Methylnaphthalene
-1,2,4,5-Tetrachlorobenzen+
-2-Fluorobiphenyl
-2-Chloronaphthalene+
-Dimethyl Phthalate+
-Acenaphthylene+
-2,4-Dinitrophenol
-Pentachlorobenzene+
-Dibenzofuran+
Acenaphthene-D10+
-Diethylphthalate
-Fluorene+
-4,6-Dinitro-2-Methylpheno+
-2,4,6-Tribromophenol
-Diallate+
-Dimethoate
-4-Bromophenyl-phenylether+
-Atrazine
-4-Aminobiphenyl+
-Pronamide
-Phenanthrene-D10+
-Carbazole
-Methyl Parathion
-Di-n-butylphthalate
-4-Nitroquinoline-1-Oxide+
-Methapyrilene
-Isodrin
-Fluoranthene
-Benzidine
-Pyrene
-Terphenyl-D14
-Aramite
-p-Dimethylaminoazobenzene
-Famphur
-3,3'-Dimethylbenzidine
-Butylbenzylphthalate
-Bis(2-ethylhexyl)adipate
-2-Acetylaminofluorene
-Benzo(a)anthracene+
-bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(b)fluoranthene+
-Benzo(a)pyrene
-Perylene-D12
-3-Methylcholanthrene
-Dibenz(a,j)acridine
-Benzo(g,h,i)perylene

Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\U1766.D
Report Date: 25-Jul-2018 08:11

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-u.i\U072418.b\U1766.D
Lab Smp Id: WG232607-5
Inj Date : 24-JUL-2018 16:56
Operator : JCG   Inst ID: gcms-u.i
Smp Info : WG232607-5
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gcms-u.i\U072418.b\U8270C51.m
Meth Date : 25-Jul-2018 07:58 gcms-u.i   Quant Type: ISTD
Cal Date : 24-JUL-2018 16:56   Cal File: U1766.D
Als bottle: 5   Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all_DOD50.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	1 1,4-Dioxane	58	3.194	3.205	(0.362)	120365	75.0000	71.6	
	3 Pyridine	79	3.659	3.660	(0.511)	474376	75.0000	72.9	
	2 N-Nitrosodimethylamine	42	3.628	3.640	(0.507)	186098	75.0000	72.6	
	4 Ethyl Methacrylate	69	4.291	4.292	(0.599)	346098	75.0000	73.0	
	5 2-Picoline	93	4.684	4.685	(0.654)	464587	75.0000	74.3	
	6 N-Nitrosomethylethylamine	88	4.850	4.851	(0.678)	191690	75.0000	74.8	
	7 Methyl Methanesulfonate	80	5.274	5.275	(0.737)	240300	75.0000	74.4	
$	8 2-Fluorophenol	112	5.522	5.523	(0.772)	425729	75.0000	73.1	
	9 N-Nitrosodiethylamine	102	5.781	5.792	(0.808)	198245	75.0000	75.7	
	10 Ethyl Methanesulfonate	79	6.205	6.206	(0.867)	300325	75.0000	74.8	
	11 Benzaldehyde	77	6.588	6.589	(0.920)	139848	75.0000	63.0	
	16 Pentachloroethane	117	6.785	6.786	(0.948)	154712	75.0000	74.3	
	12 Aniline	93	6.744	6.745	(0.942)	550702	75.0000	71.6	
	14 Bis(2-Chloroethyl)ether	93	6.847	6.848	(0.957)	370397	75.0000	74.3	
$	13 Phenol-D6	99	6.754	6.765	(0.944)	463918	75.0000	73.2	
	15 Phenol	94	6.775	6.776	(0.946)	497899	75.0000	73.8(Q)	
	17 2-Chlorophenol	128	6.899	6.910	(0.964)	422412	75.0000	73.8	
	18 1,3-Dichlorobenzene	146	7.085	7.086	(0.990)	461167	75.0000	72.6	
*	21 1,4-Dichlorobenzene-D4	152	7.158	7.159	(1.000)	181366	40.0000		
	19 1,4-Dichlorobenzene	146	7.178	7.179	(1.003)	447689	75.0000	72.4	
	20 1,2-Dichlorobenzene	146	7.375	7.376	(1.030)	411310	75.0000	71.6	

Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\U1766.D
Report Date: 25-Jul-2018 08:11

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	22 Benzyl alcohol	108	7.375	7.386	(1.030)	244620	75.0000	73.4	
	25 Bis(2-Chloroisopropyl)ether	45	7.551	7.552	(1.055)	433500	75.0000	72.4	
	26 2,2'-Oxybis(1-chloropropane)	45	7.551	7.552	(1.055)	433500	75.0000	72.4	
	23 2-Methylphenol	108	7.541	7.552	(1.053)	371502	75.0000	75.0(M)	M9
	28 Acetophenone	105	7.706	7.707	(0.872)	502729	75.0000	73.3	
	32 Hexachloroethane	117	7.820	7.821	(1.093)	187374	75.0000	73.9	
	27 N-Nitrosopyrrolidine	100	7.706	7.717	(1.077)	188553	75.0000	76.6	
	29 o-Toluidine	106	7.758	7.759	(1.084)	473257	75.0000	71.2	
	30 N-Nitrosomorpholine	56	7.737	7.738	(1.081)	196363	75.0000	74.5	
	31 N-Nitroso-di-n-propylamine	70	7.737	7.749	(1.081)	220353	75.0000	70.7	
	24 3&4-Methylphenol	108	7.758	7.769	(1.084)	384143	75.0000	73.0	
$	33 Nitrobenzene-D5	82	7.893	7.904	(0.893)	414213	75.0000	75.7	
	34 Nitrobenzene	77	7.924	7.924	(0.897)	377801	75.0000	75.7	
	35 N-Nitrosopiperidine	114	8.120	8.132	(0.919)	202124	75.0000	76.5	
	36 Isophorone	82	8.244	8.256	(0.933)	697044	75.0000	75.6	
	37 2-Nitrophenol	139	8.338	8.339	(0.944)	228527	75.0000	75.1	
	38 2,4-Dimethylphenol	107	8.441	8.452	(0.955)	361451	75.0000	72.6	
	40 Bis(2-Chloroethoxy)methane	93	8.555	8.556	(0.968)	525725	75.0000	77.6	
	39 O,O,O-Triethylphosphorothioat	198	8.534	8.535	(0.966)	169828	75.0000	76.2	
	42 2,4-Dichlorophenol	162	8.679	8.680	(0.982)	331781	75.0000	76.7	
	43 1,2,4-Trichlorobenzene	180	8.772	8.773	(0.993)	344822	75.0000	73.6	
*	44 Naphthalene-D8	136	8.834	8.835	(1.000)	645746	40.0000		
	41 Benzoic acid	122	8.669	8.701	(0.981)	165052	75.0000	73.7(Q)	
	45 Naphthalene	128	8.865	8.866	(1.004)	990409	75.0000	73.1	
	50 A,A-Dimethylphenethylamine	58	9.072	9.187	(1.027)	927164	75.0000	78.8(M)	M9
	48 Hexachloropropene	213	8.990	8.991	(1.018)	237123	75.0000	74.6	
	47 2,6-Dichlorophenol	162	8.969	8.980	(1.015)	289095	75.0000	73.6	
	46 4-Chloroaniline	127	8.959	8.970	(1.014)	395683	75.0000	69.3	
	49 Hexachlorobutadiene	225	9.062	9.063	(1.026)	193150	75.0000	73.8	
	51 N-Nitroso-Di-N-Butylamine	84	9.435	9.446	(1.068)	238198	75.0000	69.4	
	53 Caprolactam	113	9.486	9.508	(1.074)	125705	75.0000	78.7	
	52 p-Phenylenediamine	108	9.466	9.477	(1.071)	223034	75.0000	68.3(M)	M6
	55 Isosafrole	162	9.704	9.705	(1.098)	302800	75.0000	75.8	
	57 2-Methylnaphthalene	142	9.797	9.798	(1.109)	715333	75.0000	73.3	
	54 4-Chloro-3-Methylphenol	107	9.652	9.663	(1.093)	313179	75.0000	77.3	
	58 1-Methylnaphthalene	142	9.921	9.932	(1.123)	692930	75.0000	73.5	
	60 1,2,4,5-Tetrachlorobenzene	216	10.035	10.036	(0.896)	308166	75.0000	72.6	
	59 Hexachlorocyclopentadiene	237	10.025	10.036	(0.896)	174464	75.0000	76.4	
	61 2,4,6-Trichlorophenol	196	10.201	10.202	(0.911)	220155	75.0000	74.1	
$	63 2-Fluorobiphenyl	172	10.304	10.305	(0.920)	754624	75.0000	71.6	
	62 2,4,5-Trichlorophenol	196	10.252	10.264	(0.916)	246228	75.0000	77.1	
	56 Safrole	104	9.693	9.705	(0.866)	158672	75.0000	73.2	
	65 2-Chloronaphthalene	127	10.449	10.450	(0.933)	281832	75.0000	70.2	
	64 1,1'-Biphenyl	154	10.439	10.440	(0.933)	779887	75.0000	78.7	
	66 1-Chloronaphthalene	127	10.480	10.481	(0.936)	272148	75.0000	78.2	
	67 Diphenylether	170	10.573	10.584	(0.945)	467839	75.0000	73.0	
	68 2-Nitroaniline	65	10.604	10.616	(0.947)	187639	75.0000	66.0	
	69 1,4-Naphthoquinone	158	10.687	10.688	(0.955)	176315	75.0000	75.9	
	71 1,4-Dinitrobenzene	75	10.780	10.791	(0.963)	130828	75.0000	77.3	
	76 Acenaphthylene	152	10.998	10.998	(0.982)	970361	75.0000	70.6	
	70 Dimethyl Phthalate	163	10.884	10.895	(0.972)	721060	75.0000	72.2	
	73 1,3-Dinitrobenzene	168	10.904	10.916	(0.974)	133345	75.0000	76.5	
	72 2,6-Dinitrotoluene	165	10.946	10.947	(0.978)	188503	75.0000	76.5	
	77 1,2-Dinitrobenzene	50	11.008	11.019	(0.983)	109184	75.0000	76.2	



1:06 pm, Aug 14, 2018

Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\U1766.D
Report Date: 25-Jul-2018 08:11

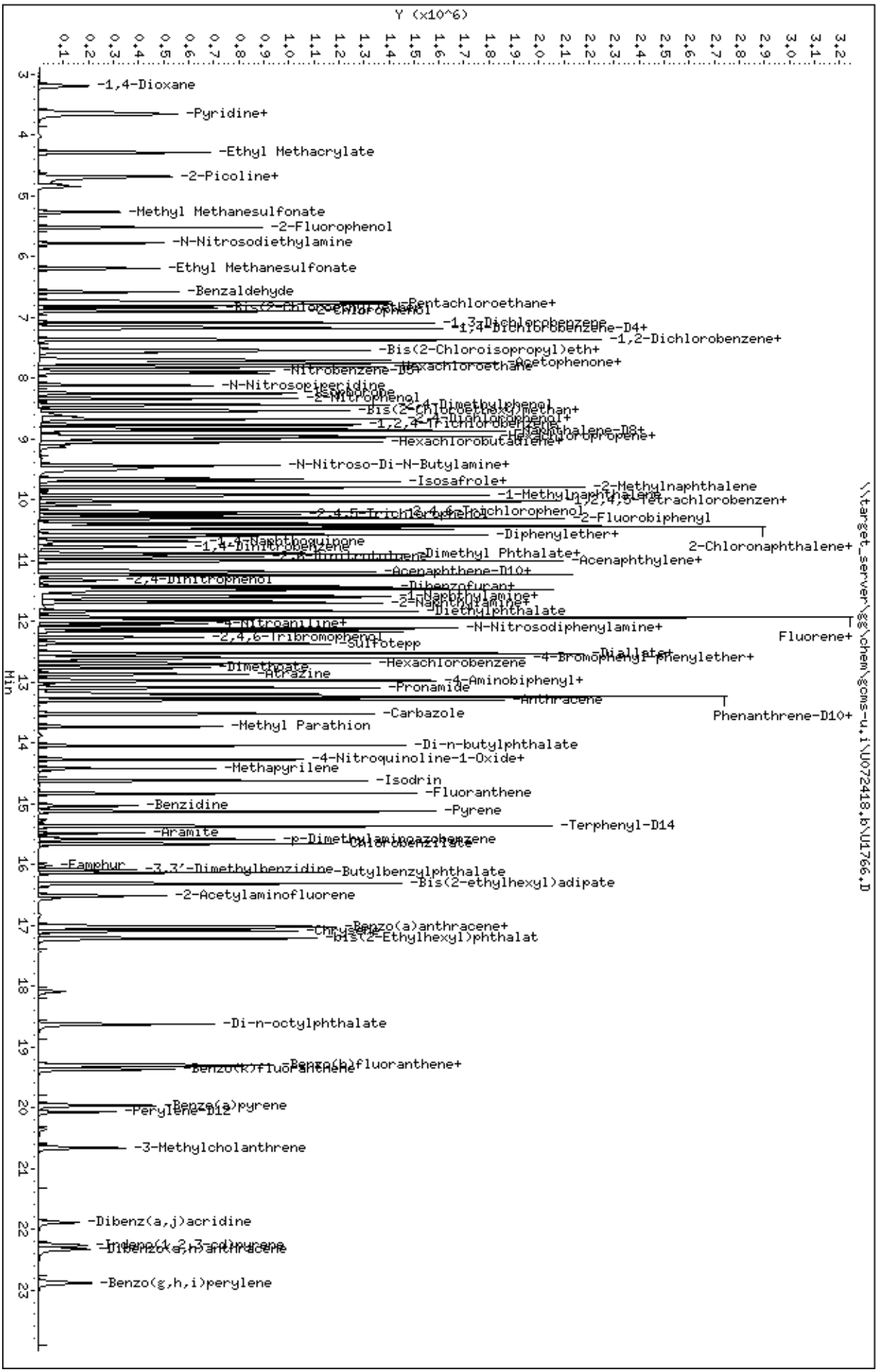
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
*	75 Acenaphthene-D10	164	11.194	11.195	(1.000)	351571	40.0000		
	78 Acenaphthene	153	11.236	11.247	(1.004)	627161	75.0000	70.8	
	74 3-Nitroaniline	138	11.173	11.185	(0.998)	198037	75.0000	76.1	
	79 2,4-Dinitrophenol	184	11.329	11.340	(1.012)	89942	75.0000	75.7	
	82 Dibenzofuran	168	11.474	11.475	(1.025)	826668	75.0000	70.7	
	80 Pentachlorobenzene	250	11.432	11.433	(1.021)	270156	75.0000	73.6	
	85 1-Naphthylamine	143	11.588	11.588	(1.035)	650277	75.0000	74.0	
	87 2,4-Dinitrotoluene	165	11.494	11.506	(1.027)	226409	75.0000	74.6	
	83 2,3,5,6-Tetrachlorophenol	232	11.608	11.619	(1.037)	172366	75.0000	76.9	
	89 2-Naphthylamine	143	11.701	11.713	(1.045)	611854	75.0000	77.7	
	81 4-Nitrophenol	109	11.463	11.475	(1.024)	90469	75.0000	73.6(H)	
	84 2,3,4,6-Tetrachlorophenol	232	11.670	11.671	(1.043)	178048	75.0000	76.7	
	88 Fluorene	166	11.939	11.940	(1.067)	659657	75.0000	71.7	
	86 Diethylphthalate	149	11.836	11.847	(1.057)	726338	75.0000	72.1	
	90 4-Chlorophenyl-phenylether	204	11.950	11.951	(1.067)	308866	75.0000	70.9	
	91 O,O-diethyl-o-2-pyrazinylphos	107	11.939	11.951	(1.067)	100349	75.0000	70.5	
	94 5-Nitro-O-Toluidine	152	11.981	11.992	(1.070)	205356	75.0000	76.1(Q)	
	97 4-Nitroaniline	138	12.012	12.023	(1.073)	175719	75.0000	76.1	
	92 4,6-Dinitro-2-Methylphenol	198	12.043	12.065	(0.913)	125162	75.0000	75.9	
	93 N-Nitrosodiphenylamine	169	12.115	12.127	(0.918)	613565	75.0000	74.3	
	98 1,2-Diphenylhydrazine	77	12.167	12.168	(0.922)	684236	75.0000	74.4	
	99 Azobenzene	77	12.167	12.168	(0.922)	684236	75.0000	74.4	
$	95 2,4,6-Tribromophenol	330	12.271	12.272	(1.096)	95500	75.0000	77.5	
	96 Sulfotepp	97	12.364	12.375	(0.937)	113538	75.0000	75.3	
	101 Diallate	86	12.519	12.530	(0.949)	245065	75.0000	72.5	
	100 4-Bromophenyl-phenylether	248	12.612	12.613	(0.956)	194562	75.0000	73.6	
	109 Phorate	75	12.529	12.541	(0.950)	448945	75.0000	70.6	
	107 1,3,5-Trinitrobenzene	213	12.540	12.551	(0.951)	59090	75.0000	75.8(Q)	
	102 Phenacetin	108	12.602	12.613	(0.955)	320360	75.0000	76.2	
	103 Hexachlorobenzene	284	12.695	12.696	(0.962)	204122	75.0000	72.8	
	112 Dimethoate	87	12.767	12.779	(0.968)	185967	75.0000	68.6	
	104 Atrazine	200	12.881	12.882	(0.976)	157216	75.0000	80.4	
	105 4-Aminobiphenyl	169	12.964	12.975	(0.983)	519218	75.0000	68.5	
	106 Pentachlorophenol	266	12.974	12.986	(0.984)	95633	75.0000	74.7	
	108 Pentachloronitrobenzene	237	12.985	12.996	(0.984)	92489	75.0000	75.1	
*	111 Phenanthrene-D10	188	13.192	13.203	(1.000)	539906	40.0000		
	110 Pronamide	173	13.088	13.100	(0.992)	329445	75.0000	74.8	
	114 Phenanthrene	178	13.233	13.234	(1.003)	873043	75.0000	71.6	
	116 Anthracene	178	13.295	13.307	(1.008)	929600	75.0000	71.4	
	115 Disulfoton	88	13.233	13.234	(1.003)	331605	75.0000	70.6	
	113 Dinoseb	211	13.244	13.256	(1.004)	118429	75.0000	73.7	
	117 Carbazole	167	13.533	13.534	(1.026)	813863	75.0000	73.0	
	119 Methyl Parathion	109	13.730	13.741	(1.041)	182075	75.0000	69.6	
	118 Di-n-butylphthalate	149	14.051	14.052	(1.065)	1100646	75.0000	71.7	
	120 4-Nitroquinoline-1-Oxide	190	14.279	14.290	(1.082)	33314	75.0000	74.7	
	122 Ethyl Parathion	291	14.279	14.279	(1.082)	61574	75.0000	75.4	
	121 Methapyrilene	97	14.423	14.424	(1.093)	196310	75.0000	72.3	
	123 Isodrin	193	14.620	14.621	(1.108)	112958	75.0000	73.2	
	124 Fluoranthene	202	14.837	14.838	(1.125)	887550	75.0000	71.1	
	125 Pyrene	202	15.127	15.139	(0.888)	875037	75.0000	77.1	
	126 Benzidine	184	15.034	15.045	(0.882)	235451	75.0000	74.4	
$	127 Terphenyl-D14	244	15.376	15.377	(0.902)	587919	75.0000	76.2	
	128 Aramite	185	15.490	15.490	(0.909)	62622	75.0000	79.7	
	129 p-Dimethylaminoazobenzene	225	15.583	15.584	(0.914)	148863	75.0000	80.5	

Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\U1766.D
Report Date: 25-Jul-2018 08:11

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
130	Chlorobenzilate	251	15.665	15.666	(0.919)	244773	75.0000	78.8	
136	3,3'-Dimethylbenzidine	212	16.090	16.091	(0.944)	226776	75.0000	72.6	
131	Butylbenzylphthalate	149	16.131	16.143	(0.947)	432945	75.0000	76.7	
132	Bis(2-ethylhexyl)adipate	129	16.318	16.318	(0.957)	382345	75.0000	80.4	
134	2-Acetylaminofluorene	181	16.514	16.525	(0.969)	198905	75.0000	77.8	
138	Benzo(a)anthracene	228	17.032	17.033	(0.999)	610297	75.0000	74.2	
* 137	Chrysene-D12	240	17.042	17.053	(1.000)	297893	40.0000		
139	Chrysene	228	17.094	17.105	(1.003)	581539	75.0000	74.6	
135	3,3'-Dichlorobenzidine	252	17.011	17.022	(0.998)	165872	75.0000	75.4	
140	bis(2-Ethylhexyl)phthalate	149	17.218	17.229	(1.010)	589604	75.0000	78.2	
143	Di-n-octylphthalate	149	18.626	18.637	(0.928)	854628	75.0000	84.2	
144	Benzo(b)fluoranthene	252	19.309	19.330	(0.962)	433137	75.0000	77.7	
145	7,12-Dimethylbenz(A)Anthracen	256	19.309	19.320	(0.962)	224618	75.0000	76.8	
147	Benzo(k)fluoranthene	252	19.371	19.382	(0.965)	439177	75.0000	74.4(H)	
148	Benzo(a)pyrene	252	19.971	19.972	(0.995)	358803	75.0000	77.9	
* 146	Perylene-D12	264	20.075	20.076	(1.000)	194915	40.0000		
149	3-Methylcholanthrene	268	20.665	20.676	(1.029)	156380	75.0000	79.3	
151	Dibenz(a,j)acridine	279	21.886	21.897	(1.090)	194027	75.0000	77.7	
150	Indeno(1,2,3-cd)pyrene	276	22.269	22.270	(1.109)	205878	75.0000	74.7	
152	Dibenzo(a,h)anthracene	278	22.331	22.342	(1.112)	221888	75.0000	82.6	
153	Benzo(g,h,i)perylene	276	22.890	22.901	(1.140)	254111	75.0000	80.9	

QC Flag Legend

Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.


Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\U1766.D
Date : 24-JUL-2018 16:56
Client ID:
Sample Info: WG232607-5
Volume Injected (uL): 1.0
Column phase: ZB5-MS
Instrument: gcms-u.i
Operator: JCG
Column diameter: 0.25
\\target_server\gg\chem\gcms-u.i\U072418.b\U1766.D
Y (x10^6)
Min
-1,4-Dioxane
-Pyridine+
-Ethyl Methacrylate
-2-Picoline+
-Methyl Methanesulfonate
-2-Fluorophenol
-N-Nitrosodiethylamine
-Ethyl Methanesulfonate
-Benzaldehyde
-Pentachloroethane+
-1,3-Dichlorobenzene
-1,4-Dichlorobenzene-D4+
-1,2-Dichlorobenzene+
-Bis(2-Chloroisopropyl)eth+
-Acetophenone+
-Hexachloroethane
-Nitrobenzene-D5+
-N-Nitrosopiperidine
-Isophorone
-2-Nitrophenol
-Bis(2-Chloroethoxy)Methan+
-2,4-Dichlorophenol+
-1,2,4-Trichlorobenzene
-Naphthalene-D8+
-Hexachlorobutadiene+
-N-Nitroso-Di-N-Butylamine+
-Isosafrole+
-2-Methylnaphthalene
-1-Methylnaphthalene
-1,2,4,5-Tetrachlorobenzen+
-2,4,5-Trichlorophenol
-2,4,6-Trichlorophenol
-2-Fluorobiphenyl
-1,3-Naphthoquinone
-Diphenylether+
-1,4-Dinitrobenzene
-2,6-Dinitrotoluene
-Dimethyl Phthalate+
2-Chloronaphthalene+
-Acenaphthylene+
-Acenaphthene-D10+
-2,4-Dinitrophenol
-Dibenzofuran+
-1-Naphthylamine+
-2-Naphthylamine+
-Diethylphthalate
-4-Nitroaniline+
-N-Nitrosodiphenylamine+
Fluorene+
-2,4,6-Tribromophenol
-Sulfotepp
-Diallate
-Hexachlorobenzene
-4-Bromophenyl-Phenylether+
-Dimethoate
-Atrazine
-4-Aminobiphenyl+
-Pronamide
-Anthracene
Phenanthrene-D10+
-Carbazole
-Methyl Parathion
-Di-n-butylphthalate
-4-Nitroquinoline-1-Oxide+
-Methapyrilene
-Isodrin
-Fluoranthene
-Benzidine
-Pyrene
-Terphenyl-D14
-Aramite
-p-Dimethylaminoazobenzene
-Chlorobenzilate
-Famphur
-3,3'-Dimethylbenzidine
-Butylbenzylphthalate
-Bis(2-ethylhexyl)adipate
-2-Acetylaminofluorene
-Benzo(a)anthracene+
-Chrysene
-Bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(k)fluoranthene
-Benzo(b)fluoranthene+
-Benzo(a)pyrene
-Perylene-D12
-3-Methylcholanthrene
-Dibenz(a,j)acridine
-Indeno(1,2,3-cd)pyrene
-Dibenzo(a,h)anthracene
-Benzo(g,h,i)perylene

Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\U1767.D
Report Date: 25-Jul-2018 08:11

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-u.i\U072418.b\U1767.D
Lab Smp Id: WG232607-6
Inj Date : 24-JUL-2018 17:28
Operator : JCG   Inst ID: gcms-u.i
Smp Info : WG232607-6
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gcms-u.i\U072418.b\U8270C51.m
Meth Date : 25-Jul-2018 07:58 gcms-u.i   Quant Type: ISTD
Cal Date : 24-JUL-2018 17:28   Cal File: U1767.D
Als bottle: 6   Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all_DOD50.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)	REVIEW CODE
	1 1,4-Dioxane	58	3.196	3.205	(0.362)	163735	100.000	91.8	
	3 Pyridine	79	3.661	3.660	(0.511)	622230	100.000	93.7	
	2 N-Nitrosodimethylamine	42	3.630	3.640	(0.507)	249436	100.000	95.3	
	4 Ethyl Methacrylate	69	4.293	4.292	(0.600)	453223	100.000	93.7	
	5 2-Picoline	93	4.676	4.685	(0.653)	626758	100.000	98.2	
	6 N-Nitrosomethylethylamine	88	4.852	4.851	(0.678)	258845	100.000	99.0	
	7 Methyl Methanesulfonate	80	5.276	5.275	(0.737)	323719	100.000	98.2	
$	8 2-Fluorophenol	112	5.524	5.523	(0.772)	558293	100.000	93.9	
	9 N-Nitrosodiethylamine	102	5.793	5.792	(0.809)	264947	100.000	99.2	
	10 Ethyl Methanesulfonate	79	6.207	6.206	(0.867)	404435	100.000	98.8	
	11 Benzaldehyde	77	6.590	6.589	(0.920)	164537	100.000	72.6	
	16 Pentachloroethane	117	6.787	6.786	(0.948)	190284	100.000	89.6	
	12 Aniline	93	6.746	6.745	(0.942)	716969	100.000	91.3	
	14 Bis(2-Chloroethyl)ether	93	6.849	6.848	(0.957)	505822	100.000	99.5	
$	13 Phenol-D6	99	6.766	6.765	(0.945)	592288	100.000	91.6	
	15 Phenol	94	6.777	6.776	(0.947)	611468	100.000	88.8	
	17 2-Chlorophenol	128	6.911	6.910	(0.965)	553938	100.000	94.8	
	18 1,3-Dichlorobenzene	146	7.087	7.086	(0.990)	593975	100.000	91.6	
*	21 1,4-Dichlorobenzene-D4	152	7.160	7.159	(1.000)	185036	40.0000		
	19 1,4-Dichlorobenzene	146	7.180	7.179	(1.003)	583000	100.000	92.4	
	20 1,2-Dichlorobenzene	146	7.377	7.376	(1.030)	517935	100.000	88.4	

Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\U1767.D
Report Date: 25-Jul-2018 08:11

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)	REVIEW CODE
	22 Benzyl alcohol	108	7.387	7.386	(1.032)	320989	100.000	94.4	
	25 Bis(2-Chloroisopropyl)ether	45	7.543	7.552	(1.053)	554459	100.000	90.8	
	26 2,2'-Oxybis(1-chloropropane)	45	7.543	7.552	(1.053)	554459	100.000	90.8	
	23 2-Methylphenol	108	7.553	7.552	(1.055)	488006	100.000	96.5	
	28 Acetophenone	105	7.708	7.707	(0.872)	679128	100.000	93.3	
	32 Hexachloroethane	117	7.822	7.821	(1.093)	246681	100.000	95.4	
	27 N-Nitrosopyrrolidine	100	7.719	7.717	(1.078)	241621	100.000	96.2	
	29 o-Toluidine	106	7.760	7.759	(1.084)	579420	100.000	85.5	
	30 N-Nitrosomorpholine	56	7.739	7.738	(1.081)	245942	100.000	91.5	
	31 N-Nitroso-di-n-propylamine	70	7.750	7.749	(1.082)	273298	100.000	85.9	
	24 3&4-Methylphenol	108	7.770	7.769	(1.085)	492954	100.000	91.9	
$	33 Nitrobenzene-D5	82	7.895	7.904	(0.893)	559348	100.000	96.3	
	34 Nitrobenzene	77	7.926	7.924	(0.897)	493544	100.000	93.2	
	35 N-Nitrosopiperidine	114	8.122	8.132	(0.919)	274662	100.000	97.9	
	36 Isophorone	82	8.257	8.256	(0.934)	936328	100.000	95.7	
	37 2-Nitrophenol	139	8.340	8.339	(0.944)	309865	100.000	95.9	
	38 2,4-Dimethylphenol	107	8.453	8.452	(0.957)	486029	100.000	92.0	
	40 Bis(2-Chloroethoxy)methane	93	8.557	8.556	(0.968)	680861	100.000	94.7	
	39 O,O,O-Triethylphosphorothioat	198	8.536	8.535	(0.966)	220699	100.000	93.3	
	42 2,4-Dichlorophenol	162	8.681	8.680	(0.982)	425851	100.000	92.7	
	43 1,2,4-Trichlorobenzene	180	8.774	8.773	(0.993)	458866	100.000	92.3	
*	44 Naphthalene-D8	136	8.836	8.835	(1.000)	685513	40.0000		
	41 Benzoic acid	122	8.702	8.701	(0.985)	255579	100.000	105(M)	M9
	45 Naphthalene	128	8.867	8.866	(1.004)	1270490	100.000	88.3	
	50 A,A-Dimethylphenethylamine	58	9.188	9.187	(1.040)	1297306	100.000	104(TM)	M9
	48 Hexachloropropene	213	8.992	8.991	(1.018)	314582	100.000	93.3	
	47 2,6-Dichlorophenol	162	8.971	8.980	(1.015)	374094	100.000	89.7	
	46 4-Chloroaniline	127	8.961	8.970	(1.014)	530489	100.000	87.5	
	49 Hexachlorobutadiene	225	9.064	9.063	(1.026)	252881	100.000	91.0	
	51 N-Nitroso-Di-N-Butylamine	84	9.437	9.446	(1.068)	325233	100.000	89.2	
	53 Caprolactam	113	9.509	9.508	(1.076)	169908	100.000	100(M)	M9
	52 p-Phenylenediamine	108	9.530	9.477	(1.078)	266800	100.000	77.0(M)	M9
	55 Isosafrole	162	9.706	9.705	(1.098)	401045	100.000	94.6	
	57 2-Methylnaphthalene	142	9.799	9.798	(1.109)	916994	100.000	88.5	
	54 4-Chloro-3-Methylphenol	107	9.664	9.663	(1.094)	410562	100.000	95.4	
	58 1-Methylnaphthalene	142	9.934	9.932	(1.124)	911701	100.000	91.0	
	60 1,2,4,5-Tetrachlorobenzene	216	10.037	10.036	(0.896)	402264	100.000	91.6	
	59 Hexachlorocyclopentadiene	237	10.027	10.036	(0.896)	235642	100.000	99.7	
	61 2,4,6-Trichlorophenol	196	10.203	10.202	(0.911)	295965	100.000	96.2	
$	63 2-Fluorobiphenyl	172	10.306	10.305	(0.921)	1000907	100.000	91.8	
	62 2,4,5-Trichlorophenol	196	10.254	10.264	(0.916)	328133	100.000	99.2	
	56 Safrole	104	9.706	9.705	(0.867)	216971	100.000	96.6	
	65 2-Chloronaphthalene	127	10.451	10.450	(0.933)	361923	100.000	87.0(Q)	
	64 1,1'-Biphenyl	154	10.441	10.440	(0.933)	929388	100.000	95.9	
	66 1-Chloronaphthalene	127	10.482	10.481	(0.936)	396445	100.000	110(Q)	
	67 Diphenylether	170	10.575	10.584	(0.945)	611641	100.000	92.1	
	68 2-Nitroaniline	65	10.606	10.616	(0.947)	307177	100.000	104	
	69 1,4-Naphthoquinone	158	10.689	10.688	(0.955)	213754	100.000	98.9	
	71 1,4-Dinitrobenzene	75	10.793	10.791	(0.964)	178435	100.000	102	
	76 Acenaphthylene	152	11.000	10.998	(0.982)	1272087	100.000	89.4	
	70 Dimethyl Phthalate	163	10.896	10.895	(0.973)	971839	100.000	93.9	
	73 1,3-Dinitrobenzene	168	10.917	10.916	(0.975)	177507	100.000	98.3	
	72 2,6-Dinitrotoluene	165	10.948	10.947	(0.978)	238121	100.000	93.3	
	77 1,2-Dinitrobenzene	50	11.020	11.019	(0.984)	137917	100.000	93.0	



1:07 pm, Aug 14, 2018

Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\U1767.D
Report Date: 25-Jul-2018 08:11

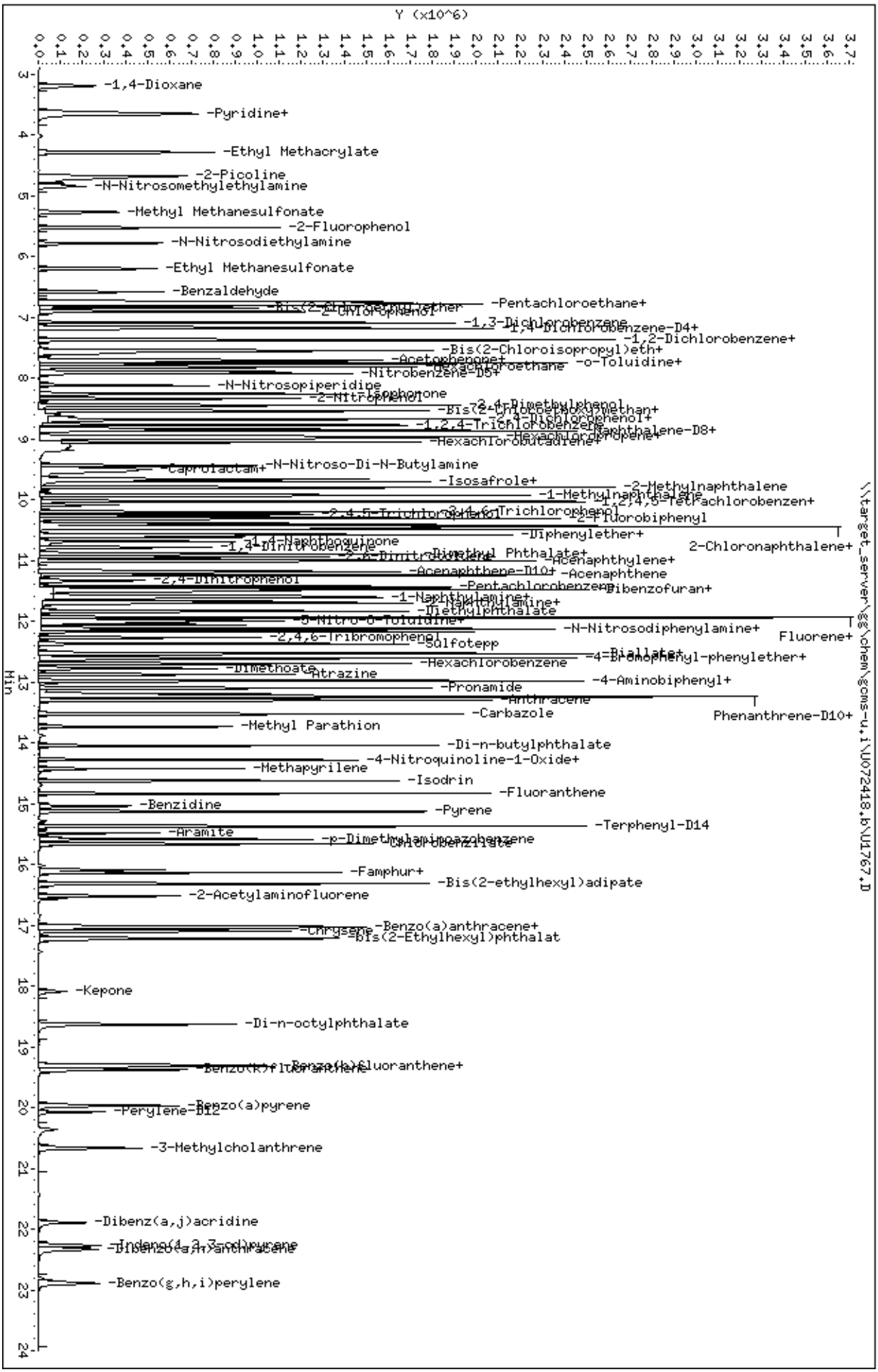
		QUANT SIG					AMOUNTS		
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
*	75 Acenaphthene-D10	164	11.196	11.195	(1.000)	364109	40.0000		
	78 Acenaphthene	153	11.238	11.247	(1.004)	843374	100.000	91.9	
	74 3-Nitroaniline	138	11.186	11.185	(0.999)	264073	100.000	98.0	
	79 2,4-Dinitrophenol	184	11.331	11.340	(1.012)	130579	100.000	101	
	82 Dibenzofuran	168	11.476	11.475	(1.025)	1059892	100.000	87.5	
	80 Pentachlorobenzene	250	11.434	11.433	(1.021)	353018	100.000	92.8	
	85 1-Naphthylamine	143	11.590	11.588	(1.035)	851331	100.000	93.6	
	87 2,4-Dinitrotoluene	165	11.507	11.506	(1.028)	294229	100.000	93.6	
	83 2,3,5,6-Tetrachlorophenol	232	11.610	11.619	(1.037)	225940	100.000	97.4	
	89 2-Naphthylamine	143	11.703	11.713	(1.045)	767397	100.000	94.1	
	81 4-Nitrophenol	109	11.476	11.475	(1.025)	113266	100.000	89.0(QH)	
	84 2,3,4,6-Tetrachlorophenol	232	11.672	11.671	(1.043)	232863	100.000	96.8	
	88 Fluorene	166	11.941	11.940	(1.067)	843516	100.000	88.5	
	86 Diethylphthalate	149	11.838	11.847	(1.057)	952186	100.000	91.2	
	90 4-Chlorophenyl-phenylether	204	11.952	11.951	(1.067)	389427	100.000	86.3	
	91 O,O-diethyl-o-2-pyrazinylphos	107	11.952	11.951	(1.067)	128517	100.000	87.2	
	94 5-Nitro-O-Toluidine	152	11.993	11.992	(1.071)	263503	100.000	94.2	
	97 4-Nitroaniline	138	12.024	12.023	(1.074)	232558	100.000	97.3	
	92 4,6-Dinitro-2-Methylphenol	198	12.055	12.065	(0.914)	171232	100.000	101	
	93 N-Nitrosodiphenylamine	169	12.128	12.127	(0.919)	781994	100.000	92.3	
	98 1,2-Diphenylhydrazine	77	12.169	12.168	(0.922)	863731	100.000	91.6	
	99 Azobenzene	77	12.169	12.168	(0.922)	863731	100.000	91.6	
$	95 2,4,6-Tribromophenol	330	12.273	12.272	(1.096)	124214	100.000	97.3	
	96 Sulfotepp	97	12.376	12.375	(0.938)	145266	100.000	94.0	
	101 Diallate	86	12.531	12.530	(0.950)	314966	100.000	90.9	
	100 4-Bromophenyl-phenylether	248	12.614	12.613	(0.956)	247575	100.000	91.3	
	109 Phorate	75	12.531	12.541	(0.950)	582717	100.000	89.4	
	107 1,3,5-Trinitrobenzene	213	12.552	12.551	(0.951)	80492	100.000	101(Q)	
	102 Phenacetin	108	12.614	12.613	(0.956)	393503	100.000	91.2	
	103 Hexachlorobenzene	284	12.697	12.696	(0.962)	266807	100.000	92.8	
	112 Dimethoate	87	12.780	12.779	(0.969)	229692	100.000	82.7	
	104 Atrazine	200	12.883	12.882	(0.976)	175169	100.000	90.8	
	105 4-Aminobiphenyl	169	12.976	12.975	(0.984)	632100	100.000	81.4	
	106 Pentachlorophenol	266	12.987	12.986	(0.984)	127055	100.000	99.6	
	108 Pentachloronitrobenzene	237	12.997	12.996	(0.985)	117467	100.000	93.1	
*	111 Phenanthrene-D10	188	13.194	13.203	(1.000)	553524	40.0000		
	110 Pronamide	173	13.101	13.100	(0.993)	411878	100.000	91.3	
	114 Phenanthrene	178	13.235	13.234	(1.003)	1078146	100.000	86.3	
	116 Anthracene	178	13.308	13.307	(1.009)	1192885	100.000	89.4	
	115 Disulfoton	88	13.246	13.234	(1.004)	413537	100.000	85.9	
	113 Dinoseb	211	13.256	13.256	(1.005)	182242	100.000	111(A)	
	117 Carbazole	167	13.535	13.534	(1.026)	1032428	100.000	90.4	
	119 Methyl Parathion	109	13.732	13.741	(1.041)	228224	100.000	85.2	
	118 Di-n-butylphthalate	149	14.053	14.052	(1.065)	1356491	100.000	86.2	
	120 4-Nitroquinoline-1-Oxide	190	14.281	14.290	(1.082)	44774	100.000	96.7	
	122 Ethyl Parathion	291	14.281	14.279	(1.082)	78731	100.000	94.0	
	121 Methapyrilene	97	14.425	14.424	(1.093)	249338	100.000	96.0	
	123 Isodrin	193	14.622	14.621	(1.108)	144077	100.000	91.0	
	124 Fluoranthene	202	14.839	14.838	(1.125)	1108649	100.000	86.6	
	125 Pyrene	202	15.140	15.139	(0.888)	1114639	100.000	99.3	
	126 Benzidine	184	15.046	15.045	(0.882)	303247	100.000	96.9	
$	127 Terphenyl-D14	244	15.378	15.377	(0.902)	732624	100.000	96.0	
	128 Aramite	185	15.492	15.490	(0.908)	78778	100.000	101	
	129 p-Dimethylaminoazobenzene	225	15.585	15.584	(0.914)	191833	100.000	105	

Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\U1767.D
Report Date: 25-Jul-2018 08:11

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
130	Chlorobenzilate	251	15.667	15.666	(0.919)	307327	100.000	100	
136	3,3'-Dimethylbenzidine	212	16.092	16.091	(0.944)	314452	100.000	102	
131	Butylbenzylphthalate	149	16.133	16.143	(0.946)	548012	100.000	98.2	
132	Bis(2-ethylhexyl)adipate	129	16.320	16.318	(0.957)	485643	100.000	103	
134	2-Acetylaminofluorene	181	16.516	16.525	(0.968)	268606	100.000	106	
138	Benzo(a)anthracene	228	17.034	17.033	(0.999)	781231	100.000	96.1	
* 137	Chrysene-D12	240	17.054	17.053	(1.000)	294537	40.0000		
139	Chrysene	228	17.106	17.105	(1.003)	752457	100.000	97.6	
135	3,3'-Dichlorobenzidine	252	17.023	17.022	(0.998)	217972	100.000	100	
140	bis(2-Ethylhexyl)phthalate	149	17.220	17.229	(1.010)	745992	100.000	100	
143	Di-n-octylphthalate	149	18.638	18.637	(0.928)	1104383	100.000	110	
144	Benzo(b)fluoranthene	252	19.321	19.330	(0.962)	549524	100.000	99.8	
145	7,12-Dimethylbenz(A)Anthracen	256	19.321	19.320	(0.962)	290752	100.000	101	
147	Benzo(k)fluoranthene	252	19.383	19.382	(0.965)	585155	100.000	100(H)	
148	Benzo(a)pyrene	252	19.973	19.972	(0.995)	477952	100.000	105	
* 146	Perylene-D12	264	20.077	20.076	(1.000)	192508	40.0000		
149	3-Methylcholanthrene	268	20.667	20.676	(1.029)	203712	100.000	105	
151	Dibenz(a,j)acridine	279	21.898	21.897	(1.091)	252527	100.000	102	
150	Indeno(1,2,3-cd)pyrene	276	22.271	22.270	(1.109)	281270	100.000	102	
152	Dibenzo(a,h)anthracene	278	22.333	22.342	(1.112)	287407	100.000	108	
153	Benzo(g,h,i)perylene	276	22.892	22.901	(1.140)	317657	100.000	102	

QC Flag Legend

T - Target compound detected outside RT window.
A - Target compound detected but, quantitated amount exceeded maximum amount.
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.


Data File: \\target_server\gg\chem\gcms-u,i\U072418,b\U1767,D
Date : 24-JUL-2018 17:28
Client ID:
Sample Info: WG232607-6
Volume Injected (uL): 1.0
Column phase: ZB5-MS
Instrument: gcms-u,i
Operator: JCG
Column diameter: 0.25
\\target_server\gg\chem\gcms-u,i\U072418,b\U1767,D
Y (x10^6)
Min
-1,4-Dioxane
-Pyridine+
-Ethyl Methacrylate
-2-Picoline
-N-Nitrosomethylethylamine
-Methyl Methanesulfonate
-2-Fluorophenol
-N-Nitrosodiethylamine
-Ethyl Methanesulfonate
-Benzaldehyde
-Pentachloroethane+
-1,3-Dichlorobenzene
-1,2-Dichlorobenzene+
-Bis(2-Chloroisopropyl)eth+
-o-Toluidine+
-Nitrobenzene-D5+
-N-Nitrosopiperidine
-Isophorone
-2,4-Dimethylphenol
-Bis(2-Chloroethoxy)Methan+
-1,2,4-Trichlorobenzene
-Naphthalene-D8+
-Hexachlorobutadiene+
-Caprolactam+
-N-Nitroso-Di-N-Butylamine
-Isosafrole+
-2-Methylnaphthalene
-1-Methylnaphthalene
-1,2,4,5-Tetrachlorobenzen+
-2-Fluorobiphenyl
-Diphenylether+
2-Chloronaphthalene+
-1,4-Naphthoquinone
-Dimethyl Phthalate+
-Acenaphthylene+
-Acenaphthene-D10+
-Acenaphthene
-2,4-Dinitrophenol
-Pentachlorobenzene
Dibenzofuran+
-1-Naphthylamine+
-2-Naphthylamine+
-Diethylphthalate
-5-Nitro-o-Toluidine+
-N-Nitrosodiphenylamine+
Fluorene+
-2,4,6-Tribromophenol
-Sulfotepp
-4-Bromophenyl-phenylether+
-Hexachlorobenzene
-Dimethoate
-Atrazine
-4-Aminobiphenyl+
-Pronamide
-Anthracene
Phenanthrene-D10+
-Carbazole
-Methyl Parathion
-Di-n-butylphthalate
-4-Nitroquinoline-1-Oxide+
-Methapyrilene
-Isodrin
-Fluoranthene
-Benzidine
-Pyrene
-Terphenyl-D14
-Aramite
-p-Dimethylaminoazobenzene
-Famphur+
-Bis(2-ethylhexyl)adipate
-2-Acetylaminofluorene
-Benzo(a)anthracene+
-Bis(2-Ethylhexyl)phthalat
-Kepone
-Di-n-octylphthalate
-Benzo(b)fluoranthene+
-Benzo(a)pyrene
-Perylene-D12
-3-Methylcholanthrene
-Dibenz(a,j)acridine
-Benzo(g,h,i)perylene

Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\U1768.D
Report Date: 25-Jul-2018 08:11

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-u.i\U072418.b\U1768.D
Lab Smp Id: WG232607-7
Inj Date : 24-JUL-2018 18:01
Operator : JCG   Inst ID: gcms-u.i
Smp Info : WG232607-7
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gcms-u.i\U072418.b\U8270C51.m
Meth Date : 25-Jul-2018 07:58 gcms-u.i   Quant Type: ISTD
Cal Date : 24-JUL-2018 18:01   Cal File: U1768.D
Als bottle: 7   Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all_DOD50.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	1 1,4-Dioxane	58	3.205	3.205	(0.363)	181887	125.000	127(A)	
	3 Pyridine	79	3.660	3.660	(0.511)	670065	125.000	123	
	2 N-Nitrosodimethylamine	42	3.640	3.640	(0.508)	264226	125.000	123	
	4 Ethyl Methacrylate	69	4.292	4.292	(0.600)	485856	125.000	122	
	5 2-Picoline	93	4.685	4.685	(0.654)	655509	125.000	125(A)	
	6 N-Nitrosomethylethylamine	88	4.851	4.851	(0.678)	267936	125.000	125	
	7 Methyl Methanesulfonate	80	5.275	5.275	(0.737)	327674	125.000	121	
$	8 2-Fluorophenol	112	5.523	5.523	(0.772)	586520	125.000	120	
	9 N-Nitrosodiethylamine	102	5.792	5.792	(0.809)	268124	125.000	122	
	10 Ethyl Methanesulfonate	79	6.206	6.206	(0.867)	406090	125.000	121	
	11 Benzaldehyde	77	6.589	6.589	(0.920)	197117	125.000	106	
	16 Pentachloroethane	117	6.786	6.786	(0.948)	198071	125.000	114	
	12 Aniline	93	6.745	6.745	(0.942)	754466	125.000	117	
	14 Bis(2-Chloroethyl)ether	93	6.848	6.848	(0.957)	477901	125.000	114	
$	13 Phenol-D6	99	6.765	6.765	(0.945)	607306	125.000	114	
	15 Phenol	94	6.776	6.776	(0.947)	632207	125.000	112	
	17 2-Chlorophenol	128	6.910	6.910	(0.965)	569943	125.000	119	
	18 1,3-Dichlorobenzene	146	7.086	7.086	(0.990)	617426	125.000	116	
*	21 1,4-Dichlorobenzene-D4	152	7.159	7.159	(1.000)	151782	40.0000		
	19 1,4-Dichlorobenzene	146	7.179	7.179	(1.003)	596037	125.000	115	
	20 1,2-Dichlorobenzene	146	7.376	7.376	(1.030)	534795	125.000	111	

Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\U1768.D
Report Date: 25-Jul-2018 08:11

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	22 Benzyl alcohol	108	7.386	7.386	(1.032)	335825	125.000	120	
	25 Bis(2-Chloroisopropyl)ether	45	7.552	7.552	(1.055)	541684	125.000	108	
	26 2,2'-Oxybis(1-chloropropane)	45	7.552	7.552	(1.055)	541684	125.000	108	
	23 2-Methylphenol	108	7.552	7.552	(1.055)	504210	125.000	122	
	28 Acetophenone	105	7.707	7.707	(0.872)	675207	125.000	115	
	32 Hexachloroethane	117	7.821	7.821	(1.093)	244978	125.000	115	
	27 N-Nitrosopyrrolidine	100	7.717	7.717	(1.078)	239001	125.000	116	
	29 o-Toluidine	106	7.759	7.759	(1.084)	608978	125.000	110	
	30 N-Nitrosomorpholine	56	7.738	7.738	(1.081)	242652	125.000	110	
	31 N-Nitroso-di-n-propylamine	70	7.749	7.749	(1.082)	270848	125.000	104	
	24 3&4-Methylphenol	108	7.769	7.769	(1.085)	501090	125.000	114	
$	33 Nitrobenzene-D5	82	7.904	7.904	(0.895)	549603	125.000	118	
	34 Nitrobenzene	77	7.924	7.924	(0.897)	480206	125.000	113	
	35 N-Nitrosopiperidine	114	8.132	8.132	(0.920)	273368	125.000	121	
	36 Isophorone	82	8.256	8.256	(0.934)	920061	125.000	117	
	37 2-Nitrophenol	139	8.339	8.339	(0.944)	315562	125.000	122	
	38 2,4-Dimethylphenol	107	8.452	8.452	(0.957)	494480	125.000	116	
	40 Bis(2-Chloroethoxy)methane	93	8.556	8.556	(0.968)	668266	125.000	116	
	39 O,O,O-Triethylphosphorothioat	198	8.535	8.535	(0.966)	216905	125.000	114	
	42 2,4-Dichlorophenol	162	8.680	8.680	(0.982)	409958	125.000	111	
	43 1,2,4-Trichlorobenzene	180	8.773	8.773	(0.993)	451823	125.000	113	
*	44 Naphthalene-D8	136	8.835	8.835	(1.000)	551099	40.0000		
	41 Benzoic acid	122	8.701	8.701	(0.985)	240267	125.000	122(M)	M9
	45 Naphthalene	128	8.866	8.866	(1.004)	1231529	125.000	106	
	50 A,A-Dimethylphenethylamine	58	9.187	9.187	(1.040)	1274845	125.000	127(AM)	M9
	48 Hexachloropropene	213	8.991	8.991	(1.018)	313131	125.000	115	
	47 2,6-Dichlorophenol	162	8.980	8.980	(1.016)	376728	125.000	112	
	46 4-Chloroaniline	127	8.970	8.970	(1.015)	574438	125.000	118	
	49 Hexachlorobutadiene	225	9.063	9.063	(1.026)	252886	125.000	113	
	51 N-Nitroso-Di-N-Butylamine	84	9.446	9.446	(1.069)	320038	125.000	109	
	53 Caprolactam	113	9.508	9.508	(1.076)	171637	125.000	126(AM)	M9
	52 p-Phenylenediamine	108	9.477	9.477	(1.073)	336787	125.000	121(M)	M9
	55 Isosafrole	162	9.705	9.705	(1.098)	385650	125.000	113	
	57 2-Methylnaphthalene	142	9.798	9.798	(1.109)	923058	125.000	111	
	54 4-Chloro-3-Methylphenol	107	9.663	9.663	(1.094)	415098	125.000	120	
	58 1-Methylnaphthalene	142	9.932	9.932	(1.124)	896858	125.000	111	
	60 1,2,4,5-Tetrachlorobenzene	216	10.036	10.036	(0.896)	388023	125.000	108	
	59 Hexachlorocyclopentadiene	237	10.036	10.036	(0.896)	235416	125.000	122	
	61 2,4,6-Trichlorophenol	196	10.202	10.202	(0.911)	292286	125.000	116	
$	63 2-Fluorobiphenyl	172	10.305	10.305	(0.920)	990807	125.000	111	
	62 2,4,5-Trichlorophenol	196	10.264	10.264	(0.917)	329229	125.000	122	
	56 Safrole	104	9.705	9.705	(0.867)	212137	125.000	116	
	65 2-Chloronaphthalene	127	10.450	10.450	(0.933)	447903	125.000	132(AQ)	
	64 1,1'-Biphenyl	154	10.440	10.440	(0.933)	914952	125.000	126(A)	
	66 1-Chloronaphthalene	127	10.481	10.481	(0.936)	301248	125.000	102(Q)	
	67 Diphenylether	170	10.584	10.584	(0.945)	612077	125.000	113	
	68 2-Nitroaniline	65	10.616	10.616	(0.948)	313546	125.000	130(A)	
	69 1,4-Naphthoquinone	158	10.688	10.688	(0.955)	200243	125.000	125(A)	
	71 1,4-Dinitrobenzene	75	10.791	10.791	(0.964)	186660	125.000	130(A)	
	76 Acenaphthylene	152	10.998	10.998	(0.982)	1301537	125.000	112	
	70 Dimethyl Phthalate	163	10.895	10.895	(0.973)	985030	125.000	116	
	73 1,3-Dinitrobenzene	168	10.916	10.916	(0.975)	184919	125.000	125(A)	
	72 2,6-Dinitrotoluene	165	10.947	10.947	(0.978)	253781	125.000	122	
	77 1,2-Dinitrobenzene	50	11.019	11.019	(0.984)	147104	125.000	121	



1:07 pm, Aug 14, 2018

Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\U1768.D
Report Date: 25-Jul-2018 08:11

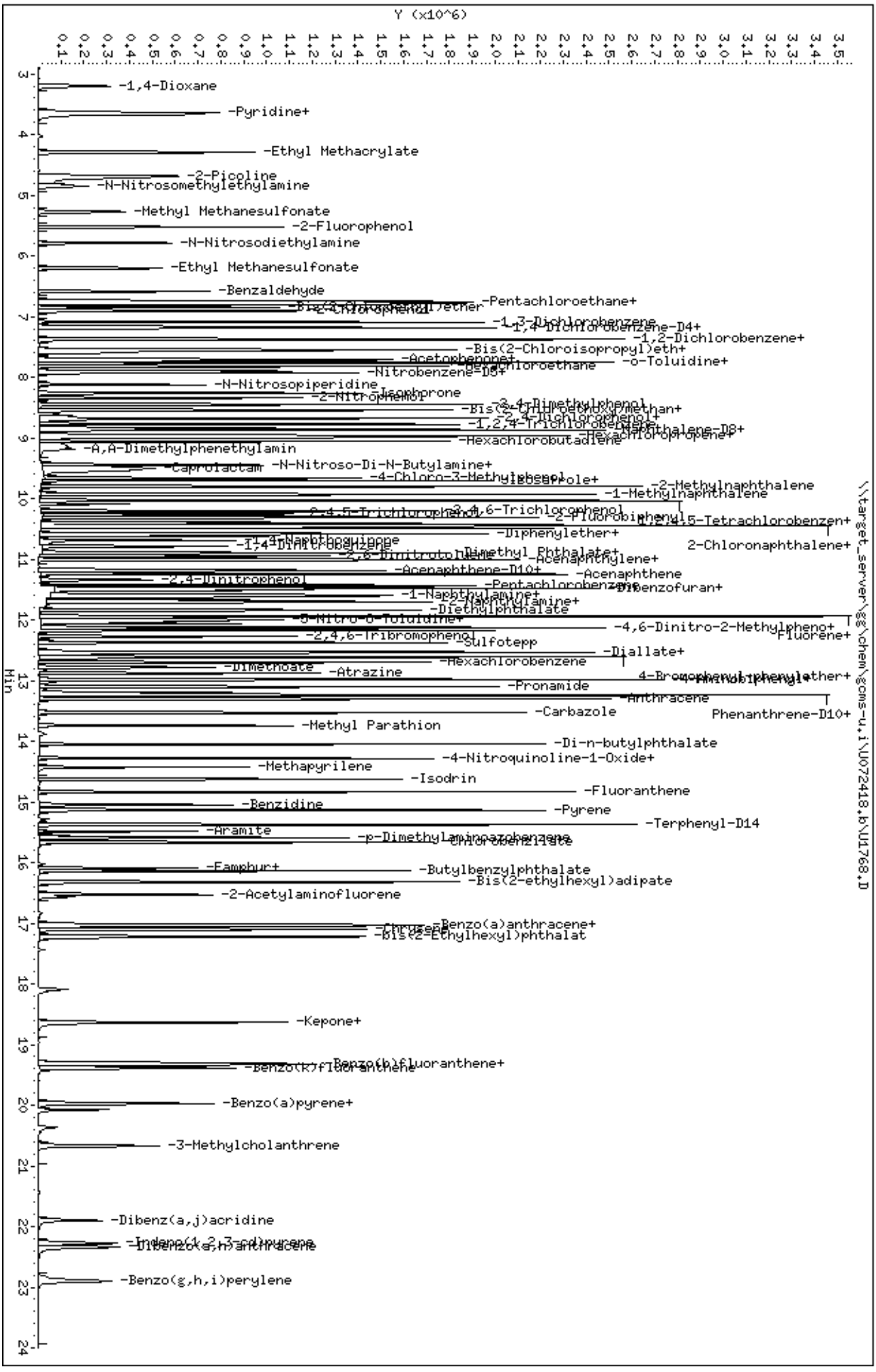
		QUANT SIG					AMOUNTS		
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
*	75 Acenaphthene-D10	164	11.195	11.195	(1.000)	297395	40.0000		
	78 Acenaphthene	153	11.247	11.247	(1.005)	850053	125.000	113	
	74 3-Nitroaniline	138	11.185	11.185	(0.999)	274970	125.000	125	
	79 2,4-Dinitrophenol	184	11.340	11.340	(1.013)	138171	125.000	124	
	82 Dibenzofuran	168	11.475	11.475	(1.025)	1107015	125.000	112	
	80 Pentachlorobenzene	250	11.433	11.433	(1.021)	360356	125.000	116	
	85 1-Naphthylamine	143	11.588	11.588	(1.035)	926110	125.000	125	
	87 2,4-Dinitrotoluene	165	11.506	11.506	(1.028)	326601	125.000	127(A)	
	83 2,3,5,6-Tetrachlorophenol	232	11.619	11.619	(1.038)	235939	125.000	124	
	89 2-Naphthylamine	143	11.713	11.713	(1.046)	864325	125.000	130(A)	
	81 4-Nitrophenol	109	11.475	11.475	(1.025)	125463	125.000	121(QH)	
	84 2,3,4,6-Tetrachlorophenol	232	11.671	11.671	(1.043)	244674	125.000	124	
	88 Fluorene	166	11.940	11.940	(1.067)	840496	125.000	108	
	86 Diethylphthalate	149	11.847	11.847	(1.058)	1004101	125.000	118	
	90 4-Chlorophenyl-phenylether	204	11.951	11.951	(1.067)	398675	125.000	108	
	91 O,O-diethyl-o-2-pyrazinylphos	107	11.951	11.951	(1.067)	136274	125.000	113	
	94 5-Nitro-O-Toluidine	152	11.992	11.992	(1.071)	292564	125.000	128(A)	
	97 4-Nitroaniline	138	12.023	12.023	(1.074)	250052	125.000	128(A)	
	92 4,6-Dinitro-2-Methylphenol	198	12.065	12.065	(0.914)	186494	125.000	124	
	93 N-Nitrosodiphenylamine	169	12.127	12.127	(0.918)	795987	125.000	106	
	98 1,2-Diphenylhydrazine	77	12.168	12.168	(0.922)	873162	125.000	105	
	99 Azobenzene	77	12.168	12.168	(0.922)	873162	125.000	105	
$	95 2,4,6-Tribromophenol	330	12.272	12.272	(1.096)	131684	125.000	126(A)	
	96 Sulfotepp	97	12.375	12.375	(0.937)	150996	125.000	110	
	101 Diallate	86	12.530	12.530	(0.949)	331197	125.000	108	
	100 4-Bromophenyl-phenylether	248	12.613	12.613	(0.955)	257027	125.000	107	
	109 Phorate	75	12.541	12.541	(0.950)	656519	125.000	114	
	107 1,3,5-Trinitrobenzene	213	12.551	12.551	(0.951)	94161	125.000	133(AQ)	
	102 Phenacetin	108	12.613	12.613	(0.955)	435681	125.000	114	
	103 Hexachlorobenzene	284	12.696	12.696	(0.962)	284878	125.000	112	
	112 Dimethoate	87	12.779	12.779	(0.968)	261331	125.000	106	
	104 Atrazine	200	12.882	12.882	(0.976)	194040	125.000	127(A)	
	105 4-Aminobiphenyl	169	12.975	12.975	(0.983)	743803	125.000	108	
	106 Pentachlorophenol	266	12.986	12.986	(0.984)	136444	125.000	125	
	108 Pentachloronitrobenzene	237	12.996	12.996	(0.984)	125174	125.000	112	
*	111 Phenanthrene-D10	188	13.203	13.203	(1.000)	488978	40.0000		
	110 Pronamide	173	13.100	13.100	(0.992)	449648	125.000	113	
	114 Phenanthrene	178	13.234	13.234	(1.002)	1130374	125.000	102	
	116 Anthracene	178	13.307	13.307	(1.008)	1254387	125.000	106	
	115 Disulfoton	88	13.234	13.234	(1.002)	440147	125.000	103	
	117 Carbazole	167	13.534	13.534	(1.025)	1114676	125.000	110	
	119 Methyl Parathion	109	13.741	13.741	(1.041)	257196	125.000	109	
	118 Di-n-butylphthalate	149	14.052	14.052	(1.064)	1430236	125.000	103	
	120 4-Nitroquinoline-1-Oxide	190	14.290	14.290	(1.082)	52668	125.000	128(A)	
	122 Ethyl Parathion	291	14.279	14.279	(1.082)	85470	125.000	116	
	121 Methapyrilene	97	14.424	14.424	(1.092)	271025	125.000	128(A)	
	123 Isodrin	193	14.621	14.621	(1.107)	158736	125.000	114	
	124 Fluoranthene	202	14.838	14.838	(1.124)	1195429	125.000	106	
	125 Pyrene	202	15.139	15.139	(0.888)	1199676	125.000	111	
	126 Benzidine	184	15.045	15.045	(0.882)	443687	125.000	147(A)	
$	127 Terphenyl-D14	244	15.377	15.377	(0.902)	832766	125.000	113	
	128 Aramite	185	15.490	15.490	(0.908)	88079	125.000	117	
	129 p-Dimethylaminoazobenzene	225	15.584	15.584	(0.914)	218585	125.000	124	
	130 Chlorobenzilate	251	15.666	15.666	(0.919)	345536	125.000	116	

Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\U1768.D
Report Date: 25-Jul-2018 08:11

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
136 3,3'-Dimethylbenzidine	212	16.091	16.091	(0.944)	373571	125.000	125(A)	
131 Butylbenzylphthalate	149	16.143	16.143	(0.947)	609593	125.000	113	
132 Bis(2-ethylhexyl)adipate	129	16.318	16.318	(0.957)	544857	125.000	120	
134 2-Acetylaminofluorene	181	16.525	16.525	(0.969)	327717	125.000	134(A)	
138 Benzo(a)anthracene	228	17.033	17.033	(0.999)	906005	125.000	115	
* 137 Chrysene-D12	240	17.053	17.053	(1.000)	284344	40.0000		
139 Chrysene	228	17.105	17.105	(1.003)	823326	125.000	111	
135 3,3'-Dichlorobenzidine	252	17.022	17.022	(0.998)	262167	125.000	125	
140 bis(2-Ethylhexyl)phthalate	149	17.229	17.229	(1.010)	840528	125.000	117	
143 Di-n-octylphthalate	149	18.637	18.637	(0.928)	1269499	125.000	126(A)	
144 Benzo(b)fluoranthene	252	19.330	19.330	(0.963)	676817	125.000	122	
145 7,12-Dimethylbenz(A)Anthracen	256	19.320	19.320	(0.962)	347438	125.000	120	
147 Benzo(k)fluoranthene	252	19.382	19.382	(0.965)	684645	125.000	117(H)	
148 Benzo(a)pyrene	252	19.972	19.972	(0.995)	577541	125.000	126(A)	
* 146 Perylene-D12	264	20.076	20.076	(1.000)	193447	40.0000		
149 3-Methylcholanthrene	268	20.676	20.676	(1.030)	244384	125.000	125	
151 Dibenz(a,j)acridine	279	21.897	21.897	(1.091)	304605	125.000	122	
150 Indeno(1,2,3-cd)pyrene	276	22.270	22.270	(1.109)	340690	125.000	123	
152 Dibenzo(a,h)anthracene	278	22.342	22.342	(1.113)	357453	125.000	134(A)	
153 Benzo(g,h,i)perylene	276	22.901	22.901	(1.141)	384358	125.000	123	

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.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Date : 24-JUL-2018 18:01
Client ID:
Sample Info: WG232607-7
Volume Injected (uL): 1.0
Column phase: ZB5-MS
Instrument: gcms-u,i
Operator: JCG
Column diameter: 0.25
\\target_server\gg\chem\gcms-u,i\U072418,b\U1768,D
Y (x10^6)
Min
-1,4-Dioxane
-Pyridine+
-Ethyl Methacrylate
-2-Picoline
-N-Nitrosomethylethylamine
-Methyl Methanesulfonate
-2-Fluorophenol
-N-Nitrosodiethylamine
-Ethyl Methanesulfonate
-Benzaldehyde
-Pentachloroethane+
-1,3-Dichlorobenzene
-1,4-Dichlorobenzene-D4+
-1,2-Dichlorobenzene+
-Bis(2-Chloroisopropyl)eth+
-o-Toluidine+
-Nitrobenzene-D5+
-N-Nitrosopiperidine
-Isophorone
-2-Nitrophenol
-2,4-Dimethylphenol
-Bis(2-Chloroethoxy)methan+
-1,2,4-Trichlorobenzene
-Naphthalene-D8+
-Hexachlorobutadiene
-A,A-Dimethylphenethylamin
-Caprolactam
-N-Nitroso-Di-N-Butylamine+
-2-Methylnaphthalene
-1-Methylnaphthalene
-Diphenylether+
2-Chloronaphthalene+
-Acenaphthylene+
-Acenaphthene
-Dibenzofuran+
-Diethylphthalate
-4,6-Dinitro-2-Methylpheno+
Fluorene+
-Diallate+
-Hexachlorobenzene
-Dimethoate
-Atrazine
-Pronamide
-Anthracene
Phenanthrene-D10+
-Carbazole
-Methyl Parathion
-Di-n-butylphthalate
-4-Nitroquinoline-1-Oxide+
-Methapyrilene
-Isodrin
-Fluoranthene
-Benzidine
-Pyrene
-Terphenyl-D14
-Aramite
-Famphur+
-Butylbenzylphthalate
-Bis(2-ethylhexyl)adipate
-2-Acetylaminofluorene
-Benzo(a)anthracene+
-Kepone+
-Benzo(b)fluoranthene+
-Benzo(a)pyrene+
-3-Methylcholanthrene
-Dibenz(a,j)acridine
-Benzo(g,h,i)perylene

Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\U1769.D
Report Date: 25-Jul-2018 08:02

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-u.i\U072418.b\U1769.D
Lab Smp Id: WG232607-8
Inj Date : 24-JUL-2018 18:34
Operator : JCG   Inst ID: gcms-u.i
Smp Info : WG232607-8
Misc Info : WG232607,WG232607,WG232607-4
Comment   :
Method   : \\target_server\gg\chem\gcms-u.i\U072418.b\U8270C51.m
Meth Date : 25-Jul-2018 07:58 gcms-u.i   Quant Type: ISTD
Cal Date : 24-JUL-2018 18:01   Cal File: U1768.D
Als bottle: 8   QC Sample: INDCHECK
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all_DOD50.sub
Target Version: 4.12
Processing Host: V200T4

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)	REVIEW CODE
1	1,4-Dioxane	58	3.195	3.205	(0.362)	83134	46.0435	46.0	
3	Pyridine	79	3.661	3.660	(0.511)	343363	49.6181	49.6(a)	
2	N-Nitrosodimethylamine	42	3.620	3.640	(0.506)	134055	49.1597	49.2	
5	2-Picoline	93	4.676	4.685	(0.653)	342892	51.5572	51.6	
6	N-Nitrosomethylethylamine	88	4.852	4.851	(0.678)	140802	51.6650	51.7	
7	Methyl Methanesulfonate	80	5.266	5.275	(0.735)	173503	50.4982	50.5	
9	N-Nitrosodiethylamine	102	5.783	5.792	(0.808)	150560	54.0936	54.1	
10	Ethyl Methanesulfonate	79	6.197	6.206	(0.866)	221609	51.9548	52.0	
11	Benzaldehyde	77	6.580	6.589	(0.919)	56802	24.0702	24.1(R)	
12	Aniline	93	6.746	6.745	(0.942)	455300	55.6558	55.6	
14	Bis(2-Chloroethyl)ether	93	6.839	6.848	(0.955)	268609	50.6988	50.7	
15	Phenol	94	6.766	6.776	(0.945)	357143	49.7778	49.8	
17	2-Chlorophenol	128	6.901	6.910	(0.964)	294971	48.4451	48.4	
18	1,3-Dichlorobenzene	146	7.087	7.086	(0.990)	338714	50.1449	50.1	
* 21	1,4-Dichlorobenzene-D4	152	7.160	7.159	(1.000)	192819	40.0000	(Q)	
19	1,4-Dichlorobenzene	146	7.180	7.179	(1.003)	332297	50.5438	50.5	
20	1,2-Dichlorobenzene	146	7.377	7.376	(1.030)	302603	49.5409	49.5	
22	Benzyl alcohol	108	7.367	7.386	(1.029)	160473	45.2977	45.3	
25	Bis(2-Chloroisopropyl)ether	45	7.543	7.552	(1.053)	235869	37.0648	37.1	
26	2,2'-Oxybis(1-chloropropane)	45	7.543	7.552	(1.053)	235869	37.0648	37.1(R)	

Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\U1769.D
Report Date: 25-Jul-2018 08:02

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
	23 2-Methylphenol	108	7.543	7.552	(1.053)	258634	49.0956	49.1	
	28 Acetophenone	105	7.698	7.707	(0.871)	696586	94.4721	94.5	
	32 Hexachloroethane	117	7.812	7.821	(1.091)	133259	49.4409	49.4	
	27 N-Nitrosopyrrolidine	100	7.687	7.717	(1.074)	138138	52.7892	52.8	
	29 o-Toluidine	106	7.750	7.759	(1.082)	357604	50.6315	50.6	
	30 N-Nitrosomorpholine	56	7.719	7.738	(1.078)	149239	53.2740	53.3	
	31 N-Nitroso-di-n-propylamine	70	7.729	7.749	(1.080)	163964	49.4614	49.5	
	24 3&4-Methylphenol	108	7.750	7.769	(1.082)	267361	47.8157	47.8	
	34 Nitrobenzene	77	7.915	7.924	(0.896)	276436	51.5348	51.5	
	35 N-Nitrosopiperidine	114	8.112	8.132	(0.918)	148455	52.2630	52.3	
	36 Isophorone	82	8.246	8.256	(0.933)	480808	48.5388	48.5	
	37 2-Nitrophenol	139	8.340	8.339	(0.944)	175320	53.6005	53.6	
	38 2,4-Dimethylphenol	107	8.443	8.452	(0.955)	267413	49.9970	50.0	
	40 Bis(2-Chloroethoxy)methane	93	8.547	8.556	(0.967)	391491	53.7544	53.8	
	39 O,O,O-Triethylphosphorothioat	198	8.526	8.535	(0.965)	131906	55.0491	55.0	
	42 2,4-Dichlorophenol	162	8.671	8.680	(0.981)	255114	54.8481	54.8	
	43 1,2,4-Trichlorobenzene	180	8.764	8.773	(0.992)	252663	50.1957	50.2	
*	44 Naphthalene-D8	136	8.836	8.835	(1.000)	694137	40.0000		
	41 Benzoic acid	122	8.660	8.701	(0.980)	141067	59.7378	59.7(R)	
	45 Naphthalene	128	8.857	8.866	(1.002)	734877	50.4620	50.5	
	48 Hexachloropropene	213	8.992	8.991	(1.018)	182696	53.4956	53.5	
	47 2,6-Dichlorophenol	162	8.971	8.980	(1.015)	228490	54.1009	54.1	
	46 4-Chloroaniline	127	8.950	8.970	(1.013)	300878	49.0283	49.0	
	49 Hexachlorobutadiene	225	9.054	9.063	(1.025)	142295	50.5611	50.6	
	51 N-Nitroso-Di-N-Butylamine	84	9.426	9.446	(1.067)	187842	50.8766	50.9	
	53 Caprolactam	113	9.468	9.508	(1.071)	92288	53.7246	53.7(Q)	
	55 Isosafrole	162	9.695	9.705	(1.097)	198605	46.2413	46.2	
	57 2-Methylnaphthalene	142	9.789	9.798	(1.108)	537086	51.1906	51.2	
	54 4-Chloro-3-Methylphenol	107	9.644	9.663	(1.091)	223182	51.2423	51.2	
	58 1-Methylnaphthalene	142	9.923	9.932	(1.123)	486639	47.9991	48.0	
	60 1,2,4,5-Tetrachlorobenzene	216	10.027	10.036	(0.896)	419549	90.2482	90.2	
	59 Hexachlorocyclopentadiene	237	10.027	10.036	(0.896)	92206	36.8663	36.9(R)	
	61 2,4,6-Trichlorophenol	196	10.192	10.202	(0.911)	164650	50.5913	50.6	
	62 2,4,5-Trichlorophenol	196	10.244	10.264	(0.916)	189482	54.1052	54.1	
	56 Safrole	104	9.695	9.705	(0.867)	106480	44.8110	44.8	
	65 2-Chloronaphthalene	127	10.441	10.450	(0.933)	250729	56.9829	57.0	
	64 1,1'-Biphenyl	154	10.430	10.440	(0.932)	588162	47.5029	47.5	
	66 1-Chloronaphthalene	127	10.472	10.481	(0.936)	156904	41.1606	41.2	
	68 2-Nitroaniline	65	10.606	10.616	(0.948)	143282	45.9867	46.0(Q)	
	69 1,4-Naphthoquinone	158	10.679	10.688	(0.955)	178318	66.4196	66.4(R)	
	76 Acenaphthylene	152	10.989	10.998	(0.982)	694395	46.0989	46.1	
	70 Dimethyl Phthalate	163	10.875	10.895	(0.972)	529075	48.3115	48.3	
	73 1,3-Dinitrobenzene	168	10.896	10.916	(0.974)	96759	50.6513	50.6	
	72 2,6-Dinitrotoluene	165	10.937	10.947	(0.978)	134395	49.7335	49.7	
*	75 Acenaphthene-D10	164	11.186	11.195	(1.000)	385357	40.0000		
	78 Acenaphthene	153	11.238	11.247	(1.005)	487979	50.2452	50.2	
	74 3-Nitroaniline	138	11.165	11.185	(0.998)	146458	51.3599	51.4	
	79 2,4-Dinitrophenol	184	11.310	11.340	(1.011)	72517	58.1191	58.1	
	82 Dibenzofuran	168	11.465	11.475	(1.025)	643440	50.2185	50.2	
	80 Pentachlorobenzene	250	11.424	11.433	(1.021)	201338	50.0405	50.0	
	85 1-Naphthylamine	143	11.579	11.588	(1.035)	408401	42.4213	42.4	
	87 2,4-Dinitrotoluene	165	11.486	11.506	(1.027)	165909	49.8689	49.9	
	89 2-Naphthylamine	143	11.693	11.713	(1.045)	376677	43.6399	43.6	
	81 4-Nitrophenol	109	11.445	11.475	(1.023)	80533	59.7727	59.8(Q)	

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	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
84	2,3,4,6-Tetrachlorophenol	232	11.662	11.671	(1.043)	128681	50.5709	50.6	
88	Fluorene	166	11.931	11.940	(1.067)	493680	48.9333	48.9	
86	Diethylphthalate	149	11.828	11.847	(1.057)	543044	49.1680	49.2	
90	4-Chlorophenyl-phenylether	204	11.952	11.951	(1.068)	238648	49.9611	50.0	
91	O,O-diethyl-o-2-pyrazinylphos	107	11.931	11.951	(1.067)	83745	53.6616	53.7	
94	5-Nitro-O-Toluidine	152	11.972	11.992	(1.070)	155511	52.5522	52.6	
97	4-Nitroaniline	138	11.993	12.023	(1.072)	126357	49.9363	49.9	
92	4,6-Dinitro-2-Methylphenol	198	12.035	12.065	(0.912)	96204	53.9898	54.0	
93	N-Nitrosodiphenylamine	169	12.117	12.127	(0.918)	737625	81.8499	81.8	
98	1,2-Diphenylhydrazine	77	12.159	12.168	(0.922)	486589	48.4870	48.5	
99	Azobenzene	77	12.159	12.168	(0.922)	486589	48.4870	48.5	
96	Sulfotepp	97	12.366	12.375	(0.937)	89490	54.4091	54.4	
101	Diallate	86	12.521	12.530	(0.949)	192598	52.2409	52.2	
100	4-Bromophenyl-phenylether	248	12.604	12.613	(0.955)	144435	50.0550	50.0	
109	Phorate	75	12.521	12.541	(0.949)	285056	41.1021	41.1	
107	1,3,5-Trinitrobenzene	213	12.531	12.551	(0.950)	47466	55.7852	55.8(Q)	
102	Phenacetin	108	12.583	12.613	(0.954)	238011	51.8741	51.9	
103	Hexachlorobenzene	284	12.687	12.696	(0.962)	152084	49.6917	49.7	
112	Dimethoate	87	12.759	12.779	(0.967)	137349	46.4582	46.4	
104	Atrazine	200	12.863	12.882	(0.975)	44189	14.1239	14.1(QR)	
105	4-Aminobiphenyl	169	12.956	12.975	(0.982)	296783	35.8999	35.9(R)	
106	Pentachlorophenol	266	12.966	12.986	(0.983)	95855	68.1345	68.1(R)	
108	Pentachloronitrobenzene	237	12.987	12.996	(0.984)	71541	53.2840	53.3	
* 111	Phenanthrene-D10	188	13.194	13.203	(1.000)	588980	40.0000		
110	Pronamide	173	13.080	13.100	(0.991)	251062	52.2941	52.3	
114	Phenanthrene	178	13.225	13.234	(1.002)	660281	49.6679	49.7	
116	Anthracene	178	13.297	13.307	(1.008)	722294	50.8789	50.9	
115	Disulfoton	88	13.235	13.234	(1.003)	257536	50.2548	50.2	
113	Dinoseb	211	13.235	13.256	(1.003)	119862	68.3832	68.4(R)	
117	Carbazole	167	13.525	13.534	(1.025)	632076	52.0030	52.0	
119	Methyl Parathion	109	13.732	13.741	(1.041)	158504	55.5871	55.6	
118	Di-n-butylphthalate	149	14.042	14.052	(1.064)	867818	51.8392	51.8	
120	4-Nitroquinoline-1-Oxide	190	14.280	14.290	(1.082)	27079	56.6546	56.6	
122	Ethyl Parathion	291	14.270	14.279	(1.082)	50954	57.1988	57.2	
121	Methapyrilene	97	14.436	14.424	(1.094)	134162	39.9672	40.0(R)	
123	Isodrin	193	14.622	14.621	(1.108)	83989	49.8583	49.8	
124	Fluoranthene	202	14.829	14.838	(1.124)	694199	50.9639	51.0	
125	Pyrene	202	15.129	15.139	(0.888)	694519	50.0237	50.0	
126	Benzidine	184	15.036	15.045	(0.882)	65394	16.8907	16.9(aR)	
128	Aramite	185	15.481	15.490	(0.908)	56571	58.8713	58.9	
129	p-Dimethylaminoazobenzene	225	15.585	15.584	(0.914)	131751	58.2547	58.2	
130	Chlorobenzilate	251	15.657	15.666	(0.919)	196564	51.7378	51.7	
136	3,3'-Dimethylbenzidine	212	16.081	16.091	(0.944)	131813	34.4798	34.5(R)	
131	Butylbenzylphthalate	149	16.133	16.143	(0.947)	346951	50.2589	50.2	
132	Bis(2-ethylhexyl)adipate	129	16.319	16.318	(0.957)	301130	51.7852	51.8	
134	2-Acetylaminofluorene	181	16.506	16.525	(0.968)	162788	52.0276	52.0	
138	Benzo(a)anthracene	228	17.023	17.033	(0.999)	492172	48.9350	48.9	
* 137	Chrysene-D12	240	17.044	17.053	(1.000)	364364	40.0000		
139	Chrysene	228	17.096	17.105	(1.003)	480305	50.3655	50.4	
135	3,3'-Dichlorobenzidine	252	17.013	17.022	(0.998)	126435	47.0203	47.0	
140	bis(2-Ethylhexyl)phthalate	149	17.220	17.229	(1.010)	485951	52.6954	52.7	
143	Di-n-octylphthalate	149	18.628	18.637	(0.928)	725865	62.6234	62.6(R)	
144	Benzo(b)fluoranthene	252	19.300	19.330	(0.961)	329882	51.8360	51.8	
145	7,12-Dimethylbenz(A)Anthracen	256	19.311	19.320	(0.962)	177835	53.2622	53.3	

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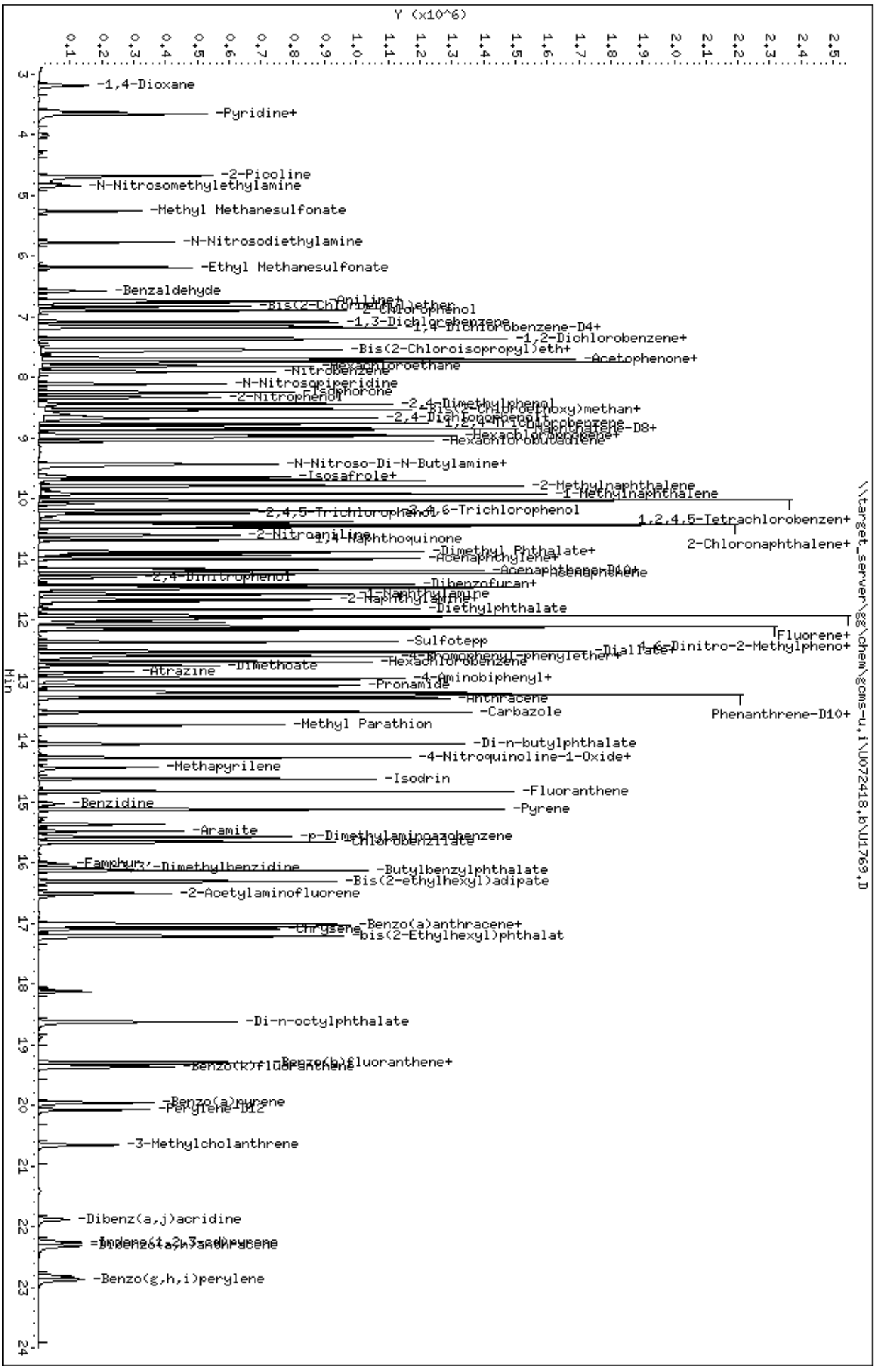
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
147	Benzo(k)fluoranthene	252	19.362	19.382	(0.964)	355436	52.7886	52.8(H)	
148	Benzo(a)pyrene	252	19.963	19.972	(0.994)	256995	48.8914	48.9	
* 146	Perylene-D12	264	20.077	20.076	(1.000)	222467	40.0000		
149	3-Methylcholanthrene	268	20.656	20.676	(1.029)	119015	52.8891	52.9	
151	Dibenz(a,j)acridine	279	21.877	21.897	(1.090)	129145	46.1058	46.1	
150	Indeno(1,2,3-cd)pyrene	276	22.260	22.270	(1.109)	145104	47.0719	47.1	
152	Dibenzo(a,h)anthracene	278	22.323	22.342	(1.112)	142137	46.3788	46.4	
153	Benzo(g,h,i)perylene	276	22.881	22.901	(1.140)	165233	46.1035	46.1	
M 154	Total PAHs	100				8573213	888.834	889	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
H - Operator selected an alternate compound hit.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Sample Info: WG232607-8
Volume Injected (uL): 1.0
Column phase: ZB5-MS
Instrument: gcms-u.i
Operator: JCG
Column diameter: 0.25
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Y (x10^6)
Min
-1,4-Dioxane
-Pyridine+
-2-Picoline
-N-Nitrosomethylethylamine
-Methyl Methanesulfonate
-N-Nitrosodiethylamine
-Ethyl Methanesulfonate
-Benzaldehyde
-Aniline+
-Bis(2-Chloroethyl)ether
-2-Chlorophenol
-1,3-Dichlorobenzene
-1,4-Dichlorobenzene-D4+
-1,4-Dichlorobenzene+
-Bis(2-Chloroisopropyl)eth+
-Acetophenone+
-Hexachloroethane
-Nitrobenzene
-N-Nitrosopiperidine
-Isophorone
-2-Nitrophenol
-2,4-Dimethylphenol
-Bis(2-Chloroethoxy)methan+
-2,4-Dichlorophenol+
-1,2,4-Trichlorobenzene
-Naphthalene-D8+
-Hexachlorobutadiene+
-Hexachlorobutadiene
-N-Nitroso-Di-N-Butylamine+
-Isosafrole+
-2-Methylnaphthalene
-1-Methylnaphthalene
-2,4,5-Trichlorophenol
-2,4,6-Trichlorophenol
1,2,4,5-Tetrachlorobenzen+
-2-Nitroaniline
1,4-Naphthoquinone
2-Chloronaphthalene+
-Dimethyl Phthalate+
-Acenaphthylene+
-Acenaphthylene-D10+
-2,4-Dinitrophenol
-Dibenzofuran+
-1-Naphthylamine
-2-Naphthylamine
-Diethylphthalate
Fluorene+
-Sulfotepp
-4-Bromophenyl-phenylether+
-Dialfate
4,6-Dinitro-2-Methylpheno+
-Hexachlorobenzene
-Dimethoate
-Atrazine
-4-Aminobiphenyl+
-Pronamide
-Anthracene
Phenanthrene-D10+
-Carbazole
-Methyl Parathion
-Di-n-butylphthalate
-4-Nitroquinoline-1-Oxide+
-Methapyrilene
-Isodrin
-Fluoranthene
-Benzidine
-Pyrene
-Aramite
-p-Dimethylaminoazobenzene
-Chlorobenzilate
-Famphur
-3,3'-Dimethylbenzidine
-Butylbenzylphthalate
-Bis(2-ethylhexyl)adipate
-2-Acetylaminofluorene
-Benzo(a)anthracene+
-Chrysene
-bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(b)fluoranthene+
-Benzo(k)fluoranthene
-Benzo(a)pyrene
-Perylene-D12
-3-Methylcholanthrene
-Dibenz(a,j)acridine
-Indeno(1,2,3-cd)pyrene
-Benzo(g,h,i)perylene

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Injection Date: 24-JUL-2018 15:19
Instrument: gcms-u.i
Client Sample ID:

Compound: A,A-Dimethylphenethylamine
CAS Number: 122-09-8

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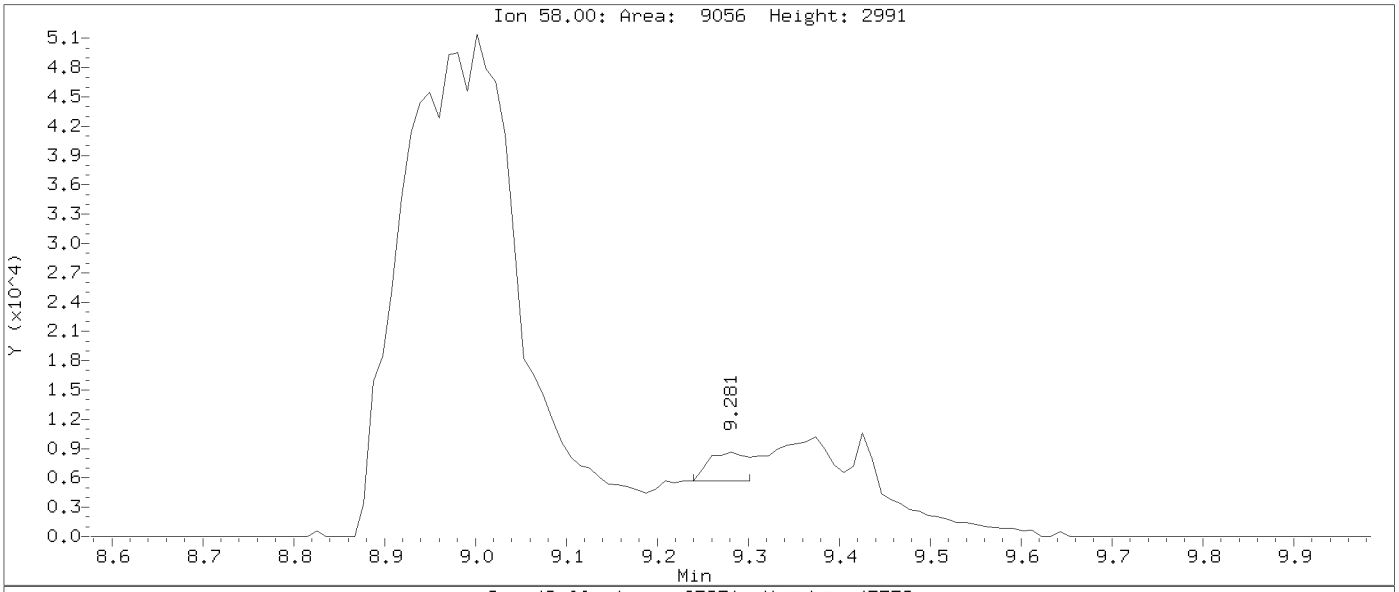

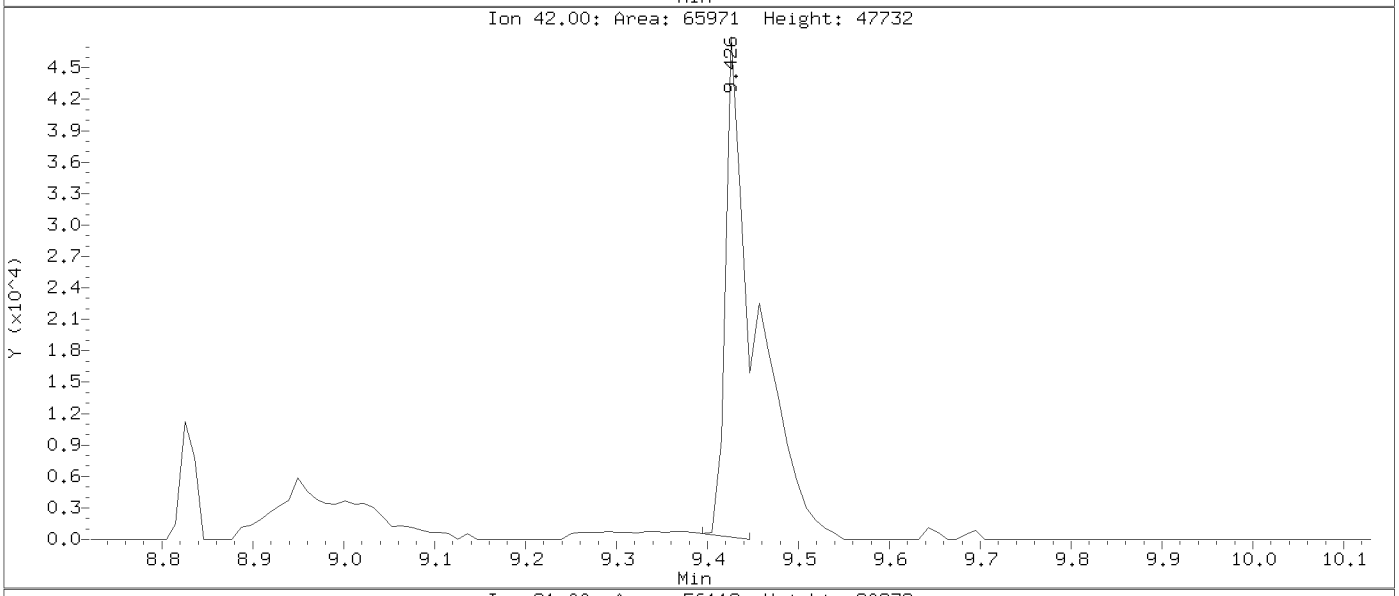

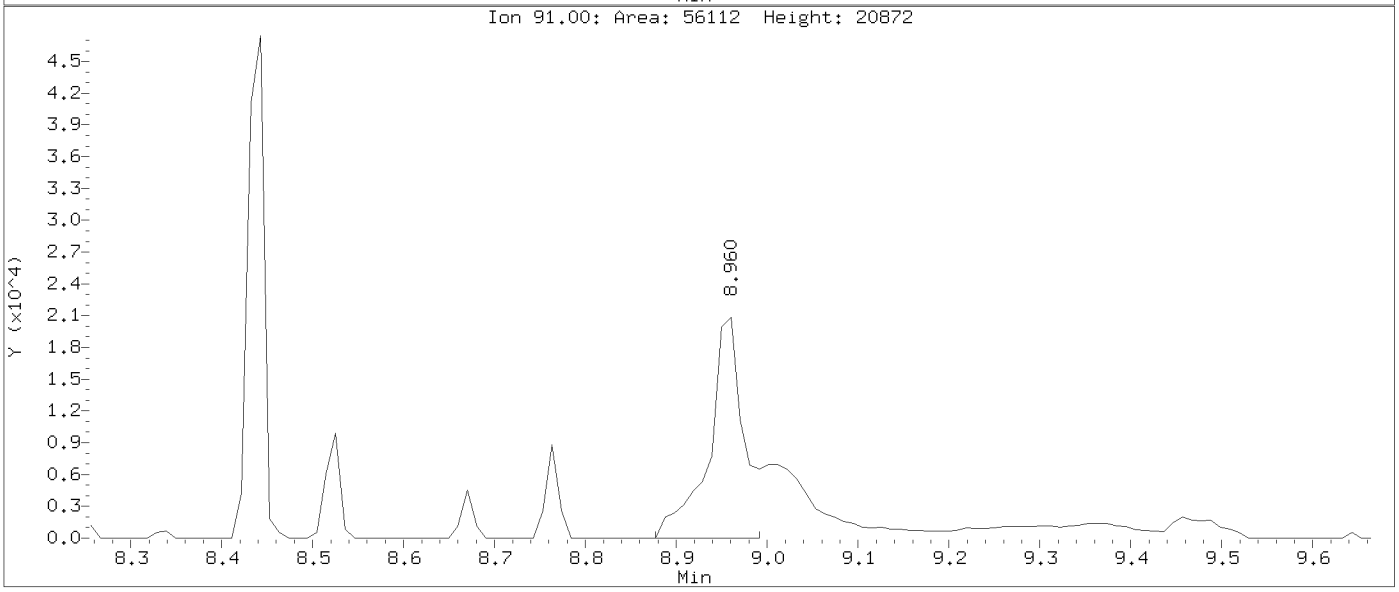

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Compound: A,A-Dimethylphenethylamine
CAS Number: 122-09-8

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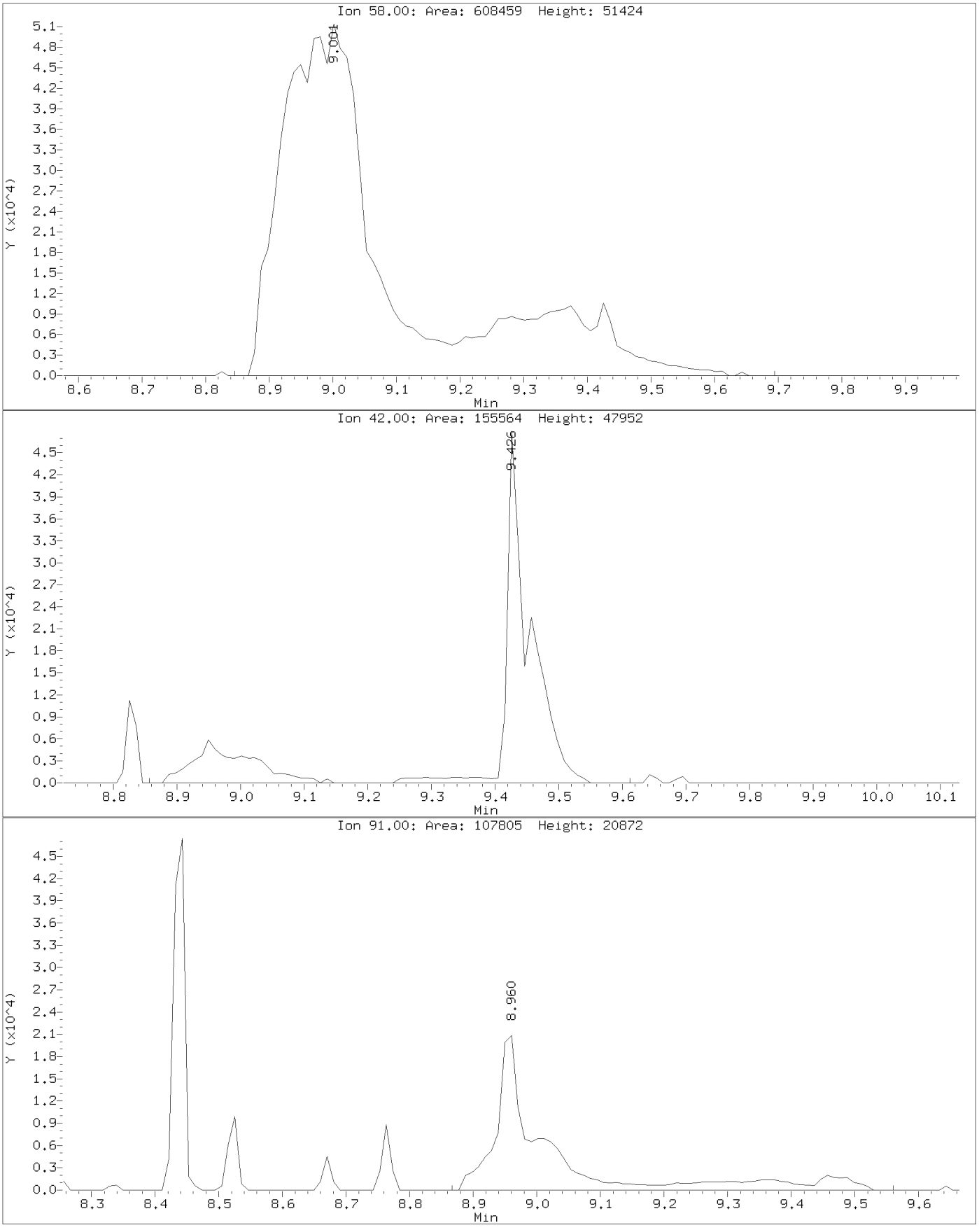

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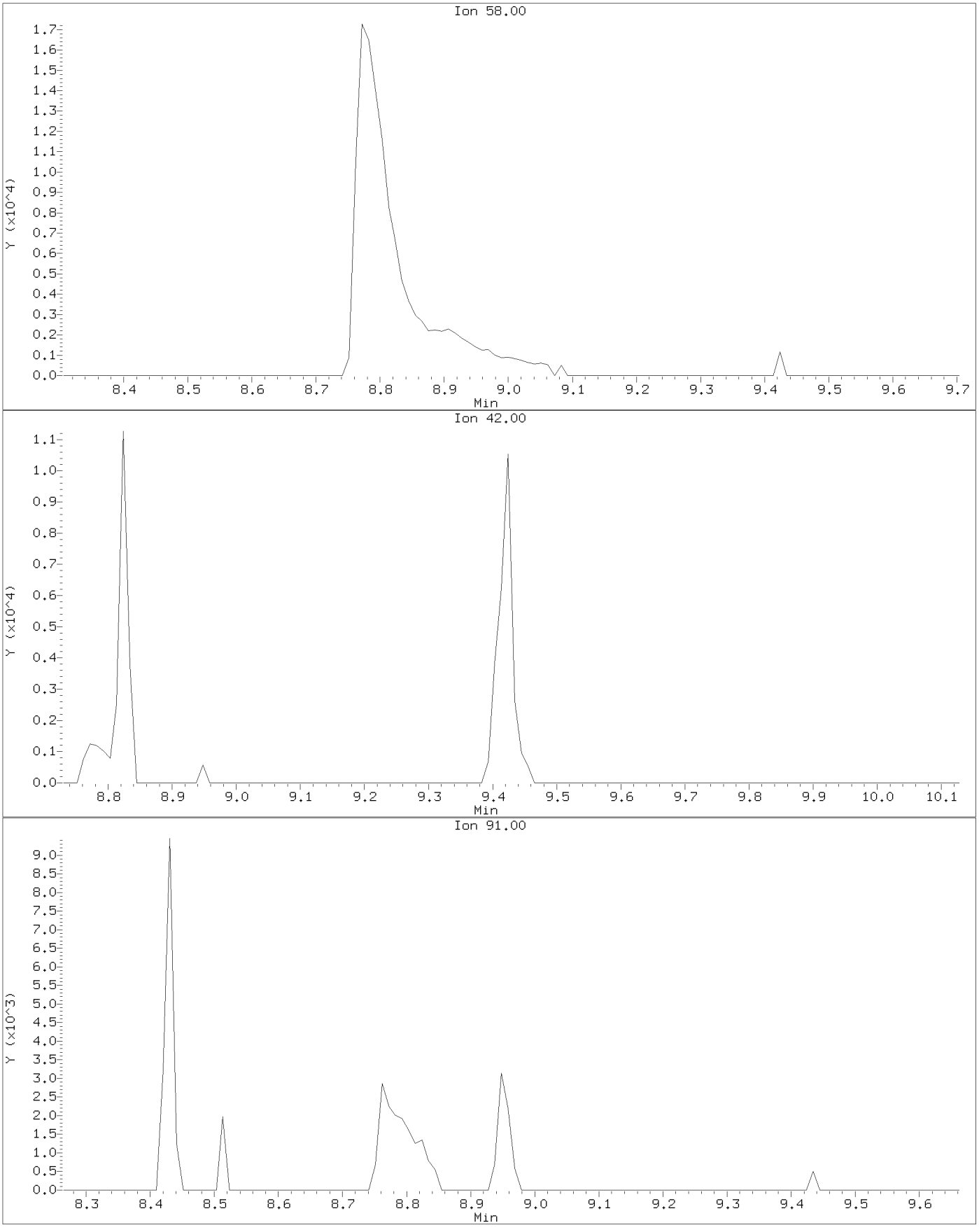
Instrument: gcms-u.i
Client Sample ID:

Compound: A,A-Dimethylphenethylamine
CAS Number: 122-09-8

BEFORE MANUAL INTEGRATION



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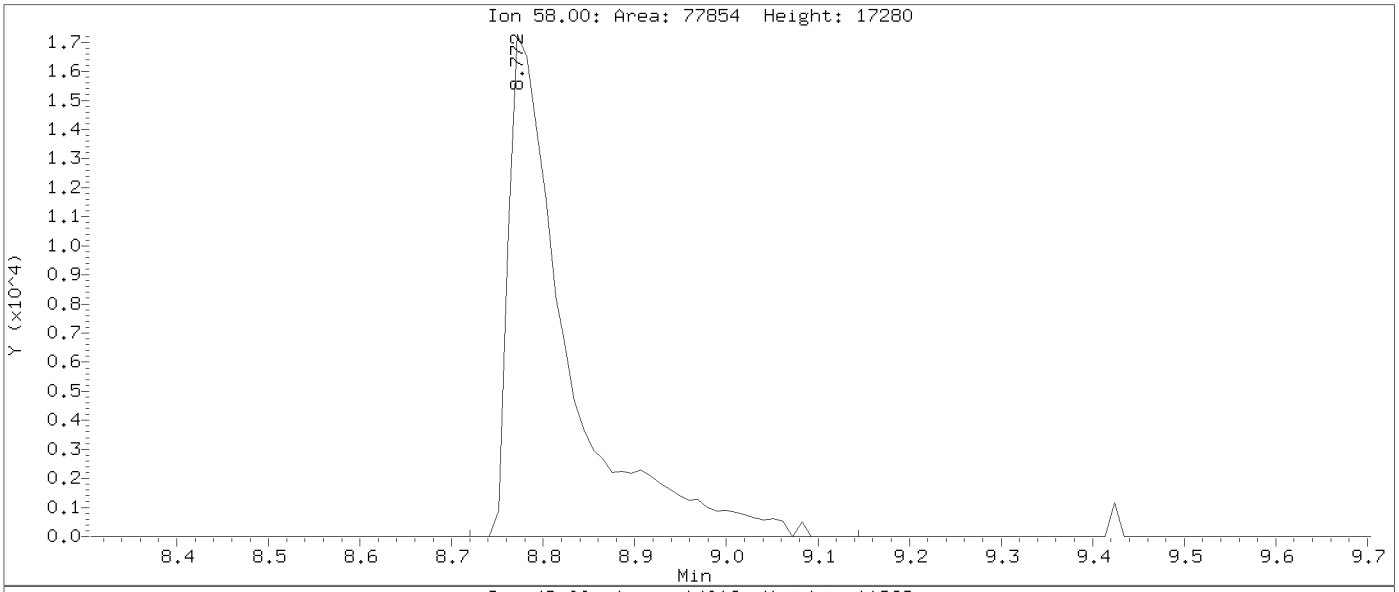
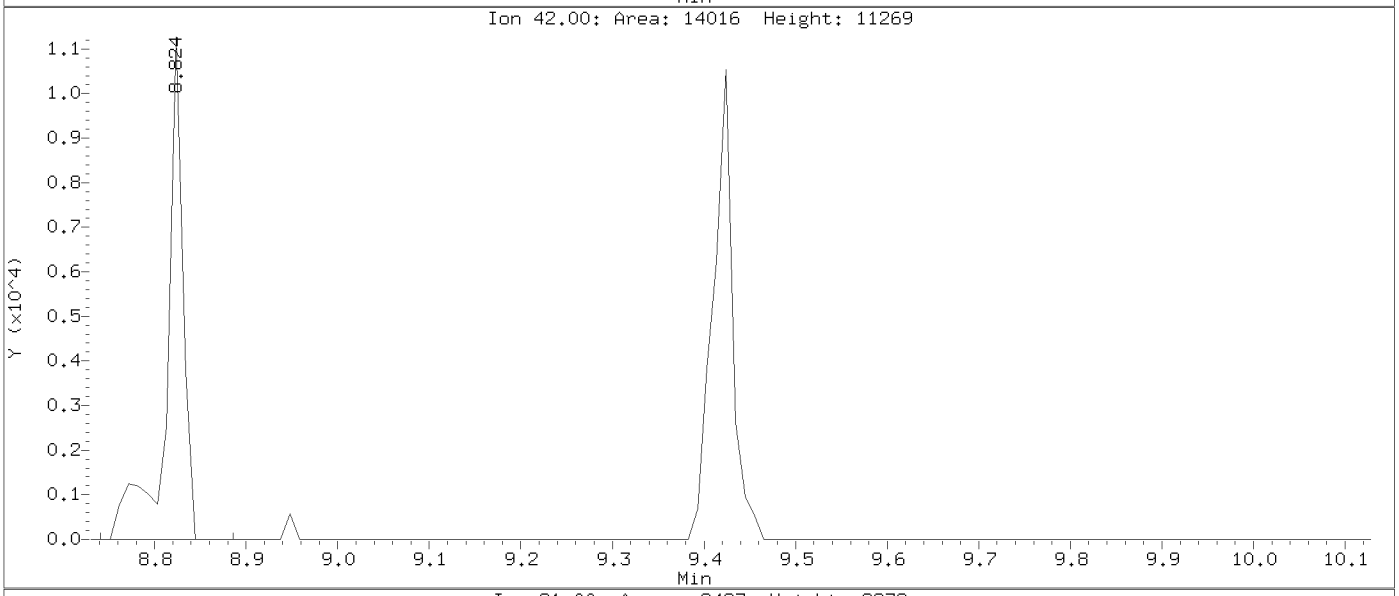
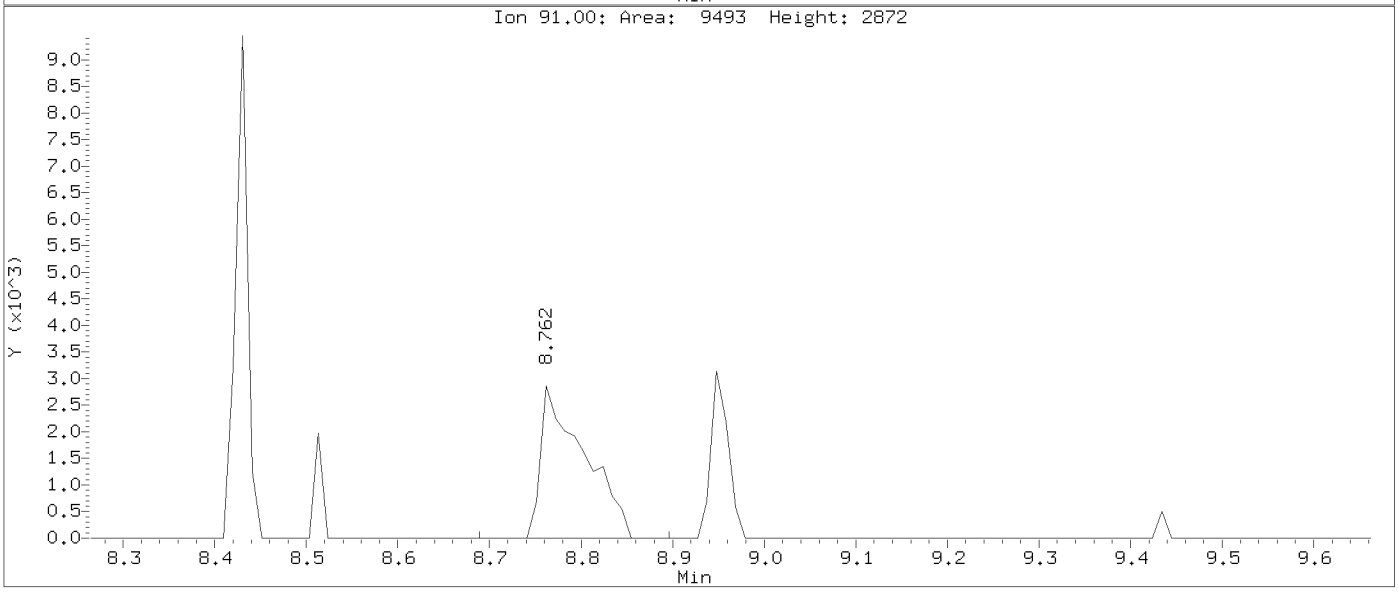
Instrument: gcms-u.i
Client Sample ID:

Compound: A,A-Dimethylphenethylamine
CAS Number: 122-09-8

AFTER MANUAL INTEGRATION







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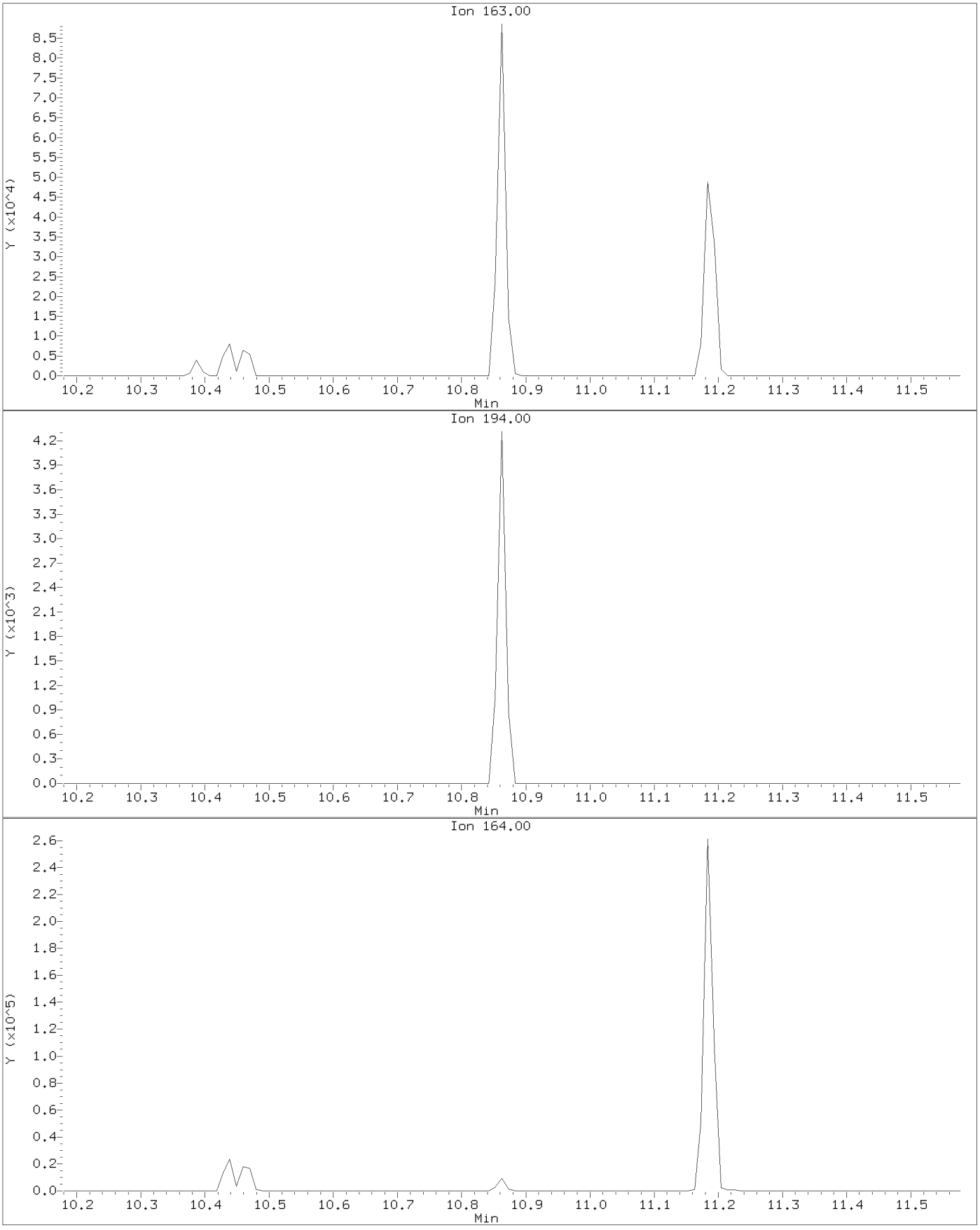
Injection Date: 24-JUL-2018 15:51
Instrument: gcms-u.i
Client Sample ID:

Compound: Dimethyl Phthalate
CAS Number: 131-11-3

BEFORE MANUAL INTEGRATION



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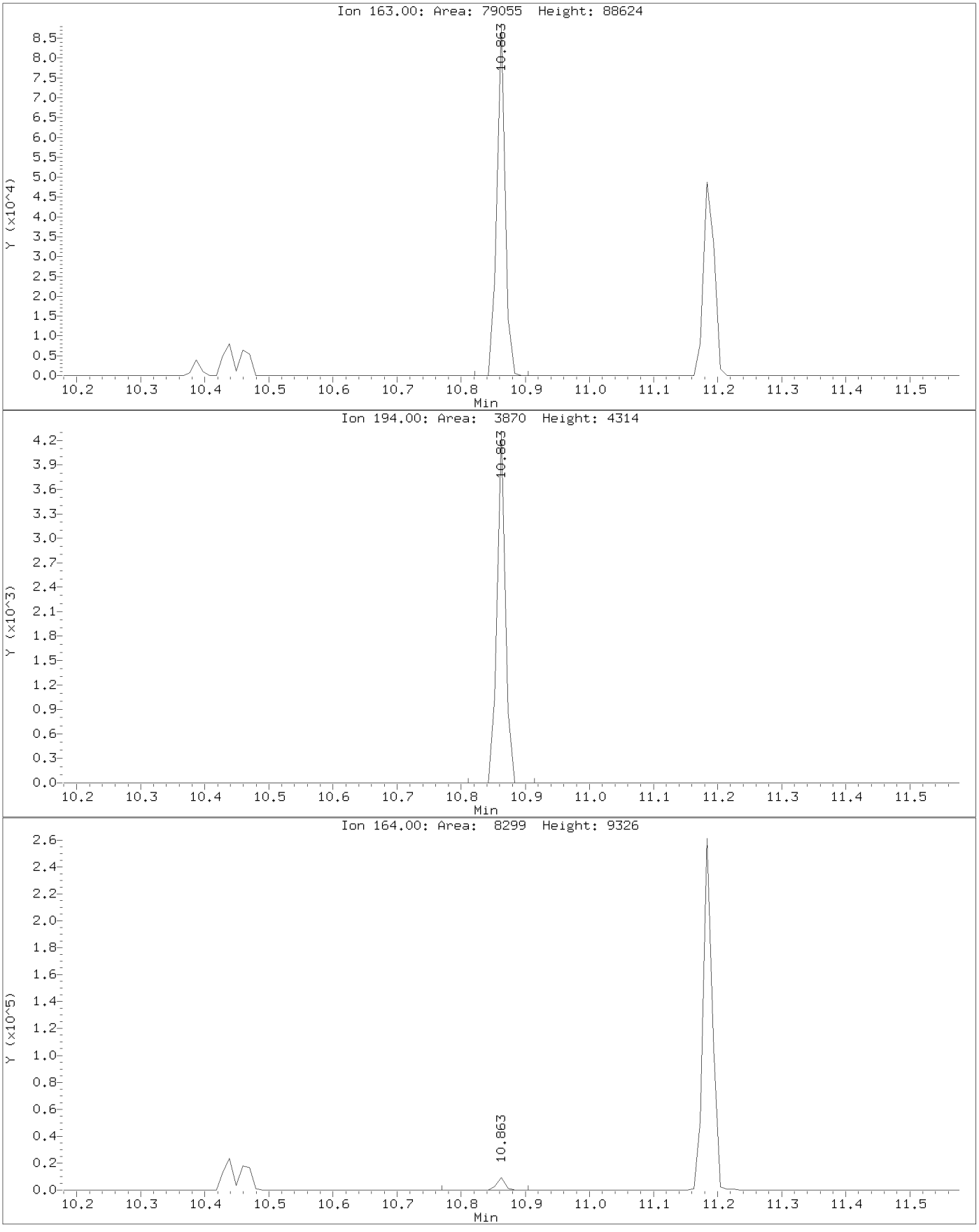
Instrument: gcms-u.i
Client Sample ID:

Compound: Dimethyl Phthalate
CAS Number: 131-11-3

AFTER MANUAL INTEGRATION



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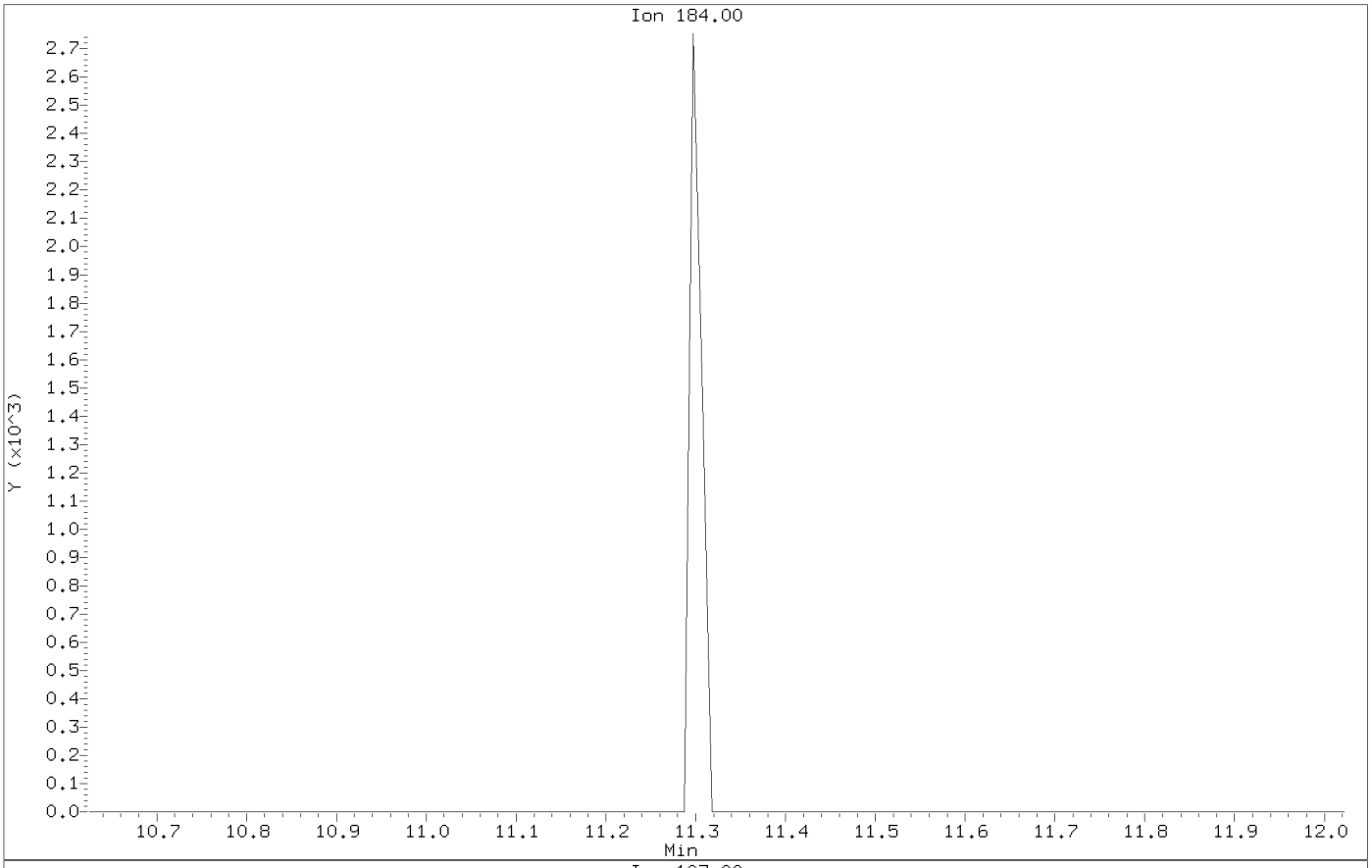
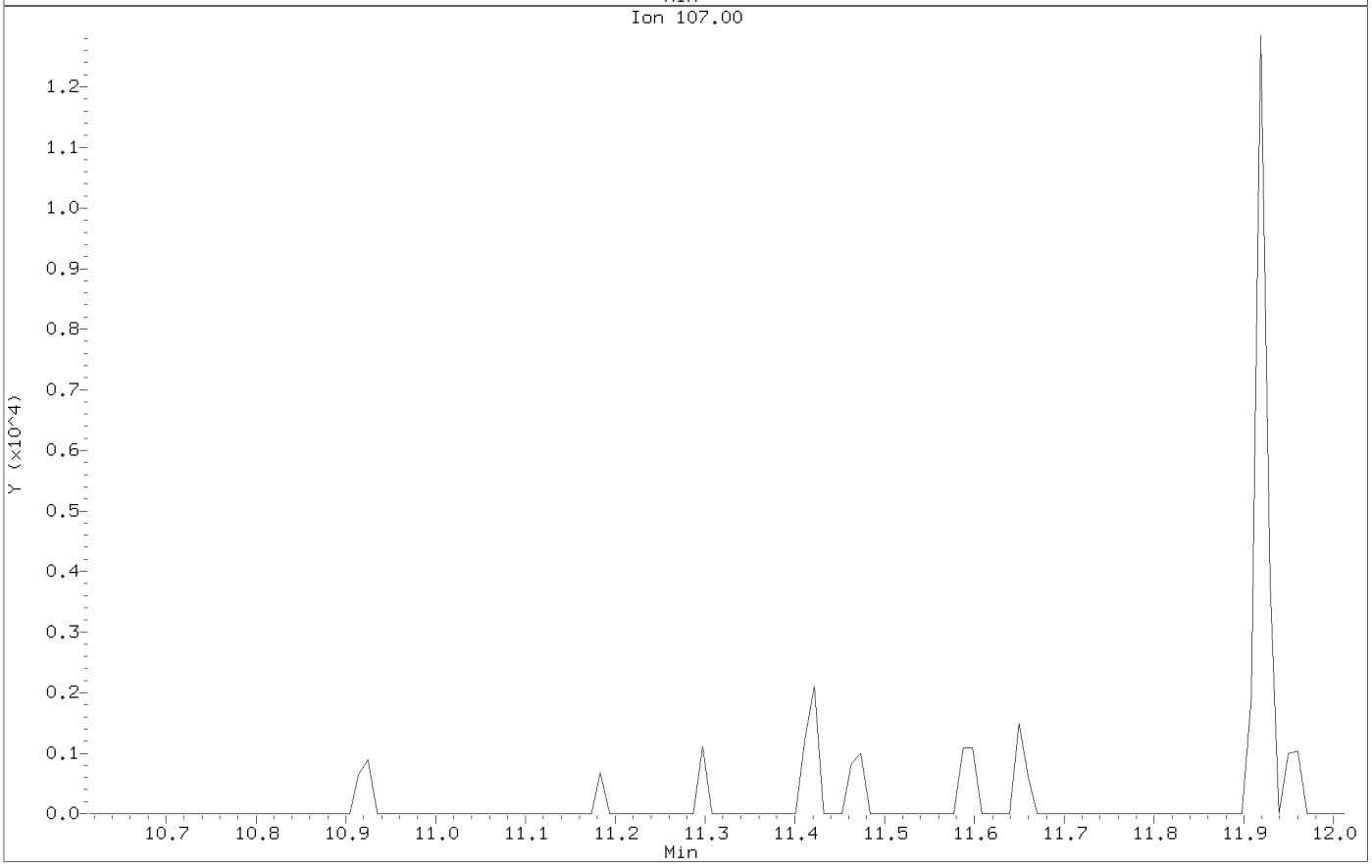
Injection Date: 24-JUL-2018 15:51
Instrument: gcms-u.i
Client Sample ID:

Compound: 2,4-Dinitrophenol
CAS Number: 51-28-5

BEFORE MANUAL INTEGRATION





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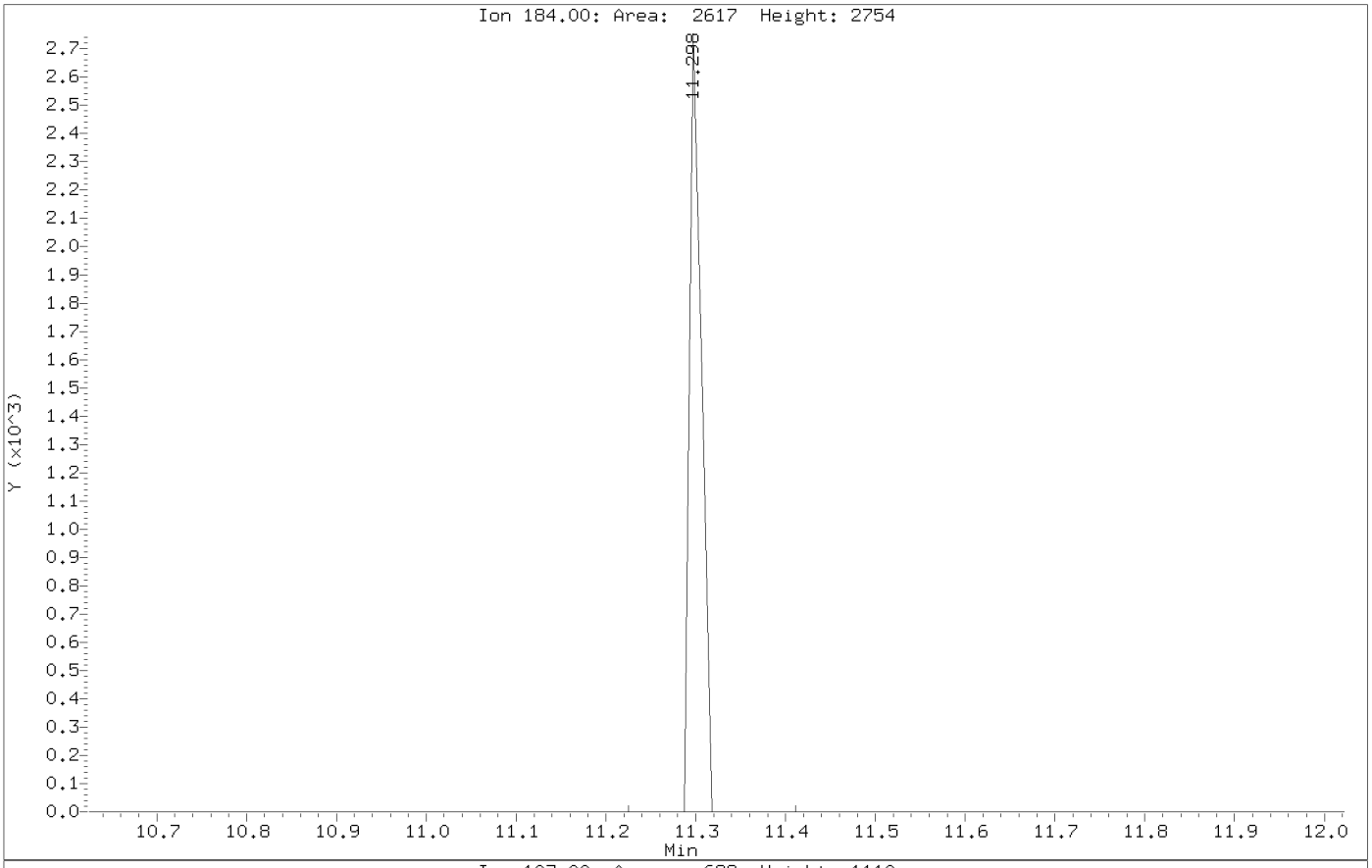
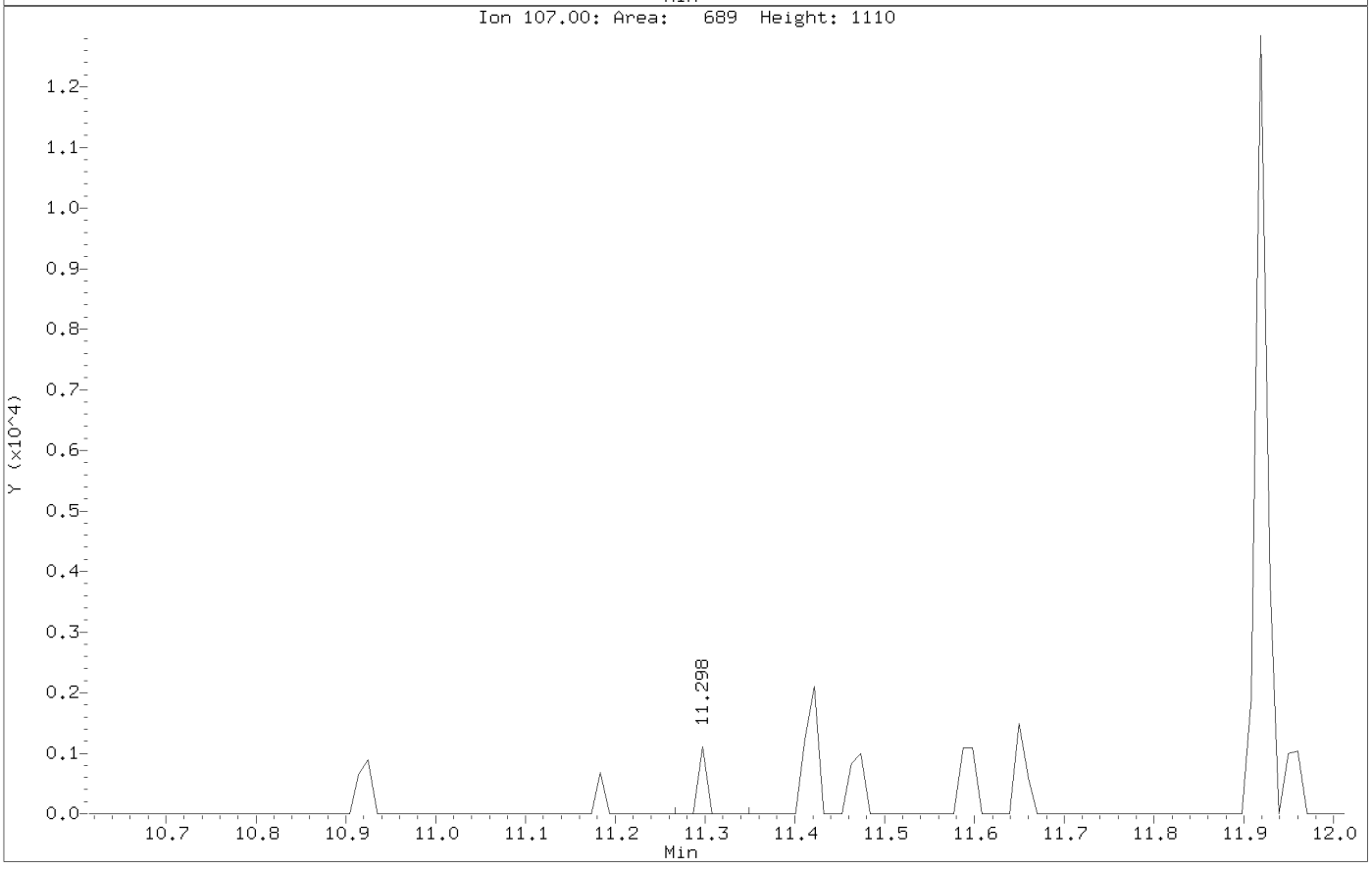
Injection Date: 24-JUL-2018 15:51
Instrument: gcms-u.i
Client Sample ID:

Compound: 2,4-Dinitrophenol
CAS Number: 51-28-5

AFTER MANUAL INTEGRATION





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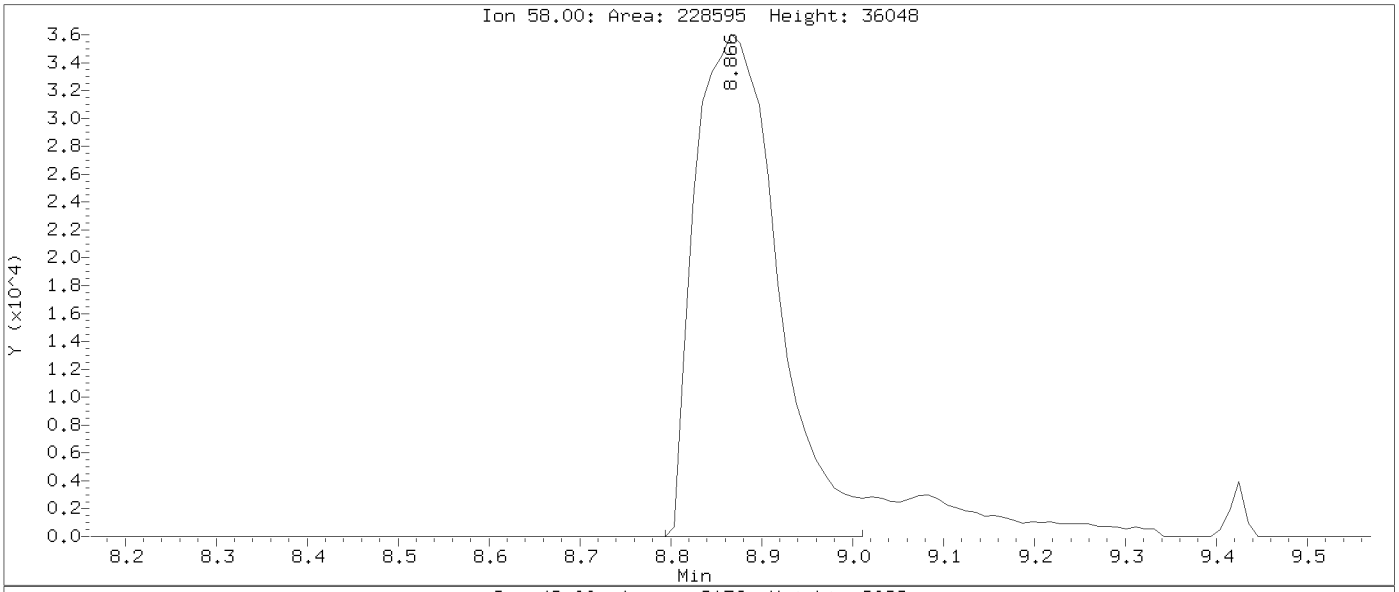
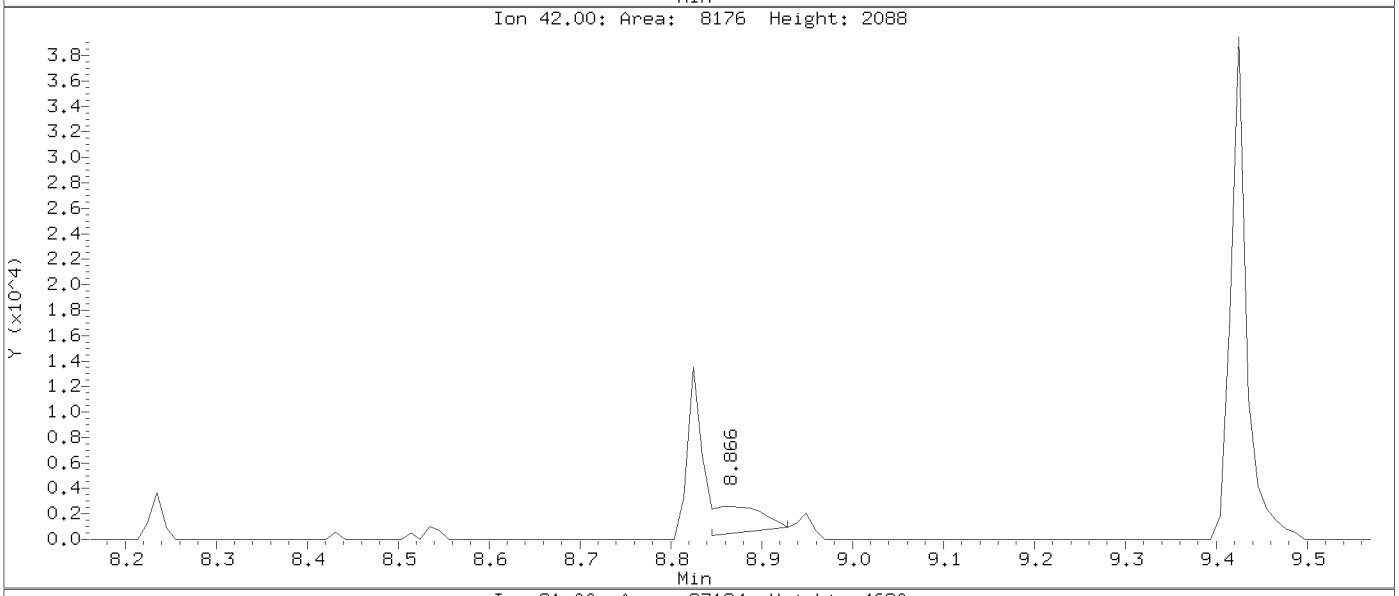
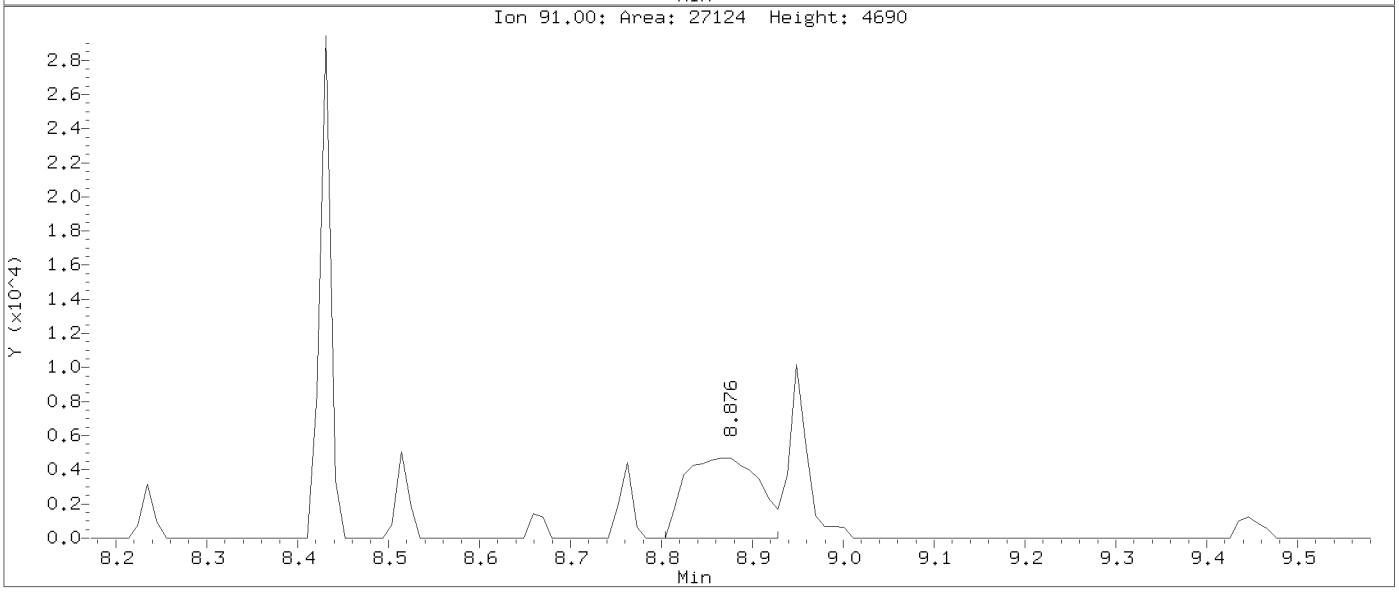
Injection Date: 24-JUL-2018 16:24
Instrument: gcms-u.i
Client Sample ID:

Compound: A,A-Dimethylphenethylamine
CAS Number: 122-09-8

BEFORE MANUAL INTEGRATION







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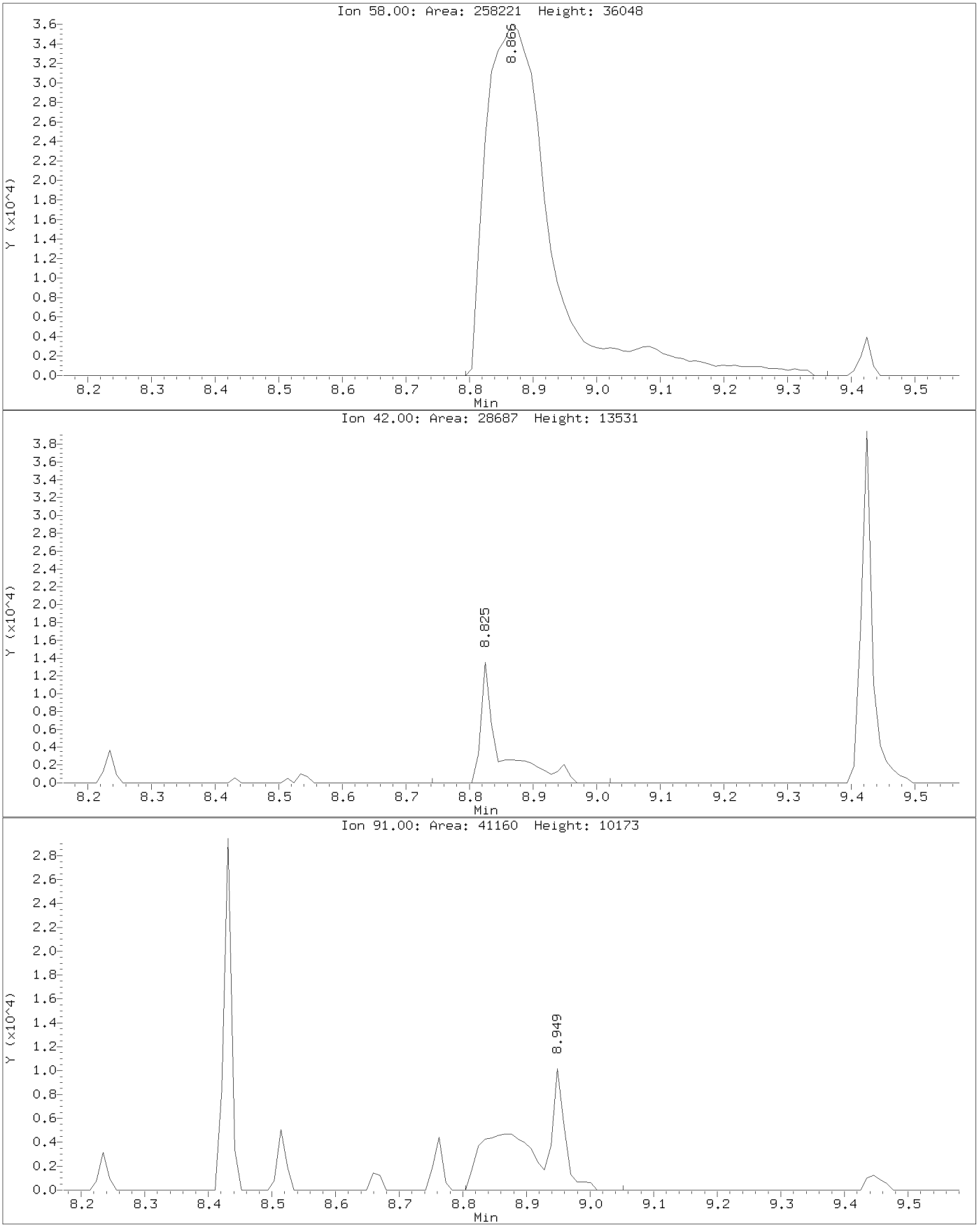
Injection Date: 24-JUL-2018 16:24
Instrument: gcms-u.i
Client Sample ID:

Compound: A,A-Dimethylphenethylamine
CAS Number: 122-09-8

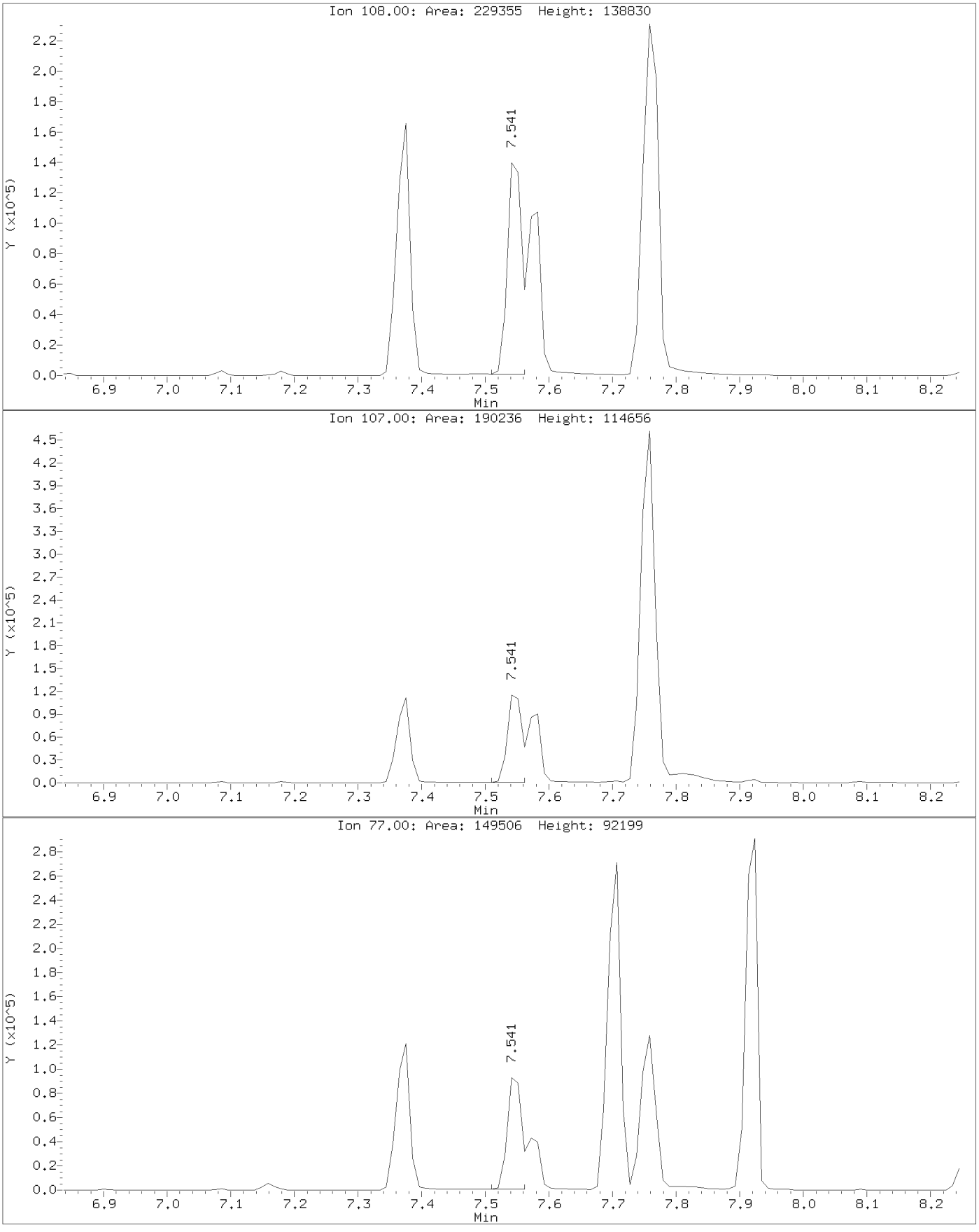
AFTER MANUAL INTEGRATION



BEFORE MANUAL INTEGRATION

Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\U1766.D
Injection Date: 24-JUL-2018 16:56
Instrument: gcms-u.i
Client Sample ID:

Compound: 2-Methylphenol
CAS Number: 95-48-7



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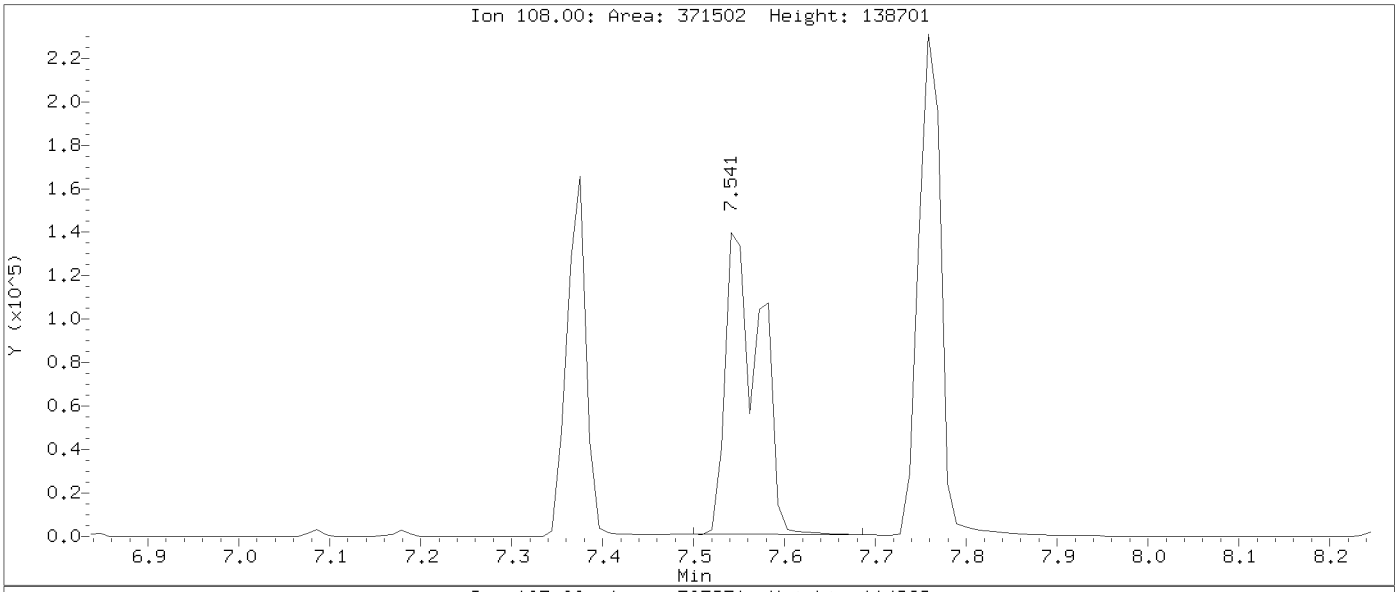
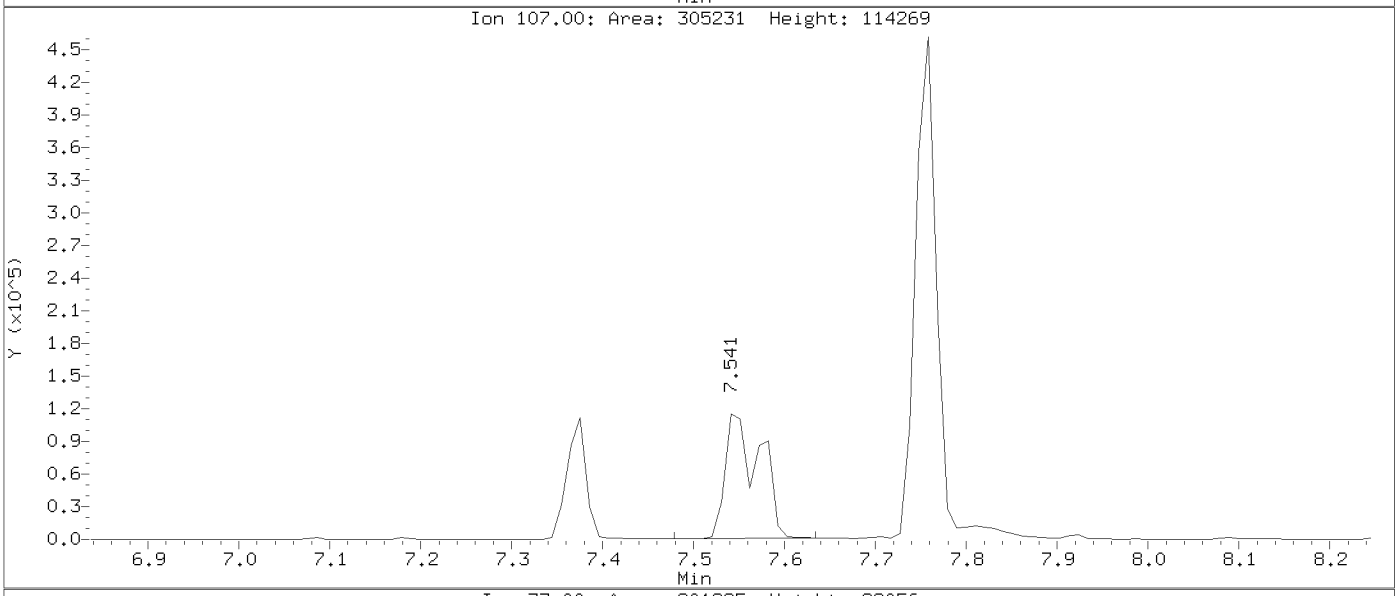
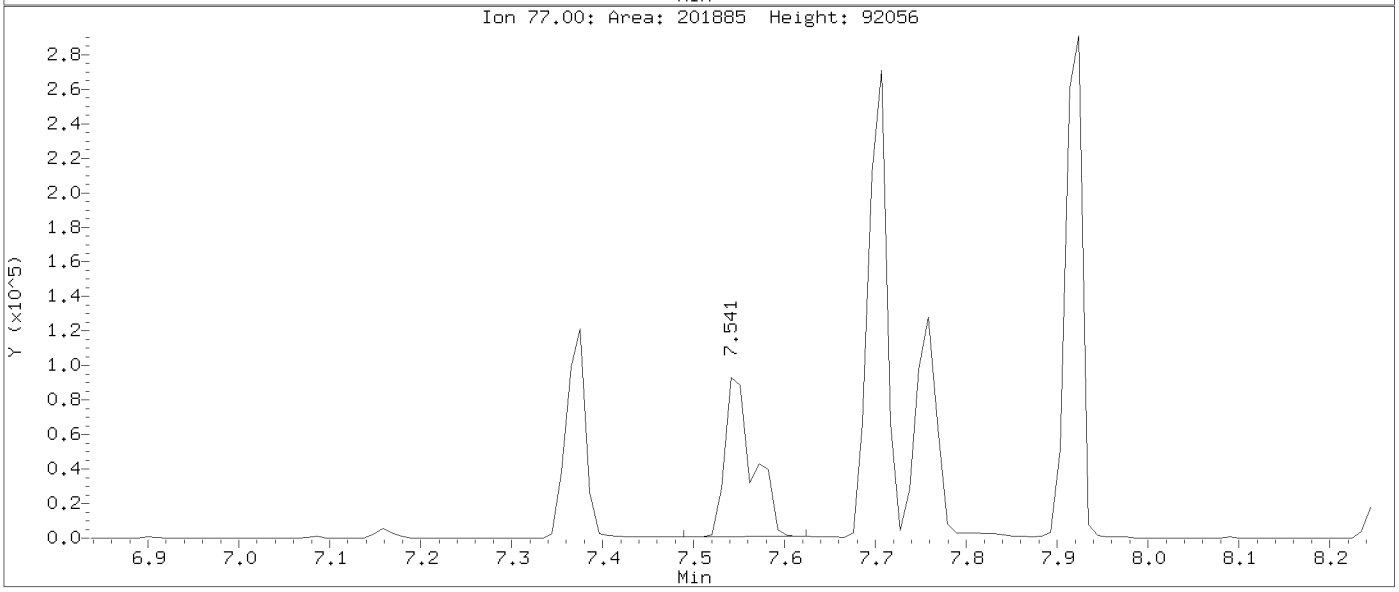
Instrument: gcms-u.i
Client Sample ID:

Compound: 2-Methylphenol
CAS Number: 95-48-7

AFTER MANUAL INTEGRATION







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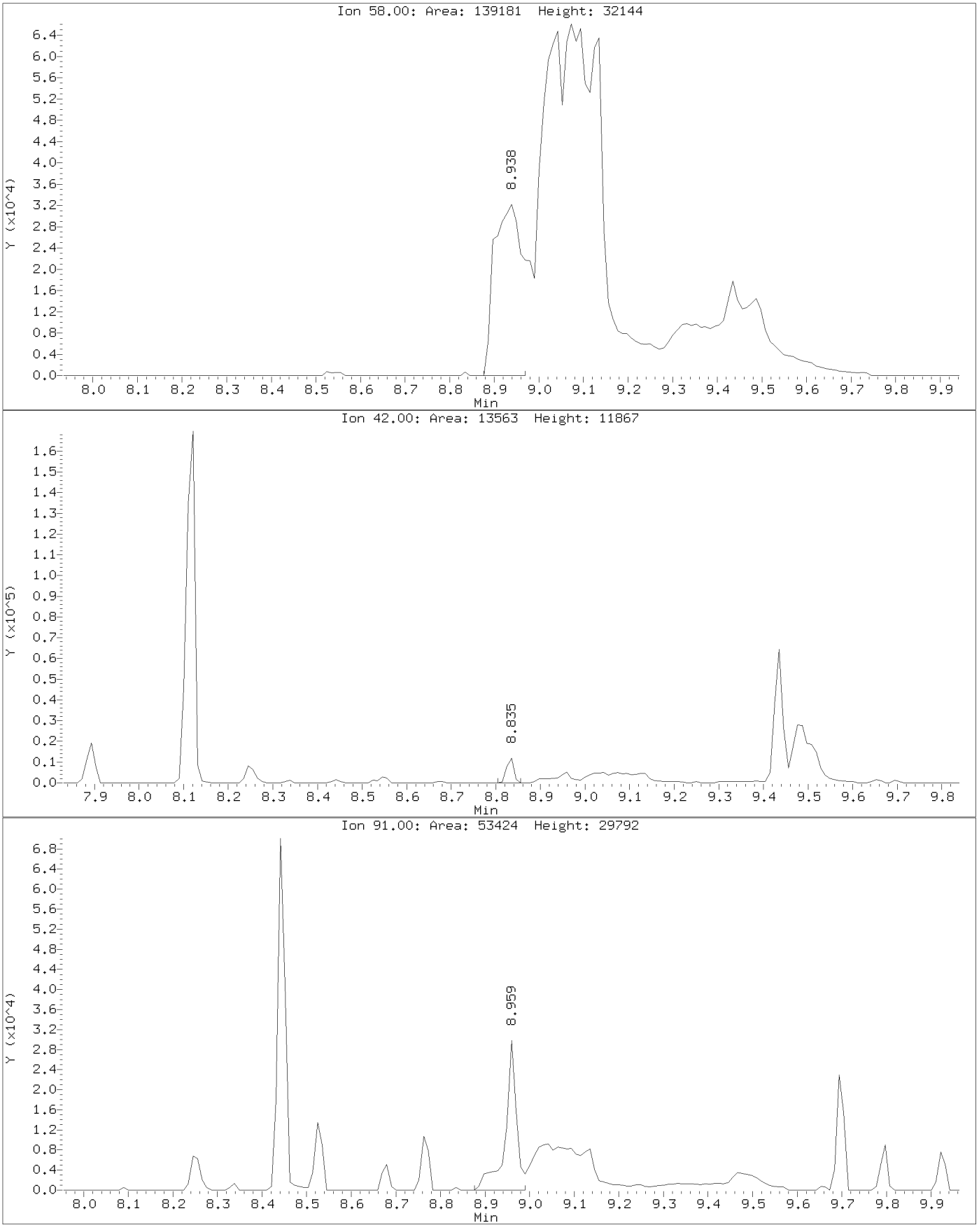
Injection Date: 24-JUL-2018 16:56
Instrument: gcms-u.i
Client Sample ID:

Compound: A,A-Dimethylphenethylamine
CAS Number: 122-09-8

BEFORE MANUAL INTEGRATION



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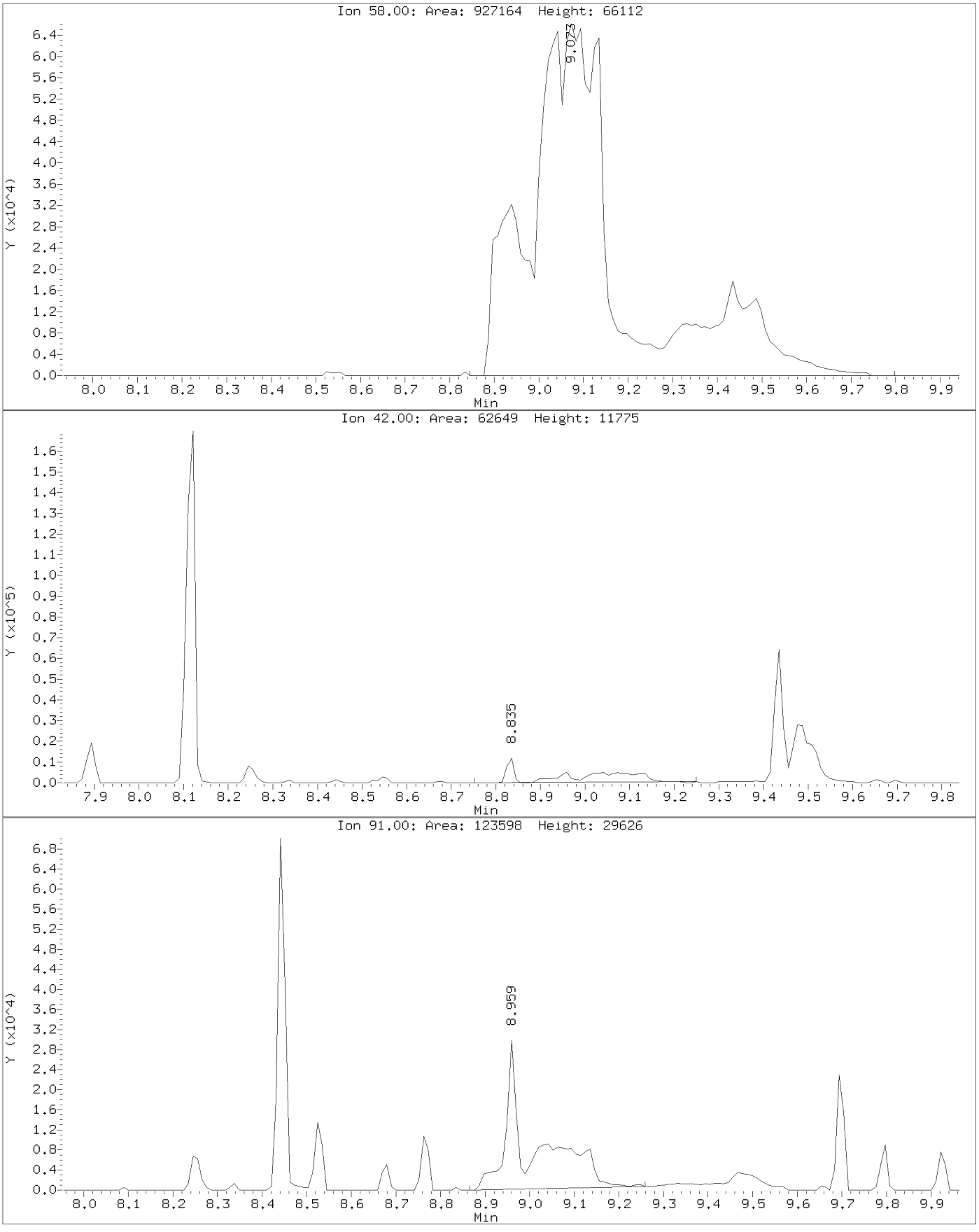
Client Sample ID:

Compound: A,A-Dimethylphenethylamine
CAS Number: 122-09-8

AFTER MANUAL INTEGRATION



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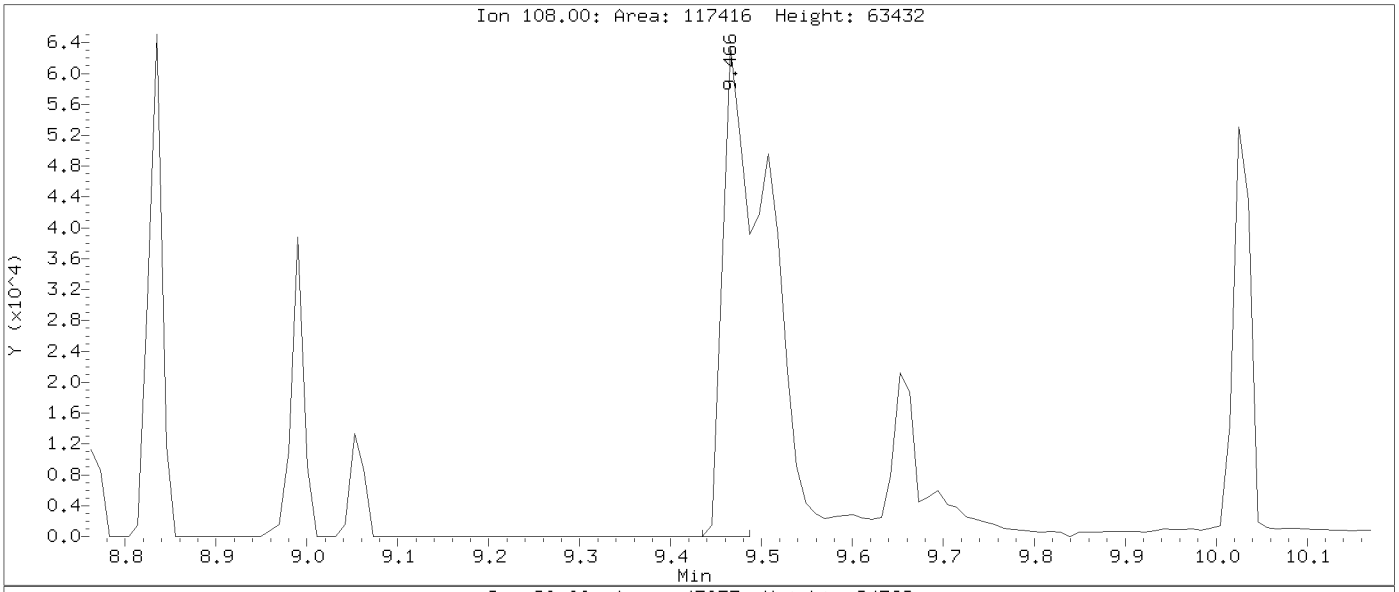
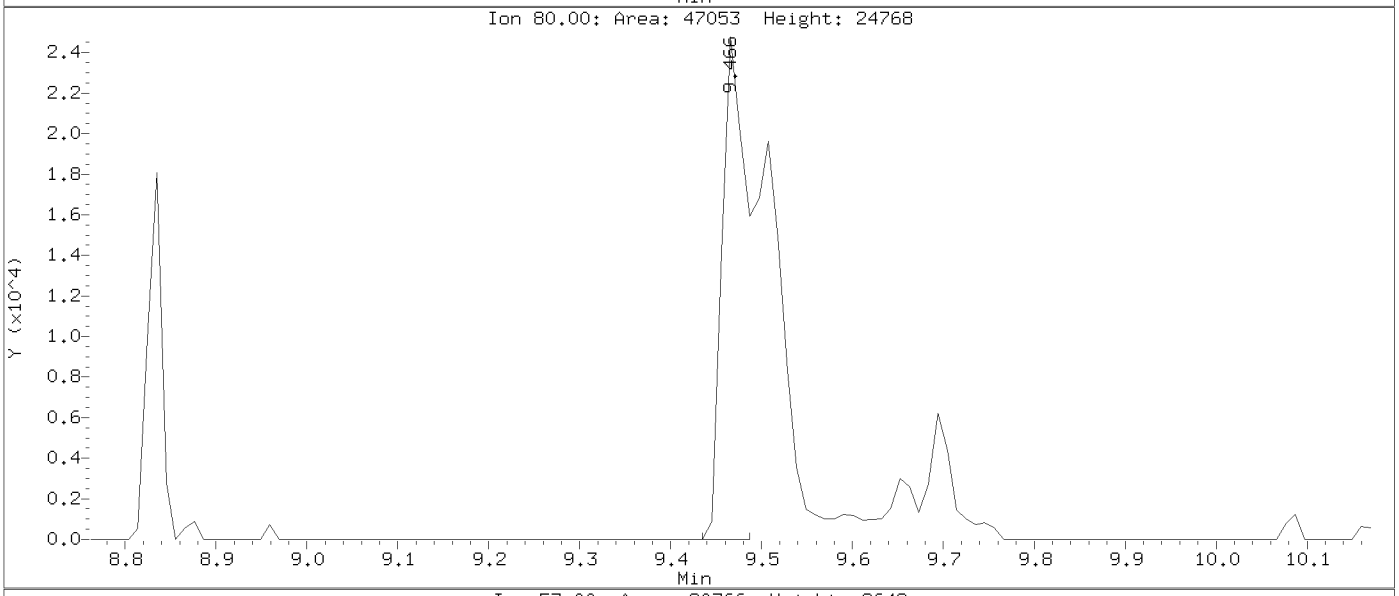
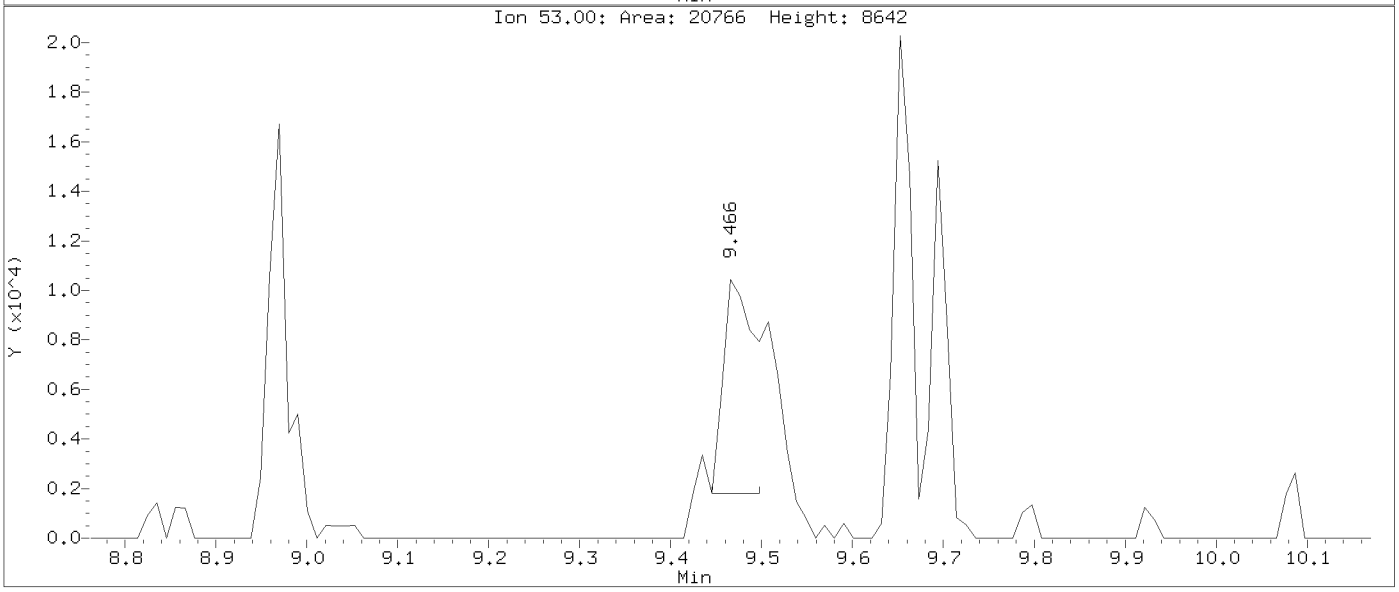
Injection Date: 24-JUL-2018 16:56
Instrument: gcms-u.i
Client Sample ID:

Compound: p-Phenylenediamine
CAS Number: 106-50-3

BEFORE MANUAL INTEGRATION







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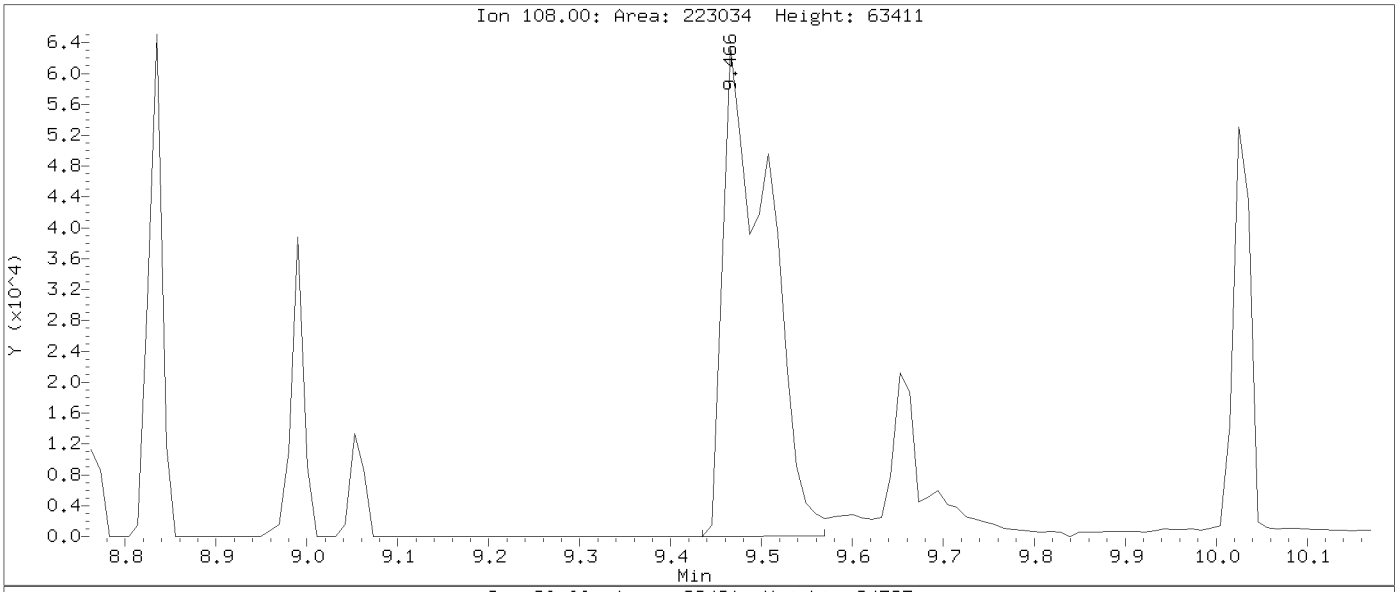
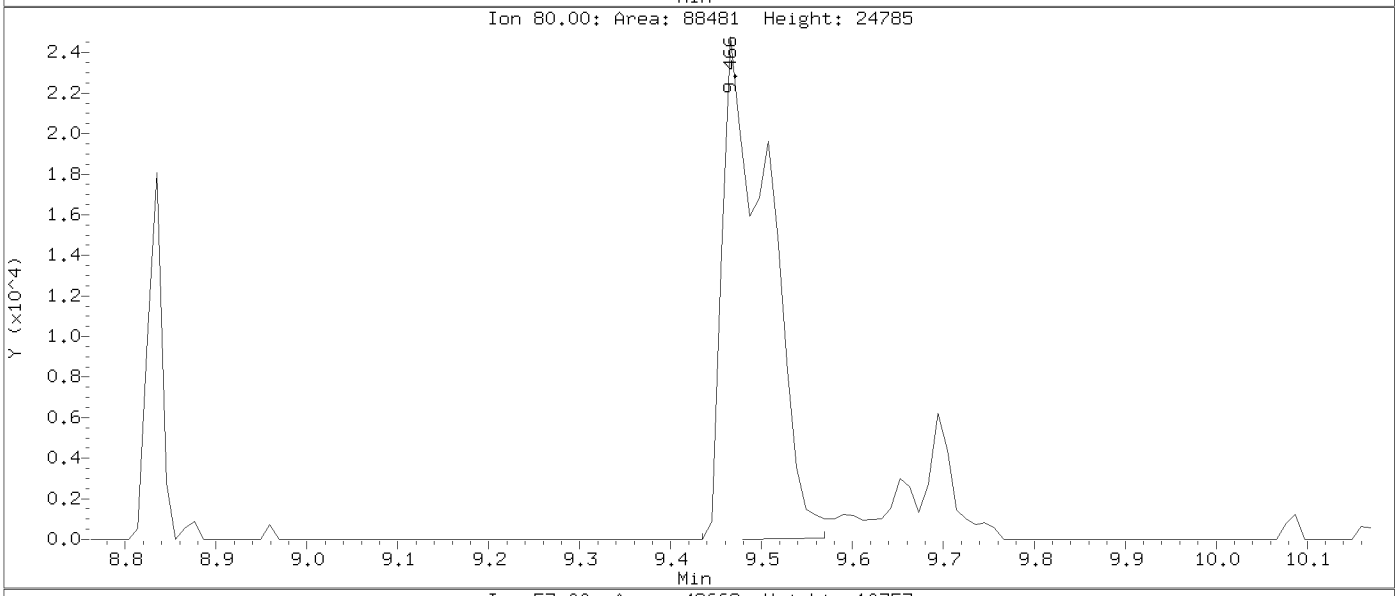
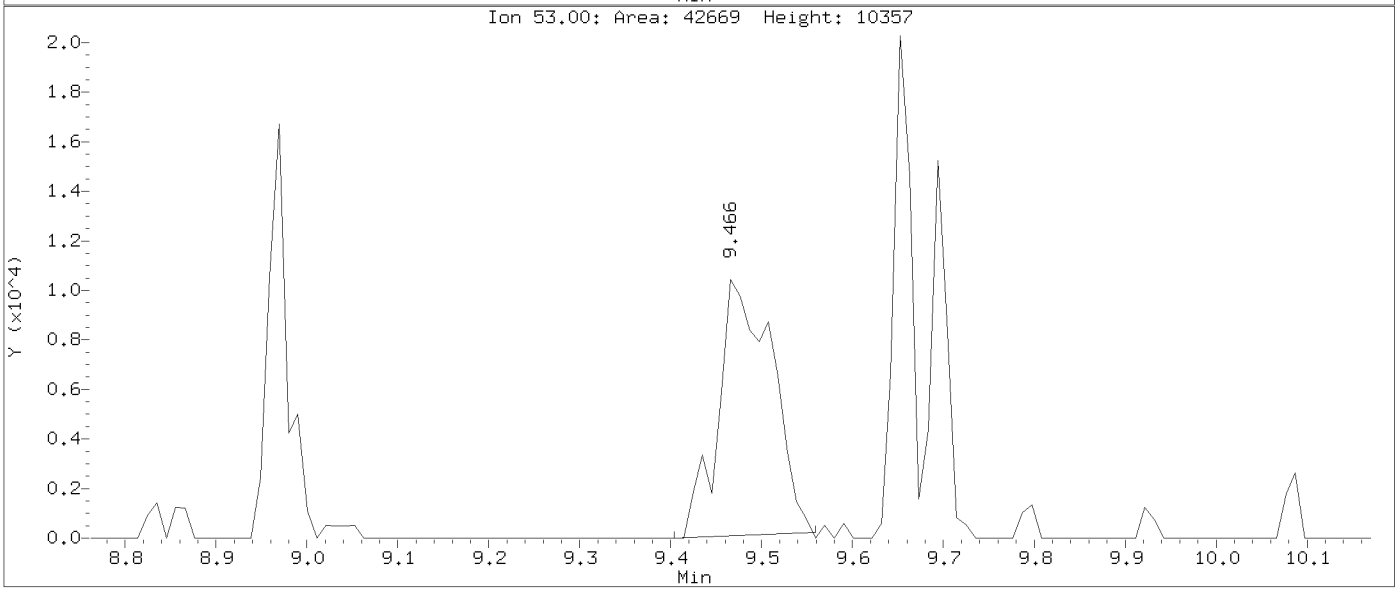
Client Sample ID:

Compound: p-Phenylenediamine
CAS Number: 106-50-3

AFTER MANUAL INTEGRATION







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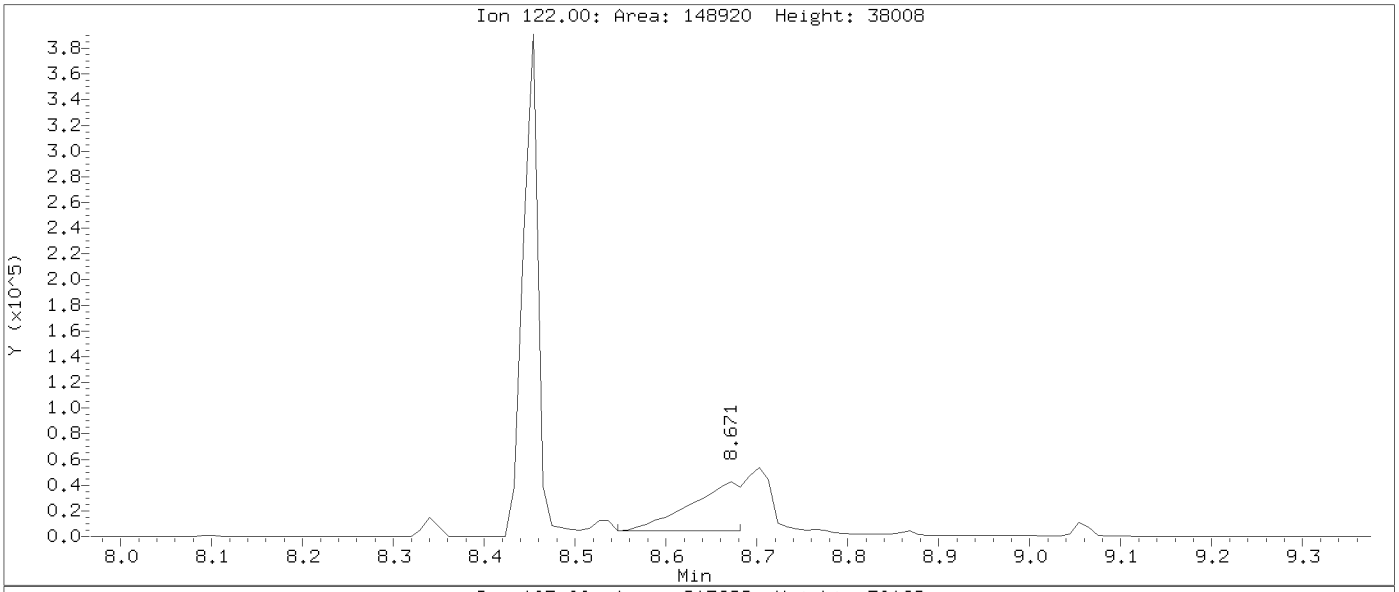
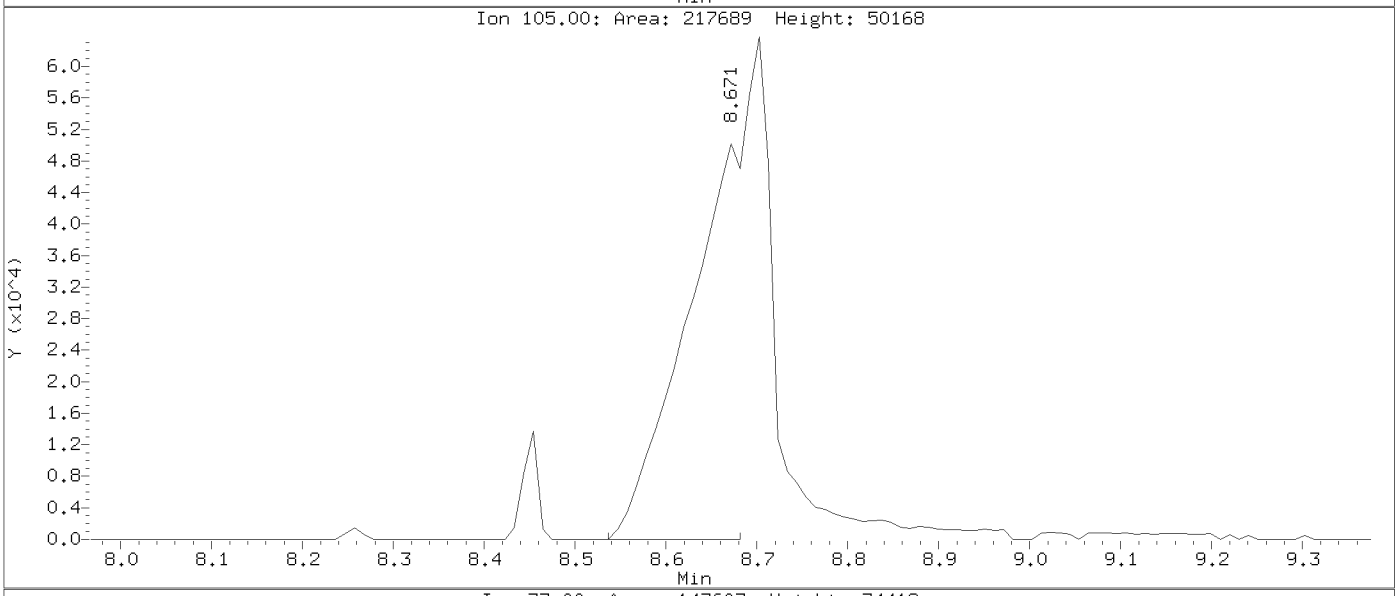
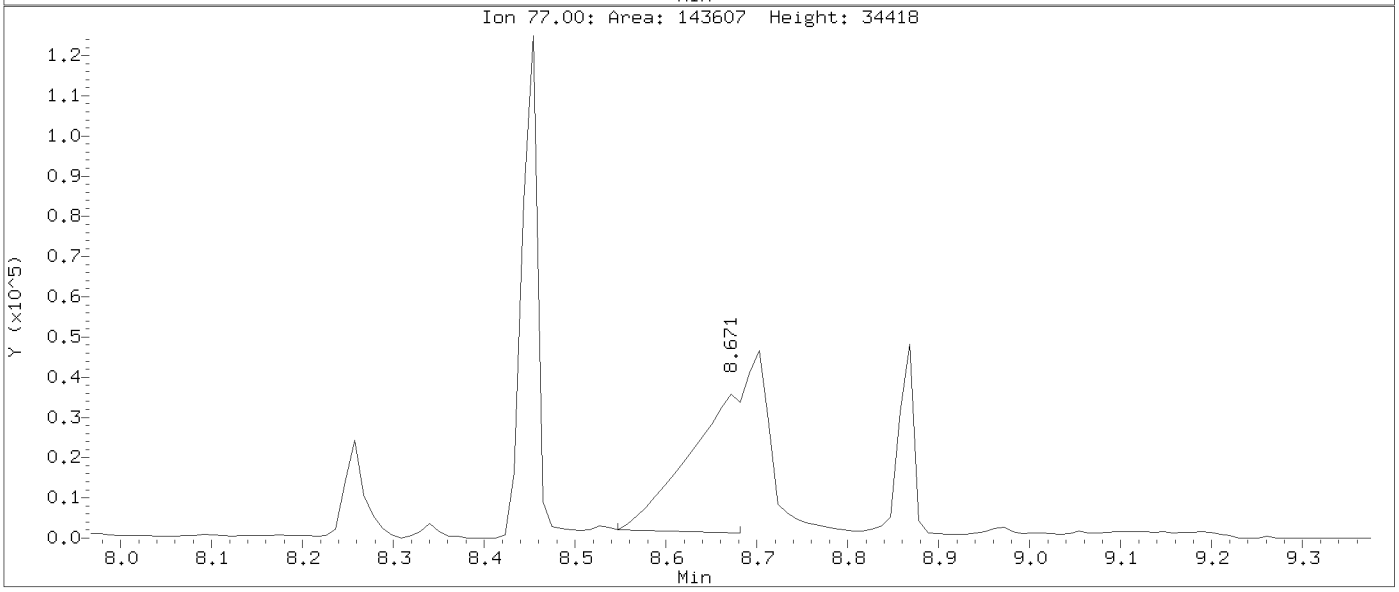
Injection Date: 24-JUL-2018 17:28
Instrument: gcms-u.i
Client Sample ID:

Compound: Benzoic acid
CAS Number: 65-85-0

BEFORE MANUAL INTEGRATION







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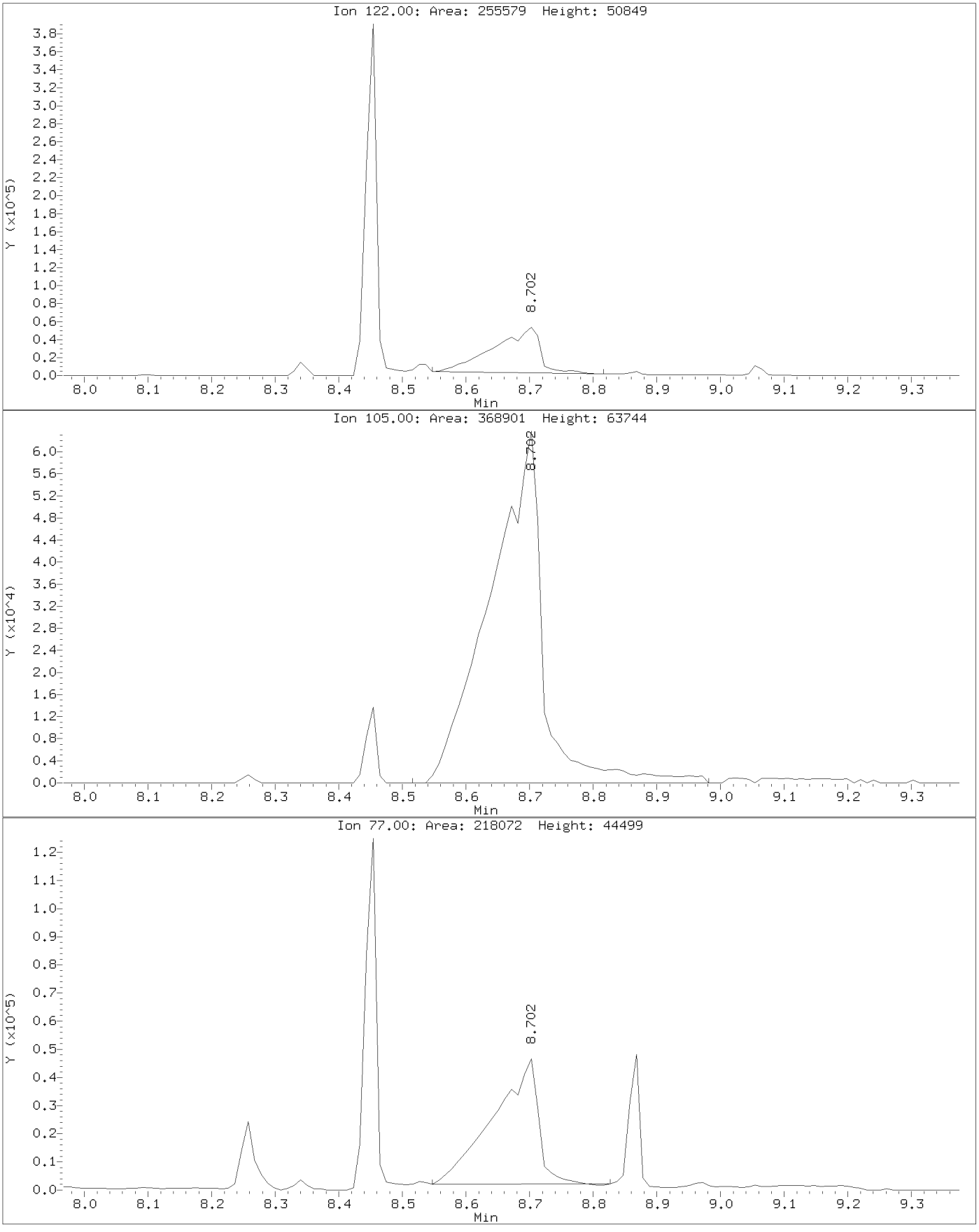
Client Sample ID:

Compound: Benzoic acid
CAS Number: 65-85-0

AFTER MANUAL INTEGRATION



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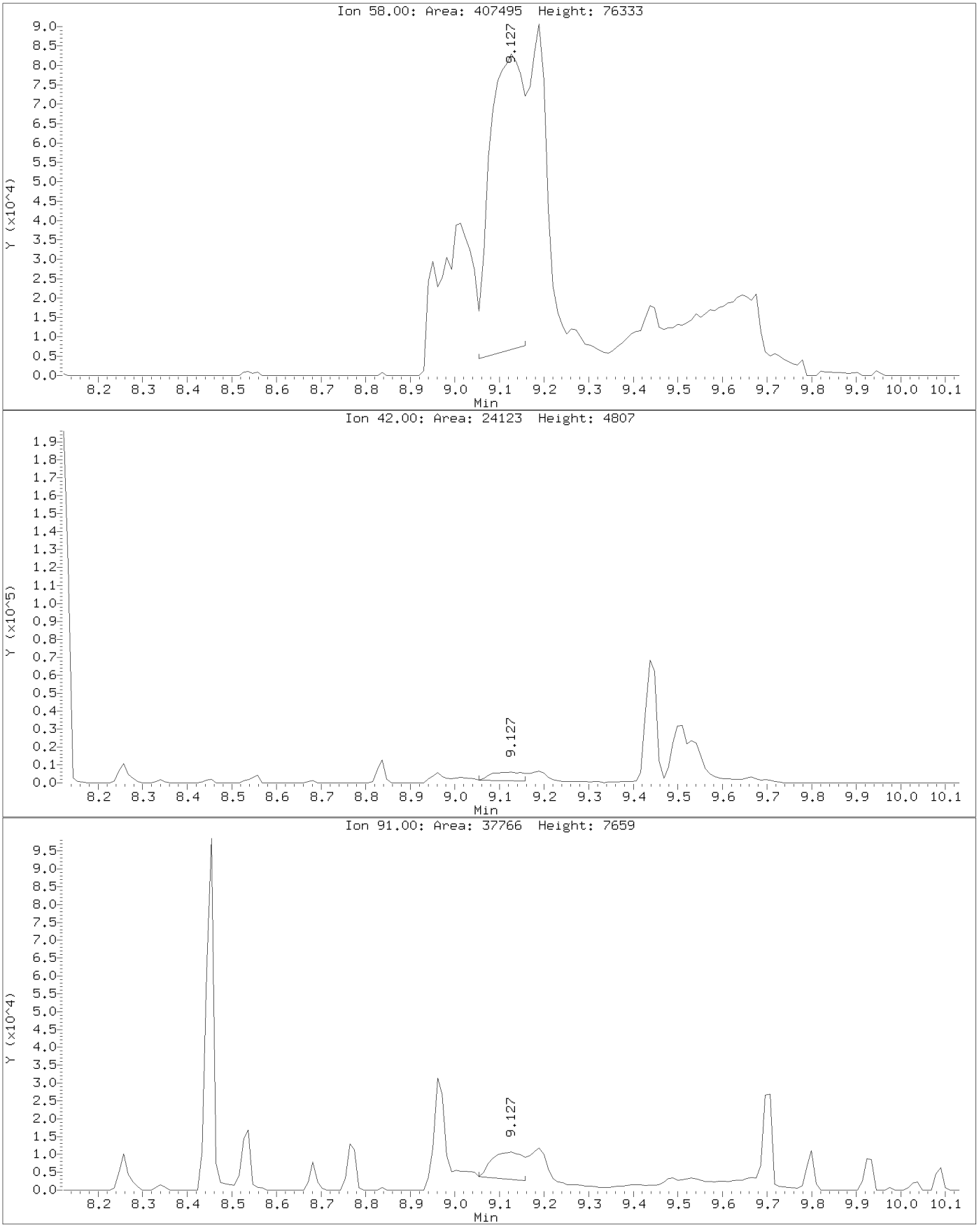
Injection Date: 24-JUL-2018 17:28
Instrument: gcms-u.i
Client Sample ID:

Compound: A,A-Dimethylphenethylamine
CAS Number: 122-09-8

BEFORE MANUAL INTEGRATION



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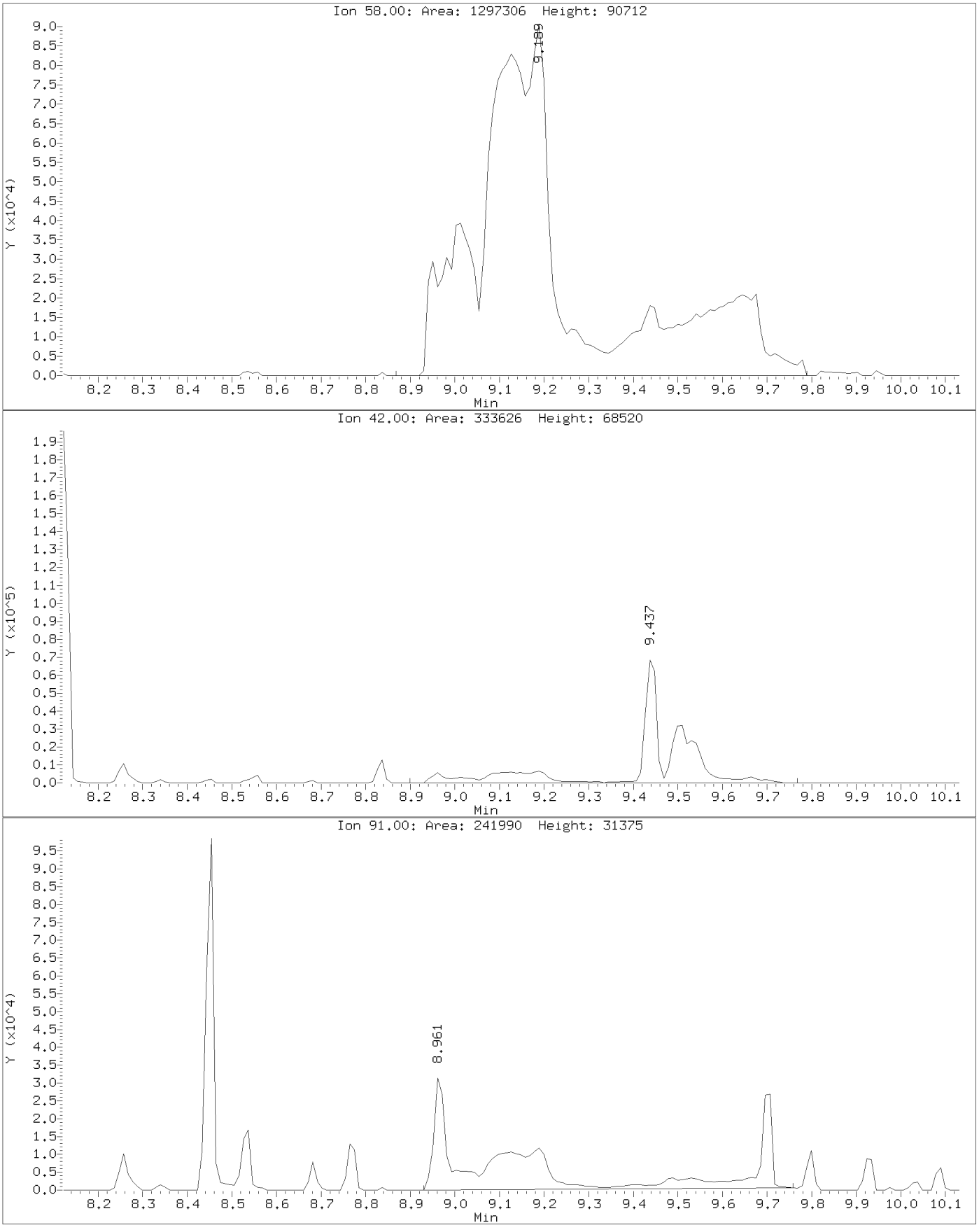
Client Sample ID:

Compound: A,A-Dimethylphenethylamine
CAS Number: 122-09-8

AFTER MANUAL INTEGRATION



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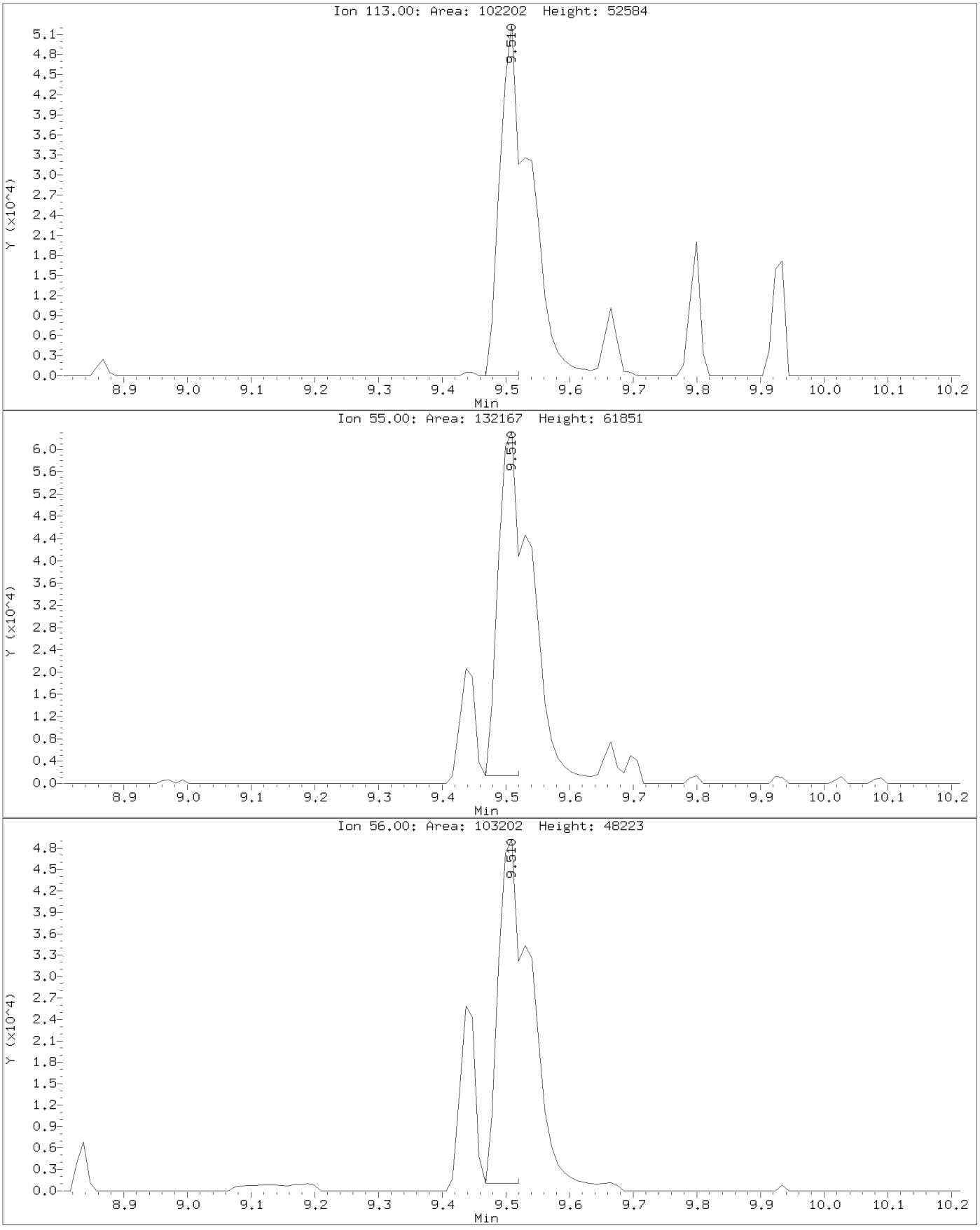
Injection Date: 24-JUL-2018 17:28
Instrument: gcms-u.i
Client Sample ID:

Compound: Caprolactam
CAS Number: 105-60-2

BEFORE MANUAL INTEGRATION



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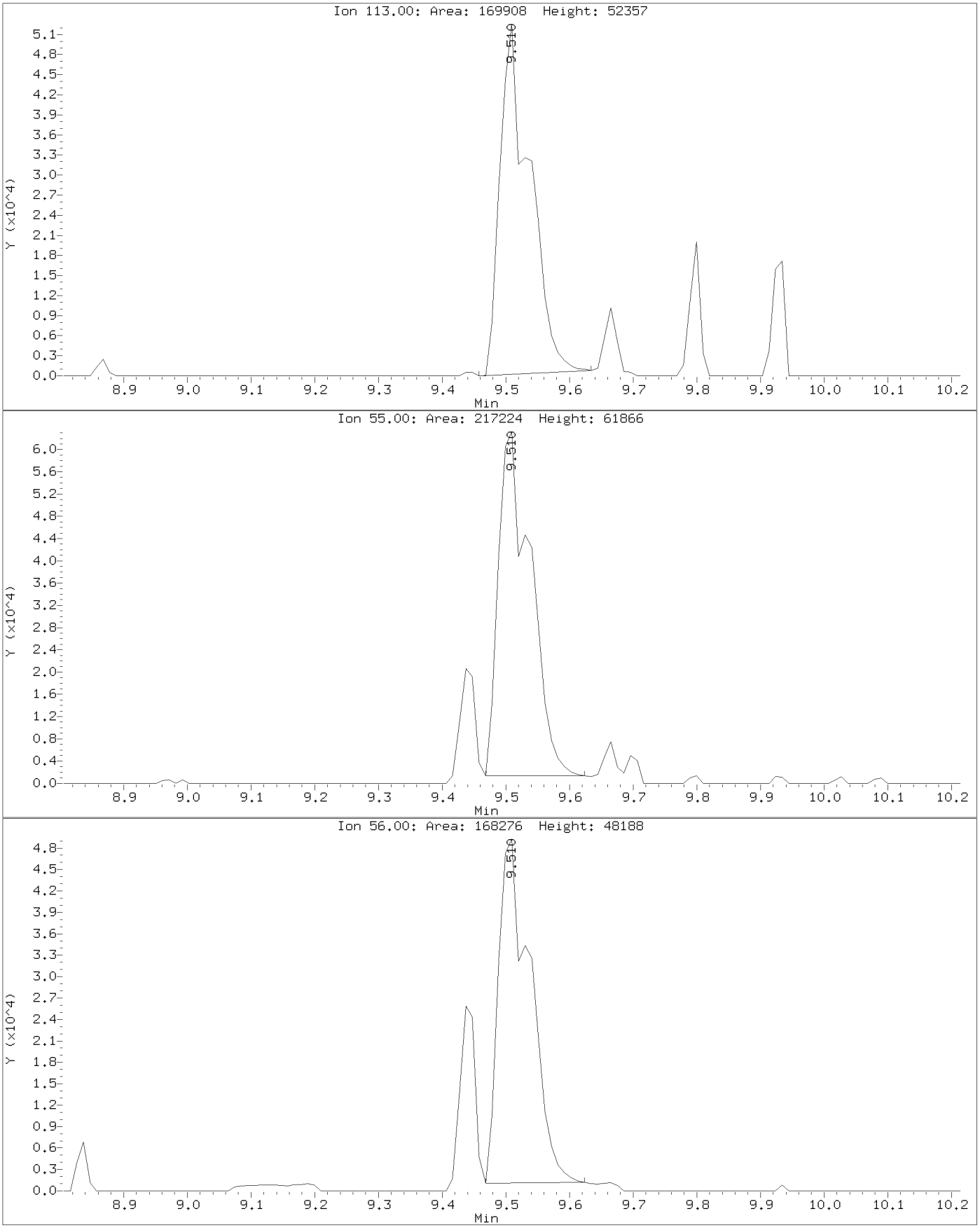
Instrument: gcms-u.i
Client Sample ID:

Compound: Caprolactam
CAS Number: 105-60-2

AFTER MANUAL INTEGRATION



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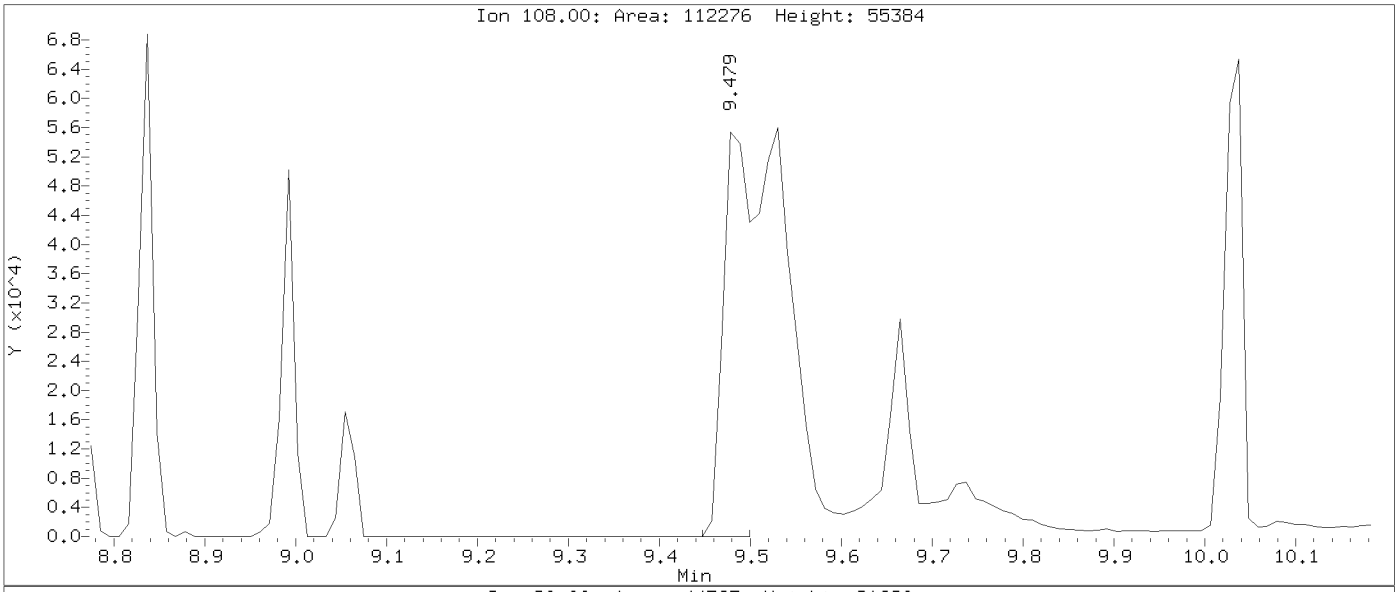
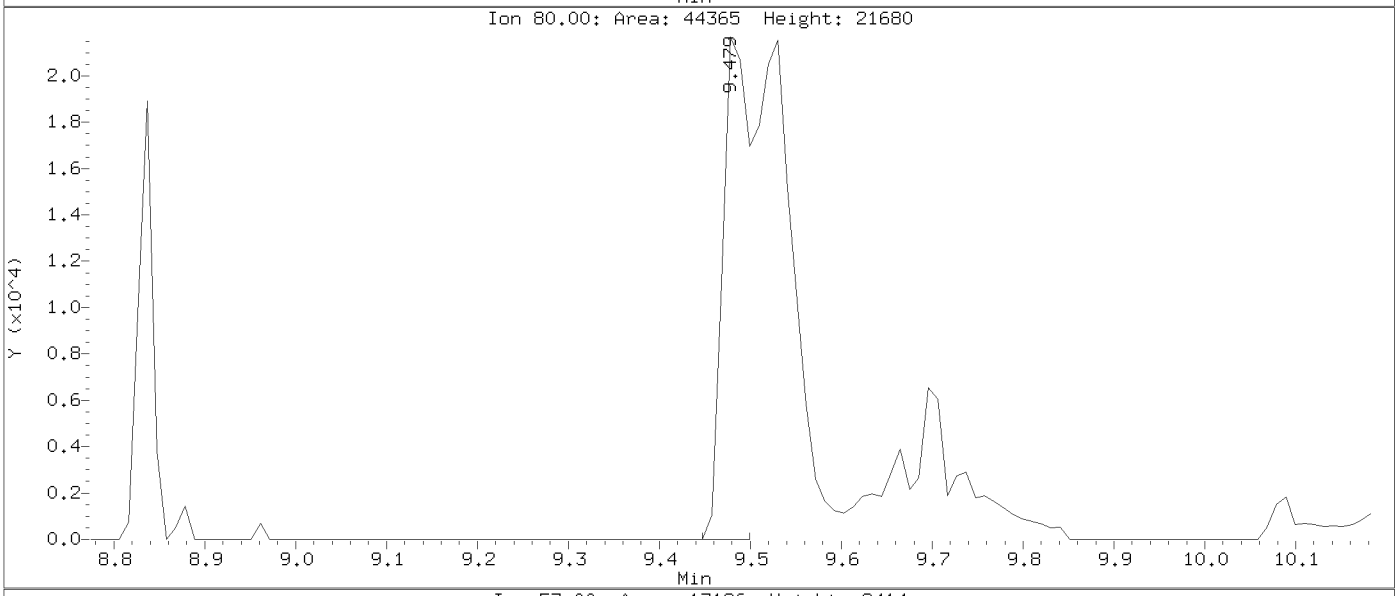
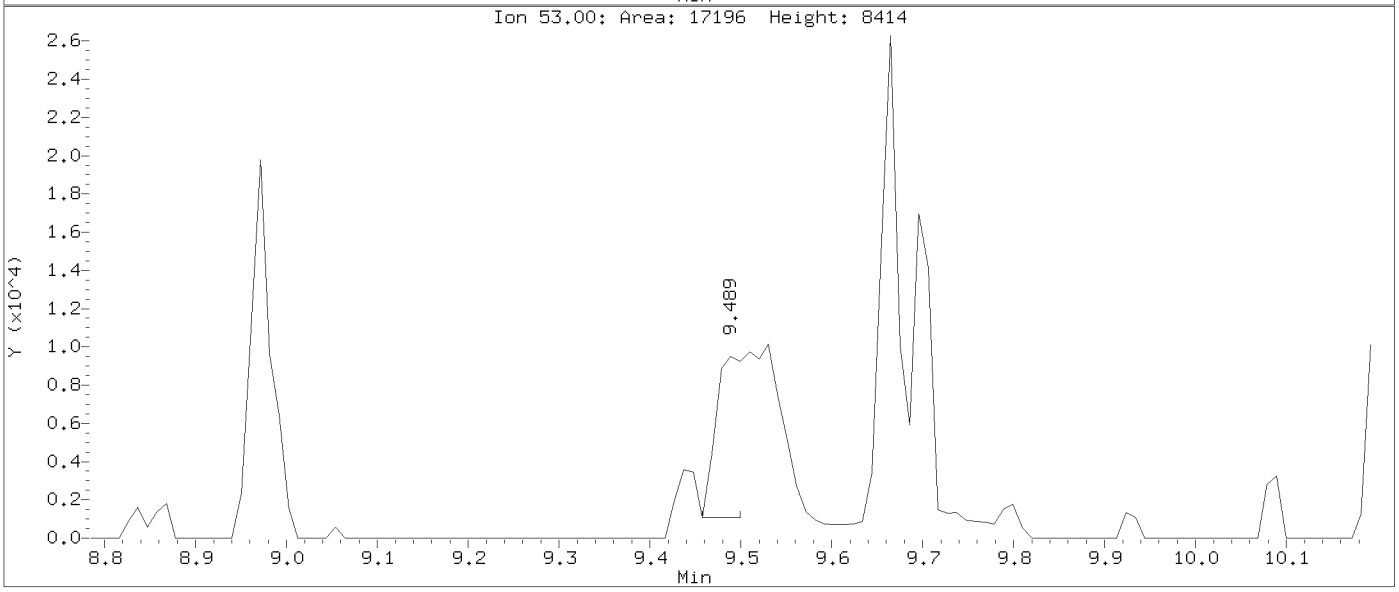
Injection Date: 24-JUL-2018 17:28
Instrument: gcms-u.i
Client Sample ID:

Compound: p-Phenylenediamine
CAS Number: 106-50-3

BEFORE MANUAL INTEGRATION







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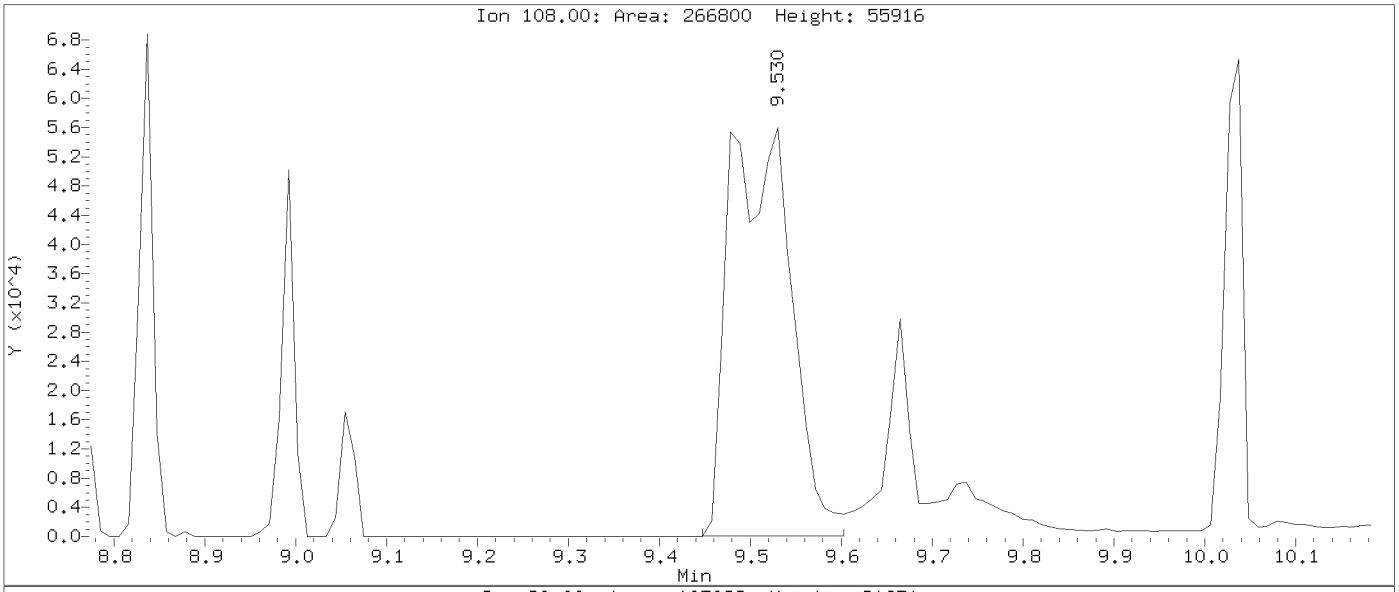
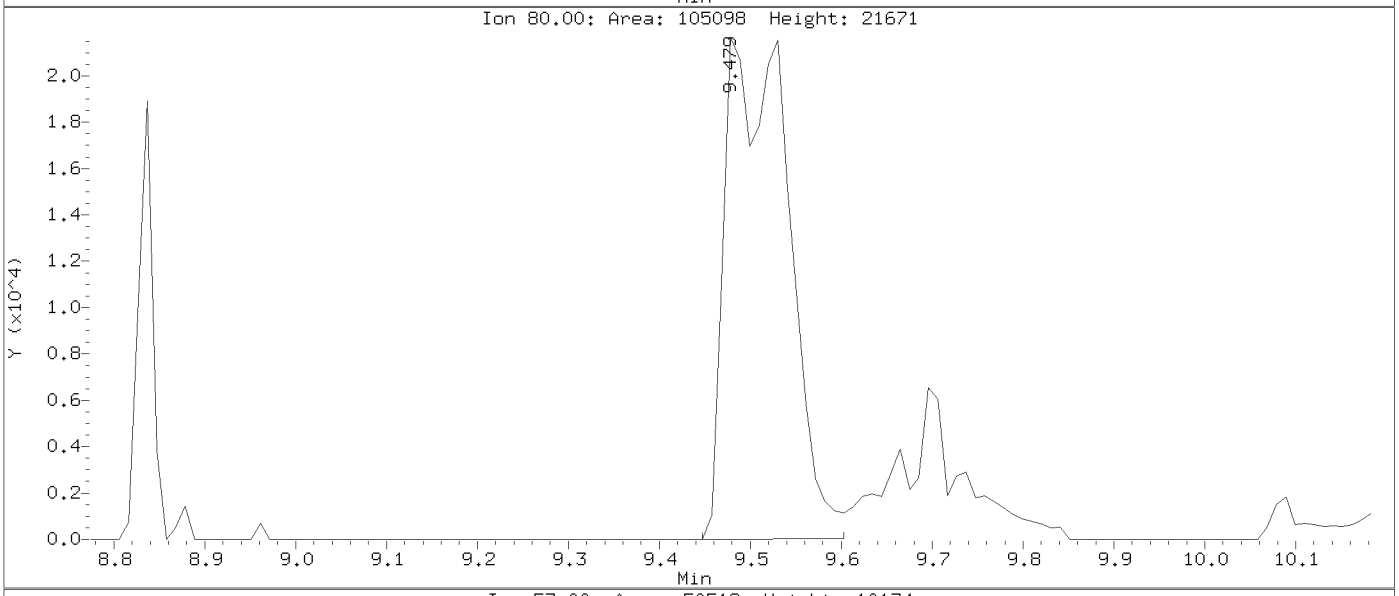
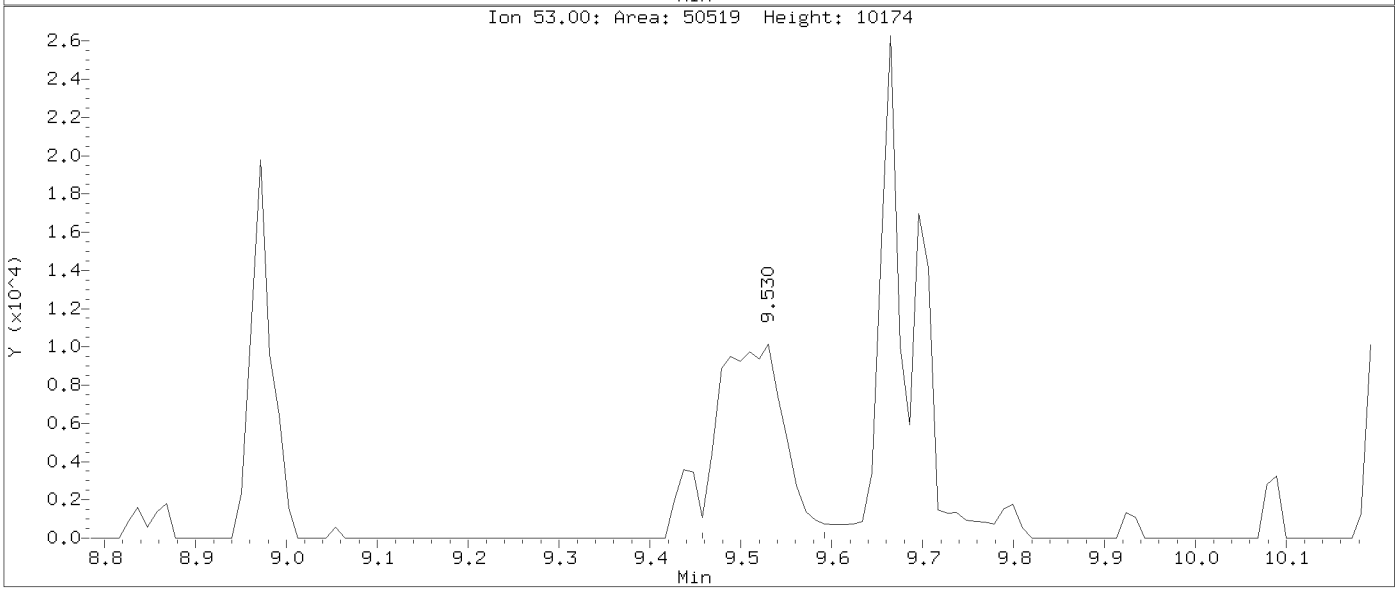
Client Sample ID:

Compound: p-Phenylenediamine
CAS Number: 106-50-3

AFTER MANUAL INTEGRATION







BEFORE MANUAL INTEGRATION

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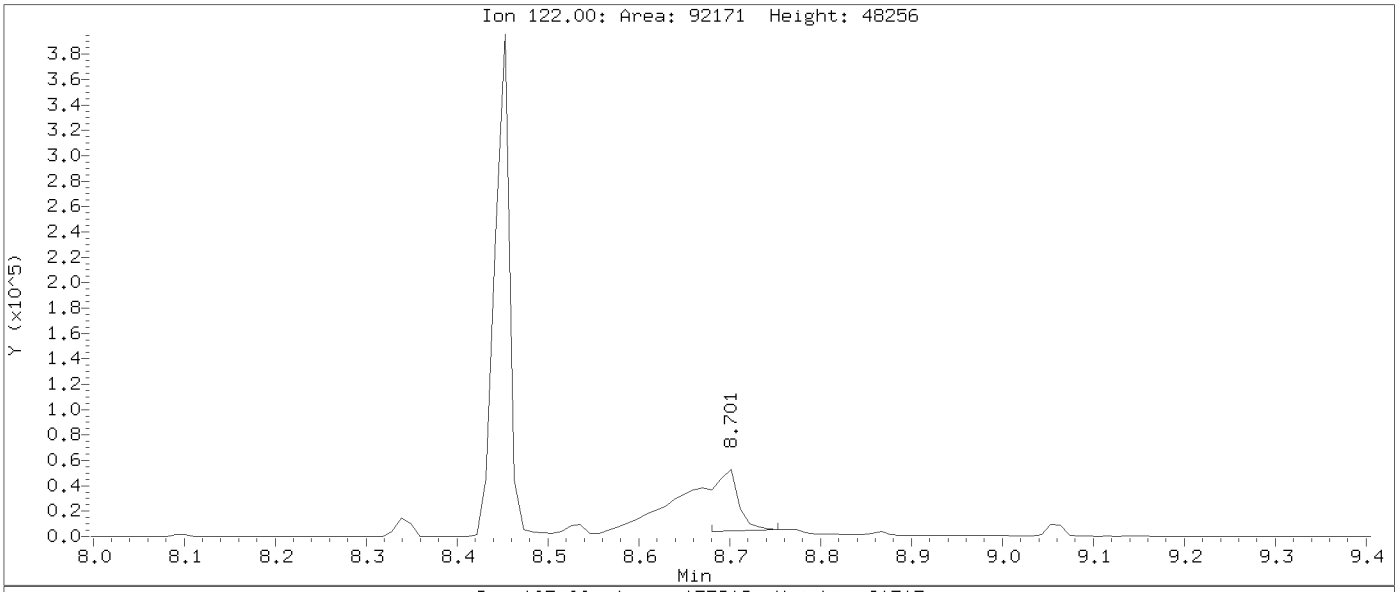
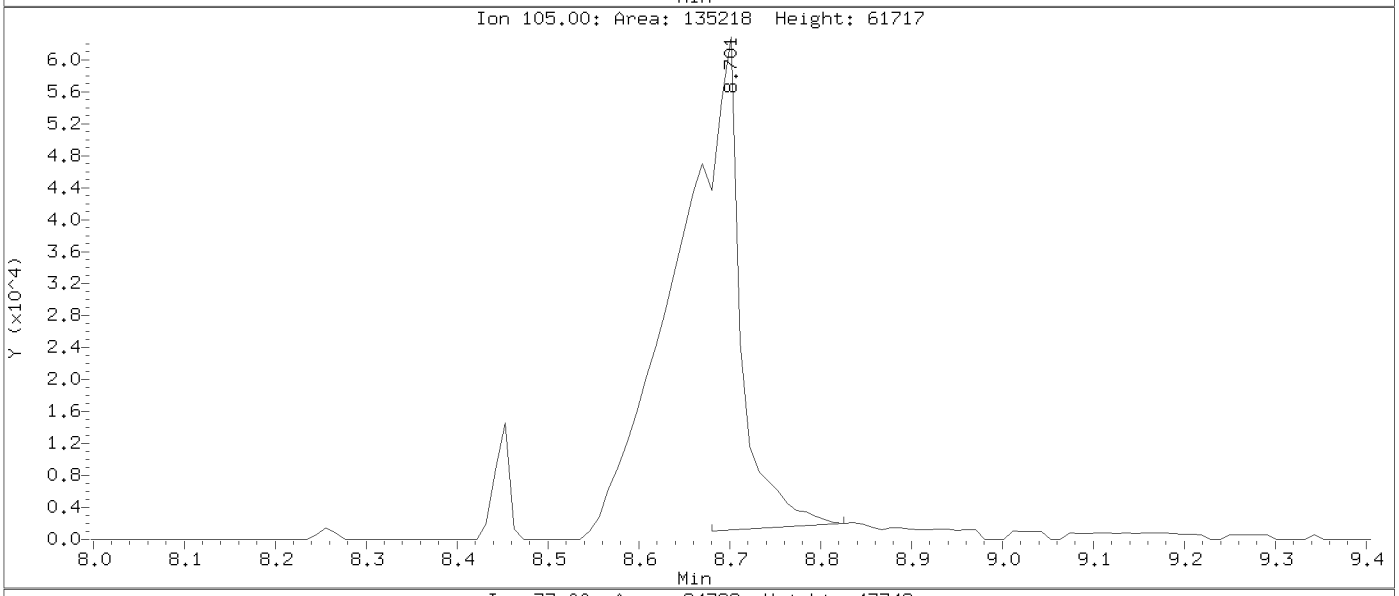
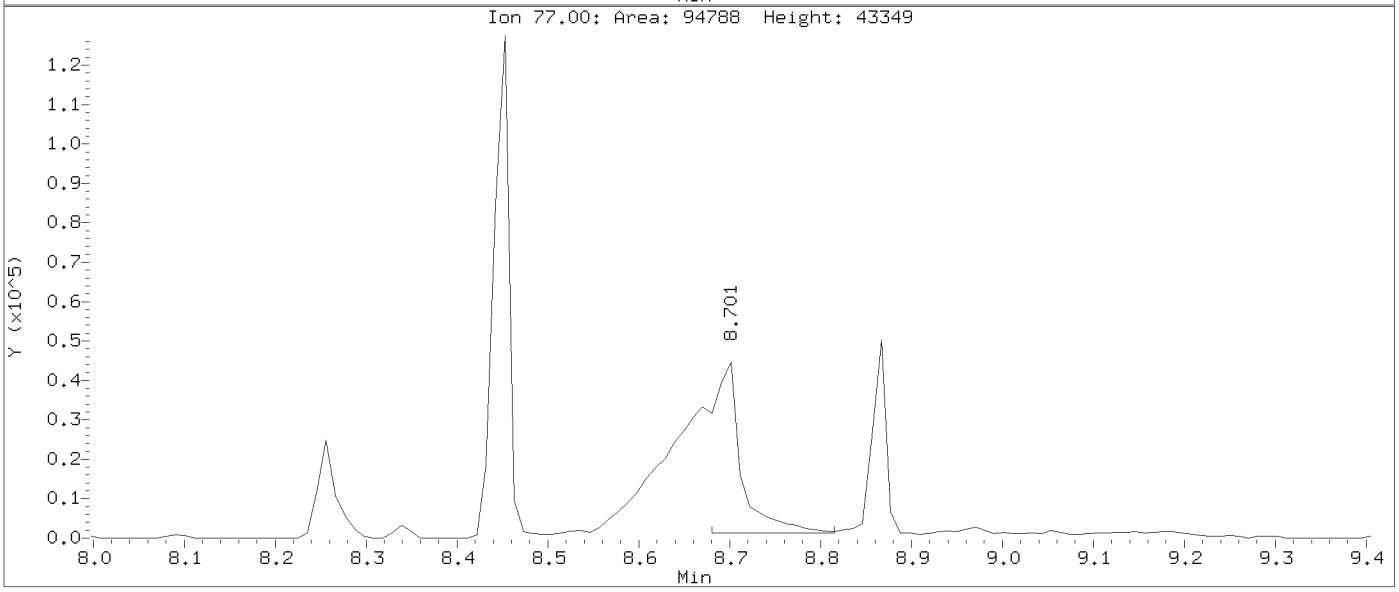
Injection Date: 24-JUL-2018 18:01
Instrument: gcms-u.i
Client Sample ID:

Compound: Benzoic acid
CAS Number: 65-85-0



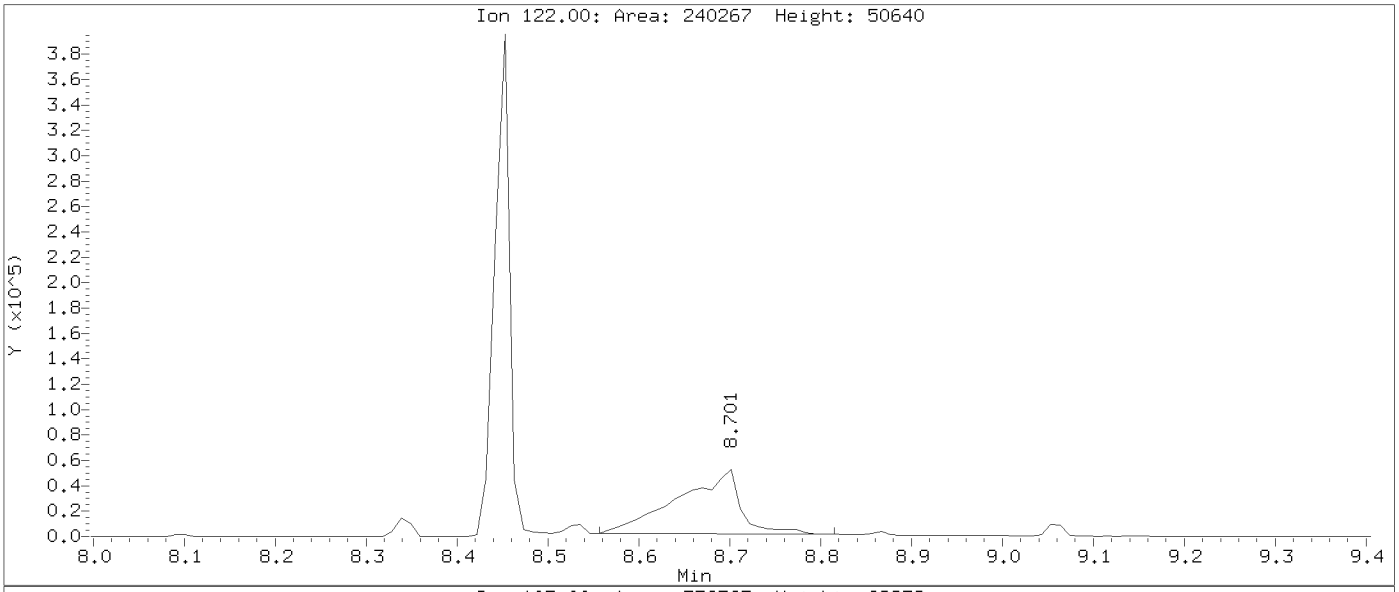


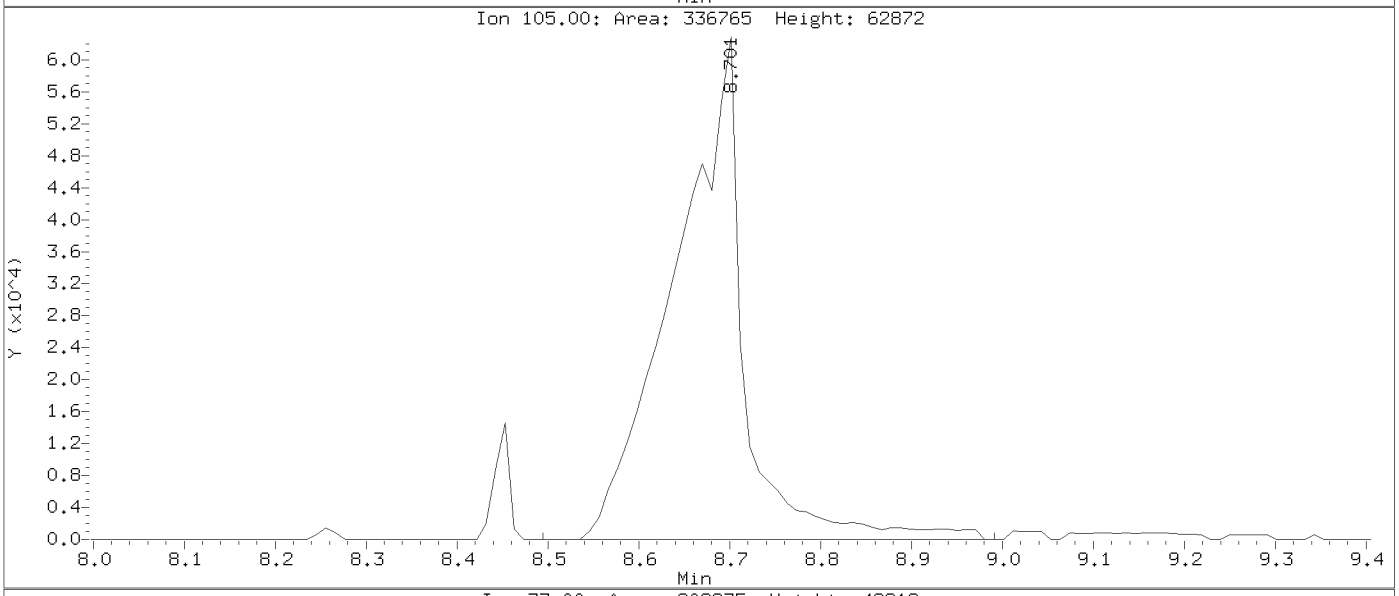


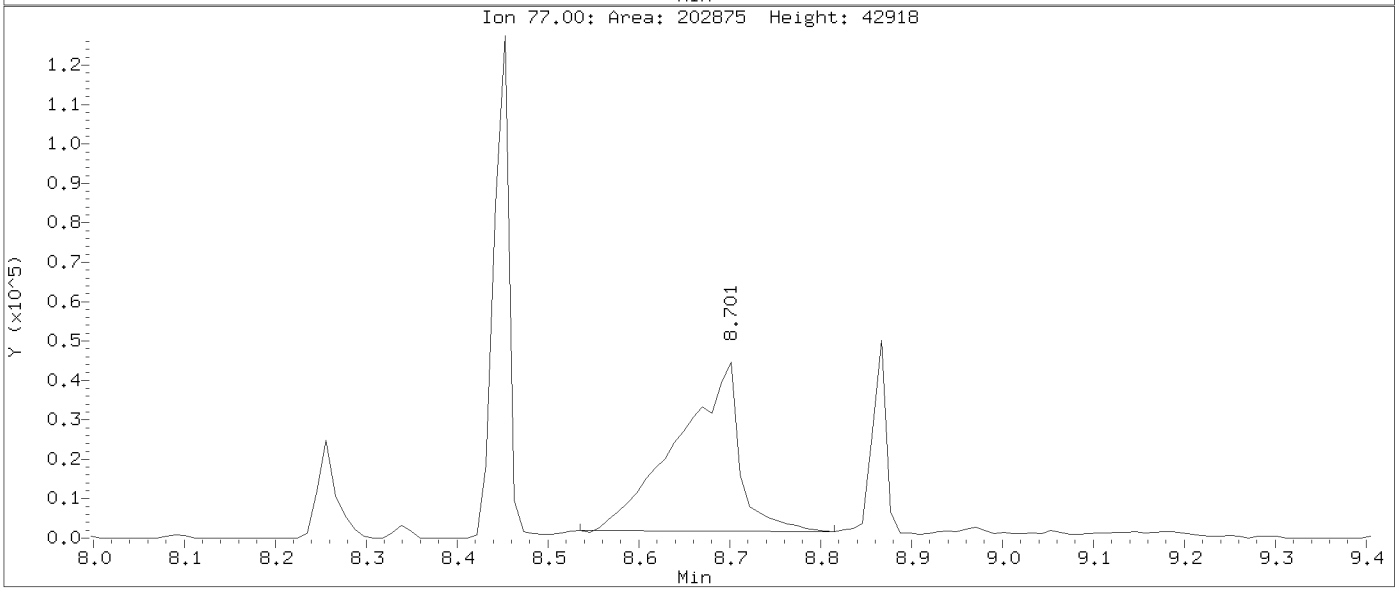
Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\U1768.D
Injection Date: 24-JUL-2018 18:01
Instrument: gcms-u.i
Client Sample ID:

Compound: Benzoic acid
CAS Number: 65-85-0

AFTER MANUAL INTEGRATION



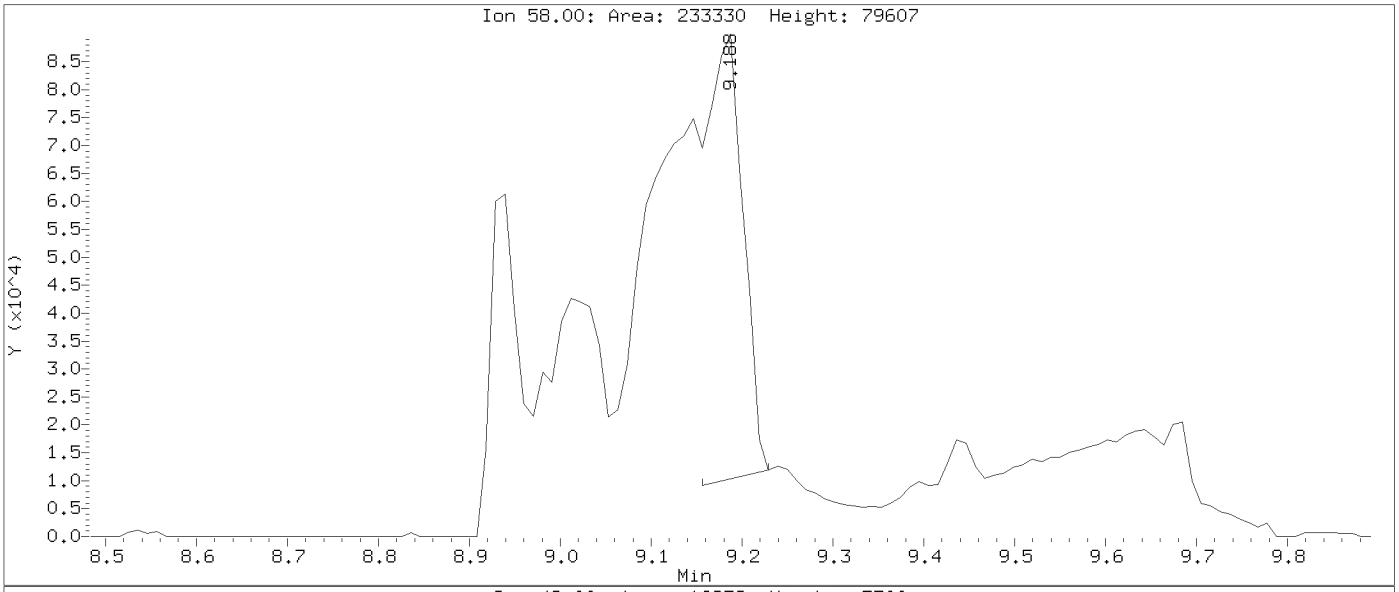


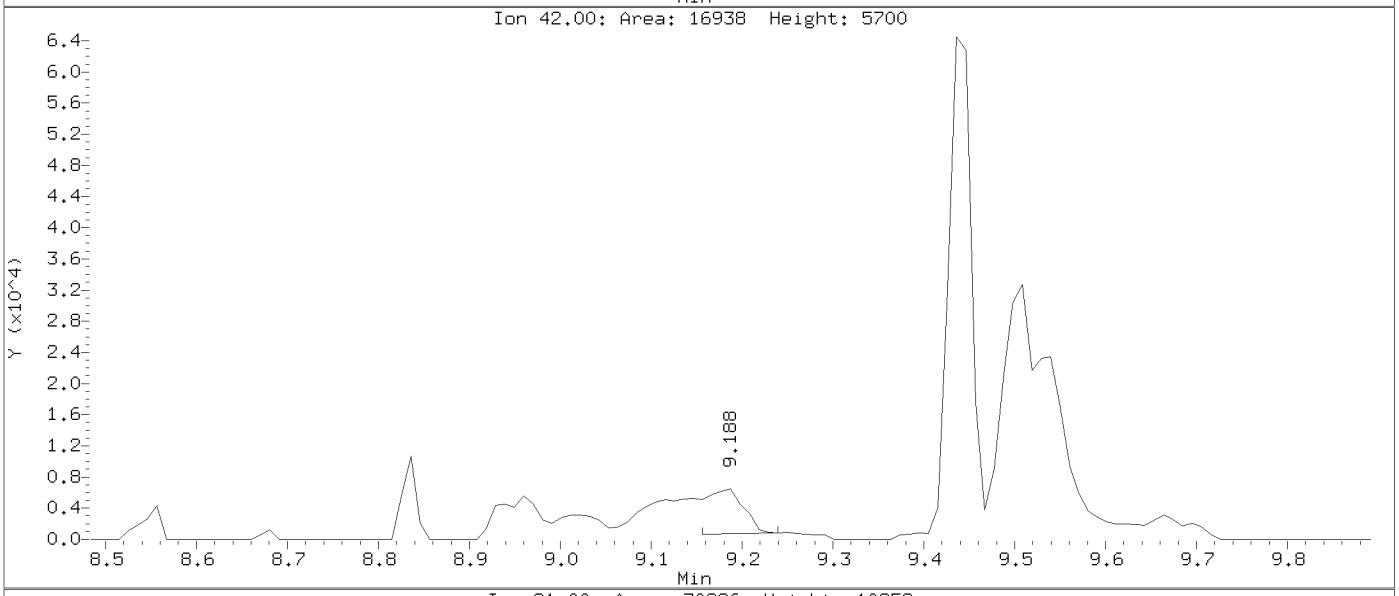


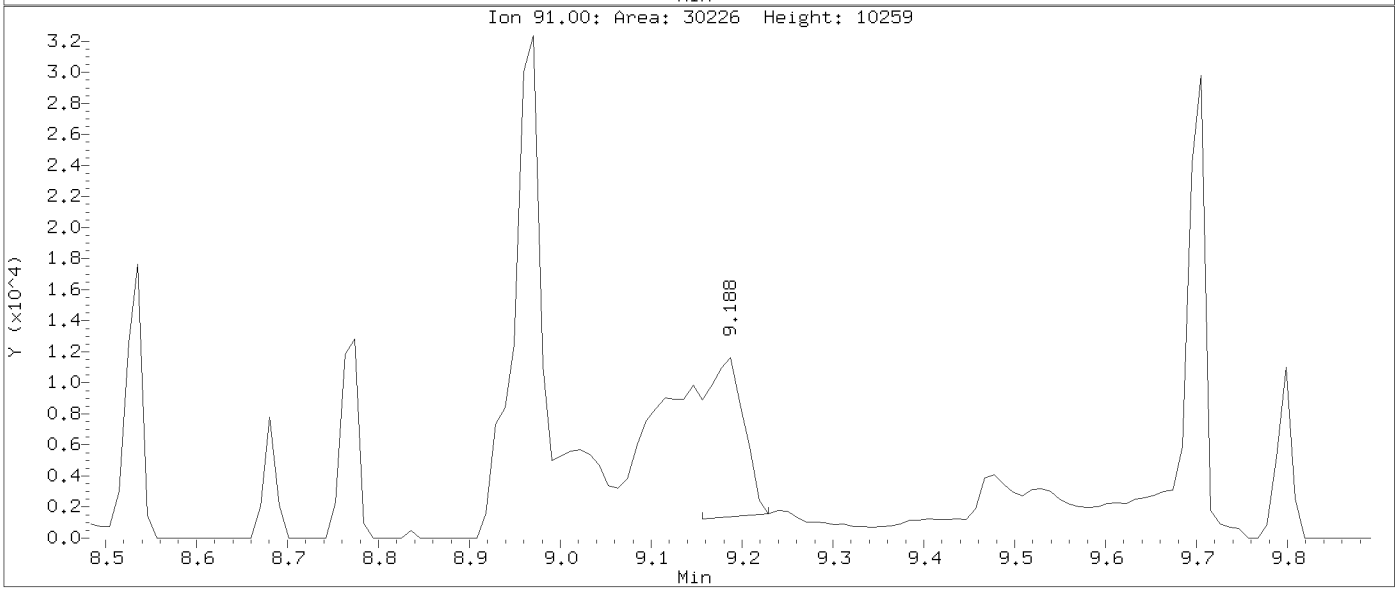
Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\U1768.D
Injection Date: 24-JUL-2018 18:01
Instrument: gcms-u.i
Client Sample ID:

Compound: A,A-Dimethylphenethylamine
CAS Number: 122-09-8

BEFORE MANUAL INTEGRATION



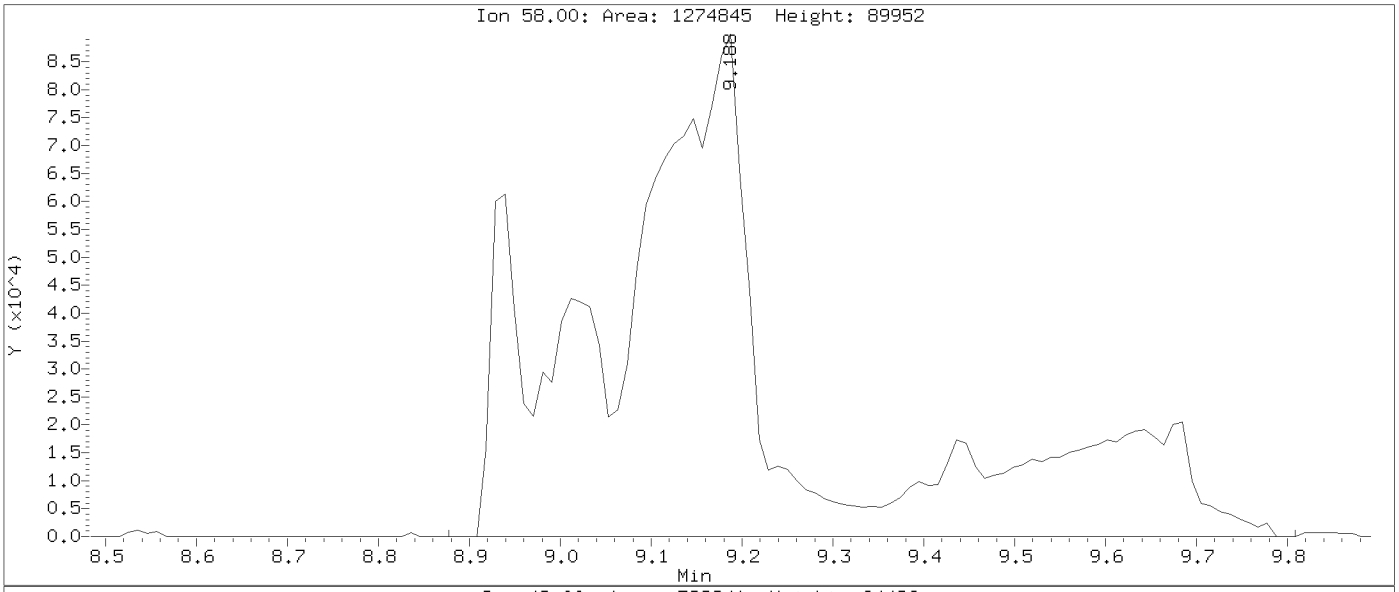


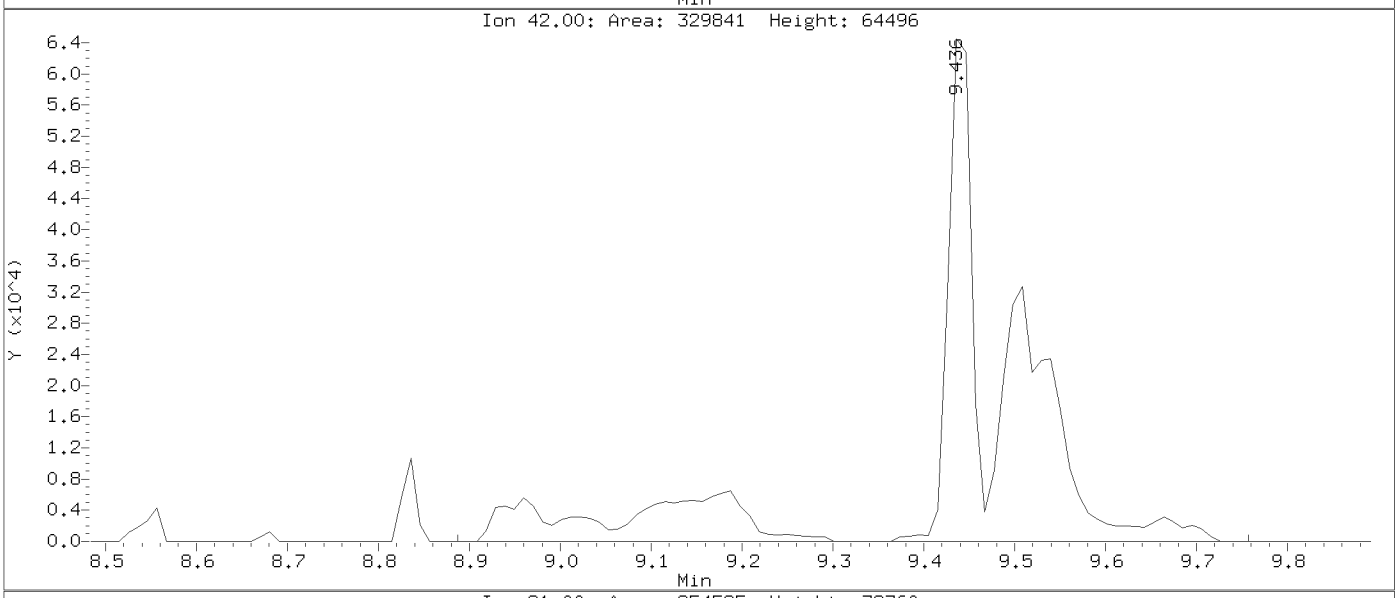


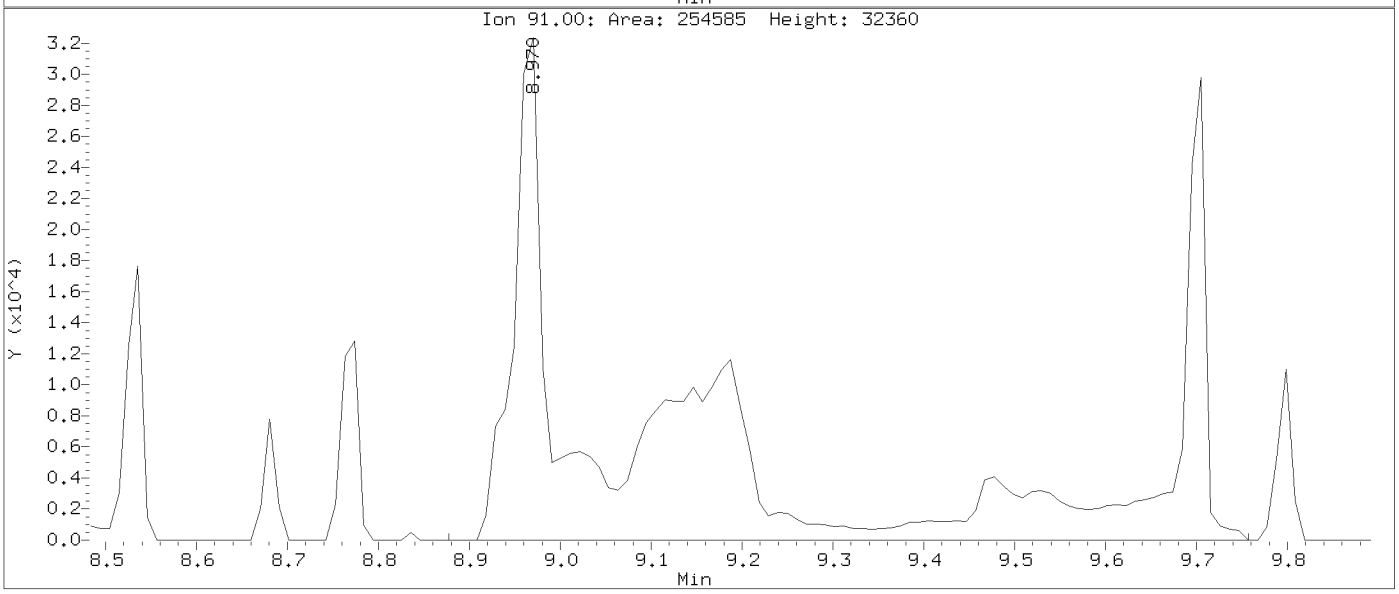
AFTER MANUAL INTEGRATION

Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\U1768.D
Injection Date: 24-JUL-2018 18:01
Instrument: gcms-u.i
Client Sample ID:

Compound: A,A-Dimethylphenethylamine
CAS Number: 122-09-8



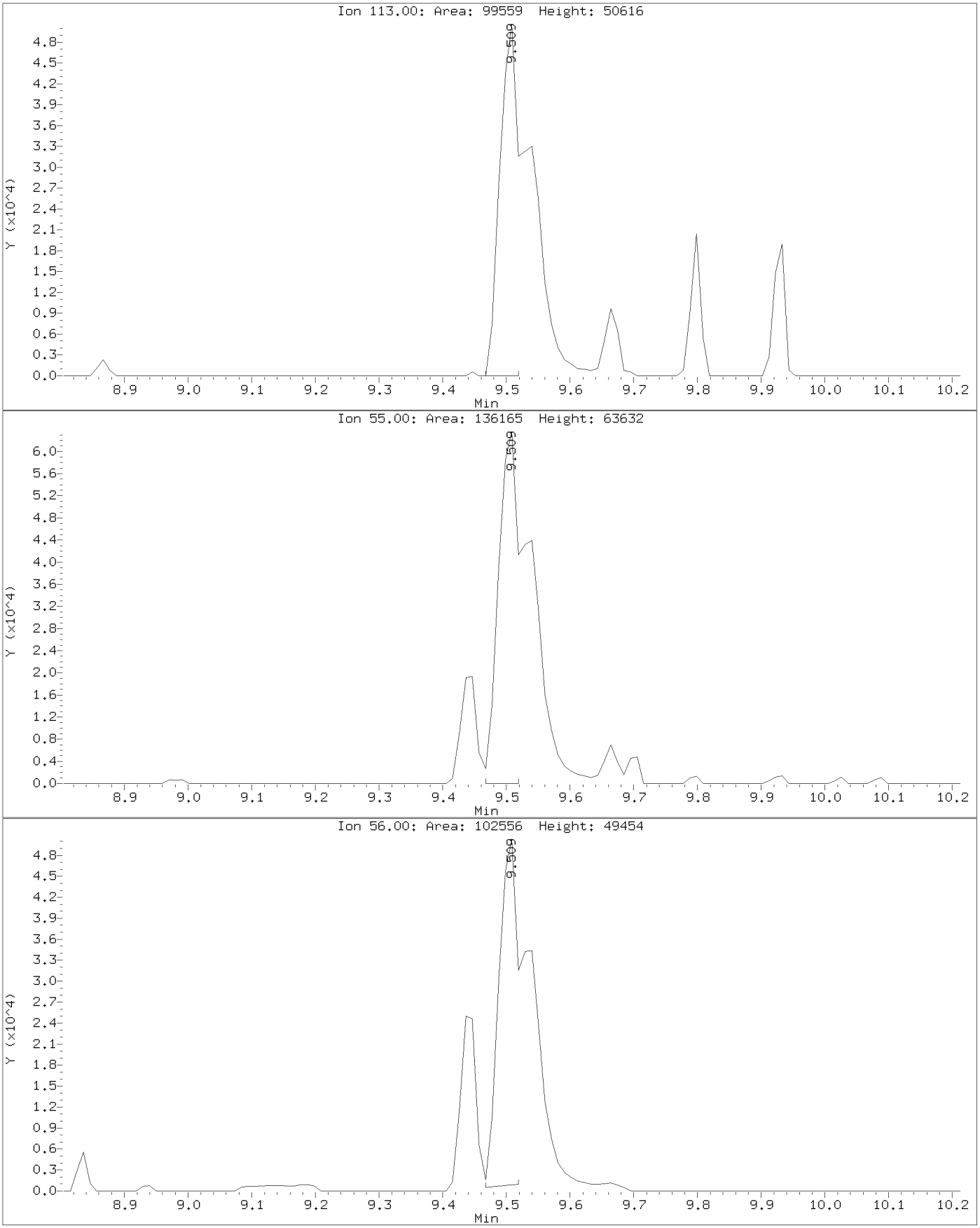




Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\U1768.D
Injection Date: 24-JUL-2018 18:01
Instrument: gcms-u.i
Client Sample ID:

Compound: Caprolactam
CAS Number: 105-60-2

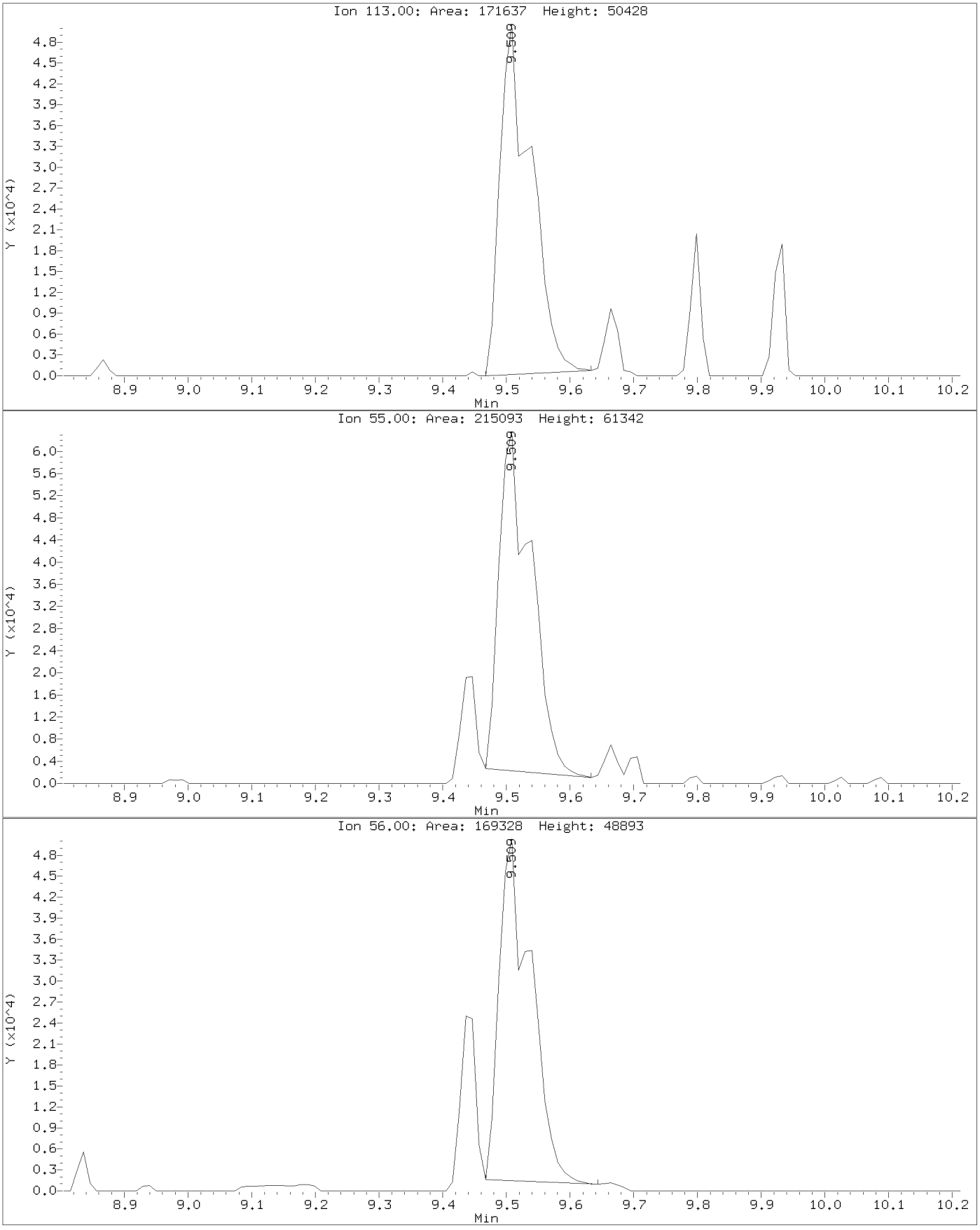
BEFORE MANUAL INTEGRATION



Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\U1768.D
Injection Date: 24-JUL-2018 18:01
Instrument: gcms-u.i
Client Sample ID:

Compound: Caprolactam
CAS Number: 105-60-2

AFTER MANUAL INTEGRATION



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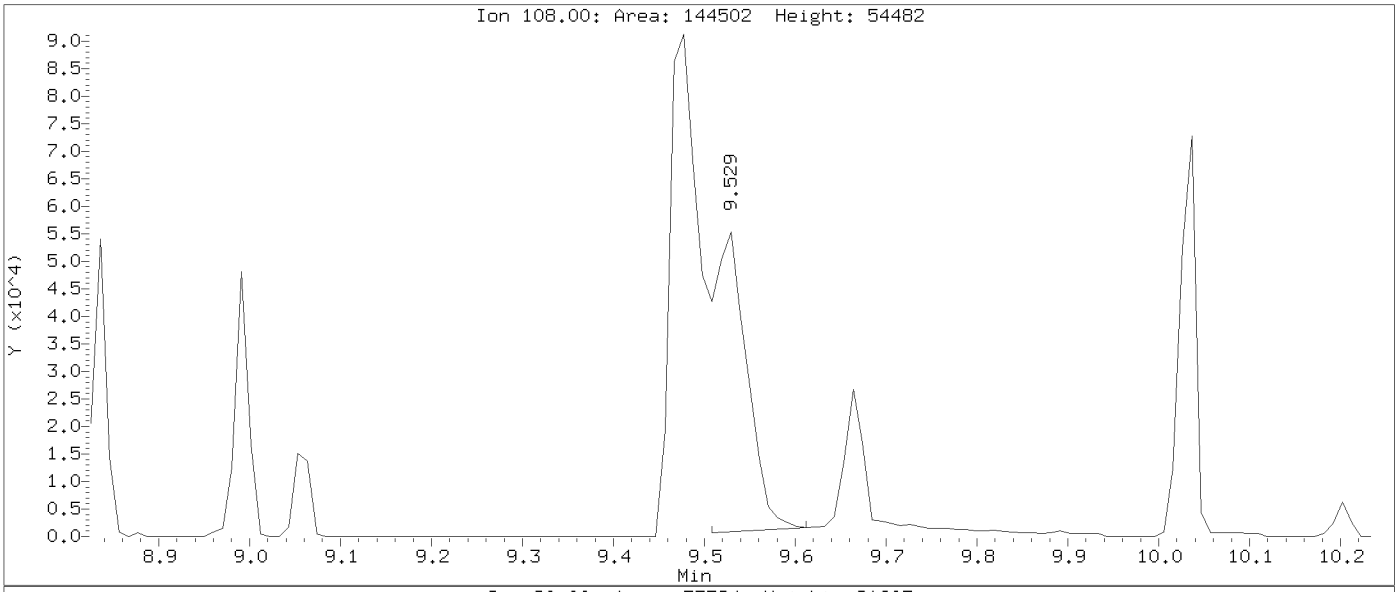
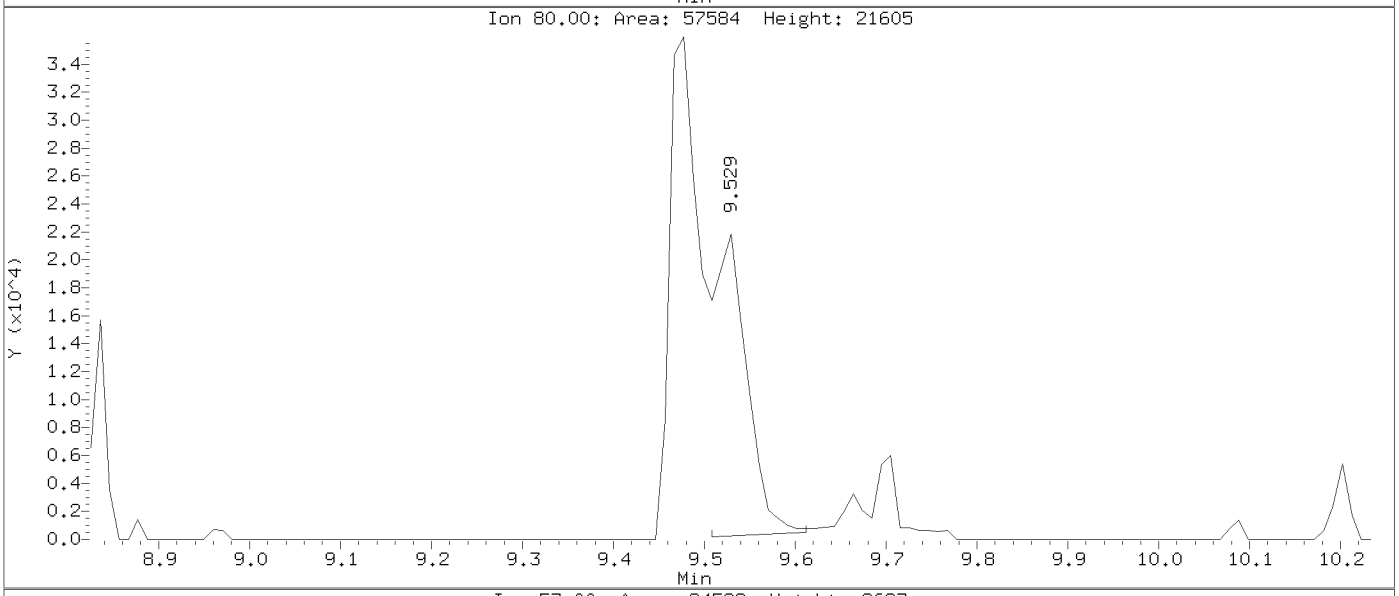
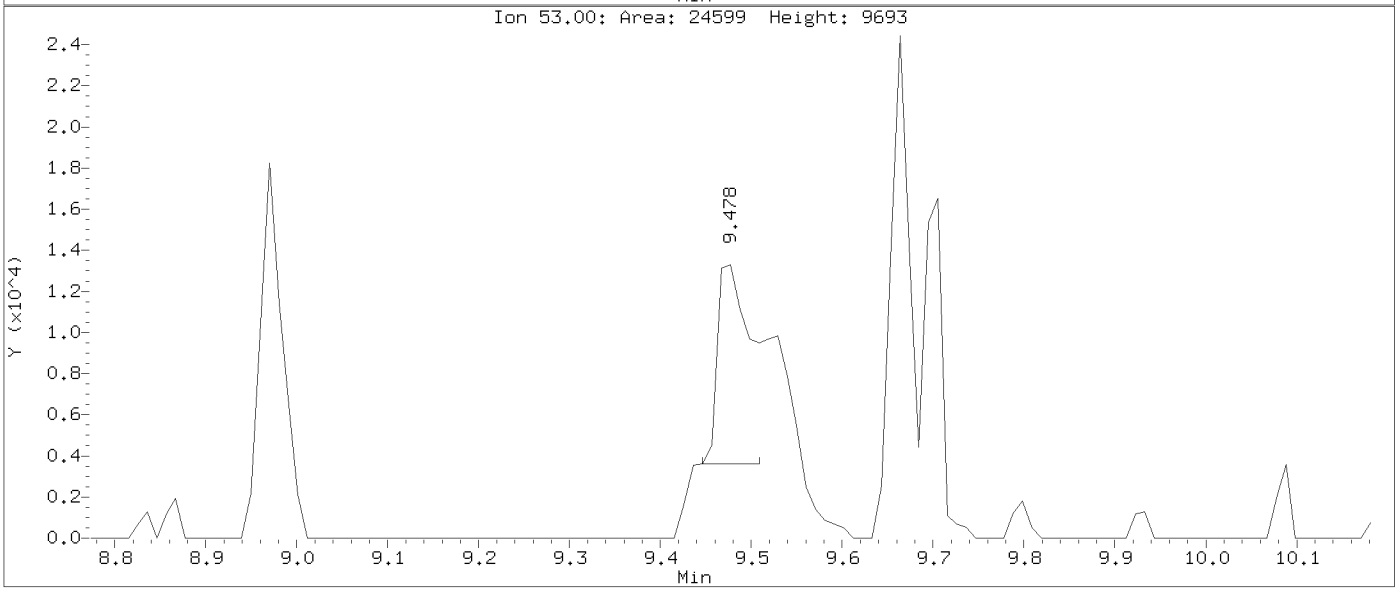
Injection Date: 24-JUL-2018 18:01
Instrument: gcms-u.i
Client Sample ID:

Compound: p-Phenylenediamine
CAS Number: 106-50-3

BEFORE MANUAL INTEGRATION



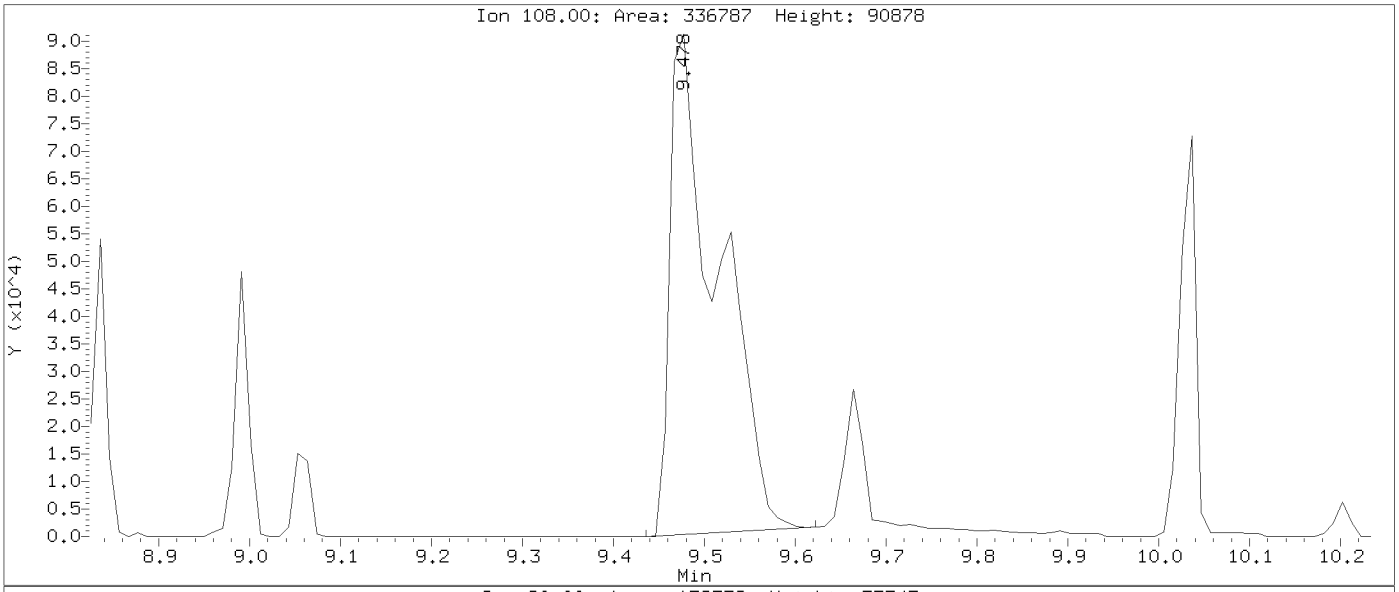


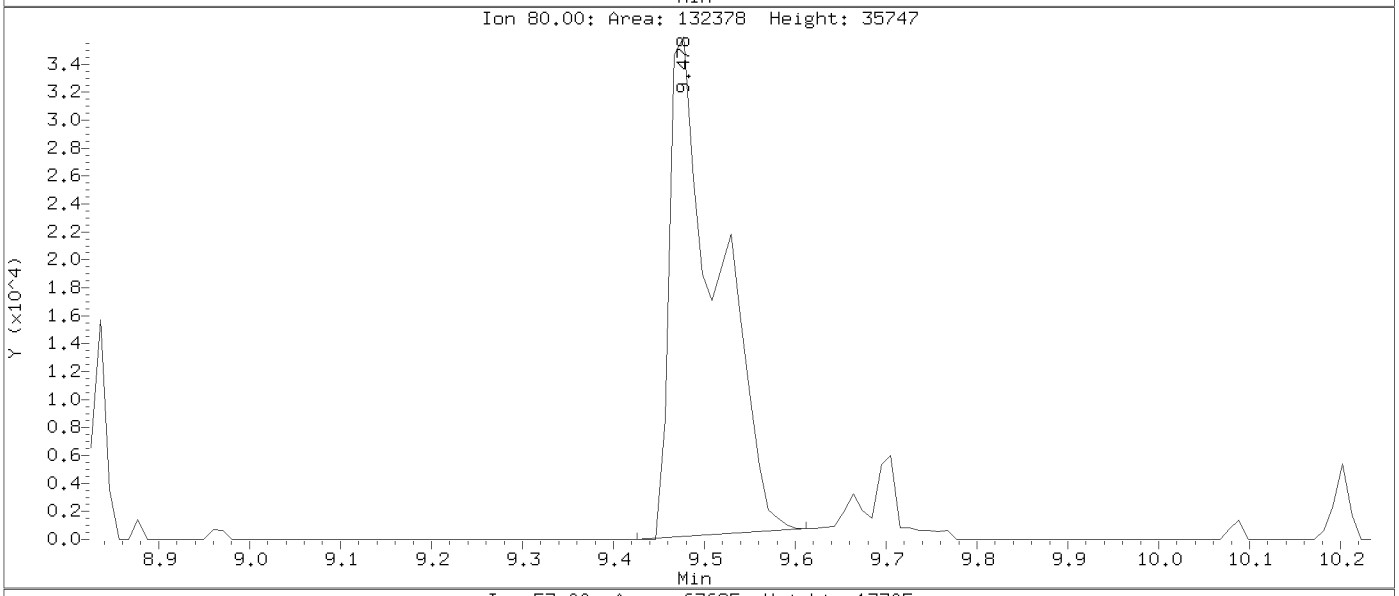


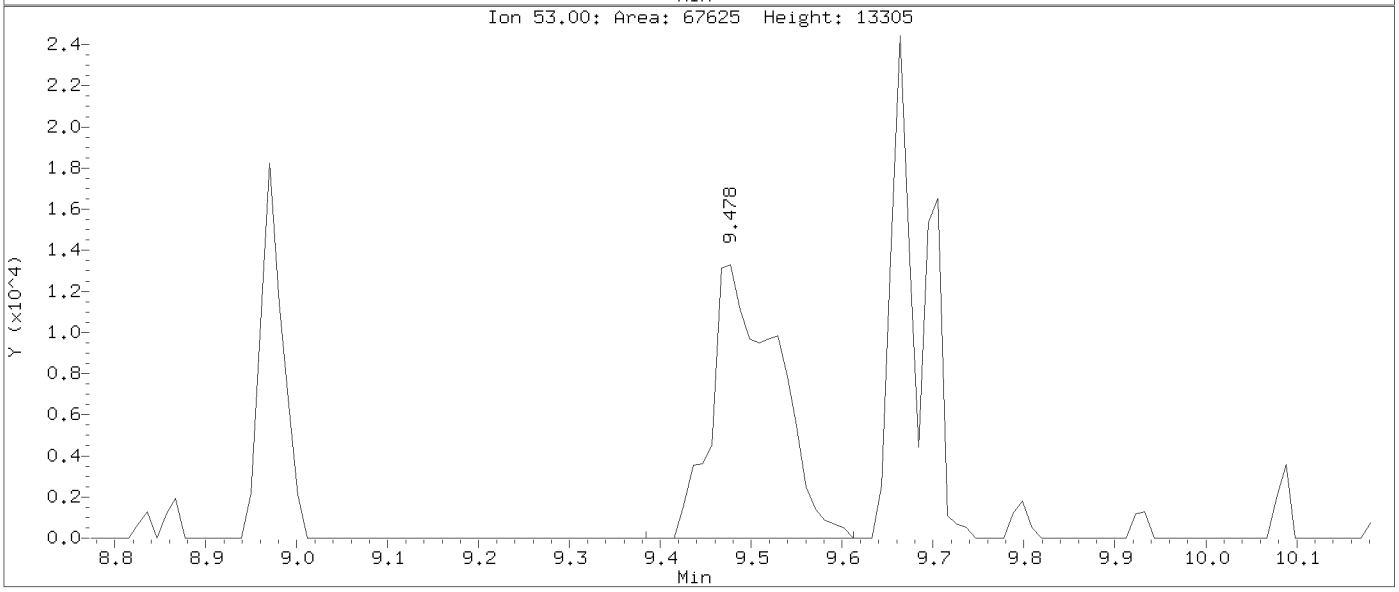
Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\U1768.D
Injection Date: 24-JUL-2018 18:01
Instrument: gcms-u.i
Client Sample ID:

Compound: p-Phenylenediamine
CAS Number: 106-50-3

AFTER MANUAL INTEGRATION







Katahdin
ANALYTICAL SERVICES

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant **SDG:** SL7420
Lab ID : WG233872-2 **Analytical Date:** 08/13/18 10:46
Lab File ID : U1907.D **Instrument ID:** GCMS-U
Initial Calibration Date(s): 07/24/18 15:19 07/24/18 18:01 **Column ID:**

	Compound	$\overline{RRF}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
3	Pyridine	1.43557	1.35405	1.35405	0.010	-5.67833	20.00000	Averaged
19	1,4-Dichlorobenzene	1.36386	1.31410	1.31410	0.010	-3.64826	20.00000	Averaged
23	2-Methylphenol	1.09283	1.07563	1.07563	0.010	-1.57375	20.00000	Averaged
24	3&4-Methylphenol	1.15995	1.16093	1.16093	0.010	0.08527	20.00000	Averaged
32	Hexachloroethane	0.55914	0.53208	0.53208	0.010	-4.83914	20.00000	Averaged
34	Nitrobenzene	0.30911	0.30617	0.30617	0.010	-0.95095	20.00000	Averaged
49	Hexachlorobutadiene	0.16218	0.15841	0.15841	0.010	-2.32100	20.00000	Averaged
61	2,4,6-Trichlorophenol	0.33782	0.34174	0.34174	0.010	1.16011	20.00000	Averaged
62	2,4,5-Trichlorophenol	0.36352	0.36838	0.36838	0.010	1.33722	20.00000	Averaged
87	2,4-Dinitrotoluene	0.34533	0.33270	0.33270	0.010	-3.65905	20.00000	Averaged
103	Hexachlorobenzene	0.20785	0.20085	0.20085	0.010	-3.37108	20.00000	Averaged
106	Pentachlorophenol	50.00000	50.50256	0.09783	0.010	1.00512	20.01000	Quadratic
8	2-Fluorophenol	1.28473	1.22737	1.22737	0.010	-4.46419	20.00000	Averaged
13	Phenol-D6	1.39795	1.35502	1.35502	0.010	-3.07090	20.00000	Averaged
33	Nitrobenzene-D5	0.33895	0.33643	0.33643	0.010	-0.74403	20.00000	Averaged
63	2-Fluorobiphenyl	1.19814	1.17896	1.17896	0.010	-1.60126	20.00000	Averaged
95	2,4,6-Tribromophenol	0.14026	0.14606	0.14606	0.010	4.13710	20.00000	Averaged
127	Terphenyl-D14	1.03598	1.02060	1.02060	0.010	-1.48495	20.00000	Averaged

*** = Compound out of QC criteria**

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http://katahdinlab.com
sales@katahdinlab.com

Data File: \\target_server\gg\chem\gcms-u.i\U081318.b\U1907.D
Report Date: 14-Aug-2018 11:32

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-u.i\U081318.b\U1907.D
Lab Smp Id: WG233872-2
Inj Date : 13-AUG-2018 10:46
Operator : JCG   Inst ID: gcms-u.i
Smp Info : WG233872-2,SL7420
Misc Info : WG233872,WG233872,WG232607-4,SL7420-1
Comment   :
Method   : \\target_server\gg\chem\gcms-u.i\U081318.b\U8270C51.m
Meth Date : 14-Aug-2018 09:11 cgomez   Quant Type: ISTD
Cal Date : 24-JUL-2018 18:01   Cal File: U1768.D
Als bottle: 2   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: DoDTCLP50.sub
Target Version: 4.12
Processing Host: KATHADIN-50E985

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

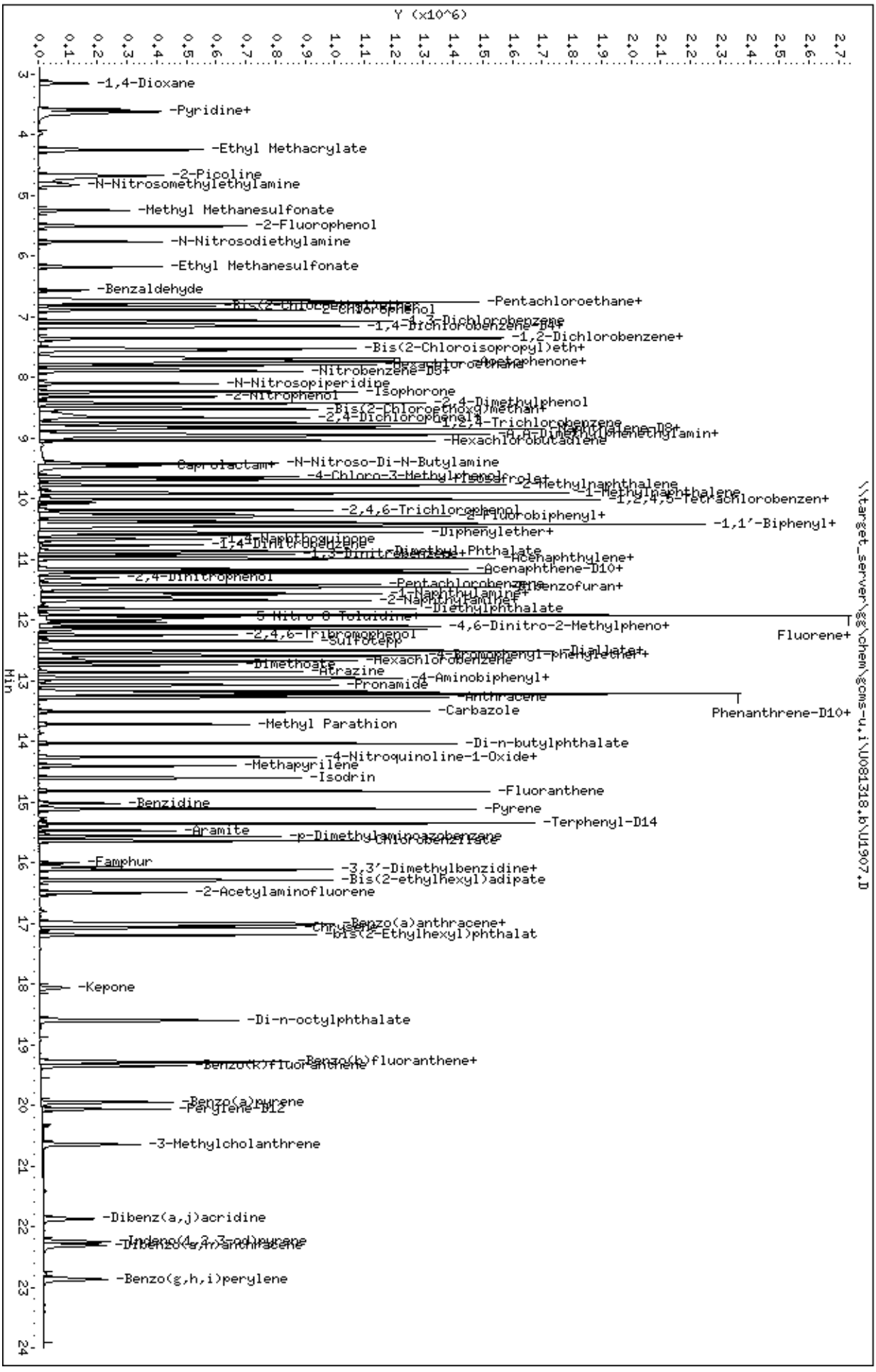
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	3 Pyridine	79	3.629	3.660	(0.508)	376506	50.0000	47.2(a)	
$	8 2-Fluorophenol	112	5.502	5.523	(0.771)	341282	50.0000	47.8	
$	13 Phenol-D6	99	6.744	6.765	(0.945)	376774	50.0000	48.5	
*	21 1,4-Dichlorobenzene-D4	152	7.137	7.159	(1.000)	222447	40.0000		
	19 1,4-Dichlorobenzene	146	7.169	7.179	(1.004)	365397	50.0000	48.2	
	23 2-Methylphenol	108	7.562	7.552	(1.059)	299089	50.0000	49.2	
	24 3&4-Methylphenol	108	7.748	7.769	(1.086)	322808	50.0000	50.0	
	32 Hexachloroethane	117	7.800	7.821	(1.093)	147950	50.0000	47.6	
$	33 Nitrobenzene-D5	82	7.872	7.904	(0.892)	324934	50.0000	49.6	
	34 Nitrobenzene	77	7.903	7.924	(0.896)	295707	50.0000	49.5	
*	44 Naphthalene-D8	136	8.825	8.835	(1.000)	772667	40.0000		
	49 Hexachlorobutadiene	225	9.042	9.063	(1.025)	153000	50.0000	48.8	
	61 2,4,6-Trichlorophenol	196	10.191	10.202	(0.912)	174822	50.0000	50.6	
	62 2,4,5-Trichlorophenol	196	10.243	10.264	(0.917)	188451	50.0000	50.7	
$	63 2-Fluorobiphenyl	172	10.294	10.305	(0.921)	603117	50.0000	49.2	
*	75 Acenaphthene-D10	164	11.174	11.195	(1.000)	409255	40.0000		
	87 2,4-Dinitrotoluene	165	11.474	11.506	(1.027)	170197	50.0000	48.2	
$	95 2,4,6-Tribromophenol	330	12.250	12.272	(1.096)	74720	50.0000	52.1	
	103 Hexachlorobenzene	284	12.675	12.696	(0.962)	156622	50.0000	48.3	
	106 Pentachlorophenol	266	12.965	12.986	(0.984)	76289	50.0000	50.5	

Data File: \\target_server\gg\chem\gcms-u.i\U081318.b\U1907.D
Report Date: 14-Aug-2018 11:32

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
* 111 Phenanthrene-D10	188	13.182	13.203	(1.000)	623845	40.0000		
$ 127 Terphenyl-D14	244	15.355	15.377	(0.902)	481448	50.0000	49.2	
* 137 Chrysene-D12	240	17.032	17.053	(1.000)	377384	40.0000		
* 146 Perylene-D12	264	20.065	20.076	(1.000)	268517	40.0000		

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).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Date : 13-AUG-2018 10:46
Client ID:
Sample Info: WG233872-2,SL7420
Volume Injected (uL): 1.0
Column phase: ZB5-MS
Instrument: gcms-u,i
Operator: JCG
Column diameter: 0.25
\\target_server\gg\chem\gcms-u,i\U081318,b\U1907.D
Y (x10^6)
Min
-1,4-Dioxane
-Pyridine+
-Ethyl Methacrylate
-2-Picoline
-N-Nitrosomethylethylamine
-Methyl Methanesulfonate
-2-Fluorophenol
-N-Nitrosodiethylamine
-Ethyl Methanesulfonate
-Benzaldehyde
-Pentachloroethane+
-1,4-Dichlorobenzene-D4+
-1,2-Dichlorobenzene+
-Bis(2-Chloroisopropyl)eth+
-Nitrobenzene-D5+
-N-Nitrosopiperidine
-2-Nitrophenol
-Isophorone
-2,4-Dimethylphenol
-Hexachlorobutadiene
Caprolactam+
-N-Nitroso-Di-N-Butylamine
-2,4,6-Trichlorophenol
-2-Fluorobiphenyl+
-1,1'-Biphenyl+
-Diphenylether+
-Acenaphthylene+
-Acenaphthene-D10+
-2,4-Dinitrophenol
-Diethylphthalate
-4,6-Dinitro-2-Methylpheno+
-2,4,6-Tribromophenol
-Dimethoate
-Atrazine
-4-Aminobiphenyl+
-Pronamide
-Anthracene
-Carbazole
-Methyl Parathion
-Di-n-butylphthalate
-4-Nitroquinoline-1-Oxide+
-Methapyrilene
-Isodrin
-Fluoranthene
-Benzidine
-Pyrene
-Terphenyl-D14
-Aramite
-Famphur
-3,3'-Dimethylbenzidine+
-Bis(2-ethylhexyl)adipate
-2-Acetylaminofluorene
-Benzo(a)anthracene+
-bis(2-Ethylhexyl)phthalat
-Kepone
-Di-n-octylphthalate
-Benzo(b)fluoranthene+
-Benzo(k)fluoranthene
-Benzo(a)pyrene
-Perylene-D12
-3-Methylcholanthrene
-Dibenz(a,j)acridine
-Benzo(g,h,i)perylene
Fluorene+
Phenanthrene-D10+

Katahdin
ANALYTICAL SERVICES

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant **SDG:** SL7420
Lab ID : WG233872-3 **Analytical Date:** 08/13/18 18:17
Lab File ID : U1921.D **Instrument ID:** GCMS-U
Initial Calibration Date(s): 07/24/18 15:19 07/24/18 18:01 **Column ID:**

	Compound	$\overline{RRF}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
3	Pyridine	1.43557	1.29380	1.29380	0.010	-9.87549	20.00000	Averaged
19	1,4-Dichlorobenzene	1.36386	1.33129	1.33129	0.010	-2.38754	20.00000	Averaged
23	2-Methylphenol	1.09283	1.05744	1.05744	0.010	-3.23800	20.00000	Averaged
24	3&4-Methylphenol	1.15995	1.22087	1.22087	0.010	5.25236	20.00000	Averaged
32	Hexachloroethane	0.55914	0.51251	0.51251	0.010	-8.34021	20.00000	Averaged
34	Nitrobenzene	0.30911	0.29464	0.29464	0.010	-4.68062	20.00000	Averaged
49	Hexachlorobutadiene	0.16218	0.15961	0.15961	0.010	-1.58331	20.00000	Averaged
61	2,4,6-Trichlorophenol	0.33782	0.33909	0.33909	0.010	0.37671	20.00000	Averaged
62	2,4,5-Trichlorophenol	0.36352	0.36250	0.36250	0.010	-0.28100	20.00000	Averaged
87	2,4-Dinitrotoluene	0.34533	0.35223	0.35223	0.010	1.99804	20.00000	Averaged
103	Hexachlorobenzene	0.20785	0.20324	0.20324	0.010	-2.21804	20.00000	Averaged
106	Pentachlorophenol	50.00000	42.86385	0.08315	0.010	-14.27231	20.01000	Quadratic
8	2-Fluorophenol	1.28473	1.22696	1.22696	0.010	-4.49611	20.00000	Averaged
13	Phenol-D6	1.39795	1.36154	1.36154	0.010	-2.60412	20.00000	Averaged
33	Nitrobenzene-D5	0.33895	0.32606	0.32606	0.010	-3.80173	20.00000	Averaged
63	2-Fluorobiphenyl	1.19814	1.14694	1.14694	0.010	-4.27305	20.00000	Averaged
95	2,4,6-Tribromophenol	0.14026	0.15309	0.15309	0.010	9.14568	20.00000	Averaged
127	Terphenyl-D14	1.03598	1.05080	1.05080	0.010	1.42961	20.00000	Averaged

*** = Compound out of QC criteria**

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Data File: \\target_server\gg\chem\gcms-u.i\U081318.b\U1921.D
Report Date: 14-Aug-2018 11:33

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-u.i\U081318.b\U1921.D
Lab Smp Id: WG233872-3
Inj Date : 13-AUG-2018 18:17
Operator : JCG   Inst ID: gcms-u.i
Smp Info : WG233872-3,SL7420
Misc Info : WG233872,WG233872,WG232607-4,SL7420-1
Comment   :
Method   : \\target_server\gg\chem\gcms-u.i\U081318.b\U8270C51.m
Meth Date : 14-Aug-2018 09:11 cgomez   Quant Type: ISTD
Cal Date : 24-JUL-2018 18:01   Cal File: U1768.D
Als bottle: 16   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: DoDTCLP50.sub
Target Version: 4.12
Processing Host: V200T4

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

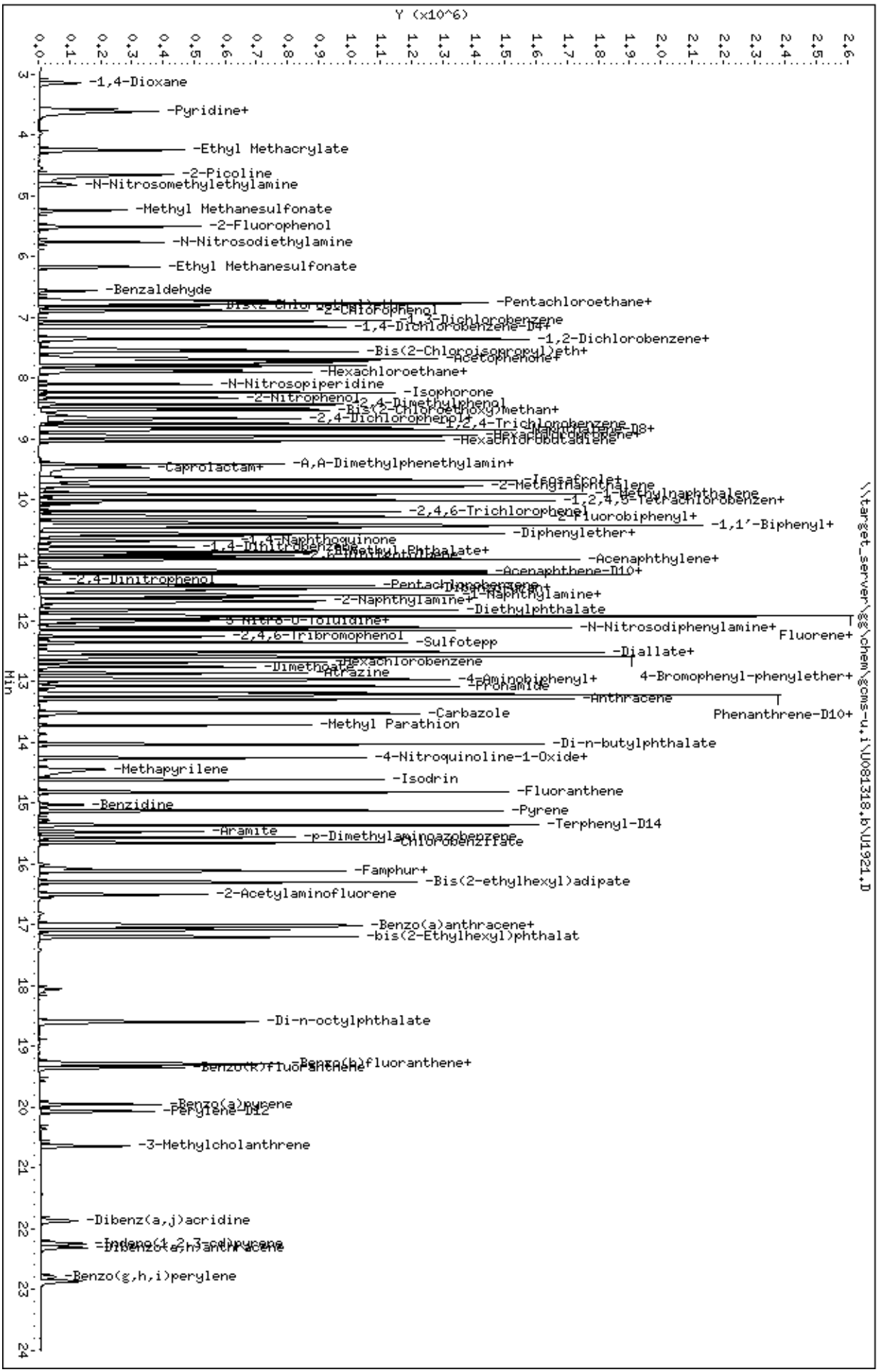
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	3 Pyridine	79	3.606	3.660	(0.505)	333771	50.0000	45.1(a)	
$	8 2-Fluorophenol	112	5.511	5.523	(0.772)	316529	50.0000	47.8	
$	13 Phenol-D6	99	6.753	6.765	(0.946)	351247	50.0000	48.7	
*	21 1,4-Dichlorobenzene-D4	152	7.136	7.159	(1.000)	206382	40.0000		
	19 1,4-Dichlorobenzene	146	7.167	7.179	(1.004)	343444	50.0000	48.8	
	23 2-Methylphenol	108	7.560	7.552	(1.059)	272797	50.0000	48.4	
	24 3&4-Methylphenol	108	7.757	7.769	(1.087)	314957	50.0000	52.6	
	32 Hexachloroethane	117	7.798	7.821	(1.093)	132215	50.0000	45.8	
$	33 Nitrobenzene-D5	82	7.871	7.904	(0.892)	308825	50.0000	48.1	
	34 Nitrobenzene	77	7.902	7.924	(0.896)	279061	50.0000	47.6	
*	44 Naphthalene-D8	136	8.823	8.835	(1.000)	757703	40.0000		
	49 Hexachlorobutadiene	225	9.040	9.063	(1.025)	151170	50.0000	49.2	
	61 2,4,6-Trichlorophenol	196	10.189	10.202	(0.911)	179487	50.0000	50.2	
	62 2,4,5-Trichlorophenol	196	10.272	10.264	(0.919)	191876	50.0000	49.8	
$	63 2-Fluorobiphenyl	172	10.293	10.305	(0.920)	607099	50.0000	47.9	
*	75 Acenaphthene-D10	164	11.183	11.195	(1.000)	423455	40.0000		
	87 2,4-Dinitrotoluene	165	11.483	11.506	(1.027)	186443	50.0000	51.0	
$	95 2,4,6-Tribromophenol	330	12.259	12.272	(1.096)	81031	50.0000	54.6	
	103 Hexachlorobenzene	284	12.683	12.696	(0.962)	174285	50.0000	48.9	
	106 Pentachlorophenol	266	12.973	12.986	(0.984)	71299	50.0000	42.9	

Data File: \\target_server\gg\chem\gcms-u.i\U081318.b\U1921.D
Report Date: 14-Aug-2018 11:33

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
* 111 Phenanthrene-D10	188	13.180	13.203	(1.000)	686013	40.0000		
$ 127 Terphenyl-D14	244	15.364	15.377	(0.902)	525923	50.0000	50.7	
* 137 Chrysene-D12	240	17.030	17.053	(1.000)	400400	40.0000		
* 146 Perylene-D12	264	20.063	20.076	(1.000)	236938	40.0000		

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).


Data File: \\target_server\gg\chem\gcms-u,i\U081318,b\U1921,D
Date : 13-AUG-2018 18:17
Client ID:
Sample Info: WG233872-3,SL7420
Volume Injected (uL): 1.0
Column phase: ZB5-MS
Instrument: gcms-u,i
Operator: JCG
Column diameter: 0.25
\\target_server\gg\chem\gcms-u,i\U081318,b\U1921,D
Y (x10^6)
Min
-1,4-Dioxane
-Pyridine+
-Ethyl Methacrylate
-2-Picoline
-N-Nitrosomethylethylamine
-Methyl Methanesulfonate
-2-Fluorophenol
-N-Nitrosodiethylamine
-Ethyl Methanesulfonate
-Benzaldehyde
-Pentachloroethane+
-1,3-Dichlorobenzene
-1,4-Dichlorobenzene-D4+
-1,2-Dichlorobenzene+
-Bis(2-Chloroisopropyl)eth+
-Hexachloroethane+
-N-Nitrosopiperidine
-Isophorone
-2-Nitrophenol
-2,4-Dimethylphenol
-Bis(2-Chloroethoxy)methan+
-2,4-Dichlorophenol
-Hexachlorobutadiene
-Caprolactam+
-A,A-Dimethylphenethylamin+
-2-Methylnaphthalene
-1-Methylnaphthalene
-1,2,4,5-Tetrachlorobenzen+
-2,4,6-Trichlorophenol
-2-Fluorobiphenyl+
-1,1'-Biphenyl+
-Diphenylether+
-1,4-Naphthoquinone
-Acenaphthylene+
-Acenaphthene-D10+
-2,4-Dinitrophenol
-Pentachlorobenzene
-1-Naphthylamine+
-2-Naphthylamine+
-Diethylphthalate
-N-Nitrosodiphenylamine+
Fluorene+
-2,4,6-Tribromophenol
-Sulfotepp
-Diallate+
-Hexachlorobenzene
-Dimethoate
-Atrazine
-4-Aminobiphenyl+
4-Bromophenyl-phenylether+
-Pronamide
-Anthracene
-Carbazole
Phenanthrene-D10+
-Methyl Parathion
-Di-n-butylphthalate
-4-Nitroquinoline-1-Oxide+
-Methapyrilene
-Isodrin
-Fluoranthene
-Benzidine
-Pyrene
-Terphenyl-D14
-Aramite
-p-Dimethylaminoazobenzene
-Famphur+
-Bis(2-ethylhexyl)adipate
-2-Acetylaminofluorene
-Benzo(a)anthracene+
-bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(b)fluoranthene+
-Benzo(k)fluoranthene
-Benzo(a)pyrene
-Perylene-D12
-3-Methylcholanthrene
-Dibenz(a,j)acridine
-Indeno(1,2,3-cd)pyrene
-Dibenz(a,h)anthracene
-Benzo(g,h,i)perylene

Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\UD943.D

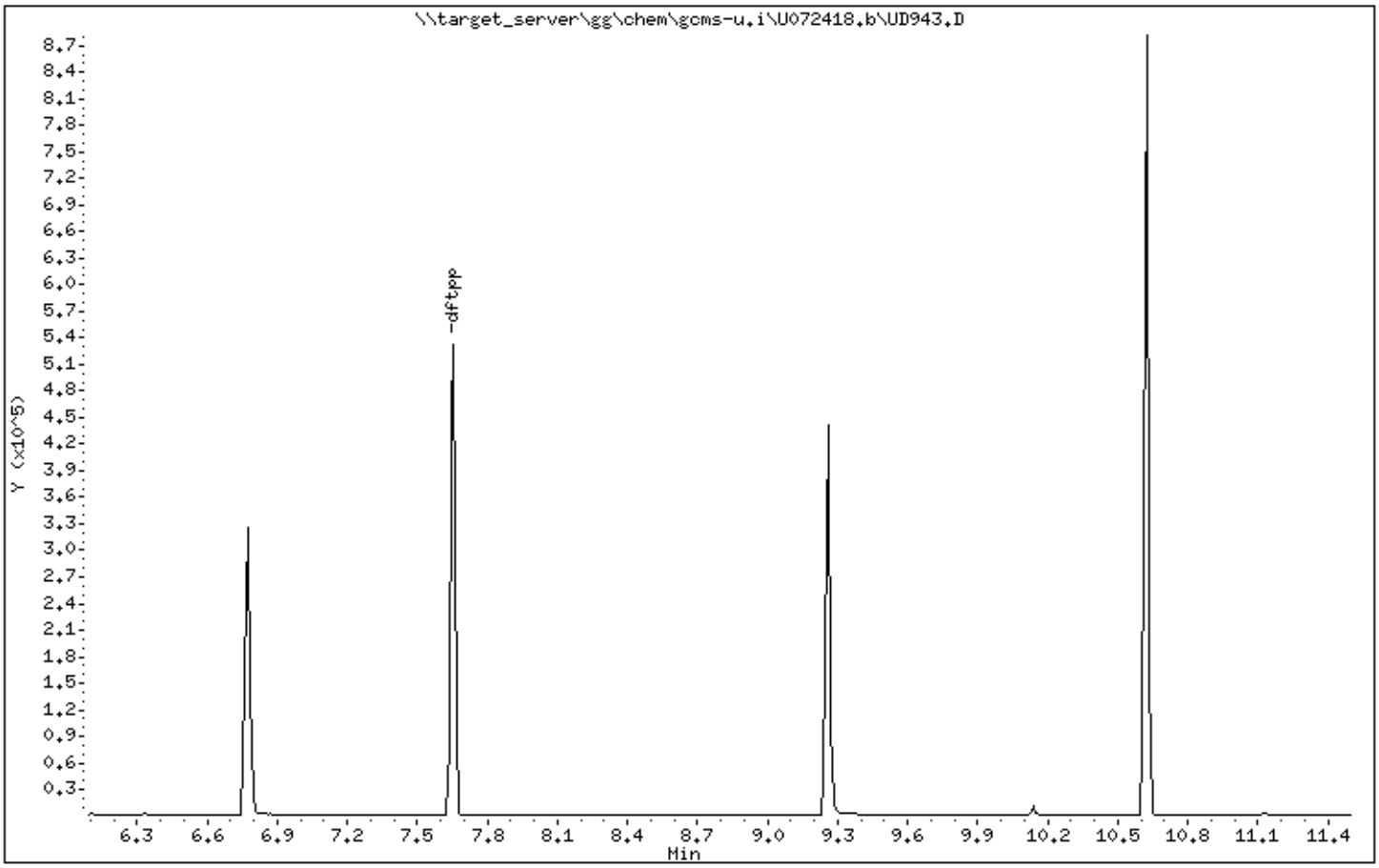
Date : 24-JUL-2018 15:00

Client ID: DFTPP02 Instrument: gcms-u.i

Sample Info: WG232607-1,SL7420

Operator: JCG

Column phase: RTX-5SILMS Column diameter: 0.25



Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\UD943.D

Date : 24-JUL-2018 15:00

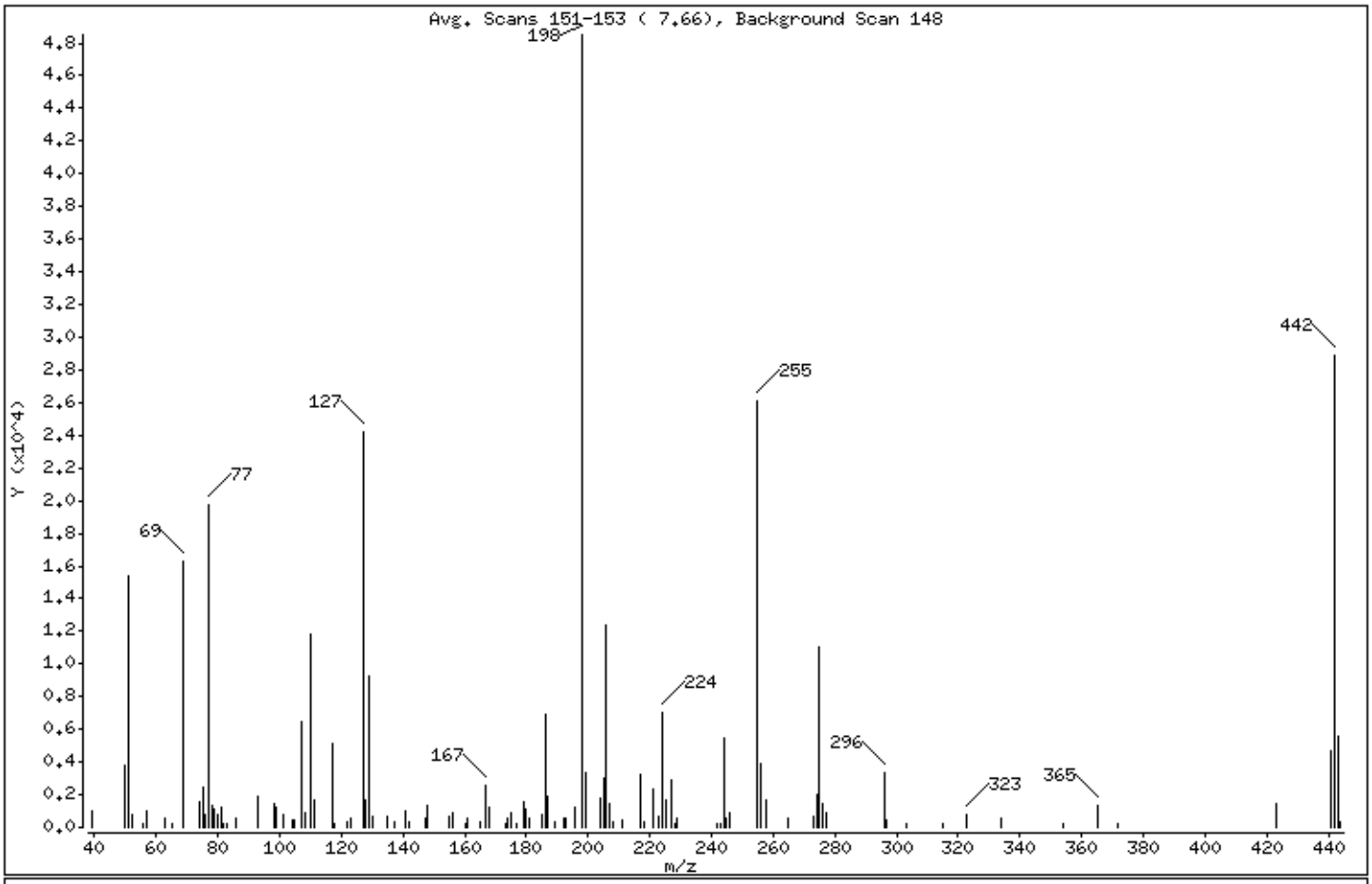
Client ID: DFTPP02 Instrument: gcms-u.i

Sample Info: WG232607-1,SL7420

Operator: JCG

Column phase: RTX-5SILMS Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	31.64
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Less than 100.00% of mass 198	33.65
70	Less than 2.00% of mass 69	0.00 (0.00)
127	40.00 - 60.00% of mass 198	49.98
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.88
275	10.00 - 30.00% of mass 198	22.70
365	1.00 - 100.00% of mass 198	2.79
441	0.01 - 100.00% of mass 443	9.66 (83.80)
442	40.00 - 100.00% of mass 198	59.43
443	17.00 - 23.00% of mass 442	11.53 (19.40)

Data File: \\target_server\gg\chem\gcms-u.i\U072418.b\UD943.D

Date : 24-JUL-2018 15:00

Client ID: DFTPP02 Instrument: gcms-u.i

Sample Info: WG232607-1,SL7420

Operator: JCG

Column phase: RTX-5SILMS Column diameter: 0.25

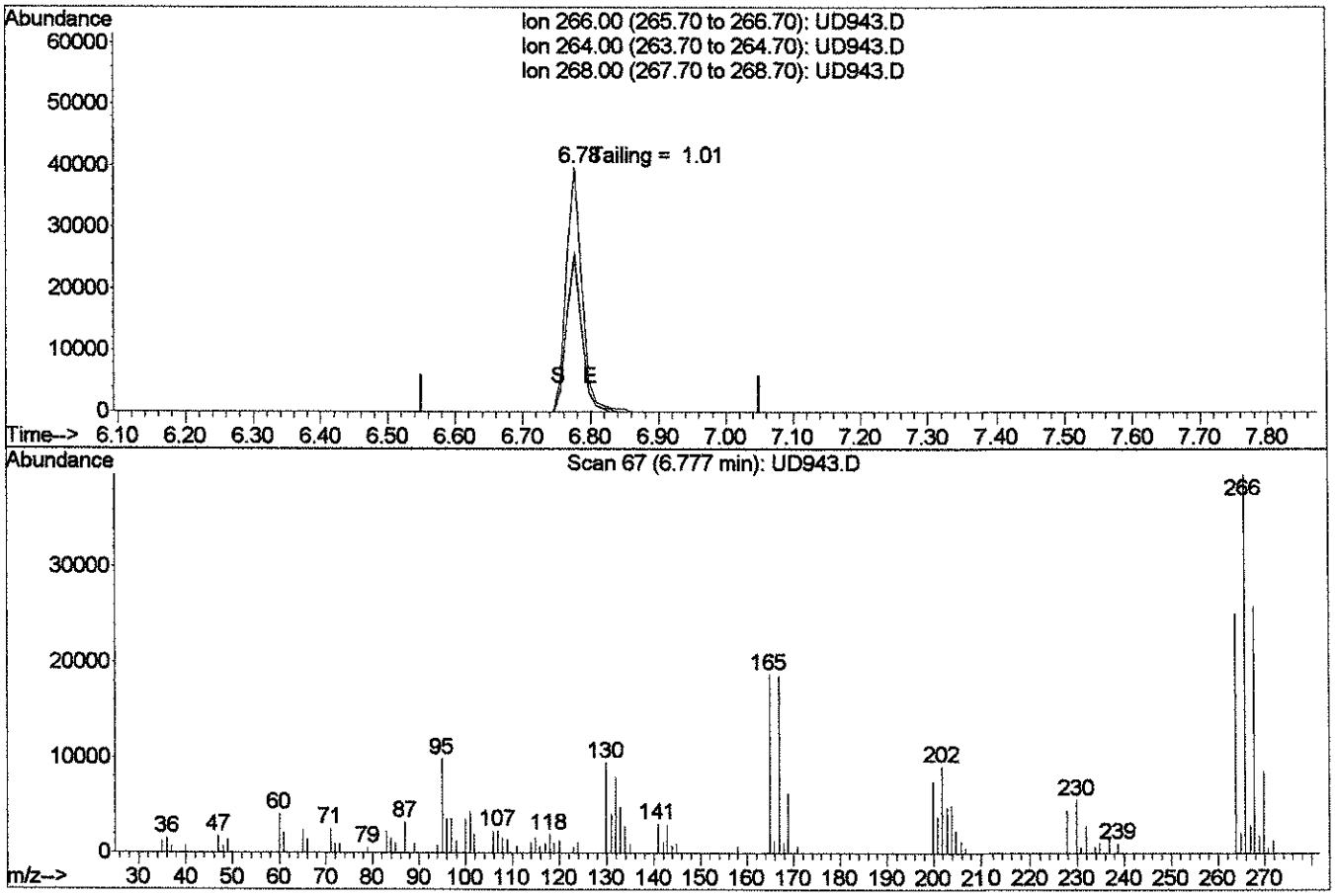
Data File: UD943.D
Spectrum: Avg. Scans 151-153 (7.66), Background Scan 148
Location of Maximum: 198.00
Number of points: 110

m/z	Y	m/z	Y	m/z	Y	m/z	Y
39.00	967	110.00	11824	180.00	1143	244.00	5443
50.00	3803	111.00	1722	181.00	568	245.00	613
51.00	15347	117.00	5074	185.00	808	246.00	886
52.00	756	118.00	182	186.00	6889	255.00	26144
56.00	260	122.00	359	187.00	1895	256.00	3885
57.00	951	123.00	603	189.00	349	258.00	1633
63.00	568	127.00	24240	192.00	526	265.00	548
65.00	188	128.00	1709	193.00	605	273.00	708
69.00	16323	129.00	9292	196.00	1256	274.00	1984
74.00	1544	130.00	692	198.00	48504	275.00	11012
75.00	2443	135.00	657	199.00	3338	276.00	1471
76.00	805	137.00	388	204.00	1765	277.00	912
77.00	19688	141.00	1041	205.00	3045	296.00	3321
78.00	1325	142.00	360	206.00	12416	297.00	426
79.00	1076	147.00	528	207.00	1495	303.00	207
80.00	817	148.00	1295	208.00	361	315.00	191
81.00	1242	155.00	618	211.00	465	323.00	783
82.00	184	156.00	946	217.00	3269	334.00	515
83.00	190	160.00	184	218.00	361	354.00	170
86.00	510	161.00	521	221.00	2375	365.00	1354
93.00	1948	165.00	357	223.00	656	372.00	268
98.00	1499	167.00	2596	224.00	7001	423.00	1408
99.00	1212	168.00	1257	225.00	1722	441.00	4685
101.00	830	173.00	171	227.00	2934	442.00	28824
104.00	428	174.00	507	228.00	205	443.00	5591
105.00	452	175.00	887	229.00	555	444.00	281
107.00	6458	177.00	204	242.00	226		
108.00	928	179.00	1594	243.00	200		

Quantitation Report

Data File : C:\HPCHEM\1\DATA\U072418\UD943.D Vial: 1
Acq On : 24 Jul 2018 3:00 pm Operator: JCG
Sample : WG232607-1 Inst : GC/MS Ins
Misc : WG232607,WG232607,WG232213-4 Multiplr: 1.00
Quant Time: Jul 24 15:18 2018 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\TUNETAIL.M (RTE Integrator)
Title : Katahdin 8270C Water Calibration
Last Update : Mon Jul 09 11:46:13 2018
Response via : Multiple Level Calibration



TIC: UD943.D

(1) Pentachlorophenol (CM)

6.78min 28.67ug/L

response 63385

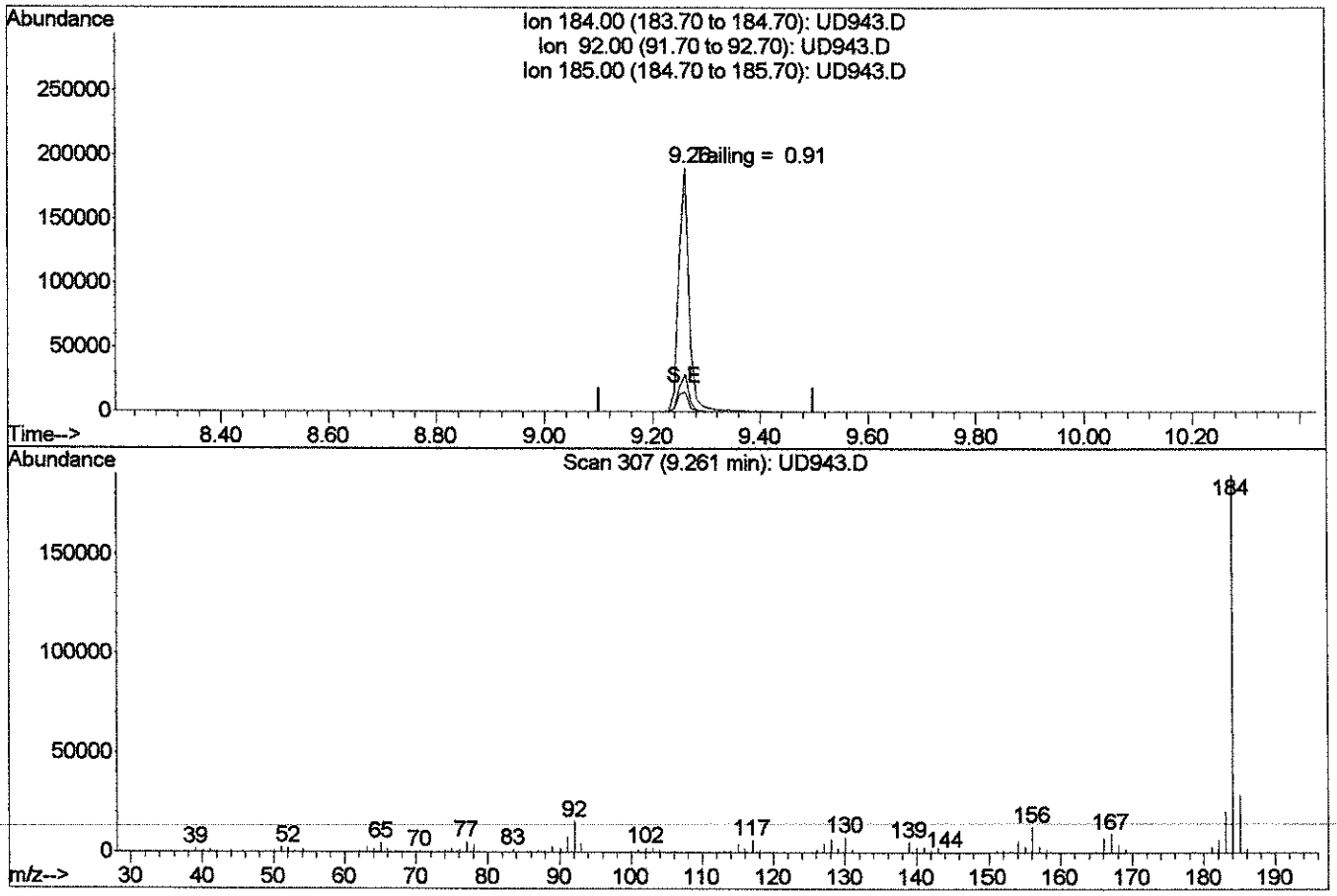
Ion	Exp%	Act%
266.00	100	100
264.00	62.00	61.74
268.00	63.50	63.50
0.00	0.00	0.00

UD943.D TUNETAIL.M Tue Jul 24 15:14:55 2018

Quantitation Report

Data File : C:\HPCHEM\1\DATA\U072418\UD943.D Vial: 1
Acq On : 24 Jul 2018 3:00 pm Operator: JCG
Sample : WG232607-1 Inst : GC/MS Ins
Misc : WG232607,WG232607,WG232213-4 Multiplr: 1.00
MS Integration Params: 18EP0P8 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\TUNETAIL.M (RTE Integrator)
Title : Katahdin 8270C Water Calibration
Last Update : Mon Jul 09 11:46:13 2018
Response via : Multiple Level Calibration



TIC: UD943.D

(2) Benzidine (T)

9.26min 56.69ug/L

response 254320

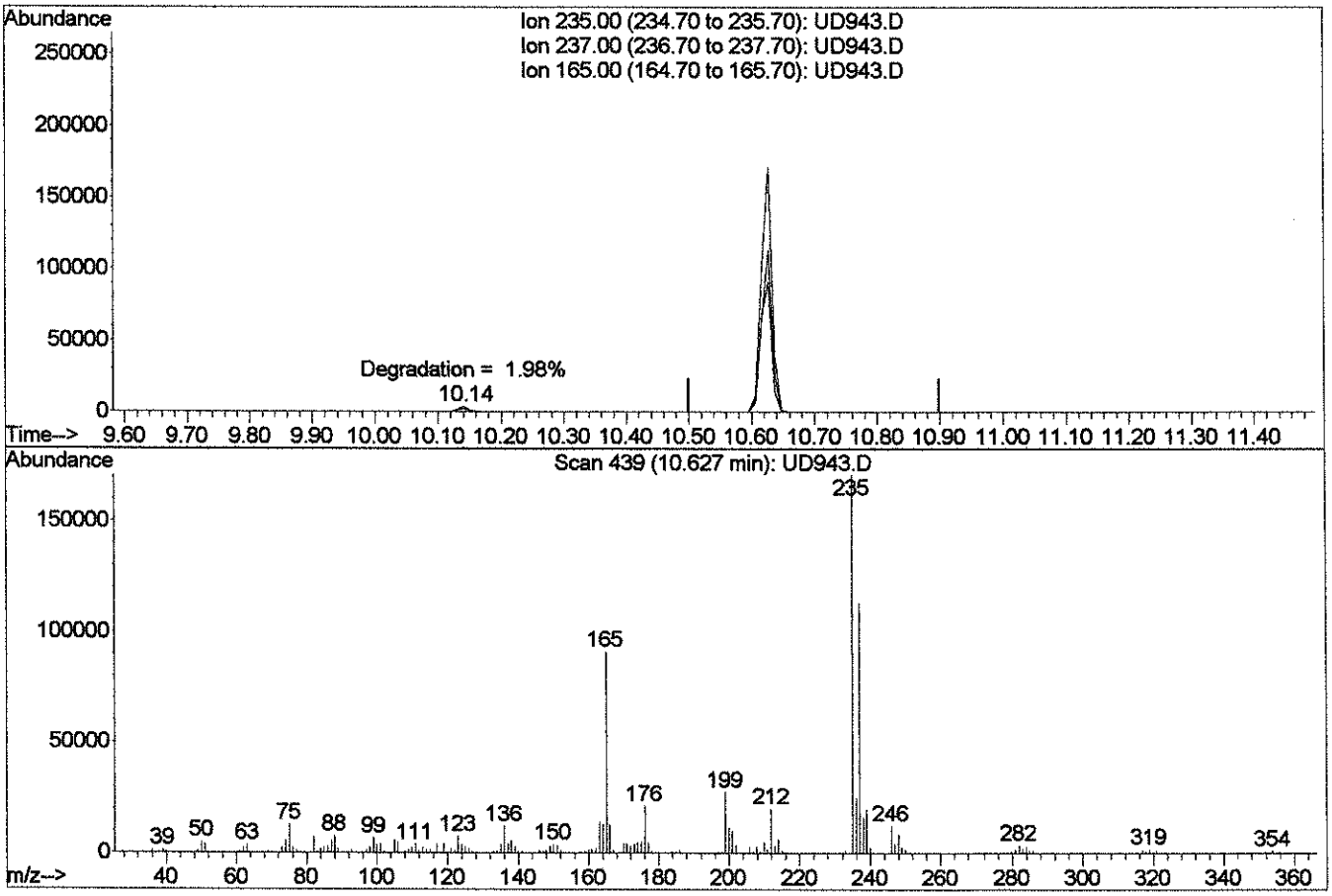
Ion	Exp%	Act%
184.00	100	100
92.00	12.20	8.70
185.00	14.40	15.04
0.00	0.00	0.00

UD943.D TUNETAIL.M Tue Jul 24 15:14:49 2018

Quantitation Report

Data File : C:\HPCHEM\1\DATA\U072418\UD943.D Vial: 1
Acq On : 24 Jul 2018 3:00 pm Operator: JCG
Sample : WG232607-1 Inst : GC/MS Ins
Misc : WG232607,WG232607,WG232213-4 Multiplr: 1.00
MS Integration Params: LEVEL Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\TUNETAIL.M (RTE Integrator)
Title : Katahdin 8270C Water Calibration
Last Update : Mon Jul 09 11:46:13 2018
Response via : Multiple Level Calibration



TIC: UD943.D

(3) 4,4'-DDT (T)

10.63min 44.96ug/L

response 201675

Ion	Exp%	Act%
235.00	100	100
237.00	50.00	65.49
165.00	50.00	56.59
0.00	0.00	0.00

UD943.D TUNETAIL.M Tue Jul 24 15:14:42 2018

Data File: \\target_server\gg\chem\gcms-u.i\U081318.b\UD953.D

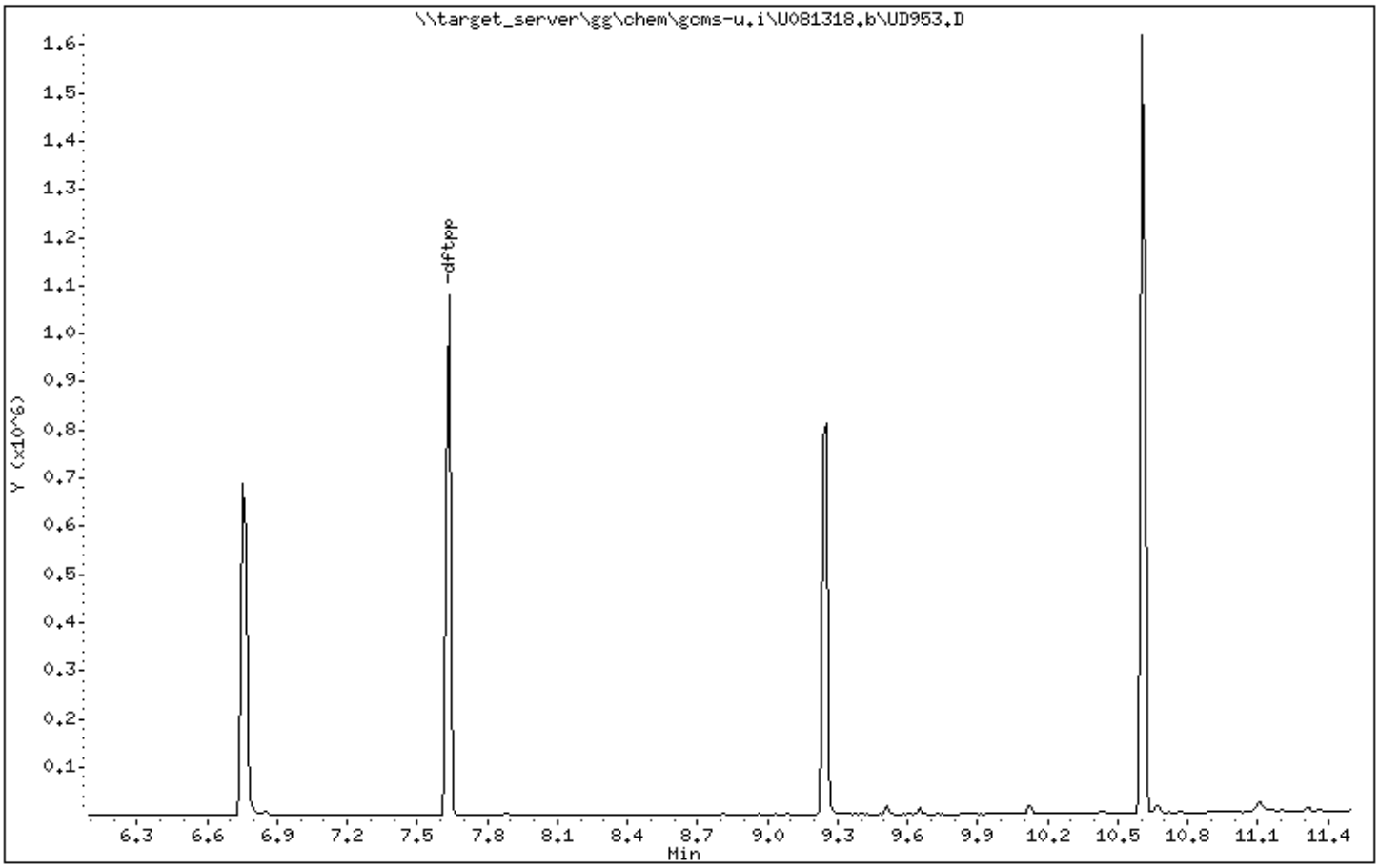
Date : 13-AUG-2018 10:27

Client ID: DFTPP02 Instrument: gcms-u.i

Sample Info: WG233872-1,SL7420

Operator: JCG

Column phase: RTX-5SILMS Column diameter: 0.25



Data File: \\target_server\gg\chem\gcms-u.i\U081318.b\UD953.D

Date : 13-AUG-2018 10:27

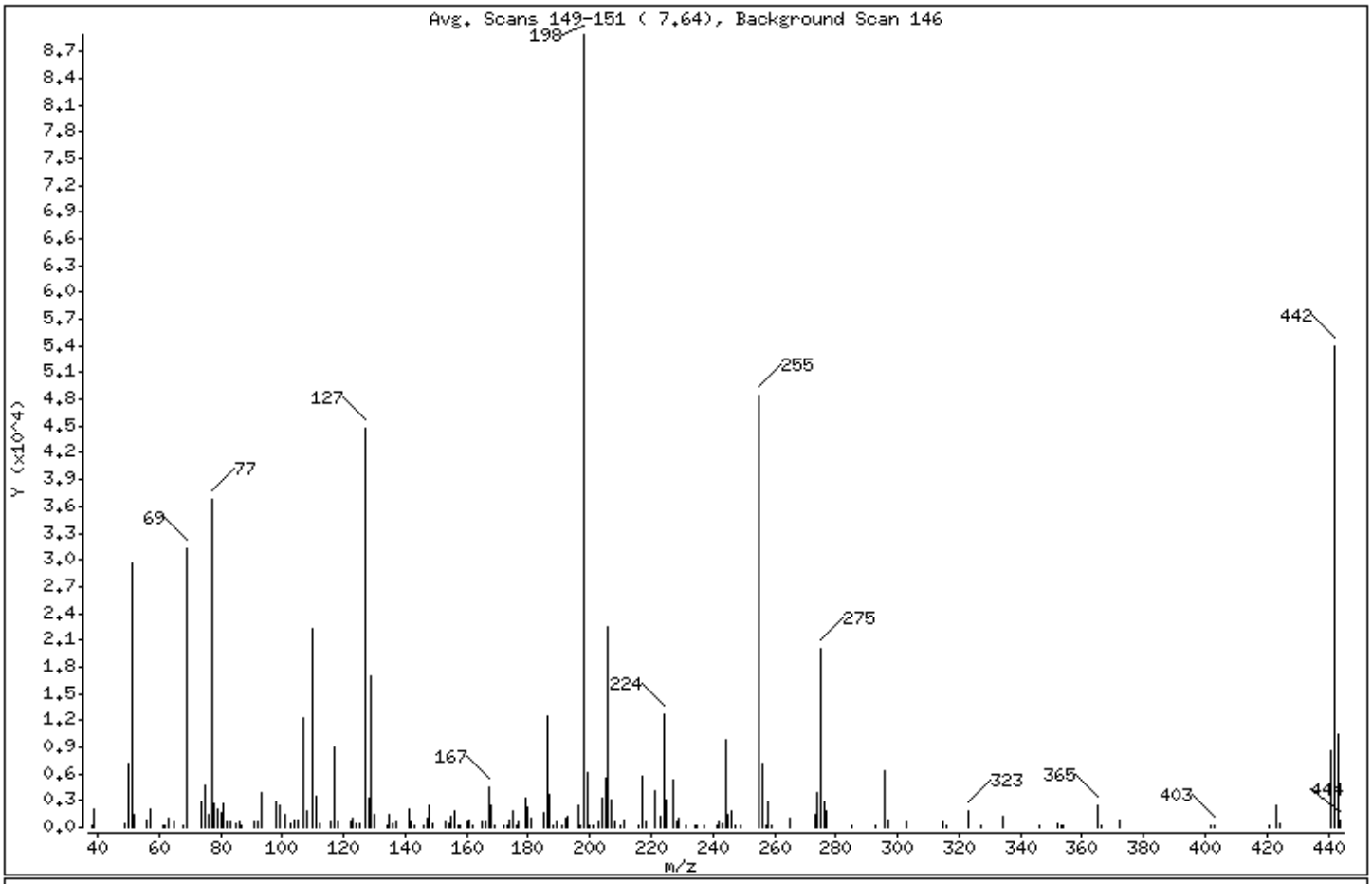
Client ID: DFTPP02 Instrument: gcms-u.i

Sample Info: WG233872-1,SL7420

Operator: JCG

Column phase: RTX-5SILMS Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	33.26
68	Less than 2.00% of mass 69	0.28 (0.78)
69	Less than 100.00% of mass 198	35.28
70	Less than 2.00% of mass 69	0.00 (0.00)
127	40.00 - 60.00% of mass 198	50.41
197	Less than 1.00% of mass 198	0.30
199	5.00 - 9.00% of mass 198	6.80
275	10.00 - 30.00% of mass 198	22.49
365	1.00 - 100.00% of mass 198	2.82
441	0.01 - 100.00% of mass 443	9.62 (82.12)
442	40.00 - 100.00% of mass 198	60.76
443	17.00 - 23.00% of mass 442	11.71 (19.27)

Data File: \\target_server\gg\chem\gcms-u.i\U081318.b\UD953.D

Date : 13-AUG-2018 10:27

Client ID: DFTPP02 Instrument: gcms-u.i

Sample Info: WG233872-1,SL7420

Operator: JCG

Column phase: RTX-5SILMS Column diameter: 0.25

Data File: UD953.D
Spectrum: Avg. Scans 149-151 (7.64), Background Scan 146
Location of Maximum: 198.00
Number of points: 167

m/z	Y	m/z	Y	m/z	Y	m/z	Y
38.00	173	117.00	9060	180.00	2221	245.00	1351
39.00	2100	118.00	616	181.00	932	246.00	1812
49.00	365	122.00	655	185.00	1606	247.00	212
50.00	7250	123.00	1032	186.00	12475	249.00	179
51.00	29568	124.00	463	187.00	3636	255.00	48480
52.00	1409	125.00	436	188.00	218	256.00	7167
56.00	807	127.00	44808	189.00	610	257.00	295
57.00	2129	128.00	3356	191.00	172	258.00	2932
61.00	171	129.00	17016	192.00	1083	259.00	215
62.00	181	130.00	1517	193.00	1196	265.00	1094
63.00	1007	134.00	235	196.00	2446	273.00	1377
65.00	562	135.00	1416	197.00	265	274.00	3909
68.00	245	136.00	484	198.00	88888	275.00	19992
69.00	31360	137.00	686	199.00	6045	276.00	2818
74.00	2947	141.00	2059	200.00	266	277.00	1882
75.00	4736	142.00	607	201.00	189	285.00	191
76.00	1471	143.00	253	203.00	519	293.00	222
77.00	36680	146.00	185	204.00	3210	296.00	6338
78.00	2564	147.00	950	205.00	5435	297.00	910
79.00	2097	148.00	2472	206.00	22376	303.00	618
80.00	1554	149.00	466	207.00	3010	315.00	570
81.00	2568	153.00	559	208.00	663	316.00	202
82.00	594	154.00	466	210.00	195	323.00	1833
83.00	653	155.00	1259	211.00	758	327.00	172
85.00	401	156.00	1889	216.00	283	334.00	1219
86.00	691	157.00	202	217.00	5657	346.00	232
87.00	171	158.00	206	218.00	633	352.00	423
91.00	614	160.00	550	221.00	4121	353.00	187
92.00	544	161.00	853	223.00	1310	354.00	276
93.00	3787	162.00	176	224.00	12768	365.00	2508
98.00	2843	165.00	714	225.00	3167	366.00	189
99.00	2545	166.00	544	227.00	5270	372.00	769
101.00	1486	167.00	4525	228.00	608	402.00	171
103.00	401	168.00	2504	229.00	1093	403.00	198
104.00	810	169.00	220	231.00	225	421.00	182

Data File: \\target_server\gg\chem\gcms-u.i\U081318.b\UD953.D

Date : 13-AUG-2018 10:27

Client ID: DFTPP02 Instrument: gcms-u.i

Sample Info: WG233872-1,SL7420

Operator: JCG

Column phase: RTX-5SILMS Column diameter: 0.25

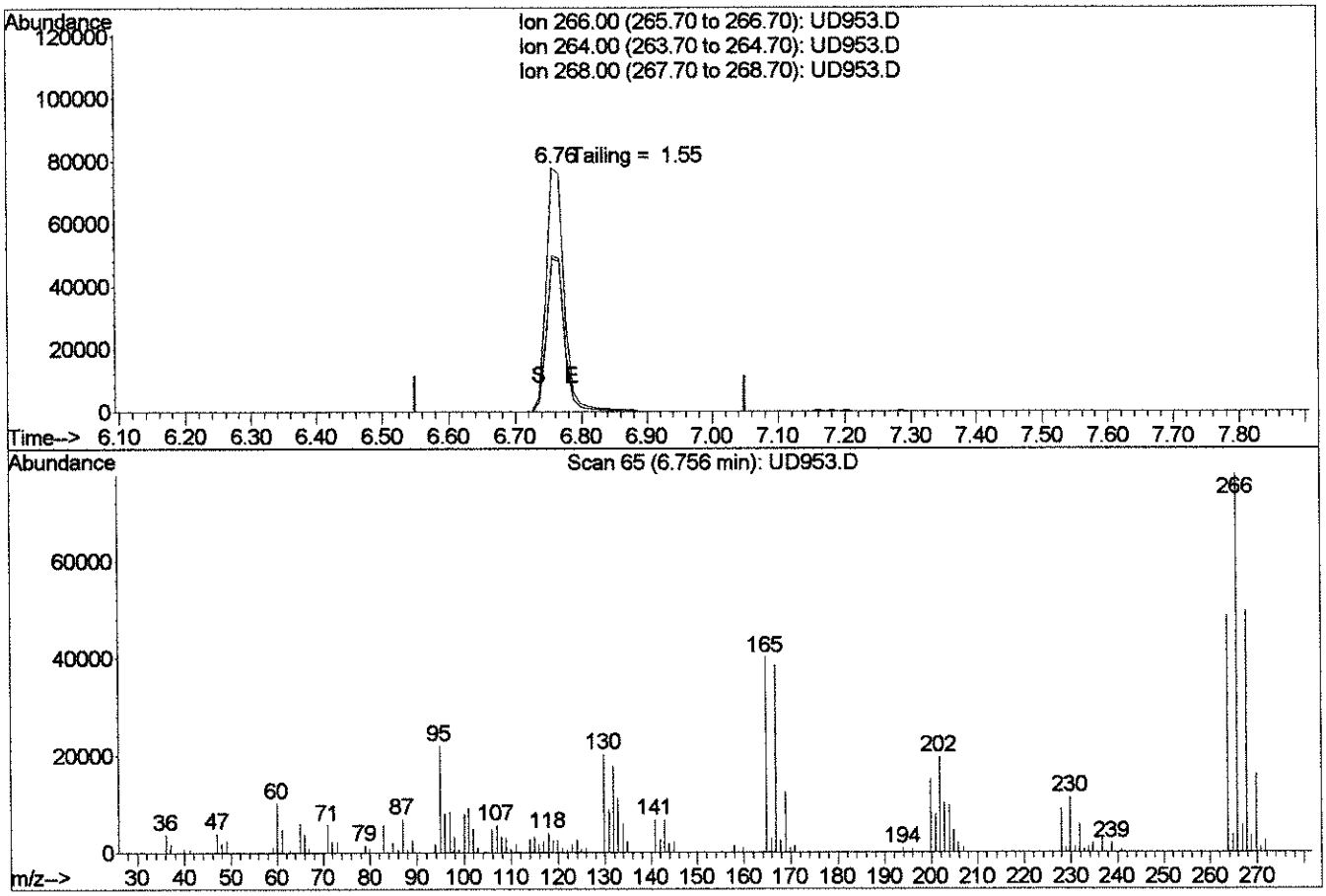
Data File: UD953.D
Spectrum: Avg. Scans 149-151 (7.64), Background Scan 146
Location of Maximum: 198.00
Number of points: 167

m/z	Y	m/z	Y	m/z	Y	m/z	Y
105.00	777	172.00	188	234.00	171	423.00	2531
107.00	12271	173.00	290	235.00	214	424.00	419
108.00	1906	174.00	746	237.00	201	441.00	8549
110.00	22264	175.00	1773	241.00	176	442.00	54008
111.00	3411	176.00	262	242.00	536	443.00	10410
112.00	421	177.00	623	243.00	495	444.00	817
116.00	581	179.00	3318	244.00	9795		

Quantitation Report

Data File : C:\HPCHEM\1\DATA\U081318\UD953.D Vial: 1
Acq On : 13 Aug 2018 10:27 am Operator: JCG
Sample : WG233872-1 Inst : GC/MS Ins
Misc : WG233872,WG233872,WG232607-4 Multiplr: 1.00
MS Integration Params: 9EP018 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\TUNETAIL.M (RTE Integrator)
Title : Katahdin 8270C Water Calibration
Last Update : Mon Jul 09 11:46:13 2018
Response via : Multiple Level Calibration



TIC: UD953.D

(1) Pentachlorophenol (CM)

6.76min 66.43ug/L

response 146877

Ion	Exp%	Act%
266.00	100	100
264.00	62.00	61.97
268.00	63.50	63.14
0.00	0.00	0.00

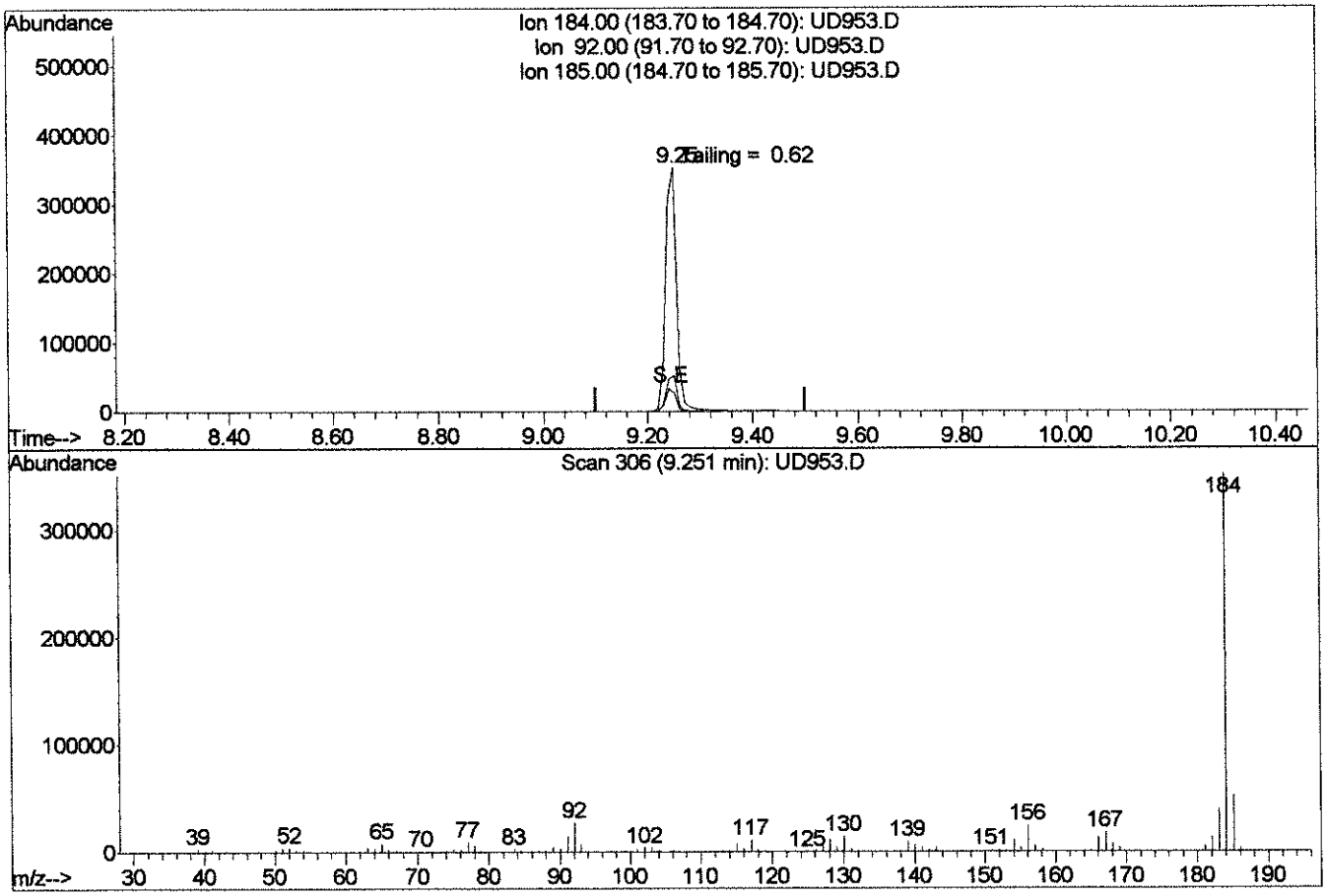
UD953.D TUNETAIL.M Mon Aug 13 10:42:00 2018

Quantitation Report

Data File : C:\HPCHEM\1\DATA\U081318\UD953.D
Acq On : 13 Aug 2018 10:27 am
Sample : WG233872-1
Misc : WG233872,WG233872,WG232607-4
MS Integration Params: 39EP0P8

Vial: 1
Operator: JCG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\TUNETAIL.M (RTE Integrator)
Title : Katahdin 8270C Water Calibration
Last Update : Mon Jul 09 11:46:13 2018
Response via : Multiple Level Calibration



TIC: UD953.D

(2) Benzidine (T)

9.25min 115.73ug/L

response 519161

Ion	Exp%	Act%
184.00	100	100
92.00	12.20	8.94
185.00	14.40	14.63
0.00	0.00	0.00

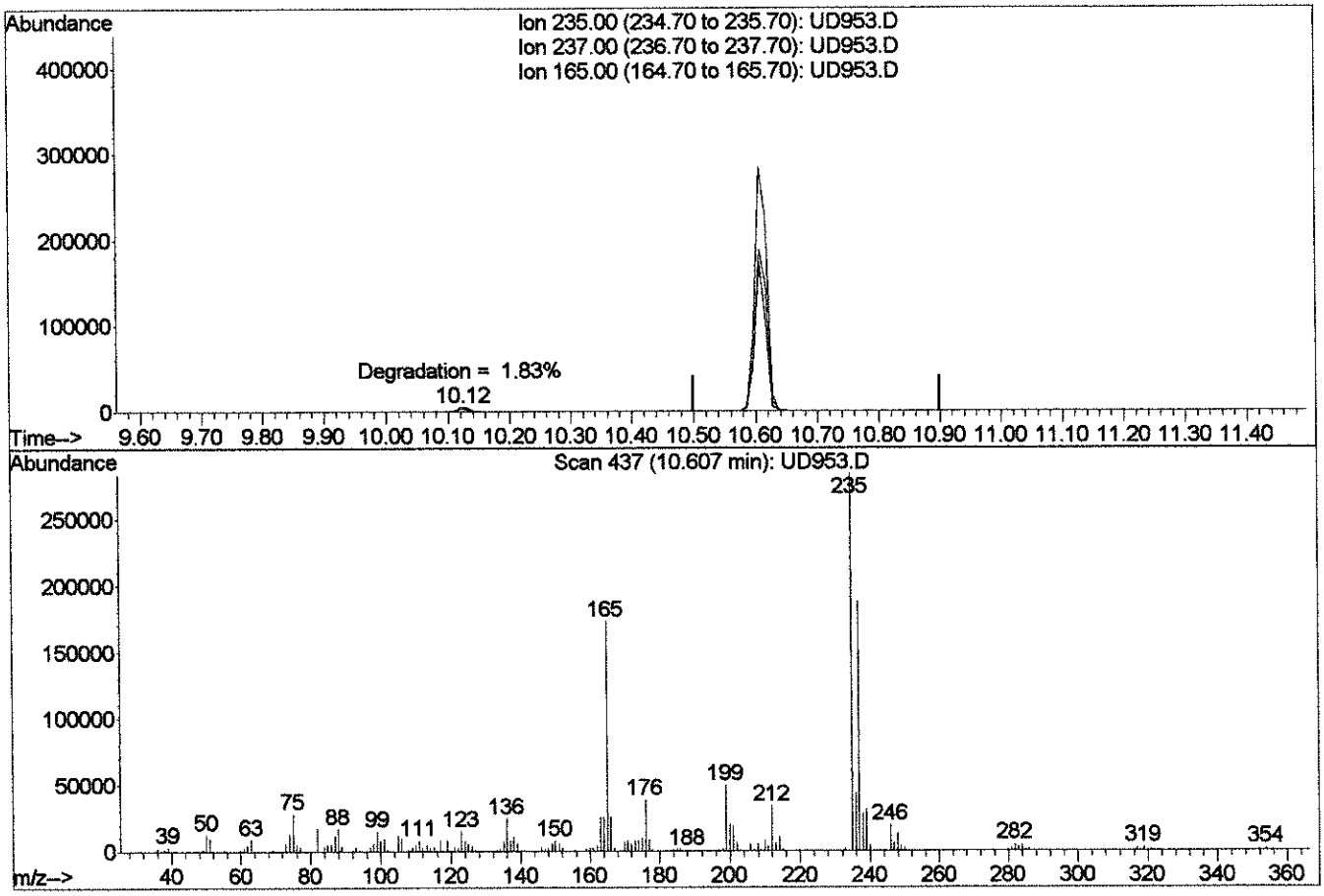
UD953.D TUNETAIL.M Mon Aug 13 10:41:54 2018

Quantitation Report

Data File : C:\HPCHEM\1\DATA\U081318\UD953.D
Acq On : 13 Aug 2018 10:27 am
Sample : WG233872-1
Misc : WG233872,WG233872,WG232607-4
MS Integration Params: 39EP2018

Vial: 1
Operator: JCG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\TUNETAIL.M (RTE Integrator)
Title : Katahdin 8270C Water Calibration
Last Update : Mon Jul 09 11:46:13 2018
Response via : Multiple Level Calibration



TIC: UD953.D

(3) 4,4'-DDT (T)

10.61min 85.69ug/L

response 384413

Ion	Exp%	Act%
235.00	100	100
237.00	50.00	65.60
165.00	50.00	56.01
0.00	0.00	0.00

UD953.D TUNETAIL.M Mon Aug 13 10:41:46 2018

Raw QC Data Section

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client:
Lab ID: WG233966-1
Client ID: Method Blank Sample
Project:
SDG: SL7420
Lab File ID: U1908.D

Sample Date:
Received Date:
Extract Date: 10-AUG-18
Extracted By: DP
Extraction Method: SW846 3510C
Lab Prep Batch: WG233966

Analysis Date: 13-AUG-18
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: AQ
% Solids: NA
Report Date: 24-AUG-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Pyridine	U	38	ug/L	1	50	50.	1.5	38.
1,4-Dichlorobenzene	U	7.5	ug/L	1	10	10.	2.2	7.5
2-Methylphenol	U	7.5	ug/L	1	10	10.	3.8	7.5
3&4-Methylphenol	U	7.5	ug/L	1	10	10.	5.6	7.5
Hexachloroethane	U	7.5	ug/L	1	10	10.	2.3	7.5
Nitrobenzene	U	7.5	ug/L	1	10	10.	3.1	7.5
Hexachlorobutadiene	U	7.5	ug/L	1	10	10.	1.8	7.5
2,4,6-Trichlorophenol	U	7.5	ug/L	1	10	10.	2.7	7.5
2,4,5-Trichlorophenol	U	19	ug/L	1	25	25.	3.6	19.
2,4-Dinitrotoluene	U	7.5	ug/L	1	10	10.	2.2	7.5
Hexachlorobenzene	U	7.5	ug/L	1	10	10.	2.1	7.5
Pentachlorophenol	U	19	ug/L	1	25	25.	2.3	19.
2-Fluorophenol		37.7	%					
Phenol-D6		26.4	%					
Nitrobenzene-D5		66.3	%					
2-Fluorobiphenyl		66.0	%					
2,4,6-Tribromophenol		79.2	%					
Terphenyl-D14		80.2	%					

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Data File: \\target_server\gg\chem\gcms-u.i\U081318.b\U1908.D
Report Date: 14-Aug-2018 11:32

Katahdin Analytical Services

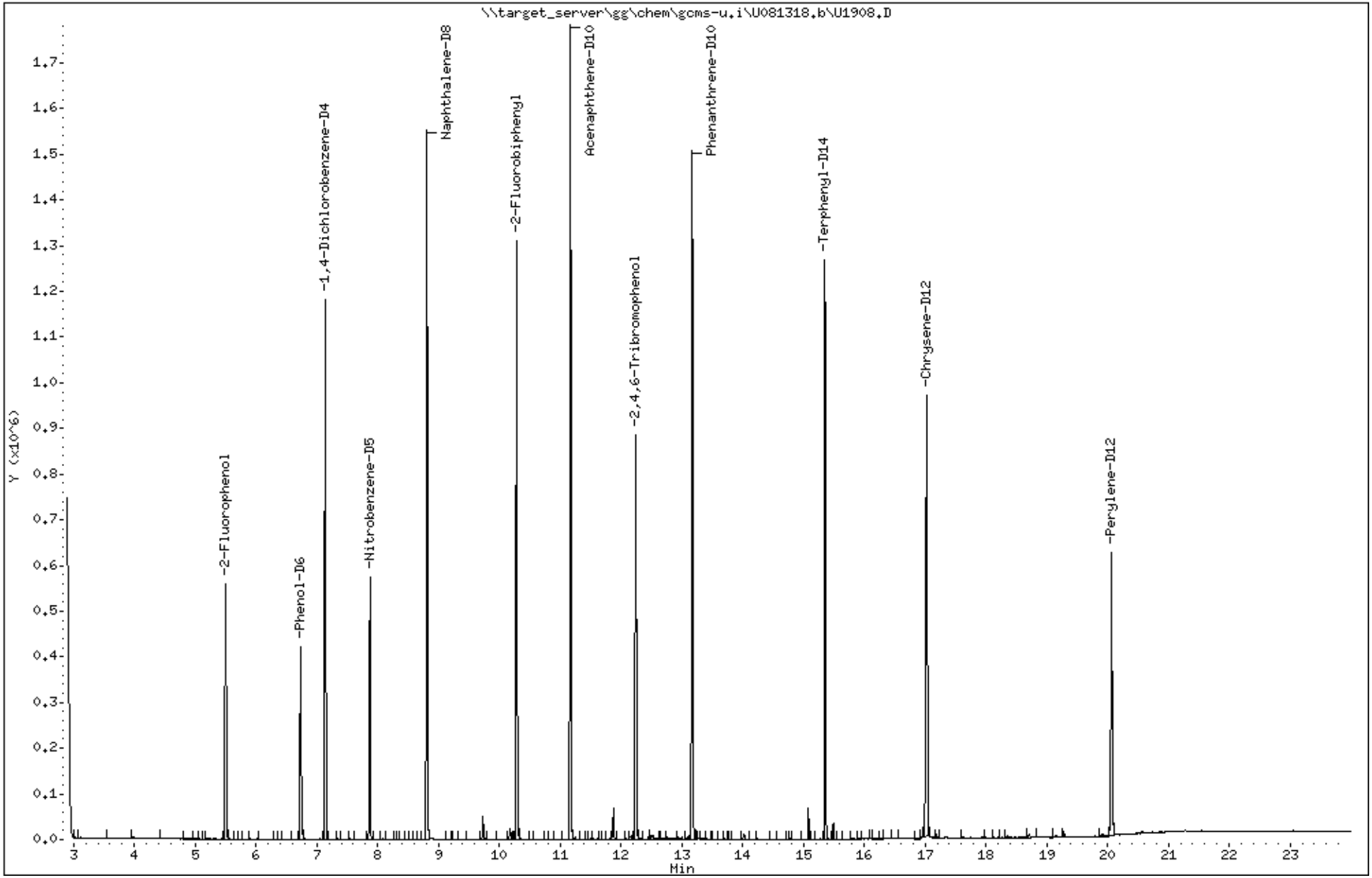
Data file : \\target_server\gg\chem\gcms-u.i\U081318.b\U1908.D
Lab Smp Id: WG233966-1 Client Smp ID: WG233966-Blank
Inj Date : 13-AUG-2018 11:18
Operator : JCG Inst ID: gcms-u.i
Smp Info : WG233966-1,SL7420
Misc Info : WG233872,WG233966,WG232607-4,SL7420-1
Comment :
Method : \\target_server\gg\chem\gcms-u.i\U081318.b\U8270C51.m
Meth Date : 14-Aug-2018 09:11 cgomez Quant Type: ISTD
Cal Date : 24-JUL-2018 18:01 Cal File: U1768.D
Als bottle: 3 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DoDTCLP50.sub
Target Version: 4.12
Processing Host: V200T4

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 8 2-Fluorophenol	112	5.491	5.523	(0.769)	277786	37.6695	37.7	
$ 13 Phenol-D6	99	6.733	6.765	(0.943)	212234	26.4493	26.4	
* 21 1,4-Dichlorobenzene-D4	152	7.137	7.159	(1.000)	229599	40.0000		
$ 33 Nitrobenzene-D5	82	7.871	7.904	(0.893)	229317	33.1328	33.1	
* 44 Naphthalene-D8	136	8.813	8.835	(1.000)	816773	40.0000		
$ 63 2-Fluorobiphenyl	172	10.283	10.305	(0.920)	460702	33.0224	33.0	
* 75 Acenaphthene-D10	164	11.173	11.195	(1.000)	465761	40.0000		
$ 95 2,4,6-Tribromophenol	330	12.250	12.272	(1.096)	129275	79.1560	79.2	
* 111 Phenanthrene-D10	188	13.171	13.203	(1.000)	737836	40.0000		
$ 127 Terphenyl-D14	244	15.355	15.377	(0.902)	560245	40.1165	40.1	
* 137 Chrysene-D12	240	17.021	17.053	(1.000)	539214	40.0000		
* 146 Perylene-D12	264	20.064	20.076	(1.000)	434820	40.0000		

Data File: \\target_server\gg\chem\gcms-u.i\U081318.b\U1908.D
Date : 13-AUG-2018 11:18
Client ID: WG233966-Blank
Instrument: gcms-u.i
Sample Info: WG233966-1,SL7420
Volume Injected (uL): 1.0
Operator: JCG
Column phase: ZB5-MS
Column diameter: 0.25



Katahdin Analytical Services 2000114

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client:
Lab ID: WG233966-3
Client ID: TCLP Blank
Project:
SDG: SL7420
Lab File ID: U1909.D

Sample Date:
Received Date:
Extract Date: 10-AUG-18
Extracted By: DP
Extraction Method: 3510C/1311
Lab Prep Batch: WG233966

Analysis Date: 13-AUG-18
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: AQ
% Solids: NA
Report Date: 24-AUG-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Pyridine	U	190	ug/L	1	50	250	7.5	190
1,4-Dichlorobenzene	U	38	ug/L	1	10	50.	11.	38.
2-Methylphenol	U	38	ug/L	1	10	50.	19.	38.
3&4-Methylphenol	U	38	ug/L	1	10	50.	28.	38.
Hexachloroethane	U	38	ug/L	1	10	50.	12.	38.
Nitrobenzene	U	38	ug/L	1	10	50.	16.	38.
Hexachlorobutadiene	U	38	ug/L	1	10	50.	9.0	38.
2,4,6-Trichlorophenol	U	38	ug/L	1	10	50.	14.	38.
2,4,5-Trichlorophenol	U	94	ug/L	1	25	120	18.	94.
2,4-Dinitrotoluene	U	38	ug/L	1	10	50.	11.	38.
Hexachlorobenzene	U	38	ug/L	1	10	50.	10.	38.
Pentachlorophenol	U	94	ug/L	1	25	120	12.	94.
2-Fluorophenol		36.2	%					
Phenol-D6		24.7	%					
Nitrobenzene-D5		70.8	%					
2-Fluorobiphenyl		71.2	%					
2,4,6-Tribromophenol		79.6	%					
Terphenyl-D14		82.3	%					

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Data File: \\target_server\gg\chem\gcms-u.i\U081318.b\U1909.D
Report Date: 14-Aug-2018 11:32

Katahdin Analytical Services

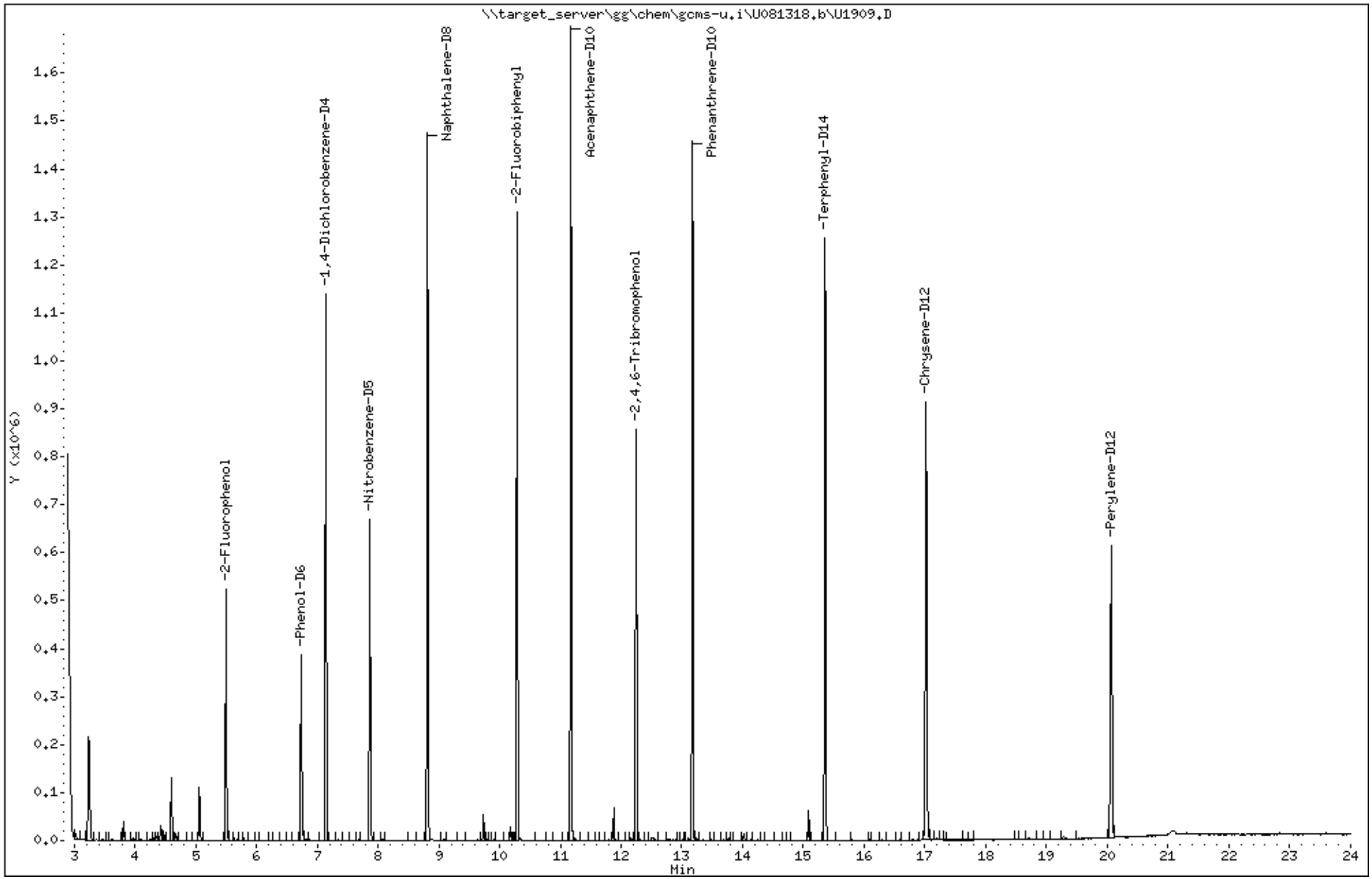
Data file : \\target_server\gg\chem\gcms-u.i\U081318.b\U1909.D
Lab Smp Id: WG233966-3 Client Smp ID: WG233966-TclpBlank
Inj Date : 13-AUG-2018 11:50
Operator : JCG Inst ID: gcms-u.i
Smp Info : WG233966-3,SL7420
Misc Info : WG233872,WG233966,WG232607-4,SL7420-1
Comment :
Method : \\target_server\gg\chem\gcms-u.i\U081318.b\U8270C51.m
Meth Date : 14-Aug-2018 09:11 cgomez Quant Type: ISTD
Cal Date : 24-JUL-2018 18:01 Cal File: U1768.D
Als bottle: 4 QC Sample: TCLPBLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DoDTCLP50.sub
Target Version: 4.12
Processing Host: V200T4

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	0.20000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 8 2-Fluorophenol	112	5.500	5.523	(0.771)	268150	36.2287	181	
$ 13 Phenol-D6	99	6.732	6.765	(0.943)	198751	24.6777	123	
* 21 1,4-Dichlorobenzene-D4	152	7.136	7.159	(1.000)	230449	40.0000		
$ 33 Nitrobenzene-D5	82	7.871	7.904	(0.893)	246686	35.4043	177	
* 44 Naphthalene-D8	136	8.812	8.835	(1.000)	822265	40.0000		
$ 63 2-Fluorobiphenyl	172	10.282	10.305	(0.920)	484583	35.6031	178	
* 75 Acenaphthene-D10	164	11.172	11.195	(1.000)	454394	40.0000		
$ 95 2,4,6-Tribromophenol	330	12.249	12.272	(1.096)	126906	79.6493	398	
* 111 Phenanthrene-D10	188	13.170	13.203	(1.000)	720044	40.0000		
$ 127 Terphenyl-D14	244	15.354	15.377	(0.902)	546191	41.1718	206	
* 137 Chrysene-D12	240	17.020	17.053	(1.000)	512214	40.0000		
* 146 Perylene-D12	264	20.063	20.076	(1.000)	410849	40.0000		

Data File: \\target_server\gg\chem\gcms-u.i\U081318.b\U1909.D
Date : 13-AUG-2018 11:50
Client ID: WG233966-TclpBlank
Instrument: gcms-u.i
Sample Info: WG233966-3,SL7420
Volume Injected (uL): 1.0
Operator: JCG
Column phase: ZB5-MS
Column diameter: 0.25



Katahdin Analytical Services 2000117

Katahdin
ANALYTICAL SERVICES

LCS Recovery Report

Client:
Lab ID: WG233966-2
Client ID: LCS
Project:
SDG: SL7420
LCS File ID: U1911.D

Sample Date:
Received Date:
Extract Date: 10-AUG-18
Extracted By: DP
Extraction Method: SW846 3510C
Lab Prep Batch: WG233966

Analysis Date: 13-AUG-18
Analyst: JCG
Analysis Method: SW846 8270D
Matrix: AQ
% Solids: NA
Report Date: 24-AUG-18

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
Pyridine	21.0	50.0	10.5	ug/L	10-96
1,4-Dichlorobenzene	64.8	50.0	32.4	ug/L	29-112
2-Methylphenol	57.4	100.	57.4	ug/L	30-117
3&4-Methylphenol	51.5	100.	51.5	ug/L	29-110
Hexachloroethane	61.2	50.0	30.6	ug/L	21-115
Nitrobenzene	74.4	50.0	37.2	ug/L	48-95
Hexachlorobutadiene	67.2	50.0	33.6	ug/L	22-124
2,4,6-Trichlorophenol	74.0	100.	74.0	ug/L	50-125
2,4,5-Trichlorophenol	79.8	100.	79.8	ug/L	53-123
2,4-Dinitrotoluene	86.4	50.0	43.2	ug/L	57-128
Hexachlorobenzene	81.2	50.0	40.6	ug/L	53-125
Pentachlorophenol	108.	100.	108.	ug/L	35-138
2-Fluorophenol	38.3				19-119
Phenol-D6	24.2				10-90
Nitrobenzene-D5	73.3				44-120
2-Fluorobiphenyl	74.0				44-119
2,4,6-Tribromophenol	84.8				43-140
Terphenyl-D14	83.2				50-134

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Data File: \\target_server\gg\chem\gcms-u.i\U081318.b\U1911.D
Report Date: 14-Aug-2018 11:32

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-u.i\U081318.b\U1911.D
Lab Smp Id: WG233966-2 Client Smp ID: WG233966-LCS
Inj Date : 13-AUG-2018 12:55
Operator : JCG Inst ID: gcms-u.i
Smp Info : WG233966-2,SL7420
Misc Info : WG233872,WG233966,WG232607-4,SL7420-1
Comment :
Method : \\target_server\gg\chem\gcms-u.i\U081318.b\U8270C51.m
Meth Date : 14-Aug-2018 09:11 cgomez Quant Type: ISTD
Cal Date : 24-JUL-2018 18:01 Cal File: U1768.D
Als bottle: 6 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DoDTCLP50.sub
Target Version: 4.12
Processing Host: V200T4

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

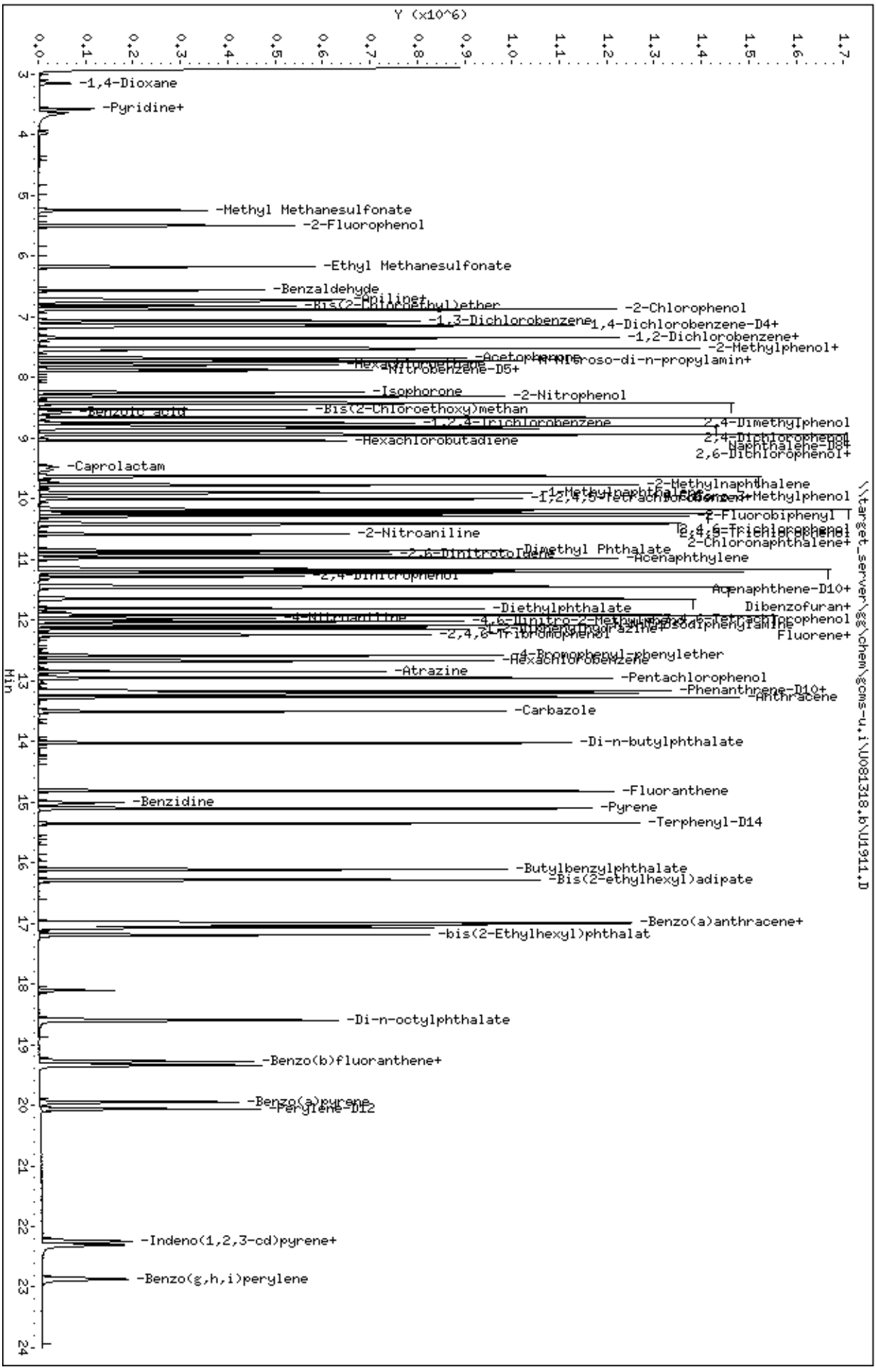
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)	REVIEW CODE
	3 Pyridine	79	3.641	3.660	(0.510)	78583	10.5136	10.5(a)	
$	8 2-Fluorophenol	112	5.494	5.523	(0.770)	255930	38.2610	38.3	
$	13 Phenol-D6	99	6.736	6.765	(0.943)	176424	24.2389	24.2	
*	21 1,4-Dichlorobenzene-D4	152	7.139	7.159	(1.000)	208264	40.0000		
	19 1,4-Dichlorobenzene	146	7.160	7.179	(1.003)	230184	32.4155	32.4	
	23 2-Methylphenol	108	7.533	7.552	(1.055)	326524	57.3863	57.4	
	24 3&4-Methylphenol	108	7.729	7.769	(1.083)	310900	51.4789	51.5(Q)	
	32 Hexachloroethane	117	7.802	7.821	(1.093)	89104	30.6072	30.6	
$	33 Nitrobenzene-D5	82	7.874	7.904	(0.893)	225276	36.6685	36.7	
	34 Nitrobenzene	77	7.895	7.924	(0.896)	208682	37.2470	37.2	
*	44 Naphthalene-D8	136	8.816	8.835	(1.000)	725012	40.0000		
	49 Hexachlorobutadiene	225	9.044	9.063	(1.026)	98858	33.6309	33.6	
	61 2,4,6-Trichlorophenol	196	10.182	10.202	(0.911)	253381	74.0443	74.0	
	62 2,4,5-Trichlorophenol	196	10.234	10.264	(0.916)	293859	79.8020	79.8	
$	63 2-Fluorobiphenyl	172	10.286	10.305	(0.920)	448938	36.9895	37.0	
*	75 Acenaphthene-D10	164	11.176	11.195	(1.000)	405191	40.0000		
	87 2,4-Dinitrotoluene	165	11.466	11.506	(1.026)	151314	43.2556	43.2	
$	95 2,4,6-Tribromophenol	330	12.252	12.272	(1.096)	120451	84.7780	84.8	
	103 Hexachlorobenzene	284	12.677	12.696	(0.962)	140747	40.6184	40.6	
	106 Pentachlorophenol	266	12.956	12.986	(0.984)	164499	108.204	108	

Data File: \\target_server\gg\chem\gcms-u.i\U081318.b\U1911.D
Report Date: 14-Aug-2018 11:32

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
* 111 Phenanthrene-D10	188	13.173	13.203	(1.000)	666834	40.0000		
$ 127 Terphenyl-D14	244	15.357	15.377	(0.902)	452245	41.5765	41.6	
* 137 Chrysene-D12	240	17.024	17.053	(1.000)	419984	40.0000		
* 146 Perylene-D12	264	20.067	20.076	(1.000)	308051	40.0000		

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.


Data File: \\target_server\gg\chem\gcms-u,i\U081318,b\U1911,D
Date : 13-AUG-2018 12:55
Client ID: WG233966-LCS
Sample Info: WG233966-2,SL7420
Volume Injected (uL): 1.0
Column phase: ZB5-MS
Instrument: gcms-u,i
Operator: JCG
Column diameter: 0.25
\\target_server\gg\chem\gcms-u,i\U081318,b\U1911,D
Y (x10^6)
Min
-1,4-Dioxane
-Pyridine+
-Methyl Methanesulfonate
-2-Fluorophenol
-Ethyl Methanesulfonate
-Benzaldehyde
-Aniline+
-Bis(2-Chloroethyl)ether
-2-Chlorophenol
-1,3-Dichlorobenzene
1,4-Dichlorobenzene-D4+
-1,2-Dichlorobenzene+
-2-Methylphenol+
-Acetophenone
-Hexachloroethane
-N-Nitroso-di-n-propylamin+
-Nitrobenzene-D5+
-Isophorone
-2-Nitrophenol
-Benzoic acid
-Bis(2-Chloroethoxy)methan
-1,2,4-Trichlorobenzene
2,4-Dimethylphenol
2,4-Dichlorophenol
Naphthalene-D8+
-Hexachlorobutadiene
2,6-Dichlorophenol+
-Caprolactam
-2-Methylnaphthalene
-1-Methylnaphthalene
-3+4-Methylphenol
-1,2,4,5-Tetrachlorobenzen+
-2-Fluorobiphenyl
2,4,6-Trichlorophenol
-2-Nitroaniline
2-Chloronaphthalene+
-Dimethyl Phthalate
-2,6-Dinitrotoluene
-Acenaphthylene
-2,4-Dinitrophenol
Acenaphthene-D10+
Dibenzofuran+
-Diethylphthalate
-4-Nitroaniline
-4,6-Dinitro-2-Methylphenol
-N-Nitrosodiphenylamine
-2,4,6-Tribromophenol
Fluorene+
-4-Bromophenyl-phenylether
-Hexachlorobenzene
-Atrazine
-Pentachlorophenol
-Phenanthrene-D10+
-Anthracene
-Carbazole
-Di-n-butylphthalate
-Fluoranthene
-Benzidine
-Pyrene
-Terphenyl-D14
-Butylbenzylphthalate
-Bis(2-ethylhexyl)adipate
-Benzo(a)anthracene+
-bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(b)fluoranthene+
-Benzo(a)pyrene
-Perylene-D12
-Indeno(1,2,3-cd)pyrene+
-Benzo(g,h,i)perylene

Logbooks and Supporting Documents

KATAHDIN ANALYTICAL SERVICES, LLC. — Non-Volatile TCLP/SPLP Extraction Log

I. EXTRACTION CONDITIONS

Extraction Method:	SW846 1311 (TCLP) ☑		Balance ID: BAL-15	Rotary Extractor ID: 2		
	SW846 1312 (SPLP) ☐		pH Meter ID: Orion 520A s/n 7422	pH Probe ID: 5733526-0038		
Solid pH Determination:	Date: 8-9-18	Analyst: AMJ	Room Thermometer ID: Dig 70	(Room Temp Criteria. 23(±2)°C)		
Rotary Extraction Started:	Date: 8/9/18	Time: 1321	Analyst: AMJ	RoomTemp(°C):	Start: 22.4	End: 23.2
Rotary Extraction Completed:	Date: 8/10/18	Time: 0521	Analyst: AMJ	Room Temp (°C):	Min. 22.4	Max. 23.4
Extraction Filtered:	Date: 8/10/18	Time: 0753	Analyst: AMJ	Filter Lot #: R75A02387 / R7MA33010		
Elapsed Extraction Time (HH:MM): 16:00		5% HNO_3 ID (used to wash filters): HR2074		HNO_3 Lot # (used to preserve extracts): MSK110		
Fluid 1 pH (Day of use): PBT1470A - 4.95 PBT1472A - 4.94		Fluid 1 Expiration Date: 8/1/19 / 8/9/19		Rotary Extractor Rotation Rate Checked? ✓		
Fluid 2 pH (Day of use): PBT1471A - 2.92		Fluid 2 Expiration Date: 8/6/19		Criteria. 30 ± 2 RPM (29)		

II. EXTRACTION SETUP

TCLP Fluid pH: #1 - 4.93 ± 0.05 #2 - 2.88 ± 0.05 SPLP Fluid pH: #1 - 4.20 ± 0.05 #2 - 5.00 ± 0.05

Katahdin Sample No. (include bottle ID)	Matrix	Check One: 100% Wet Solids- waste will yield no liquid upon filtration	Check One: < 100% Wet Solids (Perform Solids Determination below)	SPLP FLUID # (1 for east and 2 for west of Mississippi River)	TCLP pH Determination and Fluid Selection (date & init. above): Initial pH of solid phase: (If <5, use Fluid #1; If >5 add 3.5 mL of 1 N HCl)	pH after 1 N HCL addition (If <5, use Fluid #1; If >5, use Fluid #2	Extraction Setup: Volume of Extraction Fluid (mL)	Fluid # used	Associated Extraction Blank ID:	Weight of Waste (g)	pH of extract after extraction:	Extract to be analyzed for: Metals (M), SVOA (S), PEST (P), HERB (H), Cyanide (C)	Extraction Bottle ID (if applicable)
SL7472-1A	SL	✓	—	—	11.66	11.17	2000	2	PBT1471A	100.19	10.36	M	NA
SL7472-2A	SL	✓	—	—	11.66	11.17	2000	2	"	100.12	10.36	M	NA
SL7420-1C	SL	✓	—	—	7.54	1.88	2000	1	PBT1470A	100.03	5.01	M,H,P S,V	38
SL7420-2C	SL	✓	—	—	8.56	2.02	2000	1	"	100.10	6.03	M,H,P S,V	47
SL7425-1B	SL	✓	—	—	7.95	1.95	2000	1	"	100.05	5.09	M,H,P S,V	54
SL7426-1B	SL	✓	—	—	10.49	2.09	2000	1	PBT1472A	100.15	8.55	M,H,P S,V	33
PBT1471A	AQ	^	—	—	—	—	2000	2	NA	NA	2.41	M	NA
PBT1470A,B	AQ	—	—	—	—	—	2000	1	NA	NA	4.74	H,P,S,V	53
PBT1472A	AQ	—	—	—	—	—	2000	1	NA	NA	8.486	M,H,P,S	49

AMJ 8/9/18 — JS 8/9/18 — AMJ 8/10/18 — AMJ 8/10/18

ME-001 – Revision 7 – 02/23/2018

MP 8/16/18

QAAA191 — 0000138

III. SOLIDS DETERMINATION

Date AQ Filtered:

Katahdin Sample No. (include bottle ID)	AQ or SL	Time Filt'd	A: Weight of filter (g)	B: Weight of filtrate vessel (g)	C: Weight of weigh boat + waste (g)	D: Weight of weigh boat + residue (g)	E: Weight of waste (C-D) (g)	F: Weight of filtrate vessel + filtrate (g)	G: Weight of liquid phase (F-B) (g)	H: Percent wet solids [(E-G)/E x 100%]	I: Weight of filter + dry solids (g)	J: Weight of dry solids (I-A) (g)	K: Percent dry solids (J/E x 100%)

IV. PHASE SEPARATION

Katahdin Sample No. (include bottle ID)	Matrix	Percent dry solids [1]: <0.5%	Percent dry solids [1]: >0.5%	L: Weight of filtrate vessel (g)	M: Weight of weigh boat + waste (g)	N: Weight of weigh boat + residue (g)	O: Weight of waste (M-N) (g)	P: Weight of filtrate vessel + filtrate (g)	Q: Weight of liquid phase (P-L) (g)	R: Volume of liquid phase (mL) [2]	S: Weight of wet solids (O - Q) (g)

AMJ 8/10/18

1) If dry solids is <0.5%, filter sufficient volume of waste to support all required analyses. If dry solids >0.5% and wet solids <100%, perform phase separation (steps L – S above).

2) If miscible, proportionately combine pre-extraction filtrate with rotary extract. If not miscible, analyze aliquots separately and mathematically combine results.

V. COMMENTS:

Reviewed By [signature] Date 8/16/18

ME-001 – Revision 7 – 02/23/2018

SEP ! SV/SIM

KATAHDIN ANALYTICAL SERVICES, LLC.
ORGANIC EXTRACTIONS LOG - AQUEOUS SEMI-VOLATILES

Extraction Method: (check one)	SW846 3510 (SEP) ✓	SW846 3520 (CLLE)	SW846 3535 (SPE)
Analytical Method:(check one)	SW846 8270 ✓	SW846 8270 SIM ✓	EPA 625 (mark meniscus w/ marker to determine IV)
Surrogate ID: SVA864	Surrogate ID: —	Spike ID: SV2869 (SIM)	Spike ID: SVA855 (SV)
Methylene Chloride Lot #: DV514-US	pH Paper Lot # HC739245	KI Starch Paper ID: 102017	Note samples requiring TRC neutralization in comments section.
pH (1st Extraction) 7 ≤2	H_2SO_4 Lot # 185389	pH (2nd Extraction) ≥ 11	NaOH Lot # 190393
$NaSO_4$ Lot # 27968002	Filter Paper Lot #: 14081047	Boiling Stones ID: 03272014	Vial Lot #: 402625
Nitrogen Bath Temperature: 36°	—	—	—
Prep Start Time: 10:15	Prep End Time: 2:00	CLLE Start Time: —	CLLE End Date & Time: —

Date Extracted	Ext. Init.	Sample ID	Initial Vol. mL	Surr. Vol.	Spike Vol.	Fraction SV	Fraction SIM	Final Vol. mL	Date Conc.	Tray Location	Initials	SV: R485513 Comments SIM: R485514
8-10-18	DP	WG233966-1 (SV) 233967 (SIM)	1000	1.00	NR	✓	✓	1.00	08-10-18	SV340 C7	KF	
		WG233966-2	1000		1.00					C8		
		-3	200		NR					C9		PBT1470B
		-4	200			✓				C10		PBT1472A
		WG233967-2	1000		1.00		✓			D1		
		-3	980							D2		SL7484-3A MS: SL7485
		-4	1000				✓			D3		MSD: SL7484-3B
												DP 08-10-18

Date Extracted	Ext. Init.	Sample ID	Initial Vol. mL	Surr. Vol.	Spike Vol.	Fraction SV	Fraction SIM	Final Vol. mL	Date Conc.	Tray Location	Initials	Comments
8-10-18	DP	SL7420-1C	200	1.00	NR	✓		1.00	08-10-18	D4	KF	
		-2C								5		
		SL7425-1B								6		
		SL7426-1B								7		
		SL7503-1I	900							8		
		SL7533-4D	1000			✓				9		Side-Sep
		SL7483-1A	1000				✓			D10		Side-Sep
		-2A	990							E1		
		-3A	980							2		
		SL7484-1A	990							3		
		-2A	970							4		
		-3C	980							5		Side-Sep MS/D
		-4A	1000							6		
		-5A	1000							7		
		-6A	970							8		
		SL7501-5H	1040							9		
		SL7496-9F	1060							E10		
												PP 08-10-18

Reviewed By_____ Date_____

KATAHDIN ANALYTICAL SERVICES
GC/MS SVOA INJ LOG INSTRUMENT: 5973-U

DATE OF DFTPP INJECTION: 072418

JOB	SAMPLE	DATAFILE	DF	VIAL #	METHOD	UL INJ	CHEMIST	COMMENTS
W4232607-1	50ng DFTPP	UD943	1	1	DFTPP3Q0	2.0	JLG	OK
	SSTD 010 UD724	U1763	1	2	U8270C51	1.0		✓
	010	64		3				✓
	025	65		4				✓
	075	66		5				✓
	100	67		6				✓
	125	68		7				✓
	150	69		8				

KATAHDIN ANALYTICAL SERVICES
GC/MS SVOA INJ LOG INSTRUMENT: 5973-U

DATE OF DFTPP INJECTION: 081318

JOB	SAMPLE	DATAFILE	DF	VIAL #	METHOD	UL INJ	CHEMIST	COMMENTS
WG233872-1	50 ng DFTPP	UD953	1	1	DFTPP390	2.0	JLK	OK
-2	SSTD050 U0823	U1907		2	U8270C51	1.0		OK
	WG233966-1	08		3				OK
	-3	09		4				OK
	-4	10		5				OK 186↑
	-2	11		6				OK
	SL7420-1	12		7				OK
	-2	13		8				OK
	SL7425-1	14		9				OK 156↑
	SL7426-1	15		10				OK
	SL7503-11	16		4				OK
	SL7496-9	17		12				551↓
	SL7533-4DL	18	5	13				552↑ JD/220
	-4	19	1	14				156↓ 552↑
	melt	20	1	15				—
-3	SSTD010 U0813	21		16				OK USE
-4	↓	22		1				OK ↓
-5	↓	23	↓	↓	↓	↓	↓	OK
								Jumpline

STANDARD	CODE
DFTPP	53148
CAL. STD.	53137 JK-5467
ICV. STD.	-
IS MIX	JK-5499

REVIEWED AND APPROVED BY: _____
DATE: _____

TCLP HERBICIDE DATA

QC Summary Section

Katahdin
ANALYTICAL SERVICES

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** Cornhusker Army Ammunition Plant **Matrix:** AQ
Lab Code: KAS **SDG:** SL7420

Client Sample ID	Lab Sample ID	Col. ID	DCPA	#
CHAAP-IDW-SOIL-080618	SL7420-1	A	65.0	
CHAAP-IDW-SOIL-080618	SL7420-1	B	62.0	
CHAAP-IDW-SOIL-080618	SL7420-2	A	42.7	
CHAAP-IDW-SOIL-080618	SL7420-2	B	41.2	
Method Blank Sample	WG233963-1	A	60.7	
Method Blank Sample	WG233963-1	B	62.6	
Laboratory Control S	WG233963-2	A	92.7	
Laboratory Control S	WG233963-2	B	96.2	
TCLP Blank	WG233963-3	A	53.8	
TCLP Blank	WG233963-3	B	53.0	

		QC Limits
DCPA	2,4-DICHLOROPHENYLACETIC ACID	32-138

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

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Katahdin
ANALYTICAL SERVICES

Form 4
Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : 8LH00016.D
Matrix : AQ

Column A
Instrument ID : GC08
Date Analyzed : 13-AUG-18
Time Analyzed : 15:51

SDG : SL7420
Lab Sample ID : WG233963-1
Date Extracted : 10-AUG-18
Extraction Method : SW846 3510C

Column B
Instrument ID : GC08
Date Analyzed : 13-AUG-18
Time Analyzed : 15:51

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG233963-2	8LH00017.	08/13/18	16:14
TCLP Blank	WG233963-3	8LH00018.	08/13/18	16:38
CHAAP-IDW-SOIL-080618-S	SL7420-1	8LH00020.	08/13/18	17:25
CHAAP-IDW-SOIL-080618-N	SL7420-2	8LH00021.	08/13/18	17:49

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Form 8
GC Analytical Sequence

Lab Name : Katahdin Analytical Services
SDG : SL7420
Project : Cornhusker Army Ammunition Plant
Column ID : A
Instrument ID : GC08

Client Sample ID	Lab Sample ID	Date Analyzed	Time Analyzed	DCPA	
Initial Calibration	WG232698-1	07/23/18	15:52	10.71	
Initial Calibration	WG232698-2	07/23/18	16:15	10.71	
Initial Calibration	WG232698-3	07/23/18	16:39	10.72	
Initial Calibration	WG232698-4	07/23/18	17:02	10.72	
Initial Calibration	WG232698-5	07/23/18	17:26	10.73	
Initial Calibration	WG232698-6	07/23/18	17:49	10.74	
Independent Source	WG232698-7	07/23/18	18:13		
Continuing Calibrati	WG234216-1	08/13/18	13:22	10.69	
Method Blank Sample	WG233963-1	08/13/18	15:51	10.70	
Laboratory Control S	WG233963-2	08/13/18	16:14	10.69	
TCLP Blank	WG233963-3	08/13/18	16:38	10.70	
CHAAP-IDW-SOIL-08061	SL7420-1	08/13/18	17:25	10.72	
CHAAP-IDW-SOIL-08061	SL7420-2	08/13/18	17:49	10.72	
Continuing Calibrati	WG234216-2	08/13/18	19:47	10.74	

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Form 8
GC Analytical Sequence

Lab Name : Katahdin Analytical Services
SDG : SL7420
Project : Cornhusker Army Ammunition Plant
Column ID : B
Instrument ID : GC08

Client Sample ID	Lab Sample ID	Date Analyzed	Time Analyzed	DCPA	
Initial Calibration	WG232698-1	07/23/18	15:52	11.80	
Initial Calibration	WG232698-2	07/23/18	16:15	11.82	
Initial Calibration	WG232698-3	07/23/18	16:39	11.82	
Initial Calibration	WG232698-4	07/23/18	17:02	11.84	
Initial Calibration	WG232698-5	07/23/18	17:26	11.84	
Initial Calibration	WG232698-6	07/23/18	17:49	11.84	
Independent Source	WG232698-7	07/23/18	18:13		
Continuing Calibrati	WG234216-1	08/13/18	13:22	11.80	
Method Blank Sample	WG233963-1	08/13/18	15:51	11.80	
Laboratory Control S	WG233963-2	08/13/18	16:14	11.81	
TCLP Blank	WG233963-3	08/13/18	16:38	11.83	
CHAAP-IDW-SOIL-08061	SL7420-1	08/13/18	17:25	11.84	
CHAAP-IDW-SOIL-08061	SL7420-2	08/13/18	17:49	11.85	
Continuing Calibrati	WG234216-2	08/13/18	19:47	11.86	

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Sample Data Section

KATAHDIN ANALYTICAL SERVICES - ORGANIC DATA QUALIFIERS

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.

* Compound recovery or percent RPD (relative percent difference) was outside of quality control limits.

D Indicates the result was obtained from analysis of a diluted sample. Surrogate recoveries may not be calculable.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

or

J Used for Pesticides, PCBs, Herbicides, Formaldehyde, Explosives and Method 504.1 analytes when there is a greater than 40% difference for detected concentrations between the two GC columns.

B Indicates the analyte was detected in the laboratory method blank analyzed concurrently with the sample.

C Indicates that the flagged compound did not meet DoD criteria in the corresponding daily calibration verification (CV).

L Indicates that the flagged compound did not meet DoD criteria in the corresponding Laboratory Control Sample (LCS) and/or Laboratory Control Sample Duplicate (LCSD) prepared and/or analyzed concurrently with the sample.

M Indicates that the flagged compound did not meet DoD criteria in the Matrix Spike and/or Matrix Spike Duplicate prepared and/or analyzed concurrently with the native sample.

N Presumptive evidence of a compound based on a mass spectral library search.

A Indicates that a tentatively identified compound is a suspected aldol-condensation product.

P Used for Pesticide/Aroclor analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. (for CLP methods only).

Katahdin Analytical Services, Inc.

Manual Integration Codes For GC/MS, GC, HPLC and/or IC

M1	Peak splitting.
M2	Well defined peaks on the shoulders of the other peaks.
M3	There is additional area due to a coeluting interferant.
M4	There are negative spikes in the baseline.
M5	There are rising or falling baselines.
M6	The software has failed to detect a peak or misidentified a peak.
M7	Excessive peak tailing.
M8	Analysis such as GRO, DRO and TPH require a baseline hold.
M9	Peak was not completely integrated as in GC/MS.
M10	Primary ion was correctly integrated, but secondary or tertiary ion needed manual integration as in GC/MS.
M11	For GC analysis, when a sample is diluted by 1:10 or more, the surrogate is set to undetected and then the area under the surrogate is manually integrated.
M12	Manual integration saved in method due to TurboChrom floating point error.

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL7420-1
Client ID: CHAAP-IDW-SOIL-080618-S
Project: Cornhusker Army Ammunition Plant
SDG: SL7420
Lab File ID: 8LH00020.D

Sample Date: 06-AUG-18
Received Date: 08-AUG-18
Extract Date: 10-AUG-18
Extracted By: DP
Extraction Method: 3510C/1311
Lab Prep Batch: WG233963

Analysis Date: 13-AUG-18
Analyst: BF
Analysis Method: SW846 8151A
Matrix: AQ
% Solids: NA
Report Date: 15-AUG-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
2,4-D	U	7.0	ug/L	1	3	14.	1.4	7.0
Silvex	U	7.1	ug/L	1	3	14.	0.95	7.1
2,4-Dichlorophenylacetic Acid		65.0	%					

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Data File: \\target_server\gg\chem\gc08.i\GC08LH13.b\8LH00020.D
Report Date: 15-Aug-2018 11:26

Katahdin Analytical Services

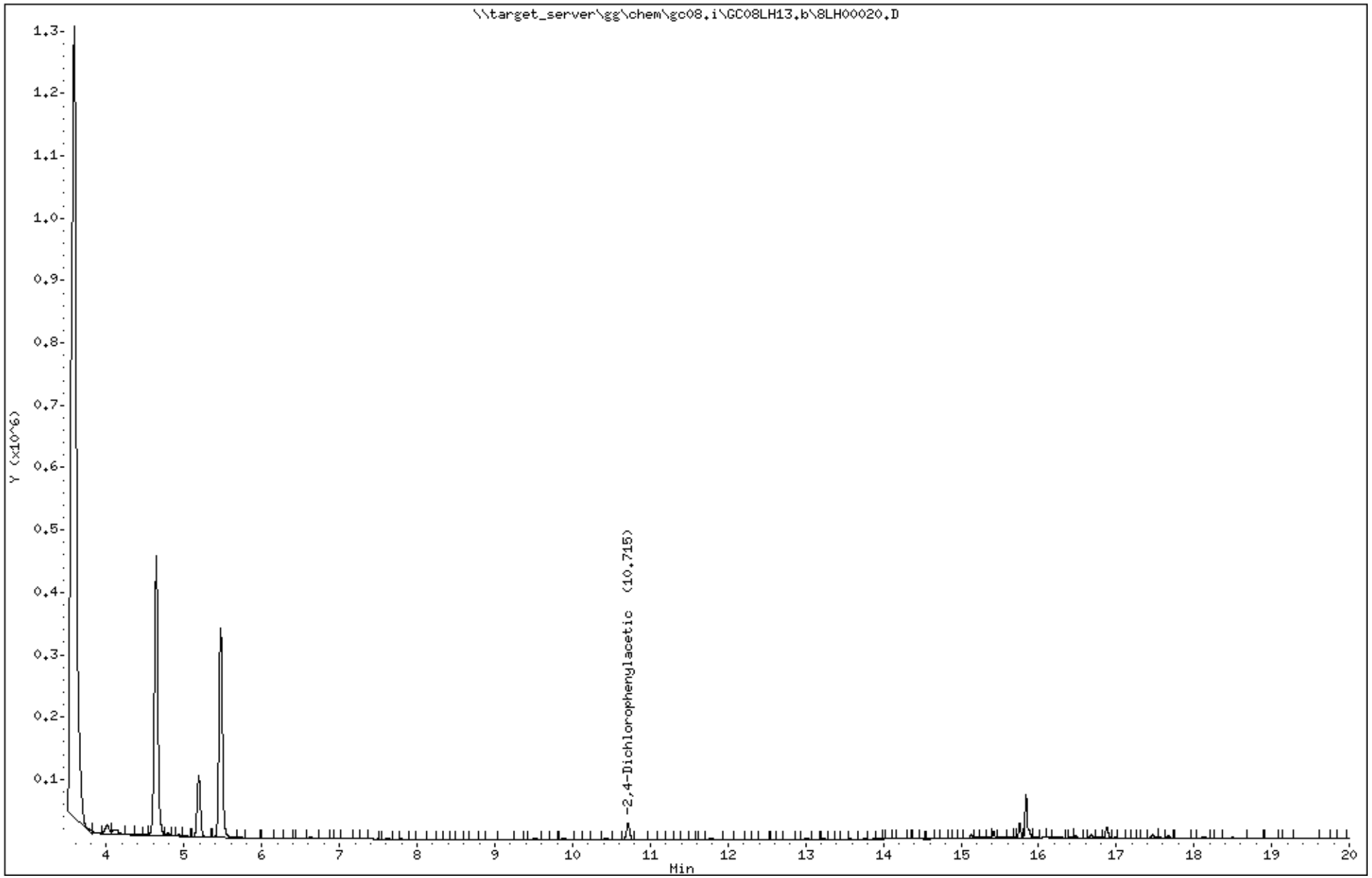
Data file : \\target_server\gg\chem\gc08.i\GC08LH13.b\8LH00020.D
Lab Smp Id: SL7420-1 Client Smp ID: HAAP-IDW-SOIL-08061
Inj Date : 13-AUG-2018 17:25
Operator : BF Inst ID: gc08.i
Smp Info : SL7420-1
Misc Info : WG234216,WG233963,WG232698-1
Comment :
Method : \\target_server\gg\chem\gc08.i\GC08LH13.b\HERB109.m
Meth Date : 15-Aug-2018 11:00 bflanders Quant Type: ESTD
Cal Date : 23-JUL-2018 17:49 Cal File: 8LG00067.D
Als bottle: 7
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TCLP-DoD5.sub
Target Version: 4.12
Processing Host: INSPIRON1

Concentration Formula: Amt * DF * 1000*Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	0.20000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ng/uL)	CONCENTRATIONS FINAL (ug/L)	
Compounds		RT	EXP RT	DLT RT	RESPONSE			REVIEW CODE
$	2 2,4-Dichlorophenylacetic Acid	10.715	10.736	-0.021	27243	0.32452	16.2	

Data File: \\target_server\gg\chem\gc08.i\GC08LH13.b\8LH00020.D
Date : 13-AUG-2018 17:25
Client ID: HAAP-IDW-SOIL-08061
Instrument: gc08.i
Sample Info: SL7420-1
Purge Volume: 0.2
Operator: BF
Column phase: RTX-CLPesticides
Column diameter: 0.53



Katahdin Analytical Services 3000012

Data File: 8LH00020.D
Report Date: 15-Aug-2018 11:26

Katahdin Analytical Services

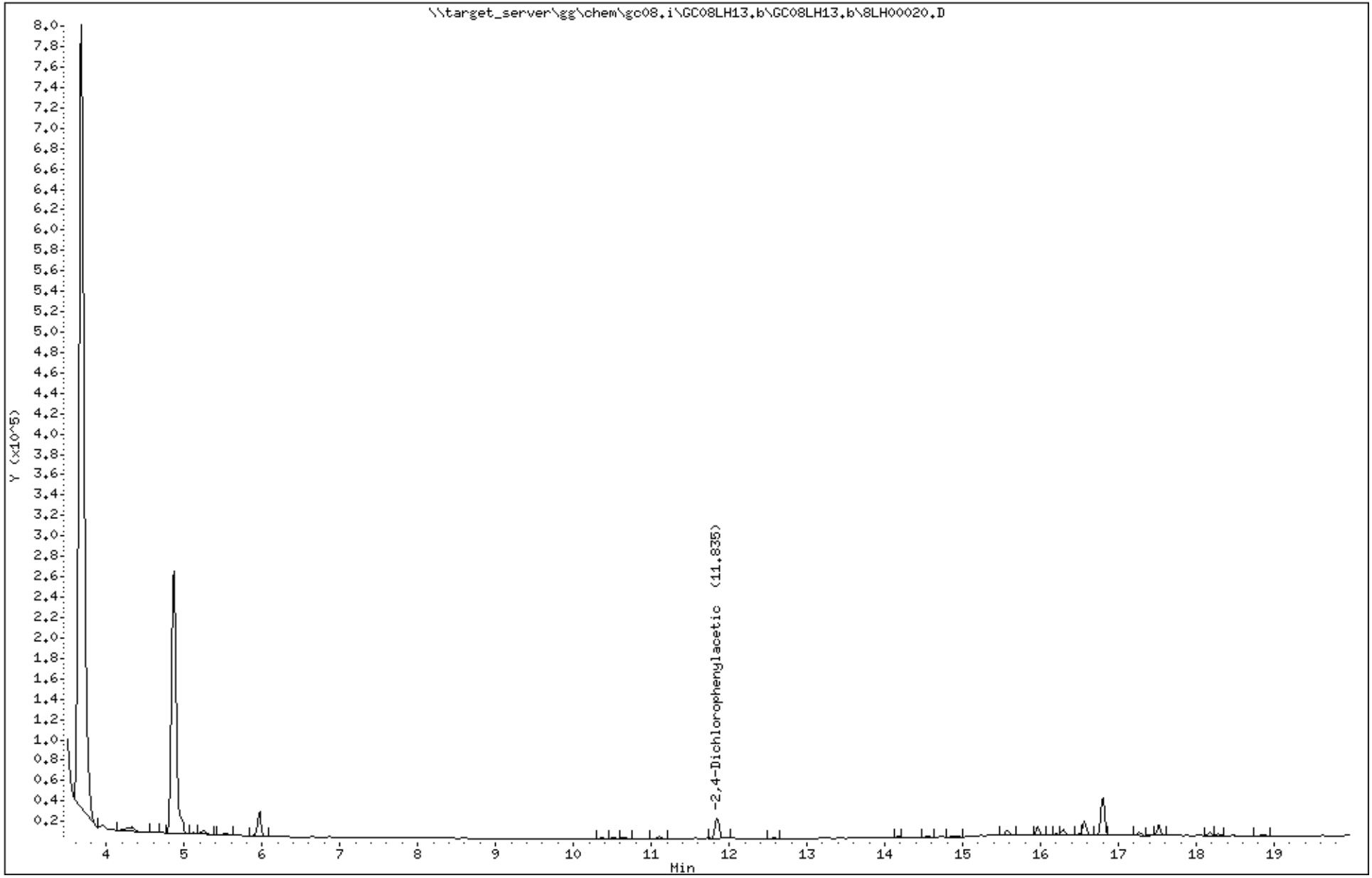
Data file : \\target_server\gg\chem\gc08.i\GC08LH13.b\GC08LH13.b\8LH00020.D
Lab Smp Id: SL7420-1 Client Smp ID: HAAP-IDW-SOIL-08061
Inj Date : 13-AUG-2018 17:25
Operator : BF Inst ID: gc08.i
Smp Info : SL7420-1
Misc Info : WG234216,WG233963,WG232698-1
Comment :
Method : \\target_server\gg\chem\gc08.i\GC08LH13.b\HERB109.m\HERB109.m
Meth Date : 15-Aug-2018 10:58 bflanders Quant Type: ESTD
Cal Date : 23-JUL-2018 17:49 Cal File: 8LG00067.D
Als bottle: 7
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TCLP-DoD5.sub
Target Version: 4.12
Processing Host: INSPIRON1

Concentration Formula: Amt * DF * 1000*Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	0.20000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ng/uL)	CONCENTRATIONS FINAL (ug/L)	
Compounds	RT	EXP RT	DLT RT	RESPONSE				REVIEW CODE
$ 2 2,4-Dichlorophenylacetic Acid	11.835	11.858	-0.023	19954		0.31039	15.5	

Data File: \\target_server\gg\chem\gc08.i\GC08LH13.b\GC08LH13.b\8LH00020.D
Date : 13-AUG-2018 17:25
Client ID: HAAP-IDW-SOIL-08061
Instrument: gc08.i
Sample Info: SL7420-1
Purge Volume: 0.2
Operator: BF
Column phase: RTX-CLPesticides2
Column diameter: 0.53



Katahdin Analytical Services 3000014

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL7420-2
Client ID: CHAAP-IDW-SOIL-080618-N
Project: Cornhusker Army Ammunition Plant
SDG: SL7420
Lab File ID: 8LH00021.D

Sample Date: 06-AUG-18
Received Date: 08-AUG-18
Extract Date: 10-AUG-18
Extracted By: DP
Extraction Method: 3510C/1311
Lab Prep Batch: WG233963

Analysis Date: 13-AUG-18
Analyst: BF
Analysis Method: SW846 8151A
Matrix: AQ
% Solids: NA
Report Date: 15-AUG-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
2,4-D	U	7.0	ug/L	1	3	14.	1.4	7.0
Silvex	U	7.1	ug/L	1	3	14.	0.95	7.1
2,4-Dichlorophenylacetic Acid		42.7	%					

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Data File: \\target_server\gg\chem\gc08.i\GC08LH13.b\8LH00021.D
Report Date: 15-Aug-2018 11:26

Katahdin Analytical Services

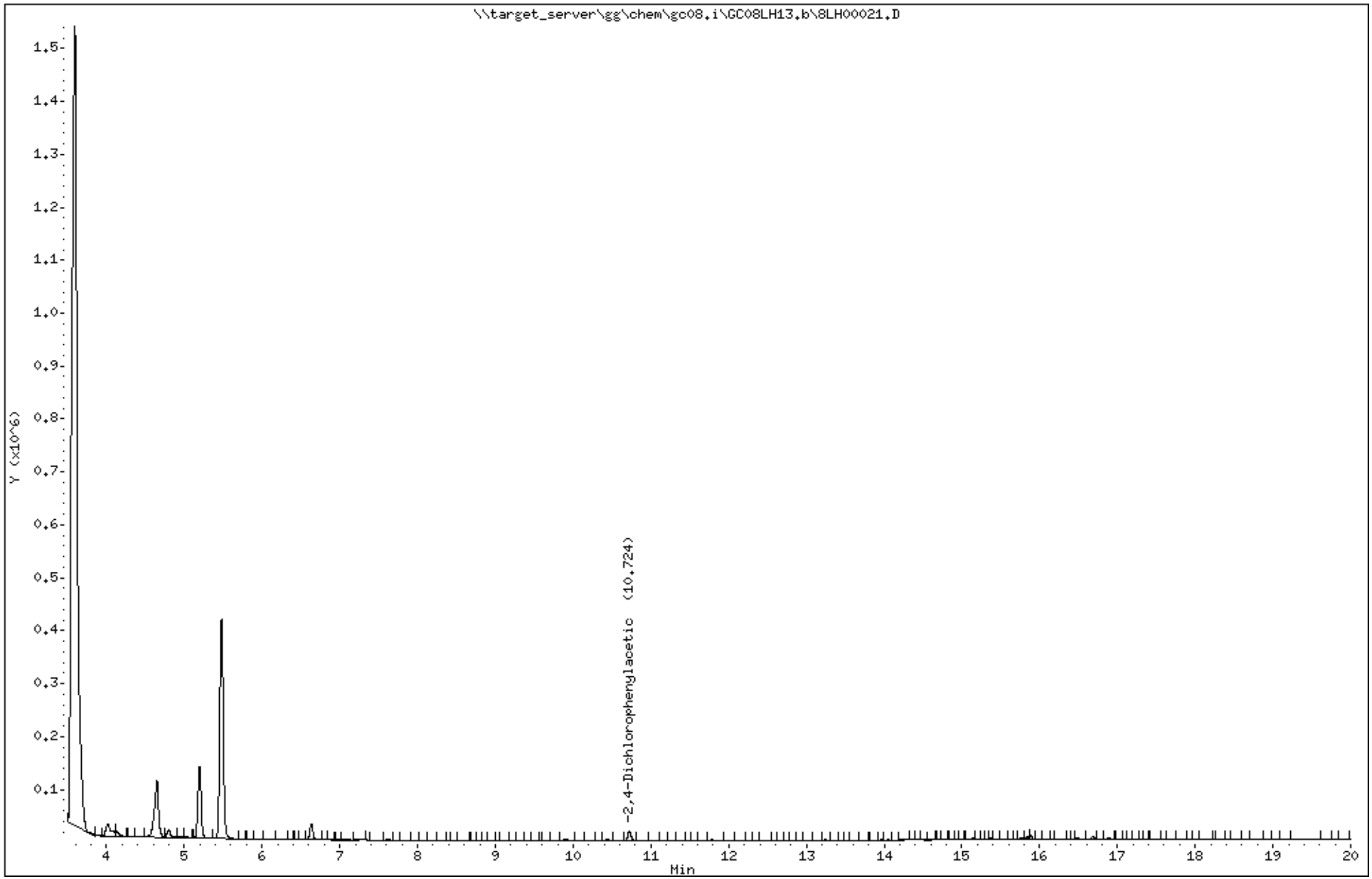
Data file : \\target_server\gg\chem\gc08.i\GC08LH13.b\8LH00021.D
Lab Smp Id: SL7420-2 Client Smp ID: HAAP-IDW-SOIL-08061
Inj Date : 13-AUG-2018 17:49
Operator : BF Inst ID: gc08.i
Smp Info : SL7420-2
Misc Info : WG234216,WG233963,WG232698-1
Comment :
Method : \\target_server\gg\chem\gc08.i\GC08LH13.b\HERB109.m
Meth Date : 15-Aug-2018 11:00 bflanders Quant Type: ESTD
Cal Date : 23-JUL-2018 17:49 Cal File: 8LG00067.D
Als bottle: 8
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TCLP-DoD5.sub
Target Version: 4.12
Processing Host: INSPIRON1

Concentration Formula: Amt * DF * 1000*Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	0.20000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ng/uL)	CONCENTRATIONS FINAL (ug/L)	
Compounds	RT	EXP RT	DLT RT	RESPONSE				REVIEW CODE
$ 2 2,4-Dichlorophenylacetic Acid	10.723	10.736	-0.013	17940		0.21370	10.7	

Data File: \\target_server\gg\chem\gc08.i\GC08LH13.b\8LH00021.D
Date : 13-AUG-2018 17:49
Client ID: HAAP-IDW-SOIL-08061
Instrument: gc08.i
Sample Info: SL7420-2
Purge Volume: 0.2
Operator: BF
Column phase: RTX-CLPesticides
Column diameter: 0.53



Katahdin Analytical Services 3000017

Data File: 8LH00021.D
Report Date: 15-Aug-2018 11:26

Katahdin Analytical Services

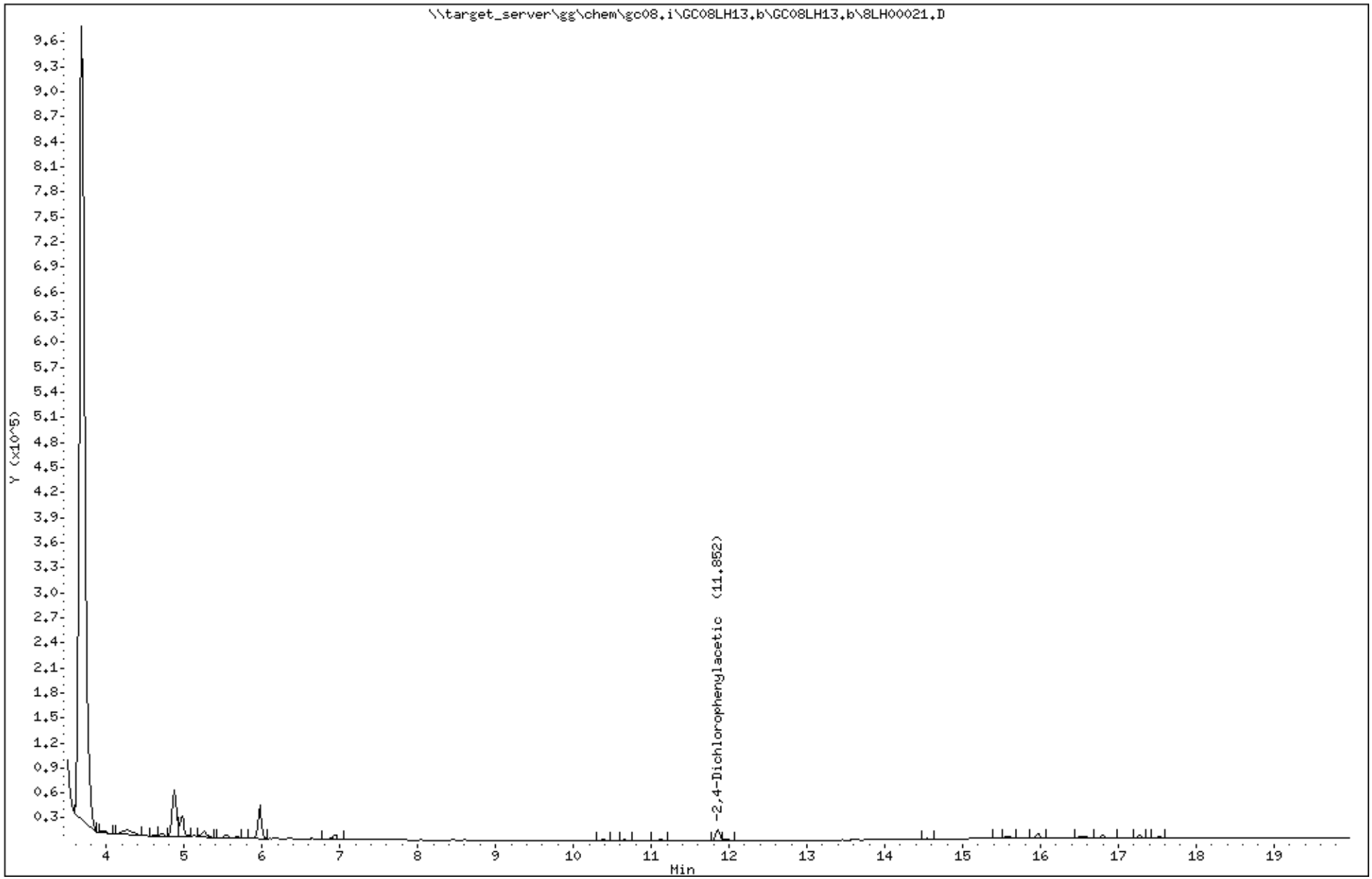
Data file : \\target_server\gg\chem\gc08.i\GC08LH13.b\GC08LH13.b\8LH00021.D
Lab Smp Id: SL7420-2 Client Smp ID: HAAP-IDW-SOIL-08061
Inj Date : 13-AUG-2018 17:49
Operator : BF Inst ID: gc08.i
Smp Info : SL7420-2
Misc Info : WG234216,WG233963,WG232698-1
Comment :
Method : \\target_server\gg\chem\gc08.i\GC08LH13.b\HERB109.m\HERB109.m
Meth Date : 15-Aug-2018 10:58 bflanders Quant Type: ESTD
Cal Date : 23-JUL-2018 17:49 Cal File: 8LG00067.D
Als bottle: 8
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TCLP-DoD5.sub
Target Version: 4.12
Processing Host: INSPIRON1

Concentration Formula: Amt * DF * 1000*Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	0.20000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ng/uL)	CONCENTRATIONS FINAL (ug/L)	
Compounds	RT	EXP RT	DLT RT	RESPONSE				REVIEW CODE
$ 2 2,4-Dichlorophenylacetic Acid	11.852	11.858	-0.006	13240		0.20595	10.3	

Data File: \\target_server\gg\chem\gc08.i\GC08LH13.b\GC08LH13.b\8LH00021.D
Date : 13-AUG-2018 17:49
Client ID: HAAP-IDW-SOIL-08061
Instrument: gc08.i
Sample Info: SL7420-2
Purge Volume: 0.2
Operator: BF
Column phase: RTX-CLPesticides2
Column diameter: 0.53



Katahdin Analytical Services 3000019

Standards Data Section

Katahdin
ANALYTICAL SERVICES

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL7420
Project : Cornhusker Army Ammunition Plant
Instrument ID: GC08
Lab File IDs : 8LG00063.D 8LG00064.D 8LG00062.D 8LG00065.D 8LG00066.D 8LG00067.D
Column ID: A
Calibration Date(s): 23-JUL-18 15:52 23-JUL-18 17:49

	0.100000(Level 1	0.250000(Level 2	0.500000(Level 3	0.750000(Level 4	1.0000 Level 5	2.0000 Level 6	New Crv	b	m1	m2	%RSD	Max %RSD	
2,4-D	118740	123540	107442	105833	117178	114856	AVG		114598		5.94232	20.00000	O
Silvex	631630	669144	581550	554620	599666	542710	AVG		596553		8.00144	20.00000	O
2,4-Dichlorophenylacetic Ac	87325	89634	81798	76268	84836	83837	AVG		83950		5.53973	20.00000	

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

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http://katahdinlab.com
sales@katahdinlab.com

Katahdin
ANALYTICAL SERVICES

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL7420
Project : Cornhusker Army Ammunition Plant
Instrument ID: GC08
Lab File IDs : 8LG00063.D 8LG00064.D 8LG00062.D 8LG00065.D 8LG00066.D 8LG00067.D
Column ID: B
Calibration Date(s): 23-JUL-18 15:52 23-JUL-18 17:49

	0.100000(Level 1	0.250000(Level 2	0.500000(Level 3	0.750000(Level 4	1.0000 Level 5	2.0000 Level 6	New Crv	b	m1	m2	%RSD	Max %RSD	
2,4-D	89940	92288	82040	79799	89949	90595	AVG		87435		5.91085	20.00000	O
Silvex	360050	412960	370734	357260	380854	352308	AVG		372361		6.01087	20.00000	O
2,4-Dichlorophenylacetic Ac	68165	68274	63715	58595	64793	62177	AVG		64286		5.75225	20.00000	

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

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sales@katahdinlab.com

Report Date: 25-Jul-2018 08:47

Calibration History

Method : \\target_server\gg\chem\gc08.i\SrcMeths\HERB109.m
Start Cal Date: 23-JUL-2018 15:52
End Cal Date : 23-JUL-2018 17:49
Last Cal Level: 6
Last Cal Type : Continuing Calibration

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 0.10000		
23-JUL-2018 16:15	all	8LG00063.D
Cal Level: 2 , Cal Amount: 0.25000		
23-JUL-2018 16:39	all	8LG00064.D
Cal Level: 3 , Cal Amount: 0.50000		
23-JUL-2018 15:52	all	8LG00062.D
Cal Level: 4 , Cal Amount: 0.75000		
23-JUL-2018 17:02	cal	8LG00065.D
Cal Level: 5 , Cal Amount: 1.00000		
23-JUL-2018 17:26	all	8LG00066.D
Cal Level: 6 , Cal Amount: 2.00000		
23-JUL-2018 17:49	all	8LG00067.D

Report Date: 25-Jul-2018 08:47

Calibration History

Method : \\target_server\gg\chem\gc08.i\SrcMeths\HERB109.m\HERB109.m
Start Cal Date: 23-JUL-2018 15:52
End Cal Date : 23-JUL-2018 17:49
Last Cal Level: 6
Last Cal Type : Continuing Calibration

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 0.10000		
23-JUL-2018 16:15	all	8LG00063.D
Cal Level: 2 , Cal Amount: 0.25000		
23-JUL-2018 16:39	all	8LG00064.D
Cal Level: 3 , Cal Amount: 0.50000		
23-JUL-2018 15:52	all	8LG00062.D
Cal Level: 4 , Cal Amount: 0.75000		
23-JUL-2018 17:02	cal	8LG00065.D
Cal Level: 5 , Cal Amount: 1.00000		
23-JUL-2018 17:26	all	8LG00066.D
Cal Level: 6 , Cal Amount: 2.00000		
23-JUL-2018 17:49	all	8LG00067.D

Data File: \\target_server\gg\chem\gc08.i\GC08LG23.b\8LG00068.D
Report Date: 25-Jul-2018 08:57

Katahdin Analytical Services

RECOVERY REPORT

Client Name: Client SDG: WG232698
Sample Matrix: LIQUID Fraction: Herbicides
Lab Smp Id: WG232698-7 Client Smp ID: Independent Source
Level: MED Operator: BF
Data Type: GC DATA SampleType: LCS
SpikeList File: ind.spk Quant Type: ESTD
Sublist File: IND.sub
Method File: \\target_server\gg\chem\gc08.i\GC08LG23.b\HERB109.m
Misc Info: WG232698,WG232698,WG232698-1,SL6630-1

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1 Dalapon	0.500	0.426	85.27	80-120
8 Pentachlorophenol	0.500	0.453	90.64	80-120
4 MCPP	50.0	43.7	87.37	80-120
3 Dicamba	0.500	0.434	86.89	80-120
5 MCPA	50.0	42.6	85.15	80-120
6 Dichloroprop	0.500	0.408	81.64	80-120
7 2,4-D	0.500	0.423	84.67	80-120
9 Silvex	0.500	0.413	82.56	80-120
10 2,4,5-T	0.500	0.435	86.93	80-120
11 Dinoseb	0.500	0.422	84.51	80-120
12 2,4-DB	0.500	0.488	97.52	80-120

Data File: 8LG00068.D
Report Date: 25-Jul-2018 08:57

Katahdin Analytical Services

RECOVERY REPORT

Client Name: Client SDG: WG232698
Sample Matrix: LIQUID Fraction: Herbicides
Lab Smp Id: WG232698-7 Client Smp ID: Independent Source
Level: MED Operator: BF
Data Type: GC DATA SampleType: LCS
SpikeList File: ind.spk Quant Type: ESTD
Sublist File: IND.sub
Method File: \\target_server\gg\chem\gc08.i\GC08LG23.b\HERB109.m\HERB109.m
Misc Info: WG232698,WG232698,WG232698-1,SL6630-1

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1 Dalapon	0.500	0.431	86.17	80-120
8 Pentachlorophenol	0.500	0.443	88.53	80-120
4 MCPP	50.0	43.5	87.05	80-120
3 Dicamba	0.500	0.446	89.32	80-120
5 MCPA	50.0	42.8	85.60	80-120
6 Dichloroprop	0.500	0.417	83.36	80-120
7 2,4-D	0.500	0.437	87.41	80-120
9 Silvex	0.500	0.427	85.35	80-120
10 2,4,5-T	0.500	0.441	88.16	80-120
11 Dinoseb	0.500	0.434	86.83	80-120
12 2,4-DB	0.500	0.417	83.47	80-120

Data File: \\target_server\gg\chem\gc08.i\GC08LG23.b\8LG00062.D
Report Date: 25-Jul-2018 08:35

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc08.i\GC08LG23.b\8LG00062.D
Lab Smp Id: WG232698-1 Client Smp ID: Initial Calibration
Inj Date : 23-JUL-2018 15:52
Operator : BF Inst ID: gc08.i
Smp Info : WG232698-1
Misc Info :
Comment :
Method : \\target_server\gg\chem\gc08.i\GC08LG23.b\HERB109.m
Meth Date : 24-Jul-2018 14:02 bflanders Quant Type: ESTD
Cal Date : 23-JUL-2018 15:52 Cal File: 8LG00062.D
Als bottle: 3 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 4.12
Processing Host: INSPIRON1

Concentration Formula: Amt * DF * 1000*Vt/Vo * CpndVariable

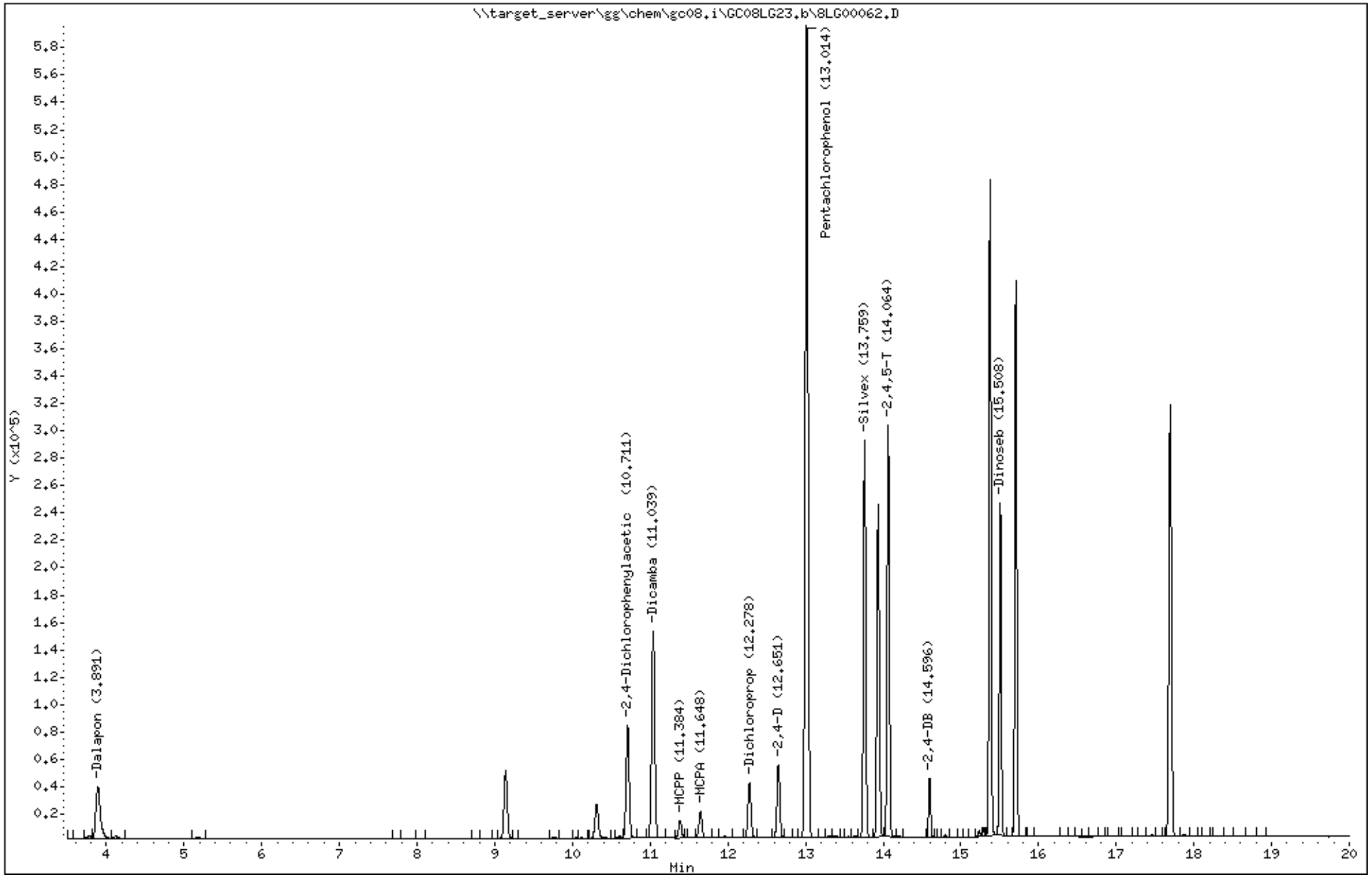
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)	REVIEW CODE
1	Dalapon	3.891	3.916	-0.025	150479	0.50000	0.500(a)	
$ 2	2,4-Dichlorophenylacetic Acid	10.711	10.730	-0.019	81798	1.00000	1.00	
3	Dicamba	11.039	11.056	-0.017	151468	0.50000	0.500(a)	
4	MCPP	11.384	11.405	-0.021	12908	50.0000	50.0(a)	
5	MCPA	11.647	11.665	-0.018	19259	50.0000	50.0(a)	
6	Dichloroprop	12.277	12.295	-0.018	39930	0.50000	0.500(a)	
7	2,4-D	12.651	12.666	-0.015	53721	0.50000	0.500(a)	
8	Pentachlorophenol	13.014	13.030	-0.016	1533786	0.50000	0.500(a)	
9	Silvex	13.759	13.773	-0.014	290775	0.50000	0.500(a)	
10	2,4,5-T	14.064	14.076	-0.012	626001	0.50000	0.500(a)	
11	Dinoseb	15.507	15.516	-0.009	243433	0.50000	0.500(a)	
12	2,4-DB	14.596	14.606	-0.010	43161	0.50000	0.500(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\target_server\gg\chem\gc08.i\GC08LG23.b\8LG00062.D
Date : 23-JUL-2018 15:52
Client ID: Initial Calibration
Instrument: gc08.i
Sample Info: WG232698-1
Purge Volume: 1.0
Operator: BF
Column phase: RTX-CLPesticides
Column diameter: 0.53



Katahdin Analytical Services 3000028

Data File: 8LG00062.D
Report Date: 25-Jul-2018 08:36

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc08.i\GC08LG23.b\GC08LG23.b\8LG00062.D
Lab Smp Id: WG232698-1 Client Smp ID: Initial Calibration
Inj Date : 23-JUL-2018 15:52
Operator : BF Inst ID: gc08.i
Smp Info : WG232698-1
Misc Info :
Comment :
Method : \\target_server\gg\chem\gc08.i\GC08LG23.b\HERB109.m\HERB109.m
Meth Date : 24-Jul-2018 14:02 bflanders Quant Type: ESTD
Cal Date : 23-JUL-2018 15:52 Cal File: 8LG00062.D
Als bottle: 3 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 4.12
Processing Host: INSPIRON1

Concentration Formula: Amt * DF * 1000*Vt/Vo * CpndVariable

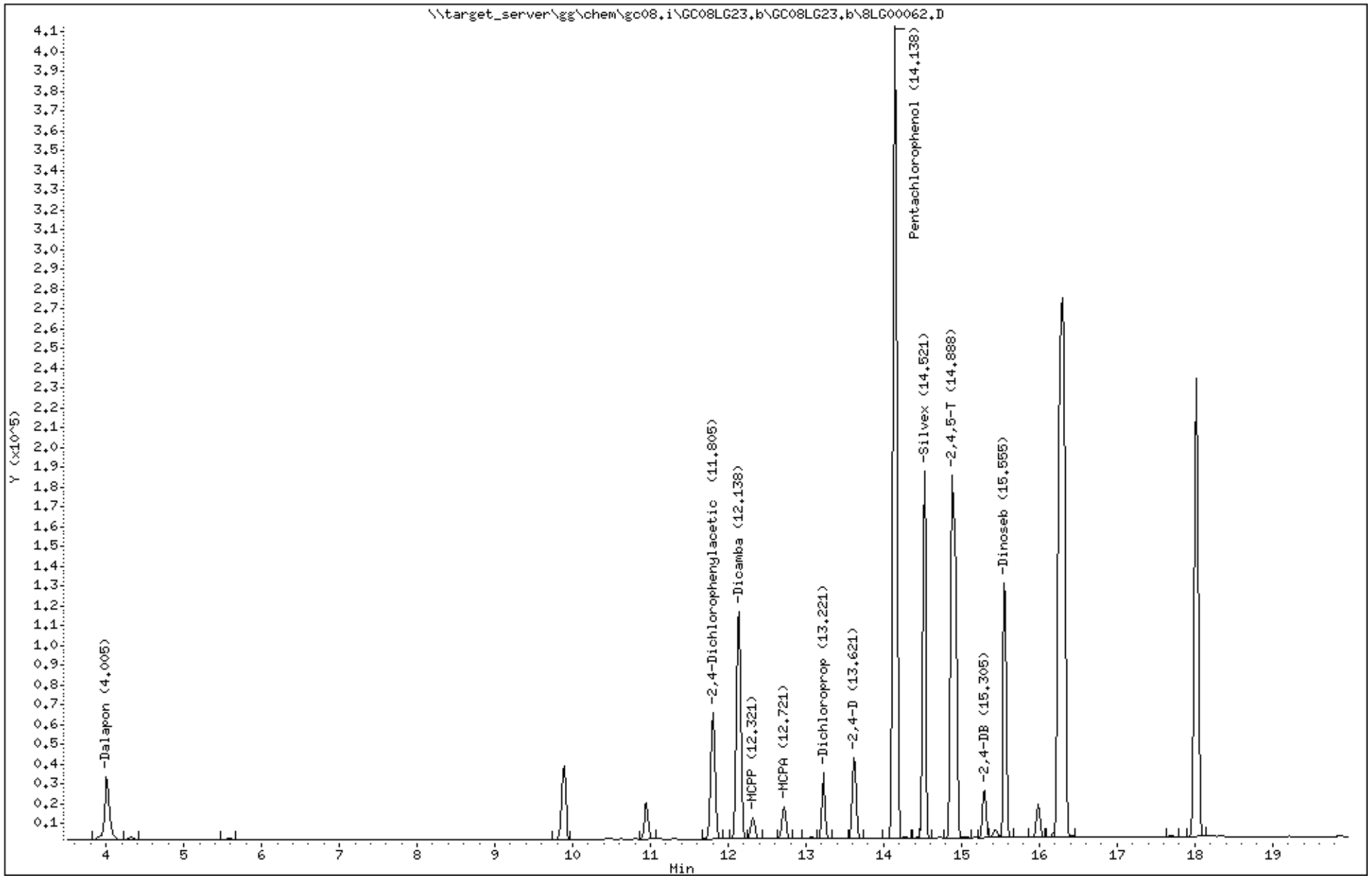
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)	REVIEW CODE
1	Dalapon	4.004	4.038	-0.034	31727	0.50000	0.500(a)	
$ 2	2,4-Dichlorophenylacetic Acid	11.804	11.838	-0.034	63715	1.00000	1.00	
3	Dicamba	12.137	12.172	-0.035	114498	0.50000	0.500(a)	
4	MCPP	12.321	12.372	-0.051	10555	50.0000	50.0(a)	
5	MCPA	12.721	12.755	-0.034	16474	50.0000	50.0(a)	
6	Dichloroprop	13.221	13.255	-0.034	33511	0.50000	0.500(a)	
7	2,4-D	13.621	13.655	-0.034	41020	0.50000	0.500(a)	
8	Pentachlorophenol	14.137	14.172	-0.035	410281	0.50000	0.500(a)	
9	Silvex	14.521	14.538	-0.017	185367	0.50000	0.500(a)	
10	2,4,5-T	14.887	14.905	-0.018	183498	0.50000	0.500(a)	
11	Dinoseb	15.554	15.572	-0.018	128357	0.50000	0.500(a)	
12	2,4-DB	15.304	15.322	-0.018	23799	0.50000	0.500(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\target_server\gg\chem\gc08.i\GC08LG23.b\GC08LG23.b\8LG00062.D
Date : 23-JUL-2018 15:52
Client ID: Initial Calibration
Instrument: gc08.i
Sample Info: WG232698-1
Purge Volume: 1.0
Operator: BF
Column phase: RTX-CLPesticides2
Column diameter: 0.53



Katahdin Analytical Services 3000030

Data File: \\target_server\gg\chem\gc08.i\GC08LG23.b\8LG00063.D
Report Date: 25-Jul-2018 08:35

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc08.i\GC08LG23.b\8LG00063.D
Lab Smp Id: WG232698-2 Client Smp ID: Initial Calibration
Inj Date : 23-JUL-2018 16:15
Operator : BF Inst ID: gc08.i
Smp Info : WG232698-2
Misc Info :
Comment :
Method : \\target_server\gg\chem\gc08.i\GC08LG23.b\HERB109.m
Meth Date : 24-Jul-2018 14:02 bflanders Quant Type: ESTD
Cal Date : 23-JUL-2018 16:15 Cal File: 8LG00063.D
Als bottle: 4 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 4.12
Processing Host: INSPIRON1

Concentration Formula: Amt * DF * 1000*Vt/Vo * CpndVariable

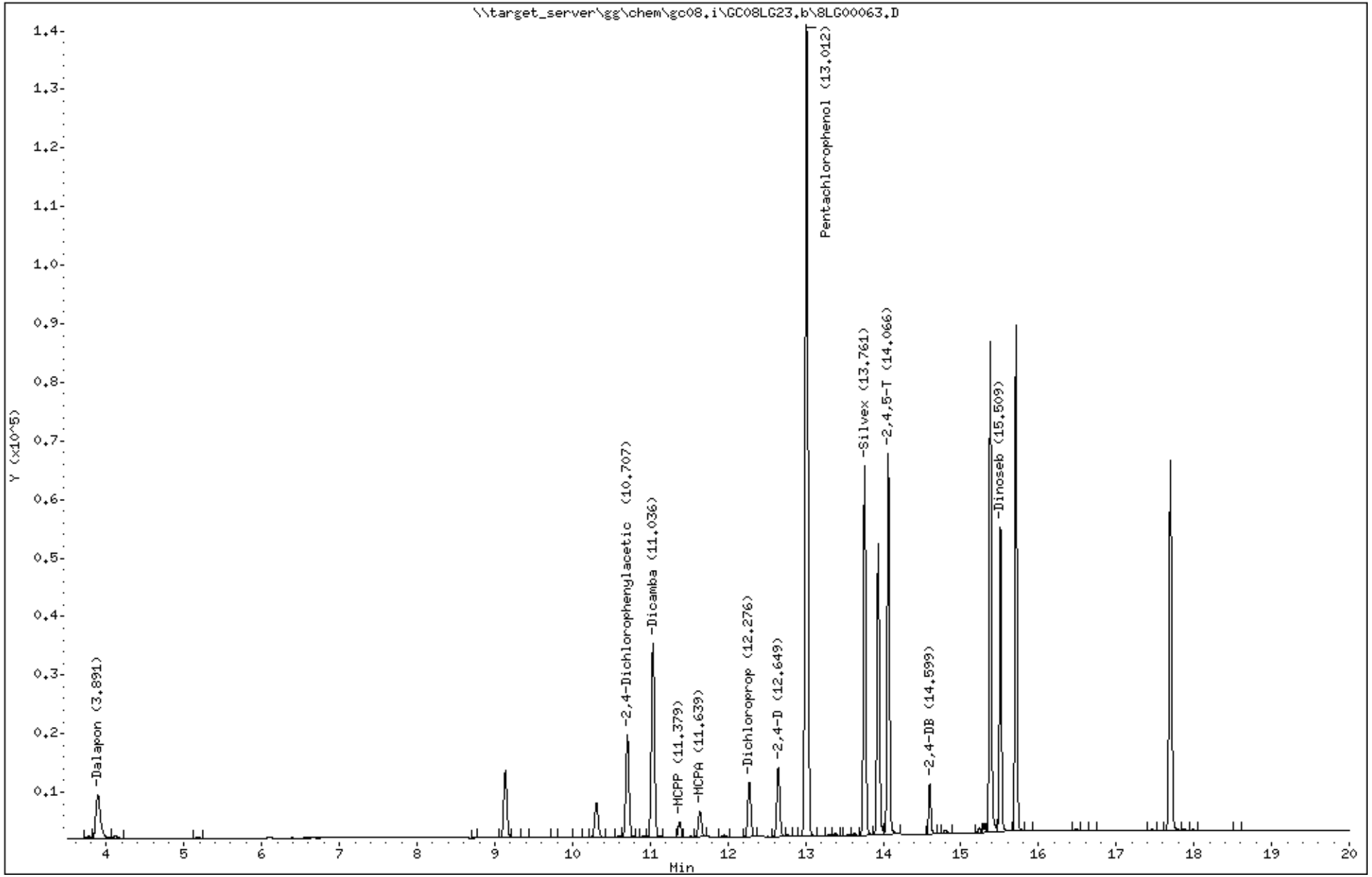
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)	REVIEW CODE
1	Dalapon	3.890	3.916	-0.026	31439	0.10000	0.102(a)	
$ 2	2,4-Dichlorophenylacetic Acid	10.707	10.730	-0.023	17465	0.20000	0.206	
3	Dicamba	11.035	11.056	-0.021	32970	0.10000	0.104(a)	
4	MCPP	11.379	11.405	-0.026	2654	10.0000	10.1(a)	
5	MCPA	11.639	11.665	-0.026	4355	10.0000	10.6(a)	
6	Dichloroprop	12.275	12.295	-0.020	9166	0.10000	0.107(a)	
7	2,4-D	12.649	12.666	-0.017	11874	0.10000	0.105(a)	
8	Pentachlorophenol	13.012	13.030	-0.018	346242	0.10000	0.106(a)	
9	Silvex	13.760	13.773	-0.013	63163	0.10000	0.104(a)	
10	2,4,5-T	14.065	14.076	-0.011	136015	0.10000	0.104(a)	
11	Dinoseb	15.509	15.516	-0.007	52056	0.10000	0.103(a)	
12	2,4-DB	14.599	14.606	-0.007	8533	0.10000	0.0994(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\target_server\gg\chem\gc08.i\GC08LG23.b\8LG00063.D
Date : 23-JUL-2018 16:15
Client ID: Initial Calibration
Instrument: gc08.i
Sample Info: WG232698-2
Purge Volume: 1.0
Operator: BF
Column phase: RTX-CLPesticides
Column diameter: 0.53



Katahdin Analytical Services 3000032

Data File: 8LG00063.D
Report Date: 25-Jul-2018 08:36

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc08.i\GC08LG23.b\GC08LG23.b\8LG00063.D
Lab Smp Id: WG232698-2 Client Smp ID: Initial Calibration
Inj Date : 23-JUL-2018 16:15
Operator : BF Inst ID: gc08.i
Smp Info : WG232698-2
Misc Info :
Comment :
Method : \\target_server\gg\chem\gc08.i\GC08LG23.b\HERB109.m\HERB109.m
Meth Date : 24-Jul-2018 14:02 bflanders Quant Type: ESTD
Cal Date : 23-JUL-2018 16:15 Cal File: 8LG00063.D
Als bottle: 4 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 4.12
Processing Host: INSPIRON1

Concentration Formula: Amt * DF * 1000*Vt/Vo * CpndVariable

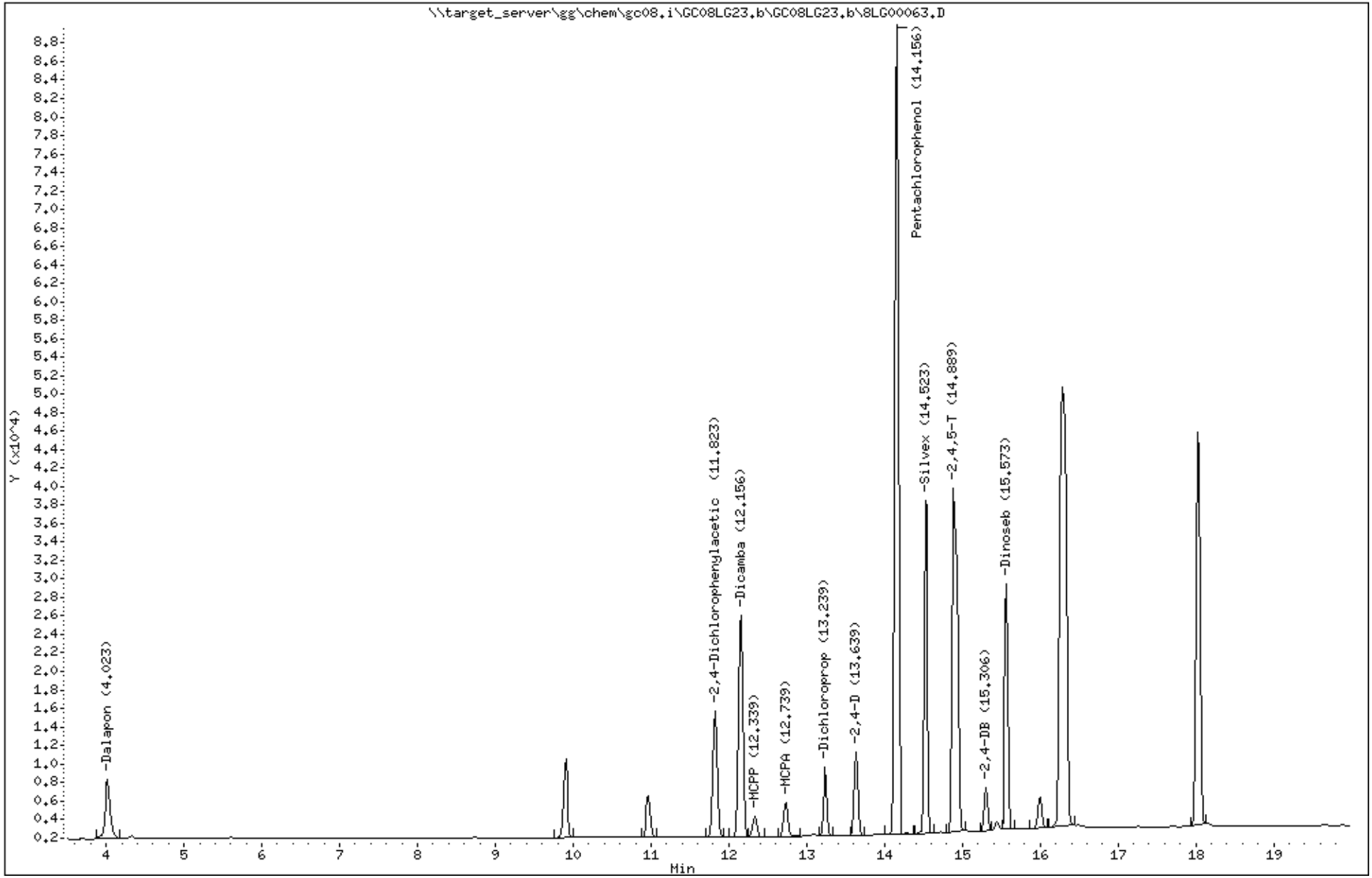
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)	REVIEW CODE
1	Dalapon	4.022	4.038	-0.016	6391	0.10000	0.100(a)	
$ 2	2,4-Dichlorophenylacetic Acid	11.822	11.838	-0.016	13633	0.20000	0.207	
3	Dicamba	12.155	12.172	-0.017	23956	0.10000	0.102(a)	
4	MCPP	12.339	12.372	-0.033	2268	10.0000	10.4(a)	
5	MCPA	12.739	12.755	-0.016	3656	10.0000	10.5(a)	
6	Dichloroprop	13.239	13.255	-0.016	7498	0.10000	0.106(a)	
7	2,4-D	13.639	13.655	-0.016	8994	0.10000	0.104(a)	
8	Pentachlorophenol	14.155	14.172	-0.017	87634	0.10000	0.103(a)	
9	Silvex	14.522	14.538	-0.016	36005	0.10000	0.0985(a)	
10	2,4,5-T	14.889	14.905	-0.016	37189	0.10000	0.101(a)	
11	Dinoseb	15.572	15.572	0.000	26484	0.10000	0.102(a)	
12	2,4-DB	15.305	15.322	-0.017	4624	0.10000	0.0986(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\target_server\gg\chem\gc08.i\GC08LG23.b\GC08LG23.b\8LG00063.D
Date : 23-JUL-2018 16:15
Client ID: Initial Calibration
Instrument: gc08.i
Sample Info: WG232698-2
Purge Volume: 1.0
Operator: BF
Column phase: RTX-CLPesticides2
Column diameter: 0.53



Katahdin Analytical Services 3000034

Data File: \\target_server\gg\chem\gc08.i\GC08LG23.b\8LG00064.D
Report Date: 25-Jul-2018 08:35

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc08.i\GC08LG23.b\8LG00064.D
Lab Smp Id: WG232698-3 Client Smp ID: Initial Calibration
Inj Date : 23-JUL-2018 16:39
Operator : BF Inst ID: gc08.i
Smp Info : WG232698-3
Misc Info :
Comment :
Method : \\target_server\gg\chem\gc08.i\GC08LG23.b\HERB109.m
Meth Date : 24-Jul-2018 14:02 bflanders Quant Type: ESTD
Cal Date : 23-JUL-2018 16:39 Cal File: 8LG00064.D
Als bottle: 5 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 4.12
Processing Host: INSPIRON1

Concentration Formula: Amt * DF * 1000*Vt/Vo * CpndVariable

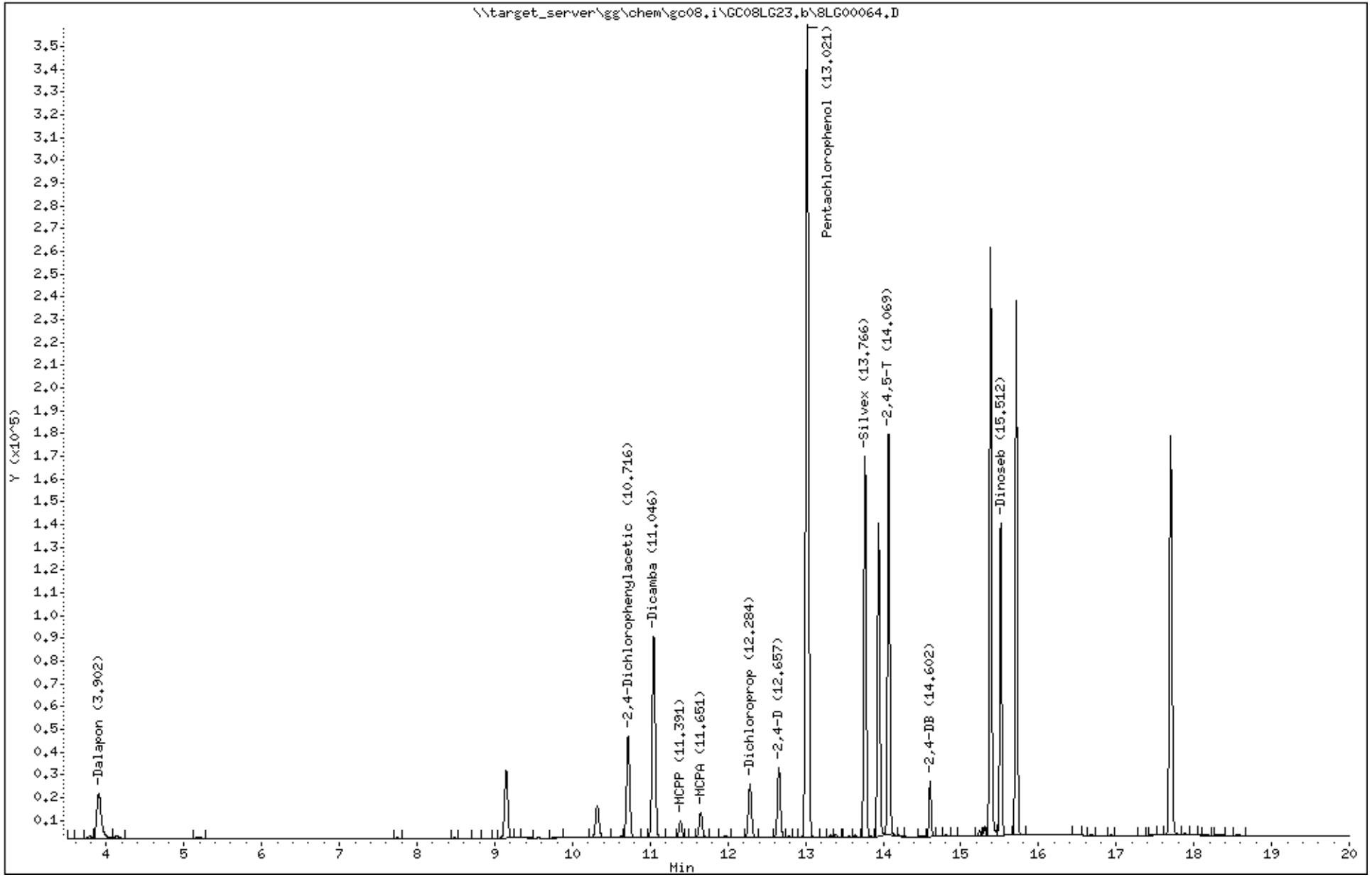
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)	REVIEW CODE
1	Dalapon	3.902	3.916	-0.014	81842	0.25000	0.260(a)	
$ 2	2,4-Dichlorophenylacetic Acid	10.715	10.730	-0.015	44817	0.50000	0.520	
3	Dicamba	11.045	11.056	-0.011	88262	0.25000	0.269(a)	
4	MCPP	11.390	11.405	-0.015	7339	25.0000	26.9(a)	
5	MCPA	11.650	11.665	-0.015	11199	25.0000	26.5(a)	
6	Dichloroprop	12.284	12.295	-0.011	23283	0.25000	0.264(a)	
7	2,4-D	12.657	12.666	-0.009	30885	0.25000	0.265(a)	
8	Pentachlorophenol	13.020	13.030	-0.010	919007	0.25000	0.270(a)	
9	Silvex	13.765	13.773	-0.008	167286	0.25000	0.267(a)	
10	2,4,5-T	14.069	14.076	-0.007	362136	0.25000	0.268(a)	
11	Dinoseb	15.512	15.516	-0.004	137230	0.25000	0.264(a)	
12	2,4-DB	14.602	14.606	-0.004	24310	0.25000	0.271(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\target_server\gg\chem\gc08.i\GC08LG23.b\8LG00064.D
Date : 23-JUL-2018 16:39
Client ID: Initial Calibration
Instrument: gc08.i
Sample Info: WG232698-3
Purge Volume: 1.0
Operator: BF
Column phase: RTX-CLPesticides
Column diameter: 0.53



Katahdin Analytical Services 3000036

Data File: 8LG00064.D
Report Date: 25-Jul-2018 08:36

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc08.i\GC08LG23.b\GC08LG23.b\8LG00064.D
Lab Smp Id: WG232698-3 Client Smp ID: Initial Calibration
Inj Date : 23-JUL-2018 16:39
Operator : BF Inst ID: gc08.i
Smp Info : WG232698-3
Misc Info :
Comment :
Method : \\target_server\gg\chem\gc08.i\GC08LG23.b\HERB109.m\HERB109.m
Meth Date : 24-Jul-2018 14:02 bflanders Quant Type: ESTD
Cal Date : 23-JUL-2018 16:39 Cal File: 8LG00064.D
Als bottle: 5 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 4.12
Processing Host: INSPIRON1

Concentration Formula: Amt * DF * 1000*Vt/Vo * CpndVariable

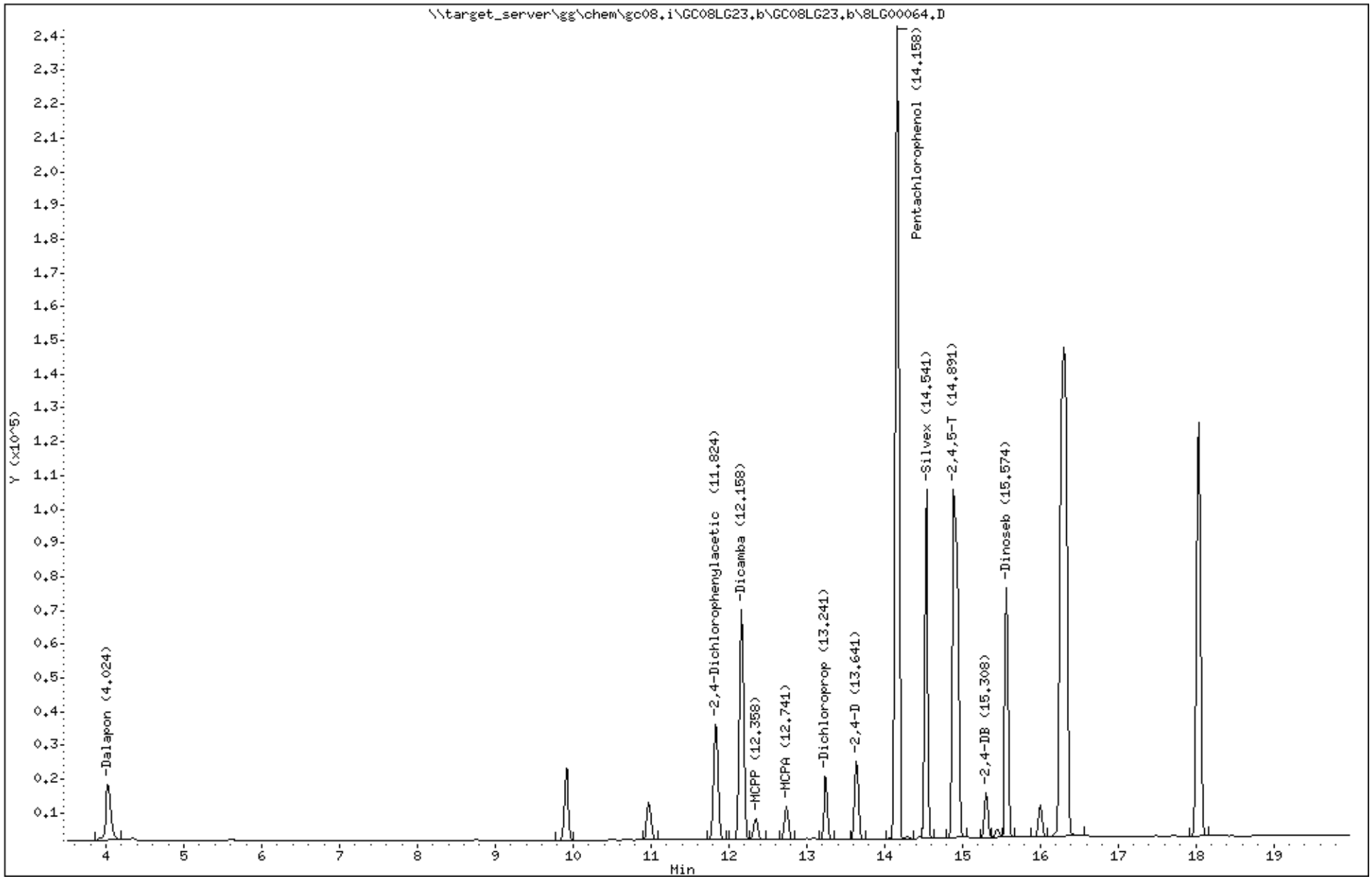
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)	REVIEW CODE
1	Dalapon	4.024	4.038	-0.014	16563	0.25000	0.257(a)	
$ 2	2,4-Dichlorophenylacetic Acid	11.824	11.838	-0.014	34137	0.50000	0.512	
3	Dicamba	12.157	12.172	-0.015	68039	0.25000	0.276(a)	
4	MCPP	12.357	12.372	-0.015	6017	25.0000	26.6(a)	
5	MCPA	12.740	12.755	-0.015	9611	25.0000	26.7(a)	
6	Dichloroprop	13.240	13.255	-0.015	18824	0.25000	0.260(a)	
7	2,4-D	13.640	13.655	-0.015	23072	0.25000	0.262(a)	
8	Pentachlorophenol	14.157	14.172	-0.015	240789	0.25000	0.272(a)	
9	Silvex	14.540	14.538	0.002	103240	0.25000	0.271(a)	
10	2,4,5-T	14.890	14.905	-0.015	103073	0.25000	0.269(a)	
11	Dinoseb	15.574	15.572	0.002	73664	0.25000	0.271(a)	
12	2,4-DB	15.307	15.322	-0.015	13056	0.25000	0.268(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\target_server\gg\chem\gc08.i\GC08LG23.b\GC08LG23.b\8LG00064.D
Date : 23-JUL-2018 16:39
Client ID: Initial Calibration
Instrument: gc08.i
Sample Info: WG232698-3
Purge Volume: 1.0
Operator: BF
Column phase: RTX-CLPesticides2
Column diameter: 0.53



Katahdin Analytical Services 3000038

Data File: \\target_server\gg\chem\gc08.i\GC08LG23.b\8LG00065.D
Report Date: 25-Jul-2018 08:35

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc08.i\GC08LG23.b\8LG00065.D
Lab Smp Id: WG232698-4 Client Smp ID: Initial Calibration
Inj Date : 23-JUL-2018 17:02
Operator : BF Inst ID: gc08.i
Smp Info : WG232698-4
Misc Info :
Comment :
Method : \\target_server\gg\chem\gc08.i\GC08LG23.b\HERB109.m
Meth Date : 24-Jul-2018 14:02 bflanders Quant Type: ESTD
Cal Date : 23-JUL-2018 17:02 Cal File: 8LG00065.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: cal.sub
Target Version: 4.12
Processing Host: INSPIRON1

Concentration Formula: Amt * DF * 1000*Vt/Vo * CpndVariable

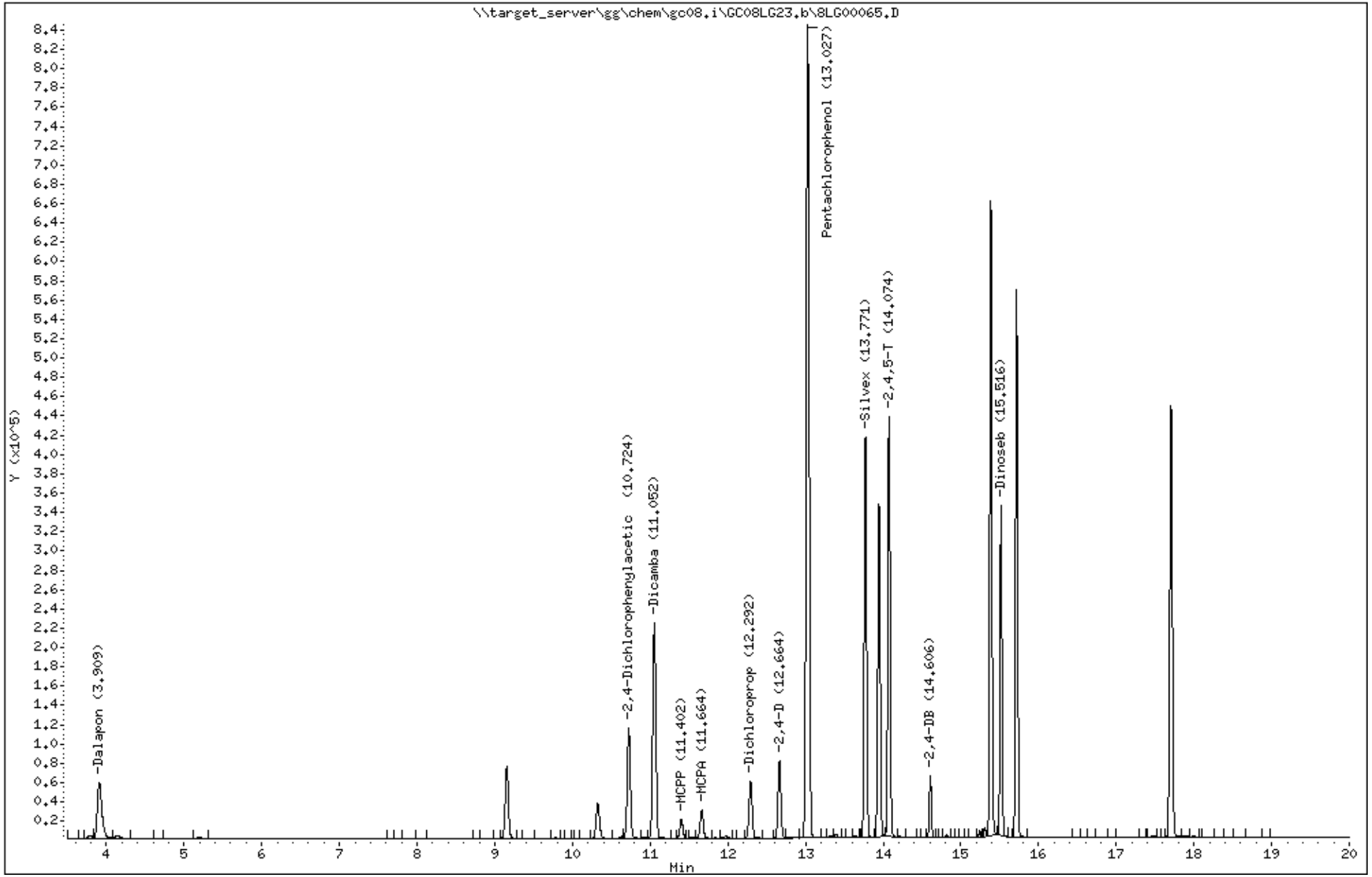
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)	REVIEW CODE
	1 Dalapon	3.909	3.916	-0.007	238044	0.75000	0.756(a)	
$	2 2,4-Dichlorophenylacetic Acid	10.724	10.730	-0.006	114402	1.50000	1.36	
	3 Dicamba	11.052	11.056	-0.004	222700	0.75000	0.694(a)	
	4 MCPP	11.402	11.405	-0.003	19415	75.0000	72.2(a)	
	5 MCPA	11.664	11.665	-0.001	28912	75.0000	69.9(a)	
	7 2,4-D	12.664	12.666	-0.002	79375	0.75000	0.697(a)	
	6 Dichloroprop	12.292	12.295	-0.003	58992	0.75000	0.687(a)	
	8 Pentachlorophenol	13.027	13.030	-0.003	2236672	0.75000	0.678(a)	
	9 Silvex	13.770	13.773	-0.003	415965	0.75000	0.683(a)	
	10 2,4,5-T	14.074	14.076	-0.002	905345	0.75000	0.687(a)	
	11 Dinoseb	15.515	15.516	-0.001	341799	0.75000	0.679(a)	
	12 2,4-DB	14.605	14.606	-0.001	64234	0.75000	0.725(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\target_server\gg\chem\gc08.i\GC08LG23.b\8LG00065.D
Date : 23-JUL-2018 17:02
Client ID: Initial Calibration
Instrument: gc08.i
Sample Info: WG232698-4
Purge Volume: 1.0
Operator: BF
Column phase: RTX-CLPesticides
Column diameter: 0.53



Katahdin Analytical Services 3000040

Data File: 8LG00065.D
Report Date: 25-Jul-2018 08:36

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc08.i\GC08LG23.b\GC08LG23.b\8LG00065.D
Lab Smp Id: WG232698-4 Client Smp ID: Initial Calibration
Inj Date : 23-JUL-2018 17:02
Operator : BF Inst ID: gc08.i
Smp Info : WG232698-4
Misc Info :
Comment :
Method : \\target_server\gg\chem\gc08.i\GC08LG23.b\HERB109.m\HERB109.m
Meth Date : 24-Jul-2018 14:02 bflanders Quant Type: ESTD
Cal Date : 23-JUL-2018 17:02 Cal File: 8LG00065.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: cal.sub
Target Version: 4.12
Processing Host: INSPIRON1

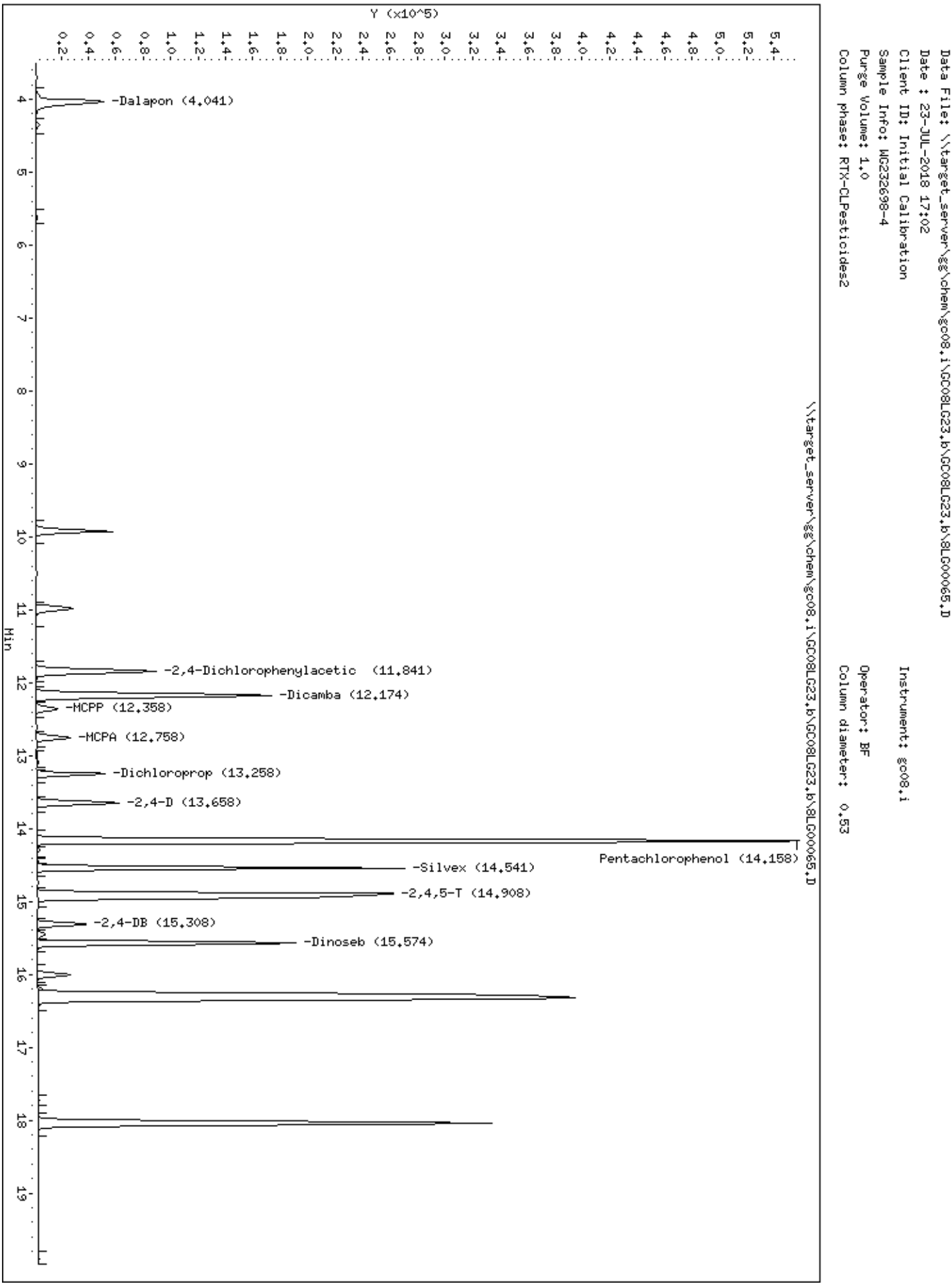
Concentration Formula: Amt * DF * 1000*Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)	REVIEW CODE
1	Dalapon	4.040	4.038	0.002	49610	0.75000	0.764(a)	
$ 2	2,4-Dichlorophenylacetic Acid	11.840	11.838	0.002	87892	1.50000	1.36	
3	Dicamba	12.174	12.172	0.002	171089	0.75000	0.706(a)	
4	MCPP	12.357	12.372	-0.015	15709	75.0000	70.8(a)	
5	MCPA	12.757	12.755	0.002	24315	75.0000	69.3(a)	
7	2,4-D	13.657	13.655	0.002	59849	0.75000	0.696(a)	
6	Dichloroprop	13.257	13.255	0.002	49710	0.75000	0.701(a)	
8	Pentachlorophenol	14.157	14.172	-0.015	556045	0.75000	0.654(a)	
9	Silvex	14.540	14.538	0.002	267945	0.75000	0.714(a)	
10	2,4,5-T	14.907	14.905	0.002	259769	0.75000	0.694(a)	
11	Dinoseb	15.574	15.572	0.002	188148	0.75000	0.705(a)	
12	2,4-DB	15.307	15.322	-0.015	35531	0.75000	0.735(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).


Data File: \\target_server\gg\chem\gc08.i\GC08LG23.b\GC08LG23.b\8LG00065.D
Date : 23-JUL-2018 17:02
Client ID: Initial Calibration
Sample Info: WG232698-4
Purge Volume: 1.0
Column phase: RTX-CLPesticides2
Instrument: gc08.i
Operator: BF
Column diameter: 0.53
\\target_server\gg\chem\gc08.i\GC08LG23.b\GC08LG23.b\8LG00065.D
Y (x10^5)
Min
-Dalapon (4.041)
-2,4-Dichlorophenylacetic (11.841)
-Dicamba (12.174)
-MCPP (12.358)
-MCPA (12.758)
-Dichloroprop (13.258)
-2,4-D (13.658)
Pentachlorophenol (14.158)
-Silvex (14.541)
-2,4,5-T (14.908)
-2,4-DB (15.308)
-Dinoseb (15.574)

Data File: \\target_server\gg\chem\gc08.i\GC08LG23.b\8LG00066.D
Report Date: 25-Jul-2018 08:35

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc08.i\GC08LG23.b\8LG00066.D
Lab Smp Id: WG232698-5 Client Smp ID: Initial Calibration
Inj Date : 23-JUL-2018 17:26
Operator : BF Inst ID: gc08.i
Smp Info : WG232698-5
Misc Info :
Comment :
Method : \\target_server\gg\chem\gc08.i\GC08LG23.b\HERB109.m
Meth Date : 24-Jul-2018 14:02 bflanders Quant Type: ESTD
Cal Date : 23-JUL-2018 17:26 Cal File: 8LG00066.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 4.12
Processing Host: INSPIRON1

Concentration Formula: Amt * DF * 1000*Vt/Vo * CpndVariable

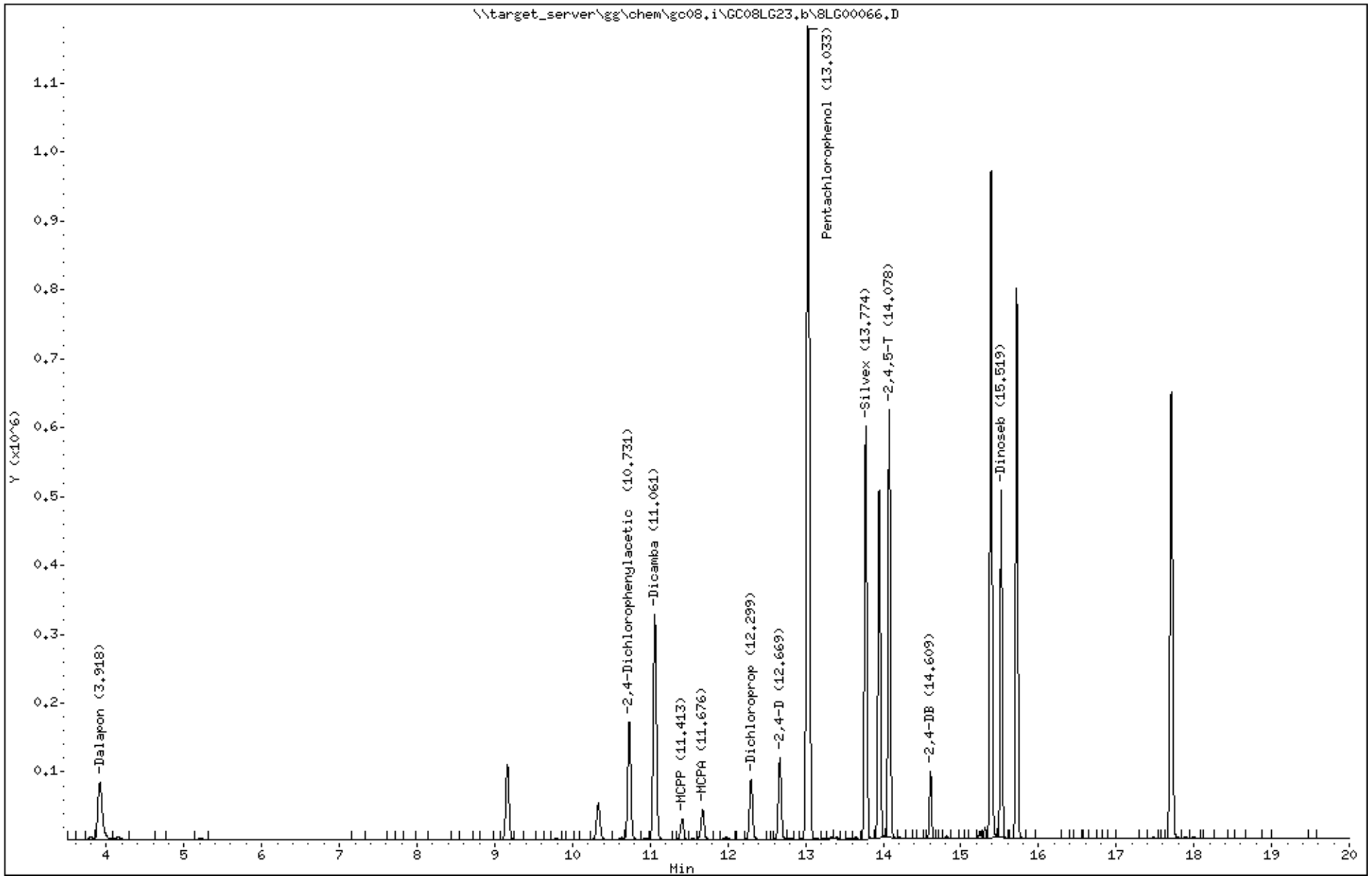
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)	REVIEW CODE
1	Dalapon	3.917	3.916	0.001	332196	1.00000	1.04(a)	
$ 2	2,4-Dichlorophenylacetic Acid	10.730	10.730	0.000	169671	2.00000	2.02	
3	Dicamba	11.060	11.056	0.004	325413	1.00000	1.01(a)	
4	MCPP	11.412	11.405	0.007	29210	100.000	107	
5	MCPA	11.675	11.665	0.010	42410	100.000	102(a)	
7	2,4-D	12.669	12.666	0.003	117178	1.00000	1.02(a)	
6	Dichloroprop	12.299	12.295	0.004	87523	1.00000	1.02(a)	
8	Pentachlorophenol	13.032	13.030	0.002	3175605	1.00000	0.970(a)	
9	Silvex	13.774	13.773	0.001	599666	1.00000	0.987(a)	
10	2,4,5-T	14.077	14.076	0.001	1310078	1.00000	0.996(a)	
11	Dinoseb	15.519	15.516	0.003	502851	1.00000	1.000(a)	
12	2,4-DB	14.609	14.606	0.003	97890	1.00000	1.08(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\target_server\gg\chem\gc08.i\GC08LG23.b\8LG00066.D
Date : 23-JUL-2018 17:26
Client ID: Initial Calibration
Instrument: gc08.i
Sample Info: WG232698-5
Purge Volume: 1.0
Operator: BF
Column phase: RTX-CLPesticides
Column diameter: 0.53



Katahdin Analytical Services 3000044

Data File: 8LG00066.D
Report Date: 25-Jul-2018 08:36

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc08.i\GC08LG23.b\GC08LG23.b\8LG00066.D
Lab Smp Id: WG232698-5 Client Smp ID: Initial Calibration
Inj Date : 23-JUL-2018 17:26
Operator : BF Inst ID: gc08.i
Smp Info : WG232698-5
Misc Info :
Comment :
Method : \\target_server\gg\chem\gc08.i\GC08LG23.b\HERB109.m\HERB109.m
Meth Date : 24-Jul-2018 14:02 bflanders Quant Type: ESTD
Cal Date : 23-JUL-2018 17:26 Cal File: 8LG00066.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 4.12
Processing Host: INSPIRON1

Concentration Formula: Amt * DF * 1000*Vt/Vo * CpndVariable

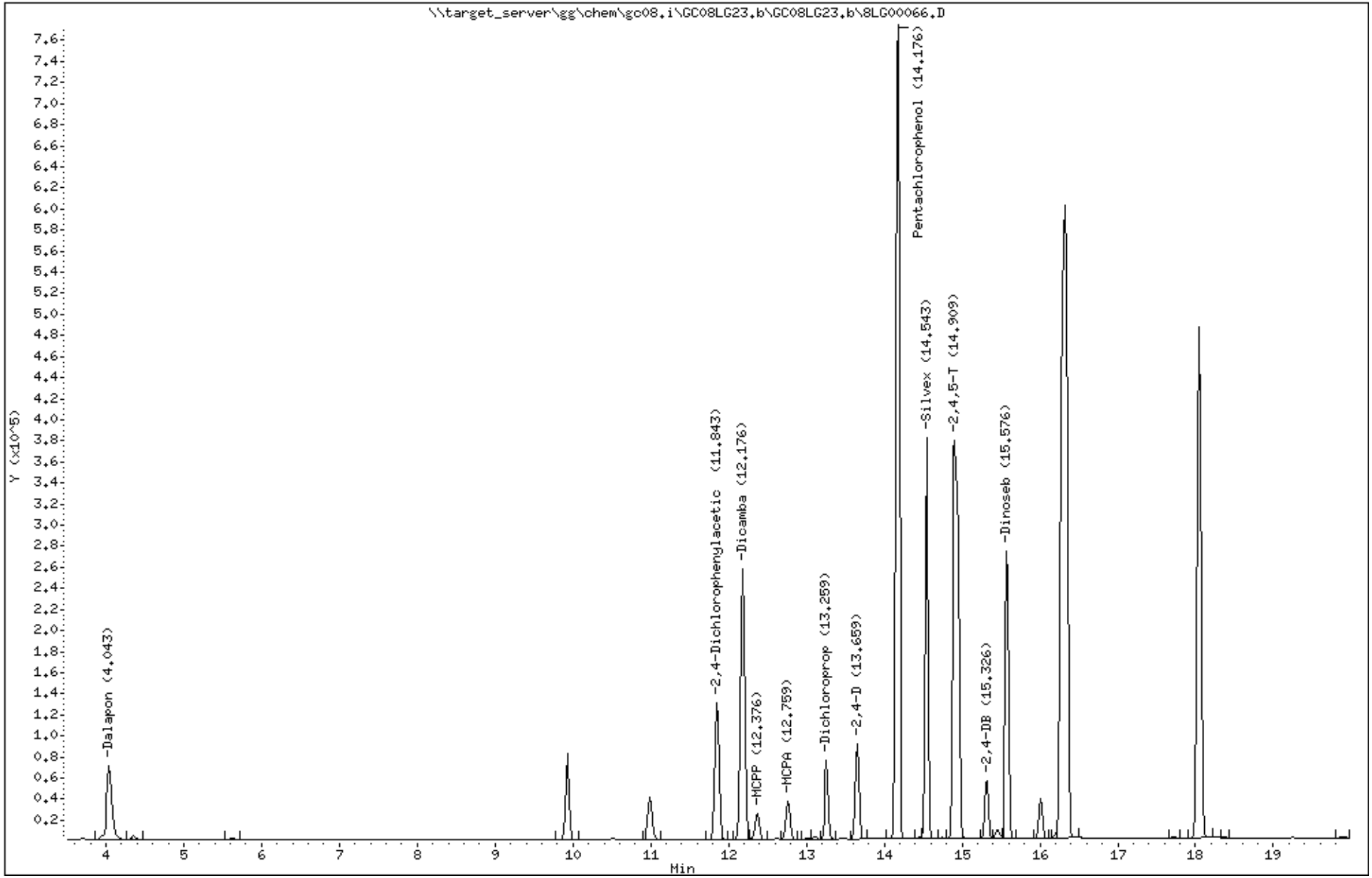
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)	REVIEW CODE
1	Dalapon	4.042	4.038	0.004	69561	1.00000	1.06(a)	
$ 2	2,4-Dichlorophenylacetic Acid	11.842	11.838	0.004	129586	2.00000	2.00	
3	Dicamba	12.176	12.172	0.004	256231	1.00000	1.04(a)	
4	MCPP	12.376	12.372	0.004	24032	100.000	106	
5	MCPA	12.759	12.755	0.004	36217	100.000	102(a)	
7	2,4-D	13.659	13.655	0.004	89949	1.00000	1.04(a)	
6	Dichloroprop	13.259	13.255	0.004	74707	1.00000	1.04(a)	
8	Pentachlorophenol	14.176	14.172	0.004	772360	1.00000	0.925(a)	
9	Silvex	14.542	14.538	0.004	380854	1.00000	1.01(a)	
10	2,4,5-T	14.909	14.905	0.004	378017	1.00000	1.01(a)	
11	Dinoseb	15.576	15.572	0.004	272122	1.00000	1.02(a)	
12	2,4-DB	15.326	15.322	0.004	54868	1.00000	1.10(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\target_server\gg\chem\gc08.i\GC08LG23.b\GC08LG23.b\8LG00066.D
Date : 23-JUL-2018 17:26
Client ID: Initial Calibration
Instrument: gc08.i
Sample Info: WG232698-5
Purge Volume: 1.0
Operator: BF
Column phase: RTX-CLPesticides2
Column diameter: 0.53



Katahdin Analytical Services 3000046

Data File: \\target_server\gg\chem\gc08.i\GC08LG23.b\8LG00067.D
Report Date: 25-Jul-2018 08:35

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc08.i\GC08LG23.b\8LG00067.D
Lab Smp Id: WG232698-6 Client Smp ID: Initial Calibration
Inj Date : 23-JUL-2018 17:49
Operator : BF Inst ID: gc08.i
Smp Info : WG232698-6
Misc Info :
Comment :
Method : \\target_server\gg\chem\gc08.i\GC08LG23.b\HERB109.m
Meth Date : 24-Jul-2018 14:02 bflanders Quant Type: ESTD
Cal Date : 23-JUL-2018 17:49 Cal File: 8LG00067.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 4.12
Processing Host: INSPIRON1

Concentration Formula: Amt * DF * 1000*Vt/Vo * CpndVariable

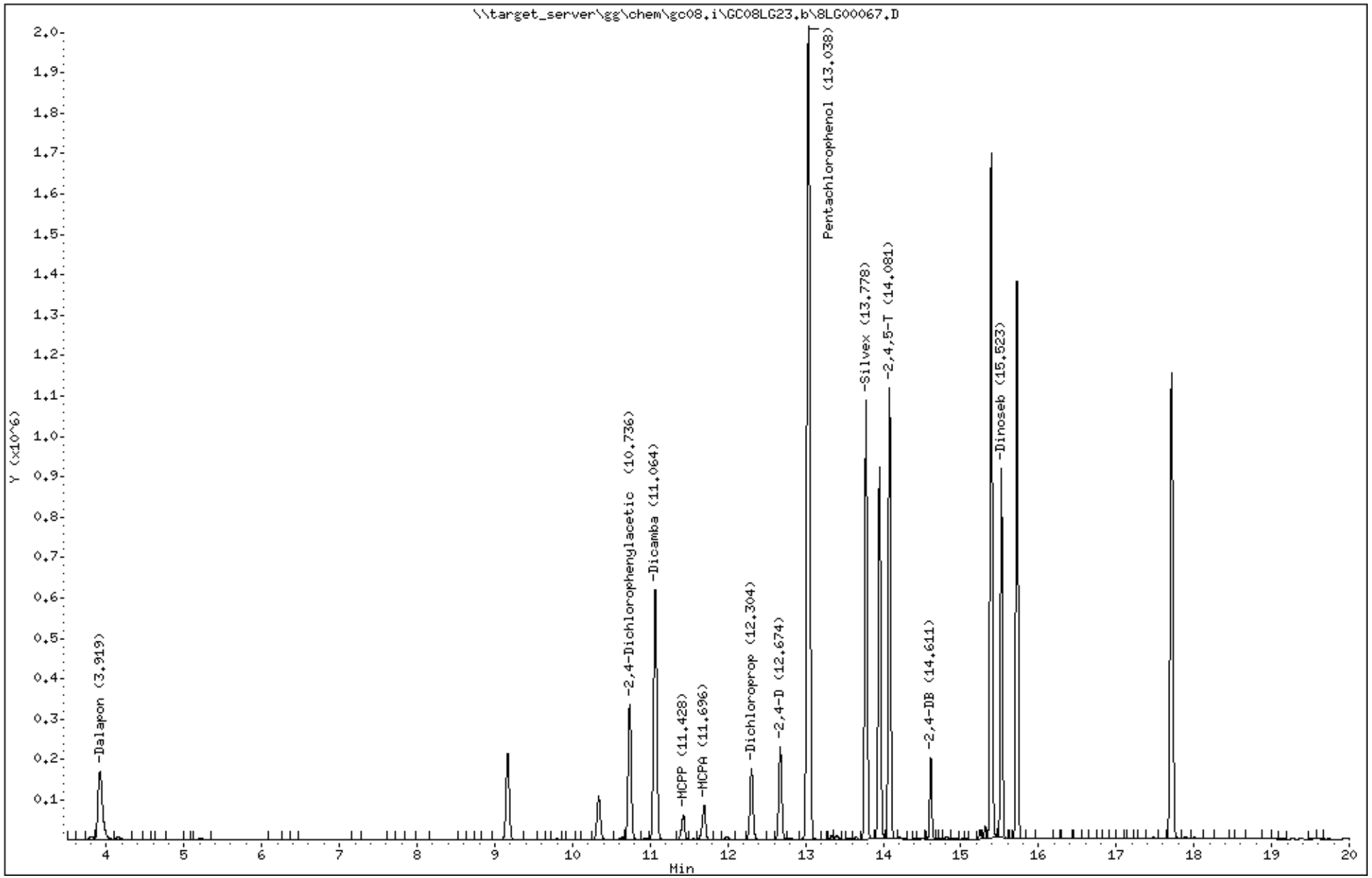
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)	REVIEW CODE
1	Dalapon	3.919	3.916	0.003	691951	2.00000	2.14(aA)	
$ 2	2,4-Dichlorophenylacetic Acid	10.735	10.730	0.005	335348	4.00000	3.99	
3	Dicamba	11.064	11.056	0.008	617770	2.00000	1.93(a)	
4	MCPP	11.427	11.405	0.022	59281	200.000	214(A)	
5	MCPA	11.695	11.665	0.030	83578	200.000	201(A)	
7	2,4-D	12.674	12.666	0.008	229712	2.00000	2.00(aA)	
6	Dichloroprop	12.304	12.295	0.009	176025	2.00000	2.04(aA)	
8	Pentachlorophenol	13.037	13.030	0.007	5617351	2.00000	1.76(aA)	
9	Silvex	13.777	13.773	0.004	1085419	2.00000	1.82(a)	
10	2,4,5-T	14.080	14.076	0.004	2405477	2.00000	1.85(a)	
11	Dinoseb	15.522	15.516	0.006	915186	2.00000	1.85(a)	
12	2,4-DB	14.610	14.606	0.004	200868	2.00000	2.18(aA)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount
exceeded maximum amount.

Data File: \\target_server\gg\chem\gc08.i\GC08LG23.b\8LG00067.D
Date : 23-JUL-2018 17:49
Client ID: Initial Calibration
Instrument: gc08.i
Sample Info: WG232698-6
Purge Volume: 1.0
Operator: BF
Column phase: RTX-CLPesticides
Column diameter: 0.53



Katahdin Analytical Services 3000048

Data File: 8LG00067.D
Report Date: 25-Jul-2018 08:36

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc08.i\GC08LG23.b\GC08LG23.b\8LG00067.D
Lab Smp Id: WG232698-6 Client Smp ID: Initial Calibration
Inj Date : 23-JUL-2018 17:49
Operator : BF Inst ID: gc08.i
Smp Info : WG232698-6
Misc Info :
Comment :
Method : \\target_server\gg\chem\gc08.i\GC08LG23.b\HERB109.m\HERB109.m
Meth Date : 24-Jul-2018 14:02 bflanders Quant Type: ESTD
Cal Date : 23-JUL-2018 17:49 Cal File: 8LG00067.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 4.12
Processing Host: INSPIRON1

Concentration Formula: Amt * DF * 1000*Vt/Vo * CpndVariable

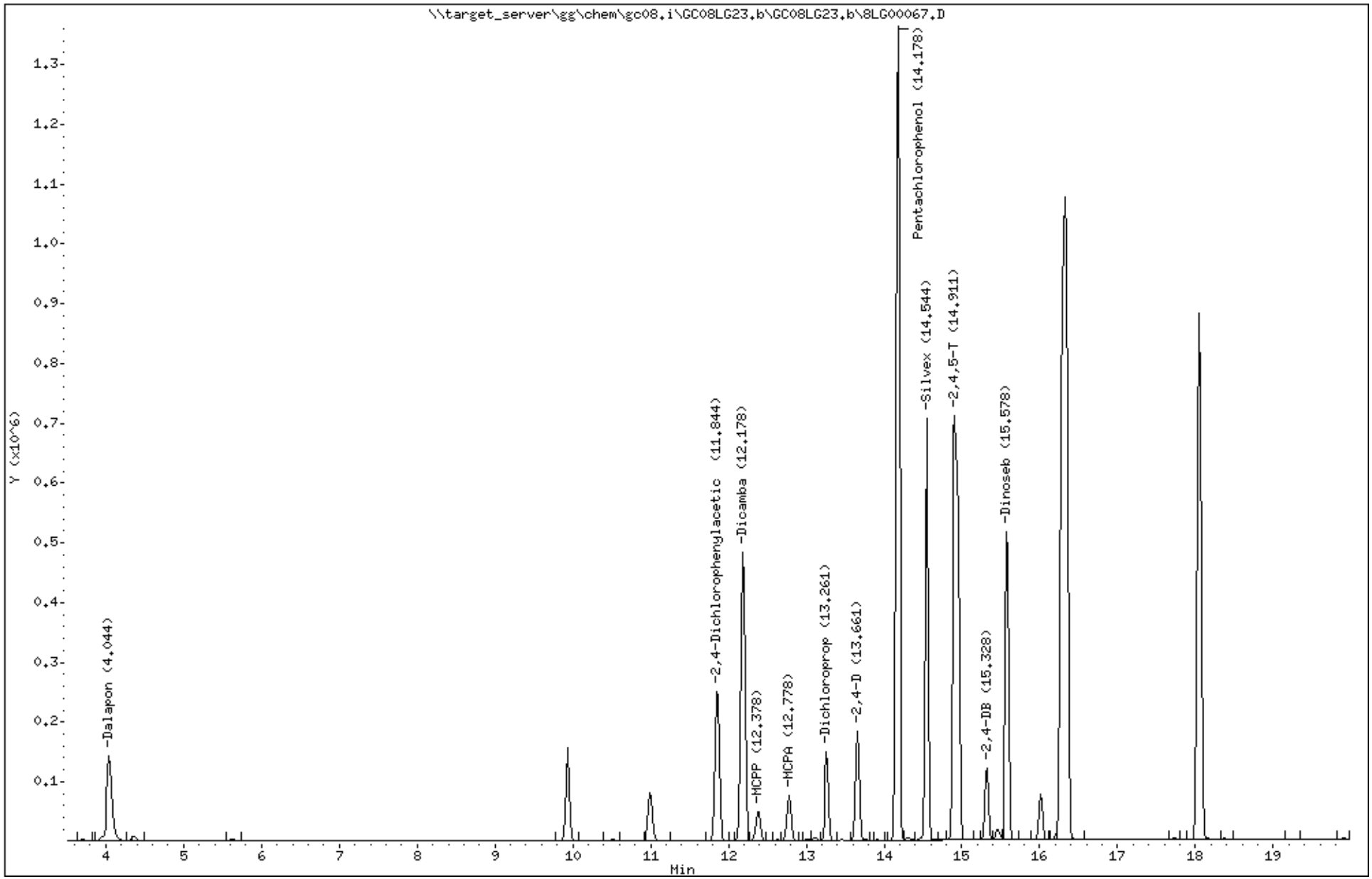
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)	REVIEW CODE
1	Dalapon	4.044	4.038	0.006	141893	2.00000	2.13(aA)	
$ 2	2,4-Dichlorophenylacetic Acid	11.844	11.838	0.006	248708	4.00000	3.87	
3	Dicamba	12.177	12.172	0.005	481200	2.00000	1.97(a)	
4	MCPP	12.377	12.372	0.005	47457	200.000	208(A)	
5	MCPA	12.777	12.755	0.022	74215	200.000	208(A)	
7	2,4-D	13.661	13.655	0.006	181189	2.00000	2.07(aA)	
6	Dichloroprop	13.261	13.255	0.006	149027	2.00000	2.07(aA)	
8	Pentachlorophenol	14.177	14.172	0.005	1361484	2.00000	1.63(aA)	
9	Silvex	14.544	14.538	0.006	704615	2.00000	1.89(a)	
10	2,4,5-T	14.911	14.905	0.006	708486	2.00000	1.91(a)	
11	Dinoseb	15.577	15.572	0.005	514624	2.00000	1.93(a)	
12	2,4-DB	15.327	15.322	0.005	119543	2.00000	2.33(aA)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount
exceeded maximum amount.

Data File: \\target_server\gg\chem\gc08.i\GC08LG23.b\GC08LG23.b\8LG00067.D
Date : 23-JUL-2018 17:49
Client ID: Initial Calibration
Instrument: gc08.i
Sample Info: WG232698-6
Purge Volume: 1.0
Operator: BF
Column phase: RTX-CLPesticides2
Column diameter: 0.53



Katahdin Analytical Services 3000050

Data File: \\target_server\gg\chem\gc08.i\GC08LG23.b\8LG00068.D
Report Date: 25-Jul-2018 08:58

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc08.i\GC08LG23.b\8LG00068.D
Lab Smp Id: WG232698-7 Client Smp ID: Independent Source
Inj Date : 23-JUL-2018 18:13
Operator : BF Inst ID: gc08.i
Smp Info : WG232698-7,SL6630
Misc Info : WG232698,WG232698,WG232698-1,SL6630-1
Comment :
Method : \\target_server\gg\chem\gc08.i\GC08LG23.b\HERB109.m
Meth Date : 24-Jul-2018 14:02 bflanders Quant Type: ESTD
Cal Date : 23-JUL-2018 17:49 Cal File: 8LG00067.D
Als bottle: 9 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: IND.sub
Target Version: 4.12
Processing Host: INSPIRON1

Concentration Formula: Amt * DF * 1000*Vt/Vo * CpndVariable

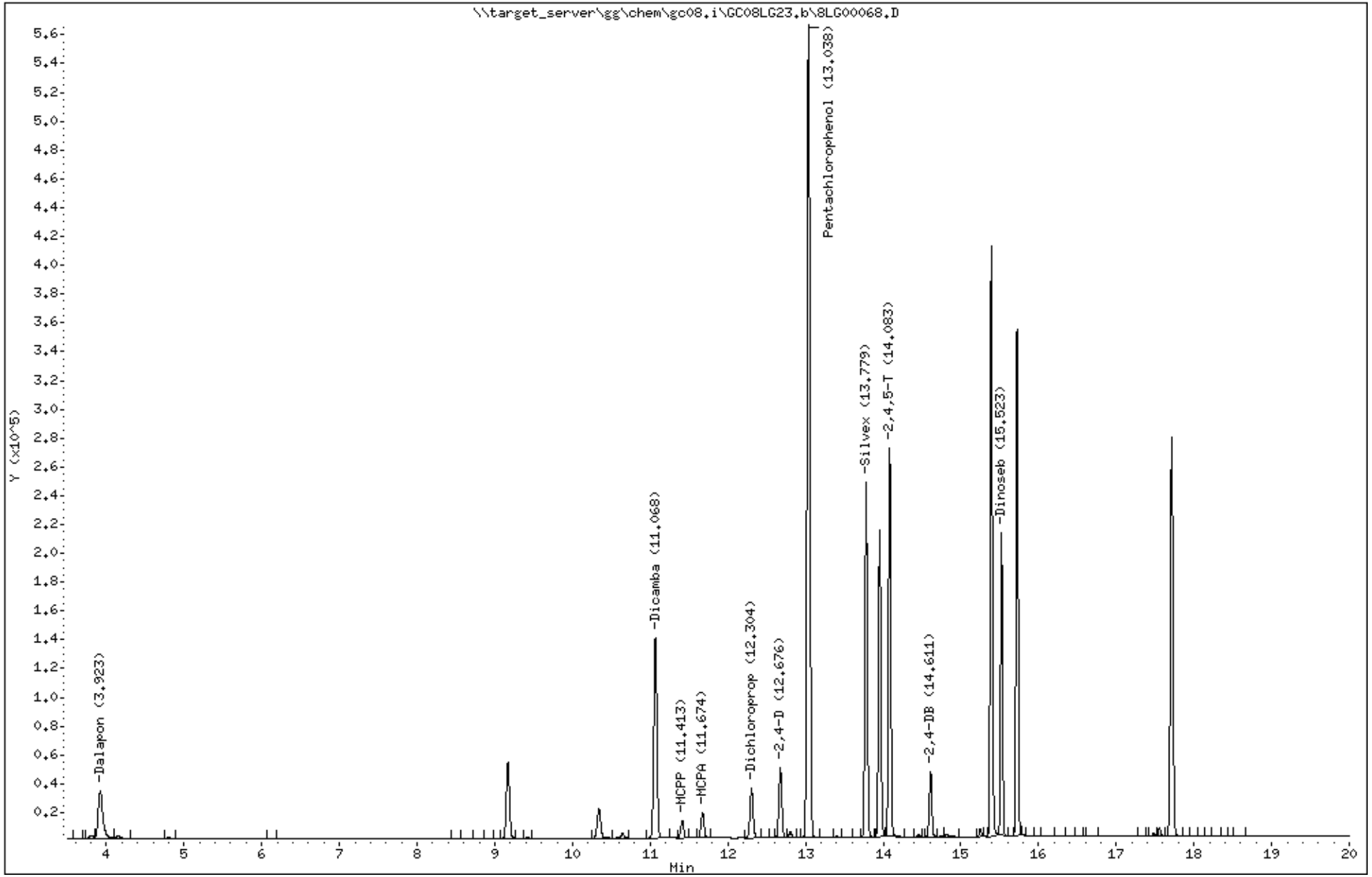
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
1	Dalapon	3.922	3.916	0.006	137738	0.42637	0.426(a)	
3	Dicamba	11.067	11.056	0.011	138808	0.43447	0.434	
4	MCPP	11.412	11.405	0.007	12119	43.6854	43.7	
5	MCPA	11.674	11.665	0.009	17713	42.5772	42.6	
7	2,4-D	12.676	12.666	0.010	48516	0.42336	0.423	
8	Pentachlorophenol	13.037	13.030	0.007	1448183	0.45321	0.453	
6	Dichloroprop	12.304	12.295	0.009	34154	0.40821	0.408	
9	Silvex	13.779	13.773	0.006	246252	0.41279	0.413	
10	2,4,5-T	14.082	14.076	0.006	563666	0.43467	0.435	
11	Dinoseb	15.522	15.516	0.006	209352	0.42257	0.422(a)	
12	2,4-DB	14.611	14.606	0.005	44929	0.48760	0.488	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\target_server\gg\chem\gc08.i\GC08LG23.b\8LG00068.D
Date : 23-JUL-2018 18:13
Client ID: Independent Source
Instrument: gc08.i
Sample Info: WG232698-7,SL6630
Purge Volume: 1.0
Operator: BF
Column phase: RTX-CLPesticides
Column diameter: 0.53



Katahdin Analytical Services 3000052

Data File: 8LG00068.D
Report Date: 25-Jul-2018 08:58

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc08.i\GC08LG23.b\GC08LG23.b\8LG00068.D
Lab Smp Id: WG232698-7 Client Smp ID: Independent Source
Inj Date : 23-JUL-2018 18:13
Operator : BF Inst ID: gc08.i
Smp Info : WG232698-7,SL6630
Misc Info : WG232698,WG232698,WG232698-1,SL6630-1
Comment :
Method : \\target_server\gg\chem\gc08.i\GC08LG23.b\HERB109.m\HERB109.m
Meth Date : 24-Jul-2018 14:02 bflanders Quant Type: ESTD
Cal Date : 23-JUL-2018 17:49 Cal File: 8LG00067.D
Als bottle: 9 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: IND.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*Vt/Vo * CpndVariable

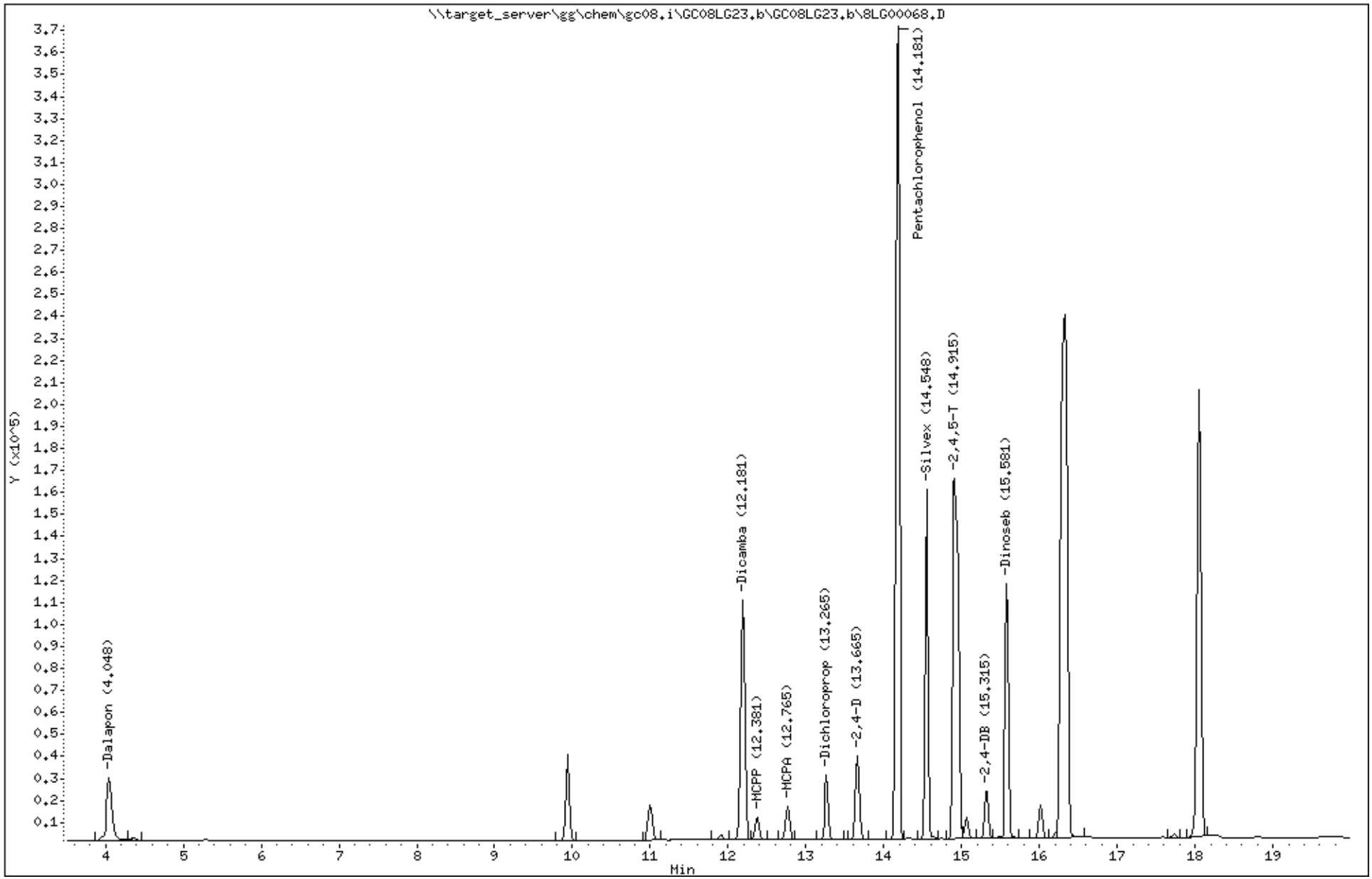
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
1	Dalapon	4.047	4.038	0.009	28742	0.43084	0.431(a)	
3	Dicamba	12.181	12.172	0.009	109091	0.44659	0.446	
4	MCPP	12.381	12.372	0.009	9907	43.5269	43.5	
5	MCPA	12.764	12.755	0.009	15244	42.8009	42.8	
7	2,4-D	13.664	13.655	0.009	38214	0.43706	0.437	
8	Pentachlorophenol	14.181	14.172	0.009	369496	0.44264	0.443	
6	Dichloroprop	13.264	13.255	0.009	29253	0.41680	0.417	
9	Silvex	14.547	14.538	0.009	158897	0.42673	0.427	
10	2,4,5-T	14.914	14.905	0.009	163819	0.44081	0.441	
11	Dinoseb	15.581	15.572	0.009	115521	0.43415	0.434(a)	
12	2,4-DB	15.314	15.322	-0.008	21430	0.41736	0.417	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\target_server\gg\chem\gc08.i\GC08LG23.b\GC08LG23.b\8LG00068.D
Date : 23-JUL-2018 18:13
Client ID: Independent Source
Instrument: gc08.i
Sample Info: WG232698-7,SL6630
Purge Volume: 1.0
Operator: BF
Column phase: RTX-CLPesticides2
Column diameter: 0.53



Katahdin Analytical Services 3000054

Katahdin
ANALYTICAL SERVICES

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG234216-1
Lab File ID : 8LH00015.D
Initial Calibration Date(s): 07/23/18 15:52 07/23/18 17:49

SDG: SL7420
Analytical Date: 08/13/18 13:22
Instrument ID: GC08
Column ID: A

	Compound	RRF/Amount	RF0.500	CCAL RRF0.500	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
7	2,4-D	114598	109420	109420	0.010	-4.51859	20.00000	Averaged
9	Silvex	596553	581306	581306	0.010	-2.55589	20.00000	Averaged
2	2,4-Dichlorophenylacetic Ac	83950	85046	85046	0.010	1.30604	20.00000	Averaged

*** = Compound out of QC criteria**

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Data File: \\target_server\gg\chem\gc08.i\GC08LH13.b\8LH00015.D
Report Date: 15-Aug-2018 11:26

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc08.i\GC08LH13.b\8LH00015.D
Lab Smp Id: WG234216-1
Inj Date : 13-AUG-2018 13:22
Operator : BF   Inst ID: gc08.i
Smp Info : WG234216-1,SL7420
Misc Info : WG234216,WG234216,WG232698-1,SL7420-1
Comment   :
Method   : \\target_server\gg\chem\gc08.i\GC08LH13.b\HERB109.m
Meth Date : 15-Aug-2018 11:00 bflanders Quant Type: ESTD
Cal Date : 23-JUL-2018 17:49   Cal File: 8LG00067.D
Als bottle: 2   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: all.sub
Target Version: 4.12
Processing Host: INSPIRON1

Concentration Formula: Amt * DF * 1000*Vt/Vo * CpndVariable

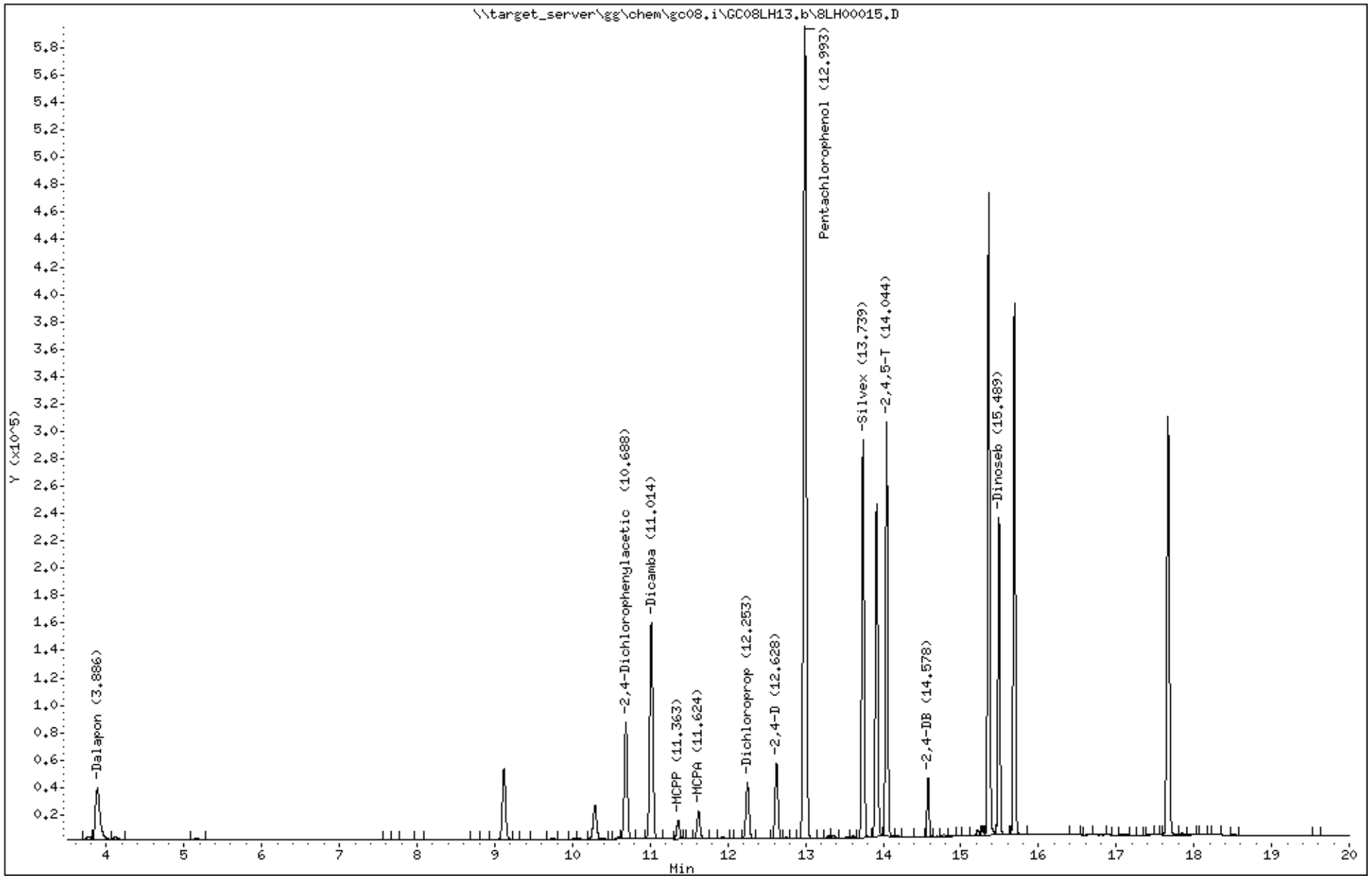
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)	REVIEW CODE
1	Dalapon	3.886	3.930	-0.044	152383	0.50000	0.472(a)	
$ 2	2,4-Dichlorophenylacetic Acid	10.687	10.736	-0.049	85046	1.00000	1.01	
3	Dicamba	11.014	11.065	-0.051	157632	0.50000	0.493(a)	
4	MCPP	11.362	11.408	-0.046	13209	50.0000	47.6(a)	
5	MCPA	11.624	11.668	-0.044	20242	50.0000	48.6(a)	
6	Dichloroprop	12.252	12.301	-0.049	40851	0.50000	0.484(a)	
7	2,4-D	12.627	12.671	-0.044	54710	0.50000	0.477(a)	
8	Pentachlorophenol	12.992	13.033	-0.041	1550053	0.50000	0.485(a)	
9	Silvex	13.739	13.775	-0.036	290653	0.50000	0.487(a)	
10	2,4,5-T	14.044	14.076	-0.032	619504	0.50000	0.478(a)	
11	Dinoseb	15.489	15.515	-0.026	231951	0.50000	0.468(a)	
12	2,4-DB	14.577	14.606	-0.029	43014	0.50000	0.467(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).

Data File: \\target_server\gg\chem\gc08.i\GC08LH13.b\8LH00015.D
Date : 13-AUG-2018 13:22
Client ID:
Instrument: gc08.i
Sample Info: WG234216-1,SL7420
Purge Volume: 1.0
Operator: BF
Column phase: RTX-CLPesticides
Column diameter: 0.53



Katahdin Analytical Services 3000057

Katahdin
ANALYTICAL SERVICES

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG234216-1
Lab File ID : 8LH00015.D
Initial Calibration Date(s): 07/23/18 15:52 07/23/18 17:49

SDG: SL7420
Analytical Date: 08/13/18 13:22
Instrument ID: GC08
Column ID: B

Compound	RRF/Amount	RF0.500	CCAL RRF0.500	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
7 2,4-D	87435	88090	88090	0.010	0.74910	20.00000	Averaged
9 Silvex	372361	395784	395784	0.010	6.29042	20.00000	Averaged
2 2,4-Dichlorophenylacetic Ac	64286	68990	68990	0.010	7.31656	20.00000	Averaged

*** = Compound out of QC criteria**

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sales@katahdinlab.com

Data File: 8LH00015.D
Report Date: 15-Aug-2018 11:26

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc08.i\GC08LH13.b\GC08LH13.b\8LH00015.D
Lab Smp Id: WG234216-1
Inj Date : 13-AUG-2018 13:22
Operator : BF   Inst ID: gc08.i
Smp Info : WG234216-1,SL7420
Misc Info : WG234216,WG234216,WG232698-1,SL7420-1
Comment   :
Method   : \\target_server\gg\chem\gc08.i\GC08LH13.b\HERB109.m\HERB109.m
Meth Date : 15-Aug-2018 10:58 bflanders Quant Type: ESTD
Cal Date : 23-JUL-2018 17:49   Cal File: 8LG00067.D
Als bottle: 2   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: all.sub
Target Version: 4.12
Processing Host: INSPIRON1

Concentration Formula: Amt * DF * 1000*Vt/Vo * CpndVariable

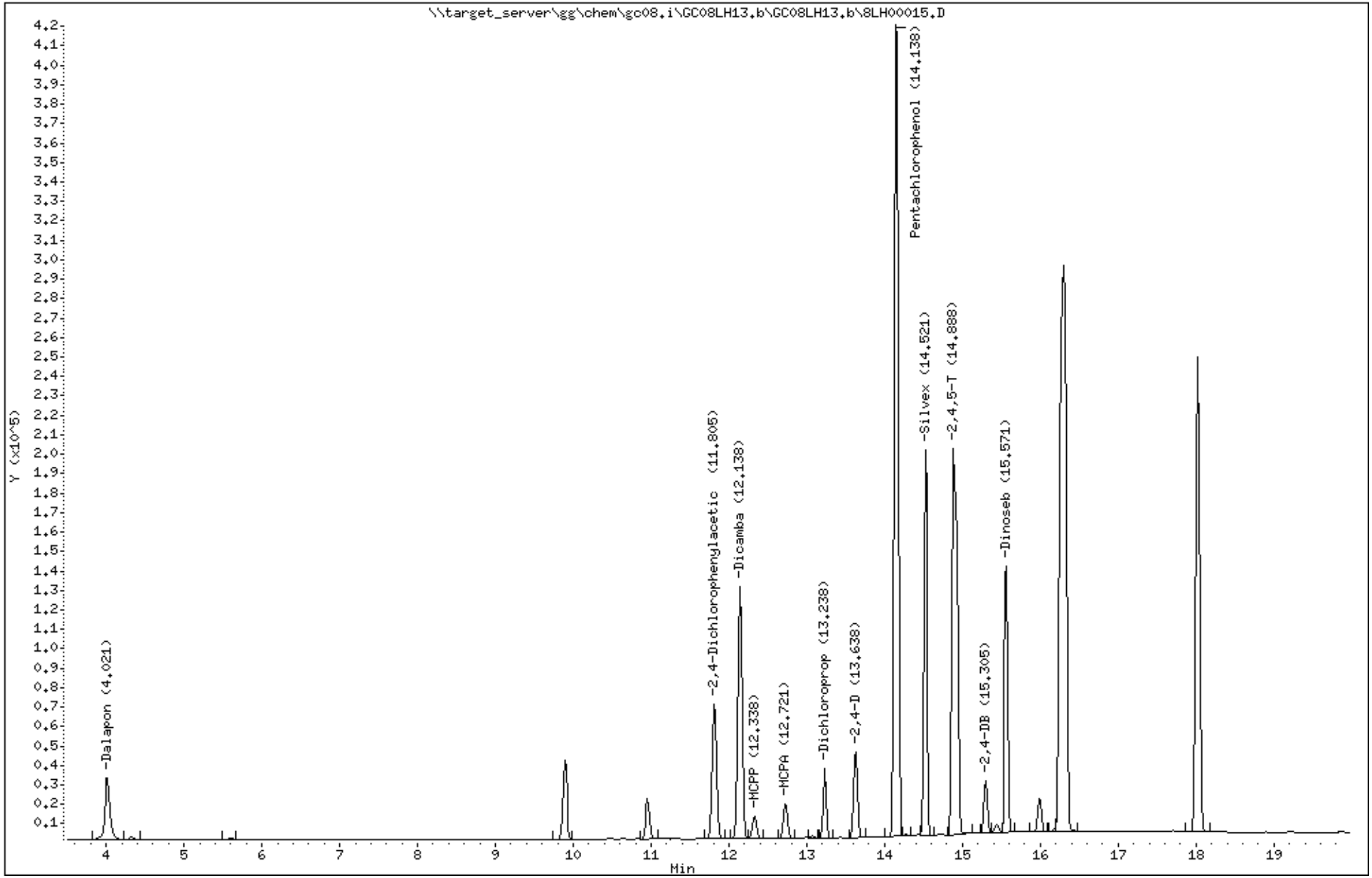
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)	REVIEW CODE
1	Dalapon	4.021	4.058	-0.037	31866	0.50000	0.478(a)	
$ 2	2,4-Dichlorophenylacetic Acid	11.804	11.858	-0.054	68990	1.00000	1.07	
3	Dicamba	12.137	12.192	-0.055	129648	0.50000	0.531(a)	
4	MCPP	12.337	12.375	-0.038	11692	50.0000	51.4(a)	
5	MCPA	12.721	12.775	-0.054	17867	50.0000	50.2(a)	
6	Dichloroprop	13.237	13.275	-0.038	35771	0.50000	0.504(a)	
7	2,4-D	13.637	13.675	-0.038	44045	0.50000	0.504(a)	
8	Pentachlorophenol	14.137	14.175	-0.038	417249	0.50000	0.500(a)	
9	Silvex	14.521	14.558	-0.037	197892	0.50000	0.531(a)	
10	2,4,5-T	14.887	14.908	-0.021	198170	0.50000	0.533(a)	
11	Dinoseb	15.571	15.592	-0.021	136779	0.50000	0.514(a)	
12	2,4-DB	15.304	15.325	-0.021	26714	0.50000	0.520(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).

Data File: \\target_server\gg\chem\gc08.i\GC08LH13.b\GC08LH13.b\8LH00015.D
Date : 13-AUG-2018 13:22
Client ID:
Instrument: gc08.i
Sample Info: WG234216-1,SL7420
Purge Volume: 1.0
Operator: BF
Column phase: RTX-CLPesticides2
Column diameter: 0.53



Katahdin Analytical Services 3000060

Katahdin
ANALYTICAL SERVICES

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG234216-2
Lab File ID : 8LH00026.D
Initial Calibration Date(s): 07/23/18 15:52 07/23/18 17:49

SDG: SL7420
Analytical Date: 08/13/18 19:47
Instrument ID: GC08
Column ID: A

Compound	RRF/Amount	RF0.250	CCAL RRF0.250	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
7 2,4-D	114598	119800	119800	0.010	4.53914	20.00000	Averaged
9 Silvex	596553	647556	647556	0.010	8.54957	20.00000	Averaged
2 2,4-Dichlorophenylacetic Ac	83950	86530	86530	0.010	3.07377	20.00000	Averaged

*** = Compound out of QC criteria**

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Data File: \\target_server\gg\chem\gc08.i\GC08LH13.b\8LH00026.D
Report Date: 15-Aug-2018 11:26

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc08.i\GC08LH13.b\8LH00026.D
Lab Smp Id: WG234216-2
Inj Date : 13-AUG-2018 19:47
Operator : BF   Inst ID: gc08.i
Smp Info : WG234216-2,SL7420
Misc Info : WG234216,WG234216,WG232698-1,SL7420-1
Comment   :
Method   : \\target_server\gg\chem\gc08.i\GC08LH13.b\HERB109.m
Meth Date : 15-Aug-2018 11:00 bflanders Quant Type: ESTD
Cal Date : 23-JUL-2018 17:49   Cal File: 8LG00067.D
Als bottle: 12   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: all.sub
Target Version: 4.12
Processing Host: INSPIRON1

Concentration Formula: Amt * DF * 1000*Vt/Vo * CpndVariable

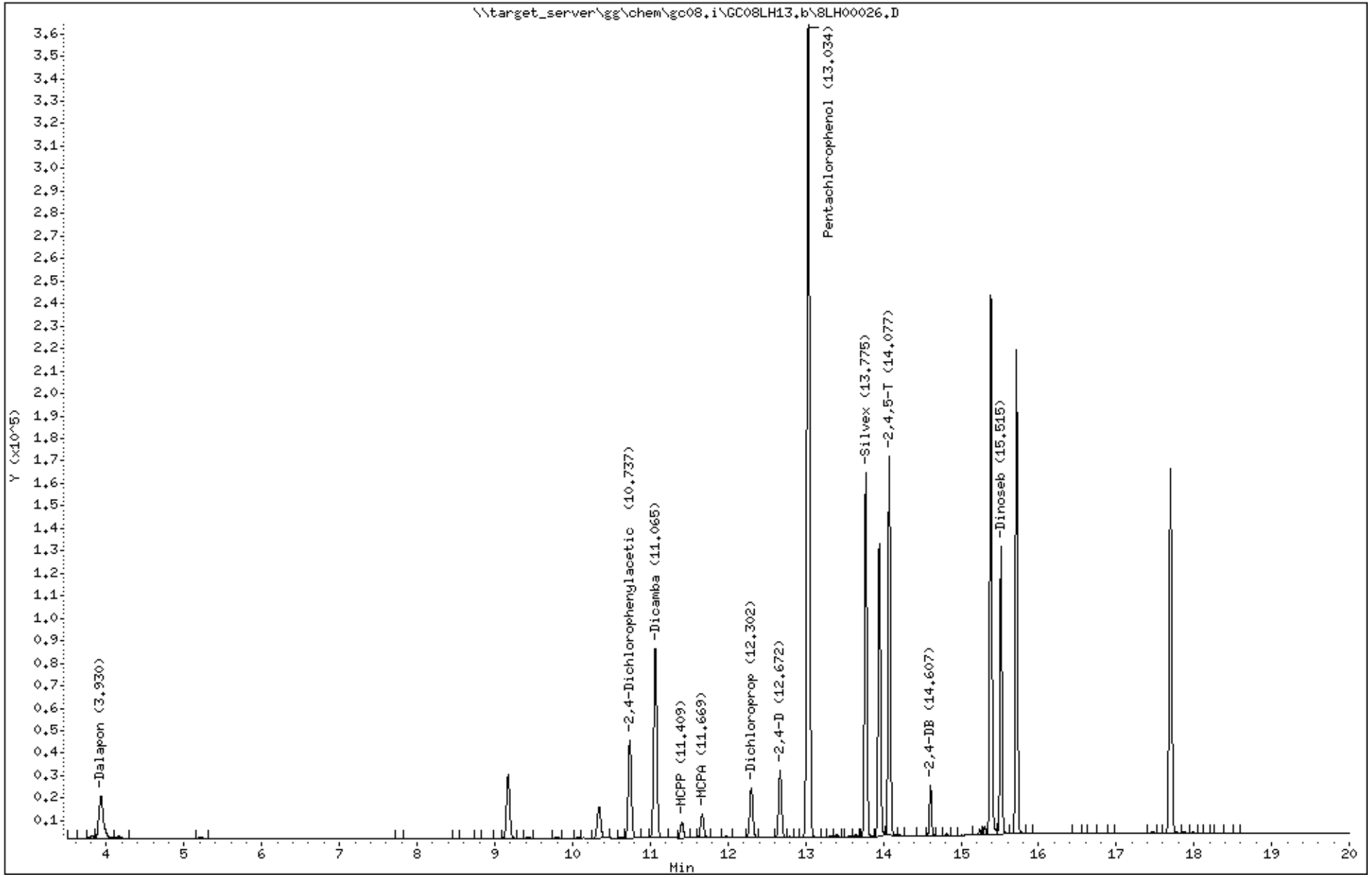
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						AMOUNTS		
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ng/uL)	ON-COL (ng/uL)	REVIEW CODE
$	2 2,4-Dichlorophenylacetic Acid	10.736	10.736	0.000	43265	1.00000	0.515	
	7 2,4-D	12.671	12.671	0.000	29950	0.50000	0.261(a)	
	9 Silvex	13.775	13.775	0.000	161889	0.50000	0.271(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).

Data File: \\target_server\gg\chem\gc08.i\GC08LH13.b\8LH00026.D
Date : 13-AUG-2018 19:47
Client ID:
Instrument: gc08.i
Sample Info: WG234216-2,SL7420
Purge Volume: 1.0
Operator: BF
Column phase: RTX-CLPesticides
Column diameter: 0.53



Katahdin Analytical Services 3000063

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG234216-2
Lab File ID : 8LH00026.D
Initial Calibration Date(s): 07/23/18 15:52 07/23/18 17:49

SDG: SL7420
Analytical Date: 08/13/18 19:47
Instrument ID: GC08
Column ID: B

Compound	RRF/Amount	RF0.250	CCAL RRF0.250	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
7 2,4-D	87435	92640	92640	0.010	5.95296	20.00000	Averaged
9 Silvex	372361	421328	421328	0.010	13.15044	20.00000	Averaged
2 2,4-Dichlorophenylacetic Ac	64286	70496	70496	0.010	9.65920	20.00000	Averaged

*** = Compound out of QC criteria**

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Tel:(207) 874-2400 Fax:(207) 775-4029

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sales@katahdinlab.com

Data File: 8LH00026.D
Report Date: 15-Aug-2018 11:26

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc08.i\GC08LH13.b\GC08LH13.b\8LH00026.D
Lab Smp Id: WG234216-2
Inj Date : 13-AUG-2018 19:47
Operator : BF   Inst ID: gc08.i
Smp Info : WG234216-2,SL7420
Misc Info : WG234216,WG234216,WG232698-1,SL7420-1
Comment   :
Method   : \\target_server\gg\chem\gc08.i\GC08LH13.b\HERB109.m\HERB109.m
Meth Date : 15-Aug-2018 10:58 bflanders Quant Type: ESTD
Cal Date : 23-JUL-2018 17:49   Cal File: 8LG00067.D
Als bottle: 12   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: all.sub
Target Version: 4.12
Processing Host: INSPIRON1

Concentration Formula: Amt * DF * 1000*Vt/Vo * CpndVariable

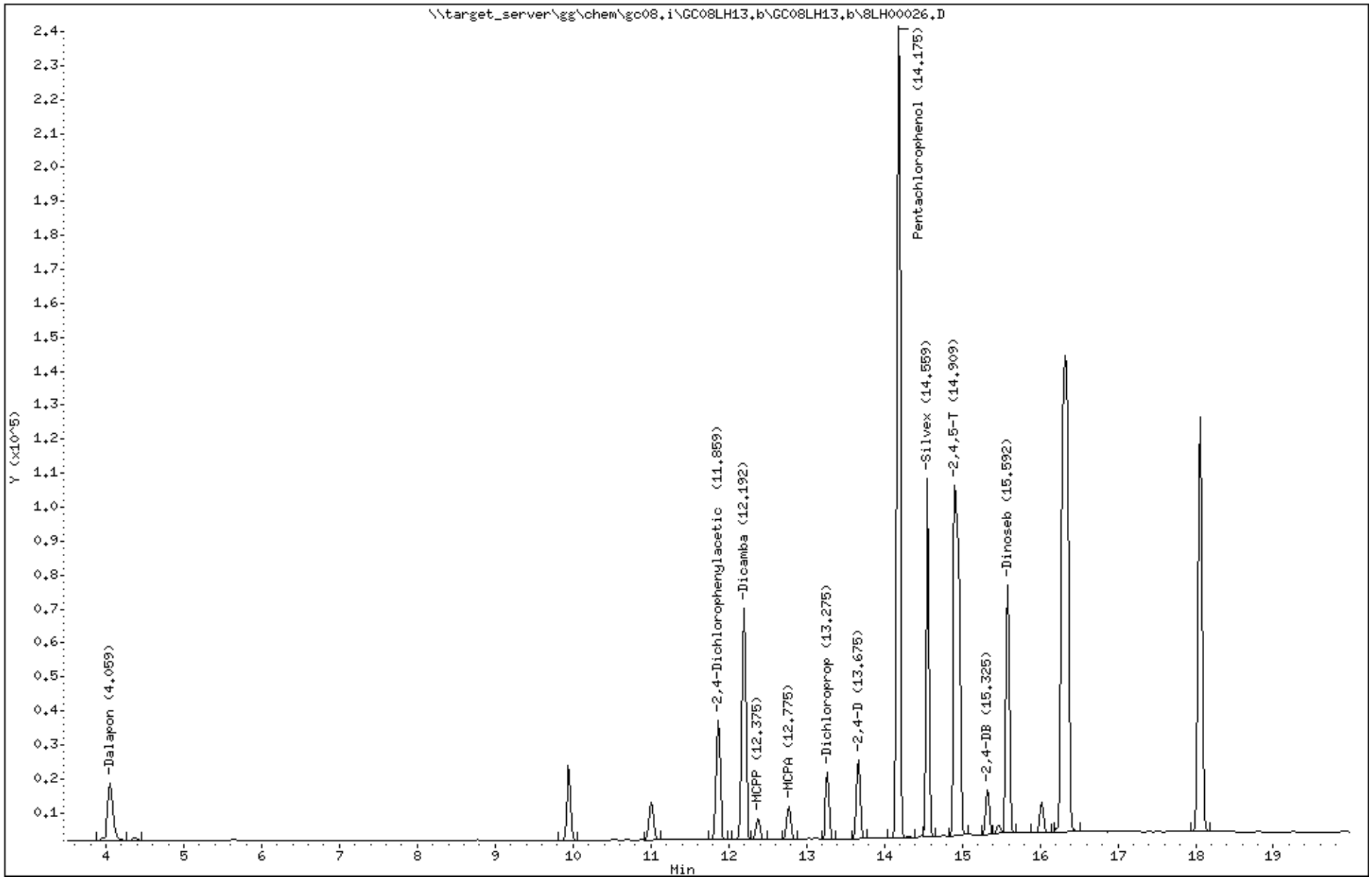
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						AMOUNTS		
						CAL-AMT	ON-COL	
Compounds	RT	EXP RT	DLT RT	RESPONSE		(ng/uL)	(ng/uL)	REVIEW CODE
$ 2 2,4-Dichlorophenylacetic Acid	11.858	11.858	0.000	35248		1.00000	0.548	
7 2,4-D	13.675	13.675	0.000	23160		0.50000	0.265(a)	
9 Silvex	14.558	14.558	0.000	105332		0.50000	0.283(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).

Data File: \\target_server\gg\chem\gc08.i\GC08LH13.b\GC08LH13.b\8LH00026.D
Date : 13-AUG-2018 19:47
Client ID:
Instrument: gc08.i
Sample Info: WG234216-2,SL7420
Purge Volume: 1.0
Operator: BF
Column phase: RTX-CLPesticides2
Column diameter: 0.53



Katahdin Analytical Services 3000066

Raw QC Data Section

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client:
Lab ID: WG233963-1
Client ID: Method Blank Sample
Project:
SDG: SL7420
Lab File ID: 8LH00016.D

Sample Date:
Received Date:
Extract Date: 10-AUG-18
Extracted By: DP
Extraction Method: SW846 3510C
Lab Prep Batch: WG233963

Analysis Date: 13-AUG-18
Analyst: BF
Analysis Method: SW846 8151A
Matrix: AQ
% Solids: NA
Report Date: 15-AUG-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
2,4-D	U	1.4	ug/L	1	3	2.8	0.28	1.4
Silvex	U	1.4	ug/L	1	3	2.8	0.19	1.4
2,4-Dichlorophenylacetic Acid		62.6	%					

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Data File: \\target_server\gg\chem\gc08.i\GC08LH13.b\8LH00016.D
Report Date: 15-Aug-2018 11:26

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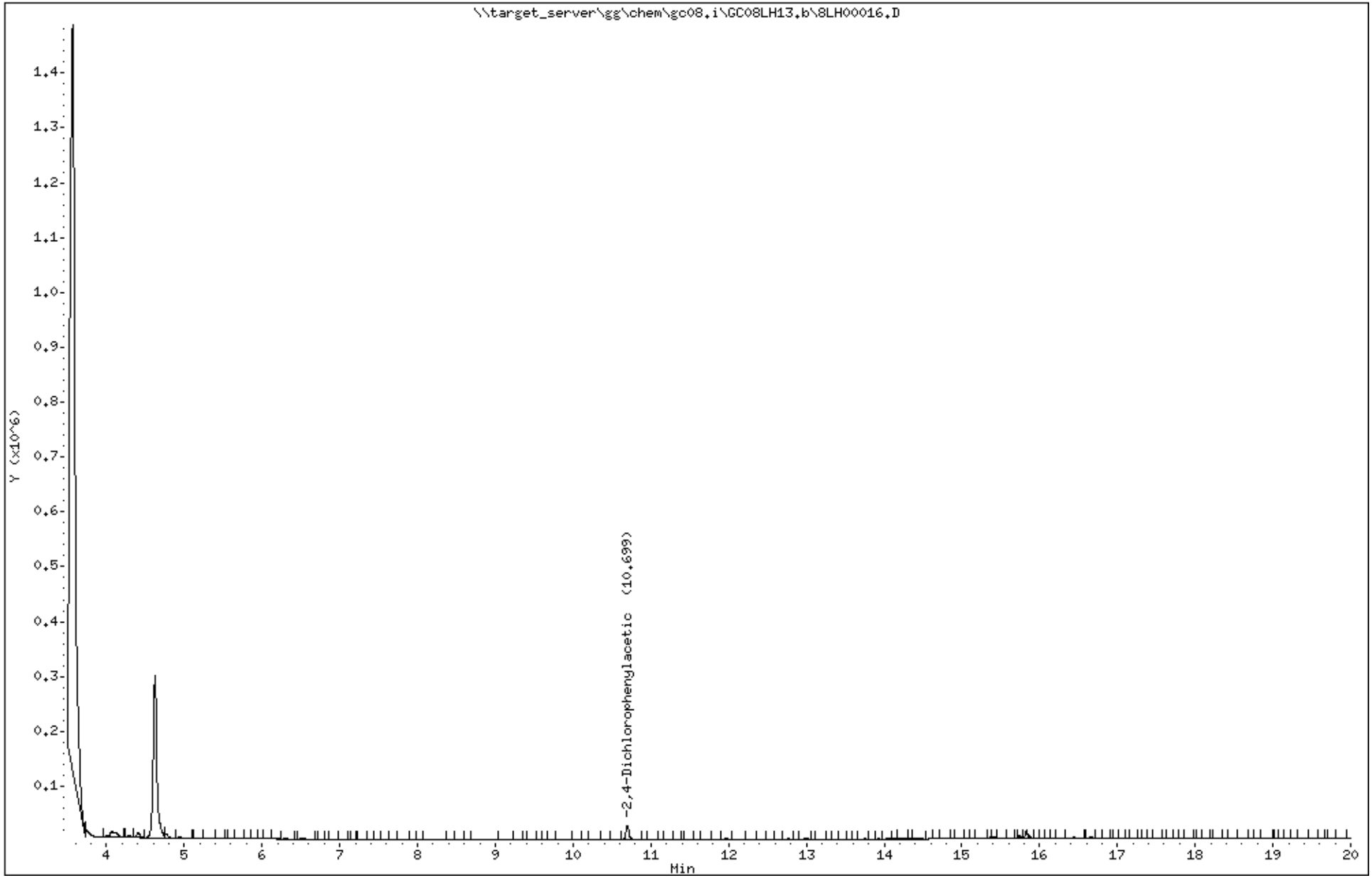
Data file : \\target_server\gg\chem\gc08.i\GC08LH13.b\8LH00016.D
Lab Smp Id: WG233963-1 Client Smp ID: WG233963-Blank
Inj Date : 13-AUG-2018 15:51
Operator : BF Inst ID: gc08.i
Smp Info : WG233963-1,SL7420
Misc Info : WG234216,WG233963,WG232698-1,SL7420-1
Comment :
Method : \\target_server\gg\chem\gc08.i\GC08LH13.b\HERB109.m
Meth Date : 15-Aug-2018 11:00 bflanders Quant Type: ESTD
Cal Date : 23-JUL-2018 17:49 Cal File: 8LG00067.D
Als bottle: 3 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8151_PCP.sub
Target Version: 4.12
Processing Host: INSPIRON1

Concentration Formula: Amt * DF * 1000*Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ng/uL)	CONCENTRATIONS FINAL (ug/L)	
Compounds		RT	EXP RT	DLT RT	RESPONSE			REVIEW CODE
$	2 2,4-Dichlorophenylacetic Acid	10.699	10.736	-0.037	25466	0.30335	3.03	

Data File: \\target_server\gg\chem\gc08.i\GC08LH13.b\8LH00016.D
Date : 13-AUG-2018 15:51
Client ID: WG233963-Blank
Instrument: gc08.i
Sample Info: WG233963-1,SL7420
Purge Volume: 1.0
Operator: BF
Column phase: RTX-CLPesticides
Column diameter: 0.53



Katahdin Analytical Services 3000070

Data File: 8LH00016.D
Report Date: 15-Aug-2018 11:26

Katahdin Analytical Services

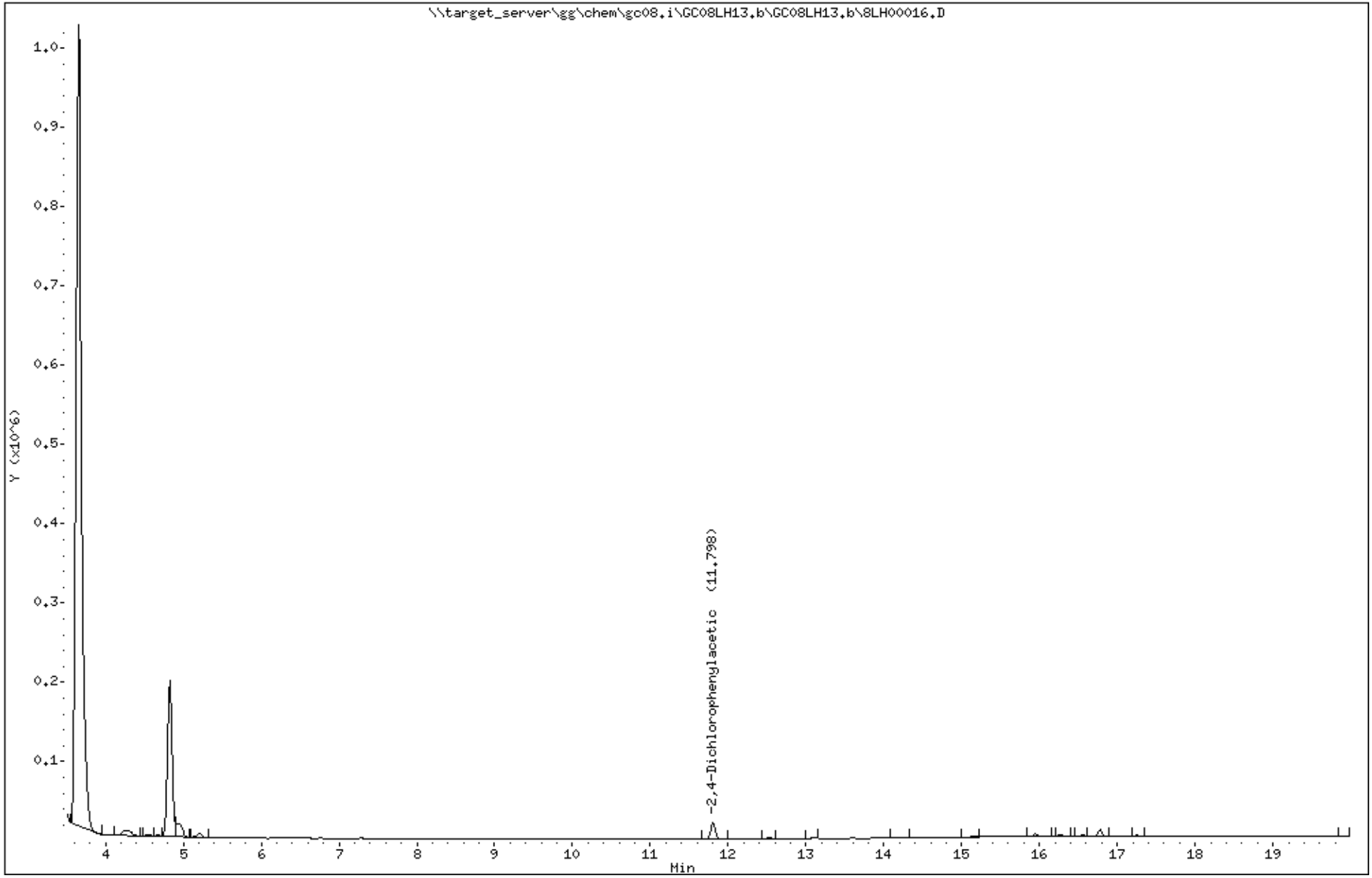
Data file : \\target_server\gg\chem\gc08.i\GC08LH13.b\GC08LH13.b\8LH00016.D
Lab Smp Id: WG233963-1 Client Smp ID: WG233963-Blank
Inj Date : 13-AUG-2018 15:51
Operator : BF Inst ID: gc08.i
Smp Info : WG233963-1,SL7420
Misc Info : WG234216,WG233963,WG232698-1,SL7420-1
Comment :
Method : \\target_server\gg\chem\gc08.i\GC08LH13.b\HERB109.m\HERB109.m
Meth Date : 15-Aug-2018 10:58 bflanders Quant Type: ESTD
Cal Date : 23-JUL-2018 17:49 Cal File: 8LG00067.D
Als bottle: 3 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8151_PCP.sub
Target Version: 4.12
Processing Host: INSPIRON1

Concentration Formula: Amt * DF * 1000*Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ng/uL)	CONCENTRATIONS FINAL (ug/L)	
Compounds	RT	EXP RT	DLT RT	RESPONSE				REVIEW CODE
$ 2 2,4-Dichlorophenylacetic Acid	11.797	11.858	-0.061	20123		0.31302	3.13	

Data File: \\target_server\gg\chem\gc08.i\GC08LH13.b\GC08LH13.b\8LH00016.D
Date : 13-AUG-2018 15:51
Client ID: WG233963-Blank
Instrument: gc08.i
Sample Info: WG233963-1,SL7420
Purge Volume: 1.0
Operator: BF
Column phase: RTX-CLPesticides2
Column diameter: 0.53



Katahdin Analytical Services 3000072

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ANALYTICAL SERVICES

Report of Analytical Results

Client:
Lab ID: WG233963-3
Client ID: TCLP Blank
Project:
SDG: SL7420
Lab File ID: 8LH00018.D

Sample Date:
Received Date:
Extract Date: 10-AUG-18
Extracted By: DP
Extraction Method: 3510C/1311
Lab Prep Batch: WG233963

Analysis Date: 13-AUG-18
Analyst: BF
Analysis Method: SW846 8151A
Matrix: AQ
% Solids: NA
Report Date: 15-AUG-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
2,4-D	U	7.0	ug/L	1	3	14.	1.4	7.0
Silvex	U	7.1	ug/L	1	3	14.	0.95	7.1
2,4-Dichlorophenylacetic Acid		53.8	%					

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Data File: \\target_server\gg\chem\gc08.i\GC08LH13.b\8LH00018.D
Report Date: 15-Aug-2018 11:26

Katahdin Analytical Services

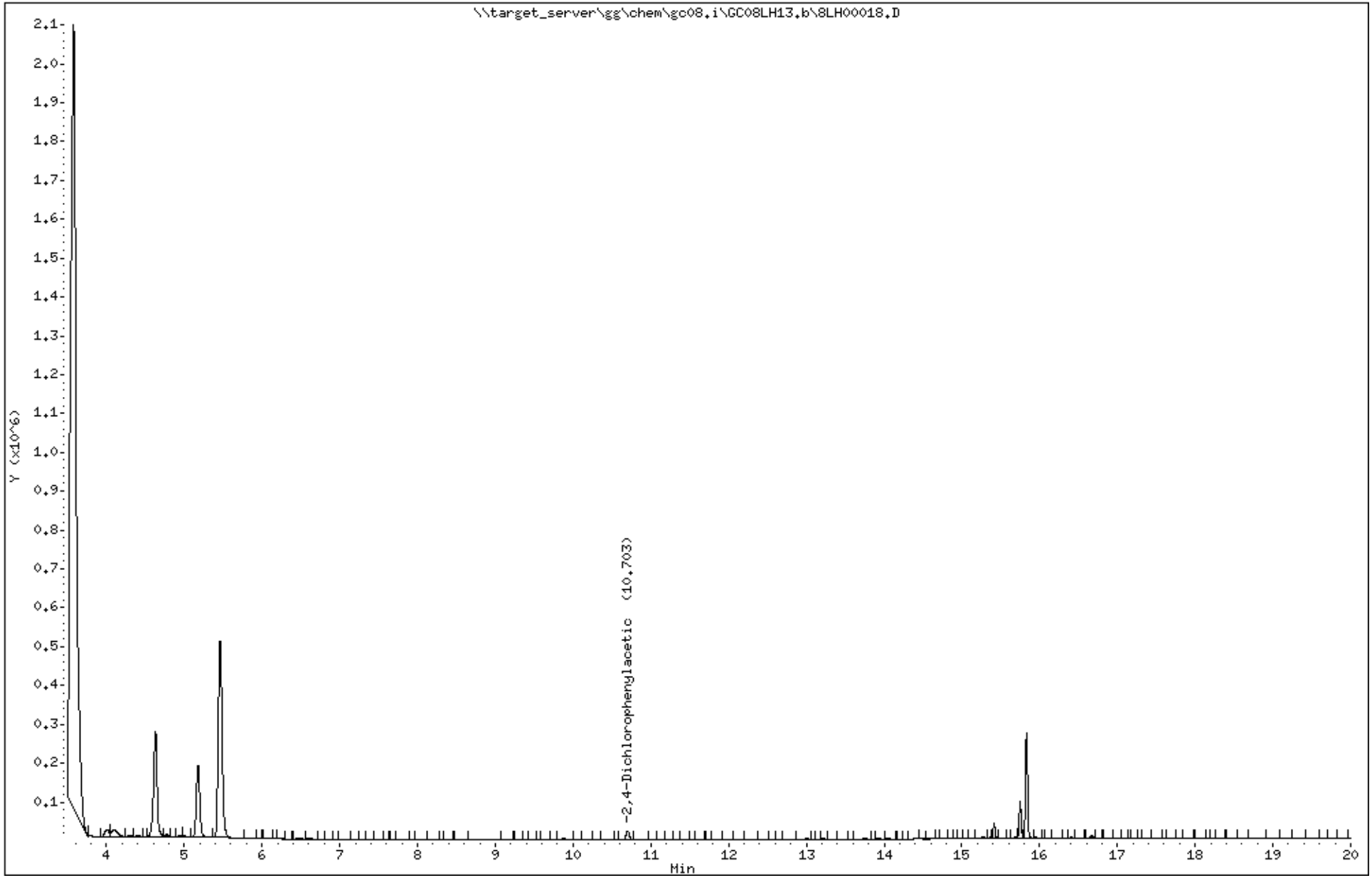
Data file : \\target_server\gg\chem\gc08.i\GC08LH13.b\8LH00018.D
Lab Smp Id: WG233963-3 Client Smp ID: WG233963-TclpBlank
Inj Date : 13-AUG-2018 16:38
Operator : BF Inst ID: gc08.i
Smp Info : WG233963-3,SL7420
Misc Info : WG234216,WG233963,WG232698-1,SL7420-1
Comment :
Method : \\target_server\gg\chem\gc08.i\GC08LH13.b\HERB109.m
Meth Date : 15-Aug-2018 11:00 bflanders Quant Type: ESTD
Cal Date : 23-JUL-2018 17:49 Cal File: 8LG00067.D
Als bottle: 5 QC Sample: TCLPBLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TCLP-SW8151.sub
Target Version: 4.12
Processing Host: INSPIRON1

Concentration Formula: Amt * DF * 1000*Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	0.20000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ng/uL)	CONCENTRATIONS FINAL (ug/L)	
Compounds	RT	EXP RT	DLT RT	RESPONSE				REVIEW CODE
$ 2 2,4-Dichlorophenylacetic Acid	10.702	10.736	-0.034	22702		0.27042	13.5	

Data File: \\target_server\gg\chem\gc08.i\GC08LH13.b\8LH00018.D
Date : 13-AUG-2018 16:38
Client ID: WG233963-TclpBlank
Instrument: gc08.i
Sample Info: WG233963-3,SL7420
Purge Volume: 0.2
Operator: BF
Column phase: RTX-CLPesticides
Column diameter: 0.53



Katahdin Analytical Services 3000075

Data File: 8LH00018.D
Report Date: 15-Aug-2018 11:26

Katahdin Analytical Services

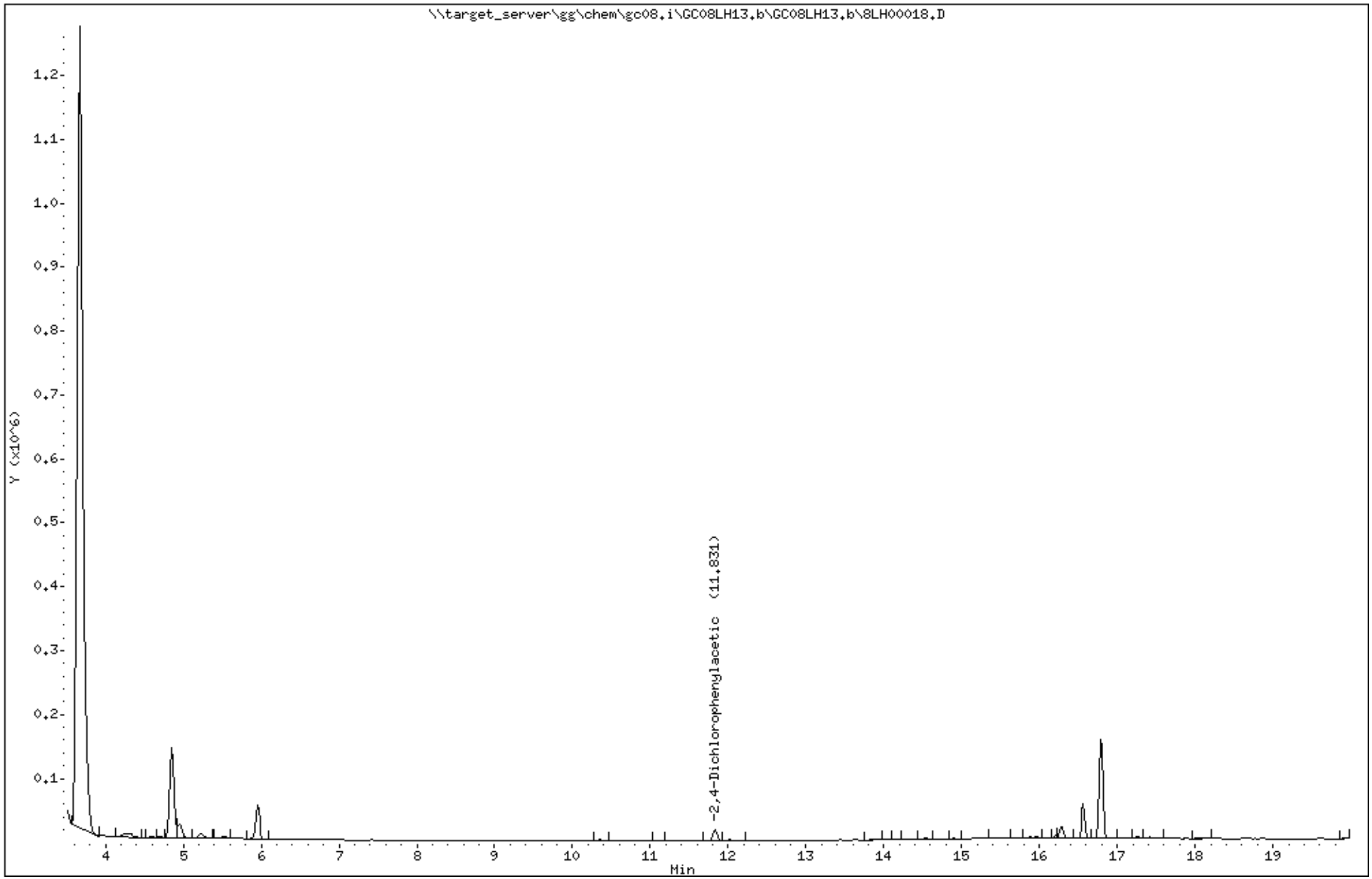
Data file : \\target_server\gg\chem\gc08.i\GC08LH13.b\GC08LH13.b\8LH00018.D
Lab Smp Id: WG233963-3 Client Smp ID: WG233963-TclpBlank
Inj Date : 13-AUG-2018 16:38
Operator : BF Inst ID: gc08.i
Smp Info : WG233963-3,SL7420
Misc Info : WG234216,WG233963,WG232698-1,SL7420-1
Comment :
Method : \\target_server\gg\chem\gc08.i\GC08LH13.b\HERB109.m\HERB109.m
Meth Date : 15-Aug-2018 10:58 bflanders Quant Type: ESTD
Cal Date : 23-JUL-2018 17:49 Cal File: 8LG00067.D
Als bottle: 5 QC Sample: TCLPBLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TCLP-SW8151.sub
Target Version: 4.12
Processing Host: INSPIRON1

Concentration Formula: Amt * DF * 1000*Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	0.20000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 2 2,4-Dichlorophenylacetic Acid	11.831	11.858	-0.027	16933	0.26340	13.2	

Data File: \\target_server\gg\chem\gc08.i\GC08LH13.b\GC08LH13.b\8LH00018.D
Date : 13-AUG-2018 16:38
Client ID: WG233963-TclpBlank
Instrument: gc08.i
Sample Info: WG233963-3,SL7420
Purge Volume: 0.2
Operator: BF
Column phase: RTX-CLPesticides2
Column diameter: 0.53



Katahdin Analytical Services 3000077

Katahdin
ANALYTICAL SERVICES

LCS Recovery Report

Client:
Lab ID: WG233963-2
Client ID: LCS
Project:
SDG: SL7420
LCS File ID: 8LH00017.D

Sample Date:
Received Date:
Extract Date: 10-AUG-18
Extracted By: DP
Extraction Method: SW846 3510C
Lab Prep Batch: WG233963

Analysis Date: 13-AUG-18
Analyst: BF
Analysis Method: SW846 8151A
Matrix: AQ
% Solids: NA
Report Date: 15-AUG-18

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
2,4-D	88.9	4.70	4.18	ug/L	45-152
Silvex	88.4	4.75	4.20	ug/L	51-134
2,4-Dichlorophenylacetic Acid	96.2				32-138

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Data File: \\target_server\gg\chem\gc08.i\GC08LH13.b\8LH00017.D
Report Date: 15-Aug-2018 11:26

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc08.i\GC08LH13.b\8LH00017.D
Lab Smp Id: WG233963-2 Client Smp ID: WG233963-LCS
Inj Date : 13-AUG-2018 16:14
Operator : BF Inst ID: gc08.i
Smp Info : WG233963-2,SL7420
Misc Info : WG234216,WG233963,WG232698-1,SL7420-1
Comment :
Method : \\target_server\gg\chem\gc08.i\GC08LH13.b\HERB109.m
Meth Date : 15-Aug-2018 11:00 bflanders Quant Type: ESTD
Cal Date : 23-JUL-2018 17:49 Cal File: 8LG00067.D
Als bottle: 4 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8151_PCP.sub
Target Version: 4.12
Processing Host: INSPIRON1

Concentration Formula: Amt * DF * 1000*Vt/Vo * CpndVariable

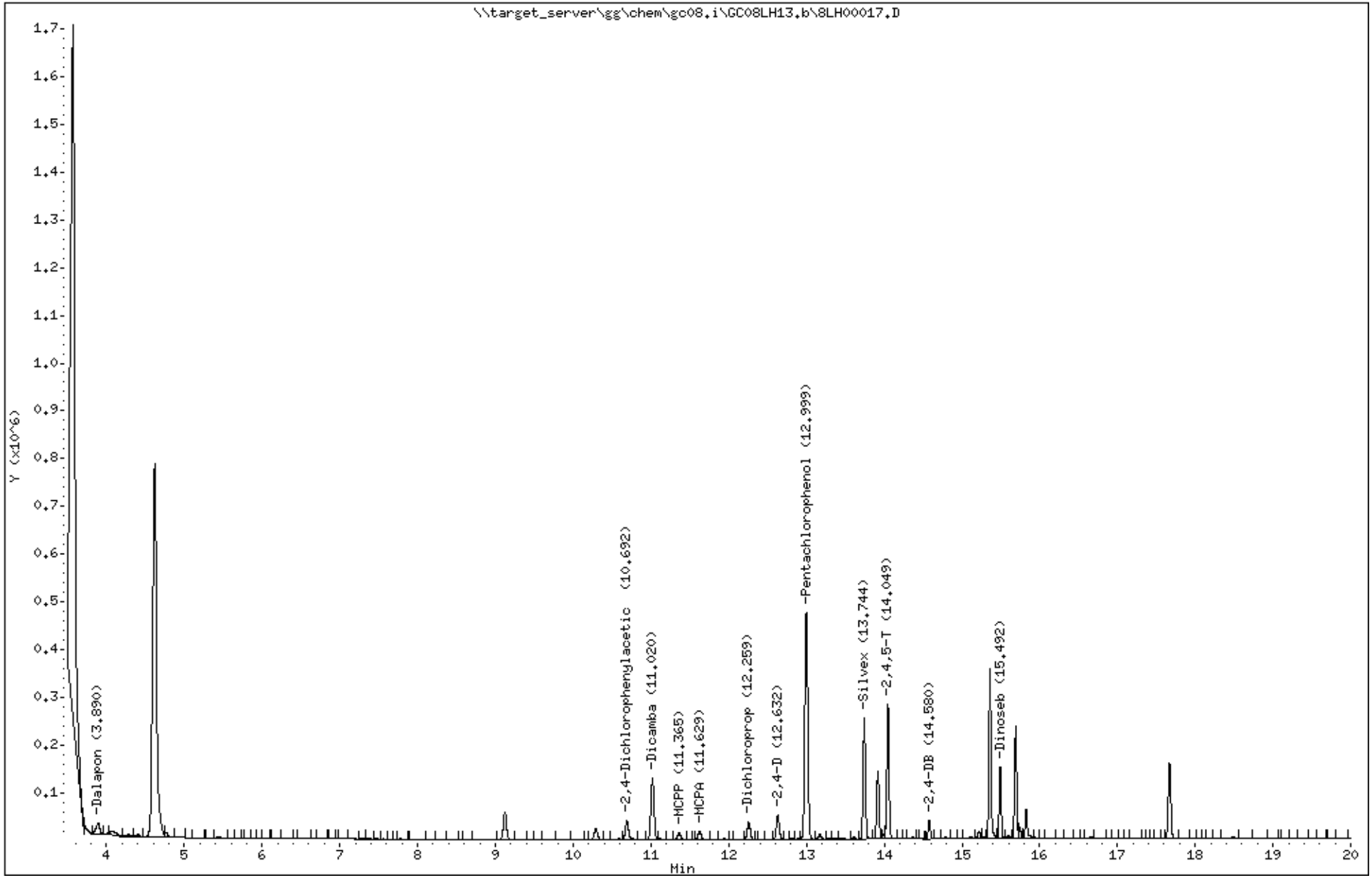
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
1	Dalapon	3.890	3.930	-0.040	74972	0.23208	2.32(a)	
8	Pentachlorophenol	12.998	13.033	-0.035	1281162	0.40094	4.01	
$ 2	2,4-Dichlorophenylacetic Acid	10.691	10.736	-0.045	38974	0.46425	4.64	
3	Dicamba	11.020	11.065	-0.045	128609	0.40255	4.02	
4	MCPP	11.365	11.408	-0.043	13404	48.3175	483	
5	MCPA	11.628	11.668	-0.040	16818	40.4259	404	
6	Dichloroprop	12.258	12.301	-0.043	35430	0.42265	4.23	
7	2,4-D	12.631	12.671	-0.040	50586	0.44142	4.41	
9	Silvex	13.743	13.775	-0.032	252970	0.42405	4.24	
10	2,4,5-T	14.048	14.076	-0.028	576210	0.44434	4.44	
11	Dinoseb	15.491	15.515	-0.024	148889	0.30053	3.00(a)	
12	2,4-DB	14.580	14.606	-0.026	39128	0.42464	4.25	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\target_server\gg\chem\gc08.i\GC08LH13.b\8LH00017.D
Date : 13-AUG-2018 16:14
Client ID: WG233963-LCS
Instrument: gc08.i
Sample Info: WG233963-2,SL7420
Purge Volume: 1.0
Operator: BF
Column phase: RTX-CLPesticides
Column diameter: 0.53



Katahdin Analytical Services 3000080

Data File: 8LH00017.D
Report Date: 15-Aug-2018 11:26

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc08.i\GC08LH13.b\GC08LH13.b\8LH00017.D
Lab Smp Id: WG233963-2 Client Smp ID: WG233963-LCS
Inj Date : 13-AUG-2018 16:14
Operator : BF Inst ID: gc08.i
Smp Info : WG233963-2,SL7420
Misc Info : WG234216,WG233963,WG232698-1,SL7420-1
Comment :
Method : \\target_server\gg\chem\gc08.i\GC08LH13.b\HERB109.m\HERB109.m
Meth Date : 15-Aug-2018 10:58 bflanders Quant Type: ESTD
Cal Date : 23-JUL-2018 17:49 Cal File: 8LG00067.D
Als bottle: 4 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8151_PCP.sub
Target Version: 4.12
Processing Host: INSPIRON1

Concentration Formula: Amt * DF * 1000*Vt/Vo * CpndVariable

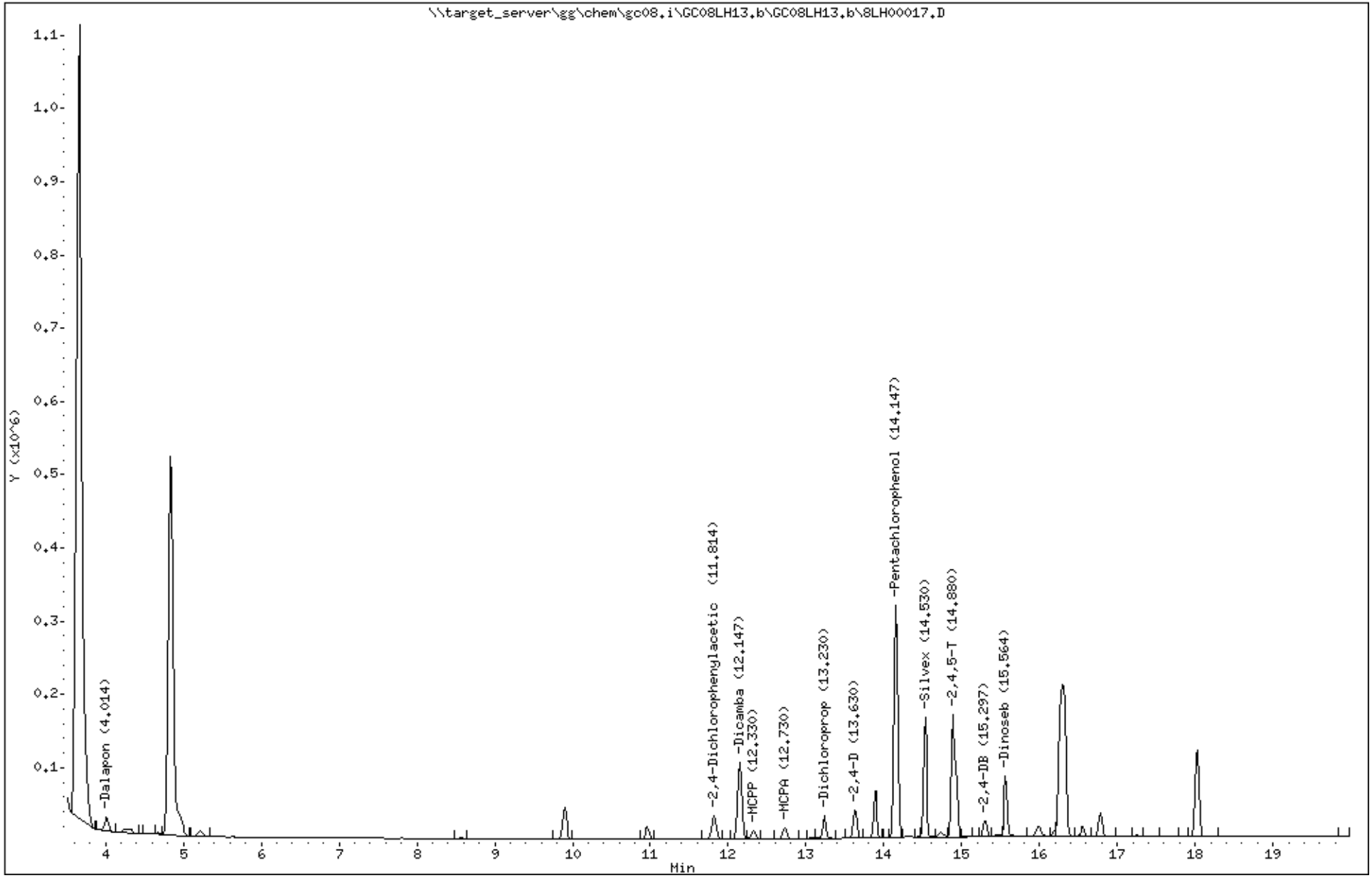
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
1	Dalapon	4.013	4.058	-0.045	18880	0.28301	2.83(a)	
8	Pentachlorophenol	14.147	14.175	-0.028	316554	0.37921	3.79	
$ 2	2,4-Dichlorophenylacetic Acid	11.813	11.858	-0.045	30903	0.48071	4.81	
3	Dicamba	12.147	12.192	-0.045	103877	0.42524	4.25	
4	MCPP	12.330	12.375	-0.045	10437	45.8555	458	
5	MCPA	12.730	12.775	-0.045	15194	42.6605	427	
6	Dichloroprop	13.230	13.275	-0.045	30539	0.43391	4.34	
7	2,4-D	13.630	13.675	-0.045	38934	0.44529	4.45	
9	Silvex	14.530	14.558	-0.028	164448	0.44164	4.42	
10	2,4,5-T	14.880	14.908	-0.028	167316	0.45022	4.50	
11	Dinoseb	15.563	15.592	-0.029	82072	0.30844	3.08(a)	
12	2,4-DB	15.297	15.325	-0.028	21668	0.42200	4.22	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\target_server\gg\chem\gc08.i\GC08LH13.b\GC08LH13.b\8LH00017.D
Date : 13-AUG-2018 16:14
Client ID: WG233963-LCS
Instrument: gc08.i
Sample Info: WG233963-2,SL7420
Purge Volume: 1.0
Operator: BF
Column phase: RTX-CLPesticides2
Column diameter: 0.53



Katahdin Analytical Services 3000082

Logbooks and Supporting Documents

KATAHDIN ANALYTICAL SERVICES, LLC. — Non-Volatile TCLP/SPLP Extraction Log

I. EXTRACTION CONDITIONS

Extraction Method:	SW846 1311 (TCLP) ☑		Balance ID: BAL-15	Rotary Extractor ID: 2		
	SW846 1312 (SPLP) ☐		pH Meter ID: Orion 520A s/n 7422	pH Probe ID: 573352600388		
Solid pH Determination:	Date: 8-9-18	Analyst: AMJ	Room Thermometer ID: Dig 70	(Room Temp Criteria. 23(±2)°C)		
Rotary Extraction Started:	Date: 8/9/18	Time: 1321	Analyst: AMJ	RoomTemp(°C):	Start: 22.4	End: 23.2
Rotary Extraction Completed:	Date: 8/10/18	Time: 0521	Analyst: AMJ	Room Temp (°C):	Min. 22-4	Max. 23.4
Extraction Filtered:	Date: 8/10/18	Time: 0753	Analyst: AMJ	Filter Lot #: R7SA02387 / R7MA33010		
Elapsed Extraction Time (HH:MM): 16:00		5% HNO_3 ID (used to wash filters): HP2074		HNO_3 Lot # (used to preserve extracts): N5K110		
Fluid 1 pH (Day of use): PBT1470A - 4.95 PBT1472A - 4.94		Fluid 1 Expiration Date: 8/11/19 / 8/9/19		Rotary Extractor Rotation Rate Checked? ✓		
Fluid 2 pH (Day of use): PBT1471A - 2.92		Fluid 2 Expiration Date: 8/6/19		Criteria. 30 ± 2 RPM (29)		

II. EXTRACTION SETUP

TCLP Fluid pH: #1 - 4.93 ± 0.05 #2 - 2.88 ± 0.05 SPLP Fluid pH: #1 - 4.20 ± 0.05 #2 - 5.00 ± 0.05

Katahdin Sample No. (include bottle ID)	Matrix	Check One: 100% Wet Solids- waste will yield no liquid upon filtration	Check One: < 100% Wet Solids (Perform Solids Determination below)	SPLP FLUID # (1 for east and 2 for west of Mississippi River)	TCLP pH Determination and Fluid Selection (date & init. above): Initial pH of solid phase: (If <5, use Fluid #1; if >5 add 3.5 mL of 1 N HCl)	TCLP pH Determination and Fluid Selection (date & init. above): pH after 1 N HCL addition (If <5, use Fluid #1; If >5, use Fluid #2	Extraction Setup: Volume of Extraction Fluid (mL)	Extraction Setup: Fluid # used	Extraction Setup: Associated Extraction Blank ID:	Extraction Setup: Weight of Waste (g)	pH of extract after extraction:	Extract to be analyzed for: Metals (M), SVOA (S), PEST (P), HERB (H), Cyanide (C)	Extraction Bottle ID (if applicable)
SL7472-1A	SL	✓	—	—	11.66	11.17	2000	2	PBT1471A	100.19	10.36	M	NA
SL7472-2A	SL	✓	—	—	11.66	11.17	2000	2	1	100.12	10.36	M	NA
SL7420-1C	SL	✓	—	—	7.54	1.88	2000	1	PBT1470B	100.03	5.01	M,H,P S,V	38
SL7420-2C	SL	✓	—	—	8.56	2.02	2000	1	↓	100.10	6.03	M,H,P S,V	47
SL7425-1B	SL	✓	—	—	7.95	1.95	2000	1	↓	100.05	5.09	M,H,P SV	54
SL7426-1B	SL	✓	—	—	10.49	2.09	2000	1	PBT1472A	100.15	8.55	M,H,P SV	33
PBT1471A	AQ	—	—	—	—	—	2000	2	NA	NA	2.41	M	NA
PBT1470A/B	AQ	—	—	—	—	—	2000	1	NA	NA	4.74	H,P,S,V	53
PBT1472A	AQ	—	—	—	—	—	2000	1	NA	NA	8.486	M,H,P,S	49

AMJ 8/9/18 — AMJ 8/9/18 — JS 8/9/18 — AMJ 8/10/18

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QAAA191 — 0000138

III. SOLIDS DETERMINATION

Date AQ Filtered:

Katahdin Sample No. (include bottle ID)	AQ or SL	Time Filt'd	A: Weight of filter (g)	B: Weight of filtrate vessel (g)	C: Weight of weigh boat + waste (g)	D: Weight of weigh boat + residue (g)	E: Weight of waste (C-D) (g)	F: Weight of filtrate vessel + filtrate (g)	G: Weight of liquid phase (F-B) (g)	H: Percent wet solids [(E-G)/E x 100%]	I: Weight of filter + dry solids (g)	J: Weight of dry solids (I-A) (g)	K: Percent dry solids (J/E x 100%)

IV. PHASE SEPARATION

Katahdin Sample No. (include bottle ID)	Matrix	Percent dry solids [1]: <0.5%	Percent dry solids [1]: >0.5%	L: Weight of filtrate vessel (g)	M: Weight of weigh boat + waste (g)	N: Weight of weigh boat + residue (g)	O: Weight of waste (M-N) (g)	P: Weight of filtrate vessel + filtrate (g)	Q: Weight of liquid phase (P-L) (g)	R: Volume of liquid phase (mL) [2]	S: Weight of wet solids (O - Q) (g)

AMJ 8/10/18

1) If dry solids is <0.5%, filter sufficient volume of waste to support all required analyses. If dry solids >0.5% and wet solids <100%, perform phase separation (steps L – S above).

2) If miscible, proportionately combine pre-extraction filtrate with rotary extract. If not miscible, analyze aliquots separately and mathematically combine results.

V. COMMENTS:

Reviewed By_____ Date_____

Katahdin Analytical Services 3000084

SEP! HERB

KATAHDIN ANALYTICAL SERVICES
ORGANIC EXTRACTIONS LOG - HERBICIDES

Extraction Method: (√ one)	SEP. FUNNEL: √	SONICATION:	Analytical Method: SW846 8151	
Standards	Surrogate ID (1): GC1886	Surrogate ID (2): —	Spike ID (1): GC1879	Spike ID (2): —
Solvents	MeCl2 Lot #: DU514-03	Acetone Lot # : —	Hexane Lot #: PT922	
	Ether Lot #: DT448	Methanol Lot #:	Isooctane Lot #: A0369617	
Consumables	Filter Paper Lot # (SON) —	Filter Paper Lot # (KD) 14081047	Powdered $NaSO_4$ Lot # —	
	Crystal $NaSO_4$ Lot #: 2796B002	HCl Lot #: —	H_2SO_4 Lot #: 185389	
	NaOH Lot #: 190393	Silicic Acid Lot #: MKBZ277284	Diazald ID: GC1900	
	Potassium Hydroxide Lot #: —	$NaCl_2$ Lot #: RE0301	pH Paper Lot#: HC739245	
Prep Start Time: 13:30	Prep End Time: 1600	Nitrogen Bath Temperature: 36°	Sonicator Horns Tuned: —	Balance ID: —

Ext. Date	Ext. Init.	Sample ID	Initial Vol. / Weight (g / mL)	Surr. Vol. (mL)	Spk. Vol. (mL)	Date Esterfied	Date Conc.	Conc. Init.	Final Vol. (mL)	Tray Loc.	Comments
										0498	R485509
08-10-18	DP	14233463 - 1	1.000	1.00	NR	8-13-18	8-13-18	AC	1.0	D4	
		-2	L		1.00					D5	
		-3	2.00		NR					D6	PBTN705
		-4	L		L					D7	PBTN728A
									RF	8-13-18	

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QAEX353

0000052

Ext. Date	Ext. Init.	Sample ID	Initial Vol. / Weight (g / mL)	Surr. Vol. (mL)	Spk. Vol. (mL)	Date Esterfied	Date Conc.	Conc. Init.	Final Vol. (mL)	Tray Loc.	Comments
08-10-18	DP	SL7420-1 C	2.00	1.00	NR	8-13-18	8-13-18	AC	1.0	D8	2.00 mL diluted to 1.000 mL
		-2 C								D9	
		SL7425-1 B								D10	
		SL7426-1 B								D11	
		SL7451-1 A	1.060							D12	

Reviewed By _____ Date _____

EX-014 – Revision 3 – 06/09/2016

QAEX353

0000053

Katahdin Analytical Services

GC Laboratory Instrument Runlog

Instrument: GC08

Amount Injected: 2 uL

Column Numbers: 478/479

Method: SW846 8081 / 8082 / 8151 / 8011
(circle) EPA 504.1 / 556 / 608

Hexane Lot #:	DT922/DT745
Standard	Standard ID
Herb 0.5	P9063
↓ 0.25	P9178
AR1660 1.0	P9170
↓ 0.25	P9167

Date	Init.	Result File	Sample ID	Y/N	Analytical Workgroup	Method	Comments
7-23-18	BF	8LG00~~698~~ 062	Herb 0.5	Y	WG232698 -1	Herb109	P9063
		063 ~~699~~	0.1		-2		P9067
		064 ~~700~~	0.25		-3		P9178
		065	0.75		-4		P9065
		066	1.0		-5		1:2 100/200 P9064
		067	2.0		-6		P9064
		068	Herb IND		-7		P9182
		069	WG232482-1 3310	Y			
		070	↓ -2				
		071	SL6485-2				
		072	↓ -3	Y			SS↓A+B
		073	SL6630-1	Y			
		074	↓ -2				
		075	Herb 0.5	Y	-8		
7-24-18	BF	8LG00076	PRIME	N	WG232779	P(B031	
		077	AR1660 1.0	Y			
		78	WG232674-1	Y			
		79	↓ -2	Y			
		80	SL4916-5DL	N			RR 1/42,48 1:5 50/25
		81	-10	N			
		82	-10DL	Y			1:20 50/1
		83	-19	Y			
		84	SL6692-3DL	Y			DMB 1:5 50/250
		85	-4	Y N			not needed
		86	-5	Y			
		87	-7	Y			TPA
		88	-8	Y			TPA
		89	-12	Y			
		90	Rinse	N			
		91	60 0.45	Y			

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*BF 7-23-18

QAGC373

0000030

Katahdin Analytical Services

GC Laboratory Instrument Runlog

Instrument: GC08

Amount Injected: 2 uL

Column Numbers: 478/479

Method: SW846 8081 / 8082 / 8151 / 8011
(circle) EPA 504.1 / 556 / 608

Hexane Lot #:	DT922
Standard	Standard ID
Heib 0.5	P9063
↓ 0.25	P9178

Date	Init.	Result File	Sample ID	Y/N	Analytical Workgroup	Method	Comments
8-13-18	BF	8LH00015	Heib 0.5	Y	WG234216-1	Heib109	
		016	WG233963-1 3510	Y			
		017	-2				
		018	-3				
		019	-4				
		020	SL7420-1				
		021	↓ -2				
		022	SL7425-1				SSLA+B
		023	SL7426-1				~~[illegible]~~ SSLA+B
		024	SL7451-1	Y			
		025	RINSE	N			Yellow Sample
		026	Heib 0.25	Y	-2		

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QAGC373

0000032

Katahdin Analytical Services 3000087

METALS DATA

Sample Data Section

METALS SAMPLE FLAGGING

FLAG	SPECIFIED MEANING
E	The reported value is estimated because of the presence of interference (as indicated by serial dilution).
N	The pre-digestion spiked sample recovery is not within control limits.
*	The duplicate sample analysis relative percent difference (RPD) is not within control limits.
B	Indicates the analyte was detected in the laboratory method blank analyzed concurrently with the sample.
A	The post-digestion spiked sample recovery is not within control limits.
•	Analytical run QC sample (e.g. ICV, CCV, ICB, CCB, ICSA, ICSAB) not within control limits.
U	The analyte was not detected above the specified level. This level may be the Practical Quantitation Level (PQL) (also called Limit of Quantitation (LOQ)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client. Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL, "U" LOQ or "U" LOD, where the rate of false negatives is <1%.
J	Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Practical Quantitation Level (PQL) (also called Limit of Quantitation (LOQ)), but above the Method Detection Limit (MDL).
Q	One or more quality control criteria failed (e.g., LCS recovery, surrogate spike recovery or CCV).

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: Katahdin Analytical Services

SDG Name: SL7420 **SOW No.** SW846

Client Field ID	Lab Sample ID
CHAAP-IDW-SOIL-080618-N	SL7420-002
CHAAP-IDW-SOIL-080618-S	SL7420-001

Were ICP interelement corrections applied ?	Yes
Were ICP background corrections applied ?	Yes
If yes - were raw data generated before application of background corrections ?	No

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: Madison Onsmore

Date: 8/16/18 Title: Analyst

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-IDW-SOIL-080618-S

Matrix: WATER **SDG Name:** SL7420

Percent Solids: 0.00 **Lab Sample ID:** SL7420-001

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-38-2	ARSENIC, TCLP	16	J		P	1	40	7.0	25
7440-39-3	BARIUM, TCLP	326		B	P	1	25	1.2	15
7440-43-9	CADMIUM, TCLP	0.78	J		P	1	25	0.25	15
7440-47-3	CHROMIUM, TCLP	3.1	J		P	1	50	1.8	20
7439-92-1	LEAD, TCLP	20	U		P	1	25	5.5	20
7439-97-6	MERCURY, TCLP	0.031	J		CV	1	0.20	0.013	0.10
7782-49-2	SELENIUM, TCLP	35	U		P	1	50	12	35
7440-22-4	SILVER, TCLP	20	U		P	1	50	1.4	20

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-IDW-SOIL-080618-N

Matrix: WATER **SDG Name:** SL7420

Percent Solids: 0.00 **Lab Sample ID:** SL7420-002

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-38-2	ARSENIC, TCLP	42			P	1	40	7.0	25
7440-39-3	BARIUM, TCLP	648		B	P	1	25	1.2	15
7440-43-9	CADMIUM, TCLP	0.52	J		P	1	25	0.25	15
7440-47-3	CHROMIUM, TCLP	4.2	J		P	1	50	1.8	20
7439-92-1	LEAD, TCLP	20	U		P	1	25	5.5	20
7439-97-6	MERCURY, TCLP	0.018	J		CV	1	0.20	0.013	0.10
7782-49-2	SELENIUM, TCLP	35	U		P	1	50	12	35
7440-22-4	SILVER, TCLP	2.9	J		P	1	50	1.4	20

Comments:

QC Summary Section

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Concentration Units: ug/L

SAMPLE: ICV

File: HLH10A Aug 10, 2018 12:01

Analyte	True	Found	%R (1)
MERCURY	6.0	6.07	101.2

SAMPLE: CCV

File: HLH10A Aug 10, 2018 12:07

Analyte	True	Found	%R (1)
MERCURY	5.0	4.83	96.6

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Concentration Units: ug/L

SAMPLE: CCV

File: HLH10A Aug 10, 2018 12:34

Analyte	True	Found	%R (1)
MERCURY	5.0	4.86	97.2

SAMPLE: CCV

File: HLH10A Aug 10, 2018 13:00

Analyte	True	Found	%R (1)
MERCURY	5.0	5.06	101.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Concentration Units: ug/L

SAMPLE: CCV

File: HLH10A Aug 10, 2018 13:27

Analyte	True	Found	%R (1)
MERCURY	5.0	4.90	98.0

SAMPLE: CCV

File: HLH10A Aug 10, 2018 13:34

Analyte	True	Found	%R (1)
MERCURY	5.0	4.95	99.0

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Concentration Units: ug/L

SAMPLE: CCV

File: HLH10A Aug 10, 2018 14:01

Analyte	True	Found	%R (1)
MERCURY	5.0	4.92	98.4

SAMPLE: CCV

File: HLH10A Aug 10, 2018 14:27

Analyte	True	Found	%R (1)
MERCURY	5.0	4.99	99.8

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Concentration Units: ug/L

SAMPLE: CCV

File: HLH10A Aug 10, 2018 14:53

Analyte	True	Found	%R (1)
MERCURY	5.0	4.98	99.6

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Concentration Units: ug/L

SAMPLE: ICV

File: ILH10A Aug 10, 2018 13:28

Analyte	True	Found	%R (1)
ALUMINUM	10000.0	10070.00	100.7
ARSENIC	400.0	402.40	100.6
BARIUM	400.0	398.30	99.6
CADMIUM	400.0	410.30	102.6
CALCIUM	10000.0	10260.00	102.6
CHROMIUM	400.0	399.40	99.8
IRON	10000.0	10270.00	102.7
LEAD	400.0	412.90	103.2
MAGNESIUM	10000.0	10380.00	103.8
SELENIUM	400.0	406.90	101.7
SILVER	400.0	399.80	100.0

SAMPLE: CCV

File: ILH10A Aug 10, 2018 13:52

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12690.00	101.5
ARSENIC	500.0	500.30	100.1
BARIUM	500.0	496.00	99.2
CADMIUM	500.0	503.00	100.6
CALCIUM	12500.0	12690.00	101.5
CHROMIUM	500.0	493.00	98.6
IRON	12500.0	12680.00	101.4
LEAD	500.0	506.20	101.2
MAGNESIUM	12500.0	12850.00	102.8
SELENIUM	500.0	505.00	101.0
SILVER	500.0	491.70	98.3

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Concentration Units: ug/L

SAMPLE: CCV

File: ILH10A Aug 10, 2018 14:12

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12880.00	103.0
ARSENIC	500.0	504.20	100.8
BARIUM	500.0	506.50	101.3
CADMIUM	500.0	502.30	100.5
CALCIUM	12500.0	12890.00	103.1
CHROMIUM	500.0	504.50	100.9
IRON	12500.0	12960.00	103.7
LEAD	500.0	505.10	101.0
MAGNESIUM	12500.0	12810.00	102.5
SELENIUM	500.0	507.40	101.5
SILVER	500.0	498.60	99.7

SAMPLE: CCV

File: ILH10A Aug 10, 2018 15:09

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12890.00	103.1
ARSENIC	500.0	491.30	98.3
BARIUM	500.0	506.20	101.2
CADMIUM	500.0	489.30	97.9
CALCIUM	12500.0	12910.00	103.3
CHROMIUM	500.0	502.80	100.6
IRON	12500.0	12950.00	103.6
LEAD	500.0	494.00	98.8
MAGNESIUM	12500.0	12560.00	100.5
SELENIUM	500.0	491.60	98.3
SILVER	500.0	499.70	99.9

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Concentration Units: ug/L

SAMPLE: CCV

File: ILH10A Aug 10, 2018 16:09

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12960.00	103.7
ARSENIC	500.0	498.70	99.7
BARIUM	500.0	509.40	101.9
CADMIUM	500.0	493.90	98.8
CALCIUM	12500.0	12950.00	103.6
CHROMIUM	500.0	510.60	102.1
IRON	12500.0	13120.00	105.0
LEAD	500.0	495.60	99.1
MAGNESIUM	12500.0	12710.00	101.7
SELENIUM	500.0	502.40	100.5
SILVER	500.0	503.00	100.6

SAMPLE: CCV

File: ILH10A Aug 10, 2018 17:08

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12770.00	102.2
ARSENIC	500.0	495.90	99.2
BARIUM	500.0	501.30	100.3
CADMIUM	500.0	494.30	98.9
CALCIUM	12500.0	12700.00	101.6
CHROMIUM	500.0	499.20	99.8
IRON	12500.0	12840.00	102.7
LEAD	500.0	497.40	99.5
MAGNESIUM	12500.0	12680.00	101.4
SELENIUM	500.0	496.10	99.2
SILVER	500.0	494.80	99.0

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Concentration Units: ug/L

SAMPLE: CCV

File: ILH10A Aug 10, 2018 18:02

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12800.00	102.4
ARSENIC	500.0	498.00	99.6
BARIUM	500.0	500.50	100.1
CADMIUM	500.0	491.90	98.4
CALCIUM	12500.0	12700.00	101.6
CHROMIUM	500.0	501.90	100.4
IRON	12500.0	12910.00	103.3
LEAD	500.0	494.30	98.9
MAGNESIUM	12500.0	12640.00	101.1
SELENIUM	500.0	500.30	100.1
SILVER	500.0	489.90	98.0

SAMPLE: CCV

File: ILH10A Aug 10, 2018 18:56

Analyte	True	Found	%R (1)
ALUMINUM	12500.0	12700.00	101.6
ARSENIC	500.0	488.90	97.8
BARIUM	500.0	497.20	99.4
CADMIUM	500.0	482.10	96.4
CALCIUM	12500.0	12700.00	101.6
CHROMIUM	500.0	496.10	99.2
IRON	12500.0	12830.00	102.6
LEAD	500.0	486.10	97.2
MAGNESIUM	12500.0	12480.00	99.8
SELENIUM	500.0	490.40	98.1
SILVER	500.0	488.40	97.7

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Concentration Units: ug/L

SAMPLE: PQL

File: HLH10A Aug 10, 2018 12:05

Analyte	TRUE	FOUND	% R
MERCURY	0.2	0.21	105.0

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Concentration Units: ug/L

SAMPLE: PQL

File: ILH10A Aug 10, 2018 13:37

Analyte	TRUE	FOUND	% R
ALUMINUM	300.0	318.00	106.0
ARSENIC	8.0	8.63	107.9
BARIUM	5.0	4.98	99.6
CADMIUM	5.0	5.18	103.6
CALCIUM	100.0	108.50	108.5
CHROMIUM	10.0	10.50	105.0
IRON	100.0	109.00	109.0
LEAD	5.0	5.49	109.8
MAGNESIUM	100.0	103.70	103.7
SELENIUM	10.0	10.24	102.4
SILVER	10.0	10.62	106.2

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Concentration Units: ug/L

SAMPLE: ICB

File: HLH10A Aug 10, 2018 12:03

Analyte	Result	C
MERCURY	0.026	U

SAMPLE: CCB

File: HLH10A Aug 10, 2018 12:09

Analyte	Result	C
MERCURY	0.026	U

SAMPLE: CCB

File: HLH10A Aug 10, 2018 12:37

Analyte	Result	C
MERCURY	0.050	J

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Concentration Units: ug/L

SAMPLE: CCB
File: HLH10A Aug 10, 2018 13:02

Analyte	Result	C
MERCURY	0.031	J

SAMPLE: CCB
File: HLH10A Aug 10, 2018 13:29

Analyte	Result	C
MERCURY	0.108	B

SAMPLE: CCB
File: HLH10A Aug 10, 2018 13:37

Analyte	Result	C
MERCURY	0.026	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Concentration Units: ug/L

SAMPLE: CCB

File: HLH10A Aug 10, 2018 14:03

Analyte	Result	C
MERCURY	0.026	U

SAMPLE: CCB

File: HLH10A Aug 10, 2018 14:29

Analyte	Result	C
MERCURY	0.026	U

SAMPLE: CCB

File: HLH10A Aug 10, 2018 14:55

Analyte	Result	C
MERCURY	0.026	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Concentration Units: ug/L

SAMPLE: ICB

File: ILH10A Aug 10, 2018 13:32

Analyte	Result	C
ALUMINUM	19.000	U
ARSENIC	1.500	U
BARIUM	0.330	U
CADMIUM	0.073	U
CALCIUM	5.900	U
CHROMIUM	0.590	U
IRON	3.300	U
LEAD	1.100	U
MAGNESIUM	2.500	U
SELENIUM	3.300	U
SILVER	0.590	U

SAMPLE: CCB

File: ILH10A Aug 10, 2018 13:56

Analyte	Result	C
ALUMINUM	19.000	U
ARSENIC	1.500	U
BARIUM	0.330	U
CADMIUM	0.081	J
CALCIUM	5.900	U
CHROMIUM	0.590	U
IRON	3.300	U
LEAD	1.100	U
MAGNESIUM	2.500	U
SELENIUM	3.300	U
SILVER	0.590	U

SAMPLE: CCB

File: ILH10A Aug 10, 2018 14:16

Analyte	Result	C
ALUMINUM	19.000	U
ARSENIC	1.582	J
BARIUM	-0.331	U
CADMIUM	0.073	U
CALCIUM	5.900	U
CHROMIUM	0.590	U
IRON	3.300	U
LEAD	1.100	U
MAGNESIUM	2.500	U
SELENIUM	3.300	U
SILVER	0.590	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Concentration Units: ug/L

SAMPLE: CCB
File: ILH10A Aug 10, 2018 15:13

Analyte	Result	C
ALUMINUM	19.000	U
ARSENIC	1.500	U
BARIUM	0.330	U
CADMIUM	0.073	U
CALCIUM	5.900	U
CHROMIUM	0.590	U
IRON	3.300	U
LEAD	1.100	U
MAGNESIUM	2.500	U
SELENIUM	3.300	U
SILVER	0.590	U

SAMPLE: CCB
File: ILH10A Aug 10, 2018 16:13

Analyte	Result	C
ALUMINUM	19.000	U
ARSENIC	1.500	U
BARIUM	0.330	U
CADMIUM	0.073	U
CALCIUM	5.900	U
CHROMIUM	0.590	U
IRON	3.300	U
LEAD	1.100	U
MAGNESIUM	2.500	U
SELENIUM	3.300	U
SILVER	0.590	U

SAMPLE: CCB
File: ILH10A Aug 10, 2018 17:12

Analyte	Result	C
ALUMINUM	19.000	U
ARSENIC	1.500	U
BARIUM	0.330	U
CADMIUM	0.073	U
CALCIUM	5.900	U
CHROMIUM	0.590	U
IRON	3.300	U
LEAD	1.100	U
MAGNESIUM	2.500	U
SELENIUM	3.300	U
SILVER	0.590	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Concentration Units: ug/L

SAMPLE: CCB

File: ILH10A Aug 10, 2018 18:06

Analyte	Result	C
ALUMINUM	19.000	U
ARSENIC	1.500	U
BARIUM	0.330	U
CADMIUM	0.073	U
CALCIUM	5.900	U
CHROMIUM	0.590	U
IRON	3.300	U
LEAD	1.100	U
MAGNESIUM	2.500	U
SELENIUM	3.300	U
SILVER	0.590	U

SAMPLE: CCB

File: ILH10A Aug 10, 2018 19:00

Analyte	Result	C
ALUMINUM	19.000	U
ARSENIC	1.500	U
BARIUM	0.330	U
CADMIUM	0.073	U
CALCIUM	6.116	J
CHROMIUM	0.590	U
IRON	3.300	U
LEAD	1.100	U
MAGNESIUM	2.500	U
SELENIUM	3.300	U
SILVER	0.590	U

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBT1470B

Matrix: WATER **SDG Name:** SL7420

QC Batch ID: LH10ICW1

Concentration Units : ug/L

Analyte	RESULT	C
ARSENIC	25	U
BARIUM	90.8	B
CADMIUM	0.78	J
CHROMIUM	20	U
LEAD	6.3	J
MERCURY	0.019	J
SELENIUM	35	U
SILVER	2.6	J

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBWLH10HGW1

Matrix: WATER **SDG Name:** SL7420

QC Batch ID: LH10HGW1

Concentration Units : ug/L

Analyte	RESULT	C
MERCURY	0.10	U

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBWLH10ICW1

Matrix: WATER **SDG Name:** SL7420

QC Batch ID: LH10ICW1

Concentration Units : ug/L

Analyte	RESULT	C
ARSENIC	5.0	U
BARIUM	3.0	U
CADMIUM	3.0	U
CHROMIUM	4.0	U
LEAD	4.0	U
SELENIUM	7.0	U
SILVER	0.97	J

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Concentration Units: ug/L

SAMPLE: ICSA

File: ILH10A Aug 10, 2018 13:41

Analyte	TRUE	FOUND	% R
ALUMINUM	500000.00	498000.00	99.6
ARSENIC	0	1.41	
BARIUM	0	0.01	
CADMIUM	0	0.07	
CALCIUM	500000.00	472200.00	94.4
CHROMIUM	0	0.77	
IRON	200000.00	188500.00	94.3
LEAD	0	3.38	
MAGNESIUM	500000.00	451600.00	90.3
SELENIUM	0	-1.77	
SILVER	0	-0.60	

SAMPLE: ICSAB

File: ILH10A Aug 10, 2018 13:46

Analyte	TRUE	FOUND	% R
ALUMINUM	500000.00	501600.00	100.3
ARSENIC	100.00	98.80	99.0
BARIUM	500.00	495.40	99.0
CADMIUM	1000.00	935.00	93.5
CALCIUM	500000.00	473700.00	94.7
CHROMIUM	500.00	473.90	94.8
IRON	200000.00	190400.00	95.2
LEAD	50.00	48.14	96.0
MAGNESIUM	500000.00	458400.00	91.7
SELENIUM	50.00	46.47	92.0
SILVER	200.00	210.30	105.0

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSWLH10HGW1

Matrix: WATER **SDG Name:** SL7420

QC Batch ID: LH10HGW1

Concentration Units : ug/L

Analyte	TRUE	FOUND	% R	LIMITS (%)	
MERCURY	5.00	5.12	102.4	82	119

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSWLH10ICW1

Matrix: WATER **SDG Name:** SL7420

QC Batch ID: LH10ICW1

Concentration Units : ug/L

Analyte	TRUE	FOUND	% R	LIMITS (%)	
ARSENIC	100	101	101.1	87	113
BARIUM	2000	1970	98.7	88	113
CADMIUM	250	253	101.3	88	113
CHROMIUM	200	208	104.0	90	113
LEAD	100	102	101.7	86	113
SELENIUM	100	99.0	99.0	83	114
SILVER	50.0	51.2	102.5	84	115

INSTRUMENT DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** H

Instrument Name: CETAC M6100 **Date:** 7/11/2018

Concentration Units: ug/L

Analyte	PQL/LOQ	IDL	M
MERCURY	0.20	0.026	CV

INSTRUMENT DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 7/16/2018

Concentration Units: ug/L

Analyte	PQL/LOQ	IDL	M
ALUMINUM	300	19	P
ARSENIC	8.0	1.5	P
BARIUM	5.0	0.33	P
CADMIUM	5.0	0.073	P
CALCIUM	100	5.9	P
CHROMIUM	10	0.59	P
IRON	100	3.3	P
LEAD	5.0	1.1	P
MAGNESIUM	100	2.5	P
SELENIUM	10	3.3	P
SILVER	10	0.59	P

LIMITS of DETECTION

Lab Name: Katahdin Analytical Services **Instrument Code:** H

Instrument Name: CETAC M6100 **Date:** 2/9/2011

Analyte	LOD	Units	M	EPA Prep./Anal. Method
MERCURY	0.10	ug/L	CV	SW846 7470A / SW846 7470A

LIMITS of DETECTION

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/19/2011

Analyte	LOD	Units	M	EPA Prep./Anal. Method
ARSENIC	5.0	ug/L	P	SW846 3010A / SW846 6010C
BARIUM	3.0	ug/L	P	SW846 3010A / SW846 6010C
CADMIUM	3.0	ug/L	P	SW846 3010A / SW846 6010C
CHROMIUM	4.0	ug/L	P	SW846 3010A / SW846 6010C
LEAD	4.0	ug/L	P	SW846 3010A / SW846 6010C
SELENIUM	7.0	ug/L	P	SW846 3010A / SW846 6010C
SILVER	4.0	ug/L	P	SW846 3010A / SW846 6010C

METHOD DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** H

Instrument Name: CETAC M6100 **Date:** 2/9/2011

Analyte	MDL	Units	M	EPA Prep./Anal. Method
MERCURY	0.013	ug/L	CV	SW846 7470A / SW846 7470A

METHOD DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 1/19/2011

Analyte	MDL	Units	M	EPA Prep./Anal. Method
ARSENIC	1.4	ug/L	P	SW846 3010A / SW846 6010C
BARIUM	0.23	ug/L	P	SW846 3010A / SW846 6010C
CADMIUM	0.049	ug/L	P	SW846 3010A / SW846 6010C
CHROMIUM	0.36	ug/L	P	SW846 3010A / SW846 6010C
LEAD	1.1	ug/L	P	SW846 3010A / SW846 6010C
SELENIUM	2.4	ug/L	P	SW846 3010A / SW846 6010C
SILVER	0.27	ug/L	P	SW846 3010A / SW846 6010C

ICP INTERELEMENT CORRECTION FACTORS

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Instrument Name: THERMO ICAP 6500 **Instrument ID:** I **Date:** 7/12/2018

Analyte	Wavelength (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	As	Cr	Co	Cu	Mn	Mo	Ni	Ti	V
ALUMINUM	396.15	0.0	0.0004500	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0363000	0.0	0.0	0.0
ANTIMONY	206.83	0.0000090	0.0	0.0000310	0.0	-0.0000820	0.0091920	0.0	0.0	0.0	-0.0019100	-0.0010130	0.0	-0.0003690
ARSENIC	189.04	-0.0000120	0.0	-0.0000840	0.0	0.0	0.0002030	0.0	0.0	0.0	0.0006500	0.0	0.0	0.0
BARIUM	455.40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BERYLLIUM	313.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0007160	0.0000820
BORON	208.96	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0446700	0.0	0.0	0.0
CADMIUM	226.50	0.0	0.0	0.0000640	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0000800	0.0000260	0.0
CALCIUM	315.89	0.0	0.0	0.0	0.0	0.0	0.0008850	0.0030700	0.0	0.0	0.0	0.0	0.0	0.0
CHROMIUM	267.72	0.0	0.0	0.0000070	0.0	0.0	0.0	0.0	0.0	0.0001360	0.0	0.0	0.0	0.0000720
COBALT	228.62	0.0	0.0	0.0000010	0.0	0.0	-0.0000420	0.0	0.0	0.0	0.0	0.0000640	0.0020930	0.0
COPPER	327.40	0.0000050	0.0	-0.0000110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0014700	0.0004010
GOLD	242.79	0.0	0.0	0.0001110	0.0	0.0	0.0	0.0	0.0	0.0058700	0.0	0.0	0.0	0.0
IRON	259.94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LEAD	220.35	-0.0000930	0.0	0.0000260	0.0	0.0	-0.0001750	-0.0000480	0.0000290	0.0	-0.0012100	0.0002080	-0.0001240	0.0
LITHIUM	670.78	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAGNESIUM	202.58	0.0	0.0	0.0005280	0.0	0.0	0.0	0.0687500	0.0	0.0	0.0209000	0.0	-0.0000620	0.0
MANGANESE	257.61	-0.0000160	0.0	-0.0000300	0.0000310	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MOLYBDENUM	202.03	0.0	0.0	0.0	0.0	0.0	0.0000620	0.0	0.0	0.0000840	0.0	0.0	0.0	-0.0001920
NICKEL	231.60	0.0	0.0	-0.0000380	0.0	0.0	0.0	0.0001750	0.0	0.0	0.0019630	0.0	0.0	0.0
POTASSIUM	766.49	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SELENIUM	196.09	0.0000220	0.0	0.0000110	0.0	-0.0000500	0.0	0.0001640	0.0	0.0003770	0.0	0.0	0.0	-0.0000070
SILICON	251.61	0.0	0.0	-0.0004840	0.0	0.0	0.0	0.0	0.0	0.0	0.0107740	0.0	0.0069100	0.0
SILVER	328.07	0.0	0.0	-0.0003310	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0001370	0.0
SODIUM	589.59	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STRONTIUM	421.55	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THALLIUM	190.86	0.0000040	0.0	-0.0000090	0.0	0.0	0.0	0.0021060	0.0000120	-0.0015310	-0.0000380	0.0	-0.0007180	-0.0083600
TIN	189.99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TITANIUM	334.90	0.0	0.0	0.0	0.0	0.0	0.0001290	0.0	0.0	0.0	0.0019400	0.0	0.0	0.0
VANADIUM	292.40	0.0	0.0	0.0000050	0.0	0.0	-0.0028120	0.0	0.0	-0.0002370	-0.0039090	0.0	0.0006460	0.0
ZINC	206.20	0.0	0.0	0.0	0.0	0.0	0.0000010	0.0	0.0	0.0	0.0	0.0	0.0	0.0

FORM XI - IN

ICP LINEAR RANGES

Lab Name: Katahdin Analytical Services **Instrument Code:** I

Instrument Name: THERMO ICAP 6500 **Date:** 7/11/2018

Concentration Units: ug/L

Analyte	Integration Time (sec)	Linear Range	M
ALUMINUM	5.00	500000	P
ARSENIC	45.00	20000	P
BARIUM	5.00	20000	P
CADMIUM	45.00	20000	P
CALCIUM	5.00	500000	P
CHROMIUM	10.00	20000	P
IRON	5.00	250000	P
LEAD	45.00	20000	P
MAGNESIUM	45.00	200000	P
SELENIUM	45.00	20000	P
SILVER	10.00	2000	P

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** LH10HGW1

Matrix: WATER **SDG Name:** SL7420

Method: CV **Prep Date:** 08/10/2018

Client ID	Lab Sample ID	Initial (L)	Final (L)	Bottle ID
LCSWLH10HGW1	LCSWLH10HGW1	0.025	0.025	
PBT1470B	PBT1470B	0.025	0.025	
PBWLH10HGW1	PBWLH10HGW1	0.025	0.025	
CHAAP-IDW-SOIL-080618-S	SL7420-001	0.025	0.025	C
CHAAP-IDW-SOIL-080618-N	SL7420-002	0.025	0.025	C

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** LH10ICW1

Matrix: WATER **SDG Name:** SL7420

Method: P **Prep Date:** 08/10/2018

Client ID	Lab Sample ID	Initial (L)	Final (L)	Bottle ID
LCSWLH10ICW1	LCSWLH10ICW1	0.05	0.05	
PBT1470B	PBT1470B	0.01	0.05	
PBWLH10ICW1	PBWLH10ICW1	0.05	0.05	
CHAAP-IDW-SOIL-080618-S	SL7420-001	0.01	0.05	C
CHAAP-IDW-SOIL-080618-N	SL7420-002	0.01	0.05	C

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Instrument ID: CETAC M6100 **File Name:** HLH10A

Date: 8/10/2018 **Method:** CV

Lab Sample ID	Client ID	D.F.	Time	Elements
Calibration Blank		1	11:42	Hg
Standard #1 (0.2 ppb		1	11:44	Hg
Standard #2 (0.5 ppb		1	11:46	Hg
Standard #3 (1.0 ppb		1	11:48	Hg
Standard #4 (5.0 ppb		1	11:50	Hg
Standard #5 (10.0 pp		1	11:52	Hg
ICV		1	12:01	HG
ICB		1	12:03	HG
PQL		1	12:05	HG
CCV		1	12:07	HG
CCB		1	12:09	HG
ZZZZZZ		1	12:11	
ZZZZZZ		1	12:13	
ZZZZZZ		1	12:16	
ZZZZZZ		1	12:22	
ZZZZZZ		1	12:24	
ZZZZZZ		1	12:26	
ZZZZZZ		1	12:28	
ZZZZZZ		1	12:30	
ZZZZZZ		1	12:32	
CCV		1	12:34	HG
CCB		1	12:37	HG
ZZZZZZ		1	12:39	
ZZZZZZ		1	12:41	
ZZZZZZ		5	12:43	
ZZZZZZ		1	12:45	
ZZZZZZ		1	12:47	

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Instrument ID: CETAC M6100 **File Name:** HLH10A

Date: 8/10/2018 **Method:** CV

Lab Sample ID	Client ID	D.F.	Time	Elements
ZZZZZZ		1	12:49	
ZZZZZZ		1	12:52	
ZZZZZZ		5	12:54	
ZZZZZZ		1	12:56	
ZZZZZZ		1	12:58	
CCV		1	13:00	HG
CCB		1	13:02	HG
ZZZZZZ		1	13:04	
ZZZZZZ		1	13:07	
ZZZZZZ		1	13:09	
ZZZZZZ		1	13:11	
ZZZZZZ		1	13:13	
ZZZZZZ		1	13:15	
ZZZZZZ		1	13:17	
ZZZZZZ		1	13:21	
ZZZZZZ		1	13:23	
ZZZZZZ		1	13:25	
CCV		1	13:27	HG
CCB		1	13:29	HG
CCV		1	13:34	HG
CCB		1	13:37	HG
ZZZZZZ		1	13:39	
ZZZZZZ		1	13:41	
ZZZZZZ		1	13:44	
ZZZZZZ		1	13:46	
ZZZZZZ		1	13:48	
ZZZZZZ		1	13:50	

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Instrument ID: CETAC M6100 **File Name:** HLH10A

Date: 8/10/2018 **Method:** CV

Lab Sample ID	Client ID	D.F.	Time	Elements
ZZZZZZ		1	13:52	
ZZZZZZ		1	13:54	
ZZZZZZ		1	13:57	
ZZZZZZ		1	13:59	
CCV		1	14:01	HG
CCB		1	14:03	HG
ZZZZZZ		1	14:05	
ZZZZZZ		1	14:07	
ZZZZZZ		1	14:09	
ZZZZZZ		1	14:12	
ZZZZZZ		1	14:14	
PBWLH10HGW1		1	14:16	HG
LCSWLH10HGW1		1	14:18	HG
PBT1470B		1	14:20	HG
ZZZZZZ		1	14:22	
ZZZZZZ		1	14:25	
CCV		1	14:27	HG
CCB		1	14:29	HG
ZZZZZZ		1	14:31	
ZZZZZZ		1	14:33	
ZZZZZZ		1	14:35	
ZZZZZZ		1	14:38	
ZZZZZZ		1	14:40	
ZZZZZZ		1	14:42	
ZZZZZZ		1	14:44	
SL7420-001	CHAAP-IDW-SOIL-080618-S	1	14:46	HG
SL7420-002	CHAAP-IDW-SOIL-080618-N	1	14:48	HG

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Instrument ID: CETAC M6100 **File Name:** HLH10A

Date: 8/10/2018 **Method:** CV

Lab Sample ID	Client ID	D.F.	Time	Elements
ZZZZZZ		1	14:51	
CCV		1	14:53	HG
CCB		1	14:55	HG

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Instrument ID: THERMO ICAP 6500 **File Name:** ILH10A

Date: 8/10/2018 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements									
Blank		1	13:20	AL	AS	BA	CD	CA	CR	FE	PB	MG	SE	AG
Std 1		1	13:24	AL	AS	BA	CD	CA	CR	FE	PB	MG	SE	AG
ICV		1	13:28	AL	AS	BA	CD	CA	CR	FE	PB	MG	SE	AG
ICB		1	13:32	AL	AS	BA	CD	CA	CR	FE	PB	MG	SE	AG
PQL		1	13:37	AL	AS	BA	CD	CA	CR	FE	PB	MG	SE	AG
ICSA		1	13:41	AL	AS	BA	CD	CA	CR	FE	PB	MG	SE	AG
ICSAB		1	13:46	AL	AS	BA	CD	CA	CR	FE	PB	MG	SE	AG
CCV		1	13:52	AL	AS	BA	CD	CA	CR	FE	PB	MG	SE	AG
CCB		1	13:56	AL	AS	BA	CD	CA	CR	FE	PB	MG	SE	AG
ZZZZZZ		1	14:00											
ZZZZZZ		1	14:06											
CCV		1	14:12	AL	AS	BA	CD	CA	CR	FE	PB	MG	SE	AG
CCB		1	14:16	AL	AS	BA	CD	CA	CR	FE	PB	MG	SE	AG
ZZZZZZ		1	14:20											
ZZZZZZ		1	14:25											
ZZZZZZ		1	14:29											
ZZZZZZ		1	14:33											
ZZZZZZ		1	14:38											
ZZZZZZ		1	14:44											
ZZZZZZ		5	14:49											
ZZZZZZ		1	14:53											
ZZZZZZ		1	14:58											
ZZZZZZ		1	15:04											
CCV		1	15:09	AL	AS	BA	CD	CA	CR	FE	PB	MG	SE	AG
CCB		1	15:13	AL	AS	BA	CD	CA	CR	FE	PB	MG	SE	AG
ZZZZZZ		1	15:17											
ZZZZZZ		1	15:23											

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Instrument ID: THERMO ICAP 6500 **File Name:** ILH10A

Date: 8/10/2018 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements									
ZZZZZZ		1	15:28										
ZZZZZZ		1	15:33										
ZZZZZZ		1	15:38										
ZZZZZZ		1	15:43										
ZZZZZZ		1	15:48										
ZZZZZZ		1	15:53										
ZZZZZZ		1	15:59										
ZZZZZZ		1	16:04										
CCV		1	16:09	AL	AS	BA	CD	CA	CR	FE	PB	MG	SE	AG
CCB		1	16:13	AL	AS	BA	CD	CA	CR	FE	PB	MG	SE	AG
ZZZZZZ		1	16:17										
ZZZZZZ		1	16:23										
ZZZZZZ		1	16:28										
ZZZZZZ		1	16:33										
ZZZZZZ		1	16:38										
ZZZZZZ		2	16:43										
ZZZZZZ		10	16:49										
ZZZZZZ		2	16:53										
ZZZZZZ		2	16:58										
ZZZZZZ		2	17:02										
CCV		1	17:08	AL	AS	BA	CD	CA	CR	FE	PB	MG	SE	AG
CCB		1	17:12	AL	AS	BA	CD	CA	CR	FE	PB	MG	SE	AG
ZZZZZZ		2	17:16										
ZZZZZZ		2	17:21										
ZZZZZZ		2	17:27										
ZZZZZZ		2	17:31										
ZZZZZZ		2	17:35										

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL7420

Instrument ID: THERMO ICAP 6500 **File Name:** ILH10A

Date: 8/10/2018 **Method:** P

Lab Sample ID	Client ID	D.F.	Time	Elements												
ZZZZZZ		2	17:40													
PBWLH10ICW1		1	17:44		AS	BA		CD	CR			PB			SE	AG
LCSWLH10ICW1		1	17:48		AS	BA		CD	CR			PB			SE	AG
PBT1470B		1	17:52		AS	BA		CD	CR			PB			SE	AG
ZZZZZZ		1	17:58													
CCV		1	18:02	AL	AS	BA		CD	CA	CR		FE	PB	MG	SE	AG
CCB		1	18:06	AL	AS	BA		CD	CA	CR		FE	PB	MG	SE	AG
SL7420-001	CHAAP-IDW-SOIL-080618-S	1	18:11		AS	BA		CD	CR			PB			SE	AG
SL7420-002	CHAAP-IDW-SOIL-080618-N	1	18:16		AS	BA		CD	CR			PB			SE	AG
ZZZZZZ		1	18:21													
ZZZZZZ		5	18:27													
ZZZZZZ		1	18:31													
ZZZZZZ		1	18:36													
ZZZZZZ		1	18:41													
ZZZZZZ		1	18:47													
ZZZZZZ		1	18:52													
CCV		1	18:56	AL	AS	BA		CD	CA	CR		FE	PB	MG	SE	AG
CCB		1	19:00	AL	AS	BA		CD	CA	CR		FE	PB	MG	SE	AG

Raw Data Section

KATAHDIN ANALYTICAL SERVICES, LLC
METALS ANALYSIS RUN INFORMATION SHEET

INSTR. ID: Cetac M6100 (H) **ANALYST**: AMJ **ANALYSIS DATE**: 08/10/2018

FILE NAME: HLH10A **METHOD**: **CVAA**

- [x] 245.1
- [x] 7470
- [ ] 7471
- [x] DoD
- [ ] _____

Analyte : Mercury

$SnCl_2$ Lot : MR2073

REVIEWED
JS 8.10.18
KATAHDIN ANALYTICAL
METALS SECTION

STANDARDS USED:

Standard Name	Prep. Date	Expiration Date	Standard Conc.
Cal. Blank / ICB / CCB	08/10/2018	08/23/2018	0.00 ug/L
Standard #1 / PQL	08/10/2018	08/23/2018	0.20 ug/L
Standard #2	08/10/2018	08/23/2018	0.50 ug/L
Standard #3	08/10/2018	08/23/2018	1.00 ug/L
Standard #4 / CCV	08/10/2018	08/23/2018	5.00 ug/L
Standard #5	08/10/2018	08/23/2018	10.00 ug/L
ICV	08/10/2018	09/06/2018	6.00 ug/L

Additional Comments and Notes:

JS 8.10.18

Post Spike (245.1/7470): 0.005 mL MW17928 (pipet M17) into 8.0mL (pipet M12) of sample

Post Spike (7471): 0.008 mL MW17928 (pipet M17) into 8.0mL (pipet M12) of sample

5x Dilution: 6.4mL (pipet M13) of Cal. Blank + 1.6mL (pipet M13) of sample

O flag: Sample concentration over calibration, re-analyzed at dilution

Q flag: Analytical run QC outside laboratory limits

INSTRUMENT RUNLOG

Instrument: CETAC M6100

SAMPLE ID	DF	FILE	DATE	TIME	ANALYST
Calibration Blank	1.0000	HLH10A	8/10/2018	11:42	AMJ
Standard #1 (0.2 ppb)	1.0000	HLH10A	8/10/2018	11:44	AMJ
Standard #2 (0.5 ppb)	1.0000	HLH10A	8/10/2018	11:46	AMJ
Standard #3 (1.0 ppb)	1.0000	HLH10A	8/10/2018	11:48	AMJ
Standard #4 (5.0 ppb)	1.0000	HLH10A	8/10/2018	11:50	AMJ
Standard #5 (10.0 ppb)	1.0000	HLH10A	8/10/2018	11:52	AMJ
ICV	1.0000	HLH10A	8/10/2018	12:01	AMJ
ICB	1.0000	HLH10A	8/10/2018	12:03	AMJ
PQL	1.0000	HLH10A	8/10/2018	12:05	AMJ
CCV	1.0000	HLH10A	8/10/2018	12:07	AMJ
CCB	1.0000	HLH10A	8/10/2018	12:09	AMJ
PBWLH09HGW1	1.0000	HLH10A	8/10/2018	12:11	AMJ
LCSWLH09HGW1	1.0000	HLH10A	8/10/2018	12:13	AMJ
SL7390-001	1.0000	HLH10A	8/10/2018	12:16	AMJ
SL7411-001	1.0000	HLH10A	8/10/2018	12:22	AMJ
PBSLH08ICS3	1.0000	HLH10A	8/10/2018	12:24	AMJ
PBWLH09HGW2	1.0000	HLH10A	8/10/2018	12:26	AMJ
LCSWLH09HGW2	1.0000	HLH10A	8/10/2018	12:28	AMJ
LCSOLH09ICS3	1.0000	HLH10A	8/10/2018	12:30	AMJ
Q3 SEM LOD	1.0000	HLH10A	8/10/2018	12:32	AMJ
CCV	1.0000	HLH10A	8/10/2018	12:34	AMJ
CCB	1.0000	HLH10A	8/10/2018	12:37	AMJ
Q3 SEM LOQ	1.0000	HLH10A	8/10/2018	12:39	AMJ
SL7183-002	1.0000	HLH10A	8/10/2018	12:41	AMJ
SL7183-002L	5.0000	HLH10A	8/10/2018	12:43	AMJ
SL7183-002A	1.0000	HLH10A	8/10/2018	12:45	AMJ
SL7183-002S	1.0000	HLH10A	8/10/2018	12:47	AMJ
SL7183-002D	1.0000	HLH10A	8/10/2018	12:49	AMJ
SL7183-005	1.0000	HLH10A	8/10/2018	12:52	AMJ
SL7183-005L	5.0000	HLH10A	8/10/2018	12:54	AMJ
SL7183-005A	1.0000	HLH10A	8/10/2018	12:56	AMJ
SL7183-005S	1.0000	HLH10A	8/10/2018	12:58	AMJ
CCV	1.0000	HLH10A	8/10/2018	13:00	AMJ
CCB	1.0000	HLH10A	8/10/2018	13:02	AMJ
SL7183-007	1.0000	HLH10A	8/10/2018	13:04	AMJ
SL7271-002	1.0000	HLH10A	8/10/2018	13:07	AMJ
SL7271-005	1.0000	HLH10A	8/10/2018	13:09	AMJ
SL7271-007	1.0000	HLH10A	8/10/2018	13:11	AMJ
SL7271-013	1.0000	HLH10A	8/10/2018	13:13	AMJ
SL7272-003	1.0000	HLH10A	8/10/2018	13:15	AMJ
SL7272-007	1.0000	HLH10A	8/10/2018	13:17	AMJ
SL7288-002	1.0000	HLH10A	8/10/2018	13:21	AMJ
SL7288-004	1.0000	HLH10A	8/10/2018	13:23	AMJ
SL7288-006	1.0000	HLH10A	8/10/2018	13:25	AMJ

SAMPLE ID	DF	FILE	DATE	TIME	ANALYST
CCV	1.0000	HLH10A	8/10/2018	13:27	AMJ
CCB	1.0000	HLH10A	8/10/2018	13:29	AMJ
CCV	1.0000	HLH10A	8/10/2018	13:34	AMJ
CCB	1.0000	HLH10A	8/10/2018	13:37	AMJ
SL7183-007	1.0000	HLH10A	8/10/2018	13:39	AMJ
SL7271-002	1.0000	HLH10A	8/10/2018	13:41	AMJ
SL7271-005	1.0000	HLH10A	8/10/2018	13:44	AMJ
SL7271-007	1.0000	HLH10A	8/10/2018	13:46	AMJ
SL7271-013	1.0000	HLH10A	8/10/2018	13:48	AMJ
SL7272-003	1.0000	HLH10A	8/10/2018	13:50	AMJ
SL7272-007	1.0000	HLH10A	8/10/2018	13:52	AMJ
SL7288-002	1.0000	HLH10A	8/10/2018	13:54	AMJ
SL7288-004	1.0000	HLH10A	8/10/2018	13:57	AMJ
SL7288-006	1.0000	HLH10A	8/10/2018	13:59	AMJ
CCV	1.0000	HLH10A	8/10/2018	14:01	AMJ
CCB	1.0000	HLH10A	8/10/2018	14:03	AMJ
SL7288-010	1.0000	HLH10A	8/10/2018	14:05	AMJ
SL7288-014	1.0000	HLH10A	8/10/2018	14:07	AMJ
SL7288-016	1.0000	HLH10A	8/10/2018	14:09	AMJ
SL7288-018	1.0000	HLH10A	8/10/2018	14:12	AMJ
SL7288-020	1.0000	HLH10A	8/10/2018	14:14	AMJ
PBWLH10HGW1	1.0000	HLH10A	8/10/2018	14:16	AMJ
LCSWLH10HGW1	1.0000	HLH10A	8/10/2018	14:18	AMJ
PBT1470B	1.0000	HLH10A	8/10/2018	14:20	AMJ
PBT1471A	1.0000	HLH10A	8/10/2018	14:22	AMJ
SL7419-001	1.0000	HLH10A	8/10/2018	14:25	AMJ
CCV	1.0000	HLH10A	8/10/2018	14:27	AMJ
CCB	1.0000	HLH10A	8/10/2018	14:29	AMJ
SL7419-002	1.0000	HLH10A	8/10/2018	14:31	AMJ
SL7419-003	1.0000	HLH10A	8/10/2018	14:33	AMJ
SL7419-004	1.0000	HLH10A	8/10/2018	14:35	AMJ
SL7419-005	1.0000	HLH10A	8/10/2018	14:38	AMJ
SL7419-006	1.0000	HLH10A	8/10/2018	14:40	AMJ
SL7419-007	1.0000	HLH10A	8/10/2018	14:42	AMJ
SL7419-008	1.0000	HLH10A	8/10/2018	14:44	AMJ
SL7420-001	1.0000	HLH10A	8/10/2018	14:46	AMJ
SL7420-002	1.0000	HLH10A	8/10/2018	14:48	AMJ
SL7472-001	1.0000	HLH10A	8/10/2018	14:51	AMJ
CCV	1.0000	HLH10A	8/10/2018	14:53	AMJ
CCB	1.0000	HLH10A	8/10/2018	14:55	AMJ
SL7472-001L	5.0000	HLH10A	8/10/2018	14:57	AMJ
SL7472-001A	1.0000	HLH10A	8/10/2018	14:59	AMJ
SL7472-001S	1.0000	HLH10A	8/10/2018	15:01	AMJ
SL7472-001P	1.0000	HLH10A	8/10/2018	15:04	AMJ
SL7472-002	1.0000	HLH10A	8/10/2018	15:06	AMJ
SL7496-009	1.0000	HLH10A	8/10/2018	15:08	AMJ
SL7501-001	1.0000	HLH10A	8/10/2018	15:10	AMJ

SAMPLE ID	DF	FILE	DATE	TIME	ANALYST
SL7501-002	1.0000	HLH10A	8/10/2018	15:12	AMJ
SL7501-003	1.0000	HLH10A	8/10/2018	15:15	AMJ
SL7501-005	1.0000	HLH10A	8/10/2018	15:17	AMJ
CCV	1.0000	HLH10A	8/10/2018	15:19	AMJ
CCB	1.0000	HLH10A	8/10/2018	15:21	AMJ
SL7503-011	1.0000	HLH10A	8/10/2018	15:23	AMJ
SL7183-002S	1.0000	HLH10A	8/10/2018	15:25	AMJ
SL7183-005S	1.0000	HLH10A	8/10/2018	15:28	AMJ
CCV	1.0000	HLH10A	8/10/2018	15:30	AMJ
CCB	1.0000	HLH10A	8/10/2018	15:32	AMJ

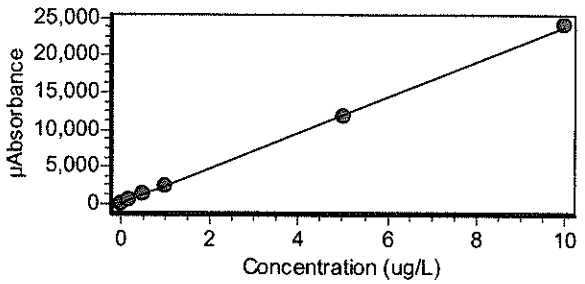
Report Generated By CETAC QuickTrace
Analyst: kasgc
Worksheet file: C:\Program Files\QuickTrace\Worksheets\HLH10A.wsz
Date Started: 8/10/2018 11:39:44 AM
Comment:

Results

Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags
Calibration Blank					STD	08/10/18 11:42:07 am	0.000	-62	53.56	
Replicates	-81.5	-48.4	-22.6	-97.1						
Standard #1 (0.2 ppb)					STD	08/10/18 11:44:14 am	0.200	508	6.14	
Replicates	480.4	524.0	544.5	484.0						
Standard #2 (0.5 ppb)					STD	08/10/18 11:46:21 am	0.500	1234	0.66	
Replicates	1231.3	1238.1	1224.5	1243.1						
Standard #3 (1.0 ppb)					STD	08/10/18 11:48:29 am	1.000	2431	2.00	
Replicates	2476.1	2362.1	2441.9	2445.4						
Standard #4 (5.0 ppb)					STD	08/10/18 11:50:37 am	5.000	11697	0.19	
Replicates	11681.1	11703.8	11725.3	11676.8						
Standard #5 (10.0 ppb)					STD	08/10/18 11:52:46 am	10.000	24168	0.45	
Replicates	24051.9	24122.4	24187.2	24309.1						

Calibration

Equation: A = -34.942 + 2406.320C
R2: 0.99974
SEE: 174.5710
Flags:



ICV					ICV	08/10/18 12:01:10 pm	6.074	14582	0.22	
Replicates	14552.8	14577.6	14570.0	14628.3						
% Recovery	101.24									
ICB					ICB	08/10/18 12:03:16 pm	0.012	-7	109.82	
Replicates	1.1	-7.6	-4.4	-17.2						

Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags
PQL					CRDL	08/10/18 12:05:23 pm	0.207	463	4.40	
	Replicates	451.6	456.6	492.8	449.5					
	% Recovery	103.39								
CCV					CCV	08/10/18 12:07:31 pm	4.834	11596	0.40	
	Replicates	11530.0	11637.8	11602.8	11614.6					
	% Recovery	96.67								
CCB					CCB	08/10/18 12:09:38 pm	-0.003	-42	35.62	
	Replicates	-25.0	-42.3	-40.6	-62.0					
PBWLH09HGW1					PBK	08/10/18 12:11:45 pm	0.013	-3	340.24	
	Replicates	1.8	-2.5	-16.3	5.7					
LCSWLH09HGW1					LCS	08/10/18 12:13:52 pm	4.715	11311	0.14	
	Replicates	11304.5	11333.8	11297.5	11307.5					
	% Recovery	94.30								
SL7390-001					UNK	08/10/18 12:16:00 pm	0.028	31	139.46	
	Replicates	11.5	34.8	-11.3	91.0					
SL7411-001					UNK	08/10/18 12:22:10 pm	0.003	-27	56.69	
	Replicates	-29.4	-20.0	-11.0	-46.3					
S JS8.9.18 10 JS8.10.18 PBWLH08ICS3					PBK	08/10/18 12:24:19 pm	0.031	40	40.83	
	Replicates	18.5	57.1	38.0	45.3					
W JS8.10.18 PBSLH09HGW2					PBK	08/10/18 12:26:26 pm	0.016	5	340.24	
	Replicates	10.2	20.5	3.5	-16.0					
LCSWLH09HGW2					LCS	08/10/18 12:28:34 pm	4.703	11282	1.07	
	Replicates	11343.9	11384.3	11289.6	11110.8					
	% Recovery	94.06								
LCSOLH09ICS3					UNK	08/10/18 12:30:42 pm	3.736	8955	1.46	
	Replicates	9117.0	8999.8	8825.8	8877.0					
Q3 SEM LOD					UNK	08/10/18 12:32:51 pm	0.135	290	11.42	
	Replicates	290.8	329.9	291.7	248.7					

Sample Name				Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags
CCV				CCV	08/10/18 12:34:59 pm	4.864	11669	0.20	
Replicates	11694.0	11671.3	11637.8	11674.6					
% Recovery	97.28								
CCB				CCB	08/10/18 12:37:06 pm	0.050	86	26.76	
Replicates	92.1	99.2	102.2	52.3					
Q3 SEM LOQ				UNK	08/10/18 12:39:15 pm	0.371	857	1.52	
Replicates	858.9	853.3	842.8	874.1					
SL7183-002				UNK	08/10/18 12:41:22 pm	0.002	-30	62.09	
Replicates	-7.9	-23.0	-50.7	-36.7					
SL7183-002L				UNK	08/10/18 12:43:31 pm	0.087	7	483.89	
Replicates	54.1	-26.0	9.1	-8.7					
SL7183-002A				UNK	08/10/18 12:45:39 pm	0.841	1989	2.47	
Replicates	2037.0	2019.4	1927.4	1973.2					
SL7183-002S				UNK	08/10/18 12:47:48 pm	0.041	64	17.45	
Replicates	66.2	48.7	65.9	75.5					
SL7183-002D				UNK	08/10/18 12:49:57 pm	-0.001	-38	60.88	
Replicates	-64.1	-30.0	-10.3	-48.0					
SL7183-005				UNK	08/10/18 12:52:06 pm	0.011	-9	300.22	
Replicates	24.8	-31.0	-34.4	2.8					
SL7183-005L				UNK	08/10/18 12:54:14 pm	0.069	-2	286.13	
Replicates	-1.5	45.3	-44.1	-6.1					
SL7183-005A				UNK	08/10/18 12:56:23 pm	0.840	1987	1.79	
Replicates	2032.2	1960.0	1999.0	1957.3					
SL7183-005S				UNK	08/10/18 12:58:32 pm	0.054	96	44.26	
Replicates	90.1	90.3	50.1	152.8					

Sample Name				Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags
CCV				CCV	08/10/18 01:00:41 pm	5.058	12137	1.30	
Replicates	12309.3	12211.7	12080.9	11947.0					
% Recovery	101.17								
CCB				CCB	08/10/18 01:02:47 pm	0.031	39	55.09	
Replicates	28.3	17.5	66.8	41.8					
SL7183-007				UNK	08/10/18 01:04:57 pm	0.012	-6	514.53	
Replicates	21.7	-47.4	-17.7	18.1					
SL7271-002				UNK	08/10/18 01:07:05 pm	0.044	70	39.98	
Replicates	28.5	83.1	80.1	89.1					
SL7271-005				UNK	08/10/18 01:09:14 pm	0.063	116	38.34	
Replicates	130.5	169.7	94.2	67.8					
SL7271-007				UNK	08/10/18 01:11:23 pm	0.126	268	11.90	
Replicates	300.2	225.9	282.2	262.4					
SL7271-013				UNK	08/10/18 01:13:33 pm	0.039	60	17.01	
Replicates	57.6	49.4	59.0	73.9					
SL7272-003				UNK	08/10/18 01:15:43 pm	0.048	80	22.37	
Replicates	103.1	78.2	78.7	59.5					
SL7272-007				UNK	08/10/18 01:17:52 pm	0.040	61	22.40	
Replicates	74.7	60.0	65.2	42.4					
SL7288-002				UNK	08/10/18 01:21:07 pm	0.021	15	137.05	
Replicates	37.1	-12.5	13.4	22.9					
SL7288-004				UNK	08/10/18 01:23:16 pm	0.046	76	35.61	
Replicates	40.0	76.5	80.7	105.2					
SL7288-006				UNK	08/10/18 01:25:26 pm	0.024	23	94.01	
Replicates	52.3	15.1	1.9	21.6					

Rejected due to CCB failure

JS 8.10.18

Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags
CCV					CCV	08/10/18 01:27:35 pm	4.897	11748	0.58	
	Replicates	11848.1	11730.2	11710.0	11702.7					
	% Recovery	97.93								
CCB					CCB	08/10/18 01:29:41 pm	0.108	226	14.87	Q
	Replicates	263.5	207.0	244.0	190.0					
							Outside limits	JS 8.10.18		
CCV					CCV	08/10/18 01:34:57 pm	4.951	11878	0.28	
	Replicates	11926.2	11858.3	11854.0	11872.0					
	% Recovery	99.01								
CCB					CCB	08/10/18 01:37:38 pm	0.019	12	298.69	
	Replicates	24.5	54.7	-23.3	-9.0					
SL7183-007					UNK	08/10/18 01:39:48 pm	0.006	-20	203.82	
	Replicates	29.0	-8.5	-33.0	-66.2					
SL7271-002					UNK	08/10/18 01:41:57 pm	0.037	53	61.16	
	Replicates	61.9	93.6	40.6	16.9					
SL7271-005					UNK	08/10/18 01:44:06 pm	0.032	41	40.55	
	Replicates	65.6	32.4	37.9	28.8					
SL7271-007					UNK	08/10/18 01:46:15 pm	0.112	234	8.67	
	Replicates	262.0	228.8	213.6	231.4					
SL7271-013					UNK	08/10/18 01:48:25 pm	0.044	70	34.22	
	Replicates	58.4	93.0	86.0	41.8					
SL7272-003					UNK	08/10/18 01:50:35 pm	0.051	88	15.91	
	Replicates	88.4	76.5	79.6	107.6					
SL7272-007					UNK	08/10/18 01:52:44 pm	0.036	53	42.68	
	Replicates	71.5	34.2	32.5	73.4					
SL7288-002					UNK	08/10/18 01:54:53 pm	0.042	66	30.44	
	Replicates	66.7	52.4	50.3	93.8					

Sample Name				Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags
SL7288-004				UNK	08/10/18 01:57:03 pm	0.049	83	20.27	
Replicates	72.2	106.1	85.9	68.9					
SL7288-006				UNK	08/10/18 01:59:13 pm	0.013	-4	451.10	
Replicates	-14.9	-24.5	11.6	11.5					
CCV				CCV	08/10/18 02:01:21 pm	4.915	11793	0.20	
Replicates	11815.6	11809.5	11777.7	11768.8					
% Recovery	98.31								
CCB				CCB	08/10/18 02:03:27 pm	0.002	-31	33.47	
Replicates	-35.2	-30.0	-40.8	-16.8					
SL7288-010				UNK	08/10/18 02:05:38 pm	0.007	-18	101.43	
Replicates	9.1	-24.5	-27.5	-27.4					
SL7288-014				UNK	08/10/18 02:07:47 pm	0.033	44	28.59	
Replicates	32.5	60.9	45.7	36.7					
SL7288-016				UNK	08/10/18 02:09:57 pm	0.029	34	94.99	
Replicates	18.5	52.9	-3.2	67.9					
SL7288-018				UNK	08/10/18 02:12:07 pm	0.043	69	33.06	
Replicates	37.0	86.6	83.6	67.6					
SL7288-020				UNK	08/10/18 02:14:17 pm	0.021	16	172.24	
Replicates	-12.2	-2.6	39.0	38.0					
PBWLH10HGW1				PBK	08/10/18 02:16:28 pm	-0.001	-36	30.24	
Replicates	-44.4	-23.9	-30.3	-46.6					
LCSWLH10HGW1				LCS	08/10/18 02:18:37 pm	5.120	12285	0.09	
Replicates	12274.3	12299.2	12277.2	12287.5					
% Recovery	102.39								
PBT1470B				UNK	08/10/18 02:20:47 pm	0.019	12	203.02	
Replicates	7.3	40.7	16.1	-17.1					

Katahdin Analytical Services 4000058

Sample Name				Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags
PBT1471A				UNK	08/10/18 02:22:58 pm	-0.007	-52	32.66	
Replicates	-38.7	-65.0	-67.0	-35.4					
SL7419-001				UNK	08/10/18 02:25:08 pm	-0.002	-40	67.73	
Replicates	-48.6	-70.1	-5.6	-35.1					
CCV				CCV	08/10/18 02:27:16 pm	4.991	11976	0.27	
Replicates	11982.5	12003.6	11929.9	11986.3					
% Recovery	99.82								
CCB				CCB	08/10/18 02:29:23 pm	0.015	2	677.72	
Replicates	-7.3	-11.3	19.2	7.7					
SL7419-002				UNK	08/10/18 02:31:34 pm	0.013	-4	316.85	
Replicates	-0.2	-19.7	7.3	-1.7					
SL7419-003				UNK	08/10/18 02:33:44 pm	0.004	-24	139.20	
Replicates	-23.1	-60.8	-34.3	20.7					
SL7419-004				UNK	08/10/18 02:35:54 pm	0.021	15	146.64	
Replicates	9.5	44.7	16.9	-9.6					
SL7419-005				UNK	08/10/18 02:38:04 pm	0.025	25	113.24	
Replicates	7.5	-5.3	52.4	43.6					
SL7419-006				UNK	08/10/18 02:40:15 pm	0.004	-25	30.11	
Replicates	-34.8	-28.4	-18.7	-19.6					
SL7419-007				UNK	08/10/18 02:42:27 pm	0.005	-22	74.42	
Replicates	-15.6	-11.2	-45.9	-14.4					
SL7419-008				UNK	08/10/18 02:44:37 pm	0.013	-3	458.45	
Replicates	-16.7	1.1	-14.7	16.6					
SL7420-001				UNK	08/10/18 02:46:48 pm	0.031	40	51.37	
Replicates	13.9	34.0	60.2	52.0					

Sample Name				Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags
SL7420-002				UNK	08/10/18 02:48:59 pm	0.018	8	246.85	
Replicates	22.3	-16.4	23.8	1.3					
SL7472-001				UNK	08/10/18 02:51:10 pm	0.039	59	24.40	
Replicates	51.6	58.2	46.7	79.4					
CCV				CCV	08/10/18 02:53:18 pm	4.981	11951	0.93	
Replicates	12104.9	11958.3	11852.1	11888.8					
% Recovery	99.62								
CCB				CCB	08/10/18 02:55:25 pm	0.001	-33	133.86	
Replicates	-82.3	-42.9	24.1	-30.2					
SL7472-001L				UNK	08/10/18 02:57:36 pm	0.025	-23	105.04	
Replicates	-48.6	-3.3	-38.0	-1.5					
SL7472-001A				UNK	08/10/18 02:59:47 pm	1.210	2876	1.12	
Replicates	2832.9	2884.5	2910.2	2875.5					
SL7472-001S				UNK	08/10/18 03:01:58 pm	2.258	5398	0.64	
Replicates	5349.1	5405.1	5410.0	5429.0					
SL7472-001P				UNK	08/10/18 03:04:09 pm	2.201	5261	0.67	
Replicates	5215.8	5257.6	5300.1	5270.6					
SL7472-002				UNK	08/10/18 03:06:21 pm	0.043	69	38.19	
Replicates	97.3	63.4	78.1	35.2					
SL7496-009				UNK	08/10/18 03:08:33 pm	0.017	7	592.51	
Replicates	12.1	-25.7	-21.4	62.6					
SL7501-001				UNK	08/10/18 03:10:44 pm	-0.010	-59	40.48	
Replicates	-91.8	-46.5	-58.9	-37.5					
SL7501-002				UNK	08/10/18 03:12:55 pm	-0.008	-54	35.58	
Replicates	-34.8	-56.2	-79.9	-45.7					

Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags
SL7501-003					UNK	08/10/18 03:15:07 pm	-0.003	-42	31.58	
	Replicates	-59.0	-36.1	-28.1	-43.0					
SL7501-005					UNK	08/10/18 03:17:19 pm	-0.011	-62	64.24	
	Replicates	-71.3	-115.1	-36.0	-27.0					
CCV					CCV	08/10/18 03:19:27 pm	4.851	11637	0.47	
	Replicates	11695.5	11661.4	11624.9	11568.1					
	% Recovery	97.01								
CCB					CCB	08/10/18 03:21:34 pm	-0.004	-44	39.23	
	Replicates	-27.3	-45.9	-68.1	-36.7					
SL7503-011					UNK	08/10/18 03:23:46 pm	0.021	16	195.31	
	Replicates	30.4	-30.2	30.0	32.5					
SL7183-002S					UNK	08/10/18 03:25:55 pm	0.051	87	15.34	
	Replicates	99.7	73.9	97.4	77.3					
SL7183-005S					UNK	08/10/18 03:28:04 pm	0.048	81	32.23	
	Replicates	47.7	72.8	99.8	103.6					
CCV					CCV	08/10/18 03:30:12 pm	5.015	12032	2.16	
	Replicates	12414.2	11978.3	11874.3	11861.3					
	% Recovery	100.29								
CCB					CCB	08/10/18 03:32:19 pm	0.023	20	113.85	
	Replicates	38.8	-8.5	36.8	11.8					

KATAHDIN ANALYTICAL SERVICES, LLC
METALS ANALYSIS RUN INFORMATION SHEET

INSTR. ID: I (Thermo iCAP 6500) **ANALYST**: JS **ANALYSIS DATE**: 08/10/2018

FILE NAME: ILH10A

METHOD: ICP
- ☐ 200.7
- ☑ 6010
- ☑ DOD
- ☐ _____

REVIEWED
Ea 08-15-18
KATAHDIN ANALYTICAL
METALS SECTION

The pHs of all samples that were tested by direct analysis in this analytical run were checked just prior to analysis and confirmed to be <2. The time of preservation of these samples was checked in the "Measured Turbidity and Preservation of Incoming Samples" logbook to verify that they had been preserved at least 16 hours prior to analysis. These verifications were performed by _____ (initals) on _____ (date).

STANDARDS USED:

Standard Name	Standard ID	Prep Date	Expiration Date	Standard Conc.
Cal. Blk/ICB/CCB	MW17940	07/26/2018	07/26/2019	0 ug/L
Standard 1	MW17947	07/30/2018	08/21/2018	Varies by Element
ICV	MW17956	08/02/2018	08/30/2018	Varies by Element
PQL	MW17955	08/02/2018	09/01/2018	Varies by Element
LRS1	MW17957	08/02/2018	11/02/2018	Varies by Element
LRS2	MW17969	08/09/2018	11/09/2018	Varies by Element
ICSA	MW17925	07/19/2018	10/19/2018	Varies by Element
ICSAB	MW17872	06/26/2018	09/26/2018	Varies by Element
CCV	MW17965	08/07/2018	08/21/2018	Varies by Element
Internal Standard	MW17970	08/09/2018	11/09/2018	5.0 mg/L Yttrium

Additional Comments and Notes:

2x diln. Post Spike: 0.04mL of MS2085, MS2089 (pipet M16), 0.08mL of MS2111 (pipet M16), 0.004mL of MS2109(pipet M17) to 2x diln. of sample (pipet M18)

Ea 08-15-18

Dilutions: Some samples were diluted based on history or due to interfering element concentrations.

Dilution preparations are as follows:

10x serial diln.: 1.6mL of 2x diln. of sample (pipet M18) + 6.4mL of MW17940 (pipet M18)

2x diln.: 4.0mL of sample (pipet M18) + 4.0mL of MW17940 (pipet M18)

5x diln.: 1.6mL of sample (pipet M18) + 6.4mL of MW17940 (pipet M18)

Post Spike: 0.03mL of MS2085, MS2089 (pipet M16), 0.06mL of MS2111 (pipet M16), 0.003mL of MS2109(pipet M17) to 6.0mL of sample (pipet M18) (Unless otherwise specified)

INSTRUMENT RUNLOG

Instrument: ICAP 6500

SAMPLE ID	DF	FILE	DATE	TIME	ANALYST
Blank	1.000	ILH10A	8/10/2018	13:20	JS
Std 1	1.000	ILH10A	8/10/2018	13:24	JS
ICV	1.000	ILH10A	8/10/2018	13:28	JS
ICB	1.000	ILH10A	8/10/2018	13:32	JS
PQL	1.000	ILH10A	8/10/2018	13:37	JS
ICSA	1.000	ILH10A	8/10/2018	13:41	JS
ICSAB	1.000	ILH10A	8/10/2018	13:46	JS
CCV	1.000	ILH10A	8/10/2018	13:52	JS
CCB	1.000	ILH10A	8/10/2018	13:56	JS
LRS1	1.000	ILH10A	8/10/2018	14:00	JS
LRS2	1.000	ILH10A	8/10/2018	14:06	JS
CCV	1.000	ILH10A	8/10/2018	14:12	JS
CCB	1.000	ILH10A	8/10/2018	14:16	JS
SL7409-005P	1.000	ILH10A	8/10/2018	14:20	JS
PBSLH09ICS2	1.000	ILH10A	8/10/2018	14:25	JS
LCSOLH09ICS2	1.000	ILH10A	8/10/2018	14:29	JS
SL7421-001	1.000	ILH10A	8/10/2018	14:33	JS
SL7421-003	1.000	ILH10A	8/10/2018	14:38	JS
SL7421-004	1.000	ILH10A	8/10/2018	14:44	JS
SL7421-004L	5.000	ILH10A	8/10/2018	14:49	JS
SL7421-004A	1.000	ILH10A	8/10/2018	14:53	JS
SL7421-004S	1.000	ILH10A	8/10/2018	14:58	JS
SL7421-004P	1.000	ILH10A	8/10/2018	15:04	JS
CCV	1.000	ILH10A	8/10/2018	15:09	JS
CCB	1.000	ILH10A	8/10/2018	15:13	JS
SL7421-006	1.000	ILH10A	8/10/2018	15:17	JS
SL7421-009	1.000	ILH10A	8/10/2018	15:23	JS
SL7421-012	1.000	ILH10A	8/10/2018	15:28	JS
SL7421-017	1.000	ILH10A	8/10/2018	15:33	JS
SL7421-018	1.000	ILH10A	8/10/2018	15:38	JS
SL7421-019	1.000	ILH10A	8/10/2018	15:43	JS
SL7421-020	1.000	ILH10A	8/10/2018	15:48	JS
SL7421-023	1.000	ILH10A	8/10/2018	15:53	JS
SL7421-025	1.000	ILH10A	8/10/2018	15:59	JS
SL7421-027	1.000	ILH10A	8/10/2018	16:04	JS
CCV	1.000	ILH10A	8/10/2018	16:09	JS
CCB	1.000	ILH10A	8/10/2018	16:13	JS
SL7421-029	1.000	ILH10A	8/10/2018	16:17	JS
SL7421-030	1.000	ILH10A	8/10/2018	16:23	JS
SL7421-031	1.000	ILH10A	8/10/2018	16:28	JS
SL7422-001	1.000	ILH10A	8/10/2018	16:33	JS
SL7422-002	1.000	ILH10A	8/10/2018	16:38	JS
SL7421-004	2.000	ILH10A	8/10/2018	16:43	JS
SL7421-004L	10.00	ILH10A	8/10/2018	16:49	JS

SAMPLE ID	DF	FILE	DATE	TIME	ANALYST
SL7421-004A	2.000	ILH10A	8/10/2018	16:53	JS
SL7421-004S	2.000	ILH10A	8/10/2018	16:58	JS
SL7421-004P	2.000	ILH10A	8/10/2018	17:02	JS
CCV	1.000	ILH10A	8/10/2018	17:08	JS
CCB	1.000	ILH10A	8/10/2018	17:12	JS
SL7421-009	2.000	ILH10A	8/10/2018	17:16	JS
SL7421-012	2.000	ILH10A	8/10/2018	17:21	JS
SL7421-023	2.000	ILH10A	8/10/2018	17:27	JS
SL7421-025	2.000	ILH10A	8/10/2018	17:31	JS
SL7421-027	2.000	ILH10A	8/10/2018	17:35	JS
SL7421-029	2.000	ILH10A	8/10/2018	17:40	JS
PBWLH10ICW1	1.000	ILH10A	8/10/2018	17:44	JS
LCSWLH10ICW1	1.000	ILH10A	8/10/2018	17:48	JS
PBT1470B	1.000	ILH10A	8/10/2018	17:52	JS
PBT1471A	1.000	ILH10A	8/10/2018	17:58	JS
CCV	1.000	ILH10A	8/10/2018	18:02	JS
CCB	1.000	ILH10A	8/10/2018	18:06	JS
SL7420-001	1.000	ILH10A	8/10/2018	18:11	JS
SL7420-002	1.000	ILH10A	8/10/2018	18:16	JS
SL7472-001	1.000	ILH10A	8/10/2018	18:21	JS
SL7472-001L	5.000	ILH10A	8/10/2018	18:27	JS
SL7472-001A	1.000	ILH10A	8/10/2018	18:31	JS
SL7472-001S	1.000	ILH10A	8/10/2018	18:36	JS
SL7472-001P	1.000	ILH10A	8/10/2018	18:41	JS
SL7472-002	1.000	ILH10A	8/10/2018	18:47	JS
SL7496-009	1.000	ILH10A	8/10/2018	18:52	JS
CCV	1.000	ILH10A	8/10/2018	18:56	JS
CCB	1.000	ILH10A	8/10/2018	19:00	JS
PQL	1.000	ILH10A	8/10/2018	19:05	JS
ICSA	1.000	ILH10A	8/10/2018	19:09	JS
ICSAB	1.000	ILH10A	8/10/2018	19:14	JS
CCV	1.000	ILH10A	8/10/2018	19:20	JS
CCB	1.000	ILH10A	8/10/2018	19:24	JS

Intensity Report

Author:

Published: 8/13/2018 7:46:55AM

Notes:

Blank

Method Name: FAST-2016_NO_AU Method Revision: 561

Analyst Name: JS

Acquire Date: 8/10/2018 1:20:06PM Sample Type: Standard

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		-0.0003330	Cts/S	0.00003900	11.57	-49.26
Al3961_R		-0.0008350	Cts/S	0.0003280	39.24	-11.58
As1891_A		-0.0001670	Cts/S	0.00001200	7.098	-1.408
B_2089_A		0.0003530	Cts/S	0.00001000	2.784	2.974
Ba4554_R		0.001907	Cts/S	0.0005480	28.72	26.44
Be3130_R		-0.0004320	Cts/S	0.0002100	48.59	-5.991
Ca3158_R		-0.002423	Cts/S	0.0004180	17.27	-33.57
Cd2265_A		-0.0004390	Cts/S	0.00007000	15.82	-3.703
Co2286_A		0.0006540	Cts/S	0.00003700	5.643	5.516
Cr2677_A		0.00003100	Cts/S	0.00002500	80.51	4.533
Cu3273_A		0.000009000	Cts/S	0.00003100	335.9	1.338
Fe2599_R		0.0001470	Cts/S	0.0001730	117.5	2.043
K_7664_R		-0.005324	Cts/S	0.0009100	17.10	-73.77
Li6707_R		-0.0001500	Cts/S	0.0002830	189.2	-2.072
Mg2025_A		-0.0004210	Cts/S	0.00005900	13.91	-3.549
Mn2576_R		-0.00003200	Cts/S	0.0002670	844.1	-0.4343
Mo2020_A		0.00007400	Cts/S	0.00005000	67.81	0.6212
Na5895_R		-0.001387	Cts/S	0.001637	118.0	-19.24
Ni2316_A		-0.00008600	Cts/S	0.000005000	5.760	-0.7256
Pb2203_A		-0.00005300	Cts/S	0.0001260	236.3	-0.4484
Sb2068_A		0.0001160	Cts/S	0.00004000	34.16	0.9759
Se1960_A		0.0002510	Cts/S	0.000003000	1.367	2.114
Si2516_R		0.001186	Cts/S	0.00003700	3.086	16.43
Sn1899_A		0.0002450	Cts/S	0.000002000	0.7446	2.066
Sr4215_R		-0.002407	Cts/S	0.00004400	1.815	-33.36
Ti3349_A		-0.0001690	Cts/S	0.00002300	13.42	-24.94
Tl1908_A		-0.00008800	Cts/S	0.00001100	12.29	-0.7424
V_2924_A		-0.00005700	Cts/S	0.000009000	16.56	-8.403
Zn2062_A		0.0001880	Cts/S	0.00001700	9.265	1.584
Y_3600_R		13,859	Cts/S	27.470	0.19822	13,859
Y_2243_A		8,431.4	Cts/S	16.421	0.19476	8,431.4
Y_3600_A		147,850	Cts/S	1,160.2	0.78471	147,850

Std 1

Method Name: FAST-2016_NO_AU Method Revision: 561

Analyst Name: JS

Acquire Date: 8/10/2018 1:24:29PM Sample Type: Standard

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.1261	Cts/S	0.0002740	0.2176	17,770
Al3961_R		1.517	Cts/S	0.01041	0.6863	20,500
As1891_A		0.04529	Cts/S	0.0008320	1.836	370.0
B_2089_A		0.1563	Cts/S	0.002747	1.758	1,277
Ba4554_R		3.322	Cts/S	0.03013	0.9069	44,890
Be3130_R		5.057	Cts/S	0.04890	0.9670	68,320
Ca3158_R		1.822	Cts/S	0.002282	0.1253	24,620
Cd2265_A		1.582	Cts/S	0.02432	1.537	12,920
Co2286_A		0.4807	Cts/S	0.007410	1.542	3,927
Cr2677_A		0.08676	Cts/S	0.0005560	0.6404	12,220
Cu3273_A		0.08020	Cts/S	0.0006970	0.8694	11,300
Fe2599_R		2.639	Cts/S	0.01810	0.6860	35,650
K_7664_R		0.9582	Cts/S	0.004851	0.5063	12,950
Li6707_R		0.6888	Cts/S	0.005034	0.7308	9,307

Std 1

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 1:24:29PM
Sample Type: Standard

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Mg2025_A		1.083	Cts/S	0.01821	1.682	8,844
Mn2576_R		0.6253	Cts/S	0.004032	0.6448	8,448
Mo2020_A		0.4117	Cts/S	0.007980	1.938	3,363
Na5895_R		2.867	Cts/S	0.0004050	0.01411	38,740
Ni2316_A		0.1935	Cts/S	0.002980	1.540	1,580
Pb2203_A		0.1144	Cts/S	0.001775	1.552	934.3
Sb2068_A		0.06420	Cts/S	0.001053	1.641	524.5
Se1960_A		0.03344	Cts/S	0.0005360	1.604	273.2
Si2516_R		0.7753	Cts/S	0.003317	0.4278	10,480
Sn1899_A		0.06619	Cts/S	0.0009910	1.498	540.7
Sr4215_R		4.368	Cts/S	0.01416	0.3242	59,010
Ti3349_A		0.1921	Cts/S	0.001213	0.6317	27,050
Tl1908_A		0.07837	Cts/S	0.001143	1.458	640.2
V_2924_A		0.08524	Cts/S	0.0007840	0.9193	12,010
Zn2062_A		0.3866	Cts/S	0.006227	1.611	3,158
Y_3600_R		13,511	Cts/S	88.238	0.65307	13,511
Y_2243_A		8,169.4	Cts/S	71.056	0.86978	8,169.4
Y_3600_A		140,850	Cts/S	295.76	0.20997	140,850

ICV

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 1:28:35PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		399.8	ug/L	0.3201	0.08005	7,276
Al3961_R		10,070	ug/L	78.48	0.7794	8,397
As1891_A		402.4	ug/L	1.419	0.3526	150.5
B_2089_A		406.7	ug/L	0.2156	0.05300	529.7
Ba4554_R		398.3	ug/L	0.3079	0.07731	18,210
Be3130_R		401.1	ug/L	2.109	0.5259	27,890
Ca3158_R		10,260	ug/L	108.1	1.053	10,270
Cd2265_A		410.3	ug/L	0.6886	0.1678	5,389
Co2286_A		413.2	ug/L	1.365	0.3303	1,653
Cr2677_A		399.4	ug/L	0.1531	0.03833	5,022
Cu3273_A		397.4	ug/L	1.672	0.4206	4,618
Fe2599_R		10,270	ug/L	86.52	0.8424	14,910
K_7664_R		13,810	ug/L	28.20	0.2042	7,247
Li6707_R		406.5	ug/L	0.3525	0.08672	3,850
Mg2025_A		10,380	ug/L	13.10	0.1263	3,731
Mn2576_R		406.5	ug/L	4.652	1.144	3,495
Mo2020_A		409.0	ug/L	1.407	0.3441	1,399
Na5895_R		10,230	ug/L	50.42	0.4929	16,120
Ni2316_A		414.2	ug/L	2.520	0.6082	665.1
Pb2203_A		412.9	ug/L	1.914	0.4635	392.0
Sb2068_A		405.2	ug/L	1.619	0.3996	216.5
Se1960_A		406.9	ug/L	0.9358	0.2300	114.2
Si2516_R		9,937	ug/L	44.07	0.4435	4,248
Sn1899_A		420.2	ug/L	2.813	0.6695	232.2
Sr4215_R		409.3	ug/L	1.536	0.3753	24,560
Ti3349_A		398.2	ug/L	0.1862	0.04675	11,070
Tl1908_A		408.0	ug/L	2.676	0.6558	265.2
V_2924_A		398.6	ug/L	0.4557	0.1143	4,916
Zn2062_A		411.6	ug/L	0.9196	0.2234	1,323
Y_3600_R		13,751	Cts/S	144.49	1.0507	13,751
Y_2243_A		8,305.6	Cts/S	8.5276	0.10267	8,305.6
Y_3600_A		144,870	Cts/S	302.98	0.20914	144,870

ICB

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 1:32:44PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.1545	ug/L	0.2931	189.7	-46.21
Al3961_R		3.189	ug/L	4.614	144.7	-8.910
As1891_A		0.3333	ug/L	0.1484	44.52	-1.307
B_2089_A		0.8974	ug/L	0.08268	9.214	4.231
Ba4554_R		-0.2276	ug/L	0.2157	94.78	15.98
Be3130_R		0.05643	ug/L	0.08911	157.9	-2.031
Ca3158_R		4.108	ug/L	1.179	28.70	-29.50
Cd2265_A		0.007327	ug/L	0.03832	523.0	-3.685
Co2286_A		-0.2201	ug/L	0.1275	57.95	4.723
Cr2677_A		0.1556	ug/L	0.06002	38.57	6.522
Cu3273_A		0.06587	ug/L	0.4224	641.3	2.133
Fe2599_R		-0.1035	ug/L	0.5316	513.6	1.897
K_7664_R		-0.3375	ug/L	11.83	3,504	-74.16
Li6707_R		0.3550	ug/L	1.072	302.0	1.295
Mg2025_A		-2.452	ug/L	0.01244	0.5074	-4.534
Mn2576_R		0.5828	ug/L	0.2662	45.68	4.622
Mo2020_A		0.6506	ug/L	0.07648	11.75	2.938
Na5895_R		1.068	ug/L	11.37	1,064	-17.61
Ni2316_A		0.4244	ug/L	0.06199	14.61	-0.03043
Pb2203_A		-0.4703	ug/L	0.3011	64.02	-0.9227
Sb2068_A		-0.4141	ug/L	0.2760	66.66	0.7724
Se1960_A		0.9646	ug/L	0.05312	5.507	2.434
Si2516_R		-0.8513	ug/L	3.760	441.7	16.12
Sn1899_A		-1.546	ug/L	0.5490	35.51	1.230
Sr4215_R		0.1754	ug/L	0.03817	21.76	-22.81
Ti3349_A		0.1081	ug/L	0.2190	202.5	-21.81
Tl1908_A		0.9337	ug/L	0.3916	41.94	-0.1254
V_2924_A		0.4316	ug/L	0.09751	22.60	-2.957
Zn2062_A		-0.01606	ug/L	0.08748	544.6	1.561
Y_3600_R		13,899	Cts/S	60.158	0.43281	13,899
Y_2243_A		8,608.3	Cts/S	105.04	1.2202	8,608.3
Y_3600_A		147,350	Cts/S	79.599	0.054019	147,350

PQL

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 1:37:08PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		10.62	ug/L	0.09364	0.8820	145.0
Al3961_R		318.0	ug/L	4.049	1.273	246.7
As1891_A		8.635	ug/L	0.1765	2.044	1.878
B_2089_A		49.64	ug/L	0.3743	0.7541	65.86
Ba4554_R		4.982	ug/L	0.2532	5.082	246.6
Be3130_R		5.241	ug/L	0.05319	1.015	348.0
Ca3158_R		108.5	ug/L	3.529	3.251	73.48
Cd2265_A		5.178	ug/L	0.08241	1.592	64.46
Co2286_A		10.40	ug/L	0.1714	1.649	46.99
Cr2677_A		10.50	ug/L	0.0009710	0.009249	134.2
Cu3273_A		25.62	ug/L	0.01393	0.05438	294.4
Fe2599_R		109.0	ug/L	4.589	4.211	155.7
K_7664_R		1,018	ug/L	2.513	0.2467	453.3
Li6707_R		106.9	ug/L	3.434	3.211	982.8
Mg2025_A		103.7	ug/L	2.452	2.364	34.02
Mn2576_R		5.433	ug/L	0.2876	5.293	44.93
Mo2020_A		10.43	ug/L	0.2512	2.408	36.32
Na5895_R		1,069	ug/L	12.18	1.139	1,621
Ni2316_A		10.68	ug/L	0.1497	1.402	16.50

PQL

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 1:37:08PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A		5.485	ug/L	1.170	21.34	4.759
Sb2068_A		7.983	ug/L	0.2398	3.004	4.803
Se1960_A		10.24	ug/L	0.2826	2.760	4.913
Si2516_R		200.6	ug/L	0.4949	0.2467	98.87
Sn1899_A		105.1	ug/L	1.263	1.202	59.67
Sr4215_R		10.57	ug/L	0.005661	0.05357	584.9
Ti3349_A		15.39	ug/L	0.1113	0.7233	398.0
Tl1908_A		15.70	ug/L	0.07847	0.5000	9.526
V_2924_A		10.49	ug/L	0.1798	1.714	119.6
Zn2062_A		20.42	ug/L	0.5139	2.517	67.21
Y_3600_R		13,362	Cts/S	176.38	1.3200	13,362
Y_2243_A		8,317.0	Cts/S	116.48	1.4005	8,317.0
Y_3600_A		142,660	Cts/S	519.25	0.36398	142,660

ICSA

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 1:41:31PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		-0.6039	ug/L	0.06835	11.32	-1,109
Al3961_R		498,000	ug/L	704.1	0.1414	393,200
As1891_A		1.414	ug/L	1.142	80.81	-4.133
B_2089_A		-0.08198	ug/L	0.6532	796.8	2.518
Ba4554_R		0.01239	ug/L	0.1370	1,105	25.36
Be3130_R		0.1990	ug/L	0.01387	6.969	7.445
Ca3158_R		472,200	ug/L	8,685	1.839	448,700
Cd2265_A		0.07051	ug/L	0.02064	29.27	137.5
Co2286_A		-0.4613	ug/L	0.08323	18.04	6.050
Cr2677_A		0.7675	ug/L	0.08188	10.67	28.01
Cu3273_A		0.4742	ug/L	0.1923	40.56	11.92
Fe2599_R		188,500	ug/L	291.7	0.1548	259,100
K_7664_R		13.35	ug/L	27.57	206.6	-62.60
Li6707_R		4.409	ug/L	1.410	31.98	37.63
Mg2025_A		451,600	ug/L	138.4	0.03064	146,100
Mn2576_R		-0.6872	ug/L	0.1732	25.21	2.712
Mo2020_A		-0.8952	ug/L	0.02797	3.124	-2.207
Na5895_R		44.68	ug/L	3.326	7.444	48.69
Ni2316_A		-1.210	ug/L	0.5201	42.98	-22.11
Pb2203_A		3.382	ug/L	0.8735	25.82	-35.17
Sb2068_A		-0.3169	ug/L	3.183	1,004	6.311
Se1960_A		-1.766	ug/L	2.896	164.0	5.621
Si2516_R		12.82	ug/L	8.080	63.04	17.77
Sn1899_A		9.271	ug/L	0.9809	10.58	6.412
Sr4215_R	W	5.255	ug/L	0.05116	0.9735	267.7
Ti3349_A		0.8277	ug/L	0.1003	12.11	-1.260
Tl1908_A		2.654	ug/L	0.04790	1.805	1.466
V_2924_A		0.6381	ug/L	0.2932	45.94	25.39
Zn2062_A		0.4244	ug/L	0.2446	57.65	2.634
Y_3600_R		13,023	Cts/S	53.400	0.41005	13,023
Y_2243_A		7,487.6	Cts/S	9.5330	0.12732	7,487.6
Y_3600_A		128,850	Cts/S	617.39	0.47916	128,850

ICSAB

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 1:46:53PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

ICSAB

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 1:46:53PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		210.3	ug/L	1.076	0.5119	2,372
Al3961_R		501,600	ug/L	9,937	1.981	400,500
As1891_A		98.80	ug/L	1.689	1.710	29.07
B_2089_A		489.6	ug/L	0.5424	0.1108	572.6
Ba4554_R		495.4	ug/L	0.4333	0.08748	21,680
Be3130_R		488.1	ug/L	1.046	0.2142	32,500
Ca3158_R		473,700	ug/L	902.8	0.1906	455,000
Cd2265_A		935.0	ug/L	3.221	0.3445	11,170
Co2286_A		463.5	ug/L	0.3854	0.08315	1,670
Cr2677_A		473.9	ug/L	0.7154	0.1510	5,375
Cu3273_A		522.2	ug/L	0.5725	0.1096	5,465
Fe2599_R		190,400	ug/L	360.7	0.1894	264,600
K_7664_R		20,840	ug/L	68.43	0.3284	10,510
Li6707_R		524.7	ug/L	1.250	0.2382	4,757
Mg2025_A		458,400	ug/L	140.5	0.03065	148,000
Mn2576_R		465.9	ug/L	1.284	0.2757	3,846
Mo2020_A		484.6	ug/L	0.2389	0.04930	1,490
Na5895_R		20,620	ug/L	52.45	0.2544	31,140
Ni2316_A		909.2	ug/L	2.622	0.2884	1,294
Pb2203_A		48.14	ug/L	1.615	3.355	2.559
Sb2068_A		606.8	ug/L	0.1261	0.02079	296.7
Se1960_A		46.47	ug/L	3.011	6.480	17.64
Si2516_R		1,953	ug/L	2.845	0.1457	810.2
Sn1899_A		487.7	ug/L	2.213	0.4537	242.1
Sr4215_R		503.7	ug/L	1.502	0.2981	28,950
Ti3349_A		487.9	ug/L	0.5526	0.1133	12,200
Tl1908_A		92.27	ug/L	1.297	1.405	53.00
V_2924_A		489.4	ug/L	1.119	0.2287	5,457
Zn2062_A		915.8	ug/L	4.697	0.5129	2,646
Y_3600_R		13,166	Cts/S	3.9675	0.030134	13,166
Y_2243_A		7,469.0	Cts/S	4.8989	0.065589	7,469.0
Y_3600_A		130,300	Cts/S	213.39	0.16377	130,300

CCV

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 1:52:04PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		491.7	ug/L	0.8729	0.1775	9,007
Al3961_R		12,690	ug/L	17.26	0.1360	10,580
As1891_A		500.3	ug/L	0.6169	0.1233	186.8
B_2089_A		499.6	ug/L	0.6875	0.1376	647.7
Ba4554_R		496.0	ug/L	0.05118	0.01032	22,660
Be3130_R		494.0	ug/L	1.105	0.2238	34,330
Ca3158_R		12,690	ug/L	19.64	0.1547	12,700
Cd2265_A		503.0	ug/L	1.263	0.2511	6,584
Co2286_A		505.4	ug/L	0.6620	0.1310	2,013
Cr2677_A		493.0	ug/L	1.074	0.2179	6,232
Cu3273_A		486.4	ug/L	1.939	0.3987	5,683
Fe2599_R		12,680	ug/L	31.01	0.2445	18,400
K_7664_R		12,650	ug/L	16.13	0.1275	6,627
Li6707_R		509.5	ug/L	0.1184	0.02323	4,822
Mg2025_A		12,850	ug/L	23.11	0.1799	4,602
Mn2576_R		497.5	ug/L	3.687	0.7410	4,275
Mo2020_A		499.7	ug/L	1.503	0.3007	1,703
Na5895_R		12,710	ug/L	6.322	0.04974	20,030
Ni2316_A		507.2	ug/L	1.053	0.2076	811.7

CCV

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 1:52:04PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A		506.2	ug/L	0.6731	0.1330	478.9
Sb2068_A		501.2	ug/L	0.4175	0.08330	266.7
Se1960_A		505.0	ug/L	0.5747	0.1138	140.8
Si2516_R		12,700	ug/L	3.315	0.02611	5,419
Sn1899_A		512.7	ug/L	0.6908	0.1347	281.9
Sr4215_R		507.1	ug/L	0.5182	0.1022	30,420
Ti3349_A		485.9	ug/L	1.190	0.2449	13,580
Tl1908_A		507.2	ug/L	1.030	0.2030	328.7
V_2924_A		489.7	ug/L	0.7085	0.1447	6,075
Zn2062_A		505.2	ug/L	2.396	0.4743	1,617
Y_3600_R		13,743	Cts/S	56.395	0.41036	13,743
Y_2243_A		8,276.4	Cts/S	26.155	0.31602	8,276.4
Y_3600_A		145,650	Cts/S	400.63	0.27506	145,650

CCB

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 1:56:14PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.5154	ug/L	0.1954	37.92	-39.19
Al3961_R		-3.134	ug/L	1.896	60.48	-13.56
As1891_A		1.169	ug/L	0.7952	68.01	-0.9420
B_2089_A		0.7097	ug/L	0.4792	67.52	3.836
Ba4554_R		-0.2792	ug/L	0.1297	46.46	12.88
Be3130_R		0.05133	ug/L	0.04273	83.25	-2.223
Ca3158_R		-1.425	ug/L	1.486	104.3	-33.58
Cd2265_A		0.08080	ug/L	0.01234	15.27	-2.584
Co2286_A		-0.2116	ug/L	0.1290	60.97	4.589
Cr2677_A		0.01874	ug/L	0.1532	817.4	4.747
Cu3273_A		-0.07066	ug/L	0.2732	386.7	0.5237
Fe2599_R		1.578	ug/L	2.972	188.3	4.073
K_7664_R		-25.83	ug/L	24.72	95.69	-84.18
Li6707_R		0.6567	ug/L	0.9250	140.9	4.208
Mg2025_A		-2.115	ug/L	0.3375	15.96	-4.246
Mn2576_R		0.3821	ug/L	0.1291	33.80	2.777
Mo2020_A		0.6197	ug/L	0.007808	1.260	2.726
Na5895_R		20.19	ug/L	2.595	12.85	12.26
Ni2316_A		0.3162	ug/L	0.1058	33.46	-0.2024
Pb2203_A		0.4166	ug/L	0.1032	24.77	-0.04657
Sb2068_A		0.1596	ug/L	0.8007	501.7	1.042
Se1960_A		-0.9574	ug/L	2.473	258.3	1.812
Si2516_R		9.229	ug/L	0.9662	10.47	19.52
Sn1899_A		-0.2735	ug/L	0.1733	63.37	1.883
Sr4215_R		0.06460	ug/L	0.07078	109.6	-28.30
Ti3349_A		-0.03602	ug/L	0.06042	167.7	-25.72
Tl1908_A		-0.2285	ug/L	0.09522	41.67	-0.8826
V_2924_A		0.7499	ug/L	0.1754	23.39	1.082
Zn2062_A		-0.1394	ug/L	0.1653	118.6	1.114
Y_3600_R		13,277	Cts/S	597.68	4.5017	13,277
Y_2243_A		8,292.5	Cts/S	119.67	1.4431	8,292.5
Y_3600_A		146,400	Cts/S	708.60	0.48401	146,400

LRS1

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 2:00:37PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

LRS1

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 2:00:37PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		1,963	ug/L	55.97	2.850	35,980
Al3961_R		-7.316	ug/L	0.8923	12.20	142.4
As1891_A		20,880	ug/L	109.1	0.5228	7,524
B_2089_A		20,480	ug/L	107.9	0.5269	24,770
Ba4554_R		20,040	ug/L	270.2	1.349	915,400
Be3130_R		19,280	ug/L	139.5	0.7236	1,341,000
Ca3158_R		-90.39	ug/L	4.476	4.951	-18.19
Cd2265_A		20,090	ug/L	102.0	0.5078	251,500
Co2286_A		21,050	ug/L	107.6	0.5113	80,030
Cr2677_A		19,410	ug/L	496.5	2.558	242,400
Cu3273_A		19,580	ug/L	507.3	2.592	226,200
Fe2599_R		-9.186	ug/L	1.448	15.76	-11.30
K_7664_R		39.56	ug/L	14.25	36.02	-52.32
Li6707_R		20,690	ug/L	325.0	1.571	196,100
Mg2025_A		1,340	ug/L	9.821	0.7329	823.9
Mn2576_R		19,950	ug/L	192.5	0.9649	171,700
Mo2020_A		5,281	ug/L	32.02	0.6064	17,220
Na5895_R		37.66	ug/L	3.688	9.794	40.34
Ni2316_A		20,760	ug/L	114.0	0.5490	31,800
Pb2203_A		21,050	ug/L	111.2	0.5281	19,130
Sb2068_A		20,580	ug/L	97.53	0.4739	10,450
Se1960_A		21,040	ug/L	93.88	0.4461	5,531
Si2516_R		2.468	ug/L	23.82	965.2	75.16
Sn1899_A		20,890	ug/L	116.8	0.5592	10,920
Sr4215_R		19,890	ug/L	600.1	3.017	1,196,000
Ti3349_A		19,530	ug/L	592.6	3.034	540,700
Tl1908_A		20,300	ug/L	113.6	0.5599	12,620
V_2924_A		19,670	ug/L	489.5	2.488	242,700
Zn2062_A		20,180	ug/L	96.95	0.4803	61,800
Y_3600_R		13,759	Cts/S	180.36	1.3109	13,759
Y_2243_A		7,922.9	Cts/S	37.028	0.46736	7,922.9
Y_3600_A		144,070	Cts/S	2,286.9	1.5873	144,070

LRS2

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 2:06:41PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		-0.9352	ug/L	0.8955	95.75	-1,386
Al3961_R		500,000	ug/L	5,414	1.083	407,500
As1891_A		3.288	ug/L	2.088	63.52	-4.496
B_2089_A		21.35	ug/L	1.797	8.414	27.43
Ba4554_R		0.1554	ug/L	0.1844	118.7	32.60
Be3130_R		0.1913	ug/L	0.03488	18.23	6.836
Ca3158_R		469,800	ug/L	1,184	0.2520	460,700
Cd2265_A		-0.3949	ug/L	0.2202	55.75	169.4
Co2286_A		-1.053	ug/L	0.04760	4.522	4.764
Cr2677_A		-1.252	ug/L	0.2697	21.54	9.344
Cu3273_A		1.718	ug/L	0.3858	22.46	20.02
Fe2599_R		234,400	ug/L	2,276	0.9709	332,600
K_7664_R		305,400	ug/L	5.986	0.001960	158,200
Li6707_R		7.274	ug/L	1.059	14.56	65.38
Mg2025_A		185,200	ug/L	601.2	0.3245	61,100
Mn2576_R		17.29	ug/L	0.2217	1.283	72.89
Mo2020_A		1.340	ug/L	0.5334	39.80	4.772
Na5895_R		202,800	ug/L	3,397	1.675	312,900
Ni2316_A		-0.05585	ug/L	0.2397	429.1	-25.72

LRS2

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 2:06:41PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A		3.641	ug/L	2.567	70.51	-34.44
Sb2068_A		-0.4484	ug/L	1.249	278.7	7.207
Se1960_A		-3.844	ug/L	3.630	94.44	5.243
Si2516_R		49,240	ug/L	60.11	0.1221	20,500
Sn1899_A		8.212	ug/L	0.8312	10.12	6.004
Sr4215_R		17.54	ug/L	0.04379	0.2496	998.3
Ti3349_A		7.476	ug/L	0.3621	4.844	165.0
Tl1908_A		1.079	ug/L	0.5367	49.75	0.5345
V_2924_A		1.060	ug/L	0.1450	13.68	36.58
Zn2062_A		1.697	ug/L	0.1019	6.002	6.452
Y_3600_R		13,443	Cts/S	77.888	0.57940	13,443
Y_2243_A		7,633.8	Cts/S	6.4671	0.084717	7,633.8
Y_3600_A		130,110	Cts/S	593.71	0.45632	130,110

CCV

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 2:12:17PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		498.6	ug/L	2.175	0.4362	9,029
Al3961_R		12,880	ug/L	144.7	1.123	10,790
As1891_A		504.2	ug/L	0.07244	0.01437	189.5
B_2089_A		510.7	ug/L	1.239	0.2427	665.7
Ba4554_R		506.5	ug/L	1.899	0.3750	23,260
Be3130_R		500.7	ug/L	5.276	1.054	34,970
Ca3158_R		12,890	ug/L	199.8	1.550	12,960
Cd2265_A		502.3	ug/L	1.255	0.2499	6,617
Co2286_A		505.7	ug/L	0.7191	0.1422	2,027
Cr2677_A		504.5	ug/L	6.594	1.307	6,305
Cu3273_A		495.2	ug/L	4.769	0.9630	5,720
Fe2599_R		12,960	ug/L	182.1	1.405	18,890
K_7664_R		12,840	ug/L	56.69	0.4414	6,764
Li6707_R		516.4	ug/L	0.2794	0.05410	4,912
Mg2025_A		12,810	ug/L	28.78	0.2247	4,619
Mn2576_R		503.7	ug/L	8.404	1.668	4,350
Mo2020_A		500.9	ug/L	0.03831	0.007648	1,718
Na5895_R		13,000	ug/L	127.8	0.9837	20,580
Ni2316_A		510.5	ug/L	0.4040	0.07914	822.1
Pb2203_A		505.1	ug/L	0.06513	0.01289	481.0
Sb2068_A		500.1	ug/L	2.020	0.4040	267.9
Se1960_A		507.4	ug/L	1.804	0.3555	142.4
Si2516_R		12,810	ug/L	132.4	1.034	5,495
Sn1899_A		514.3	ug/L	0.5806	0.1129	284.6
Sr4215_R		518.1	ug/L	4.624	0.8926	31,230
Ti3349_A		495.1	ug/L	2.540	0.5131	13,680
Tl1908_A		508.7	ug/L	0.5995	0.1179	331.7
V_2924_A		499.1	ug/L	7.012	1.405	6,122
Zn2062_A		502.6	ug/L	0.5040	0.1003	1,619
Y_3600_R		13,812	Cts/S	219.25	1.5874	13,812
Y_2243_A		8,329.1	Cts/S	14.839	0.17816	8,329.1
Y_3600_A		144,010	Cts/S	1,334.7	0.92679	144,010

CCB

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 2:16:26PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

CCB

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 2:16:26PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.2685	ug/L	0.04338	16.15	-43.74
Al3961_R		-1.406	ug/L	6.308	448.7	-12.77
As1891_A		1.582	ug/L	0.04844	3.062	-0.8071
B_2089_A		9.244	ug/L	0.2948	3.190	14.91
Ba4554_R		-0.3305	ug/L	0.1846	55.85	11.30
Be3130_R		0.1402	ug/L	0.01215	8.668	3.850
Ca3158_R		5.410	ug/L	4.230	78.19	-28.22
Cd2265_A		0.03343	ug/L	0.02822	84.42	-3.279
Co2286_A		-0.1335	ug/L	0.1316	98.58	5.011
Cr2677_A		0.09814	ug/L	0.009615	9.798	5.744
Cu3273_A		-0.1990	ug/L	0.7993	401.7	-1.008
Fe2599_R		1.159	ug/L	2.003	172.8	3.744
K_7664_R		37.78	ug/L	11.35	30.03	-53.87
Li6707_R		1.633	ug/L	1.125	68.92	13.61
Mg2025_A		-0.6596	ug/L	2.032	308.0	-3.811
Mn2576_R		0.1183	ug/L	0.06533	55.24	0.5915
Mo2020_A		0.9370	ug/L	0.06296	6.719	3.899
Na5895_R		18.62	ug/L	2.659	14.28	10.45
Ni2316_A		-0.1009	ug/L	0.6874	681.3	-0.8880
Pb2203_A		0.3890	ug/L	0.3395	87.27	-0.07497
Sb2068_A		-0.4232	ug/L	0.3391	80.14	0.7509
Se1960_A		2.058	ug/L	0.4763	23.15	2.707
Si2516_R		8.672	ug/L	0.9742	11.23	20.24
Sn1899_A		-0.1516	ug/L	0.8256	544.5	1.994
Sr4215_R		0.1295	ug/L	0.1259	97.28	-25.66
Ti3349_A		0.1140	ug/L	0.1223	107.3	-21.48
Tl1908_A		0.2689	ug/L	0.3933	146.3	-0.5702
V_2924_A		0.6234	ug/L	0.002651	0.4252	-0.5404
Zn2062_A		-0.06229	ug/L	0.007309	11.73	1.390
Y_3600_R		13,922	Cts/S	96.962	0.69645	13,922
Y_2243_A		8,488.1	Cts/S	26.830	0.31609	8,488.1
Y_3600_A		146,250	Cts/S	531.97	0.36375	146,250

SL7409-005P

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 2:20:49PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		52.49	ug/L	0.03030	0.05773	703.1
Al3961_R		2,195	ug/L	5.715	0.2604	1,884
As1891_A		104.9	ug/L	0.2584	0.2463	37.36
B_2089_A		516.7	ug/L	1.572	0.3043	654.2
Ba4554_R	W	2,128	ug/L	8.248	0.3875	99,500
Be3130_R		53.08	ug/L	0.05208	0.09811	3,752
Ca3158_R	W	96,900	ug/L	578.6	0.5971	99,470
Cd2265_A		255.8	ug/L	0.06532	0.02554	3,366
Co2286_A		528.1	ug/L	0.04987	0.009443	2,102
Cr2677_A		207.6	ug/L	0.2413	0.1162	2,610
Cu3273_A		267.7	ug/L	0.4187	0.1564	3,097
Fe2599_R	W	34,110	ug/L	195.7	0.5737	50,660
K_7664_R		15,300	ug/L	33.66	0.2200	8,227
Li6707_R		539.4	ug/L	3.007	0.5575	5,228
Mg2025_A		21,210	ug/L	4.231	0.01994	7,586
Mn2576_R	W	2,369	ug/L	12.03	0.5079	20,850
Mo2020_A		106.2	ug/L	0.004598	0.004329	362.6
Na5895_R	W	35,230	ug/L	150.6	0.4274	56,880
Ni2316_A		523.1	ug/L	0.9440	0.1804	831.5

SL7409-005P

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 2:20:49PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A		103.7	ug/L	0.5877	0.5668	98.73
Sb2068_A		103.2	ug/L	0.2330	0.2257	54.57
Se1960_A		104.8	ug/L	1.100	1.049	31.10
Si2516_R		9,209	ug/L	44.16	0.4795	4,030
Sn1899_A		526.1	ug/L	1.326	0.2520	288.9
Sr4215_R	W	1,824	ug/L	5.272	0.2891	112,100
Ti3349_A		508.8	ug/L	2.292	0.4505	14,090
Tl1908_A		103.3	ug/L	0.6034	0.5841	63.37
V_2924_A		521.5	ug/L	0.8110	0.1555	6,453
Zn2062_A		516.4	ug/L	0.03970	0.007688	1,653
Y_3600_R		14,075	Cts/S	30.132	0.21409	14,075
Y_2243_A		8,269.9	Cts/S	5.8447	0.070674	8,269.9
Y_3600_A		144,360	Cts/S	206.87	0.14331	144,360

PBSLH09ICS2

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 2:25:01PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.7102	ug/L	0.2526	35.56	-36.39
Al3961_R		14.31	ug/L	0.6302	4.403	0.4839
As1891_A		0.6313	ug/L	1.272	201.4	-1.188
B_2089_A		7.235	ug/L	0.2707	3.741	12.46
Ba4554_R		-0.4235	ug/L	0.02673	6.311	6.991
Be3130_R		0.1501	ug/L	0.02935	19.55	4.540
Ca3158_R		54.92	ug/L	6.982	12.71	22.08
Cd2265_A		-0.01730	ug/L	0.02506	144.8	-3.993
Co2286_A		-0.3093	ug/L	0.05909	19.11	4.352
Cr2677_A		0.6249	ug/L	0.06434	10.30	12.70
Cu3273_A		0.4356	ug/L	0.1657	38.04	6.588
Fe2599_R		17.05	ug/L	1.705	9.999	27.15
K_7664_R		42.01	ug/L	8.780	20.90	-51.71
Li6707_R		2.307	ug/L	0.5168	22.40	20.06
Mg2025_A		15.07	ug/L	0.1453	0.9643	1.976
Mn2576_R		1.363	ug/L	0.01016	0.7456	11.45
Mo2020_A		0.5673	ug/L	0.1049	18.49	2.639
Na5895_R		44.64	ug/L	2.390	5.353	52.14
Ni2316_A		0.4557	ug/L	0.01921	4.214	0.01829
Pb2203_A		-0.4782	ug/L	0.1468	30.69	-0.9307
Sb2068_A		-0.6848	ug/L	0.3562	52.02	0.4503
Se1960_A		-0.9172	ug/L	0.4525	49.34	1.893
Si2516_R		10.69	ug/L	1.251	11.71	21.16
Sn1899_A		37.67	ug/L	0.05187	0.1377	23.44
Sr4215_R		0.3647	ug/L	0.1171	32.10	-11.37
Ti3349_A		0.4010	ug/L	0.1274	31.77	-13.70
Tl1908_A		-0.4256	ug/L	0.02792	6.561	-1.047
V_2924_A		0.2308	ug/L	0.1071	46.40	-5.588
Zn2062_A		2.129	ug/L	0.009918	0.4658	8.685
Y_3600_R		13,953	Cts/S	117.52	0.84232	13,953
Y_2243_A		8,588.3	Cts/S	2.2567	0.026276	8,588.3
Y_3600_A		149,460	Cts/S	285.59	0.19108	149,460

LCSOLH09ICS2

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 2:29:25PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

LCSOLH09ICS2

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 2:29:25PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		49.16	ug/L	0.03772	0.07673	872.3
Al3961_R		2,026	ug/L	28.37	1.401	1,708
As1891_A		99.24	ug/L	0.9436	0.9508	36.60
B_2089_A		477.7	ug/L	1.039	0.2175	615.8
Ba4554_R		2,005	ug/L	20.08	1.001	93,020
Be3130_R		49.67	ug/L	0.1562	0.3145	3,483
Ca3158_R		2,558	ug/L	2.121	0.08289	2,576
Cd2265_A		250.6	ug/L	0.05973	0.02384	3,328
Co2286_A		514.6	ug/L	0.2486	0.04832	2,084
Cr2677_A		199.8	ug/L	0.5750	0.2878	2,574
Cu3273_A		252.8	ug/L	0.1307	0.05169	3,007
Fe2599_R		1,032	ug/L	5.994	0.5807	1,524
K_7664_R		10,050	ug/L	55.14	0.5487	5,337
Li6707_R		515.7	ug/L	5.221	1.012	4,962
Mg2025_A		4,959	ug/L	5.965	0.1203	1,809
Mn2576_R		500.7	ug/L	2.377	0.4747	4,376
Mo2020_A		103.1	ug/L	0.1304	0.1265	357.5
Na5895_R		7,613	ug/L	7.106	0.09335	12,180
Ni2316_A		510.5	ug/L	0.7291	0.1428	829.4
Pb2203_A		101.0	ug/L	0.4176	0.4134	96.83
Sb2068_A		98.04	ug/L	0.2183	0.2227	51.94
Se1960_A		100.1	ug/L	1.176	1.174	30.13
Si2516_R		988.6	ug/L	7.358	0.7442	445.6
Sn1899_A		549.3	ug/L	0.4209	0.07663	306.9
Sr4215_R		513.3	ug/L	3.013	0.5869	31,310
Ti3349_A		489.5	ug/L	1.699	0.3471	13,920
Tl1908_A		101.6	ug/L	0.8423	0.8292	65.30
V_2924_A		491.2	ug/L	1.964	0.3998	6,241
Zn2062_A		501.5	ug/L	0.4066	0.08106	1,634
Y_3600_R		13,970	Cts/S	136.40	0.97639	13,970
Y_2243_A		8,415.6	Cts/S	32.536	0.38661	8,415.6
Y_3600_A		148,250	Cts/S	262.63	0.17715	148,250

SL7421-001

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 2:33:38PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		6.498	ug/L	0.6590	10.14	-896.8
Al3961_R	W	99,770	ug/L	342.5	0.3433	81,740
As1891_A		101.7	ug/L	1.570	1.543	30.18
B_2089_A		273.0	ug/L	2.271	0.8317	312.7
Ba4554_R		380.5	ug/L	2.065	0.5427	17,020
Be3130_R		4.424	ug/L	0.005393	0.1219	-10.04
Ca3158_R	F	2,063,000	ug/L	27,150	1.316	2,024,000
Cd2265_A		2.072	ug/L	0.2466	11.90	147.3
Co2286_A		40.99	ug/L	0.4970	1.213	212.6
Cr2677_A		407.4	ug/L	0.2367	0.05810	4,623
Cu3273_A		476.1	ug/L	1.880	0.3948	4,933
Fe2599_R	W	167,200	ug/L	617.0	0.3690	237,300
K_7664_R	W	29,470	ug/L	27.12	0.09200	15,210
Li6707_R		210.0	ug/L	2.016	0.9600	1,944
Mg2025_A	W	58,250	ug/L	347.6	0.5968	18,850
Mn2576_R	W	3,494	ug/L	8.638	0.2472	29,360
Mo2020_A		7.901	ug/L	0.05464	0.6916	25.71
Na5895_R	W	101,300	ug/L	127.5	0.1258	156,400
Ni2316_A		119.5	ug/L	0.7361	0.6161	154.7

SL7421-001

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 2:33:38PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A		522.3	ug/L	0.5993	0.1147	444.1
Sb2068_A		2.703	ug/L	1.973	72.97	6.567
Se1960_A		-0.5505	ug/L	2.646	480.8	2.962
Si2516_R		4,134	ug/L	22.20	0.5370	1,753
Sn1899_A		83.28	ug/L	1.305	1.568	42.97
Sr4215_R	W	9,855	ug/L	445.6	4.521	579,100
Ti3349_A	W	6,297	ug/L	5.724	0.09089	157,600
Tl1908_A		3.183	ug/L	0.2613	8.210	-5.143
V_2924_A		308.6	ug/L	0.5015	0.1625	3,494
Zn2062_A		834.9	ug/L	5.946	0.7122	2,419
Y_3600_R		13,450	Cts/S	99.476	0.73961	13,450
Y_2243_A		7,490.7	Cts/S	36.887	0.49244	7,490.7
Y_3600_A		130,210	Cts/S	510.60	0.39214	130,210

SL7421-003

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 2:38:54PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		12.24	ug/L	1.903	15.55	-1,115
Al3961_R	W	116,000	ug/L	1,830	1.579	102,500
As1891_A		68.14	ug/L	0.8786	1.289	20.25
B_2089_A		195.2	ug/L	0.1952	0.10000	252.2
Ba4554_R		451.0	ug/L	4.241	0.9404	21,860
Be3130_R		5.727	ug/L	0.2327	4.062	-57.67
Ca3158_R	W	123,800	ug/L	2,057	1.661	131,700
Cd2265_A		5.710	ug/L	0.2179	3.817	244.8
Co2286_A		68.05	ug/L	0.9595	1.410	376.6
Cr2677_A		535.6	ug/L	19.31	3.605	6,686
Cu3273_A		786.8	ug/L	25.11	3.191	8,989
Fe2599_R	W	203,300	ug/L	1,187	0.5839	312,700
K_7664_R	W	27,040	ug/L	287.1	1.062	15,110
Li6707_R		216.4	ug/L	0.8290	0.3831	2,171
Mg2025_A	W	56,710	ug/L	50.86	0.08968	20,610
Mn2576_R	W	2,443	ug/L	40.74	1.668	22,220
Mo2020_A		15.20	ug/L	0.2153	1.417	53.75
Na5895_R	W	68,920	ug/L	920.3	1.335	115,300
Ni2316_A		147.7	ug/L	0.2553	0.1729	215.3
Pb2203_A		998.0	ug/L	0.8348	0.08365	957.1
Sb2068_A		-1.719	ug/L	0.2497	14.52	6.117
Se1960_A		1.404	ug/L	2.922	208.1	3.926
Si2516_R		3,470	ug/L	0.9200	0.02651	1,608
Sn1899_A		110.3	ug/L	0.8708	0.7896	63.22
Sr4215_R		672.0	ug/L	10.63	1.581	42,770
Ti3349_A	W	9,020	ug/L	306.4	3.397	248,600
Tl1908_A		-0.09203	ug/L	0.8575	931.8	-8.515
V_2924_A		463.5	ug/L	16.56	3.572	5,783
Zn2062_A	W	1,335	ug/L	3.281	0.2457	4,345
Y_3600_R		14,577	Cts/S	45.315	0.31087	14,577
Y_2243_A		8,410.4	Cts/S	2.9883	0.035531	8,410.4
Y_3600_A		143,470	Cts/S	4,239.2	2.9547	143,470

SL7421-004

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 2:44:02PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

SL7421-004

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 2:44:02PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A	F	-19.06	ug/L	0.9394	4.929	-3,507
Al3961_R	W	390,000	ug/L	4,274	1.096	356,500
As1891_A		158.0	ug/L	0.3137	0.1985	51.23
B_2089_A		159.0	ug/L	0.6350	0.3992	215.4
Ba4554_R	W	1,638	ug/L	2.526	0.1542	82,030
Be3130_R		16.18	ug/L	0.3538	2.187	-95.49
Ca3158_R	W	38,730	ug/L	275.6	0.7115	42,580
Cd2265_A		-0.3594	ug/L	0.9136	254.2	408.9
Co2286_A		177.0	ug/L	1.607	0.9077	1,025
Cr2677_A		634.3	ug/L	13.99	2.205	8,244
Cu3273_A		423.2	ug/L	9.537	2.253	4,892
Fe2599_R	F	468,600	ug/L	13,200	2.817	745,700
K_7664_R	W	128,100	ug/L	124.1	0.09687	74,360
Li6707_R		612.5	ug/L	2.720	0.4441	6,362
Mg2025_A	W	146,400	ug/L	310.1	0.2118	55,710
Mn2576_R	W	7,955	ug/L	43.01	0.5407	74,890
Mo2020_A		3.220	ug/L	0.1885	5.853	14.26
Na5895_R	W	52,580	ug/L	70.87	0.1348	90,970
Ni2316_A		435.2	ug/L	0.6471	0.1487	681.6
Pb2203_A		174.9	ug/L	3.644	2.084	149.6
Sb2068_A		-2.709	ug/L	0.6503	24.01	13.25
Se1960_A		-0.6261	ug/L	3.800	606.9	6.912
Si2516_R		3,848	ug/L	14.22	0.3695	1,885
Sn1899_A		60.10	ug/L	0.6882	1.145	37.05
Sr4215_R		391.9	ug/L	0.1901	0.04852	25,790
Ti3349_A	F	24,310	ug/L	446.2	1.836	694,900
Tl1908_A		-0.2540	ug/L	0.3217	126.6	-23.08
V_2924_A		875.4	ug/L	18.95	2.164	11,420
Zn2062_A	W	1,104	ug/L	0.1358	0.01229	3,761
Y_3600_R		15,080	Cts/S	178.46	1.1834	15,080
Y_2243_A		8,804.9	Cts/S	21.796	0.24754	8,804.9
Y_3600_A		148,770	Cts/S	1,340.6	0.90114	148,770

SL7421-004L

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 2:49:23PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		5.108	ug/L	2.058	40.30	-762.8
Al3961_R	W	439,800	ug/L	2,655	0.6038	75,940
As1891_A		183.2	ug/L	7.944	4.337	10.31
B_2089_A		189.6	ug/L	2.626	1.385	52.04
Ba4554_R		1,832	ug/L	8.960	0.4891	17,360
Be3130_R		18.34	ug/L	0.2148	1.171	-20.81
Ca3158_R		44,070	ug/L	294.7	0.6687	9,125
Cd2265_A		-3.453	ug/L	0.1852	5.362	84.20
Co2286_A		206.7	ug/L	1.542	0.7460	233.5
Cr2677_A		713.3	ug/L	3.341	0.4684	1,832
Cu3273_A		455.9	ug/L	0.9986	0.2190	1,037
Fe2599_R	W	563,800	ug/L	3,276	0.5810	169,500
K_7664_R	W	142,900	ug/L	438.2	0.3067	15,610
Li6707_R		690.5	ug/L	4.536	0.6570	1,353
Mg2025_A	W	168,500	ug/L	995.4	0.5907	12,420
Mn2576_R	W	9,033	ug/L	50.64	0.5606	16,060
Mo2020_A		3.326	ug/L	0.5066	15.23	3.396
Na5895_R		59,040	ug/L	288.4	0.4885	19,280
Ni2316_A		495.7	ug/L	0.8480	0.1711	149.2

SL7421-004L

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 2:49:23PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A		202.5	ug/L	1.784	0.8813	33.61
Sb2068_A		-13.98	ug/L	2.953	21.12	2.604
Se1960_A		-1.938	ug/L	3.188	164.5	3.102
Si2516_R		4,428	ug/L	139.5	3.149	422.1
Sn1899_A		67.69	ug/L	4.646	6.863	9.708
Sr4215_R		440.3	ug/L	1.744	0.3961	5,447
Ti3349_A	W	27,120	ug/L	34.02	0.1254	152,800
Tl1908_A		2.720	ug/L	0.4050	14.89	-5.193
V_2924_A		966.8	ug/L	0.5599	0.05791	2,480
Zn2062_A		1,269	ug/L	12.08	0.9522	838.5
Y_3600_R		14,244	Cts/S	41.571	0.29185	14,244
Y_2243_A		8,531.9	Cts/S	42.429	0.49730	8,531.9
Y_3600_A		146,600	Cts/S	218.74	0.14921	146,600

SL7421-004A

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 2:53:39PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		437.0	ug/L	3.881	0.8882	5,163
Al3961_R	W	396,900	ug/L	12,710	3.203	362,100
As1891_A		598.3	ug/L	2.370	0.3961	228.2
B_2089_A		577.9	ug/L	2.011	0.3480	793.1
Ba4554_R	W	2,067	ug/L	6.401	0.3096	103,300
Be3130_R		459.5	ug/L	0.04658	0.01014	33,690
Ca3158_R	W	42,980	ug/L	211.1	0.4910	47,170
Cd2265_A		416.7	ug/L	0.8587	0.2061	6,229
Co2286_A		594.0	ug/L	3.340	0.5623	2,787
Cr2677_A	W	1,056	ug/L	3.852	0.3648	13,770
Cu3273_A		871.1	ug/L	3.073	0.3528	10,300
Fe2599_R	F	471,200	ug/L	8,117	1.723	748,400
K_7664_R	W	135,600	ug/L	312.7	0.2305	78,610
Li6707_R	W	1,051	ug/L	1.889	0.1797	10,890
Mg2025_A	W	148,100	ug/L	386.4	0.2610	56,490
Mn2576_R	W	8,235	ug/L	11.98	0.1454	77,390
Mo2020_A		439.5	ug/L	2.032	0.4624	1,599
Na5895_R	W	57,250	ug/L	198.0	0.3459	98,860
Ni2316_A		845.3	ug/L	4.796	0.5674	1,385
Pb2203_A		578.8	ug/L	1.259	0.2175	558.0
Sb2068_A		431.7	ug/L	0.3013	0.06979	260.8
Se1960_A		433.6	ug/L	1.046	0.2412	134.1
Si2516_R		4,106	ug/L	31.64	0.7706	2,000
Sn1899_A		59.09	ug/L	1.342	2.271	36.56
Sr4215_R		840.5	ug/L	3.558	0.4233	55,250
Ti3349_A	F	24,030	ug/L	55.95	0.2329	691,200
Tl1908_A		392.6	ug/L	1.820	0.4636	249.4
V_2924_A	W	1,284	ug/L	2.947	0.2295	16,700
Zn2062_A	W	1,496	ug/L	5.456	0.3646	5,108
Y_3600_R		15,051	Cts/S	74.328	0.49383	15,051
Y_2243_A		8,827.3	Cts/S	28.149	0.31889	8,827.3
Y_3600_A		149,680	Cts/S	49.434	0.033026	149,680

SL7421-004S

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 2:58:57PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

SL7421-004S

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 2:58:57PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		34.90	ug/L	0.9965	2.855	-2,282
Al3961_R	W	363,400	ug/L	1,021	0.2810	327,400
As1891_A		231.7	ug/L	0.1042	0.04497	80.86
B_2089_A		550.9	ug/L	0.9480	0.1721	735.5
Ba4554_R	W	3,226	ug/L	2.781	0.08621	159,200
Be3130_R		60.31	ug/L	0.1314	0.2178	3,297
Ca3158_R	W	50,850	ug/L	287.1	0.5645	55,110
Cd2265_A		213.4	ug/L	0.2141	0.1003	3,327
Co2286_A		599.7	ug/L	0.5987	0.09983	2,770
Cr2677_A		743.3	ug/L	0.1813	0.02440	9,695
Cu3273_A		700.0	ug/L	2.993	0.4276	8,246
Fe2599_R	F	436,300	ug/L	1,811	0.4149	684,300
K_7664_R	W	122,200	ug/L	73.10	0.05980	69,940
Li6707_R	W	1,018	ug/L	3.875	0.3807	10,420
Mg2025_A	W	139,700	ug/L	388.5	0.2781	52,740
Mn2576_R	W	7,656	ug/L	29.94	0.3911	71,040
Mo2020_A		87.32	ug/L	0.2167	0.2482	316.2
Na5895_R	W	53,530	ug/L	111.5	0.2083	91,270
Ni2316_A		841.2	ug/L	1.131	0.1345	1,366
Pb2203_A		242.3	ug/L	1.181	0.4872	217.7
Sb2068_A		16.68	ug/L	0.1724	1.033	21.34
Se1960_A		78.14	ug/L	0.8178	1.047	29.38
Si2516_R		4,321	ug/L	0.9089	0.02103	2,071
Sn1899_A		485.8	ug/L	1.624	0.3343	282.0
Sr4215_R		826.2	ug/L	1.914	0.2316	53,620
Ti3349_A	F	23,020	ug/L	279.1	1.212	661,400
Tl1908_A		82.31	ug/L	0.7275	0.8839	34.47
V_2924_A	W	1,233	ug/L	1.715	0.1390	16,050
Zn2062_A	W	1,406	ug/L	5.417	0.3852	4,752
Y_3600_R		14,861	Cts/S	19.336	0.13011	14,861
Y_2243_A		8,735.2	Cts/S	8.5779	0.098199	8,735.2
Y_3600_A		149,500	Cts/S	172.53	0.11541	149,500

SL7421-004P

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 3:04:07PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		30.27	ug/L	3.205	10.59	-2,602
Al3961_R	W	404,300	ug/L	4,954	1.225	369,600
As1891_A		245.0	ug/L	0.1846	0.07535	85.38
B_2089_A		557.2	ug/L	1.809	0.3246	743.3
Ba4554_R	W	3,423	ug/L	38.62	1.128	171,400
Be3130_R		60.27	ug/L	0.5385	0.8934	3,311
Ca3158_R	W	39,430	ug/L	249.9	0.6336	43,350
Cd2265_A		209.0	ug/L	1.082	0.5178	3,293
Co2286_A		601.7	ug/L	2.824	0.4694	2,784
Cr2677_A		795.6	ug/L	9.700	1.219	10,440
Cu3273_A		670.2	ug/L	6.599	0.9847	7,934
Fe2599_R	F	469,200	ug/L	4,369	0.9310	746,800
K_7664_R	W	136,200	ug/L	849.5	0.6239	79,060
Li6707_R	W	1,073	ug/L	13.74	1.281	11,140
Mg2025_A	W	148,000	ug/L	754.6	0.5099	55,840
Mn2576_R	W	8,281	ug/L	58.72	0.7092	77,970
Mo2020_A		82.54	ug/L	0.4354	0.5276	299.0
Na5895_R	W	60,240	ug/L	484.0	0.8035	104,200
Ni2316_A		853.9	ug/L	3.625	0.4245	1,382

SL7421-004P

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 3:04:07PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A		257.4	ug/L	0.6565	0.2550	229.6
Sb2068_A		13.66	ug/L	0.9611	7.034	20.78
Se1960_A		77.07	ug/L	0.9724	1.262	29.53
Si2516_R		3,970	ug/L	11.98	0.3019	1,939
Sn1899_A		475.3	ug/L	0.2175	0.04575	275.8
Sr4215_R		844.9	ug/L	9.885	1.170	55,640
Ti3349_A	F	23,600	ug/L	29.51	0.1251	682,200
Tl1908_A		80.35	ug/L	0.4134	0.5144	32.02
V_2924_A	W	1,307	ug/L	11.69	0.8947	17,110
Zn2062_A	W	1,523	ug/L	2.126	0.1396	5,142
Y_3600_R		15,080	Cts/S	40.712	0.26996	15,080
Y_2243_A		8,730.9	Cts/S	20.221	0.23160	8,730.9
Y_3600_A		150,440	Cts/S	976.28	0.64894	150,440

CCV

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 3:09:24PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		499.7	ug/L	1.339	0.2679	9,031
Al3961_R		12,890	ug/L	69.52	0.5391	10,710
As1891_A		491.3	ug/L	8.831	1.798	186.7
B_2089_A		488.3	ug/L	8.285	1.697	644.3
Ba4554_R		506.2	ug/L	3.034	0.5994	23,040
Be3130_R		500.3	ug/L	3.787	0.7568	34,650
Ca3158_R		12,910	ug/L	92.21	0.7143	12,870
Cd2265_A		489.3	ug/L	7.253	1.482	6,519
Co2286_A		494.1	ug/L	8.305	1.681	2,003
Cr2677_A		502.8	ug/L	1.092	0.2172	6,272
Cu3273_A		496.3	ug/L	0.7305	0.1472	5,721
Fe2599_R		12,950	ug/L	142.6	1.101	18,720
K_7664_R		12,920	ug/L	47.36	0.3665	6,747
Li6707_R		517.2	ug/L	2.617	0.5060	4,878
Mg2025_A		12,560	ug/L	213.6	1.701	4,580
Mn2576_R		502.8	ug/L	0.4950	0.09844	4,305
Mo2020_A		491.2	ug/L	8.395	1.709	1,703
Na5895_R		13,050	ug/L	58.29	0.4465	20,490
Ni2316_A		500.9	ug/L	7.795	1.556	815.7
Pb2203_A		494.0	ug/L	7.362	1.490	475.6
Sb2068_A		489.0	ug/L	6.510	1.331	264.9
Se1960_A		491.6	ug/L	7.983	1.624	139.5
Si2516_R		12,820	ug/L	39.97	0.3118	5,452
Sn1899_A		503.4	ug/L	8.419	1.672	281.7
Sr4215_R		517.1	ug/L	2.546	0.4925	30,910
Ti3349_A		495.8	ug/L	0.8853	0.1786	13,670
Tl1908_A		496.5	ug/L	6.198	1.248	327.4
V_2924_A		498.1	ug/L	0.03364	0.006753	6,099
Zn2062_A		489.6	ug/L	6.629	1.354	1,595
Y_3600_R		13,694	Cts/S	1.2496	0.0091250	13,694
Y_2243_A		8,423.6	Cts/S	101.95	1.2103	8,423.6
Y_3600_A		143,720	Cts/S	215.42	0.14990	143,720

CCB

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 3:13:33PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

CCB

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 3:13:33PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.5887	ug/L	0.04496	7.636	-38.01
Al3961_R		-3.826	ug/L	1.590	41.56	-14.61
As1891_A		-0.1027	ug/L	0.08945	87.10	-1.453
B_2089_A		1.947	ug/L	0.2420	12.43	5.504
Ba4554_R		-0.2343	ug/L	0.04368	18.64	15.47
Be3130_R		0.1524	ug/L	0.1198	78.60	4.635
Ca3158_R		1.636	ug/L	1.012	61.84	-31.57
Cd2265_A		0.01087	ug/L	0.01587	145.9	-3.572
Co2286_A		-0.2474	ug/L	0.1697	68.61	4.536
Cr2677_A		-0.04655	ug/L	0.05755	123.6	3.934
Cu3273_A		-0.3530	ug/L	0.2536	71.82	-2.820
Fe2599_R		-0.1999	ug/L	1.619	809.6	1.731
K_7664_R		22.21	ug/L	25.89	116.5	-61.23
Li6707_R		2.037	ug/L	0.9408	46.19	17.19
Mg2025_A		-0.9085	ug/L	2.118	233.2	-3.894
Mn2576_R		0.5699	ug/L	0.2203	38.65	4.453
Mo2020_A		0.6087	ug/L	0.1809	29.73	2.745
Na5895_R		20.17	ug/L	1.211	6.006	12.71
Ni2316_A		0.2176	ug/L	0.4182	192.2	-0.3693
Pb2203_A		-0.8998	ug/L	1.325	147.2	-1.326
Sb2068_A		-0.3639	ug/L	0.5925	162.8	0.7834
Se1960_A		0.6684	ug/L	1.578	236.1	2.310
Si2516_R		-2.324	ug/L	3.685	158.6	15.26
Sn1899_A		-0.7885	ug/L	0.5280	66.96	1.633
Sr4215_R		0.08903	ug/L	0.009499	10.67	-27.66
Ti3349_A		0.1433	ug/L	0.05363	37.42	-20.79
Tl1908_A		0.3769	ug/L	1.222	324.1	-0.4953
V_2924_A		0.3725	ug/L	0.3454	92.70	-3.694
Zn2062_A		-0.1141	ug/L	0.04048	35.49	1.216
Y_3600_R		13,708	Cts/S	13.842	0.10097	13,708
Y_2243_A		8,463.0	Cts/S	14.459	0.17085	8,463.0
Y_3600_A		147,190	Cts/S	276.15	0.18762	147,190

SL7421-006

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 3:17:57PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		7.726	ug/L	0.7639	9.888	-957.8
Al3961_R	W	110,800	ug/L	616.1	0.5561	93,340
As1891_A		90.40	ug/L	2.658	2.941	27.89
B_2089_A		260.9	ug/L	0.5567	0.2134	318.2
Ba4554_R		376.8	ug/L	1.808	0.4797	17,390
Be3130_R		4.999	ug/L	0.05893	1.179	-16.93
Ca3158_R	F	826,700	ug/L	21,500	2.601	836,700
Cd2265_A		1.569	ug/L	0.1040	6.629	155.2
Co2286_A		43.94	ug/L	0.09540	0.2171	246.8
Cr2677_A		447.8	ug/L	1.081	0.2415	5,338
Cu3273_A		471.2	ug/L	1.108	0.2352	5,127
Fe2599_R	W	172,900	ug/L	1,270	0.7345	253,200
K_7664_R	W	32,250	ug/L	131.8	0.4087	17,170
Li6707_R		219.8	ug/L	4.118	1.874	2,099
Mg2025_A	W	52,410	ug/L	26.11	0.04982	18,050
Mn2576_R	W	2,408	ug/L	10.48	0.4351	20,860
Mo2020_A		9.581	ug/L	0.1704	1.778	32.57
Na5895_R	W	83,950	ug/L	271.0	0.3229	133,700
Ni2316_A		129.3	ug/L	0.8143	0.6296	179.2

SL7421-006

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 3:17:57PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A		438.4	ug/L	0.9202	0.2099	394.9
Sb2068_A		-1.748	ug/L	1.017	58.21	5.000
Se1960_A		0.5272	ug/L	0.01762	3.342	3.426
Si2516_R		3,246	ug/L	10.56	0.3252	1,430
Sn1899_A		84.14	ug/L	0.6365	0.7565	46.17
Sr4215_R	W	2,700	ug/L	5.794	0.2146	163,700
Ti3349_A	W	7,231	ug/L	12.28	0.1698	190,200
Tl1908_A		1.571	ug/L	0.2977	18.95	-5.874
V_2924_A		320.4	ug/L	0.8960	0.2796	3,822
Zn2062_A		801.8	ug/L	0.09417	0.01174	2,472
Y_3600_R		13,877	Cts/S	226.66	1.6334	13,877
Y_2243_A		7,970.0	Cts/S	3.2711	0.041043	7,970.0
Y_3600_A		136,900	Cts/S	114.02	0.083285	136,900

SL7421-009

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 3:23:07PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.2052	ug/L	1.383	673.9	-1,703
Al3961_R	W	130,200	ug/L	462.1	0.3549	110,400
As1891_A		74.89	ug/L	1.441	1.924	20.47
B_2089_A		93.94	ug/L	0.08212	0.08743	118.6
Ba4554_R		244.6	ug/L	2.284	0.9341	11,360
Be3130_R		5.041	ug/L	0.03301	0.6548	-173.8
Ca3158_R	F	790,400	ug/L	1,657	0.2096	805,200
Cd2265_A		1.078	ug/L	0.3356	31.15	230.9
Co2286_A		87.83	ug/L	0.6134	0.6984	453.4
Cr2677_A		445.3	ug/L	1.956	0.4393	5,386
Cu3273_A		310.6	ug/L	1.375	0.4428	3,382
Fe2599_R	F	271,200	ug/L	3,747	1.382	399,600
K_7664_R		13,570	ug/L	36.99	0.2726	7,229
Li6707_R		298.9	ug/L	3.095	1.035	2,874
Mg2025_A	W	76,910	ug/L	463.9	0.6032	26,850
Mn2576_R	W	3,074	ug/L	8.368	0.2722	26,790
Mo2020_A		21.83	ug/L	0.2695	1.235	73.73
Na5895_R	W	34,720	ug/L	74.29	0.2140	55,610
Ni2316_A		186.4	ug/L	0.6885	0.3693	259.7
Pb2203_A		501.7	ug/L	1.216	0.2423	459.9
Sb2068_A		-0.9334	ug/L	1.641	175.8	7.419
Se1960_A		-1.224	ug/L	4.510	368.5	3.286
Si2516_R		3,253	ug/L	7.678	0.2360	1,449
Sn1899_A		73.27	ug/L	1.283	1.751	41.02
Sr4215_R	W	4,147	ug/L	7.381	0.1780	253,000
Ti3349_A	W	10,420	ug/L	7.948	0.07627	277,600
Tl1908_A		1.669	ug/L	0.3951	23.67	-8.649
V_2924_A		616.1	ug/L	1.607	0.2608	7,432
Zn2062_A	W	1,071	ug/L	4.142	0.3867	3,348
Y_3600_R		13,963	Cts/S	14.429	0.10334	13,963
Y_2243_A		8,079.0	Cts/S	33.913	0.41977	8,079.0
Y_3600_A		138,630	Cts/S	57.364	0.041379	138,630

SL7421-012

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 3:28:30PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

SL7421-012

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 3:28:30PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		7.991	ug/L	2.349	29.39	-1,699
Al3961_R	W	156,300	ug/L	1,255	0.8032	135,800
As1891_A		88.93	ug/L	1.641	1.846	25.29
B_2089_A		187.9	ug/L	0.2571	0.1369	233.4
Ba4554_R		451.6	ug/L	0.5983	0.1325	21,500
Be3130_R		5.765	ug/L	0.1468	2.547	-70.92
Ca3158_R	F	913,800	ug/L	10,280	1.125	954,700
Cd2265_A		2.940	ug/L	0.3937	13.39	268.5
Co2286_A		79.55	ug/L	0.5243	0.6591	411.2
Cr2677_A		403.8	ug/L	2.020	0.5003	4,979
Cu3273_A		550.1	ug/L	5.376	0.9773	6,160
Fe2599_R	F	288,700	ug/L	6,498	2.251	436,300
K_7664_R	W	25,060	ug/L	38.98	0.1555	13,760
Li6707_R		304.4	ug/L	0.2947	0.09680	3,002
Mg2025_A	W	77,490	ug/L	283.7	0.3662	27,070
Mn2576_R	W	3,224	ug/L	26.82	0.8318	28,810
Mo2020_A		12.59	ug/L	0.05599	0.4448	43.21
Na5895_R	W	60,770	ug/L	60.16	0.09900	99,840
Ni2316_A		173.7	ug/L	1.755	1.010	237.9
Pb2203_A	W	1,128	ug/L	3.083	0.2733	1,040
Sb2068_A		-0.2501	ug/L	0.6680	267.1	8.111
Se1960_A		-1.328	ug/L	3.233	243.4	3.517
Si2516_R		3,825	ug/L	25.37	0.6631	1,737
Sn1899_A		82.98	ug/L	0.2140	0.2579	46.22
Sr4215_R	W	3,517	ug/L	7.532	0.2141	220,100
Ti3349_A	W	9,342	ug/L	45.85	0.4908	253,400
Tl1908_A		0.08224	ug/L	0.3032	368.7	-8.752
V_2924_A		400.5	ug/L	3.974	0.9920	4,947
Zn2062_A	W	1,124	ug/L	7.307	0.6503	3,515
Y_3600_R		14,321	Cts/S	216.62	1.5126	14,321
Y_2243_A		8,084.8	Cts/S	20.503	0.25360	8,084.8
Y_3600_A		141,190	Cts/S	506.44	0.35869	141,190

SL7421-017

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 3:33:46PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		1.524	ug/L	1.194	78.32	-968.3
Al3961_R	W	74,660	ug/L	653.4	0.8752	65,080
As1891_A		18.48	ug/L	1.085	5.872	2.588
B_2089_A		36.03	ug/L	1.156	3.210	50.11
Ba4554_R		104.7	ug/L	1.011	0.9654	5,027
Be3130_R		2.961	ug/L	0.09996	3.376	-133.7
Ca3158_R		22,850	ug/L	216.3	0.9465	23,950
Cd2265_A		-0.7468	ug/L	0.1073	14.37	110.9
Co2286_A		68.49	ug/L	0.6433	0.9392	361.0
Cr2677_A		146.4	ug/L	2.353	1.608	1,915
Cu3273_A		117.2	ug/L	1.140	0.9725	1,357
Fe2599_R	W	143,400	ug/L	1,343	0.9367	217,700
K_7664_R		9,470	ug/L	30.66	0.3238	5,173
Li6707_R		134.4	ug/L	1.740	1.294	1,330
Mg2025_A	W	36,890	ug/L	143.9	0.3899	13,730
Mn2576_R	W	2,289	ug/L	26.31	1.150	20,550
Mo2020_A		1.298	ug/L	0.09876	7.608	5.785
Na5895_R	W	35,030	ug/L	237.7	0.6786	57,790
Ni2316_A		117.6	ug/L	0.008300	0.007058	177.7

SL7421-017

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 3:33:46PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A		59.41	ug/L	0.01767	0.02974	54.86
Sb2068_A		-0.9414	ug/L	0.3879	41.21	4.110
Se1960_A		-2.247	ug/L	0.2532	11.27	2.544
Si2516_R		3,202	ug/L	44.01	1.375	1,461
Sn1899_A		36.63	ug/L	0.2567	0.7008	22.93
Sr4215_R		167.6	ug/L	0.6550	0.3909	10,500
Ti3349_A	W	6,606	ug/L	79.38	1.202	189,300
Tl1908_A		-1.397	ug/L	0.1035	7.410	-7.743
V_2924_A		242.0	ug/L	3.031	1.253	3,160
Zn2062_A		286.0	ug/L	1.440	0.5035	954.3
Y_3600_R		14,382	Cts/S	87.566	0.60887	14,382
Y_2243_A		8,616.8	Cts/S	42.972	0.49869	8,616.8
Y_3600_A		149,150	Cts/S	1,614.7	1.0826	149,150

SL7421-018

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 3:38:48PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		1.757	ug/L	1.216	69.20	-900.6
Al3961_R	W	64,840	ug/L	85.18	0.1314	56,100
As1891_A		20.17	ug/L	0.1826	0.9053	3.466
B_2089_A		19.86	ug/L	0.1926	0.9696	29.21
Ba4554_R		92.45	ug/L	0.08947	0.09677	4,409
Be3130_R		2.678	ug/L	0.06394	2.387	-97.87
Ca3158_R		20,720	ug/L	68.56	0.3308	21,550
Cd2265_A		-0.6186	ug/L	0.05591	9.038	104.9
Co2286_A		62.59	ug/L	0.3140	0.5018	326.5
Cr2677_A		105.4	ug/L	1.500	1.423	1,384
Cu3273_A		104.1	ug/L	1.201	1.154	1,204
Fe2599_R	W	134,200	ug/L	208.3	0.1552	202,200
K_7664_R		7,148	ug/L	31.10	0.4351	3,857
Li6707_R		119.7	ug/L	1.111	0.9278	1,175
Mg2025_A	W	30,630	ug/L	142.4	0.4648	11,450
Mn2576_R	W	3,116	ug/L	7.204	0.2312	27,780
Mo2020_A		2.871	ug/L	0.03385	1.179	11.68
Na5895_R		6,716	ug/L	12.78	0.1903	10,980
Ni2316_A		109.4	ug/L	0.5294	0.4837	166.0
Pb2203_A		46.03	ug/L	0.002463	0.005351	42.63
Sb2068_A		-1.585	ug/L	0.1083	6.836	3.360
Se1960_A		-2.280	ug/L	0.2396	10.51	2.537
Si2516_R		3,357	ug/L	5.370	0.1600	1,515
Sn1899_A		40.56	ug/L	0.1315	0.3242	25.27
Sr4215_R		134.7	ug/L	0.5875	0.4362	8,368
Ti3349_A	W	5,533	ug/L	58.27	1.053	158,400
Tl1908_A		-0.7510	ug/L	0.7635	101.7	-7.585
V_2924_A		200.2	ug/L	1.384	0.6910	2,611
Zn2062_A		256.7	ug/L	1.474	0.5744	860.7
Y_3600_R		14,275	Cts/S	15.372	0.10769	14,275
Y_2243_A		8,655.6	Cts/S	18.167	0.20989	8,655.6
Y_3600_A		149,010	Cts/S	1,427.2	0.95777	149,010

SL7421-019

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 3:43:50PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

SL7421-019

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 3:43:50PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.6240	ug/L	0.1594	25.55	-1,168
Al3961_R	W	105,800	ug/L	730.4	0.6901	93,630
As1891_A		23.37	ug/L	1.474	6.307	3.921
B_2089_A		48.59	ug/L	0.2410	0.4960	66.84
Ba4554_R		213.2	ug/L	0.8300	0.3892	10,360
Be3130_R		3.932	ug/L	0.03207	0.8155	-167.6
Ca3158_R	W	26,980	ug/L	180.3	0.6683	28,690
Cd2265_A		-0.3250	ug/L	0.05256	16.17	141.6
Co2286_A		122.6	ug/L	0.09448	0.07704	608.7
Cr2677_A		179.5	ug/L	0.7326	0.4081	2,351
Cu3273_A		162.0	ug/L	0.8767	0.5413	1,877
Fe2599_R	W	171,000	ug/L	1,634	0.9556	263,400
K_7664_R		16,480	ug/L	72.33	0.4389	9,191
Li6707_R		189.3	ug/L	0.3726	0.1968	1,902
Mg2025_A	W	47,400	ug/L	38.57	0.08138	17,730
Mn2576_R	W	6,669	ug/L	49.07	0.7357	60,830
Mo2020_A		1.229	ug/L	0.2012	16.37	6.855
Na5895_R	W	27,200	ug/L	134.5	0.4946	45,520
Ni2316_A		153.9	ug/L	0.8670	0.5635	235.8
Pb2203_A		80.10	ug/L	1.549	1.934	73.27
Sb2068_A		-0.7118	ug/L	1.509	211.9	5.074
Se1960_A		-0.6642	ug/L	1.137	171.2	3.798
Si2516_R		3,768	ug/L	11.08	0.2940	1,743
Sn1899_A		41.62	ug/L	0.2463	0.5919	25.89
Sr4215_R		207.1	ug/L	1.071	0.5172	13,170
Ti3349_A	W	8,570	ug/L	8.730	0.1019	245,300
Tl1908_A		-0.4032	ug/L	0.9491	235.4	-12.62
V_2924_A		279.8	ug/L	0.05524	0.01974	3,647
Zn2062_A		405.5	ug/L	0.7984	0.1969	1,359
Y_3600_R		14,594	Cts/S	16.082	0.11019	14,594
Y_2243_A		8,659.1	Cts/S	1.7277	0.019952	8,659.1
Y_3600_A		148,950	Cts/S	87.920	0.059026	148,950

SL7421-020

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 3:48:50PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		1.013	ug/L	0.02350	2.319	-926.2
Al3961_R	W	67,460	ug/L	270.0	0.4002	59,600
As1891_A		15.22	ug/L	0.8020	5.270	1.448
B_2089_A		23.34	ug/L	0.2837	1.215	33.39
Ba4554_R		107.8	ug/L	1.063	0.9858	5,247
Be3130_R		2.829	ug/L	0.02057	0.7272	-60.89
Ca3158_R		16,520	ug/L	32.53	0.1969	17,530
Cd2265_A		-0.4328	ug/L	0.03498	8.081	108.2
Co2286_A		57.67	ug/L	0.3650	0.6329	297.7
Cr2677_A		97.74	ug/L	0.1208	0.1236	1,280
Cu3273_A		125.4	ug/L	0.4947	0.3945	1,458
Fe2599_R	W	136,600	ug/L	684.1	0.5009	210,100
K_7664_R		8,865	ug/L	11.28	0.1273	4,902
Li6707_R		106.5	ug/L	0.1907	0.1789	1,068
Mg2025_A	W	33,180	ug/L	38.28	0.1154	12,290
Mn2576_R	W	1,597	ug/L	5.323	0.3333	14,520
Mo2020_A		1.142	ug/L	0.1547	13.55	5.014
Na5895_R		12,000	ug/L	11.96	0.09966	20,060
Ni2316_A		80.06	ug/L	0.5662	0.7073	115.5

SL7421-020

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 3:48:50PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A		54.66	ug/L	0.3249	0.5945	50.60
Sb2068_A		-0.7675	ug/L	0.5247	68.37	3.832
Se1960_A		-3.643	ug/L	0.7351	20.18	1.989
Si2516_R		2,991	ug/L	3.057	0.1022	1,380
Sn1899_A		39.71	ug/L	1.128	2.839	24.55
Sr4215_R		112.7	ug/L	0.9985	0.8856	7,146
Ti3349_A	W	5,006	ug/L	11.62	0.2322	142,900
Tl1908_A		-2.668	ug/L	0.6445	24.15	-7.007
V_2924_A		208.6	ug/L	0.5372	0.2576	2,711
Zn2062_A		280.6	ug/L	0.9471	0.3375	931.9
Y_3600_R		14,575	Cts/S	280.19	1.9225	14,575
Y_2243_A		8,573.6	Cts/S	11.876	0.13852	8,573.6
Y_3600_A		148,610	Cts/S	6.5212	0.0043880	148,610

SL7421-023

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 3:53:52PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		1.936	ug/L	3.212	165.9	-1,863
Al3961_R	W	148,000	ug/L	1,129	0.7629	129,600
As1891_A		112.0	ug/L	1.296	1.157	34.74
B_2089_A		158.5	ug/L	3.597	2.269	203.0
Ba4554_R		268.1	ug/L	2.530	0.9438	12,890
Be3130_R		5.603	ug/L	0.005169	0.09225	-66.63
Ca3158_R	W	190,100	ug/L	1,515	0.7967	200,400
Cd2265_A		0.4027	ug/L	0.2608	64.75	243.9
Co2286_A		87.70	ug/L	1.971	2.248	452.8
Cr2677_A		386.4	ug/L	0.4304	0.1114	4,899
Cu3273_A		602.2	ug/L	1.405	0.2333	6,936
Fe2599_R	F	289,700	ug/L	9,138	3.154	441,700
K_7664_R		20,820	ug/L	93.42	0.4486	11,520
Li6707_R		327.3	ug/L	0.5444	0.1663	3,256
Mg2025_A	W	78,730	ug/L	1,341	1.703	28,330
Mn2576_R	W	4,502	ug/L	31.37	0.6968	40,620
Mo2020_A		2.088	ug/L	0.05505	2.636	8.843
Na5895_R	W	45,410	ug/L	324.7	0.7151	75,270
Ni2316_A		197.7	ug/L	3.670	1.856	283.5
Pb2203_A		821.4	ug/L	15.69	1.910	778.7
Sb2068_A		-1.744	ug/L	0.2925	16.77	7.497
Se1960_A		-1.762	ug/L	2.401	136.2	3.566
Si2516_R		3,560	ug/L	15.80	0.4439	1,632
Sn1899_A		72.86	ug/L	2.612	3.585	42.05
Sr4215_R		878.5	ug/L	6.198	0.7055	55,440
Ti3349_A	W	9,027	ug/L	9.533	0.1056	251,600
Tl1908_A		-1.598	ug/L	0.9367	58.63	-11.41
V_2924_A		462.6	ug/L	0.01270	0.002746	5,852
Zn2062_A	W	1,313	ug/L	27.06	2.060	4,231
Y_3600_R		14,449	Cts/S	42.264	0.29250	14,449
Y_2243_A		8,329.0	Cts/S	117.85	1.4150	8,329.0
Y_3600_A		145,040	Cts/S	365.27	0.25184	145,040

SL7421-025

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 3:59:00PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

SL7421-025

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 3:59:00PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.07547	ug/L	1.166	1,545	-1,821
Al3961_R	W	131,800	ug/L	204.9	0.1554	114,700
As1891_A		67.41	ug/L	1.491	2.211	18.21
B_2089_A		61.17	ug/L	0.6265	1.024	80.99
Ba4554_R		185.0	ug/L	0.1184	0.06403	8,844
Be3130_R		4.290	ug/L	0.1908	4.447	-82.10
Ca3158_R	W	208,500	ug/L	67.93	0.03258	218,300
Cd2265_A		-0.3697	ug/L	0.003901	1.055	228.1
Co2286_A		89.25	ug/L	0.07410	0.08302	447.4
Cr2677_A		263.0	ug/L	2.372	0.9022	3,312
Cu3273_A		315.2	ug/L	0.2817	0.08938	3,571
Fe2599_R	F	280,800	ug/L	36.69	0.01306	425,400
K_7664_R		11,380	ug/L	37.13	0.3263	6,219
Li6707_R		333.1	ug/L	1.229	0.3689	3,292
Mg2025_A	W	69,770	ug/L	48.55	0.06960	25,350
Mn2576_R	W	3,603	ug/L	3.499	0.09710	32,280
Mo2020_A		2.977	ug/L	0.006562	0.2205	11.75
Na5895_R	W	25,440	ug/L	24.62	0.09678	41,880
Ni2316_A		174.5	ug/L	1.512	0.8667	249.6
Pb2203_A		361.5	ug/L	0.5146	0.1423	343.9
Sb2068_A		-1.557	ug/L	1.005	64.54	7.043
Se1960_A		-2.035	ug/L	1.508	74.12	3.273
Si2516_R		3,177	ug/L	21.15	0.6658	1,447
Sn1899_A		51.84	ug/L	0.1541	0.2971	30.81
Sr4215_R		749.6	ug/L	0.5587	0.07453	46,990
Ti3349_A	W	7,494	ug/L	55.56	0.7414	206,900
Tl1908_A		-0.1022	ug/L	0.2593	253.8	-8.785
V_2924_A		414.2	ug/L	2.837	0.6850	5,192
Zn2062_A		815.1	ug/L	1.495	0.1834	2,652
Y_3600_R		14,354	Cts/S	6.0270	0.041989	14,354
Y_2243_A		8,408.6	Cts/S	10.710	0.12737	8,408.6
Y_3600_A		143,690	Cts/S	1,039.7	0.72358	143,690

SL7421-027

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 4:04:10PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		28.31	ug/L	3.194	11.28	-902.5
Al3961_R	W	142,200	ug/L	863.6	0.6073	123,100
As1891_A		107.0	ug/L	0.5081	0.4748	33.72
B_2089_A		269.8	ug/L	0.7164	0.2655	337.7
Ba4554_R		630.6	ug/L	0.3014	0.04780	29,880
Be3130_R		6.554	ug/L	0.01420	0.2166	9.948
Ca3158_R	F	711,200	ug/L	11,660	1.640	739,800
Cd2265_A		8.097	ug/L	0.3897	4.813	281.8
Co2286_A		62.08	ug/L	0.2553	0.4113	340.6
Cr2677_A		962.7	ug/L	0.3087	0.03207	11,670
Cu3273_A	W	1,131	ug/L	2.092	0.1849	12,590
Fe2599_R	W	220,600	ug/L	7,693	3.488	331,900
K_7664_R	W	37,660	ug/L	5.393	0.01432	20,620
Li6707_R		273.4	ug/L	1.977	0.7231	2,684
Mg2025_A	W	62,260	ug/L	163.1	0.2620	21,930
Mn2576_R	W	2,752	ug/L	18.88	0.6862	24,490
Mo2020_A		47.01	ug/L	0.1143	0.2432	158.9
Na5895_R	W	83,500	ug/L	160.0	0.1917	136,600
Ni2316_A		198.8	ug/L	0.9609	0.4833	287.3

SL7421-027

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 4:04:10PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A	W	1,384	ug/L	0.4972	0.03593	1,286
Sb2068_A		1.069	ug/L	1.655	154.8	9.234
Se1960_A		-0.2306	ug/L	0.9869	428.0	3.637
Si2516_R		3,823	ug/L	47.69	1.247	1,728
Sn1899_A		145.8	ug/L	0.02405	0.01650	80.35
Sr4215_R	W	2,125	ug/L	4.371	0.2057	132,400
Ti3349_A	W	8,893	ug/L	0.2364	0.002659	238,300
Tl1908_A		1.165	ug/L	0.2958	25.38	-7.724
V_2924_A		487.8	ug/L	1.447	0.2966	5,899
Zn2062_A	W	1,768	ug/L	8.581	0.4854	5,572
Y_3600_R		14,259	Cts/S	58.147	0.40778	14,259
Y_2243_A		8,150.0	Cts/S	2.5625	0.031442	8,150.0
Y_3600_A		139,450	Cts/S	204.30	0.14651	139,450

CCV

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 4:09:26PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		503.0	ug/L	1.595	0.3172	9,102
Al3961_R		12,960	ug/L	79.61	0.6141	10,820
As1891_A		498.7	ug/L	1.025	0.2055	189.0
B_2089_A		493.3	ug/L	0.7962	0.1614	649.0
Ba4554_R		509.4	ug/L	3.895	0.7646	23,310
Be3130_R		501.5	ug/L	1.317	0.2626	34,910
Ca3158_R		12,950	ug/L	72.78	0.5622	12,970
Cd2265_A		493.9	ug/L	1.391	0.2817	6,560
Co2286_A		500.9	ug/L	2.166	0.4324	2,025
Cr2677_A		510.6	ug/L	1.484	0.2907	6,376
Cu3273_A		495.8	ug/L	2.483	0.5008	5,723
Fe2599_R		13,120	ug/L	90.27	0.6878	19,070
K_7664_R		12,970	ug/L	36.71	0.2830	6,809
Li6707_R		517.6	ug/L	3.129	0.6045	4,907
Mg2025_A		12,710	ug/L	42.13	0.3314	4,621
Mn2576_R		504.7	ug/L	1.118	0.2215	4,344
Mo2020_A		497.6	ug/L	0.6384	0.1283	1,720
Na5895_R	W	13,180	ug/L	74.55	0.5658	20,800
Ni2316_A		511.9	ug/L	2.001	0.3909	831.1
Pb2203_A		495.6	ug/L	3.175	0.6407	475.7
Sb2068_A		493.2	ug/L	0.9873	0.2002	266.4
Se1960_A		502.4	ug/L	1.211	0.2411	142.1
Si2516_R		12,810	ug/L	32.56	0.2542	5,475
Sn1899_A		507.1	ug/L	1.844	0.3637	282.9
Sr4215_R		521.2	ug/L	4.376	0.8395	31,320
Ti3349_A		496.7	ug/L	0.8895	0.1791	13,720
Tl1908_A		501.4	ug/L	0.4643	0.09260	329.6
V_2924_A		499.2	ug/L	0.04180	0.008373	6,119
Zn2062_A		496.8	ug/L	2.449	0.4929	1,614
Y_3600_R		13,765	Cts/S	26.664	0.19371	13,765
Y_2243_A		8,397.2	Cts/S	17.791	0.21187	8,397.2
Y_3600_A		143,890	Cts/S	103.06	0.071623	143,890

CCB

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 4:13:35PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

CCB

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 4:13:35PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.4559	ug/L	0.3298	72.34	-40.63
Al3961_R		2.030	ug/L	5.712	281.4	-9.848
As1891_A		1.319	ug/L	0.1610	12.21	-0.9108
B_2089_A		0.6483	ug/L	0.4777	73.69	3.862
Ba4554_R		-0.1833	ug/L	0.1487	81.14	17.99
Be3130_R		0.05406	ug/L	0.04876	90.20	-2.205
Ca3158_R		5.448	ug/L	3.035	55.70	-28.06
Cd2265_A		0.01895	ug/L	0.04398	232.1	-3.477
Co2286_A		-0.2166	ug/L	0.07732	35.69	4.685
Cr2677_A		0.1443	ug/L	0.08006	55.50	6.387
Cu3273_A		-0.3888	ug/L	0.2509	64.54	-3.245
Fe2599_R		2.115	ug/L	0.8461	40.00	5.134
K_7664_R		28.56	ug/L	37.79	132.3	-58.51
Li6707_R		3.421	ug/L	1.010	29.53	30.58
Mg2025_A		-1.095	ug/L	0.6183	56.48	-3.981
Mn2576_R		0.2950	ug/L	0.01025	3.474	2.118
Mo2020_A		0.6335	ug/L	0.2759	43.55	2.848
Na5895_R		32.49	ug/L	1.624	5.000	32.44
Ni2316_A		0.2194	ug/L	0.3949	180.0	-0.3653
Pb2203_A		0.5413	ug/L	0.2888	53.36	0.07307
Sb2068_A		-0.07946	ug/L	1.785	2,247	0.9392
Se1960_A		0.04479	ug/L	0.8585	1,917	2.146
Si2516_R		6.869	ug/L	6.778	98.68	19.38
Sn1899_A		-0.5778	ug/L	0.3580	61.96	1.760
Sr4215_R		0.03847	ug/L	0.02116	55.00	-31.02
Ti3349_A		0.1400	ug/L	0.02986	21.33	-20.94
Tl1908_A		0.1579	ug/L	0.2623	166.1	-0.6446
V_2924_A		0.5216	ug/L	0.3012	57.74	-1.820
Zn2062_A		-0.1365	ug/L	0.04688	34.33	1.148
Y_3600_R		13,857	Cts/S	4.7525	0.034297	13,857
Y_2243_A		8,504.7	Cts/S	62.765	0.73800	8,504.7
Y_3600_A		147,630	Cts/S	275.78	0.18681	147,630

SL7421-029

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 4:17:59PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		18.25	ug/L	1.894	10.38	-1,490
Al3961_R	W	158,000	ug/L	2,459	1.556	138,800
As1891_A		106.5	ug/L	0.4364	0.4098	33.21
B_2089_A		193.2	ug/L	1.329	0.6876	249.9
Ba4554_R		479.7	ug/L	4.688	0.9773	23,100
Be3130_R		6.447	ug/L	0.03634	0.5636	-5.198
Ca3158_R	W	223,300	ug/L	3,616	1.619	236,000
Cd2265_A		5.615	ug/L	0.1883	3.353	305.7
Co2286_A		90.58	ug/L	0.4972	0.5489	467.8
Cr2677_A		702.9	ug/L	3.000	0.4268	8,866
Cu3273_A	W	1,041	ug/L	9.949	0.9560	12,030
Fe2599_R	F	278,600	ug/L	5,169	1.856	425,900
K_7664_R	W	29,000	ug/L	308.6	1.064	16,120
Li6707_R		353.0	ug/L	4.633	1.312	3,522
Mg2025_A	W	73,790	ug/L	242.2	0.3282	26,770
Mn2576_R	W	3,524	ug/L	63.67	1.807	31,860
Mo2020_A		32.98	ug/L	0.1575	0.4777	115.4
Na5895_R	W	55,490	ug/L	616.8	1.112	92,230
Ni2316_A		228.6	ug/L	0.9192	0.4021	337.3

SL7421-029

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 4:17:59PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A	W	1,147	ug/L	3.562	0.3106	1,097
Sb2068_A		-0.5230	ug/L	0.2067	39.53	9.012
Se1960_A		2.413	ug/L	1.211	50.18	4.735
Si2516_R		3,361	ug/L	16.53	0.4919	1,548
Sn1899_A		119.0	ug/L	0.1728	0.1452	67.95
Sr4215_R		819.8	ug/L	8.781	1.071	51,870
Ti3349_A	W	9,035	ug/L	46.93	0.5195	251,500
Tl1908_A		-0.6168	ug/L	0.04342	7.038	-9.919
V_2924_A		489.2	ug/L	4.047	0.8274	6,164
Zn2062_A	W	1,769	ug/L	7.758	0.4386	5,743
Y_3600_R		14,488	Cts/S	109.27	0.75424	14,488
Y_2243_A		8,394.0	Cts/S	19.148	0.22811	8,394.0
Y_3600_A		144,880	Cts/S	430.71	0.29729	144,880

SL7421-030

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 4:23:07PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		3.102	ug/L	0.6219	20.05	-1,010
Al3961_R	W	76,600	ug/L	562.9	0.7348	65,750
As1891_A		41.34	ug/L	1.151	2.785	11.18
B_2089_A		25.51	ug/L	0.06519	0.2555	36.27
Ba4554_R		104.2	ug/L	1.157	1.110	4,928
Be3130_R		2.531	ug/L	0.09352	3.695	-90.95
Ca3158_R	W	25,270	ug/L	77.12	0.3052	26,070
Cd2265_A		0.5975	ug/L	0.03329	5.571	139.4
Co2286_A		75.23	ug/L	0.1083	0.1439	372.2
Cr2677_A		121.7	ug/L	0.1995	0.1640	1,577
Cu3273_A		236.0	ug/L	0.5521	0.2340	2,750
Fe2599_R	W	156,800	ug/L	1,264	0.8062	234,400
K_7664_R		8,019	ug/L	96.38	1.202	4,302
Li6707_R		209.0	ug/L	1.076	0.5150	2,037
Mg2025_A	W	42,830	ug/L	36.20	0.08452	15,860
Mn2576_R	W	1,832	ug/L	6.952	0.3795	16,190
Mo2020_A		3.350	ug/L	0.06604	1.972	12.88
Na5895_R		13,050	ug/L	63.49	0.4864	21,190
Ni2316_A		134.7	ug/L	0.2119	0.1573	203.5
Pb2203_A		142.4	ug/L	0.8084	0.5679	136.6
Sb2068_A		-1.878	ug/L	0.1251	6.663	3.731
Se1960_A		-1.620	ug/L	0.1392	8.595	2.684
Si2516_R		2,832	ug/L	35.82	1.265	1,272
Sn1899_A		43.37	ug/L	0.2716	0.6261	26.61
Sr4215_R		128.9	ug/L	1.283	0.9956	7,943
Ti3349_A	W	5,208	ug/L	9.010	0.1730	147,500
Tl1908_A		-2.030	ug/L	0.9537	46.98	-6.854
V_2924_A		200.8	ug/L	0.4143	0.2064	2,593
Zn2062_A		566.2	ug/L	1.809	0.3196	1,879
Y_3600_R		14,161	Cts/S	14.967	0.10569	14,161
Y_2243_A		8,571.2	Cts/S	11.739	0.13696	8,571.2
Y_3600_A		147,390	Cts/S	380.42	0.25810	147,390

SL7421-031

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 4:28:10PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

SL7421-031

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 4:28:10PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		12.17	ug/L	0.6928	5.691	-1,031
Al3961_R	W	106,400	ug/L	1,095	1.029	91,580
As1891_A		74.16	ug/L	1.468	1.979	21.93
B_2089_A		153.1	ug/L	1.753	1.145	191.3
Ba4554_R		295.3	ug/L	4.239	1.435	13,940
Be3130_R		4.625	ug/L	0.07376	1.595	6.658
Ca3158_R	W	362,900	ug/L	1,428	0.3934	375,700
Cd2265_A		4.890	ug/L	0.07514	1.536	217.4
Co2286_A		53.92	ug/L	0.1892	0.3509	280.5
Cr2677_A		344.9	ug/L	0.1570	0.04553	4,228
Cu3273_A	W	19,200	ug/L	59.36	0.3092	216,400
Fe2599_R	W	194,100	ug/L	2,606	1.343	290,700
K_7664_R		19,440	ug/L	212.0	1.091	10,560
Li6707_R		235.6	ug/L	1.795	0.7618	2,301
Mg2025_A	W	53,090	ug/L	256.0	0.4822	18,620
Mn2576_R	W	2,050	ug/L	18.58	0.9063	18,140
Mo2020_A		5.725	ug/L	0.09403	1.642	20.17
Na5895_R	W	39,850	ug/L	372.2	0.9341	64,870
Ni2316_A		133.5	ug/L	1.390	1.041	186.6
Pb2203_A	W	1,252	ug/L	1.053	0.08411	1,162
Sb2068_A		1.203	ug/L	1.315	109.3	6.703
Se1960_A		0.6342	ug/L	1.916	302.1	3.451
Si2516_R		3,241	ug/L	36.55	1.128	1,456
Sn1899_A		78.68	ug/L	1.211	1.539	44.09
Sr4215_R	W	1,692	ug/L	13.81	0.8163	104,900
Ti3349_A	W	6,242	ug/L	12.67	0.2030	168,600
Tl1908_A		-0.3398	ug/L	0.2562	75.40	-6.216
V_2924_A		309.4	ug/L	0.3147	0.1017	3,791
Zn2062_A	W	2,664	ug/L	11.25	0.4224	8,364
Y_3600_R		14,191	Cts/S	171.27	1.2069	14,191
Y_2243_A		8,115.3	Cts/S	21.731	0.26778	8,115.3
Y_3600_A		140,570	Cts/S	949.48	0.67546	140,570

SL7422-001

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 4:33:27PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		10.68	ug/L	1.068	9.996	-1,243
Al3961_R	W	133,500	ug/L	396.8	0.2972	119,000
As1891_A		95.79	ug/L	1.212	1.266	31.40
B_2089_A		271.4	ug/L	0.7774	0.2865	358.1
Ba4554_R		439.5	ug/L	3.327	0.7570	21,490
Be3130_R		6.191	ug/L	0.1144	1.848	-1.595
Ca3158_R	W	30,670	ug/L	14.56	0.04747	32,870
Cd2265_A		2.706	ug/L	0.1958	7.237	219.2
Co2286_A		51.08	ug/L	0.09303	0.1821	312.0
Cr2677_A		523.2	ug/L	0.7367	0.1408	6,721
Cu3273_A		596.5	ug/L	2.930	0.4912	6,998
Fe2599_R	W	213,900	ug/L	3,132	1.464	332,000
K_7664_R	W	37,640	ug/L	15.60	0.04145	21,250
Li6707_R		253.4	ug/L	3.186	1.257	2,566
Mg2025_A	W	62,300	ug/L	44.71	0.07176	23,230
Mn2576_R	W	2,363	ug/L	4.235	0.1792	21,680
Mo2020_A		6.193	ug/L	0.1775	2.867	23.20
Na5895_R	W	95,110	ug/L	75.95	0.07985	160,500
Ni2316_A		157.3	ug/L	0.08924	0.05675	235.6

SL7422-001

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 4:33:27PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A		569.6	ug/L	2.795	0.4907	556.5
Sb2068_A		-1.095	ug/L	0.9993	91.30	6.967
Se1960_A		1.585	ug/L	3.210	202.5	4.243
Si2516_R		3,158	ug/L	7.074	0.2240	1,479
Sn1899_A		96.35	ug/L	0.1072	0.1113	56.95
Sr4215_R		311.5	ug/L	0.9209	0.2956	19,990
Ti3349_A	W	8,596	ug/L	0.2176	0.002531	243,700
Tl1908_A		-1.090	ug/L	0.3181	29.17	-8.861
V_2924_A		364.0	ug/L	0.9125	0.2507	4,687
Zn2062_A	W	1,134	ug/L	1.032	0.09102	3,786
Y_3600_R		14,706	Cts/S	193.28	1.3143	14,706
Y_2243_A		8,630.6	Cts/S	8.9622	0.10384	8,630.6
Y_3600_A		147,540	Cts/S	618.74	0.41938	147,540

SL7422-002

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 4:38:37PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		11.11	ug/L	1.474	13.26	-1,207
Al3961_R	W	124,600	ug/L	882.4	0.7081	108,400
As1891_A		92.03	ug/L	1.630	1.771	29.70
B_2089_A		256.1	ug/L	0.2927	0.1143	335.0
Ba4554_R		401.6	ug/L	3.099	0.7715	19,170
Be3130_R		5.871	ug/L	0.05043	0.8589	3.206
Ca3158_R	W	26,250	ug/L	219.7	0.8371	27,450
Cd2265_A		2.034	ug/L	0.2434	11.97	205.1
Co2286_A		48.91	ug/L	0.01992	0.04074	294.4
Cr2677_A		476.0	ug/L	4.094	0.8601	6,090
Cu3273_A		545.4	ug/L	0.8416	0.1543	6,367
Fe2599_R	W	210,700	ug/L	4,834	2.295	319,100
K_7664_R	W	34,110	ug/L	215.4	0.6315	18,790
Li6707_R		234.8	ug/L	3.300	1.406	2,319
Mg2025_A	W	56,580	ug/L	107.9	0.1907	20,900
Mn2576_R	W	2,225	ug/L	21.84	0.9814	19,920
Mo2020_A		7.343	ug/L	0.04950	0.6741	27.00
Na5895_R	W	68,750	ug/L	182.5	0.2654	113,200
Ni2316_A		149.0	ug/L	1.026	0.6884	220.1
Pb2203_A		547.9	ug/L	2.077	0.3792	530.8
Sb2068_A		-1.239	ug/L	0.06331	5.111	6.552
Se1960_A		-0.1107	ug/L	4.416	3,988	3.622
Si2516_R		3,140	ug/L	39.34	1.253	1,433
Sn1899_A		92.05	ug/L	0.5611	0.6096	53.99
Sr4215_R		282.6	ug/L	1.880	0.6651	17,690
Ti3349_A	W	8,054	ug/L	25.03	0.3108	227,300
Tl1908_A		-0.9005	ug/L	0.1161	12.90	-8.195
V_2924_A		339.5	ug/L	1.122	0.3306	4,354
Zn2062_A	W	1,051	ug/L	0.7598	0.07228	3,477
Y_3600_R		14,351	Cts/S	81.172	0.56564	14,351
Y_2243_A		8,549.3	Cts/S	10.999	0.12865	8,549.3
Y_3600_A		146,880	Cts/S	470.08	0.32005	146,880

SL7421-004

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 4:43:45PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

SL7421-004

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 4:43:45PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		-1.652	ug/L	8.278	501.1	-1,816
Al3961_R	W	427,200	ug/L	10,170	2.381	185,400
As1891_A		165.6	ug/L	2.465	1.489	25.15
B_2089_A		170.1	ug/L	1.059	0.6225	114.6
Ba4554_R		1,784	ug/L	36.67	2.055	42,450
Be3130_R		17.16	ug/L	0.02583	0.1506	-51.89
Ca3158_R		42,590	ug/L	1,190	2.795	22,220
Cd2265_A		-2.733	ug/L	1.290	47.21	213.0
Co2286_A		194.1	ug/L	1.427	0.7350	550.5
Cr2677_A		675.9	ug/L	0.06899	0.01021	4,338
Cu3273_A		443.9	ug/L	0.06770	0.01525	2,529
Fe2599_R	F	538,300	ug/L	23,200	4.310	406,700
K_7664_R	W	137,800	ug/L	2,770	2.010	37,960
Li6707_R		663.2	ug/L	13.33	2.010	3,270
Mg2025_A	W	158,300	ug/L	492.4	0.3111	29,590
Mn2576_R	W	8,744	ug/L	240.2	2.748	39,080
Mo2020_A		3.501	ug/L	0.4474	12.78	7.935
Na5895_R	W	56,680	ug/L	1,345	2.374	46,560
Ni2316_A		470.3	ug/L	3.343	0.7107	359.7
Pb2203_A		190.7	ug/L	1.722	0.9032	80.34
Sb2068_A		-5.028	ug/L	3.850	76.56	7.247
Se1960_A		-8.297	ug/L	4.415	53.22	3.619
Si2516_R		4,210	ug/L	134.1	3.187	985.1
Sn1899_A		62.57	ug/L	0.6241	0.9975	19.97
Sr4215_R		427.2	ug/L	6.874	1.609	13,330
Ti3349_A	W	25,820	ug/L	3.943	0.01527	364,000
Tl1908_A		0.9553	ug/L	1.460	152.9	-12.12
V_2924_A		928.1	ug/L	0.1117	0.01203	5,970
Zn2062_A		1,199	ug/L	2.486	0.2074	2,007
Y_3600_R		14,325	Cts/S	421.32	2.9411	14,325
Y_2243_A		8,653.7	Cts/S	33.053	0.38195	8,653.7
Y_3600_A		146,760	Cts/S	411.30	0.28026	146,760

SL7421-004L

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 4:49:03PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		4.433	ug/L	4.600	103.8	-407.8
Al3961_R	W	443,000	ug/L	1,146	0.2587	38,100
As1891_A		187.0	ug/L	6.473	3.461	4.474
B_2089_A		188.0	ug/L	8.407	4.473	26.71
Ba4554_R		1,864	ug/L	11.09	0.5952	8,810
Be3130_R		18.90	ug/L	0.4003	2.118	-11.88
Ca3158_R		44,790	ug/L	273.0	0.6095	4,604
Cd2265_A		-1.592	ug/L	0.6622	41.59	42.46
Co2286_A		222.2	ug/L	1.995	0.8981	123.6
Cr2677_A		727.5	ug/L	10.19	1.401	926.1
Cu3273_A		464.6	ug/L	9.031	1.944	523.6
Fe2599_R	W	571,800	ug/L	2,809	0.4913	85,640
K_7664_R		144,000	ug/L	340.3	0.2364	7,799
Li6707_R		690.2	ug/L	13.56	1.964	672.7
Mg2025_A		177,700	ug/L	141.7	0.07976	6,402
Mn2576_R		9,242	ug/L	53.28	0.5765	8,188
Mo2020_A		3.902	ug/L	1.098	28.15	2.171
Na5895_R		59,310	ug/L	22.78	0.03840	9,640
Ni2316_A		524.3	ug/L	0.9983	0.1904	77.08

SL7421-004L

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 4:49:03PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A		212.1	ug/L	11.47	5.408	17.12
Sb2068_A		-3.285	ug/L	3.653	111.2	2.348
Se1960_A		-4.774	ug/L	0.02096	0.4391	2.490
Si2516_R		4,319	ug/L	51.98	1.204	214.0
Sn1899_A		73.06	ug/L	3.718	5.089	6.064
Sr4215_R		446.7	ug/L	3.070	0.6873	2,736
Ti3349_A	W	27,620	ug/L	227.6	0.8242	76,950
Tl1908_A		-2.814	ug/L	5.279	187.6	-3.317
V_2924_A		985.7	ug/L	9.969	1.011	1,247
Zn2062_A		1,337	ug/L	7.983	0.5970	432.9
Y_3600_R		14,192	Cts/S	134.43	0.94723	14,192
Y_2243_A		8,342.9	Cts/S	0.21142	0.0025340	8,342.9
Y_3600_A		145,030	Cts/S	1,603.3	1.1055	145,030

SL7421-004A

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 4:53:19PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		931.7	ug/L	3.394	0.3643	6,959
Al3961_R	W	429,700	ug/L	4,899	1.140	188,100
As1891_A		1,119	ug/L	17.85	1.595	208.7
B_2089_A		1,104	ug/L	10.94	0.9915	729.0
Ba4554_R	W	2,645	ug/L	22.67	0.8570	63,470
Be3130_R		967.6	ug/L	9.630	0.9952	34,670
Ca3158_R	W	51,330	ug/L	584.8	1.139	27,020
Cd2265_A		929.7	ug/L	7.472	0.8036	6,439
Co2286_A		1,129	ug/L	12.89	1.142	2,437
Cr2677_A		1,595	ug/L	16.68	1.046	10,140
Cu3273_A		1,394	ug/L	16.94	1.216	8,086
Fe2599_R	F	517,100	ug/L	17,360	3.358	394,100
K_7664_R	W	151,800	ug/L	1,344	0.8855	42,170
Li6707_R		1,573	ug/L	8.743	0.5560	7,824
Mg2025_A	W	169,200	ug/L	1,453	0.8590	30,970
Mn2576_R	W	9,320	ug/L	128.3	1.376	42,030
Mo2020_A		958.4	ug/L	9.226	0.9626	1,672
Na5895_R	W	64,980	ug/L	612.1	0.9419	53,840
Ni2316_A		1,400	ug/L	14.36	1.026	1,117
Pb2203_A		1,108	ug/L	10.96	0.9895	523.3
Sb2068_A		941.1	ug/L	8.318	0.8839	265.4
Se1960_A		945.2	ug/L	5.275	0.5581	137.5
Si2516_R		4,399	ug/L	32.03	0.7280	1,037
Sn1899_A		65.50	ug/L	1.132	1.729	20.37
Sr4215_R		1,365	ug/L	10.14	0.7432	43,040
Ti3349_A	W	26,410	ug/L	217.8	0.8247	370,900
Tl1908_A		891.3	ug/L	5.102	0.5724	284.2
V_2924_A		1,844	ug/L	19.46	1.055	11,650
Zn2062_A	W	2,129	ug/L	22.59	1.061	3,487
Y_3600_R		14,446	Cts/S	231.67	1.6036	14,446
Y_2243_A		8,471.2	Cts/S	48.787	0.57592	8,471.2
Y_3600_A		146,140	Cts/S	1,232.4	0.84328	146,140

SL7421-004S

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 4:58:31PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

SL7421-004S

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 4:58:31PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		45.17	ug/L	4.933	10.92	-1,172
Al3961_R	W	379,600	ug/L	1,333	0.3512	166,200
As1891_A		249.6	ug/L	2.516	1.008	42.39
B_2089_A		584.9	ug/L	3.256	0.5568	387.7
Ba4554_R	W	3,384	ug/L	6.216	0.1837	81,190
Be3130_R		64.11	ug/L	0.04293	0.06696	1,713
Ca3158_R	W	53,850	ug/L	158.9	0.2951	28,340
Cd2265_A		226.9	ug/L	0.06993	0.03082	1,751
Co2286_A		643.8	ug/L	2.518	0.3911	1,470
Cr2677_A		794.0	ug/L	4.550	0.5731	5,126
Cu3273_A		726.7	ug/L	8.227	1.132	4,235
Fe2599_R	W	471,900	ug/L	10,790	2.285	359,700
K_7664_R	W	128,000	ug/L	196.3	0.1533	35,570
Li6707_R		1,071	ug/L	3.444	0.3217	5,325
Mg2025_A	W	149,500	ug/L	334.3	0.2236	27,930
Mn2576_R	W	8,122	ug/L	19.01	0.2341	36,620
Mo2020_A		92.13	ug/L	0.3739	0.4058	165.4
Na5895_R	W	55,990	ug/L	11.51	0.02056	46,380
Ni2316_A		900.9	ug/L	0.7134	0.07918	722.9
Pb2203_A		261.4	ug/L	0.2048	0.07834	116.7
Sb2068_A		15.30	ug/L	2.543	16.62	11.09
Se1960_A		85.90	ug/L	3.554	4.137	16.84
Si2516_R		4,485	ug/L	43.32	0.9658	1,053
Sn1899_A		517.6	ug/L	2.017	0.3897	149.6
Sr4215_R		867.1	ug/L	1.398	0.1612	27,330
Ti3349_A	W	23,970	ug/L	15.01	0.06265	340,700
Tl1908_A		88.61	ug/L	2.269	2.561	18.29
V_2924_A		1,305	ug/L	0.3892	0.02982	8,398
Zn2062_A		1,506	ug/L	0.9939	0.06601	2,518
Y_3600_R		14,445	Cts/S	179.44	1.2422	14,445
Y_2243_A		8,643.6	Cts/S	14.325	0.16573	8,643.6
Y_3600_A		147,940	Cts/S	918.41	0.62080	147,940

SL7421-004P

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 5:02:55PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		42.50	ug/L	2.265	5.329	-1,337
Al3961_R	W	426,700	ug/L	3,637	0.8525	186,900
As1891_A		257.7	ug/L	0.4071	0.1580	43.55
B_2089_A		592.3	ug/L	1.688	0.2850	393.2
Ba4554_R	W	3,629	ug/L	4.948	0.1364	87,070
Be3130_R		64.96	ug/L	0.5833	0.8980	1,703
Ca3158_R		42,310	ug/L	376.9	0.8907	22,270
Cd2265_A		220.7	ug/L	1.186	0.5372	1,733
Co2286_A		643.4	ug/L	1.933	0.3005	1,481
Cr2677_A		863.1	ug/L	11.26	1.305	5,525
Cu3273_A		710.1	ug/L	5.326	0.7500	4,096
Fe2599_R	F	518,300	ug/L	9,856	1.902	395,100
K_7664_R	W	144,100	ug/L	374.7	0.2600	40,050
Li6707_R		1,136	ug/L	0.2293	0.02019	5,650
Mg2025_A	W	158,100	ug/L	221.2	0.1399	29,590
Mn2576_R	W	8,907	ug/L	75.01	0.8421	40,180
Mo2020_A		86.24	ug/L	0.1129	0.1309	155.3
Na5895_R	W	63,900	ug/L	501.9	0.7855	52,950
Ni2316_A		917.2	ug/L	1.884	0.2054	735.0

SL7421-004P

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 5:02:55PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A		276.6	ug/L	1.414	0.5114	122.7
Sb2068_A		13.15	ug/L	3.534	26.87	11.26
Se1960_A		77.21	ug/L	2.443	3.164	15.90
Si2516_R		4,041	ug/L	9.739	0.2410	956.0
Sn1899_A		507.5	ug/L	1.599	0.3151	147.0
Sr4215_R		896.4	ug/L	5.167	0.5765	28,270
Ti3349_A	W	25,570	ug/L	221.5	0.8664	360,300
Tl1908_A		86.63	ug/L	1.739	2.008	16.74
V_2924_A		1,408	ug/L	14.16	1.006	8,982
Zn2062_A		1,624	ug/L	0.6279	0.03866	2,720
Y_3600_R		14,449	Cts/S	25.686	0.17777	14,449
Y_2243_A		8,658.5	Cts/S	0.37665	0.0043500	8,658.5
Y_3600_A		146,670	Cts/S	916.57	0.62491	146,670

CCV

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 5:08:10PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		494.8	ug/L	2.460	0.4972	8,968
Al3961_R		12,770	ug/L	105.6	0.8270	10,790
As1891_A		495.9	ug/L	0.1600	0.03227	187.3
B_2089_A		493.1	ug/L	0.3531	0.07161	646.5
Ba4554_R		501.3	ug/L	3.819	0.7618	23,220
Be3130_R		497.7	ug/L	2.960	0.5947	35,070
Ca3158_R		12,700	ug/L	104.1	0.8194	12,890
Cd2265_A		494.3	ug/L	1.250	0.2529	6,543
Co2286_A		499.4	ug/L	1.913	0.3830	2,012
Cr2677_A		499.2	ug/L	0.07160	0.01434	6,246
Cu3273_A		490.1	ug/L	0.1972	0.04023	5,666
Fe2599_R		12,840	ug/L	141.3	1.101	18,880
K_7664_R		12,740	ug/L	44.81	0.3517	6,769
Li6707_R		512.3	ug/L	5.418	1.058	4,917
Mg2025_A		12,680	ug/L	19.97	0.1575	4,593
Mn2576_R		499.2	ug/L	4.966	0.9947	4,350
Mo2020_A		495.4	ug/L	1.800	0.3633	1,707
Na5895_R		12,880	ug/L	75.24	0.5844	20,570
Ni2316_A		506.6	ug/L	1.814	0.3581	819.9
Pb2203_A		497.4	ug/L	0.2113	0.04249	475.9
Sb2068_A		495.2	ug/L	1.349	0.2723	266.5
Se1960_A		496.1	ug/L	4.437	0.8944	139.9
Si2516_R		12,710	ug/L	7.875	0.06196	5,501
Sn1899_A		506.2	ug/L	1.773	0.3503	281.4
Sr4215_R		513.1	ug/L	3.108	0.6058	31,210
Ti3349_A		491.4	ug/L	1.049	0.2135	13,590
Tl1908_A		501.6	ug/L	1.654	0.3297	328.7
V_2924_A		492.9	ug/L	0.7327	0.1487	6,051
Zn2062_A		494.3	ug/L	1.597	0.3231	1,600
Y_3600_R		13,936	Cts/S	85.596	0.61421	13,936
Y_2243_A		8,370.0	Cts/S	36.351	0.43431	8,370.0
Y_3600_A		144,150	Cts/S	338.83	0.23506	144,150

CCB

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 5:12:19PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

CCB

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 5:12:19PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.5857	ug/L	0.3343	57.08	-38.56
Al3961_R		-7.730	ug/L	2.415	31.24	-17.98
As1891_A		1.385	ug/L	0.3715	26.83	-0.8810
B_2089_A		1.205	ug/L	0.1718	14.26	4.546
Ba4554_R		-0.1089	ug/L	0.1851	170.0	21.29
Be3130_R		0.05456	ug/L	0.06528	119.6	-2.149
Ca3158_R		0.7189	ug/L	5.092	708.3	-32.71
Cd2265_A		-0.003946	ug/L	0.05224	1,324	-3.769
Co2286_A		-0.2049	ug/L	0.2455	119.8	4.710
Cr2677_A		0.2589	ug/L	0.1356	52.38	7.935
Cu3273_A		0.05170	ug/L	0.02191	42.39	1.985
Fe2599_R		2.644	ug/L	0.7047	26.65	5.878
K_7664_R		53.29	ug/L	15.11	28.35	-45.13
Li6707_R		3.521	ug/L	0.01631	0.4631	31.40
Mg2025_A		-1.932	ug/L	1.463	75.73	-4.270
Mn2576_R		0.3731	ug/L	0.3544	94.98	2.774
Mo2020_A		0.3831	ug/L	0.1950	50.90	1.959
Na5895_R		22.26	ug/L	6.750	30.33	16.13
Ni2316_A		0.08857	ug/L	0.04250	47.99	-0.5816
Pb2203_A		0.3032	ug/L	0.9534	314.4	-0.1562
Sb2068_A		-0.6647	ug/L	0.5952	89.54	0.6218
Se1960_A		-1.290	ug/L	0.1813	14.05	1.761
Si2516_R		5.625	ug/L	9.192	163.4	18.74
Sn1899_A		-0.8274	ug/L	0.1525	18.43	1.612
Sr4215_R		0.05671	ug/L	0.1181	208.2	-29.80
Ti3349_A		0.1886	ug/L	0.05182	27.48	-19.74
Tl1908_A		0.5106	ug/L	0.2122	41.56	-0.4073
V_2924_A		0.5719	ug/L	0.1502	26.27	-1.155
Zn2062_A		-0.2194	ug/L	0.1569	71.52	0.8706
Y_3600_R		13,794	Cts/S	81.084	0.58783	13,794
Y_2243_A		8,465.0	Cts/S	1.3318	0.015732	8,465.0
Y_3600_A		148,820	Cts/S	2,679.9	1.8008	148,820

SL7421-009

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 5:16:44PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		3.436	ug/L	0.7105	20.68	-897.7
Al3961_R	W	132,700	ug/L	1,290	0.9725	55,850
As1891_A		78.40	ug/L	0.6289	0.8021	10.18
B_2089_A		96.08	ug/L	0.3546	0.3691	62.70
Ba4554_R		247.4	ug/L	1.664	0.6727	5,725
Be3130_R		5.193	ug/L	0.01021	0.1966	-90.86
Ca3158_R	W	829,400	ug/L	18,210	2.195	419,700
Cd2265_A		0.7450	ug/L	0.05742	7.707	117.9
Co2286_A		93.07	ug/L	0.5258	0.5649	243.5
Cr2677_A		462.6	ug/L	1.883	0.4071	2,840
Cu3273_A		315.4	ug/L	3.155	1.000	1,742
Fe2599_R	W	283,900	ug/L	3,002	1.057	207,800
K_7664_R		13,660	ug/L	52.56	0.3848	3,578
Li6707_R		304.2	ug/L	1.169	0.3841	1,452
Mg2025_A	W	79,950	ug/L	262.3	0.3281	14,100
Mn2576_R	W	3,196	ug/L	27.46	0.8594	13,830
Mo2020_A		22.36	ug/L	0.4415	1.974	38.46
Na5895_R		35,230	ug/L	254.9	0.7236	28,020
Ni2316_A		193.7	ug/L	0.9801	0.5061	135.8

SL7421-009

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 5:16:44PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A		531.6	ug/L	3.780	0.7110	246.2
Sb2068_A		-1.291	ug/L	3.313	256.6	4.282
Se1960_A		2.915	ug/L	2.990	102.6	3.266
Si2516_R		3,239	ug/L	10.37	0.3203	725.5
Sn1899_A		75.46	ug/L	1.529	2.026	22.31
Sr4215_R	W	4,233	ug/L	29.60	0.6993	128,300
Ti3349_A	W	10,700	ug/L	101.0	0.9442	144,500
Tl1908_A		0.9556	ug/L	1.403	146.8	-5.097
V_2924_A		632.2	ug/L	6.634	1.049	3,864
Zn2062_A		1,133	ug/L	0.7799	0.06883	1,790
Y_3600_R		13,873	Cts/S	242.51	1.7481	13,873
Y_2243_A		8,164.0	Cts/S	2.1908	0.026834	8,164.0
Y_3600_A		140,630	Cts/S	1,145.5	0.81456	140,630

SL7421-012

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 5:21:56PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		13.31	ug/L	1.689	12.69	-890.7
Al3961_R	W	162,100	ug/L	1,719	1.060	68,920
As1891_A		89.30	ug/L	1.526	1.709	11.91
B_2089_A		195.2	ug/L	0.6126	0.3139	124.0
Ba4554_R		468.4	ug/L	4.166	0.8894	10,920
Be3130_R		6.329	ug/L	0.03355	0.5302	-31.44
Ca3158_R	W	957,800	ug/L	2,905	0.3033	489,300
Cd2265_A		1.795	ug/L	0.4537	25.27	136.5
Co2286_A		83.83	ug/L	0.7141	0.8518	221.9
Cr2677_A		436.1	ug/L	0.8469	0.1942	2,662
Cu3273_A		579.9	ug/L	2.171	0.3744	3,212
Fe2599_R	W	312,900	ug/L	3,553	1.135	231,300
K_7664_R		25,890	ug/L	116.1	0.4483	6,914
Li6707_R		313.9	ug/L	6.296	2.006	1,513
Mg2025_A	W	80,820	ug/L	419.8	0.5195	14,270
Mn2576_R	W	3,440	ug/L	37.38	1.087	15,030
Mo2020_A		13.12	ug/L	0.6834	5.208	23.07
Na5895_R	W	62,990	ug/L	408.1	0.6478	50,600
Ni2316_A		183.7	ug/L	0.7683	0.4181	126.5
Pb2203_A		1,197	ug/L	7.040	0.5881	557.9
Sb2068_A		0.4227	ug/L	1.377	325.7	5.049
Se1960_A		0.1734	ug/L	2.867	1,653	3.052
Si2516_R		3,919	ug/L	30.65	0.7821	878.4
Sn1899_A		86.99	ug/L	2.214	2.545	25.45
Sr4215_R	W	3,655	ug/L	36.26	0.9920	111,800
Ti3349_A	W	9,883	ug/L	5.835	0.05905	132,600
Tl1908_A		-0.1503	ug/L	0.3111	207.0	-5.119
V_2924_A		428.2	ug/L	1.671	0.3903	2,613
Zn2062_A		1,194	ug/L	8.123	0.6803	1,889
Y_3600_R		14,006	Cts/S	37.665	0.26892	14,006
Y_2243_A		8,176.1	Cts/S	46.929	0.57398	8,176.1
Y_3600_A		139,690	Cts/S	155.39	0.11124	139,690

SL7421-023

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 5:27:07PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

SL7421-023

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 5:27:07PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		8.600	ug/L	1.660	19.30	-975.6
Al3961_R	W	151,700	ug/L	1,410	0.9293	65,590
As1891_A		115.9	ug/L	0.6605	0.5701	17.50
B_2089_A		162.2	ug/L	1.346	0.8298	107.4
Ba4554_R		277.6	ug/L	1.901	0.6848	6,601
Be3130_R		5.905	ug/L	0.06280	1.064	-31.53
Ca3158_R	W	198,400	ug/L	2,184	1.101	103,200
Cd2265_A		-0.8183	ug/L	0.2935	35.86	124.1
Co2286_A		91.16	ug/L	0.07347	0.08059	242.3
Cr2677_A		405.8	ug/L	0.4845	0.1194	2,597
Cu3273_A		617.1	ug/L	1.878	0.3044	3,584
Fe2599_R	W	312,800	ug/L	3,736	1.194	235,400
K_7664_R		21,370	ug/L	30.26	0.1416	5,799
Li6707_R		341.4	ug/L	0.6912	0.2024	1,676
Mg2025_A	W	81,070	ug/L	221.7	0.2735	14,880
Mn2576_R	W	4,698	ug/L	31.03	0.6604	20,920
Mo2020_A		2.283	ug/L	0.01912	0.8375	5.187
Na5895_R		46,750	ug/L	529.1	1.132	38,240
Ni2316_A		204.4	ug/L	0.02336	0.01143	148.3
Pb2203_A		854.8	ug/L	2.842	0.3325	413.4
Sb2068_A		-4.800	ug/L	0.5667	11.81	3.752
Se1960_A		0.7366	ug/L	1.381	187.5	3.267
Si2516_R		3,565	ug/L	39.86	1.118	815.6
Sn1899_A		75.88	ug/L	0.3825	0.5041	23.34
Sr4215_R		907.8	ug/L	10.18	1.121	28,260
Ti3349_A	W	9,278	ug/L	16.20	0.1746	130,400
Tl1908_A		-0.8941	ug/L	0.2640	29.53	-6.140
V_2924_A		482.8	ug/L	1.756	0.3637	3,076
Zn2062_A		1,367	ug/L	1.951	0.1427	2,247
Y_3600_R		14,264	Cts/S	140.86	0.98750	14,264
Y_2243_A		8,494.5	Cts/S	20.763	0.24443	8,494.5
Y_3600_A		146,280	Cts/S	180.60	0.12346	146,280

SL7421-025

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 5:31:24PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		4.682	ug/L	0.5131	10.96	-961.3
Al3961_R	W	134,300	ug/L	1,342	0.9994	58,120
As1891_A		70.99	ug/L	1.164	1.640	8.972
B_2089_A		65.15	ug/L	0.7883	1.210	44.86
Ba4554_R		189.0	ug/L	2.032	1.075	4,508
Be3130_R		4.252	ug/L	0.003808	0.08957	-47.64
Ca3158_R	W	215,600	ug/L	2,564	1.189	112,300
Cd2265_A		-1.269	ug/L	0.09351	7.367	114.1
Co2286_A		94.73	ug/L	1.677	1.771	239.9
Cr2677_A		271.8	ug/L	0.3508	0.1290	1,745
Cu3273_A		315.6	ug/L	2.050	0.6494	1,819
Fe2599_R	W	297,600	ug/L	3,630	1.220	224,200
K_7664_R		11,640	ug/L	45.83	0.3939	3,126
Li6707_R		339.6	ug/L	8.323	2.451	1,668
Mg2025_A	W	73,040	ug/L	709.6	0.9716	13,370
Mn2576_R	W	3,744	ug/L	47.45	1.267	16,680
Mo2020_A		3.037	ug/L	0.5029	16.56	6.351
Na5895_R		26,010	ug/L	232.1	0.8925	21,290
Ni2316_A		181.0	ug/L	1.383	0.7642	129.7

SL7421-025

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 5:31:24PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A		381.6	ug/L	6.443	1.688	183.0
Sb2068_A		-1.916	ug/L	1.472	76.83	4.130
Se1960_A		-4.713	ug/L	0.2725	5.783	2.358
Si2516_R		3,318	ug/L	4.855	0.1463	759.4
Sn1899_A		53.21	ug/L	1.541	2.896	16.94
Sr4215_R		768.4	ug/L	7.986	1.039	23,940
Ti3349_A	W	7,585	ug/L	5.661	0.07463	106,600
Tl1908_A		-1.333	ug/L	2.787	209.1	-5.313
V_2924_A		423.1	ug/L	0.5151	0.1217	2,695
Zn2062_A		864.8	ug/L	9.543	1.104	1,418
Y_3600_R		14,278	Cts/S	147.51	1.0331	14,278
Y_2243_A		8,473.4	Cts/S	68.299	0.80604	8,473.4
Y_3600_A		146,240	Cts/S	58.764	0.040183	146,240

SL7421-027

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 5:35:42PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		32.62	ug/L	2.505	7.679	-493.4
Al3961_R	W	145,100	ug/L	905.3	0.6240	62,520
As1891_A		110.2	ug/L	1.637	1.486	16.83
B_2089_A		278.8	ug/L	2.354	0.8442	178.5
Ba4554_R		645.1	ug/L	3.753	0.5818	15,240
Be3130_R		6.725	ug/L	0.2876	4.277	0.05459
Ca3158_R	W	739,500	ug/L	4,090	0.5530	383,100
Cd2265_A		7.746	ug/L	0.1085	1.401	145.8
Co2286_A		66.68	ug/L	0.2813	0.4218	186.4
Cr2677_A		1,012	ug/L	10.71	1.058	6,219
Cu3273_A		1,158	ug/L	18.54	1.601	6,536
Fe2599_R	W	237,200	ug/L	896.1	0.3778	177,700
K_7664_R		38,240	ug/L	90.57	0.2368	10,390
Li6707_R		277.5	ug/L	1.379	0.4969	1,355
Mg2025_A	W	64,740	ug/L	738.5	1.141	11,570
Mn2576_R	W	2,877	ug/L	12.17	0.4230	12,750
Mo2020_A		48.85	ug/L	0.1187	0.2430	84.13
Na5895_R	W	85,110	ug/L	351.3	0.4128	69,340
Ni2316_A		208.8	ug/L	2.523	1.209	152.5
Pb2203_A		1,474	ug/L	14.68	0.9962	695.3
Sb2068_A		-0.5274	ug/L	0.2615	49.58	4.984
Se1960_A		0.9796	ug/L	3.988	407.0	3.074
Si2516_R		3,973	ug/L	22.91	0.5766	902.2
Sn1899_A		153.3	ug/L	2.248	1.466	43.83
Sr4215_R	W	2,178	ug/L	17.74	0.8147	67,540
Ti3349_A	W	9,203	ug/L	129.1	1.403	125,000
Tl1908_A		2.034	ug/L	1.274	62.61	-4.154
V_2924_A		507.2	ug/L	4.910	0.9681	3,105
Zn2062_A		1,864	ug/L	17.87	0.9588	2,982
Y_3600_R		14,202	Cts/S	157.16	1.1066	14,202
Y_2243_A		8,272.5	Cts/S	56.041	0.67745	8,272.5
Y_3600_A		141,370	Cts/S	966.88	0.68396	141,370

SL7421-029

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 5:40:03PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

SL7421-029

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 5:40:03PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		20.65	ug/L	12.06	58.39	-780.7
Al3961_R	W	153,900	ug/L	17,710	11.51	68,970
As1891_A		111.5	ug/L	2.963	2.657	16.75
B_2089_A		201.5	ug/L	0.5524	0.2742	131.6
Ba4554_R		472.9	ug/L	56.24	11.89	11,630
Be3130_R		6.784	ug/L	0.2714	4.001	0.7579
Ca3158_R	W	221,400	ug/L	24,050	10.86	119,400
Cd2265_A		5.801	ug/L	2.325	40.07	156.0
Co2286_A		97.17	ug/L	0.9028	0.9291	251.0
Cr2677_A		735.5	ug/L	14.06	1.912	4,667
Cu3273_A		1,057	ug/L	15.88	1.502	6,143
Fe2599_R	W	287,800	ug/L	32,730	11.37	224,500
K_7664_R		28,420	ug/L	2,970	10.45	8,021
Li6707_R		341.6	ug/L	40.09	11.74	1,737
Mg2025_A	W	78,080	ug/L	387.9	0.4968	14,150
Mn2576_R	W	3,486	ug/L	383.5	11.00	16,080
Mo2020_A		34.41	ug/L	0.2001	0.5816	60.43
Na5895_R	W	54,580	ug/L	5,881	10.77	46,290
Ni2316_A		243.6	ug/L	2.295	0.9422	179.8
Pb2203_A		1,225	ug/L	4.385	0.3580	585.9
Sb2068_A		-3.392	ug/L	0.6501	19.16	4.339
Se1960_A		-1.159	ug/L	3.378	291.4	2.904
Si2516_R		3,321	ug/L	338.7	10.20	790.2
Sn1899_A		125.5	ug/L	1.123	0.8948	36.76
Sr4215_R		808.9	ug/L	92.62	11.45	26,090
Ti3349_A	W	9,269	ug/L	167.2	1.804	129,800
Tl1908_A		0.2503	ug/L	0.9624	384.5	-5.098
V_2924_A		508.5	ug/L	10.23	2.013	3,218
Zn2062_A		1,883	ug/L	13.23	0.7029	3,055
Y_3600_R		14,843	Cts/S	1,056.8	7.1198	14,843
Y_2243_A		8,388.2	Cts/S	23.113	0.27554	8,388.2
Y_3600_A		145,750	Cts/S	2,223.4	1.5255	145,750

PBWLH10ICW1

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 5:44:18PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.9710	ug/L	0.08325	8.574	-31.35
Al3961_R		-0.3045	ug/L	3.285	1,079	-11.96
As1891_A		0.9927	ug/L	0.5944	59.88	-1.044
B_2089_A		-0.4662	ug/L	0.09802	21.02	2.417
Ba4554_R		-0.2534	ug/L	0.1531	60.41	14.93
Be3130_R		0.06123	ug/L	0.01610	26.29	-1.736
Ca3158_R		2.469	ug/L	0.6243	25.28	-31.42
Cd2265_A		0.0006240	ug/L	0.01295	2,076	-3.749
Co2286_A		-0.3596	ug/L	0.1251	34.78	4.134
Cr2677_A		0.07312	ug/L	0.05973	81.69	5.548
Cu3273_A		-0.09534	ug/L	0.4333	454.5	0.2240
Fe2599_R		5.377	ug/L	0.3418	6.356	10.02
K_7664_R		60.72	ug/L	47.65	78.48	-41.80
Li6707_R		1.592	ug/L	0.9138	57.38	13.27
Mg2025_A		0.09738	ug/L	0.4910	504.2	-3.575
Mn2576_R		0.3631	ug/L	0.05067	13.95	2.738
Mo2020_A		-0.006351	ug/L	0.04148	653.1	0.6089
Na5895_R		23.27	ug/L	3.985	17.13	17.98
Ni2316_A		-0.04351	ug/L	0.03780	86.87	-0.8098

PBWLH10ICW1

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 5:44:18PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A		0.6467	ug/L	0.9495	146.8	0.1800
Sb2068_A		-0.8385	ug/L	0.3852	45.94	0.5344
Se1960_A		-0.1565	ug/L	0.9717	620.7	2.104
Si2516_R		-10.62	ug/L	11.93	112.3	12.01
Sn1899_A		-1.022	ug/L	0.3336	32.66	1.522
Sr4215_R		-0.01307	ug/L	0.03753	287.1	-34.53
Ti3349_A		0.3943	ug/L	0.1701	43.14	-13.91
Tl1908_A		0.2294	ug/L	0.5410	235.8	-0.6013
V_2924_A		0.3508	ug/L	0.08576	24.45	-3.982
Zn2062_A		-0.1841	ug/L	0.1676	91.04	0.9992
Y_3600_R		14,013	Cts/S	11.426	0.081536	14,013
Y_2243_A		8,565.6	Cts/S	13.273	0.15496	8,565.6
Y_3600_A		149,490	Cts/S	140.69	0.094115	149,490

LCSWLH10ICW1

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 5:48:42PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		51.24	ug/L	0.1496	0.2920	903.2
Al3961_R		1,989	ug/L	140.1	7.043	1,744
As1891_A		101.1	ug/L	0.7579	0.7498	37.83
B_2089_A		478.3	ug/L	1.574	0.3291	625.3
Ba4554_R		1,974	ug/L	153.7	7.789	95,210
Be3130_R		48.74	ug/L	3.652	7.494	3,554
Ca3158_R		2,472	ug/L	200.5	8.109	2,587
Cd2265_A		253.3	ug/L	0.3358	0.1325	3,413
Co2286_A		524.4	ug/L	0.08321	0.01587	2,154
Cr2677_A		208.0	ug/L	0.2330	0.1120	2,654
Cu3273_A		260.0	ug/L	0.5358	0.2061	3,063
Fe2599_R		1,012	ug/L	81.62	8.068	1,553
K_7664_R		9,895	ug/L	791.6	7.999	5,462
Li6707_R		493.4	ug/L	41.88	8.486	4,934
Mg2025_A		5,062	ug/L	5.226	0.1032	1,873
Mn2576_R		486.0	ug/L	39.07	8.040	4,415
Mo2020_A		101.9	ug/L	0.2871	0.2818	358.5
Na5895_R		7,493	ug/L	602.1	8.036	12,470
Ni2316_A		529.1	ug/L	0.8127	0.1536	871.9
Pb2203_A		101.7	ug/L	0.5350	0.5263	98.84
Sb2068_A		100.8	ug/L	0.3058	0.3035	54.37
Se1960_A		99.03	ug/L	0.9578	0.9672	30.25
Si2516_R		944.3	ug/L	83.34	8.825	443.2
Sn1899_A		510.2	ug/L	1.085	0.2126	289.2
Sr4215_R		493.5	ug/L	38.37	7.775	31,290
Ti3349_A		489.9	ug/L	0.1032	0.02107	13,800
Tl1908_A		103.0	ug/L	0.9782	0.9499	67.15
V_2924_A		507.6	ug/L	0.6187	0.1219	6,389
Zn2062_A		510.8	ug/L	0.1130	0.02213	1,687
Y_3600_R		14,556	Cts/S	815.92	5.6055	14,556
Y_2243_A		8,535.0	Cts/S	26.112	0.30595	8,535.0
Y_3600_A		146,840	Cts/S	13.497	0.0091920	146,840

PBT1470B

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 5:52:55PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

PBT1470B

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 5:52:55PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.5159	ug/L	0.3423	66.35	-38.05
Al3961_R		9.452	ug/L	5.592	59.16	-3.526
As1891_A		0.1925	ug/L	0.4112	213.6	-1.307
B_2089_A		4.543	ug/L	0.1490	3.280	8.595
Ba4554_R		18.17	ug/L	0.04358	0.2399	851.3
Be3130_R		0.1095	ug/L	0.007882	7.199	1.662
Ca3158_R		345.3	ug/L	6.237	1.806	311.5
Cd2265_A		0.1565	ug/L	0.003816	2.437	-1.581
Co2286_A		-0.1324	ug/L	0.04792	36.19	4.879
Cr2677_A		0.1954	ug/L	0.4382	224.3	6.787
Cu3273_A		0.6100	ug/L	0.4477	73.40	8.264
Fe2599_R		4.588	ug/L	0.4316	9.406	8.639
K_7664_R		163.2	ug/L	25.97	15.92	13.18
Li6707_R		3.612	ug/L	1.926	53.32	31.96
Mg2025_A		16.77	ug/L	0.3539	2.110	2.512
Mn2576_R		0.7906	ug/L	0.07901	9.995	6.332
Mo2020_A		0.03133	ug/L	0.03768	120.3	0.7151
Na5895_R	F	262,000	ug/L	5,037	1.923	411,200
Ni2316_A		0.7206	ug/L	0.2417	33.55	0.4379
Pb2203_A		1.255	ug/L	0.3765	30.00	0.7484
Sb2068_A		-0.9391	ug/L	0.3067	32.66	0.4590
Se1960_A		-1.288	ug/L	1.148	89.14	1.718
Si2516_R		11.39	ug/L	22.82	200.5	21.02
Sn1899_A		-0.2957	ug/L	0.5101	172.5	1.862
Sr4215_R	F	137.6	ug/L	0.01362	0.009902	8,189
Ti3349_A		0.08518	ug/L	0.2598	305.0	-21.67
Tl1908_A		0.3880	ug/L	0.3112	80.21	-0.4767
V_2924_A		0.4219	ug/L	0.2037	48.29	-2.929
Zn2062_A		25.45	ug/L	0.03495	0.1373	82.85
Y_3600_R		13,678	Cts/S	53.746	0.39295	13,678
Y_2243_A		8,255.7	Cts/S	5.4096	0.065526	8,255.7
Y_3600_A		142,150	Cts/S	248.79	0.17502	142,150

PBT1471A

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 5:58:16PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.7273	ug/L	0.03134	4.309	-36.09
Al3961_R		0.2747	ug/L	0.9933	361.5	-11.15
As1891_A		0.9917	ug/L	0.02897	2.921	-1.051
B_2089_A		3.399	ug/L	0.2616	7.696	7.479
Ba4554_R		13.00	ug/L	0.4240	3.261	615.2
Be3130_R		0.07594	ug/L	0.01026	13.51	-0.6368
Ca3158_R		16.77	ug/L	6.024	35.92	-16.17
Cd2265_A		-0.01665	ug/L	0.04725	283.8	-4.008
Co2286_A		-0.3378	ug/L	0.08796	26.04	4.246
Cr2677_A		0.2452	ug/L	0.4069	165.9	7.809
Cu3273_A		0.2880	ug/L	0.1793	62.23	4.836
Fe2599_R		4.158	ug/L	4.319	103.9	7.792
K_7664_R		69.03	ug/L	16.82	24.37	-36.07
Li6707_R		3.450	ug/L	0.05533	1.604	30.44
Mg2025_A		10.03	ug/L	0.05221	0.5203	0.1041
Mn2576_R		0.8607	ug/L	0.03462	4.023	6.914
Mo2020_A		0.03978	ug/L	0.02970	74.68	0.7764
Na5895_R		77.28	ug/L	18.41	23.82	103.2
Ni2316_A		0.05162	ug/L	0.08745	169.4	-0.6560

PBT1471A

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 5:58:16PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A		-0.5678	ug/L	0.5948	104.7	-1.021
Sb2068_A		-0.4078	ug/L	0.05282	12.95	0.7736
Se1960_A		-0.3743	ug/L	0.7102	189.7	2.055
Si2516_R		48.78	ug/L	52.80	108.2	36.06
Sn1899_A		-0.3290	ug/L	0.3510	106.7	1.925
Sr4215_R		0.2954	ug/L	0.05158	17.46	-15.35
Ti3349_A		0.1331	ug/L	0.02835	21.30	-21.47
Tl1908_A		-0.6228	ug/L	0.1735	27.85	-1.185
V_2924_A		0.6028	ug/L	0.4277	70.95	-0.7487
Zn2062_A		2.171	ug/L	0.03909	1.801	8.855
Y_3600_R		13,661	Cts/S	941.48	6.8919	13,661
Y_2243_A		8,617.7	Cts/S	8.8027	0.10215	8,617.7
Y_3600_A		149,910	Cts/S	476.86	0.31810	149,910

CCV

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 6:02:40PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		489.9	ug/L	5.031	1.027	8,974
Al3961_R		12,800	ug/L	198.2	1.548	10,720
As1891_A		498.0	ug/L	1.555	0.3123	189.1
B_2089_A		488.3	ug/L	2.832	0.5800	644.0
Ba4554_R		500.5	ug/L	8.555	1.709	22,970
Be3130_R		493.7	ug/L	8.055	1.632	34,470
Ca3158_R		12,700	ug/L	238.4	1.877	12,770
Cd2265_A		491.9	ug/L	3.871	0.7869	6,548
Co2286_A		499.4	ug/L	4.232	0.8473	2,023
Cr2677_A		501.9	ug/L	6.535	1.302	6,347
Cu3273_A		485.6	ug/L	3.251	0.6694	5,675
Fe2599_R		12,910	ug/L	269.2	2.085	18,810
K_7664_R		12,790	ug/L	225.3	1.761	6,734
Li6707_R		512.7	ug/L	6.188	1.207	4,875
Mg2025_A		12,640	ug/L	83.38	0.6595	4,606
Mn2576_R		496.5	ug/L	7.443	1.499	4,286
Mo2020_A		495.5	ug/L	3.738	0.7544	1,717
Na5895_R		13,010	ug/L	195.7	1.505	20,590
Ni2316_A		508.9	ug/L	3.630	0.7132	828.1
Pb2203_A		494.3	ug/L	3.210	0.6493	475.6
Sb2068_A		490.4	ug/L	4.592	0.9362	265.5
Se1960_A		500.3	ug/L	2.592	0.5182	141.9
Si2516_R		12,610	ug/L	188.6	1.496	5,407
Sn1899_A		506.2	ug/L	3.898	0.7700	283.0
Sr4215_R		512.3	ug/L	9.857	1.924	30,870
Ti3349_A		483.4	ug/L	5.817	1.203	13,510
Tl1908_A		497.3	ug/L	3.331	0.6698	327.6
V_2924_A		491.7	ug/L	5.951	1.210	6,102
Zn2062_A		492.6	ug/L	4.146	0.8416	1,604
Y_3600_R		13,807	Cts/S	59.272	0.42928	13,807
Y_2243_A		8,415.9	Cts/S	34.472	0.40960	8,415.9
Y_3600_A		145,710	Cts/S	1,870.7	1.2839	145,710

CCB

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 6:06:49PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

CCB

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 6:06:49PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.4191	ug/L	0.07402	17.66	-41.50
Al3961_R		3.850	ug/L	4.907	127.5	-8.426
As1891_A		0.8274	ug/L	0.2372	28.67	-1.114
B_2089_A		0.4053	ug/L	0.1188	29.31	3.579
Ba4554_R		-0.2201	ug/L	0.03852	17.51	16.45
Be3130_R		0.1016	ug/L	0.03459	34.07	1.158
Ca3158_R		3.030	ug/L	2.893	95.46	-30.76
Cd2265_A		0.01013	ug/L	0.05851	577.6	-3.644
Co2286_A		-0.3574	ug/L	0.08876	24.83	4.160
Cr2677_A		0.1495	ug/L	0.04098	27.41	6.484
Cu3273_A		-0.4966	ug/L	0.01946	3.918	-4.543
Fe2599_R		1.333	ug/L	0.2833	21.24	4.024
K_7664_R		52.43	ug/L	40.82	77.85	-46.30
Li6707_R		3.320	ug/L	0.4138	12.47	29.86
Mg2025_A		-1.544	ug/L	0.1007	6.520	-4.202
Mn2576_R		-0.09079	ug/L	0.1798	198.1	-1.246
Mo2020_A		0.3372	ug/L	0.2429	72.04	1.828
Na5895_R		35.05	ug/L	7.496	21.39	36.77
Ni2316_A		0.1129	ug/L	0.1367	121.0	-0.5510
Pb2203_A		-0.8771	ug/L	0.3021	34.44	-1.327
Sb2068_A		-0.5403	ug/L	0.4624	85.57	0.6986
Se1960_A		-1.509	ug/L	0.9525	63.14	1.729
Si2516_R		8.318	ug/L	8.771	105.4	20.15
Sn1899_A		-0.3689	ug/L	0.2633	71.37	1.900
Sr4215_R		0.1207	ug/L	0.08234	68.23	-26.25
Ti3349_A		-0.04264	ug/L	0.04979	116.8	-26.24
Tl1908_A		-0.3486	ug/L	0.1092	31.31	-0.9969
V_2924_A		0.5886	ug/L	0.03001	5.098	-0.9471
Zn2062_A		-0.1074	ug/L	0.1030	95.97	1.260
Y_3600_R		13,981	Cts/S	153.12	1.0952	13,981
Y_2243_A		8,610.6	Cts/S	19.182	0.22277	8,610.6
Y_3600_A		148,270	Cts/S	549.22	0.37041	148,270

SL7420-001

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 6:11:13PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.1692	ug/L	0.2324	137.3	-44.38
Al3961_R		55.23	ug/L	3.901	7.062	39.61
As1891_A		3.138	ug/L	1.079	34.37	-0.1999
B_2089_A		10.93	ug/L	0.1707	1.563	16.52
Ba4554_R		65.13	ug/L	0.3326	0.5107	2,997
Be3130_R		0.07636	ug/L	0.01675	21.93	-0.6249
Ca3158_R	W	25,360	ug/L	195.8	0.7719	25,390
Cd2265_A		0.1556	ug/L	0.01684	10.82	-1.573
Co2286_A		0.1159	ug/L	0.1967	169.7	5.833
Cr2677_A		0.6213	ug/L	0.2309	37.16	12.16
Cu3273_A		0.1978	ug/L	0.4265	215.7	3.555
Fe2599_R		22.91	ug/L	0.9272	4.047	35.23
K_7664_R		3,438	ug/L	27.30	0.7940	1,747
Li6707_R		4.481	ug/L	0.6152	13.73	40.32
Mg2025_A		4,345	ug/L	0.3105	0.007145	1,540
Mn2576_R		88.24	ug/L	0.8130	0.9213	758.9
Mo2020_A		0.3626	ug/L	0.08614	23.76	1.857
Na5895_R	F	278,700	ug/L	5,434	1.950	439,200
Ni2316_A		1.707	ug/L	0.1556	9.115	2.001

SL7420-001

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 6:11:13PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A		0.6627	ug/L	0.2163	32.64	0.1821
Sb2068_A		-1.242	ug/L	0.3738	30.09	0.2972
Se1960_A		-1.174	ug/L	0.3902	33.23	1.751
Si2516_R		857.2	ug/L	5.457	0.6366	380.8
Sn1899_A		-0.2591	ug/L	0.03811	14.71	1.873
Sr4215_R		212.1	ug/L	1.060	0.5000	12,700
Ti3349_A		-0.1331	ug/L	0.3405	255.8	-27.57
Tl1908_A		0.4971	ug/L	0.5178	104.2	-0.4926
V_2924_A		1.277	ug/L	0.1207	9.453	7.221
Zn2062_A		9.489	ug/L	0.1439	1.516	31.71
Y_3600_R		13,737	Cts/S	148.47	1.0808	13,737
Y_2243_A		8,218.8	Cts/S	10.182	0.12389	8,218.8
Y_3600_A		141,910	Cts/S	219.10	0.15440	141,910

SL7420-002

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 6:16:34PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.5738	ug/L	0.04636	8.080	-36.43
Al3961_R		77.82	ug/L	11.58	14.88	74.90
As1891_A		8.309	ug/L	0.7378	8.879	1.702
B_2089_A		23.29	ug/L	0.01555	0.06677	31.32
Ba4554_R		129.5	ug/L	0.5866	0.4529	5,872
Be3130_R		0.09228	ug/L	0.02854	30.93	0.5542
Ca3158_R	W	111,100	ug/L	847.3	0.7627	110,200
Cd2265_A		0.1031	ug/L	0.001205	1.169	-2.226
Co2286_A		0.1524	ug/L	0.1005	65.96	5.855
Cr2677_A		0.8379	ug/L	0.06477	7.730	14.56
Cu3273_A		1.210	ug/L	0.3345	27.64	14.88
Fe2599_R		5.110	ug/L	3.056	59.80	9.319
K_7664_R		11,760	ug/L	10.21	0.08687	6,087
Li6707_R		14.25	ug/L	0.4841	3.397	131.4
Mg2025_A		16,940	ug/L	275.9	1.628	5,899
Mn2576_R		56.60	ug/L	0.4175	0.7376	485.3
Mo2020_A		0.7494	ug/L	0.05145	6.865	3.092
Na5895_R	F	257,400	ug/L	1,061	0.4122	401,600
Ni2316_A		0.8795	ug/L	0.2571	29.23	0.6818
Pb2203_A		-1.228	ug/L	0.3357	27.33	-1.573
Sb2068_A		-1.182	ug/L	0.06419	5.433	0.3193
Se1960_A		1.107	ug/L	1.620	146.4	2.327
Si2516_R		1,385	ug/L	11.55	0.8337	599.0
Sn1899_A		0.5038	ug/L	0.5196	103.1	2.242
Sr4215_R		670.4	ug/L	4.275	0.6377	39,790
Ti3349_A		-0.7341	ug/L	0.1464	19.95	-43.32
Tl1908_A		-0.9267	ug/L	0.9023	97.37	-1.369
V_2924_A		7.583	ug/L	0.1974	2.603	83.05
Zn2062_A		2.869	ug/L	0.04308	1.501	10.46
Y_3600_R		13,594	Cts/S	86.299	0.63484	13,594
Y_2243_A		8,063.7	Cts/S	91.449	1.1341	8,063.7
Y_3600_A		139,900	Cts/S	1,767.1	1.2631	139,900

SL7472-001

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 6:21:54PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

SL7472-001

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 6:21:54PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.6118	ug/L	0.2473	40.42	-35.86
Al3961_R		567.3	ug/L	1.390	0.2450	532.9
As1891_A		2.965	ug/L	1.064	35.90	-0.2500
B_2089_A		223.4	ug/L	0.8298	0.3714	273.9
Ba4554_R		113.8	ug/L	0.8233	0.7232	5,158
Be3130_R		0.1111	ug/L	0.04963	44.66	1.801
Ca3158_R	W	385,900	ug/L	3,588	0.9298	382,300
Cd2265_A		-0.04830	ug/L	0.01827	37.82	-4.116
Co2286_A		-0.1511	ug/L	0.09309	61.60	4.643
Cr2677_A		1.931	ug/L	0.1566	8.111	27.83
Cu3273_A		21.81	ug/L	0.4190	1.921	247.0
Fe2599_R		1.660	ug/L	0.1092	6.579	4.380
K_7664_R		21,630	ug/L	102.6	0.4745	11,250
Li6707_R		28.68	ug/L	0.2228	0.7767	266.3
Mg2025_A		117.0	ug/L	0.9207	0.7872	37.15
Mn2576_R		0.4468	ug/L	0.3239	72.48	3.332
Mo2020_A		23.30	ug/L	0.1280	0.5492	77.16
Na5895_R	W	39,390	ug/L	387.5	0.9838	61,350
Ni2316_A		0.09939	ug/L	0.9130	918.6	-0.3851
Pb2203_A		8.213	ug/L	0.5761	7.014	7.024
Sb2068_A		11.15	ug/L	0.8089	7.256	6.629
Se1960_A		-0.005438	ug/L	0.2307	4,242	2.006
Si2516_R		532.1	ug/L	9.466	1.779	239.8
Sn1899_A		0.7563	ug/L	0.9885	130.7	2.356
Sr4215_R		527.5	ug/L	5.773	1.094	31,270
Ti3349_A		-0.2549	ug/L	0.2396	93.99	-30.45
Tl1908_A		0.1578	ug/L	0.1331	84.33	-0.6099
V_2924_A		2.230	ug/L	0.02109	0.9460	17.20
Zn2062_A		3.047	ug/L	0.03818	1.253	10.90
Y_3600_R		13,578	Cts/S	98.100	0.72248	13,578
Y_2243_A		7,984.6	Cts/S	38.877	0.48690	7,984.6
Y_3600_A		140,430	Cts/S	7.7408	0.0055120	140,430

SL7472-001L

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 6:27:12PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		3.016	ug/L	1.497	49.62	-37.71
Al3961_R		704.3	ug/L	8.708	1.236	123.7
As1891_A		9.797	ug/L	8.622	88.01	-0.6583
B_2089_A		218.9	ug/L	3.282	1.500	59.08
Ba4554_R		113.1	ug/L	0.3386	0.2993	1,074
Be3130_R		0.2268	ug/L	0.06008	26.49	-2.773
Ca3158_R	W	396,200	ug/L	2,476	0.6251	80,550
Cd2265_A		-0.1511	ug/L	0.09186	60.79	-4.109
Co2286_A		-1.048	ug/L	0.3089	29.47	4.664
Cr2677_A		3.863	ug/L	2.368	61.30	14.37
Cu3273_A		19.65	ug/L	0.3383	1.721	47.74
Fe2599_R		-0.4400	ug/L	8.378	1,904	1.916
K_7664_R		21,700	ug/L	70.61	0.3254	2,257
Li6707_R		48.62	ug/L	1.511	3.107	91.31
Mg2025_A		124.3	ug/L	0.8729	0.7022	5.543
Mn2576_R		2.604	ug/L	1.807	69.39	4.078
Mo2020_A		23.06	ug/L	0.4076	1.768	16.63
Na5895_R		39,650	ug/L	109.7	0.2766	12,670
Ni2316_A		1.608	ug/L	0.1032	6.416	-0.1717

SL7472-001L

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 6:27:12PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A		8.905	ug/L	0.6082	6.830	1.255
Sb2068_A		7.852	ug/L	1.299	16.54	1.827
Se1960_A		-1.326	ug/L	5.812	438.3	2.044
Si2516_R		543.8	ug/L	55.47	10.20	63.44
Sn1899_A		-1.838	ug/L	2.117	115.2	1.861
Sr4215_R		533.0	ug/L	3.785	0.7102	6,460
Ti3349_A		-4.769	ug/L	1.317	27.61	-51.77
Tl1908_A		0.4785	ug/L	1.621	338.7	-0.6824
V_2924_A		4.114	ug/L	0.9702	23.59	1.669
Zn2062_A		2.638	ug/L	0.6223	23.59	3.302
Y_3600_R		13,939	Cts/S	86.769	0.62248	13,939
Y_2243_A		8,435.3	Cts/S	57.970	0.68723	8,435.3
Y_3600_A		147,090	Cts/S	384.26	0.26124	147,090

SL7472-001A

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 6:31:36PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		507.5	ug/L	0.7428	0.1464	8,954
Al3961_R		1,083	ug/L	0.9612	0.08872	984.8
As1891_A		522.5	ug/L	2.309	0.4420	188.8
B_2089_A		729.1	ug/L	1.578	0.2165	905.0
Ba4554_R		619.6	ug/L	12.95	2.090	28,350
Be3130_R		498.6	ug/L	9.613	1.928	34,710
Ca3158_R	W	376,100	ug/L	474.0	0.1260	377,800
Cd2265_A		494.2	ug/L	0.1154	0.02335	6,239
Co2286_A		505.6	ug/L	0.2211	0.04373	1,946
Cr2677_A		506.7	ug/L	1.221	0.2409	6,116
Cu3273_A		534.6	ug/L	1.349	0.2523	5,965
Fe2599_R		515.7	ug/L	9.190	1.782	751.4
K_7664_R	W	26,600	ug/L	738.6	2.776	14,040
Li6707_R		548.3	ug/L	13.11	2.391	5,199
Mg2025_A		633.6	ug/L	0.6318	0.09972	227.5
Mn2576_R		502.9	ug/L	9.952	1.979	4,330
Mo2020_A		538.5	ug/L	0.2621	0.04868	1,773
Na5895_R	W	39,320	ug/L	976.9	2.484	62,100
Ni2316_A		510.4	ug/L	1.040	0.2038	790.7
Pb2203_A		502.5	ug/L	0.2961	0.05893	460.0
Sb2068_A		523.5	ug/L	0.5418	0.1035	271.0
Se1960_A		518.2	ug/L	0.5756	0.1111	139.4
Si2516_R		805.6	ug/L	24.39	3.028	361.2
Sn1899_A		0.6974	ug/L	0.7158	102.6	2.327
Sr4215_R	W	1,039	ug/L	23.71	2.282	62,470
Ti3349_A		502.6	ug/L	1.612	0.3207	13,420
Tl1908_A		484.8	ug/L	2.454	0.5062	303.4
V_2924_A		510.9	ug/L	1.301	0.2546	6,049
Zn2062_A		495.0	ug/L	0.2645	0.05343	1,531
Y_3600_R		13,769	Cts/S	102.65	0.74551	13,769
Y_2243_A		7,995.8	Cts/S	1.2098	0.015131	7,995.8
Y_3600_A		139,090	Cts/S	703.94	0.50611	139,090

SL7472-001S

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 6:36:40PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

SL7472-001S

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 6:36:40PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		20.10	ug/L	0.002288	0.01138	310.3
Al3961_R		1,414	ug/L	21.16	1.496	1,239
As1891_A		42.96	ug/L	0.4712	1.097	14.21
B_2089_A		425.8	ug/L	2.748	0.6453	517.6
Ba4554_R		923.2	ug/L	5.685	0.6158	41,790
Be3130_R		19.49	ug/L	0.2663	1.366	1,330
Ca3158_R	W	401,800	ug/L	12,060	3.001	399,400
Cd2265_A		95.54	ug/L	0.3100	0.3244	1,196
Co2286_A		199.3	ug/L	0.9929	0.4981	765.4
Cr2677_A		79.84	ug/L	0.8914	1.117	976.8
Cu3273_A		123.6	ug/L	0.6977	0.5644	1,394
Fe2599_R		407.3	ug/L	0.6454	0.1585	587.7
K_7664_R	W	26,430	ug/L	95.55	0.3615	13,810
Li6707_R		235.8	ug/L	1.922	0.8151	2,212
Mg2025_A		1,972	ug/L	9.818	0.4978	677.4
Mn2576_R		196.1	ug/L	0.1923	0.09809	1,671
Mo2020_A		64.86	ug/L	0.4569	0.7045	212.7
Na5895_R	W	43,910	ug/L	125.6	0.2860	68,630
Ni2316_A		200.0	ug/L	0.9325	0.4661	306.6
Pb2203_A		47.81	ug/L	0.06611	0.1383	42.98
Sb2068_A		51.59	ug/L	0.2211	0.4286	26.57
Se1960_A		39.87	ug/L	1.172	2.939	12.53
Si2516_R		947.9	ug/L	16.50	1.740	416.5
Sn1899_A		196.3	ug/L	0.3272	0.1667	104.8
Sr4215_R		748.1	ug/L	2.926	0.3911	44,510
Ti3349_A		189.0	ug/L	1.775	0.9396	5,076
Tl1908_A		37.99	ug/L	0.4355	1.146	22.58
V_2924_A		198.8	ug/L	0.5558	0.2796	2,386
Zn2062_A		197.8	ug/L	0.7555	0.3820	609.2
Y_3600_R		13,625	Cts/S	4.7210	0.034649	13,625
Y_2243_A		7,945.9	Cts/S	23.690	0.29814	7,945.9
Y_3600_A		140,420	Cts/S	78.119	0.055631	140,420

SL7472-001P

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 6:41:52PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		18.61	ug/L	0.07441	0.3999	278.3
Al3961_R		1,319	ug/L	2.796	0.2119	1,157
As1891_A		38.31	ug/L	1.237	3.230	12.64
B_2089_A		392.9	ug/L	0.6517	0.1659	482.1
Ba4554_R		864.1	ug/L	0.4518	0.05229	39,150
Be3130_R		18.31	ug/L	0.2093	1.143	1,250
Ca3158_R	W	380,100	ug/L	1,012	0.2662	378,200
Cd2265_A		88.32	ug/L	0.1774	0.2008	1,115
Co2286_A		184.6	ug/L	0.2333	0.1264	715.6
Cr2677_A		75.95	ug/L	1.334	1.757	911.3
Cu3273_A		117.4	ug/L	1.811	1.542	1,298
Fe2599_R		381.4	ug/L	2.760	0.7235	550.9
K_7664_R		24,680	ug/L	1.873	0.007587	12,900
Li6707_R		220.6	ug/L	2.944	1.335	2,070
Mg2025_A		1,830	ug/L	3.392	0.1854	633.8
Mn2576_R		182.6	ug/L	0.2131	0.1167	1,558
Mo2020_A		59.91	ug/L	0.1741	0.2906	198.2
Na5895_R	W	41,010	ug/L	52.93	0.1291	64,150
Ni2316_A		185.4	ug/L	0.3162	0.1706	286.6

SL7472-001P

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 6:41:52PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A		44.17	ug/L	0.4307	0.9752	40.03
Sb2068_A		46.71	ug/L	1.197	2.563	24.35
Se1960_A		39.41	ug/L	0.1016	0.2579	12.52
Si2516_R		892.9	ug/L	7.507	0.8407	393.6
Sn1899_A		181.7	ug/L	0.05031	0.02770	98.00
Sr4215_R		700.3	ug/L	1.256	0.1794	41,700
Ti3349_A		179.5	ug/L	1.790	0.9970	4,727
Tl1908_A		35.03	ug/L	1.374	3.923	20.93
V_2924_A		188.7	ug/L	2.798	1.482	2,221
Zn2062_A		182.8	ug/L	0.6153	0.3365	568.3
Y_3600_R		13,636	Cts/S	163.44	1.1986	13,636
Y_2243_A		8,016.5	Cts/S	8.0818	0.10081	8,016.5
Y_3600_A		137,700	Cts/S	1,797.6	1.3055	137,700

SL7472-002

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 6:47:05PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.5397	ug/L	0.08917	16.52	-37.35
Al3961_R		175.7	ug/L	0.9931	0.5651	201.3
As1891_A		2.264	ug/L	0.1744	7.701	-0.5098
B_2089_A		250.9	ug/L	1.031	0.4110	309.0
Ba4554_R		91.30	ug/L	0.5496	0.6020	4,174
Be3130_R		0.02672	ug/L	0.08854	331.4	-4.038
Ca3158_R	W	331,700	ug/L	953.0	0.2873	331,100
Cd2265_A		-0.04176	ug/L	0.06291	150.7	-4.061
Co2286_A		-0.3454	ug/L	0.2309	66.87	3.926
Cr2677_A		4.963	ug/L	0.08578	1.729	65.11
Cu3273_A		14.70	ug/L	0.1148	0.7806	167.8
Fe2599_R		0.3780	ug/L	1.217	321.9	2.561
K_7664_R		18,850	ug/L	50.24	0.2666	9,867
Li6707_R		27.12	ug/L	0.4409	1.626	253.6
Mg2025_A		2,706	ug/L	3.917	0.1447	936.5
Mn2576_R		0.6060	ug/L	0.3846	63.47	5.454
Mo2020_A		19.20	ug/L	0.06745	0.3513	64.11
Na5895_R	W	34,350	ug/L	131.0	0.3813	53,920
Ni2316_A		-0.06511	ug/L	0.4188	643.3	-0.6722
Pb2203_A		0.9507	ug/L	0.3764	39.59	0.4105
Sb2068_A		43.58	ug/L	1.814	4.163	23.44
Se1960_A		-0.5976	ug/L	0.01765	2.954	1.858
Si2516_R		843.6	ug/L	2.600	0.3082	373.6
Sn1899_A		0.5211	ug/L	0.2086	40.04	2.245
Sr4215_R		492.7	ug/L	2.405	0.4882	29,430
Ti3349_A		-0.3156	ug/L	0.08240	26.11	-32.28
Tl1908_A		-0.1604	ug/L	1.253	781.4	-0.8164
V_2924_A		2.456	ug/L	0.1907	7.765	20.24
Zn2062_A		2.273	ug/L	0.05904	2.597	8.561
Y_3600_R		13,683	Cts/S	2.6217	0.019160	13,683
Y_2243_A		8,037.5	Cts/S	4.1099	0.051135	8,037.5
Y_3600_A		141,220	Cts/S	431.18	0.30532	141,220

SL7496-009

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 6:52:17PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

SL7496-009

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 6:52:17PM
Sample Type: Unknown

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.6333	ug/L	0.07715	12.18	-37.37
Al3961_R		11.88	ug/L	2.480	20.87	-1.555
As1891_A		0.8964	ug/L	1.028	114.6	-1.056
B_2089_A		3.686	ug/L	0.3821	10.37	7.614
Ba4554_R		-0.1789	ug/L	0.1884	105.3	17.66
Be3130_R		0.04933	ug/L	0.01128	22.88	-2.461
Ca3158_R		54.04	ug/L	5.744	10.63	20.48
Cd2265_A		0.04890	ug/L	0.02806	57.38	-3.020
Co2286_A		-0.2789	ug/L	0.03789	13.58	4.351
Cr2677_A		0.4230	ug/L	0.2729	64.51	9.966
Cu3273_A		0.04050	ug/L	0.3566	880.7	1.846
Fe2599_R		5.506	ug/L	0.4168	7.570	9.840
K_7664_R		104.1	ug/L	12.92	12.41	-17.77
Li6707_R		3.064	ug/L	1.816	59.27	26.62
Mg2025_A		19.14	ug/L	2.110	11.02	3.389
Mn2576_R		1.292	ug/L	0.2286	17.69	10.51
Mo2020_A		0.03418	ug/L	0.02663	77.92	0.7336
Na5895_R		98.83	ug/L	2.235	2.261	134.5
Ni2316_A		0.2408	ug/L	0.2663	110.6	-0.3304
Pb2203_A		-0.09397	ug/L	0.07544	80.28	-0.5364
Sb2068_A		-0.2354	ug/L	0.03799	16.14	0.8422
Se1960_A		0.4887	ug/L	1.144	234.1	2.231
Si2516_R		104.5	ug/L	13.19	12.61	59.67
Sn1899_A		-0.06223	ug/L	0.2602	418.2	2.013
Sr4215_R		0.3361	ug/L	0.1205	35.86	-12.61
Ti3349_A		0.01719	ug/L	0.1104	642.2	-24.47
Tl1908_A		-0.8727	ug/L	0.9033	103.5	-1.315
V_2924_A		0.5509	ug/L	0.07957	14.44	-1.416
Zn2062_A		0.6295	ug/L	0.07138	11.34	3.603
Y_3600_R		13,505	Cts/S	218.25	1.6161	13,505
Y_2243_A		8,356.2	Cts/S	28.177	0.33721	8,356.2
Y_3600_A		147,840	Cts/S	522.45	0.35340	147,840

CCV

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 6:56:42PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		488.4	ug/L	2.203	0.4511	9,008
Al3961_R		12,700	ug/L	14.58	0.1149	10,570
As1891_A		488.9	ug/L	3.660	0.7485	189.1
B_2089_A		481.3	ug/L	0.8543	0.1775	646.8
Ba4554_R		497.2	ug/L	0.4035	0.08116	22,690
Be3130_R		488.4	ug/L	0.7066	0.1447	33,900
Ca3158_R		12,700	ug/L	0.2104	0.001657	12,690
Cd2265_A		482.1	ug/L	1.520	0.3153	6,538
Co2286_A		491.1	ug/L	1.506	0.3067	2,027
Cr2677_A		496.1	ug/L	0.2642	0.05326	6,316
Cu3273_A		480.9	ug/L	1.531	0.3185	5,658
Fe2599_R		12,830	ug/L	16.50	0.1286	18,590
K_7664_R		12,820	ug/L	17.08	0.1333	6,709
Li6707_R		504.9	ug/L	0.5121	0.1014	4,773
Mg2025_A		12,480	ug/L	11.92	0.09556	4,632
Mn2576_R		493.4	ug/L	4.087	0.8282	4,235
Mo2020_A		487.4	ug/L	1.525	0.3129	1,721
Na5895_R		13,000	ug/L	43.07	0.3313	20,460
Ni2316_A		502.4	ug/L	0.06868	0.01367	832.9

CCV

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 6:56:42PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Pb2203_A		486.1	ug/L	4.365	0.8979	476.5
Sb2068_A		483.5	ug/L	1.275	0.2637	266.7
Se1960_A		490.4	ug/L	2.916	0.5946	141.7
Si2516_R		12,490	ug/L	53.51	0.4283	5,327
Sn1899_A		495.8	ug/L	0.06356	0.01282	282.5
Sr4215_R		510.9	ug/L	0.8222	0.1609	30,620
Ti3349_A		481.6	ug/L	0.5658	0.1175	13,560
Tl1908_A		490.1	ug/L	0.7186	0.1466	329.1
V_2924_A		488.8	ug/L	0.5135	0.1051	6,108
Zn2062_A		484.7	ug/L	1.500	0.3094	1,608
Y_3600_R		13,727	Cts/S	22.318	0.16259	13,727
Y_2243_A		8,575.6	Cts/S	19.763	0.23046	8,575.6
Y_3600_A		146,690	Cts/S	95.918	0.065388	146,690

CCB

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 7:00:51PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio
Ag3280_A		0.4004	ug/L	0.2541	63.47	-41.88
Al3961_R		11.29	ug/L	5.663	50.18	-2.126
As1891_A		0.3428	ug/L	0.6026	175.8	-1.289
B_2089_A		0.9237	ug/L	0.2483	26.88	4.218
Ba4554_R		-0.2593	ug/L	0.05969	23.02	14.70
Be3130_R		0.04431	ug/L	0.01697	38.30	-2.927
Ca3158_R		6.116	ug/L	2.428	39.70	-27.81
Cd2265_A		0.04260	ug/L	0.07677	180.2	-3.163
Co2286_A		-0.3409	ug/L	0.03917	11.49	4.185
Cr2677_A		-0.01389	ug/L	0.1476	1,063	4.388
Cu3273_A		-0.3788	ug/L	0.009845	2.599	-3.144
Fe2599_R		1.449	ug/L	0.4303	29.69	4.225
K_7664_R		24.05	ug/L	19.00	78.99	-61.81
Li6707_R		3.337	ug/L	1.274	38.18	30.27
Mg2025_A		-0.8079	ug/L	1.070	132.4	-3.884
Mn2576_R		0.3944	ug/L	0.01185	3.005	3.024
Mo2020_A		0.4981	ug/L	0.05902	11.85	2.375
Na5895_R		40.05	ug/L	16.18	40.39	45.06
Ni2316_A		-0.01304	ug/L	0.01204	92.33	-0.7517
Pb2203_A		0.7189	ug/L	1.121	155.9	0.2518
Sb2068_A		-0.5412	ug/L	0.1900	35.11	0.6901
Se1960_A		-1.042	ug/L	1.183	113.6	1.844
Si2516_R		9.168	ug/L	1.287	14.04	20.67
Sn1899_A		-0.2027	ug/L	0.3096	152.7	1.973
Sr4215_R		0.1480	ug/L	0.01582	10.69	-24.76
Ti3349_A		0.08347	ug/L	0.06893	82.58	-22.66
Tl1908_A		0.7600	ug/L	0.4223	55.56	-0.2412
V_2924_A		0.4964	ug/L	0.1112	22.40	-2.134
Zn2062_A		-0.1072	ug/L	0.1544	144.0	1.249
Y_3600_R		14,067	Cts/S	93.743	0.66640	14,067
Y_2243_A		8,519.9	Cts/S	71.823	0.84300	8,519.9
Y_3600_A		148,310	Cts/S	552.39	0.37245	148,310

PQL

Method Name: FAST-2016_NO_AU
Method Revision: 561
Analyst Name: JS
Acquire Date: 8/10/2018 7:05:14PM
Sample Type: QC

Elem	Flags	Avg	Units	Stddev	%RSD	Intensity Ratio

Logbooks and Supporting Documents

Katahdin Analytical Services, LLC

Non-Volatile TCLP/SPLP Extraction Fluid Preparation and Use Logbook

FLUID PREPARATION

TCLP ☑ SPLP ☐	TCLP Fluid #:	Fluid Batch #:	Prep Date:	Prepared by:	Measured pH:
	1	1470	8/1/18	AMJ	4.92

Reagent	Manufacturer's Lot Number	Reagent Volume (mL)	Reagent Mass (g)	Fluid Final Volume (L)
Glacial Acetic Acid	MSR91	120	N.A.	20
Sodium Hydroxide	MSR79	N.A.	5495	↓
0.6% Sulfuric Acid / 0.4% nitric acid				

AMJ 8/1/18

Matrix Spike: 2.0mL of MW17913+MW17914 & 0.2mL of MS2124/MW17928

FLUID USE LOG

Katahdin Sample Number	TCLP Extraction Start Date	Extract to be Analyzed for:			
		Metals	SVOA	Pest	Herb
Blank: PBT1470	8/1/18	✓			
Matrix Spike: SL7143-1A	8/1/18	✓			
SL7131-5A	8/1/18	✓			
SL7131-6A	"	✓			
SL7143-1A	"	✓			
SL6539-14A	8/2/18	✓			
SL6539-38A	"				
PBT1470A	8/9/18	✓	✓	✓	✓
SL7420-1C	"	✓	✓	✓	✓
SL7420-2C	"	✓	✓	✓	✓
SL7425-10	"	✓	✓	✓	✓

explosive

KATAHDIN ANALYTICAL SERVICES, LLC. Non-Volatile TCLP/SPLP Extraction Log

I. EXTRACTION CONDITIONS

Extraction Method:	SW846 1311 (TCLP) ☑		Balance ID: BAL-15	Rotary Extractor ID: 2		
	SW846 1312 (SPLP) ☐		pH Meter ID: Orion 520A s/n 7422	pH Probe ID: 573352b0038		
Solid pH Determination:	Date: 8-9-18	Analyst: AMJ	Room Thermometer ID: Dig 70	(Room Temp Criteria. 23(±2)°C)		
Rotary Extraction Started:	Date: 8/9/18	Time: 1321	Analyst: AMJ	RoomTemp(°C):	Start: 22.4	End: 23.2
Rotary Extraction Completed:	Date: 8/10/18	Time: 0521	Analyst: AMJ	Room Temp (°C):	Min. 22.4	Max. 23.4
Extraction Filtered:	Date: 8/10/18	Time: 0753	Analyst: AMJ	Filter Lot #: R7SA02387 / R7MA33070		
Elapsed Extraction Time (HH:MM): 16:00		5% HNO_3 ID (used to wash filters): HR2074		HNO_3 Lot # (used to preserve extracts): MSR110		
Fluid 1 pH (Day of use): PBT1470A - 4.95 PBT1472A - 4.94		Fluid 1 Expiration Date: 8/11/19 / 8/9/19		Rotary Extractor Rotation Rate Checked? ✓		
Fluid 2 pH (Day of use): PBT1471A - 2.92		Fluid 2 Expiration Date: 8/6/19		Criteria. 30 ± 2 RPM (29)		

II. EXTRACTION SETUP

TCLP Fluid pH: #1 - 4.93 ± 0.05 #2 - 2.88 ± 0.05 SPLP Fluid pH: #1 - 4.20 ± 0.05 #2 - 5.00 ± 0.05

Katahdin Sample No. (include bottle ID)	Matrix	Check One: 100% Wet Solids- waste will yield no liquid upon filtration	Check One: < 100% Wet Solids (Perform Solids Determination below)	SPLP FLUID # (1 for east and 2 for west of Mississippi River)	TCLP pH Determination and Fluid Selection (date & init. above): Initial pH of solid phase: (if <5, use Fluid #1; if >5 add 3.5 mL of 1 N HCl)	TCLP pH Determination and Fluid Selection (date & init. above): pH after 1 N HCL addition (if <5, use Fluid #1; if >5, use Fluid #2	Extraction Setup: Volume of Extraction Fluid (mL)	Extraction Setup: Fluid # used	Extraction Setup: Associated Extraction Blank ID:	Extraction Setup: Weight of Waste (g)	pH of extract after extraction:	Extract to be analyzed for: Metals (M), SVOA (S), PEST (P), HERB (H), Cyanide (C)	Extraction Bottle ID (if applicable)
SL7472-1A	SL	✓	—	—	11.66	11.17	2000	2	PBT1471A	100.19	10.36	M	NA
SL7472-2A	SL	✓	—	—	11.66	11.17	2000	2	〃	100.12	10.36	M	NA
SL7420-1C	SL	✓	—	—	7.54	1.88	2000	1	PBT1470A	100.03	5.01	M,H,P S,V	38
SL7420-2C	SL	✓	—	—	8.56	2.02	2000	1	〃	100.10	6.03	M,H,P S,V	47
SL7425-1B	SL	✓	—	—	7.95	1.95	2000	1	〃	100.05	5.09	M,H,P S,V	54
SL7426-1B	SL	✓	—	—	10.49	2.09	2000	1	PBT1472A	100.15	8.55	M,H,P S,V	33
PBT1471A	AQ	~	—	—	—	—	2000	2	NA	NA	2.41	M	NA
PBT1470AB	AQ	—	—	—	—	—	2000	1	NA	NA	4.74	H,P,S,V	53
PBT1472A	AQ	—	—	—	—	—	2000	1	NA	NA	8.486	M,H,P,S	49

AMJ 8/9/18 — JS 8/9/18 — AMJ 8/10/18 — MD 8/11/18

Katahdin Analytical Services 4000115

Katahdin Analytical Services, Inc. | **Metals Preparation Benchsheet**

Reagent Information: **Method:** 7470

HNO3: MSR110 H2SO4: MSR103

KMNO4: MR20169 K2S2O8: MR20360 NH2OH-HCl: MR2076

Standards/Spiking Information:

1ppm A : MW17928

Pipet 1ppm B : MW17964

M11 LCSW = 125uL of 1ppm A to 25mL

M11 Spike(S/P) = 25uL of 1ppm A to 25mL

M15 ICV = 600uL of 1ppm B to 100 mL

M15 S10.0 = 1000uL of 1ppm A to 100 mL

Heat Source ID : B

Start Time: 0945 /Temp. 90 °C

End Time: 1145 /Temp. 93 °C

Thermometer ID/Pos: AUC25 / 1.2

REVIEWED
JS 8.10.18
KATAHDIN ANALYTICAL
METALS SECTION

See QA-066-188 page for Spiking Info.

Sample ID	Batch ID	Initial Wt/Vol	Initial Units	Final Vol	Final Units	MX	Meth	Anal.	Date	Bottle
LCSWLH10HGW1	LH10HGW1	0.025	L	0.025	L	AQ	HG	AMJ	08/10/2018	
PBT1470B	LH10HGW1		L		L	AQ	HG	AMJ	08/10/2018	B
PBT1471A	LH10HGW1		L		L	AQ	HG	AMJ	08/10/2018	A
PBWLH10HGW1	LH10HGW1		L		L	AQ	HG	AMJ	08/10/2018	
SL7419-001	LH10HGW1		L		L	AQ	HG	AMJ	08/10/2018	D
SL7419-002	LH10HGW1		L		L	AQ	HG	AMJ	08/10/2018	D
SL7419-003	LH10HGW1		L		L	AQ	HG	AMJ	08/10/2018	D
SL7419-004	LH10HGW1		L		L	AQ	HG	AMJ	08/10/2018	D
SL7419-005	LH10HGW1		L		L	AQ	HG	AMJ	08/10/2018	D
SL7419-006	LH10HGW1		L		L	AQ	HG	AMJ	08/10/2018	D
SL7419-007	LH10HGW1		L		L	AQ	HG	AMJ	08/10/2018	D
SL7419-008	LH10HGW1		L		L	AQ	HG	AMJ	08/10/2018	D
SL7420-001	LH10HGW1		L		L	AQ	HG	AMJ	08/10/2018	C
SL7420-002	LH10HGW1		L		L	AQ	HG	AMJ	08/10/2018	C
SL7472-001	LH10HGW1		L		L	AQ	HG	AMJ	08/10/2018	A
SL7472-001P *	LH10HGW1		L		L	AQ	HG	AMJ	08/10/2018	A
SL7472-001S *	LH10HGW1		L		L	AQ	HG	AMJ	08/10/2018	A
SL7472-002	LH10HGW1		L		L	AQ	HG	AMJ	08/10/2018	A
SL7496-009	LH10HGW1		L		L	AQ	HG	AMJ	08/10/2018	D
SL7501-001	LH10HGW1		L		L	AQ	HG	AMJ	08/10/2018	
SL7501-002	LH10HGW1		L		L	AQ	HG	AMJ	08/10/2018	
SL7501-003	LH10HGW1		L		L	AQ	HG	AMJ	08/10/2018	
SL7501-005	LH10HGW1		L		L	AQ	HG	AMJ	08/10/2018	
SL7503-011	LH10HGW1		L		L	AQ	HG	AMJ	08/10/2018	

JS 8.10.18

 Digestion performed by: AW/AMJ On: 8/10/18

Katahdin Analytical Services 4000116

Katahdin Analytical Services, Inc.

Metals Preparation Benchsheet

Reagent Information:

Method: 3010

REVIEWED
JS 8.10.18
KATAHDIN ANALYTICAL
METALS SECTION

HNO3: MSR110 HCL: MSR102

Pipet	LCS/Spiking Information:
M10	CLPP-SPK-1 (ID/Vol): MS2124 / 0.05 mL
M15	CLPP-SPK-INT1 (ID/Vol): MW17958 / 0.5 mL
M15	CLPP-SPK-INT2 (ID/Vol): MW17959 / 0.5 mL
____	_____ Spike (ID/Vol): NA / _____ mL

amj 8/10/18

Heat Source ID : DE
Start Time: 0823 /Temp. 92 °C
End Time: 1446 /Temp. 91 °C
Thermometer ID/Pos: AIC24 / 2.6

Sample ID	Batch ID	Initial Wt/Vol	Initial Units	Final Vol	Final Units	MX	Meth	Anal.	Date	Bottle
LCSWLH10ICW1	LH10ICW1	0.05	L	0.05	L	AQ	IC	AMJ	08/10/2018	
PBT1470B	LH10ICW1	0.01	L		L	AQ	IC	AMJ	08/10/2018	B
PBT1471A	LH10ICW1	0.01	L		L	AQ	IC	AMJ	08/10/2018	A
PBWLH10ICW1	LH10ICW1	0.05	L		L	AQ	IC	AMJ	08/10/2018	
SL7420-001	LH10ICW1	0.01	L		L	AQ	IC	AMJ	08/10/2018	C
SL7420-002	LH10ICW1		L		L	AQ	IC	AMJ	08/10/2018	C
SL7472-001	LH10ICW1		L		L	AQ	IC	AMJ	08/10/2018	A
SL7472-001P	LH10ICW1		L		L	AQ	IC	AMJ	08/10/2018	A
SL7472-001S	LH10ICW1		L		L	AQ	IC	AMJ	08/10/2018	A
SL7472-002	LH10ICW1		L		L	AQ	IC	AMJ	08/10/2018	A
SL7496-009	LH10ICW1	0.05	L		L	AQ	IC	AMJ	08/10/2018	D

JS 8.10.18

Digestion performed by: AMJ On: 8/10/18

Katahdin Analytical Services 4000117

CONVENTIONAL AND PHYSICAL ANALYTICAL DATA

QC Summary Section

Quality Control Report

Blank Sample Summary Report

Cyanide, Reactive

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL	LOD
MBLANK	WG234469	SW846 7.3.3	13-AUG-18	13-AUG-18	U 10. mg/Kg	20. mg/Kg	10.

Ignitability

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL	LOD
MBLANK	WG233970	SW846 1010A	09-AUG-18	N/A	> 71. Deg. C	71. Deg. C	N/A

Paint Filter Liquids Test

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL	LOD
MBLANK	WG234215	SW846 9095B	13-AUG-18	N/A	NFL		N/A

Sulfide,Reactive

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL	LOD
MBLANK	WG234234	SW846 7.3.4	13-AUG-18	13-AUG-18	U 25. mg/Kg	50. mg/Kg	25.

Quality Control Report

Laboratory Control Sample Summary Report

Cyanide, Reactive

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG234469-2	LCS	WG234469	13-AUG-18	13-AUG-18	mg/Kg	20	J 4.2	21	0-100	
WG234469-3	LCSD	WG234469	13-AUG-18	13-AUG-18	mg/Kg	20	J 5.8	29	0-100	33*

Ignitability

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG233970-2	LCS	WG233970	09-AUG-18	N/A	Deg. C	27	27.	100	80-120	
WG233970-3	LCSD	WG233970	09-AUG-18	N/A	Deg. C	27	29.	108	80-120	7

Sulfide,Reactive

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG234234-2	LCS	WG234234	13-AUG-18	13-AUG-18	mg/Kg	954	860	90	50-150	
WG234234-3	LCSD	WG234234	13-AUG-18	13-AUG-18	mg/Kg	954	820	86	50-150	5

pH(Soil)

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG233892-1	LCS	WG233892	08-AUG-18	08-AUG-18	pH	7	7.0	100	90-110	
WG233892-2	LCSD	WG233892	08-AUG-18	08-AUG-18	pH	7	7.0	100	90-110	0

Sample Data Section

KATAHDIN ANALYTICAL SERVICES – INORGANIC DATA QUALIFIERS

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Practical Quantitation Level (PQL) (also called Limit of Quantitation (LOQ)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL "U" LOQ or "U" LOD, where the rate of false negatives is <1%.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Practical Quantitation Level (PQL) (also called Limit of Quantitation (LOQ)), but above the Method Detection Limit (MDL).

I-7 The laboratory's Practical Quantitation Level (PQL) or LOQ could not be achieved for this parameter due to sample composition, matrix effects, sample volume, or quantity used for analysis.

A-4 Please refer to cover letter or narrative for further information.

H_ Please note that the regulatory holding time for _____ is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. _____ for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H1 - pH H2 - DO H3 - sulfite H4 - residual chlorine

T1 The client did not provide the full volume of at least one liter for analysis of TSS. Therefore, the PQL of 2.5 mg/L could not be achieved.

T2 The client provided the required volume of at least one liter for analysis of TSS, but the laboratory could not filter the full one liter volume due to the sample matrix. Therefore, the PQL of 2.5 mg/L could not be achieved.

M1 The matrix spike and/or matrix spike duplicate recovery performed on this sample was outside of the laboratory acceptance criteria. Sample matrix is suspected. The laboratory criteria was met for the Laboratory Control Sample (LCS) analyzed concurrently with this sample.

M2 The matrix spike and/or matrix spike duplicate recovery was outside of the laboratory acceptance criteria. The native sample concentration is greater than four times the spike added concentration so the spike added could not be distinguished from the native sample concentration.

R1 The relative percent difference (RPD) between the duplicate analyses performed on this sample was outside of the laboratory acceptance criteria (when both values are greater than ten times the PQL).

MCL	Maximum Contaminant Level	NL	No limit
NFL	No Free Liquid Present	FLP	Free Liquid Present
NOD	No Odor Detected	TON	Threshold Odor Number

D-1 As required by Method 5210B, APHA Standard Methods for the Examination of Water and Wastewater (21st edition), the BOD value reported for this sample is 'qualified' because the check standard run concurrently with the sample analysis did not meet the criteria specified in the method (198 +/- 30.5 mg/L). These results may not be reportable for compliance purposes.

D-2 The measured final dissolved oxygen concentrations of all dilutions were less than the method-specified limit of 1 mg/L. The reported BOD result was calculated assuming a final oxygen concentration equal to 1 mg/L. The reported value should be considered a minimum value.

D-3 The dilution water used to prepare this sample did not meet the method and/or regulatory criteria of less than 0.2 or 0.4 mg/L dissolved oxygen (DO) uptake over the five day period of incubation. These results may not be reportable for compliance purposes.

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: David Nelson
ATI, Inc.
9220 Rumsey Road
Columbia,MD 21045

Lab Sample ID: SL7420-1
Report Date: 25-AUG-18
Client PO: PN:16-027
Project: Cornhusker Army Ammu
SDG: SL7420

Sample Description	Matrix	Date Sampled	Date Received
CHAAP-IDW-SOIL-080618-S	SL	06-AUG-18 14:00:00	08-AUG-18

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Cyanide, Reactive	U10. mg/Kg	20.	0.16	10.	SW846 7.3.3	WG234469	13-AUG-18 16:11:55	SW846 7.3.4	13-AUG-18	
Ignitability	>71. Deg. C	71.	71.	N/A	SW846 1010A	WG233970	09-AUG-18 15:19:00	N/A	N/A	
Paint Filter Liquids Test	NFL			N/A	SW846 9095B	WG234215	13-AUG-18 12:19:00	N/A	N/A	
Sulfide,Reactive	U50 mg/Kg	50	16.39	25	SW846 7.3.4	WG234234	13-AUG-18 15:40:00	SW846 7.3.4	13-AUG-18	
pH(Soil)	8.1 pH	0.10	0.10	N/A	SW846 9045D	WG233892	08-AUG-18 16:49:20	SW846 9045C	08-AUG-18	

Katahdin Analytical Services 5000007

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: David Nelson
ATI, Inc.
9220 Rumsey Road
Columbia,MD 21045

Lab Sample ID: SL7420-2
Report Date: 25-AUG-18
Client PO: PN:16-027
Project: Cornhusker Army Ammu
SDG: SL7420

Sample Description	Matrix	Date Sampled	Date Received
CHAAP-IDW-SOIL-080618-N	SL	06-AUG-18 14:10:00	08-AUG-18

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Cyanide, Reactive	U10. mg/Kg	20.	0.16	10.	SW846 7.3.3	WG234469	13-AUG-18 16:11:56	SW846 7.3.4	13-AUG-18	
Ignitability	>71. Deg. C	71.	71.	N/A	SW846 1010A	WG233970	09-AUG-18 16:12:00	N/A	N/A	
Paint Filter Liquids Test	NFL			N/A	SW846 9095B	WG234215	13-AUG-18 12:19:00	N/A	N/A	
Sulfide,Reactive	U50 mg/Kg	50	16.39	25	SW846 7.3.4	WG234234	13-AUG-18 15:40:00	SW846 7.3.4	13-AUG-18	
pH(Soil)	8.2 pH	0.10	0.10	N/A	SW846 9045D	WG233892	08-AUG-18 16:53:47	SW846 9045C	08-AUG-18	

Katahdin Analytical Services 5000008

Raw Data Section

WET CHEMISTRY BATCH REPORT
Aug 15 2018, 10:19 am
Batch: WG234463

Parameter: Total Cyanide

Date Analyzed: 13-AUG-18

Analyst Initials: AP

Prep Date: 13-AUG-18

Prep Method: EPA 335.4

Prep Chemist: AP

Sample	Samp Type	Method	Initial Amt.	Final Amt.	Rpt. DF	Result	Rpt Result	TS(%)	PQL	MDL	Adj PQL	RPD	%Rec
SL7454-1	SAMP	EPA 335.4	0.14300g	6.0000mL	38	2.7004	U19. mg/Kgdrywt	18.	.5	8.4	19.		
SL7470-1	SAMP	EPA 335.4	6.0000mL	6.0000mL	1	.0284	U10. ug/L	NA	10	4.0	10.		
WG234463-1	MBLANK	EPA 335.4	6.0000mL	6.0000mL	1	2.1241	U8.0 ug/L	NA	10	4.0	10.		
WG234463-2	LCS	EPA 335.4	6.0000mL	6.0000mL	1	201.05093	200 ug/L	NA	10	4.0	10.		100
WG234463-3	LCSD	EPA 335.4	6.0000mL	6.0000mL	1	194.87654	190 ug/L	NA	10	4.0	10.	3	97

Comments:

WG234463-1	SL7470-1
WG234463-2	SL7470-1
WG234463-3	SL7470-1

Entered by: AP Date: 8/15/18 Accepted by: [signature] Date: 08/15/18 ✓

Katahdin Analytical Services 5000010

WET CHEMISTRY BATCH REPORT
Aug 15 2018, 10:20 am
Batch: WG234465

Parameter: Total Cyanide

Prep Date: 13-AUG-18

Date Analyzed: 13-AUG-18

Prep Method: EPA 335.4

Analyst Initials: AP

Prep Chemist: AP

Sample	Samp Type	Method	Initial Amt.	Final Amt.	Rpt. DF	Result	Rpt Result	TS(%)	PQL	MDL	Adj PQL	RPD	%Rec
SL7411-2	SAMP	EPA 335.4	6.0000mL	6.0000mL	1	.2572	U5.0 ug/L	NA	5	4.0	5.0		
SL7452-2	SAMP	EPA 335.4	6.0000mL	6.0000mL	1	.78981	U5.0 ug/L	NA	5	4.0	5.0		
SL7460-2	SAMP	EPA 335.4	6.0000mL	6.0000mL	1	-.06755	U5.0 ug/L	NA	5	4.0	5.0		
WG234465-1	MBLANK	EPA 335.4	6.0000mL	6.0000mL	1	2.1241	U5.0 ug/L	NA	5	4.0	5.0		
WG234465-2	LCS	EPA 335.4	6.0000mL	6.0000mL	1	201.05093	200 ug/L	NA	5	4.0	5.0		100
WG234465-3	LCSD	EPA 335.4	6.0000mL	6.0000mL	1	194.87654	190 ug/L	NA	5	4.0	5.0	3	97

Comments:

WG234465-1	SL7411-2
WG234465-2	SL7411-2
WG234465-3	SL7411-2

Entered by: AP Date: 8/15/18 Accepted by: Date: 08/15/18

Katahdin Analytical Services 5000011

WET CHEMISTRY BATCH REPORT
Aug 15 2018, 10:20 am
Batch: WG234466

Parameter: Total Cyanide

Prep Date: 13-AUG-18

Date Analyzed: 13-AUG-18

Prep Method: SW846 M9012B

Analyst Initials: AP

Prep Chemist: AP

Sample	Samp Type	Method	Initial Amt.	Final Amt.	Rpt. DF	Result	Rpt Result	TS(%)	PQL	MDL	Adj PQL	RPD	%Rec
SL7497-15	SAMP	SW846 M9012B	0.25700g	6.0000mL	2.9	21.02974	0.73 mg/Kgdrywt	67.	.12	0.10	0.35		
SL7497-9	SAMP	SW846 M9012B	0.24600g	6.0000mL	2.8	35.30654	1.2 mg/Kgdrywt	72.	.12	0.10	0.34		
SL7621-1	SAMP	SW846 M9012B	0.14600g	6.0000mL	5.4	.93449	U0.65 mg/Kgdrywt	64.	.12	0.19	0.65		
SL7621-2	SAMP	SW846 M9012B	0.15400g	6.0000mL	5.2	-.42202	U0.62 mg/Kgdrywt	62.	.12	0.19	0.62		
SL7621-3	SAMP	SW846 M9012B	0.19900g	6.0000mL	4.1	1.57922	U0.49 mg/Kgdrywt	61.	.12	0.15	0.49		
SL7621-4	SAMP	SW846 M9012B	0.19400g	6.0000mL	4.1	1.04518	U0.49 mg/Kgdrywt	62.	.12	0.15	0.49		
SL7621-5	SAMP	SW846 M9012B	0.26400g	6.0000mL	3.1	3.23952	J0.12 mg/Kgdrywt	62.	.12	0.11	0.37		

Comments:

SL7623-2	MS/MSD
WG234466-1	SL7623-2
WG234466-2	SL7623-2
WG234466-3	SL7623-2
WG234466-4	SL7623-2
WG234466-5	SL7623-2
WG234466-6	SL7623-8

Entered by: AP Date: 8/15/18 Accepted by: [signature] Date: 08/15/18 ✓

Katahdin Analytical Services 5000012

WET CHEMISTRY BATCH REPORT
Aug 15 2018, 10:20 am
Batch: WG234466

Parameter: Total Cyanide

Prep Date: 13-AUG-18

Date Analyzed: 13-AUG-18

Prep Method: SW846 M9012

Analyst Initials: AP

Prep Chemist: AP

Sample	Samp Type	Method	Initial Amt.	Final Amt.	Rpt. DF	Result	Rpt Result	TS(%)	PQL	MDL	Adj PQL	RPD	%Rec
SL7623-2	SAMP	SW846 M9012B	6.0000mL	6.0000mL	1	1.33421	U10. ug/L	NA	10	4.0	10.		
SL7623-3	SAMP	SW846 M9012B	6.0000mL	6.0000mL	1	.01295	U10. ug/L	NA	10	4.0	10.		
SL7623-4	SAMP	SW846 M9012B	6.0000mL	6.0000mL	1	.10509	U10. ug/L	NA	10	4.0	10.		
SL7623-5	SAMP	SW846 M9012B	6.0000mL	6.0000mL	1	1.99335	U10. ug/L	NA	10	4.0	10.		
SL7623-6	SAMP	SW846 M9012B	6.0000mL	6.0000mL	1	1.77146	U10. ug/L	NA	10	4.0	10.		
SL7623-7	SAMP	SW846 M9012B	6.0000mL	6.0000mL	1	-1.95235	U10. ug/L	NA	10	4.0	10.		
SL7623-8	SAMP	SW846 M9012B	6.0000mL	6.0000mL	20	2686.02563	2700 ug/L	NA	10	79.	200		
WG234466-1	MBLANK	SW846 M9012B	6.0000mL	6.0000mL	1	2.1241	U8.0 ug/L	NA	10	4.0	10.		
WG234466-2	LCS	SW846 M9012B	6.0000mL	6.0000mL	1	201.05093	200 ug/L	NA	10	4.0	10.		100
WG234466-3	LCSD	SW846 M9012B	6.0000mL	6.0000mL	1	194.87654	190 ug/L	NA	10	4.0	10.	3	97
WG234466-4	MS	SW846 M9012B	6.0000mL	6.0000mL	1	106.46535	110 ug/L	NA	10	4.0	10.		106
WG234466-5	MSD	SW846 M9012B	6.0000mL	6.0000mL	1	102.3379	100 ug/L	NA	10	4.0	10.	4	102
WG234466-6	DUP	SW846 M9012B	6.0000mL	6.0000mL	20	2380.5332	2400 ug/L	NA	10	79.	200	12	

Comments:

SL7623-2	MS/MSD
WG234466-1	SL7623-2
WG234466-2	SL7623-2
WG234466-3	SL7623-2
WG234466-4	SL7623-2
WG234466-5	SL7623-2
WG234466-6	SL7623-8

Entered by: AP Date: 8/15/18 Accepted by: Date: 08/15/18

Katahdin Analytical Services 5000013

WET CHEMISTRY BATCH REPORT
Aug 15 2018, 10:21 am
Batch: WG234468

Parameter: Total Cyanide

Prep Date: 13-AUG-18

Date Analyzed: 13-AUG-18

Prep Method: SW846 M9012B

Analyst Initials: AP

Prep Chemist: AP

Sample	Samp Type	Method	Initial Amt.	Final Amt.	Rpt. DF	Result	Rpt Result	TS(%)	PQL	MDL	Adj PQL	RPD	%Rec
SL7622-1	SAMP	SW846 M9012B	0.24300g	6.0000mL	2.3	.26056	U0.28 mg/Kgdrywt	88.	.12	0.083	0.28		
WG234468-1	MBLANK	SW846 M9012B	0.50000g	6.0000mL	1	-.803	U0.096 mg/Kgdrywt	NA	.12	0.036	0.12		
WG234468-2	LCS	SW846 M9012B	0.50000g	6.0000mL	1	190.83659	2.3 mg/Kgdrywt	NA	.12	0.036	0.12		95
WG234468-3	LCSD	SW846 M9012B	0.50000g	6.0000mL	1	194.71281	2.3 mg/Kgdrywt	NA	.12	0.036	0.12	2	97

Comments:

WG234468-1	SL7622-1
WG234468-2	SL7622-1
WG234468-3	SL7622-1

Entered by: AP Date: 8/15/18 Accepted by: [signature] Date: 08/15/18 ✓

Katahdin Analytical Services 5000014

WET CHEMISTRY BATCH REPORT
Aug 15 2018, 10:21 am
Batch: WG234469

Parameter: Cyanide, Reactive

Prep Date: 13-AUG-18

Date Analyzed: 13-AUG-18

Prep Method: SW846 7.3.4

Analyst Initials: AP

Prep Chemist: RO

Sample	Samp Type	Method	Initial Amt.	Final Amt.	Rpt. DF	Result	Rpt Result	TS(%)	PQL	MDL	Adj PQL	RPD	%Rec
SL7420-1	SAMP	SW846 7.3.3	10.246g	190.00mL	.976	-.3974	U10. mg/Kg	NA	20	0.16	20.		
SL7420-2	SAMP	SW846 7.3.3	10.214g	190.00mL	.979	-.50365	U10. mg/Kg	NA	20	0.16	20.		
SL7425-1	SAMP	SW846 7.3.3	10.245g	190.00mL	.976	-.47435	U20. mg/Kg	NA	20	0.16	20.		
SL7426-1	SAMP	SW846 7.3.3	10.566g	190.00mL	.946	-.66848	U20. mg/Kg	NA	20	0.16	20.		
SL7485-1	SAMP	SW846 7.3.3	10.503g	190.00mL	.952	-.793	U20. mg/Kg	NA	20	0.16	20.		
SL7487-1	SAMP	SW846 7.3.3	10.109g	190.00mL	.989	-.73141	U20. mg/Kg	NA	20	0.16	20.		
SL7489-1	SAMP	SW846 7.3.3	10.711g	190.00mL	.934	-.53969	U20. mg/Kg	NA	20	0.16	20.		
SL7493-1	SAMP	SW846 7.3.3	10.032g	190.00mL	.997	-.34221	U20. mg/Kg	75.	20	0.16	20.		
SL7493-2	SAMP	SW846 7.3.3	10.406g	190.00mL	.961	-.31186	U20. mg/Kg	NA	20	0.16	20.		
SL7497-16	SAMP	SW846 7.3.3	10.424g	190.00mL	.959	-.96164	U10. mg/Kg	NA	20	0.16	20.		
SL7560-1	SAMP	SW846 7.3.3	11.283g	190.00mL	.886	-.7083	U10. mg/Kg	85.	20	0.16	20.		
SL7566-1	SAMP	SW846 7.3.3	10.332g	190.00mL	.968	-.97104	U20. mg/Kg	NA	20	0.16	20.		
SL7569-1	SAMP	SW846 7.3.3	10.175g	190.00mL	.983	-.45499	U20. mg/Kg	NA	20	0.16	20.		
SL7616-1	SAMP	SW846 7.3.3	10.497g	190.00mL	.953	-.59181	U20. mg/Kg	NA	20	0.16	20.		
SL7620-1	SAMP	SW846 7.3.3	10.521g	190.00mL	.95	-.77898	U20. mg/Kg	NA	20	0.16	20.		
SL7629-1	SAMP	SW846 7.3.3	10.487g	190.00mL	.954	-.70792	U10. mg/Kg	NA	20	0.16	20.		
WG234469-1	MBLANK	SW846 7.3.3	10.000g	190.00mL	1	1.76658	U10. mg/Kg	NA	20	0.16	20.		
WG234469-2	LCS	SW846 7.3.3	10.000g	190.00mL	3	219.57005	J4.2 mg/Kg	NA	20	0.47	60.		21
WG234469-3	LCSD	SW846 7.3.3	10.000g	190.00mL	3	306.25	J5.8 mg/Kg	NA	20	0.47	60.	33	29

Comments:

SL7497-10	Use TS from SL7497-9
SL7497-16	Use TS from SL7497-9
WG234469-1	SL7566-1
WG234469-2	SL7566-1
WG234469-3	SL7566-1

Entered by: AP Date: 8/15/18 Accepted by: Date: 08/15/18 ✓

Katahdin Analytical Services 5000015

WET CHEMISTRY BATCH REPORT
Aug 17 2018, 10:10 am
Batch: WG234690

Parameter: Cyanide-Amenable

Prep Date: 13-AUG-18

Date Analyzed: 13-AUG-18

Prep Method: EPA 335.4

Analyst Initials:

Prep Chemist: AP

Sample	Samp Type	Method	Initial Amt.	Final Amt.	Rpt. DF	Result	Rpt Result	TS(%)	PQL	MDL	Adj PQL	RPD	%Rec
SL7410-3	SAMP	SM4500CN G M	6.0000mL	6.0000mL	1	49.56324	50. ug/L	NA	5	3.6	5.0		
WG234690-1	MBLANK	EPA 335.4	6.0000mL	6.0000mL	1	2.1241	U5.0 ug/L	NA	5	3.6	5.0		
WG234690-2	LCS	EPA 335.4	6.0000mL	6.0000mL	1	201.0509	200 ug/L	NA	5	3.6	5.0		100

Comments:

WG234690-1 SL7410-3
WG234690-2 SL7410-3

Entered by: AP Date: 8/17/18 Accepted by: [signature] Date: 08/27/18

Katahdin Analytical Services 5000016

KATAHDIN ANALYTICAL SERVICES, LLC.
Wet Chemistry Analysis Run Information Sheet

Analyte: CYANIDE	**Analyst:** AD
Instrument: KONELAB 20	**Analysis Date:** 8/13/18

Analytical Method (Check all that apply):

WG234690 R486323

- ☐ EPA 335.2
- ☐ EPA 335.3
- ☑ EPA335.4 — WG234463 R481074
- ☑ SW846 9012M — WG234468 R486077
- ☑ SW846 7.3.4 (Reactive) — WG234469 R486078
- 9012 — WG234464 R481075, WG234464 R481076

For reagents and standards prepared on each day of use and are either totally comsumed or disposed of, the reagent or standard ID is the abreviation of the reagent or standard name followed by the date. Please follow the preparation directions in the notes section.

Reagent Information: pH paper Lot ID: HC601354

Reagent Name	Reagent ID	Expiration Date
Pyridine / Barbituric Acid	**W16274**	**9/14/2018**
Phosphate Buffer	**W16757**	**8/24/2018**
Chloramine-T (dry reagent)	**SWL3964**	**3/7/2021**
Chloramine-T Solution, (Prepared from dry reagent)	CHL-T_081318	Day of use only
10 N NaOH Solution	**SWL4138**	**2/28/2019**
0.25 N NaOH Solution (Prepared from 10 N NaOH)	**W16285**	**3/16/2019**

Standards Information:

Standard Name	Concentration	ID	Expiration Date
Cal. Standard / CCV Stock	1000 mg/L	**SWL 4340**	**6/12/2019**
Cal. Std. / CCV Intermediate	50 mg/L	**W16583**	**12/12/2018**
250 ug/L Calibration Standard	250 ug/L	**W16584**	**9/12/2018**
10 ug/L Calibration Standard	10 ug/L	**W16585**	**9/12/2018**
CCV	125 ug/L	CN_CCV_081318	Day of use only
ICV Stock	1000 mg/L	**SWL4274**	**5/30/2019**
ICV Intermediate	50 mg/L	**W16581**	**12/12/2018**
ICV	200 ug/L	**W16582**	**9/12/2018**

Notes:

1) Reagents and were prepared on day of use by dilution with reagent water as follows:

2) Standards and were prepared on day of use by dilution with 0.25N NaOH as follows:

Reagent or Standard	Prepared From	Amount Added	Final Volume
Chloramine-T Solution	Chloramine-T (dry reagent)	1.0 g	100 mL
CCV	250 ug/L Calibration Standard	5.0 mL	10.0 mL

2) Additional calibration standards (100, 50, 25, 10, 5 ug/L) prepared by instrument during analysis through dilution of the 250 ug/L calibration standard.

Aquakem v. 7.2											
Results from time period:											
Mon Aug 13 13:46:51 2018											
Mon Aug 13 17:07:42 2018											
Sample Id	Test short name	Result	Result unit	Result date and time	Dil. ratio	Manual dil. ratio	Dil. Factor	Response	Blank init abs. (A)	Main abs. 1	Comments
CN-0	Cyanide	-0.7826	µg/l	8/13/18 13:46:51	0		1	0.00487	0.00001	0.00488	CAL POINT ACCEPTED
CN-250	Cyanide	5.63794	µg/l	8/13/18 13:46:52	49		50	0.01055	-0.00067	0.00988	CAL POINT ACCEPTED
CN-250	Cyanide	10.93186	µg/l	8/13/18 13:46:53	24		25	0.01522	-0.00085	0.01438	CAL POINT ACCEPTED
CN-250	Cyanide	25.42088	µg/l	8/13/18 13:46:54	9		10	0.02802	-0.00081	0.02721	CAL POINT ACCEPTED
CN-250	Cyanide	49.6628	µg/l	8/13/18 13:46:55	4		5	0.04944	-0.00072	0.04872	CAL POINT ACCEPTED
CN-250	Cyanide	98.58968	µg/l	8/13/18 13:46:56	1.5		2.5	0.09267	-0.00079	0.09188	CAL POINT ACCEPTED
CN-250	Cyanide	250.53944	µg/l	8/13/18 13:46:57	0		1	0.22691	-0.00057	0.22635	CAL POINT ACCEPTED
CN-CCV	Cyanide	118.75657	µg/l	8/13/18 14:12:18	0		1	0.11048	-0.00072	0.10977	95.01%
CN-CCB	Cyanide	-0.28834	µg/l	8/13/18 14:12:19	0		1	0.00531	-0.00028	0.00503	
BLANK	Cyanide	2.1241	µg/l	8/13/18 14:12:20	0	0	1	0.00744	-0.00014	0.0073	ACCEPTED
LCS	Cyanide	281.01523	µg/l	8/13/18 14:12:21	0	0	1	0.25384	-0.00018	0.25365	RERUN TO CONFIRM
HIGH	Cyanide	242.9191	µg/l	8/13/18 14:12:22	0	0	1	0.22018	0.00069	0.22087	ACCEPTED
LOW	Cyanide	8.0305	µg/l	8/13/18 14:12:23	0	0	1	0.01266	0.00384	0.0165	ACCEPTED
LCSD	Cyanide	194.87654	µg/l	8/13/18 14:12:24	0	0	1	0.17774	0.00117	0.1789	ACCEPTED
SL7470-1	Cyanide	0.0284	µg/l	8/13/18 14:12:25	0	0	1	0.00559	0.01094	0.01653	ACCEPTED
SL7411-2	Cyanide	0.2572	µg/l	8/13/18 14:12:26	0	0	1	0.00579	0.00636	0.01215	ACCEPTED
SL7452-2	Cyanide	0.78981	µg/l	8/13/18 14:12:27	0	0	1	0.00626	0.00255	0.00881	ACCEPTED
SL7460-2	Cyanide	-0.06755	µg/l	8/13/18 14:12:28	0	0	1	0.00551	0.00505	0.01056	ACCEPTED
SL7410-2 4	Cyanide	49.56324	µg/l	8/13/18 14:18:29	0	0	1	0.04935	0.01607	0.06543	ACCEPTED
CN-CCV	Cyanide	120.25153	µg/l	8/13/18 14:18:30	0		1	0.11181	-0.00055	0.11126	96.20%
CN-CCB	Cyanide	0.23784	µg/l	8/13/18 14:18:31	0		1	0.00578	-0.00065	0.00513	
SL7623-2	Cyanide	1.33421	µg/l	8/13/18 14:18:32	0	0	1	0.00674	0.00218	0.00892	ACCEPTED
SL7623-2 MS	Cyanide	106.46535	µg/l	8/13/18 14:18:33	0	0	1	0.09963	0.00045	0.10008	ACCEPTED
SL7623-2 MSD	Cyanide	102.3379	µg/l	8/13/18 14:18:34	0	0	1	0.09598	-0.00035	0.09563	ACCEPTED
SL7623-3	Cyanide	0.01295	µg/l	8/13/18 14:18:35	0	0	1	0.00558	-0.00026	0.00531	ACCEPTED
SL7623-4	Cyanide	0.10509	µg/l	8/13/18 14:18:36	0	0	1	0.00566	-0.00002	0.00564	ACCEPTED
SL7623-5	Cyanide	1.99335	µg/l	8/13/18 14:18:37	0	0	1	0.00733	0.00004	0.00736	ACCEPTED
SL7623-6	Cyanide	1.77146	µg/l	8/13/18 14:18:38	0	0	1	0.00713	0.00266	0.00979	ACCEPTED
SL7623-7	Cyanide	-1.95235	µg/l	8/13/18 14:18:39	0	0	1	0.00384	0.0086	0.01245	ACCEPTED
SL7623-8	Cyanide	2525.62549	µg/l	8/13/18 14:23:09	0	0	1	2.23691	0.00865	2.24556	RERUN DILUTE
SL7454-1	Cyanide	2.7004	µg/l	8/13/18 14:23:10	0	0	1	0.00795	0.00358	0.01153	ACCEPTED
CN-CCV	Cyanide	124.90761	µg/l	8/13/18 14:23:11	0		1	0.11592	-0.00031	0.11561	99.93%
CN-CCB	Cyanide	-0.15246	µg/l	8/13/18 14:23:12	0		1	0.00543	-0.00048	0.00495	
SL7497-9	Cyanide	35.30654	µg/l	8/13/18 14:23:13	0	0	1	0.03676	0.01029	0.04705	ACCEPTED
CN-CCV	Cyanide	124.47931	µg/l	8/13/18 14:25:52	0		1	0.11554	-0.00039	0.11516	99.58%
CN-CCB	Cyanide	-0.49725	µg/l	8/13/18 14:25:53	0		1	0.00513	-0.00027	0.00486	
CN-CCV	Cyanide	122.97711	µg/l	8/13/18 14:41:56	0		1	0.11421	-0.00081	0.1134	98.38%
CN-CCB	Cyanide	-0.36385	µg/l	8/13/18 14:41:57	0		1	0.00524	-0.00099	0.00425	
LCS	Cyanide	291.73505	µg/l	8/13/18 14:41:58	0	0	1	0.26331	-0.00079	0.26252	REPOUR RERUN
SL7623-8	Cyanide	2686.02563	µg/l	8/13/18 14:44:09	19	0	20	0.12422	0.00011	0.12433	ACCEPTED
CN-CCV	Cyanide	119.18571	µg/l	8/13/18 14:46:30	0		1	0.11086	-0.00062	0.11024	95.35%
CN-CCB	Cyanide	-0.55897	µg/l	8/13/18 14:46:31	0		1	0.00507	-0.00048	0.00459	
CN-CCV	Cyanide	122.17458	µg/l	8/13/18 15:05:37	0		1	0.1135	-0.00088	0.11263	97.74%
CN-CCB	Cyanide	-0.42702	µg/l	8/13/18 15:05:38	0		1	0.00519	-0.00096	0.00423	
LCS	Cyanide	294.83881	µg/l	8/13/18 15:05:39	0	0	1	0.26605	-0.00048	0.26557	REDISTIL
CN-CCV	Cyanide	117.65044	µg/l	8/13/18 15:07:52	0		1	0.10951	-0.0006	0.10891	94.12%
CN-CCB	Cyanide	-0.40496	µg/l	8/13/18 15:07:53	0		1	0.00521	-0.0008	0.0044	
CN-CCV	Cyanide	115.07274	µg/l	8/13/18 15:25:48	0		1	0.10723	-0.00058	0.10665	92.06%
CN-CCB	Cyanide	-0.16417	µg/l	8/13/18 15:25:49	0		1	0.00542	-0.00036	0.00506	

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Chlorinated

SL7497-15	Cyanide	21.02974	µg/l	8/13/18 15:25:50	0	0	1	0.02415	0.0085	0.03265	ACCEPTED
SL7621-1	Cyanide	0.93449	µg/l	8/13/18 15:25:51	0	0	1	0.00639	0.00406	0.01045	ACCEPTED
SL7621-2	Cyanide	-0.42202	µg/l	8/13/18 15:25:52	0	0	1	0.00519	0.00206	0.00726	ACCEPTED
SL7621-3	Cyanide	1.57922	µg/l	8/13/18 15:25:53	0	0	1	0.00696	0.00144	0.0084	ACCEPTED
SL7621-4	Cyanide	1.04518	µg/l	8/13/18 15:25:54	0	0	1	0.00649	0.00164	0.00813	ACCEPTED
SL7621-5	Cyanide	3.23952	µg/l	8/13/18 15:25:55	0	0	1	0.00843	0.00477	0.0132	ACCEPTED
BLANK 2	Cyanide	-0.803	µg/l	8/13/18 15:25:56	0	0	1	0.00486	0.00504	0.00989	ACCEPTED
LCS 2	Cyanide	190.83659	µg/l	8/13/18 15:25:57	0	0	1	0.17417	0.03204	0.2062	ACCEPTED
LCSD 2	Cyanide	194.71281	µg/l	8/13/18 15:25:58	0	0	1	0.17759	0.0046	0.18219	ACCEPTED
SL7622-1	Cyanide	0.26056	µg/l	8/13/18 15:28:22	0	0	1	0.0058	0.00008	0.00588	ACCEPTED
CN-CCV	Cyanide	115.91561	µg/l	8/13/18 15:30:35	0		1	0.10798	-0.00045	0.10753	92.73%
CN-CCB	Cyanide	-0.17316	µg/l	8/13/18 15:30:36	0		1	0.00541	-0.0006	0.00481	
CN-CCV	Cyanide	120.23503	µg/l	8/13/18 16:11:46	0		1	0.11179	-0.00046	0.11133	96.19%
CN-CCB	Cyanide	-0.31099	µg/l	8/13/18 16:11:47	0		1	0.00529	-0.00026	0.00503	
AMENABLE BLANK	Cyanide	303.51563	µg/l	8/13/18 16:11:48	0	0	1	0.27372	0.00393	0.27765	RERUN TO CONFIRM
AMENABLE LCS	Cyanide	-0.71609	µg/l	8/13/18 16:11:49	0	0	1	0.00493	0.00049	0.00542	ACCEPTED
SL7410-13	Cyanide	0.48332	µg/l	8/13/18 16:11:50	0	0	1	0.00599	0.00108	0.00708	ACCEPTED
SL7623-8 REDIST	Cyanide	2283.1189	µg/l	8/13/18 16:11:51	0	0	1	2.02266	0.00492	2.02758	RERUN DILUTE
R BLANK	Cyanide	1.76658	µg/l	8/13/18 16:11:52	0	0	1	0.00713	-0.00046	0.00666	ACCEPTED
R LCS	Cyanide	330.85226	µg/l	8/13/18 16:11:53	0	0	1	0.29787	0.00631	0.30418	RERUN DILUTE
R LCSD	Cyanide	405.96744	µg/l	8/13/18 16:11:54	0	0	1	0.36423	0.0025	0.36673	RERUN DILUTE
SL7420-1	Cyanide	-0.3974	µg/l	8/13/18 16:11:55	0	0	1	0.00521	-0.00073	0.00449	ACCEPTED
SL7420-2	Cyanide	-0.50365	µg/l	8/13/18 16:11:56	0	0	1	0.00512	-0.00083	0.00429	ACCEPTED
SL7425-1	Cyanide	-0.47435	µg/l	8/13/18 16:16:35	0	0	1	0.00515	0.00015	0.0053	ACCEPTED
CN-CCV	Cyanide	121.65488	µg/l	8/13/18 16:16:36	0		1	0.11305	-0.00057	0.11247	97.32%
CN-CCB	Cyanide	-0.55749	µg/l	8/13/18 16:16:37	0		1	0.00507	-0.00077	0.0043	
SL7426-1	Cyanide	-0.66848	µg/l	8/13/18 16:16:38	0	0	1	0.00498	-0.00073	0.00425	ACCEPTED
SL7485-1	Cyanide	-0.793	µg/l	8/13/18 16:16:39	0	0	1	0.00487	-0.00055	0.00431	ACCEPTED
SL7487-1	Cyanide	-0.73141	µg/l	8/13/18 16:16:40	0	0	1	0.00492	-0.00083	0.00409	ACCEPTED
SL7489-1	Cyanide	-0.53969	µg/l	8/13/18 16:16:41	0	0	1	0.00509	-0.00035	0.00474	ACCEPTED
CN-CCV	Cyanide	122.65829	µg/l	8/13/18 16:19:13	0		1	0.11393	-0.00068	0.11325	98.13%
CN-CCB	Cyanide	-0.62077	µg/l	8/13/18 16:19:14	0		1	0.00502	-0.00086	0.00415	
AMENABLE BLANK	Cyanide	-0.95699	µg/l	8/13/18 16:25:25	0	0	1	0.00472	0.00083	0.00555	ACCEPTED
SL7623-8 REDIST	Cyanide	2380.5332	µg/l	8/13/18 16:29:58	19	0	20	0.11072	-0.00036	0.11036	ACCEPTED
R LCS	Cyanide	219.57005	µg/l	8/13/18 16:29:59	2	0	3	0.07023	0.00209	0.07231	ACCEPTED
R LCSD	Cyanide	306.25	µg/l	8/13/18 16:30:00	2	0	3	0.09575	0.00135	0.0971	ACCEPTED
CN-CCV	Cyanide	120.57796	µg/l	8/13/18 16:32:10	0		1	0.11209	-0.00059	0.1115	96.46%
CN-CCB	Cyanide	-0.26653	µg/l	8/13/18 16:32:11	0		1	0.00533	-0.00044	0.00489	
CN-CCV	Cyanide	116.03671	µg/l	8/13/18 17:01:14	0		1	0.10808	-0.00037	0.10771	92.83%
CN-CCB	Cyanide	-0.10613	µg/l	8/13/18 17:01:15	0		1	0.00547	-0.00047	0.005	
SL7493-1	Cyanide	-0.34221	µg/l	8/13/18 17:01:16	0	0	1	0.00526	0.00024	0.0055	ACCEPTED
SL7493-2	Cyanide	-0.31186	µg/l	8/13/18 17:01:17	0	0	1	0.00529	-0.00058	0.00471	ACCEPTED
SL7492-10	Cyanide	-0.9038	µg/l	8/13/18 17:01:18	0	0	1	0.00477	-0.00053	0.00423	ACCEPTED
SL7497-16	Cyanide	-0.96164	µg/l	8/13/18 17:01:19	0	0	1	0.00472	-0.00078	0.00394	ACCEPTED
SL7560-1	Cyanide	-0.7083	µg/l	8/13/18 17:01:20	0	0	1	0.00494	-0.00087	0.00407	ACCEPTED
SL7566-1	Cyanide	-0.97104	µg/l	8/13/18 17:01:21	0	0	1	0.00471	0.00013	0.00484	ACCEPTED
SL7569-1	Cyanide	-0.45499	µg/l	8/13/18 17:01:22	0	0	1	0.00516	-0.00021	0.00496	ACCEPTED
SL7616-1	Cyanide	-0.59181	µg/l	8/13/18 17:01:23	0	0	1	0.00504	-0.00065	0.00439	ACCEPTED
SL7620-1	Cyanide	-0.77898	µg/l	8/13/18 17:01:24	0	0	1	0.00488	-0.00039	0.00449	ACCEPTED
SL7629-1	Cyanide	-0.70792	µg/l	8/13/18 17:04:58	0	0	1	0.00494	-0.0005	0.00444	ACCEPTED
CN-CCV	Cyanide	121.67746	µg/l	8/13/18 17:04:59	0		1	0.11307	-0.00074	0.11232	97.34%
CN-CCB	Cyanide	-0.29182	µg/l	8/13/18 17:05:00	0		1	0.00531	-0.0008	0.00451	
LCS REDIST	Cyanide	201.05093	µg/l	8/13/18 17:05:01	0	0	1	0.18319	0.0002	0.18339	ACCEPTED
CN-CCV	Cyanide	122.18231	µg/l	8/13/18 17:07:41	0		1	0.11351	-0.00026	0.11326	97.75%
CN-CCB	Cyanide	-0.3565	µg/l	8/13/18 17:07:42	0		1	0.00525	-0.00038	0.00487	

Laboratory
Analyzer User

Date : 8/13/2018
Time : 17:10

Test Cyanide
Unit µg/l

Sample ID:	Result	Date and Time	Note
CN-CCV	118.7566	8/13/2018 14:12	
CN-CCB	-0.2883	8/13/2018 14:12	
BLANK	2.1241	8/13/2018 14:12	
LCS	_____	-	R
HIGH	242.9191	8/13/2018 14:12	
LOW	8.0305	8/13/2018 14:12	
LCSD	194.8765	8/13/2018 14:12	
SL7470-1	0.0284	8/13/2018 14:12	
SL7411-2	0.2572	8/13/2018 14:12	
SL7452-2	0.7898	8/13/2018 14:12	
SL7460-2	-0.0676	8/13/2018 14:12	
SL7410-2	49.5632	8/13/2018 14:18	
CN-CCV	120.2515	8/13/2018 14:18	
CN-CCB	0.2378	8/13/2018 14:18	
SL7623-2	1.3342	8/13/2018 14:18	
SL7623-2 MS	106.4654	8/13/2018 14:18	
SL7623-2 MSD	102.3379	8/13/2018 14:18	
SL7623-3	0.0130	8/13/2018 14:18	
SL7623-4	0.1051	8/13/2018 14:18	
SL7623-5	1.9934	8/13/2018 14:18	
SL7623-6	1.7715	8/13/2018 14:18	
SL7623-7	-1.9523	8/13/2018 14:18	
SL7623-8	_____	-	R
SL7454-1	2.7004	8/13/2018 14:23	
CN-CCV	124.9076	8/13/2018 14:23	
CN-CCB	-0.1525	8/13/2018 14:23	
SL7497-9	35.3065	8/13/2018 14:23	
CN-CCV	124.4793	8/13/2018 14:25	
CN-CCB	-0.4972	8/13/2018 14:25	
CN-CCV	122.9771	8/13/2018 14:41	
CN-CCB	-0.3639	8/13/2018 14:41	
LCS	_____	-	R
SL7623-8	3e+003	8/13/2018 14:44	R
CN-CCV	119.1857	8/13/2018 14:46	
CN-CCB	-0.5590	8/13/2018 14:46	
CN-CCV	122.1746	8/13/2018 15:05	
CN-CCB	-0.4270	8/13/2018 15:05	
LCS	294.8388	8/13/2018 15:05	R
CN-CCV	117.6504	8/13/2018 15:07	
CN-CCB	-0.4050	8/13/2018 15:07	
CN-CCV	115.0727	8/13/2018 15:25	
CN-CCB	-0.1642	8/13/2018 15:25	
SL7497-15	21.0297	8/13/2018 15:25	
SL7621-1	0.9345	8/13/2018 15:25	
SL7621-2	-0.4220	8/13/2018 15:25	
SL7621-3	1.5792	8/13/2018 15:25	
SL7621-4	1.0452	8/13/2018 15:25	
SL7621-5	3.2395	8/13/2018 15:25	
BLANK 2	-0.8030	8/13/2018 15:25	
LCS 2	190.8366	8/13/2018 15:25	
LCSD 2	194.7128	8/13/2018 15:25	
SL7622-1	0.2606	8/13/2018 15:28	
CN-CCV	115.9156	8/13/2018 15:30	

Laboratory
Analyzer User

Date : 8/13/2018
Time : 17:10

Test Cyanide
Unit µg/l

Sample ID:	Result	Date and Time	Note
CN-CCB	-0.1732	8/13/2018 15:30	
CN-CCV	120.2350	8/13/2018 16:11	
CN-CCB	-0.3110	8/13/2018 16:11	
AMENABLE BLANK	_____	-	R
AMENABLE LCS	-0.7161	8/13/2018 16:11	
SL7410-1	0.4833	8/13/2018 16:11	
SL7623-8 REDIST	_____	-	R
R BLANK	1.7666	8/13/2018 16:11	
R LCS	_____	-	R
R LCSD	_____	-	R
SL7420-1	-0.3974	8/13/2018 16:11	
SL7420-2	-0.5036	8/13/2018 16:11	
SL7425-1	-0.4743	8/13/2018 16:16	
CN-CCV	121.6549	8/13/2018 16:16	
CN-CCB	-0.5575	8/13/2018 16:16	
SL7426-1	-0.6685	8/13/2018 16:16	
SL7485-1	-0.7930	8/13/2018 16:16	
SL7487-1	-0.7314	8/13/2018 16:16	
SL7489-1	-0.5397	8/13/2018 16:16	
CN-CCV	122.6583	8/13/2018 16:19	
CN-CCB	-0.6208	8/13/2018 16:19	
AMENABLE BLANK	-0.9570	8/13/2018 16:25	R
SL7623-8 REDIST	2e+003	8/13/2018 16:29	R
R LCS	219.5701	8/13/2018 16:29	R
R LCSD	306.2500	8/13/2018 16:30	R
CN-CCV	120.5780	8/13/2018 16:32	
CN-CCB	-0.2665	8/13/2018 16:32	
CN-CCV	116.0367	8/13/2018 17:01	
CN-CCB	-0.1061	8/13/2018 17:01	
SL7493-1	-0.3422	8/13/2018 17:01	
SL7493-2	-0.3119	8/13/2018 17:01	
SL7492-10	-0.9038	8/13/2018 17:01	
SL7497-16	-0.9616	8/13/2018 17:01	
SL7560-1	-0.7083	8/13/2018 17:01	
SL7566-1	-0.9710	8/13/2018 17:01	
SL7569-1	-0.4550	8/13/2018 17:01	
SL7616-1	-0.5918	8/13/2018 17:01	
SL7620-1	-0.7790	8/13/2018 17:01	
SL7629-1	-0.7079	8/13/2018 17:04	
CN-CCV	121.6775	8/13/2018 17:04	
CN-CCB	-0.2918	8/13/2018 17:05	
LCS REDIST	201.0509	8/13/2018 17:05	
CN-CCV	122.1823	8/13/2018 17:07	
CN-CCB	-0.3565	8/13/2018 17:07	

Laboratory
Analyzer User

8/13/2018 13:48

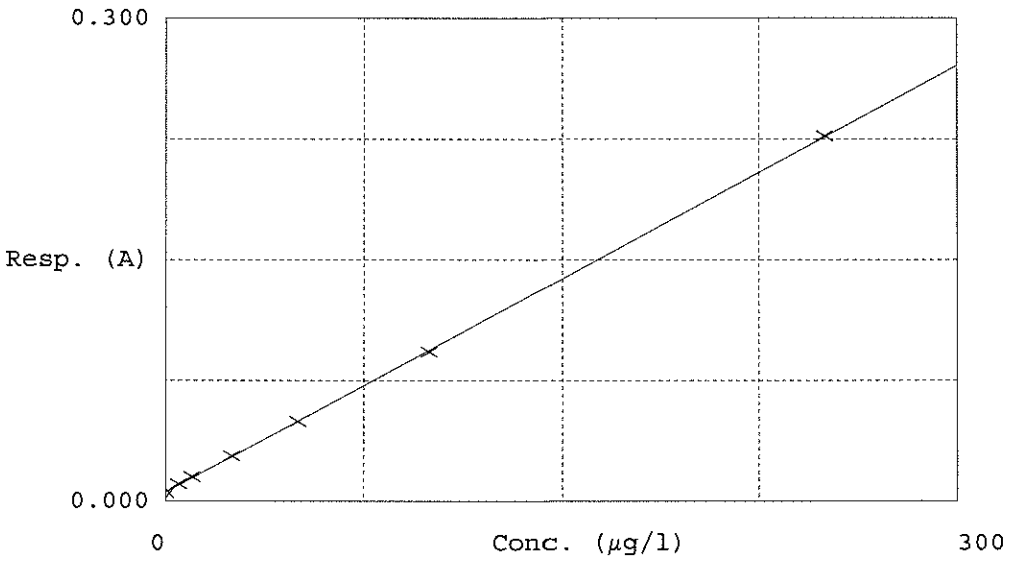
Test Cyanide

Accepted 8/13/2018 13:48

Factor 1132
Bias 0.006

Coeff. of det. 0.999907

Errors



	Calibrator	Response	Calc. con.	Conc.	Errors
1	CN-0	0.005	-0.78260	0.00000	
2	CN-250	0.011	5.63794	5.00000	
3	CN-250	0.015	10.93186	10.00000	
4	CN-250	0.028	25.42088	25.00000	
5	CN-250	0.049	49.66280	50.00000	
6	CN-250	0.093	98.58968	100.00000	
7	CN-250	0.227	250.53944	250.00000	

KATAHDIN ANALYTICAL SERVICES, LLC.
Wet Chemistry Analysis Run Information Sheet

Analyte: CYANIDE	**Analyst:** AP
Instrument: KONELAB 20	**Analysis Date:** 8/20/18

Analytical Method (Check all that apply):

☐ EPA 335.2 ☐ EPA 335.3 ☑ EPA335.4 ~~WG234907~~ WG234908 R486553 WG234909 R486554

☑ SW846 9012M WG234906 R486552 ☑ SW846 7.3.4 (Reactive) WG234910 R486555

For reagents and standards prepared on each day of use and are either totally comsumed or disposed of, the reagent or standard ID is the abreviation of the reagent or standard name followed by the date. Please follow the preparation directions in the notes section.

Reagent Information: pH paper Lot ID: HC601354

Reagent Name	Reagent ID	Expiration Date
Pyridine / Barbituric Acid	**W16274**	**9/14/2018**
Phosphate Buffer	**W16757**	**8/24/2018**
Chloramine-T (dry reagent)	**SWL3964**	**3/7/2021**
Chloramine-T Solution, (Prepared from dry reagent)	CHL-T_081318	Day of use only
10 N NaOH Solution	**SWL4138**	**2/28/2019**
0.25 N NaOH Solution (Prepared from 10 N NaOH)	**W16285**	**3/16/2019**

Standards Information:

Standard Name	Concentration	ID	Expiration Date
Cal. Standard / CCV Stock	1000 mg/L	**SWL 4340**	**6/12/2019**
Cal. Std. / CCV Intermediate	50 mg/L	**W16583**	**12/12/2018**
250 ug/L Calibration Standard	250 ug/L	**W16584**	**9/12/2018**
10 ug/L Calibration Standard	10 ug/L	**W16585**	**9/12/2018**
CCV	125 ug/L	CN_CCV_082018	Day of use only
ICV Stock	1000 mg/L	**SWL4274**	**5/30/2019**
ICV Intermediate	50 mg/L	**W16581**	**12/12/2018**
ICV	200 ug/L	**W16582**	**9/12/2018**

Notes:

1) Reagents and were prepared on day of use by dilution with reagent water as follows:

2) Standards and were prepared on day of use by dilution with 0.25N NaOH as follows:

Reagent or Standard	Prepared From	Amount Added	Final Volume
Chloramine-T Solution	Chloramine-T (dry reagent)	1.0 g	100 mL
CCV	250 ug/L Calibration Standard	5.0 mL	10.0 mL

2) Additional calibration standards (100, 50, 25, 10, 5 ug/L) prepared by instrument during analysis through dilution of the 250 ug/L calibration standard.

KATAHDIN ANALYTICAL SERVICES

CYANIDE MINI DISTILLATION:	SM4500-CN C	E335.4	SW9012B
Standard	**True Value ug/L**	**Source Standard ID**	**Source Standard Spike Amount (mL)**
Cal High Point	250	W16584	6mL
Cal Low Point	10	W16585	1
LCS	200	W16582	1
Matrix Spike	100	W16581	0.012 mL

PQL = 10 ug/L (AQ) & 0.5 mg/kg (SL)

Releasing Solution: W16725

NaOH Trapping Solution(IN): W16467

NaOH-0.25N: W16802

Block SN: 131200002198

Notes: W1a, W13, W4

KAS Sample ID	Res. Cl Check	Res. S2 Check	Initial pH	Distillation Start Time	Distillation End Time	Sample Volume (mL)	Sample Weight (g)	Distillate Volume	Comments
Blank	NA	NA	NA	1300	1331	6mL		6mL	
LCS	NA	NA	NA						
High	NA	NA	NA						
Low	NA	NA	NA						
LCSD	NA	NA	NA						
SL7470-1	—	—							
SL7411-2									
SL7452-2									
SL7460-2									
SL7410-2									
SL7623-2									
-2MS									
-2MSD									
-3									
-4									
-5									
-6									
-7									
-8									
SL7454-1							0.143 g		
SL7497-9							0.246 g		
-15	—	—	✓	1401	1432		0.257 g	6mL	
SL7621-1							0.146 g		
-2							0.154 g		
-3							0.199 g		
-4							0.194 g		
-5							0.264 g		
Blank 2						6mL			
LCS2									
LCSD2									

DISTILLED BY: AT

DISTILLATION DATE: 8/13/18

REVIEWED BY:

REVIEW DATE: 08/15/18

KATAHDIN ANALYTICAL SERVICES

CYANIDE MINI DISTILLATION:	SM4500-CN C	E335.4	SW9012B

Standard	True Value ug/L	Source Standard ID	Source Standard Spike Amount (mL)	PQL = 10 ug/L (AQ) & 0.5 mg/kg (SL)
Cal High Point	250	P 74		Releasing Solution:
Cal Low Point	10		AP 8/13/18	NaOH Trapping Solution(IN):
LCS	200			NaOH-0.25N:
Matrix Spike	100			Block SN: 131200002198

Notes:

KAS Sample ID	Res. Cl Check	Res. S2 Check	Initial pH	Distillation Start Time	Distillation End Time	Sample Volume (mL)	Sample Weight (g)	Distillate Volume	Comments
Blank	NA	NA	NA		AP 8/13/18				
LCS	NA	NA	NA						
High	NA	NA	NA						
Low	NA	NA	NA						
SC7622-1	–	–	✓	1401	1432		0.243g	6mL	
Amer Blank						6mL			
1 LCS									
SL7410-X3									
SC7623-8Dup	–	–	✓	1427	1458	6mL		6mL	Check
LCS	–	–	✓	1539	1610	6mL		6mL	Redist

Chlorinated

AP 8/13/18

DISTILLED BY:	AP	DISTILLATION DATE: 8/13/18
REVIEWED BY: [signature]		REVIEW DATE: 08/15/18

WL-020 – Revision 3 – 08/14/2015

QAWL861

0000075

12485803
W6234234

KATAHDIN ANALYTICAL
REACTIVE SULFIDE

METHOD: SW846 9030 / 7.3.4.2	PQL: 27 mg/kg
REAGENT LOT #:	
IODINE STANDARD: W16763	STS SOLUTION-0.0375N: SWC4324
Na2S SOLUTION: W16772	NaOH-0.25N:
HCl-6N: W16709	H2SO4-.005N:
Total CN (1000ug/ml) SWC4274	
LCS PREP:	
MS PREP:	

STANDARDIZATION OF I2		CALC OF I2 N	STANDARDIZATION OF Na2S			CALC OF Na2S mg/ml
VOL(ml) I2	VOL(ml) Na2S2O3		VOL(ml) I2	VOL(ml) Na2S2O3	VOL(ml) Na2S	
10	6.40		10	3.40	2	
"	6.40		"	3.35	"	
"	6.40		"	3.45	"	
	X:			X:		

Prep Start Time	Prep End Time	Sample ID	Sample Wt. (g)	NaOH Trap Vol.(ml)	Analysis Vol.(ml)	ml I2 Soln Added	ml STS to Endpoint	Time of Analysis
1240	1310	Blank	10	190	150		6.45	1330
"	"	LCS	"	"	"		5.30	"
"	"	LCSD	"	"	"		5.85	"
"	"	SL7420-1	10.246	"	"		6.45	"
"	"	" -2	10.214	"	"		6.40	"
"	"	SL7425-1	10.245	"	"		6.35	"
"	"	SL7426-1	10.566	"	"		6.50	"
"	"	SL7485-1	10.503	"	"		6.50	"
"	"	SL7487-1	10.109	"	"		6.65	"
"	"	SL7489-1	10.711	"	"		6.50	"
1505	1525	SL7493-1	10.032	"	"		6.40	"
"	"	" -2	10.406	"	"		6.60	"
"	"	SL7492-10	10.007	"	"		6.60	"
"	"	SL7457-16	10.424	"	"		5.40	"
"	"	SL7560-1	11.283	"	"		6.45	"
"	"	SL7566-1	10.332	"	"		6.40	"
"	"	SL7569-1	10.175	"	"		6.55	"
"	"	7616-1	10.497	"	"		6.40	"
"	"	7620-1	10.521	"	"		6.45	"

NOTES:

ANALYST: RO	DATE: 8/13/18
CHECKED BY:	DATE: 08/15/18

KATAHDIN ANALYTICAL
REACTIVE SULFIDE

METHOD: SW846 9030 / 7.3.4.2	PQL: 27 mg/kg
REAGENT LOT #:	
IODINE STANDARD: SEE PAGE 006	STS SOLUTION-0.0375N:
Na2S SOLUTION:	NaOH ~~0.25~~N:
HCl-6N:	H2SO4 ~~0.005~~N:
Total CN (1000ug/ml)	
LCS PREP:	
MS PREP:	

STANDARDIZATION OF I2		CALC OF I2 N	STANDARDIZATION OF Na2S			CALC OF Na2S mg/ml
VOL(ml) I2	VOL(ml) Na2S2O3		VOL(ml) I2	VOL(ml) Na2S2O3	VOL(ml) Na2S	
	X:			X:		

Prep Start Time	Prep End Time	Sample ID	Sample Wt. (g)	NaOH Trap Vol.(ml)	Analysis Vol.(ml)	ml I2 Soln Added	ml STS to Endpoint	Time of Analysis
1503	1535	SC76241	10.487	190	150		6.55	1560

RD

8/10/18

NOTES:

ANALYST: RD DATE: 8/10/18

CHECKED BY: DATE: 08/15/18

WET CHEMISTRY BATCH REPORT
Aug 10 2018, 09:41 am
Batch: WG233970

Parameter: Ignitability

Prep Date: N/A

Date Analyzed: 09-AUG-18

Prep Method: N/A

Analyst Initials: JP/AP

Prep Chemist: N/A

Sample	Samp Type	Method	Initial Amt.	Final Amt.	Rpt. DF	Result	Rpt Result	TS(%)	PQL	MDL	Adj PQL	RPD	%Rec
SL7319-2	SAMP	SW846 1010A	1g	1g	1	71	>71. Deg. C	85.	71	71.	71.		
SL7420-1	SAMP	SW846 1010A	1g	1g	1	71	>71. Deg. C	NA	71	71.	71.		
SL7420-2	SAMP	SW846 1010A	1g	1g	1	71	>71. Deg. C	NA	71	71.	71.		
SL7425-1	SAMP	SW846 1010A	1g	1g	1	71	>71. Deg. C	NA	71	71.	71.		
SL7426-1	SAMP	SW846 1010A	1g	1g	1	71	>71. Deg. C	NA	71	71.	71.		
WG233970-1	MBLANK	SW846 1010A	1g	1g	1	71	>71. Deg. C	NA	71	71.	71.		
WG233970-2	LCS	SW846 1010A	1g	1g	1	27.099	27. Deg. C	NA	71	71.	71.		100
WG233970-3	LCSD	SW846 1010A	1g	1g	1	29.099	29. Deg. C	NA	71	71.	71.	7	108

Comments:

WG233970-1	SL7319-2
WG233970-2	SL7319-2
WG233970-3	SL7319-2

Entered by: JP Date: 8/10/18 Accepted by: Date: 08/10/18

Katahdin Analytical Services 5000028

WG233970
R485494

KATAHDIN ANALYTICAL SERVICES, INC. - FLASHPOINT – CLOSED CUP LOGBOOK

METHOD: SW 846 1010	p-XYLENE: 27 Degrees Celcius	Ambient Barometric Pressure (*) = 757 mm Hg (in. of Hg) X (25.4 mm/in)
PQL: 25 Degrees Celcius	p-XYLENE Lot Number: SW2 4182	

QAWL868

	Sample ID	Analysis Time	Start Temperature (°C)	End Temperature (°C)	Flash? (Check appropriate box & record temp.) YES	Temp.(°C)	NO	Reported Flashpoint Corrected For Ambient Barometric Pressure	Comments
3	p-Xylene (LCS)	10:02	25°	29°	✓	29°		29.099	
2	p-Xylene (LCS)	10:10	25°	27°	✓	27°		27.099	
1	Method Blank	10:37	25°	71°		71°	✓		
	SL7319-2	11:35	25°	71°		71°	✓		
	SL7420-1	15:19	25	71°		71°	✓		
	-2	16:12	25°	71°		71°	✓		
	SL7425-1	1900	25°	71.0		71.0	✓		
	SL7426-1	1924	25.0	71.0		71.0	✓		
				JP 8/10/18					

*** = Ambient Pressure of the laboratory at the time of the test. When the pressure differs from 760 mm Hg, correct the flashpoint as follows: Corrected Flashpoint = (Observed Flashpoint in °C) + 0.033 (760 - the ambient barometric pressure in mm Hg) .**

Analyst JR / AP **Date** 8/9/18

Reviewed By [signature] **Date** 08/10/18

WL-029 – REVISION 1 – 10/06/2010

0000064

Katahdin Analytical Services 5000029

WET CHEMISTRY BATCH REPORT
Aug 13 2018, 05:10 pm
Batch: WG234234

Parameter: Sulfide,Reactive

Prep Date: 13-AUG-18

Date Analyzed: 13-AUG-18

Prep Method: SW846 7.3.4

Analyst Initials: RO

Prep Chemist: RO

Sample	Samp Type	Method	Initial Amt.	Final Amt.	Rpt. DF	Result	Rpt Result	TS(%)	PQL	MDL	Adj PQL	RPD	%Rec
SL7420-1	SAMP	SW846 7.3.4	10.246g	190.00mL	.98	-.03	U50 mg/Kg	NA	50	16.39	50		
SL7420-2	SAMP	SW846 7.3.4	10.214g	190.00mL	.98	0	U50 mg/Kg	NA	50	16.39	50		
SL7425-1	SAMP	SW846 7.3.4	10.245g	190.00mL	.98	.03	U50 mg/Kg	NA	50	16.39	50		
SL7426-1	SAMP	SW846 7.3.4	10.566g	190.00mL	.95	-.06	U50 mg/Kg	NA	50	16.39	50		
SL7485-1	SAMP	SW846 7.3.4	10.503g	190.00mL	.95	-.06	U50 mg/Kg	NA	50	16.39	50		
SL7487-1	SAMP	SW846 7.3.4	10.109g	190.00mL	.99	-.15	U50. mg/Kg	NA	50	16.39	50.		
SL7489-1	SAMP	SW846 7.3.4	10.711g	190.00mL	.93	-.06	U50 mg/Kg	NA	50	16.39	50		
SL7493-1	SAMP	SW846 7.3.4	10.032g	190.00mL	1	-.12	U50. mg/Kg	75.	50	16.39	50.		
SL7493-2	SAMP	SW846 7.3.4	10.406g	190.00mL	.96	-.12	U50 mg/Kg	NA	50	16.39	50		
SL7497-10	SAMP	SW846 7.3.4	10.007g	190.00mL	1	-.12	U25 mg/Kg	NA	50	16.39	50.		
SL7497-16	SAMP	SW846 7.3.4	10.424g	190.00mL	.96	.6	77. mg/Kg	NA	50	16.39	50		
SL7560-1	SAMP	SW846 7.3.4	11.283g	190.00mL	.89	-.03	U50 mg/Kg	85.	50	16.39	50		
SL7566-1	SAMP	SW846 7.3.4	10.332g	190.00mL	.97	0	U50 mg/Kg	NA	50	16.39	50		
SL7569-1	SAMP	SW846 7.3.4	10.175g	190.00mL	.98	-.09	U50 mg/Kg	NA	50	16.39	50		
SL7616-1	SAMP	SW846 7.3.4	10.497g	190.00mL	.95	0	U50 mg/Kg	NA	50	16.39	50		
SL7620-1	SAMP	SW846 7.3.4	10.521g	190.00mL	.95	-.03	U50 mg/Kg	NA	50	16.39	50		
SL7629-1	SAMP	SW846 7.3.4	10.487g	190.00mL	.95	-.09	U50 mg/Kg	NA	50	16.39	50		
WG234234-1	MBLANK	SW846 7.3.4	10.000g	190.00mL	1	-.03	U25. mg/Kg	NA	50	16.39	50.		
WG234234-2	LCS	SW846 7.3.4	10.000g	190.00mL	1	6.43	860 mg/Kg	NA	50	16.39	50.		90
WG234234-3	LCSD	SW846 7.3.4	10.000g	190.00mL	1	6.1	820 mg/Kg	NA	50	16.39	50.	5	86

Comments:

SL7497-10	Use TS from SL7497-9
SL7497-16	Use TS from SL7497-9
WG234234-1	SL7420-1
WG234234-2	SL7420-1
WG234234-3	SL7420-1

Entered by: [illegible] Date: 8/13/18 Accepted by: [illegible] Date: 08/14/18 ✓

Katahdin Analytical Services 5000030

REACTIVE SULFIDES
TITRIMETRIC

EPA: 7.3.4.2/9030
PQL = 27 mg/kg

DATE:	8/13/2018
ANALYST:	RO

STANDARDIZATION OF IODINE SOLUTION

VOL (mL) I_2	VOL (mL) $Na_2S_2O_3$
10.00	6.40
10.00	6.40
10.00	6.40
Mean $Na_2S_2O_3$=	**6.40**

CALC I_2 N =	**0.02400**

STANDARDIZATION OF SODIUM SULFIDE STANDARD

VOL (mL) I_2	VOL (mL) NA_2S	VOL (mL) $Na_2S_2O_3$
10.00	2.00	3.40
10.00	2.00	3.35
10.00	2.00	3.45
Mean Vol $Na_2S_2O_3$=		**3.40**

CALC NA_2S (mg H_2S/L):	**954.00**

$Na_2S_2O_3$ Normality:	**0.0375**

Sample ID	Sample Wt. (g)	Trap Vol. (mL)	Analysis Vol. (mL)	Volume I_2 Added (mL)	Volume $Na_2S_2O_3$ Added (mL)	Extraction Time (sec)	Calc. Sulfide (as S) in Analysis Aliquot (mg)	Releasable H_2S in Smpl. (mg/kg)	Recovery (%)	Duplicate RPD (%)
BLK	10.000	190.00	150.00	10.00	6.45	1800.00	-0.03	-4.05		
LCS S2	10.000	190.00	150.00	25.00	5.30	1800.00	6.43	866.05	90.8	
LCSD S2	10.000	190.00	150.00	25.00	5.85	1800.00	6.10	821.54		
SL7420-1	10.246	190.00	150.00	10.00	6.45	1800.00	-0.03	-3.95		
SL7420-2	10.214	190.00	150.00	10.00	6.40	1800.00	0.00	0.00	0.4	
SL7425-1	10.245	190.00	150.00	10.00	6.35	1800.00	0.03	3.95		
SL7426-1	10.566	190.00	150.00	10.00	6.50	1800.00	-0.06	-7.66		
SL7485-1	10.503	190.00	150.00	10.00	6.50	1800.00	-0.06	-7.71		
SL7487-1	10.109	190.00	150.00	10.00	6.65	1800.00	-0.15	-20.02		
SL7489-1	10.711	190.00	150.00	10.00	6.50	1800.00	-0.06	-7.56		
SL7493-1	10.032	190.00	150.00	10.00	6.60	1800.00	-0.12	-16.14		
SL7493-2	10.406	190.00	150.00	10.00	6.60	1800.00	-0.12	-15.56		
SL7492-10	10.007	190.00	150.00	10.00	6.60	1800.00	-0.12	-16.18		
SL7492-16	10.424	190.00	150.00	10.00	5.40	1800.00	0.60	77.65		
SL7560-1	11.283	190.00	150.00	10.00	6.45	1800.00	-0.03	-3.59		
SL7566-1	10.332	190.00	150.00	10.00	6.40	1800.00	0.00	0.00		
SL7569-1	10.175	190.00	150.00	10.00	6.55	1800.00	-0.09	-11.93		
SL7616-1	10.497	190.00	150.00	10.00	6.40	1800.00	0.00	0.00		
SL7620-1	10.521	190.00	150.00	10.00	6.45	1800.00	-0.03	-3.85		
SL7629-1	10.487	190.00	150.00	10.00	6.55	1800.00	-0.09	-11.58		

Katahdin Analytical Services 5000031

1248503
WG234234

KATAHDIN ANALYTICAL
REACTIVE SULFIDE

METHOD: SW846 9030 / 7.3.4.2	PQL: 27 mg/kg
REAGENT LOT #:	
IODINE STANDARD: WI6763	STS SOLUTION-0.0375N: SWL4324
Na2S SOLUTION: WI6772	NaOH-0.25N:
HCl-6N: WI6709	H2SO4-.005N:
Total CN (1000ug/ml) SWL4274	
LCS PREP:	
MS PREP:	

STANDARDIZATION OF I2		CALC OF I2 N	STANDARDIZATION OF Na2S			CALC OF Na2S mg/ml
VOL(ml) I2	VOL(ml) Na2S2O3		VOL(ml) I2	VOL(ml) Na2S2O3	VOL(ml) Na2S	
10	6.40		10	3.40	2	
"	6.40		"	3.35	"	
"	6.40		"	3.40	"	
	X:			X:		

Prep Start Time	Prep End Time	Sample ID	Sample Wt. (g)	NaOH Trap Vol.(ml)	Analysis Vol.(ml)	ml I2 Soln Added	ml STS to Endpoint	Time of Analysis
1240	1310	Blank	10	190	150		6.45	1330
"	"	LCS	"	"	"		5.30	"
"	"	LCSD	"	"	"		5.85	"
"	"	SL7420-1	10.246	"	"		6.45	"
"	"	" -2	10.214	"	"		6.40	"
"	"	SL7425-1	10.245	"	"		6.35	"
"	"	SL7426-1	10.566	"	"		6.50	"
"	"	SL7485-1	10.503	"	"		6.50	"
"	"	SL7487-1	10.109	"	"		6.65	"
"	"	SL7489-1	10.711	"	"		6.50	"
1505	1525	SL7493-1	10.032	"	"		6.60	"
"	"	" -2	10.406	"	"		6.60	"
"	"	SL7492-10	10.007	"	"		6.60	"
"	"	SL7497-16	10.424	"	"		5.40	"
"	"	SL7560-1	11.283	"	"		6.45	"
"	"	SL7566-1	10.332	"	"		6.40	"
"	"	SL7569-1	10.175	"	"		6.55	"
"	"	7616-1	10.497	"	"		6.40	"
"	"	7620-1	10.521	"	"		6.45	"

NOTES:

ANALYST: RO	DATE: 8/13/18
CHECKED BY:	DATE: 08/14/18

KATAHDIN ANALYTICAL
REACTIVE SULFIDE

METHOD: SW846 9030 / 7.3.4.2	PQL: 27 mg/kg
REAGENT LOT #:	
IODINE STANDARD: SEE PAGE 006	STS SOLUTION-0.0375N:
Na2S SOLUTION:	NaOH ~~0.25~~N:
HCl-6N:	H2SO4 ~~0.005~~N:
Total CN (1000ug/ml)	
LCS PREP:	
MS PREP:	

STANDARDIZATION OF I2		CALC OF I2 N	STANDARDIZATION OF Na2S			CALC OF Na2S mg/ml
VOL(ml) I2	VOL(ml) Na2S2O3		VOL(ml) I2	VOL(ml) Na2S2O3	VOL(ml) Na2S	
	X:			X:		

Prep Start Time	Prep End Time	Sample ID	Sample Wt. (g)	NaOH Trap Vol.(ml)	Analysis Vol.(ml)	ml I2 Soln Added	ml STS to Endpoint	Time of Analysis
1503	1535	SC76244	10.487	190	150		6.55	1540

RD

8/10/18

NOTES:

ANALYST: RD	DATE: 8/10/18
CHECKED BY:	DATE: 08/14/18

WET CHEMISTRY BATCH REPORT
Aug 09 2018, 12:36 pm
Batch: WG233890

Parameter: pH(Laboratory)

Prep Date: N/A

Date Analyzed: 08-AUG-18

Prep Method: N/A

Analyst Initials: AW

Prep Chemist: N/A

Sample	Samp Type	Method	Initial Amt.	Final Amt.	Rpt. DF	Result	Rpt Result	TS(%)	PQL	MDL	Adj PQL	RPD	%Rec
SL7429-1	SAMP	SW846 9040C	20.000mL	20.000mL	1	6.106	6.1 pH	NA	.1	0.10	0.10		
SL7429-2	SAMP	SW846 9040C	20.000mL	20.000mL	1	5.851	5.8 pH	NA	.1	0.10	0.10		
SL7440-1	SAMP	SW846 9040C	20.000mL	20.000mL	1	8.09	8.1 pH	NA	.1	0.10	0.10		
WG233890-1	LCS	SW846 9040C	20.000mL	20.000mL	1	7.001	7.0 pH	NA	.1	0.10	0.10		100

Comments:

WG233890-1 SL7429-1

Entered by: AW Date: 8/9/18 Accepted by: Date: 08/09/18 J

Katahdin Analytical Services 5000034

WET CHEMISTRY BATCH REPORT
Aug 09 2018, 12:37 pm
Batch: WG233891

Parameter: pH(Laboratory)

Prep Date: N/A

Date Analyzed: 08-AUG-18

Prep Method: N/A

Analyst Initials: AW

Prep Chemist: N/A

Sample	Samp Type	Method	Initial Amt.	Final Amt.	Rpt. DF	Result	Rpt Result	TS(%)	PQL	MDL	Adj PQL	RPD	%Rec
SL7442-1	SAMP	EPA 150.1	20.000mL	20.000mL	1	8.033	8.0 pH	NA	.1	0.10	0.10		
WG233891-1	LCS	EPA 150.1	20.000mL	20.000mL	1	7.001	7.0 pH	NA	.1	0.10	0.10		100
WG233891-2	DUP	EPA 150.1	20.000mL	20.000mL	1	8.042	8.0 pH	NA	.1	0.10	0.10	0	

Comments:

WG233891-1 SL7442-1
WG233891-2 SL7442-1

Entered by: AW Date: 8/9/18 Accepted by: Date: 08/09/18 ✓

Katahdin Analytical Services 5000035

WET CHEMISTRY BATCH REPORT
Aug 09 2018, 12:39 pm
Batch: WG233892

Parameter: pH(Soil)

Prep Date: 08-AUG-18

Date Analyzed: 08-AUG-18

Prep Method: SW846 9045C

Analyst Initials: AW

Prep Chemist: AW/SC

Sample	Samp Type	Method	Initial Amt.	Final Amt.	Rpt. DF	Result	Rpt Result	TS(%)	PQL	MDL	Adj PQL	RPD	%Rec
SL7420-1	SAMP	SW846 9045D	20g	20mL	1	8.128	8.1 pH	NA	.1	0.10	0.10		
SL7420-2	SAMP	SW846 9045D	20g	20mL	1	8.22	8.2 pH	NA	.1	0.10	0.10		
SL7421-1	SAMP	SW846 9045D	20g	20mL	1	8.334	8.3 pH	NA	.1	0.10	0.10		
SL7421-3	SAMP	SW846 9045D	20g	20mL	1	8.529	8.5 pH	NA	.1	0.10	0.10		
SL7421-4	SAMP	SW846 9045D	20g	20mL	1	8.388	8.4 pH	NA	.1	0.10	0.10		
SL7421-6	SAMP	SW846 9045D	20g	20mL	1	8.262	8.3 pH	NA	.1	0.10	0.10		
SL7425-1	SAMP	SW846 9045D	20g	20mL	1	8.173	8.2 pH	NA	.1	0.10	0.10		
SL7426-1	SAMP	SW846 9045D	20g	20mL	1	11.247	11. pH	NA	.1	0.10	0.10		
WG233892-1	LCS	SW846 9045D	20g	20mL	1	7.001	7.0 pH	NA	.1	0.10	0.10		100
WG233892-2	LCSD	SW846 9045D	20g	20mL	1	7.002	7.0 pH	NA	.1	0.10	0.10	0	100

Comments:

WG233892-1 SL7420-1
WG233892-2 SL7420-1

Entered by: AW Date: 8/9/18 Accepted by: Date: 08/09/18

Katahdin Analytical Services 5000036

WET CHEMISTRY BATCH REPORT
Aug 09 2018, 12:40 pm
Batch: WG233893

Parameter: pH(Soil)

Prep Date: 08-AUG-18

Date Analyzed: 08-AUG-18

Prep Method: SW846 9045C

Analyst Initials: AW

Prep Chemist: AW/SC

Sample	Samp Type	Method	Initial Amt.	Final Amt.	Rpt. DF	Result	Rpt Result	TS(%)	PQL	MDL	Adj PQL	RPD	%Rec
SL7422-1	SAMP	SW846 9045D	20g	20mL	1	8.042	8.0 pH	NA	.1	0.10	0.10		
SL7422-11	SAMP	SW846 9045D	20g	20mL	1	7.414	7.4 pH	NA	.1	0.10	0.10		
SL7422-12	SAMP	SW846 9045D	20g	20mL	1	7.474	7.5 pH	NA	.1	0.10	0.10		
SL7422-13	SAMP	SW846 9045D	20g	20mL	1	7.868	7.9 pH	NA	.1	0.10	0.10		
SL7422-14	SAMP	SW846 9045D	20g	20mL	1	7.921	7.9 pH	NA	.1	0.10	0.10		
SL7422-15	SAMP	SW846 9045D	20g	20mL	1	7.822	7.8 pH	NA	.1	0.10	0.10		
SL7422-16	SAMP	SW846 9045D	20g	20mL	1	8.001	8.0 pH	NA	.1	0.10	0.10		
SL7422-2	SAMP	SW846 9045D	20g	20mL	1	8.39	8.4 pH	NA	.1	0.10	0.10		
SL7422-3	SAMP	SW846 9045D	20g	20mL	1	8.068	8.1 pH	NA	.1	0.10	0.10		
SL7422-4	SAMP	SW846 9045D	20g	20mL	1	7.922	7.9 pH	NA	.1	0.10	0.10		
SL7422-5	SAMP	SW846 9045D	20g	20mL	1	7.705	7.7 pH	NA	.1	0.10	0.10		
SL7422-6	SAMP	SW846 9045D	20g	20mL	1	7.77	7.8 pH	NA	.1	0.10	0.10		
SL7422-8	SAMP	SW846 9045D	20g	20mL	1	7.863	7.9 pH	NA	.1	0.10	0.10		
SL7422-9	SAMP	SW846 9045D	20g	20mL	1	7.537	7.5 pH	NA	.1	0.10	0.10		
WG233893-1	LCS	SW846 9045D	20g	20mL	1	7.016	7.0 pH	NA	.1	0.10	0.10		100
WG233893-2	DUP	SW846 9045D	20g	20mL	1	7.868	7.9 pH	NA	.1	0.10	0.10	0	

Comments:

SL7422-11	MS/MSD
WG233893-1	SL7422-13
WG233893-2	SL7422-13

Entered by: AW Date: 8/9/18 Accepted by: [signature] Date: 08/09/18

Katahdin Analytical Services 5000037

SW9040B-PH
WG233890
R485403

HW150.1
WG233891
R485404

~~SW9~~ PH SL
WG233892
R485405

pH SL
WG233893
R485407

Start time: 8/8/2018 16:12
Results

No.	Comment / ID	Start time	Rx	Result	Unit	Name
1/18	CCV	8/8/2018 4:13:42 PM	R3 =	7.034	pH	pH
			R4 =	22	oC	TEMPERATURE
2/18	LCS	8/8/2018 4:18:12 PM	R3 =	7.001	pH	pH
			R4 =	22.1	oC	TEMPERATURE
3/18	LCSD	8/8/2018 4:22:39 PM	R3 =	7.002	pH	pH
			R4 =	22	oC	TEMPERATURE
4/18	SL7429-1	8/8/2018 4:27:06 PM	R3 =	6.106	pH	pH
			R4 =	18.7	oC	TEMPERATURE
5/18	SL7429-2	8/8/2018 4:31:33 PM	R3 =	5.851	pH	pH
			R4 =	18.6	oC	TEMPERATURE
6/18	SL7440-1	8/8/2018 4:35:59 PM	R3 =	8.09	pH	pH
			R4 =	21	oC	TEMPERATURE
7/18	SL7442-1	8/8/2018 4:40:26 PM	R3 =	8.033	pH	pH
			R4 =	22.3	oC	TEMPERATURE
8/18	SL7442-1 DUP	8/8/2018 4:44:53 PM	R3 =	8.042	pH	pH
			R4 =	22.4	oC	TEMPERATURE
9/18	SL7420-1	8/8/2018 4:49:20 PM	R3 =	8.128	pH	pH
			R4 =	22.5	oC	TEMPERATURE
10/18	SL7420-2	8/8/2018 4:53:47 PM	R3 =	8.22	pH	pH
			R4 =	22.3	oC	TEMPERATURE
11/18	SL7425-1	8/8/2018 4:58:13 PM	R3 =	8.173	pH	pH
			R4 =	22.4	oC	TEMPERATURE
12/18	CCV	8/8/2018 5:02:40 PM	R3 =	7.043	pH	pH
			R4 =	22.3	oC	TEMPERATURE
13/18	SL7426-1	8/8/2018 5:07:07 PM	R3 =	11.247	pH	pH
			R4 =	22.5	oC	TEMPERATURE
14/18	SL7421-1	8/8/2018 5:11:34 PM	R3 =	8.334	pH	pH
			R4 =	22.3	oC	TEMPERATURE
15/18	SL7421-3	8/8/2018 5:16:01 PM	R3 =	8.529	pH	pH
			R4 =	22.3	oC	TEMPERATURE
16/18	SL7421-4	8/8/2018 5:20:27 PM	R3 =	8.388	pH	pH
			R4 =	22.5	oC	TEMPERATURE
17/18	SL7421-6	8/8/2018 5:24:54 PM	R3 =	8.262	pH	pH
			R4 =	22.6	oC	TEMPERATURE
18/18	CCV	8/8/2018 5:29:21 PM	R3 =	7.049	pH	pH
			R4 =	22.4	oC	TEMPERATURE
1/18	SL7422-1	8/8/2018 6:09:38 PM	R3 =	8.042	pH	pH
			R4 =	22.6	oC	TEMPERATURE
2/18	SL7422-2	8/8/2018 6:14:21 PM	R3 =	8.39	pH	pH
			R4 =	22.6	oC	TEMPERATURE
3/18	SL7422-3	8/8/2018 6:18:47 PM	R3 =	8.068	pH	pH
			R4 =	22.6	oC	TEMPERATURE
4/18	SL7422-4	8/8/2018 6:23:14 PM	R3 =	7.922	pH	pH
			R4 =	22.5	oC	TEMPERATURE
5/18	SL7422-5	8/8/2018 6:27:41 PM	R3 =	7.705	pH	pH
			R4 =	22.4	oC	TEMPERATURE
6/18	SL7422-6	8/8/2018 6:32:08 PM	R3 =	7.77	pH	pH
			R4 =	22.4	oC	TEMPERATURE

7/18	SL7422-8	8/8/2018 6:36:35 PM	R3 =	7.863	pH	pH
			R4 =	22.5	oC	TEMPERATURE
8/18	SL7422-9	8/8/2018 6:41:02 PM	R3 =	7.537	pH	pH
			R4 =	22.9	oC	TEMPERATURE
9/18	SL7422-11	8/8/2018 6:45:28 PM	R3 =	7.414	pH	pH
			R4 =	22.7	oC	TEMPERATURE
10/18	SL7422-12	8/8/2018 6:49:55 PM	R3 =	7.474	pH	pH
			R4 =	22.8	oC	TEMPERATURE
11/18	CCV	8/8/2018 6:54:22 PM	R3 =	7.05	pH	pH
			R4 =	22.4	oC	TEMPERATURE
12/18	LCS	8/8/2018 6:58:49 PM	R3 =	7.016	pH	pH
			R4 =	22.5	oC	TEMPERATURE
13/18	SL7422-13	8/8/2018 7:03:16 PM	R3 =	7.868	pH	pH
			R4 =	22.6	oC	TEMPERATURE
14/18	SL7422-13 DUP	8/8/2018 7:07:42 PM	R3 =	7.868	pH	pH
			R4 =	22.6	oC	TEMPERATURE
15/18	SL7422-14	8/8/2018 7:12:09 PM	R3 =	7.921	pH	pH
			R4 =	22.7	oC	TEMPERATURE
16/18	SL7422-15	8/8/2018 7:16:36 PM	R3 =	7.822	pH	pH
			R4 =	22.5	oC	TEMPERATURE
17/18	SL7422-16	8/8/2018 7:21:03 PM	R3 =	8.001	pH	pH
			R4 =	22.6	oC	TEMPERATURE
18/18	CCV	8/8/2018 7:25:30 PM	R3 =	7.053	pH	pH
			R4 =	22.4	oC	TEMPERATURE

Calibration data

Number of segments	1	pH 4:	SWL	4303
Slope	-57.63 mV/pH	pH 7:	SWL	4329
Zero point	7.215 pH	pH 10:	SWL	4333
Calibration temperature	22.3 oC	LCS:	SWL	4329

KATAHDIN ANALYTICAL SERVICES

SOIL PREPARATION BY METHOD E300

Balance ID: Bal 07

PREP TIME	SAMPLE ID	WEIGHT (g)	TOTAL H20 ADDED(ml)	ANALYSIS REQUESTED	SPIKE ADDED
	BLANK				
	LCS				
1415	SL7420-1	21.412	20 mL	pH soils	
	-2	20.479			
	SL7425-1	20.225			
	SL7426-1	20.556			
	SL7421-1	21.000			
	-3	21.134			
	-4	20.452			
	-6	20.898			
	-9	20.272			
	-12	20.782			
	-15	20.543			
	-15 Dup	20.178			
	-16 17	20.655			
	-18	20.640			
	-18 Dup	20.447			
	-19	20.529			
	-20	19.822			
	-21	21.175			
	-23	20.197			
1500	-25	20.338			

NOTES:

ANALYST: AW/SL **DATE:** 8.8.18

CHECKED BY: [signature] **DATE:** 08/09/18

KATAHDIN ANALYTICAL SERVICES

SOIL PREPARATION BY METHOD E300

Balance ID: Bal 07

PREP TIME	SAMPLE ID	WEIGHT (g)	TOTAL H20 ADDED(ml)	ANALYSIS REQUESTED	SPIKE ADDED
	BLANK				
	LCS				
1507	SL74121-27	19.535	20mL	pH soils	
↓	-29	19.768			
↓	-30	20.696			
1510	-31	21.221			
15:34	SL74222-1	20.021			
	-2	20.098			
	-3	20.033			
	-4	20.066			
	-5	20.098			
	-6	20.066			
	-8	20.091			
	-9	20.025			
	-11	20.056			
	-18	20.073			
	-19	20.062			
	-20	20.068			
	-21	20.015			
	-22	20.061			
	-23	20.041			
16:05	-23Dup	20.069	↓	↓	

NOTES:

ANALYST: SC/AW **DATE:** 8.8.18

CHECKED BY: [signature] **DATE:** 08/09/18

KATAHDIN ANALYTICAL SERVICES

SOIL PREPARATION BY METHOD E300

Balance ID:

PREP TIME	SAMPLE ID	WEIGHT (g)	TOTAL H20 ADDED(ml)	ANALYSIS REQUESTED	SPIKE ADDED
	BLANK				
	LCS				
16:05	SL7422-24A	20.006	20 mL	pH soil	
~~16:25~~	-25	20.080			
	-26	20.083			
	-27	20.043			
	-28	20.072			
	-30	20.076			
	-31	20.001			
	-32	20.045			
	-33	20.093			
	-34	20.032			
16:25	-37	20.004			
16:38	-38	20.044			
	-39	20.021			
	-12	20.492			
	-13	20.364			
	-14	19.703			
	-15	20.280			
	-16	19.939			
	-17	21.055			
	-13 Dup	19.876			

NOTES:

ANALYST: JP/AW **DATE:** 5/8/19

CHECKED BY: [illegible] **DATE:** 05/09/19

WET CHEMISTRY BATCH REPORT
Aug 13 2018, 01:11 pm
Batch: WG234215

Parameter: Paint Filter Liquids Test

Prep Date: N/A

Date Analyzed: 13-AUG-18

Prep Method: N/A

Analyst Initials: SC

Prep Chemist: N/A

Sample	Samp Type	Method	Initial Amt.	Final Amt.	Rpt. DF	Result	Rpt Result	TS(%)	PQL	MDL	Adj PQL	RPD	%Rec
SL7319-2	SAMP	SW846 9095B					NFL	85.					
SL7420-1	SAMP	SW846 9095B					NFL	NA					
SL7420-2	SAMP	SW846 9095B					NFL	NA					
SL7497-15	SAMP	SW846 9095B					NFL	67.					
SL7497-9	SAMP	SW846 9095B					NFL	72.					
WG234215-1	MBLANK	SW846 9095B					NFL	NA					

Comments:

WG234215-1 SL7319-2

Entered by: SC Date: 8.13.18 Accepted by: [signature] Date: 08/13/18

Katahdin Analytical Services 5000043

KATAHDIN ANALYTICAL SERVICES, INC.

PAINT FILTER TEST

METHOD: SW846 9095

PAINT FILTER: MESH SIZE 60

COMMENTS: WG72312 ~~R485762~~ R485773

NFL=No Free Liquid FLP=Free Liquid Present

CLIENT ID	KAS SAMPLE ID	ANALYSIS TIME IN	ANALYSIS TIME OUT	SAMPLE WEIGHT(g)	FREE LIQUIDS AFTER 5 MINUTES
	Blank	1214	1219	99.341	NFL
	SL7319-2	15	20	100.420	NFL
	SL7420-1	17	22	99.529	NFL
	SL7420-2	18	23	99.785	NFL
	SL7497-9	21	26	99.824	NFL
	SL7497-15	24	29	100.796	NFL
			SC 8.13.18		

ANALYST: SC **DATE:** 8.13.18

CHECKED BY: [signature] **DATE:** 08/13/18

TCLP PESTICIDE DATA

QC Summary Section

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** Cornhusker Army Ammunition Plant **Matrix:** AQ
Lab Code: KAS **SDG:** SL7420

Client Sample ID	Lab Sample ID	Col. ID	DCB	#	TCX	#
CHAAP-IDW-SOIL-080618	SL7420-1	A	129.		120.	
CHAAP-IDW-SOIL-080618	SL7420-1	B	140.	*	121.	
CHAAP-IDW-SOIL-080618	SL7420-2	A	70.0		81.2	
CHAAP-IDW-SOIL-080618	SL7420-2	B	73.0		80.0	
Method Blank Sample	WG233964-1	A	65.7		73.9	
Method Blank Sample	WG233964-1	B	67.0		72.4	
Laboratory Control S	WG233964-2	A	74.3		87.9	
Laboratory Control S	WG233964-2	B	77.0		84.9	
Laboratory Control S	WG233964-3	A	51.8		84.7	
Laboratory Control S	WG233964-3	B	51.8		82.7	
Laboratory Control S	WG233964-4	A	140.	*	126.	*
Laboratory Control S	WG233964-4	B	148.	*	131.	*
TCLP Blank	WG233964-5	A	94.8		91.8	
TCLP Blank	WG233964-5	B	98.2		92.4	

		QC Limits
TCX	TETRACHLORO-M-XYLENE	44-124
DCB	DECACHLOROBIPHENYL	41-131

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://katahdinlab.com
sales@katahdinlab.com

Katahdin
ANALYTICAL SERVICES

Form 4
Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : 1LH10138.D
Matrix : AQ

Column A
Instrument ID : GC01
Date Analyzed : 10-AUG-18
Time Analyzed : 18:01

SDG : SL7420
Lab Sample ID : WG233964-1
Date Extracted : 10-AUG-18
Extraction Method : SW846 3510C

Column B
Instrument ID : GC01
Date Analyzed : 10-AUG-18
Time Analyzed : 18:01

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG233964-2	1LH10139.	08/10/18	18:20
Laboratory Control S	WG233964-3	1LH10140.	08/10/18	18:39
Laboratory Control S	WG233964-4	1LH10144.	08/10/18	19:57
TCLP Blank	WG233964-5	1LH10145.	08/10/18	20:16
CHAAP-IDW-SOIL-080618-S	SL7420-1	1LH10148.	08/10/18	21:14
CHAAP-IDW-SOIL-080618-N	SL7420-2	1LH10149.	08/10/18	21:34

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

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Katahdin
ANALYTICAL SERVICES

Form 8
GC Analytical Sequence

Lab Name : Katahdin Analytical Services **SDG :** SL7420
Project : Cornhusker Army Ammunition Plant **Column ID :** A
Instrument ID : GC01

Client Sample ID	Lab Sample ID	Date Analyzed	Time Analyzed	TCX	DCB	
Initial Calibration	WG233898-1	08/03/18	14:16			
Initial Calibration	WG233898-2	08/03/18	14:36			
Initial Calibration	WG233898-3	08/03/18	14:55			
Initial Calibration	WG233898-4	08/03/18	15:14			
Initial Calibration	WG233898-5	08/03/18	15:34			
Initial Calibration	WG233898-6	08/03/18	16:24			
Independent Source	WG233898-7	08/03/18	16:44			
Initial Calibration	WG233899-1	08/03/18	17:03			
Initial Calibration	WG233899-2	08/03/18	17:22			
Initial Calibration	WG233899-3	08/03/18	17:42			
Initial Calibration	WG233899-4	08/03/18	18:01			
Initial Calibration	WG233899-5	08/03/18	18:20			
Initial Calibration	WG233899-6	08/03/18	18:40			
Independent Source	WG233899-7	08/03/18	18:59			
Breakdown Evaluation	WG233901-1	08/06/18	10:53			
Initial Calibration	WG233901-3	08/06/18	11:32	4.192	12.46	
Initial Calibration	WG233901-5	08/06/18	12:11	4.193	12.46	
Initial Calibration	WG233901-6	08/06/18	12:31	4.201	12.46	
Initial Calibration	WG233901-7	08/06/18	12:50	4.191	12.46	
Initial Calibration	WG233901-2	08/06/18	13:19	4.206	12.46	
Initial Calibration	WG233901-4	08/06/18	14:11	4.193	12.46	
Independent Source	WG233901-8	08/06/18	15:31			
Continuing Calibrati	WG233999-1	08/10/18	13:19			
Breakdown Evaluation	WG233999-3	08/10/18	13:58			
Continuing Calibrati	WG233999-4	08/10/18	14:17	4.202	12.45	
Method Blank Sample	WG233964-1	08/10/18	18:01	4.202	12.45	
Laboratory Control S	WG233964-2	08/10/18	18:20	4.202	12.45	
Laboratory Control S	WG233964-3	08/10/18	18:39	4.203	12.46	
Continuing Calibrati	WG233999-5	08/10/18	18:59			
Continuing Calibrati	WG233999-6	08/10/18	19:18			
Continuing Calibrati	WG233999-7	08/10/18	19:38	4.202	12.45	
Laboratory Control S	WG233964-4	08/10/18	19:57	4.184	12.45	
TCLP Blank	WG233964-5	08/10/18	20:16	4.199	12.46	
CHAAP-IDW-SOIL-08061	SL7420-1	08/10/18	21:14	4.193	12.46	
CHAAP-IDW-SOIL-08061	SL7420-2	08/10/18	21:34	4.204	12.45	
Continuing Calibrati	WG233999-8	08/10/18	23:10			

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ANALYTICAL SERVICES

Form 8
GC Analytical Sequence

Lab Name : Katahdin Analytical Services
SDG : SL7420
Project : Cornhusker Army Ammunition Plant
Column ID : A
Instrument ID : GC01

Continuing Calibrati	WG233999-10	08/10/18	23:49	4.199	12.45	

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Form 8
GC Analytical Sequence

Lab Name : Katahdin Analytical Services **SDG :** SL7420
Project : Cornhusker Army Ammunition Plant **Column ID :** B
Instrument ID : GC01

Client Sample ID	Lab Sample ID	Date Analyzed	Time Analyzed	TCX	DCB	
Initial Calibration	WG233898-1	08/03/18	14:16			
Initial Calibration	WG233898-2	08/03/18	14:36			
Initial Calibration	WG233898-3	08/03/18	14:55			
Initial Calibration	WG233898-4	08/03/18	15:15			
Initial Calibration	WG233898-5	08/03/18	15:34			
Initial Calibration	WG233898-6	08/03/18	16:24			
Independent Source	WG233898-7	08/03/18	16:44			
Initial Calibration	WG233899-1	08/03/18	17:03			
Initial Calibration	WG233899-2	08/03/18	17:22			
Initial Calibration	WG233899-3	08/03/18	17:42			
Initial Calibration	WG233899-4	08/03/18	18:01			
Initial Calibration	WG233899-5	08/03/18	18:20			
Initial Calibration	WG233899-6	08/03/18	18:40			
Independent Source	WG233899-7	08/03/18	18:59			
Breakdown Evaluation	WG233901-1	08/06/18	10:53			
Initial Calibration	WG233901-3	08/06/18	11:32	4.271	12.94	
Initial Calibration	WG233901-5	08/06/18	12:11	4.272	12.94	
Initial Calibration	WG233901-6	08/06/18	12:31	4.28	12.94	
Initial Calibration	WG233901-7	08/06/18	12:50	4.269	12.94	
Initial Calibration	WG233901-2	08/06/18	13:19	4.275	12.93	
Initial Calibration	WG233901-4	08/06/18	14:11	4.262	12.93	
Independent Source	WG233901-8	08/06/18	15:31			
Continuing Calibrati	WG233999-1	08/10/18	13:19			
Breakdown Evaluation	WG233999-3	08/10/18	13:58			
Continuing Calibrati	WG233999-4	08/10/18	14:17	4.28	12.93	
Method Blank Sample	WG233964-1	08/10/18	18:01	4.279	12.93	
Laboratory Control S	WG233964-2	08/10/18	18:20	4.279	12.93	
Laboratory Control S	WG233964-3	08/10/18	18:39	4.282	12.93	
Continuing Calibrati	WG233999-5	08/10/18	18:59			
Continuing Calibrati	WG233999-6	08/10/18	19:18			
Continuing Calibrati	WG233999-7	08/10/18	19:38	4.281	12.93	
Laboratory Control S	WG233964-4	08/10/18	19:57	4.263	12.93	
TCLP Blank	WG233964-5	08/10/18	20:16	4.278	12.93	
CHAAP-IDW-SOIL-08061	SL7420-1	08/10/18	21:14	4.271	12.93	
CHAAP-IDW-SOIL-08061	SL7420-2	08/10/18	21:34	4.282	12.93	
Continuing Calibrati	WG233999-8	08/10/18	23:10			

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Katahdin
ANALYTICAL SERVICES

Form 8
GC Analytical Sequence

Lab Name : Katahdin Analytical Services
SDG : SL7420
Project : Cornhusker Army Ammunition Plant
Column ID : B
Instrument ID : GC01

Continuing Calibrati	WG233999-10	08/10/18	23:49	4.278	12.93	

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Sample Data Section

KATAHDIN ANALYTICAL SERVICES - ORGANIC DATA QUALIFIERS

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.

* Compound recovery or percent RPD (relative percent difference) was outside of quality control limits.

D Indicates the result was obtained from analysis of a diluted sample. Surrogate recoveries may not be calculable.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

or

J Used for Pesticides, PCBs, Herbicides, Formaldehyde, Explosives and Method 504.1 analytes when there is a greater than 40% difference for detected concentrations between the two GC columns.

B Indicates the analyte was detected in the laboratory method blank analyzed concurrently with the sample.

C Indicates that the flagged compound did not meet DoD criteria in the corresponding daily calibration verification (CV).

L Indicates that the flagged compound did not meet DoD criteria in the corresponding Laboratory Control Sample (LCS) and/or Laboratory Control Sample Duplicate (LCSD) prepared and/or analyzed concurrently with the sample.

M Indicates that the flagged compound did not meet DoD criteria in the Matrix Spike and/or Matrix Spike Duplicate prepared and/or analyzed concurrently with the native sample.

N Presumptive evidence of a compound based on a mass spectral library search.

A Indicates that a tentatively identified compound is a suspected aldol-condensation product.

P Used for Pesticide/Aroclor analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. (for CLP methods only).

Katahdin Analytical Services, Inc.

Manual Integration Codes For GC/MS, GC, HPLC and/or IC

M1	Peak splitting.
M2	Well defined peaks on the shoulders of the other peaks.
M3	There is additional area due to a coeluting interferant.
M4	There are negative spikes in the baseline.
M5	There are rising or falling baselines.
M6	The software has failed to detect a peak or misidentified a peak.
M7	Excessive peak tailing.
M8	Analysis such as GRO, DRO and TPH require a baseline hold.
M9	Peak was not completely integrated as in GC/MS.
M10	Primary ion was correctly integrated, but secondary or tertiary ion needed manual integration as in GC/MS.
M11	For GC analysis, when a sample is diluted by 1:10 or more, the surrogate is set to undetected and then the area under the surrogate is manually integrated.
M12	Manual integration saved in method due to TurboChrom floating point error.

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL7420-1
Client ID: CHAAP-IDW-SOIL-080618-S
Project: Cornhusker Army Ammunition Plant
SDG: SL7420
Lab File ID: 1LH10148.D

Sample Date: 06-AUG-18
Received Date: 08-AUG-18
Extract Date: 10-AUG-18
Extracted By: DP
Extraction Method: 3510C/1311
Lab Prep Batch: WG233964

Analysis Date: 10-AUG-18
Analyst: AC
Analysis Method: SW846 8081B
Matrix: AQ
% Solids: NA
Report Date: 24-AUG-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
gamma-BHC	U	0.12	ug/L	1	.05	0.25	0.036	0.12
Heptachlor	U	0.12	ug/L	1	.05	0.25	0.040	0.12
Heptachlor Epoxide	U	0.12	ug/L	1	.05	0.25	0.037	0.12
Endrin	U	0.25	ug/L	1	.1	0.50	0.042	0.25
Methoxychlor	U	1.2	ug/L	1	.5	2.5	0.042	1.2
Technical Chlordane	UL	1.2	ug/L	1	.5	2.5	0.42	1.2
Toxaphene	U	2.5	ug/L	1	1	5.0	0.85	2.5
Tetrachloro-M-Xylene		121.	%					
Decachlorobiphenyl	*	140.	%					

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Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10148.D
Report Date: 24-Aug-2018 12:55

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10148.D
Lab Smp Id: SL7420-1 Client Smp ID: HAAP-IDW-SOIL-08061
Inj Date : 10-AUG-2018 21:14
Operator : AC Inst ID: gc01.i
Smp Info : SL7420-1
Misc Info : WG233999,WG233964,WG233901-2
Comment :
Method : \\target_server\gg\chem\gc01.i\GC01LH10.b\PEST218.m
Meth Date : 11-Aug-2018 09:31 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 09:02 Cal File: 1LD10089.D
Als bottle: 25
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TCLP-SW8081.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

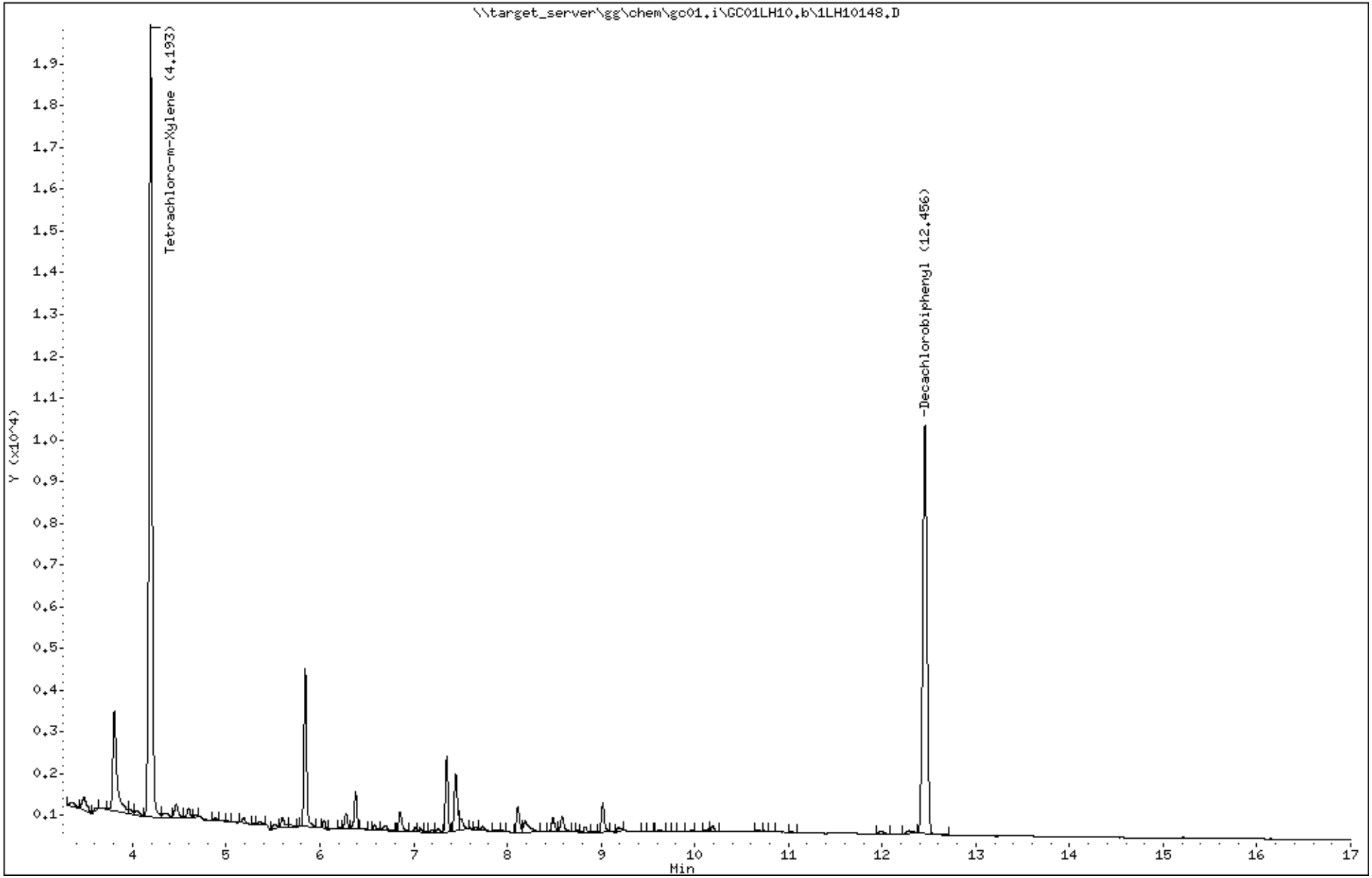
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	0.20000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS		
					ON-COLUMN	FINAL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/L)	REVIEW CODE
$ 4 Tetrachloro-m-Xylene	4.193	4.200	-0.007	18975	0.11996	6.00(R)	
$ 34 Decachlorobiphenyl	12.456	12.445	0.011	9756	0.12937	6.47	

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10148.D
Date : 10-AUG-2018 21:14
Client ID: HAAP-IDW-SOIL-08061
Instrument: gc01.i
Sample Info: SL7420-1
Purge Volume: 0.2
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000014

Data File: 1LH10148.D
Report Date: 24-Aug-2018 12:55

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LH10.b\GC01LH10.b\1LH10148.D
Lab Smp Id: SL7420-1 Client Smp ID: HAAP-IDW-SOIL-08061
Inj Date : 10-AUG-2018 21:14
Operator : AC Inst ID: gc01.i
Smp Info : SL7420-1
Misc Info : WG233999,WG233964,WG233901-2
Comment :
Method : \\target_server\gg\chem\gc01.i\GC01LH10.b\PEST218.m\PEST218.m
Meth Date : 11-Aug-2018 09:31 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 10:00 Cal File: 1LD10092.D
Als bottle: 25
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TCLP-SW8081.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

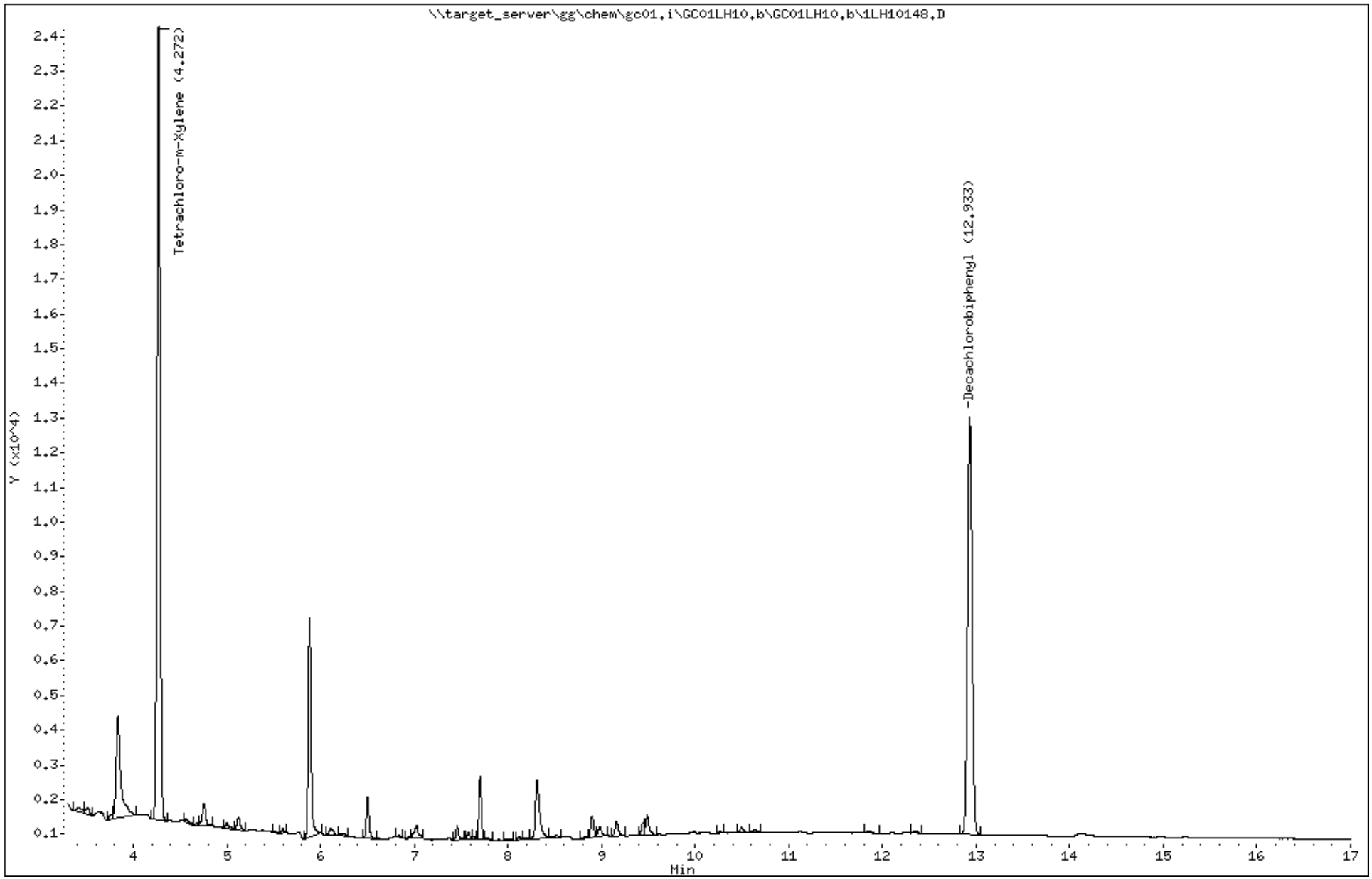
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	0.20000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS		
					ON-COLUMN	FINAL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/L)	REVIEW CODE
$ 4 Tetrachloro-m-Xylene	4.271	4.279	-0.008	22897	0.12063	6.03(R)	
$ 34 Decachlorobiphenyl	12.933	12.925	0.008	12020	0.14052	7.02(R)	

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\GC01LH10.b\1LH10148.D
Date : 10-AUG-2018 21:14
Client ID: HAAP-IDW-SOIL-08061
Instrument: gc01.i
Sample Info: SL7420-1
Purge Volume: 0.2
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000016

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL7420-2
Client ID: CHAAP-IDW-SOIL-080618-N
Project: Cornhusker Army Ammunition Plant
SDG: SL7420
Lab File ID: 1LH10149.D

Sample Date: 06-AUG-18
Received Date: 08-AUG-18
Extract Date: 10-AUG-18
Extracted By: DP
Extraction Method: 3510C/1311
Lab Prep Batch: WG233964

Analysis Date: 10-AUG-18
Analyst: AC
Analysis Method: SW846 8081B
Matrix: AQ
% Solids: NA
Report Date: 24-AUG-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
gamma-BHC	U	0.12	ug/L	1	.05	0.25	0.036	0.12
Heptachlor	U	0.12	ug/L	1	.05	0.25	0.040	0.12
Heptachlor Epoxide	U	0.12	ug/L	1	.05	0.25	0.037	0.12
Endrin	U	0.25	ug/L	1	.1	0.50	0.042	0.25
Methoxychlor	U	1.2	ug/L	1	.5	2.5	0.042	1.2
Technical Chlordane	UL	1.2	ug/L	1	.5	2.5	0.42	1.2
Toxaphene	U	2.5	ug/L	1	1	5.0	0.85	2.5
Tetrachloro-M-Xylene		81.2	%					
Decachlorobiphenyl		73.0	%					

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Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10149.D
Report Date: 24-Aug-2018 12:55

Katahdin Analytical Services

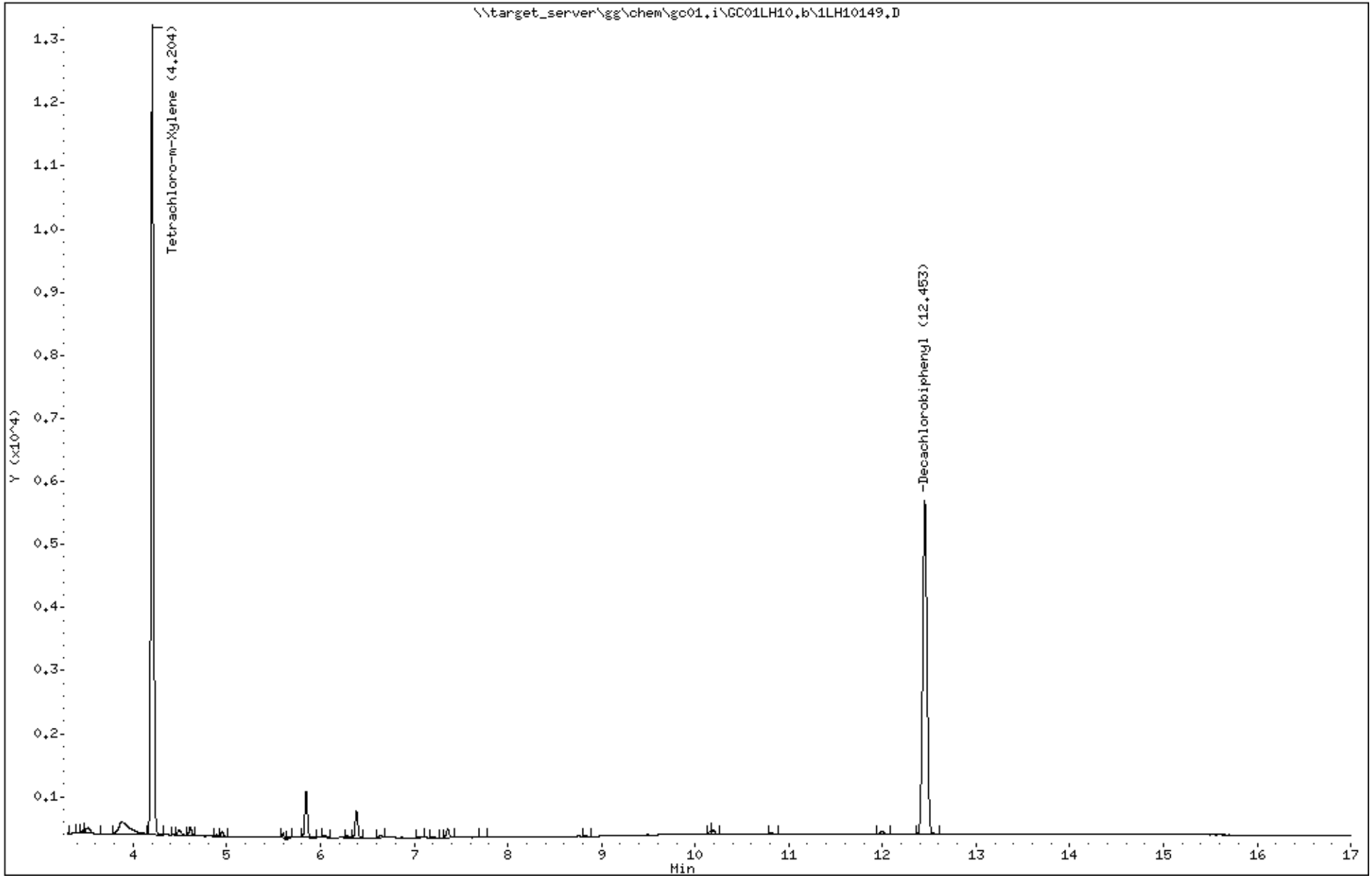
Data file : \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10149.D
Lab Smp Id: SL7420-2 Client Smp ID: HAAP-IDW-SOIL-08061
Inj Date : 10-AUG-2018 21:34
Operator : AC Inst ID: gc01.i
Smp Info : SL7420-2
Misc Info : WG233999,WG233964,WG233901-2
Comment :
Method : \\target_server\gg\chem\gc01.i\GC01LH10.b\PEST218.m
Meth Date : 11-Aug-2018 09:31 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 09:02 Cal File: 1LD10089.D
Als bottle: 26
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TCLP-SW8081.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	0.20000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS		
					ON-COLUMN	FINAL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/L)	REVIEW CODE
$ 4 Tetrachloro-m-Xylene	4.204	4.200	0.004	12843	0.08120	4.06	
$ 34 Decachlorobiphenyl	12.452	12.445	0.007	5277	0.06997	3.50	

Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10149.D
Date : 10-AUG-2018 21:34
Client ID: HAAP-IDW-SOIL-08061
Instrument: gc01.i
Sample Info: SL7420-2
Purge Volume: 0.2
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000019

Data File: 1LH10149.D
Report Date: 24-Aug-2018 12:55

Katahdin Analytical Services

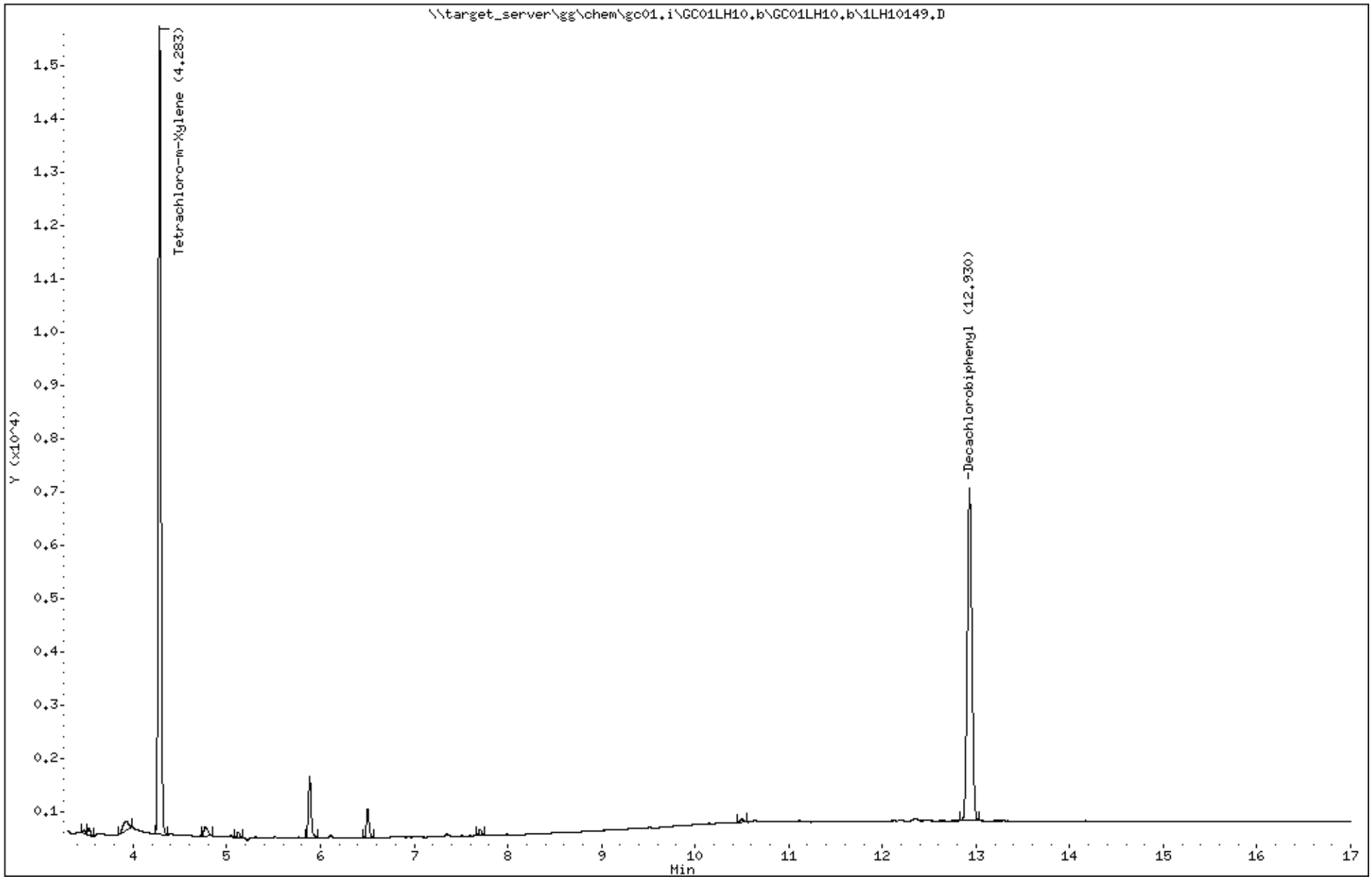
Data file : \\target_server\gg\chem\gc01.i\GC01LH10.b\GC01LH10.b\1LH10149.D
Lab Smp Id: SL7420-2 Client Smp ID: HAAP-IDW-SOIL-08061
Inj Date : 10-AUG-2018 21:34
Operator : AC Inst ID: gc01.i
Smp Info : SL7420-2
Misc Info : WG233999,WG233964,WG233901-2
Comment :
Method : \\target_server\gg\chem\gc01.i\GC01LH10.b\PEST218.m\PEST218.m
Meth Date : 11-Aug-2018 09:31 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 10:00 Cal File: 1LD10092.D
Als bottle: 26
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TCLP-SW8081.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	0.20000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS		
					ON-COLUMN	FINAL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/L)	REVIEW CODE
$ 4 Tetrachloro-m-Xylene	4.282	4.279	0.003	15182	0.07999	4.00	
$ 34 Decachlorobiphenyl	12.929	12.925	0.004	6248	0.07304	3.65	

Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\GC01LH10.b\1LH10149.D
Date : 10-AUG-2018 21:34
Client ID: HAAP-IDW-SOIL-08061
Instrument: gc01.i
Sample Info: SL7420-2
Purge Volume: 0.2
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000021

Standards Data Section

Katahdin
ANALYTICAL SERVICES

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL7420
Project : Cornhusker Army Ammunition Plant
Instrument ID: GC01
Lab File IDs : 1LD10093.D 1LD10092.D 1LD10091.D 1LD10100.D 1LD10089.D 1LD10088.D
Column ID: A
Calibration Date(s): 16-FEB-18 15:00 03-AUG-18 21:53

	0.0050000 Level 1	0.0100000 Level 2	0.0250000 Level 3	0.0500000 Level 4	0.1000000 Level 5	0.2500000 Level 6	New Crv	b	m1	m2	%RSD	Max %RSD	
Toxaphene(9)	515	784	1601	2952	8191	34769	LNR	0.05957	3488		0.99958	0.99000	O
Toxaphene(4)	258	385	765	1336	3744	16048	LNR	0.05711	1609		0.99940	0.99000	O
Toxaphene(3)	211	319	640	995	2916	11599	LNR	-0.00869	1158		0.99959	0.99000	O
Toxaphene(6)	470	589	1152	2061	5584	23689	LNR	0.03189	2369		0.99944	0.99000	O
Toxaphene(2)	197	289	570	906	2631	10806	LNR	0.01583	1080		0.99950	0.99000	O
Toxaphene(5)	237	347	662	1208	3184	13623	LNR	0.03602	1363		0.99949	0.99000	O
Toxaphene(8)	315	485	965	1821	4784	20273	LNR	0.03989	2030		0.99965	0.99000	O
Toxaphene(7)	566	658	1077	1951	5436	23174	LNR	0.02611	2315		0.99908	0.99000	O
Toxaphene(1)	109	170	334	582	1547	6406	LNR	0.00849	640		0.99972	0.99000	O

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

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Katahdin
ANALYTICAL SERVICES

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL7420
Project : Cornhusker Army Ammunition Plant
Instrument ID: GC01
Lab File IDs : 1LD10093.D 1LD10092.D 1LD10091.D 1LD10100.D 1LD10089.D 1LD10088.D
Column ID: B
Calibration Date(s): 16-FEB-18 15:00 03-AUG-18 18:40

	Level 1 0.0050000	Level 2 0.0100000	Level 3 0.0250000	Level 4 0.0500000	Level 5 0.1000000	Level 6 0.2500000	Crv New	b	m1	m2	%RSD	Max %RSD	
Toxaphene(7)	338	523	1123	2476	6066	27187	LNR	0.07395	2726		0.99925	0.99000	O
Toxaphene(4)	367	339	736	1463	3848	16879	LNR	0.05163	1689		0.99912	0.99000	O
Toxaphene(8)	260	350	723	1733	4165	19781	LNR	0.10807	1987		0.99840	0.99000	O
Toxaphene(6)	293	429	881	1966	4383	18952	LNR	0.01954	1893		0.99952	0.99000	O
Toxaphene(1)	381	283	419	807	2172	9261	LNR	-0.01650	921		0.99821	0.99000	O
Toxaphene(2)	232	370	790	1342	3849	16311	LNR	0.04861	1634		0.99950	0.99000	O
Toxaphene(9)	354	528	1100	1648	6182	28489	LNR	0.14699	2875		0.99769	0.99000	O
Toxaphene(3)	180	309	674	1274	3502	15048	LNR	0.06373	1509		0.99956	0.99000	O
Toxaphene(5)	489	381	795	1606	4097	18181	LNR	0.04115	1817		0.99877	0.99000	O

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

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Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10010.D
Report Date: 18-Aug-2018 09:29

Katahdin Analytical Services

RECOVERY REPORT

Client Name: Client SDG: SDGa00508
Sample Matrix: LIQUID Fraction: PESTICIDE
Lab Smp Id: WG233898-7
Level: LOW Operator: AC
Data Type: GC MULTI COMP SampleType: LCS
SpikeList File: tox_ind.spk Quant Type: ESTD
Sublist File: Tox.sub
Method File: \\target_server\gg\chem\gc01.i\GC01LH03.b\PEST218.m
Misc Info: WG233898,WG233898,WG233898,SL7227-1

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
18 Toxaphene	1.00	1.01	101.00	80-120

Data File: 1LH10010.D
Report Date: 18-Aug-2018 09:29

Katahdin Analytical Services

RECOVERY REPORT

Client Name: Client SDG: SDGa00508
Sample Matrix: LIQUID Fraction: PESTICIDE
Lab Smp Id: WG233898-7
Level: LOW Operator: AC
Data Type: GC MULTI COMP SampleType: LCS
SpikeList File: tox_ind.spk Quant Type: ESTD
Sublist File: Tox.sub
Method File: \\target_server\gg\chem\gc01.i\GC01LH03.b\PEST218.m\PEST218.m
Misc Info: WG233898,WG233898,WG233898,SL7227-1

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
18 Toxaphene	1.00	1.04	104.00	80-120

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10004.D
Report Date: 18-Aug-2018 09:10

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10004.D
Lab Smp Id: WG233898-1
Inj Date : 03-AUG-2018 14:16
Operator : AC   Inst ID: gc01.i
Smp Info : WG233898-1
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH03.b\PEST218.m
Meth Date : 06-Aug-2018 08:00 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 13:22   Cal File: 1LD10100.D
Als bottle: 2   Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: Tox.sub
Target Version: 4.12   Sample Matrix: WATER

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

				AMOUNTS					
				CAL-AMT	ON-COL				
RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	TARGET RANGE	RATIO	REVIEW CODE	
18 Toxaphene						CAS #: 8001-35-2			
7.386	7.386	0.000	582	1.00000	0.930	80.00- 120.00	100.00(M)	M5	
7.946	7.946	0.000	906	1.00000	0.846	144.59- 216.88	155.67	M5	
8.242	8.242	0.000	995	1.00000	0.828	154.86- 232.29	170.96	M5	
8.527	8.527	0.000	1336	1.00000	0.848	189.36- 284.04	229.55	M5	
9.007	9.007	0.000	1208	1.00000	0.925	173.94- 260.92	207.56	M5	
9.137	9.137	0.000	2061	1.00000	0.865	344.95- 517.43	354.12	M5	
9.264	9.264	0.000	1951	1.00000	0.858	415.41- 623.12	335.22	M5	
9.409	9.409	0.000	1821	1.00000	0.907	231.19- 346.79	312.89	M5	
9.874	9.874	0.000	2952	1.00000	0.822	377.98- 566.97	507.22	M5	
Average of Peak Amounts =					0.86989				

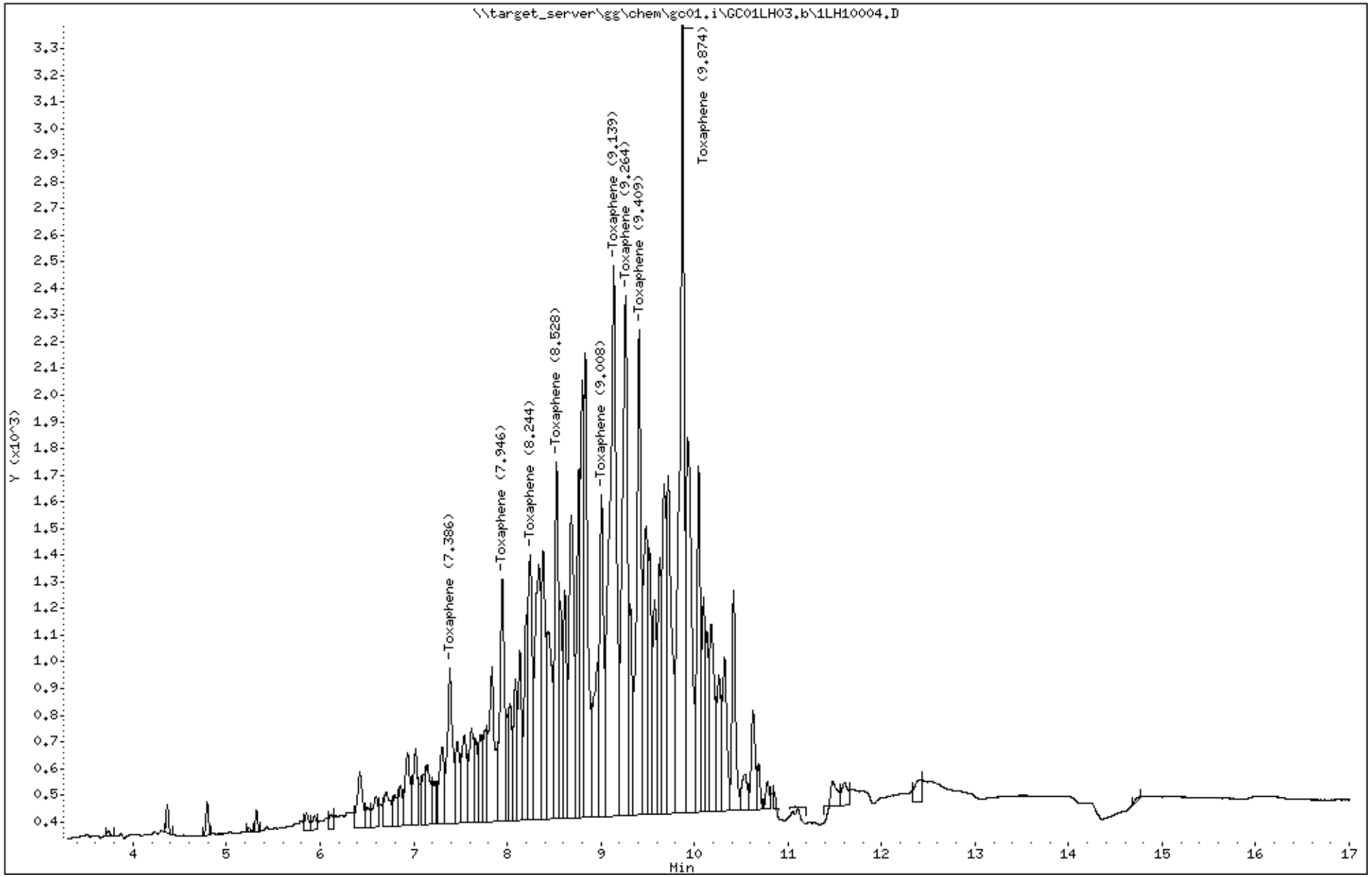
AC
9:19 am, Aug 18, 2018

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10004.D
Date : 03-AUG-2018 14:16
Client ID:
Sample Info: WG233898-1
Purge Volume: 1.0
Column phase: ZB-Multiresidue-1

Instrument: gc01.i
Operator: AC
Column diameter: 0.53



Katahdin Analytical Services 6000028

Data File: 1LH10004.D
Report Date: 18-Aug-2018 09:10

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LH03.b\GC01LH03.b\1LH10004.D
Lab Smp Id: WG233898-1
Inj Date : 03-AUG-2018 14:16
Operator : AC Inst ID: gc01.i
Smp Info : WG233898-1
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH03.b\PEST218.m\PEST218.m
Meth Date : 06-Aug-2018 08:40 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 13:22 Cal File: 1LD10100.D
Als bottle: 2 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Tox.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

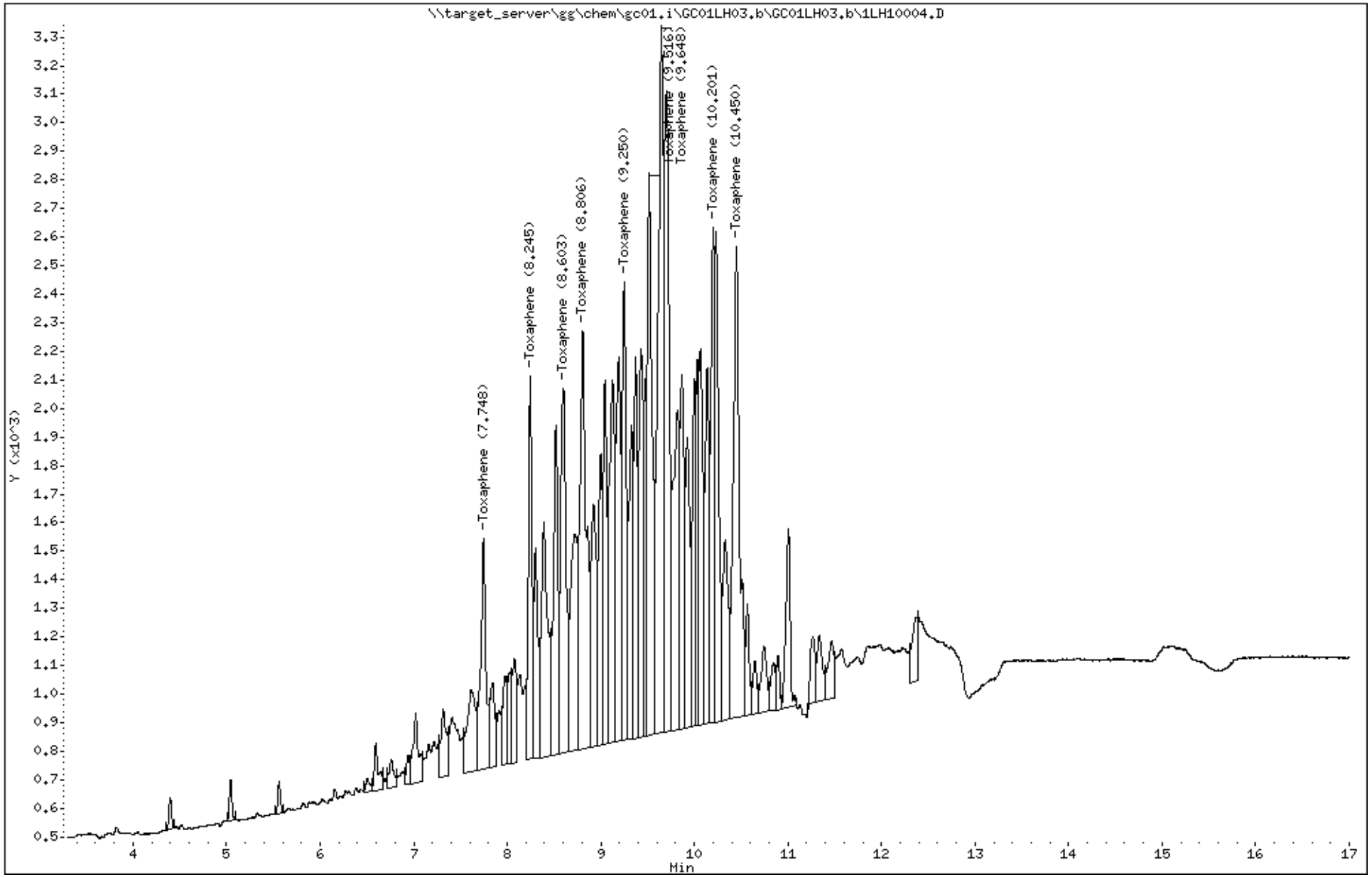
			AMOUNTS					
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
18 Toxaphene					CAS #: 8001-35-2			
7.748	7.748	0.000	807	1.00000	1.01	80.00- 120.00	100.00(M)	M5
8.244	8.244	0.000	1342	1.00000	0.973	48.71- 73.07	166.29	M5
8.601	8.601	0.000	1274	1.00000	0.988	37.80- 56.69	157.87	M5
8.806	8.806	0.000	1463	1.00000	1.05	77.06- 115.59	181.29	M5
9.249	9.249	0.000	1606	1.00000	1.03	102.68- 154.02	199.01	M5
9.516	9.516	0.000	1966	1.00000	1.16	61.52- 92.28	243.62	M5
9.648	9.648	0.000	2476	1.00000	1.04	70.97- 106.46	306.82	M5
10.201	10.201	0.000	1733	1.00000	1.01	54.59- 81.89	214.75	M5
10.449	10.449	0.000	1648	1.00000	0.776	74.33- 111.50	204.21	M5
Average of Peak Amounts =					1.00411			

AC
9:19 am, Aug 18, 2018

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\GC01LH03.b\1LH10004.D
Date : 03-AUG-2018 14:16
Client ID:
Instrument: gc01.i
Sample Info: WG233898-1
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000030

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10005.D
Report Date: 18-Aug-2018 09:10

Katahdin Analytical Services

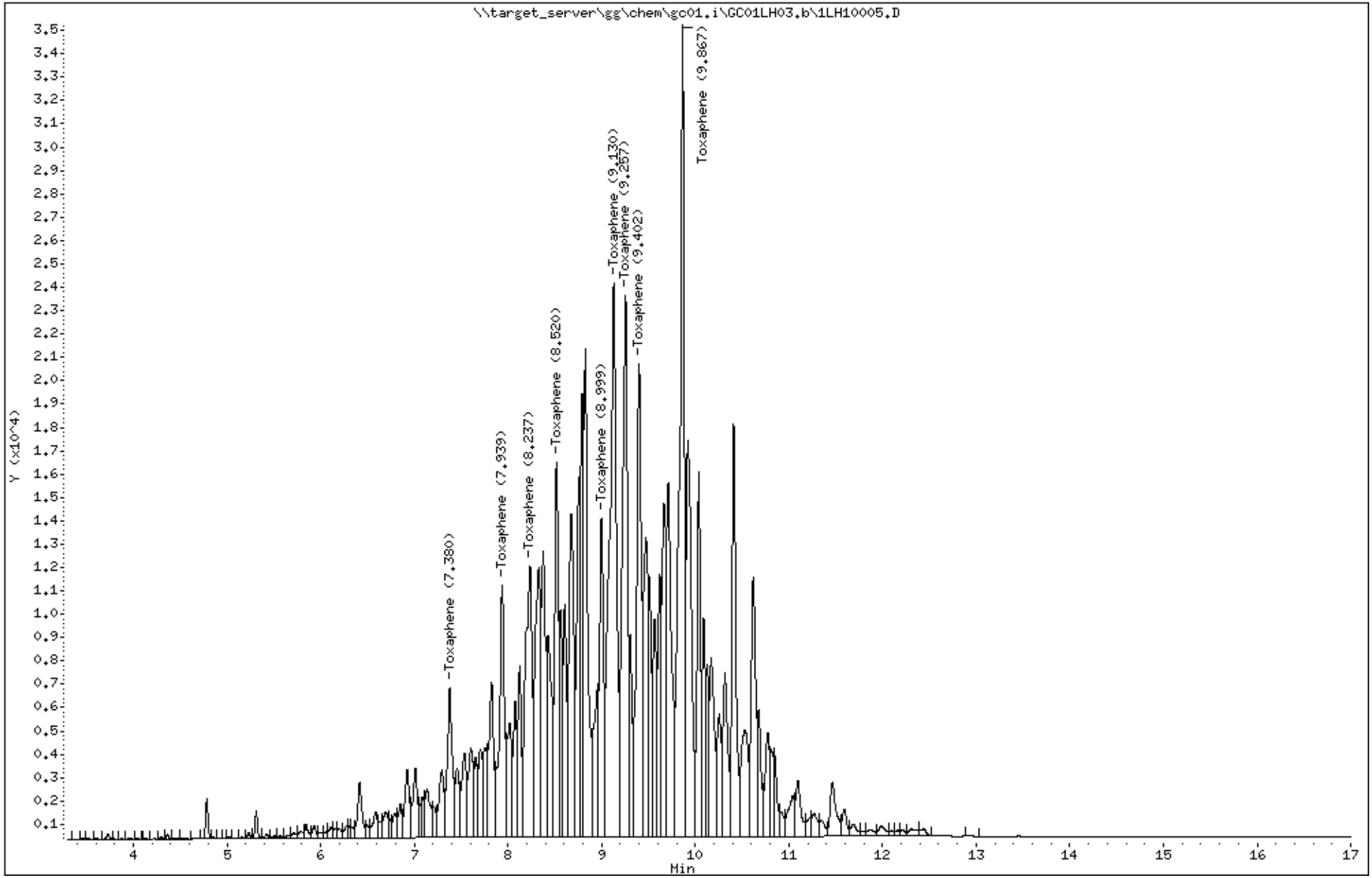
Data file : \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10005.D
Lab Smp Id: WG233898-2
Inj Date : 03-AUG-2018 14:36
Operator : AC   Inst ID: gc01.i
Smp Info : WG233898-2
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH03.b\PEST218.m
Meth Date : 06-Aug-2018 08:00 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 08:42   Cal File: 1LD10088.D
Als bottle: 3   Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: Tox.sub
Target Version: 4.12   Sample Matrix: WATER

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
18 Toxaphene						CAS #: 8001-35-2		
7.380	7.386	-0.006	6406	10.0000	9.60	80.00- 120.00	100.00	
7.938	7.946	-0.008	10806	10.0000	9.32	144.59- 216.88	168.69	
8.236	8.242	-0.006	11599	10.0000	9.16	154.86- 232.29	181.06	
8.520	8.527	-0.007	16048	10.0000	9.40	189.36- 284.04	250.52	
8.998	9.007	-0.009	13623	10.0000	9.52	173.94- 260.92	212.66	
9.130	9.137	-0.007	23689	10.0000	9.18	344.95- 517.43	369.79	
9.256	9.264	-0.008	23174	10.0000	9.41	415.41- 623.12	361.75	
9.401	9.409	-0.008	20273	10.0000	9.24	231.19- 346.79	316.47	
9.866	9.874	-0.008	34769	10.0000	9.05	377.98- 566.97	542.76	
		Average of Peak Amounts =			9.32000			

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10005.D
Date : 03-AUG-2018 14:36
Client ID:
Instrument: gc01.i
Sample Info: WG233898-2
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000032

Data File: 1LH10005.D
Report Date: 18-Aug-2018 09:10

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LH03.b\GC01LH03.b\1LH10005.D
Lab Smp Id: WG233898-2
Inj Date : 03-AUG-2018 14:36
Operator : AC   Inst ID: gc01.i
Smp Info : WG233898-2
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH03.b\PEST218.m\PEST218.m
Meth Date : 06-Aug-2018 08:40 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 08:42   Cal File: 1LD10088.D
Als bottle: 3   Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: Tox.sub
Target Version: 4.12   Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

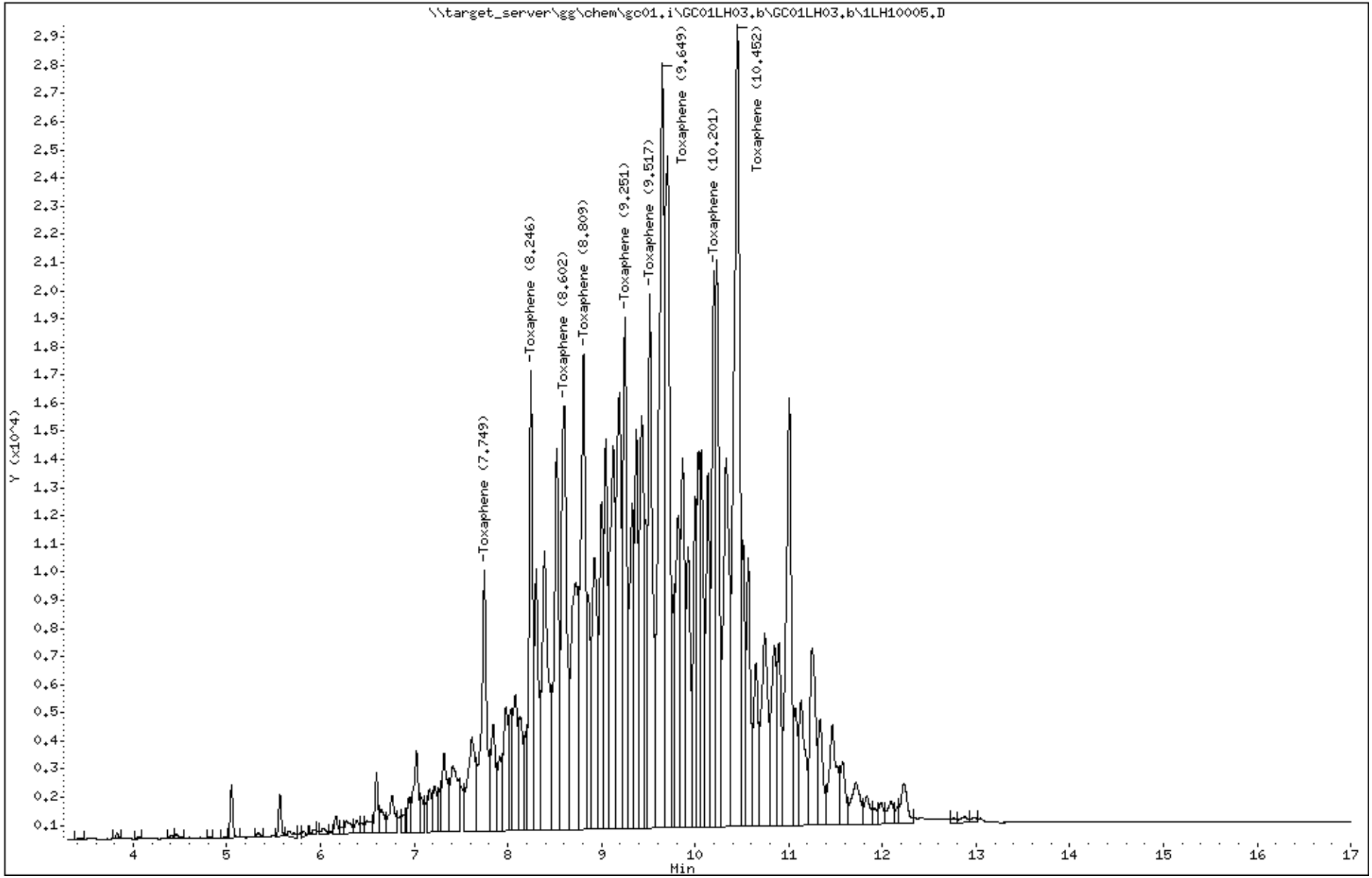
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
18 Toxaphene					CAS #: 8001-35-2			
7.748	7.748	0.000	9261	10.0000	10.1	80.00- 120.00	100.00(AM)	M5
8.245	8.244	0.001	16311	10.0000	10.0	48.71- 73.07	176.13	M5
8.602	8.601	0.001	15048	10.0000	10.0	37.80- 56.69	162.49	M5
8.808	8.806	0.002	16879	10.0000	10.0	77.06- 115.59	182.26	M5
9.250	9.249	0.001	18181	10.0000	10.0	102.68- 154.02	196.32	M5
9.517	9.516	0.001	18952	10.0000	10.0	61.52- 92.28	204.64	M5
9.648	9.648	0.000	27187	10.0000	10.0	70.97- 106.46	293.56	M5
10.200	10.201	-0.001	19781	10.0000	10.1	54.59- 81.89	213.59	M5
10.452	10.449	0.003	28489	10.0000	10.1	74.33- 111.50	307.62	M5
		Average of Peak Amounts =			10.0333			

AC
9:19 am, Aug 18, 2018

QC Flag Legend

A - Target compound detected but, quantitated amount
    exceeded maximum amount.
M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\GC01LH03.b\1LH10005.D
Date : 03-AUG-2018 14:36
Client ID:
Instrument: gc01.i
Sample Info: WG233898-2
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000034

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10006.D
Report Date: 18-Aug-2018 09:10

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10006.D
Lab Smp Id: WG233898-3
Inj Date : 03-AUG-2018 14:55
Operator : AC Inst ID: gc01.i
Smp Info : WG233898-3
Misc Info :
Comment :
Method : \\target_server\gg\chem\gc01.i\GC01LH03.b\PEST218.m
Meth Date : 06-Aug-2018 08:00 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 09:02 Cal File: 1LD10089.D
Als bottle: 4 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Tox.sub
Target Version: 4.12 Sample Matrix: WATER

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

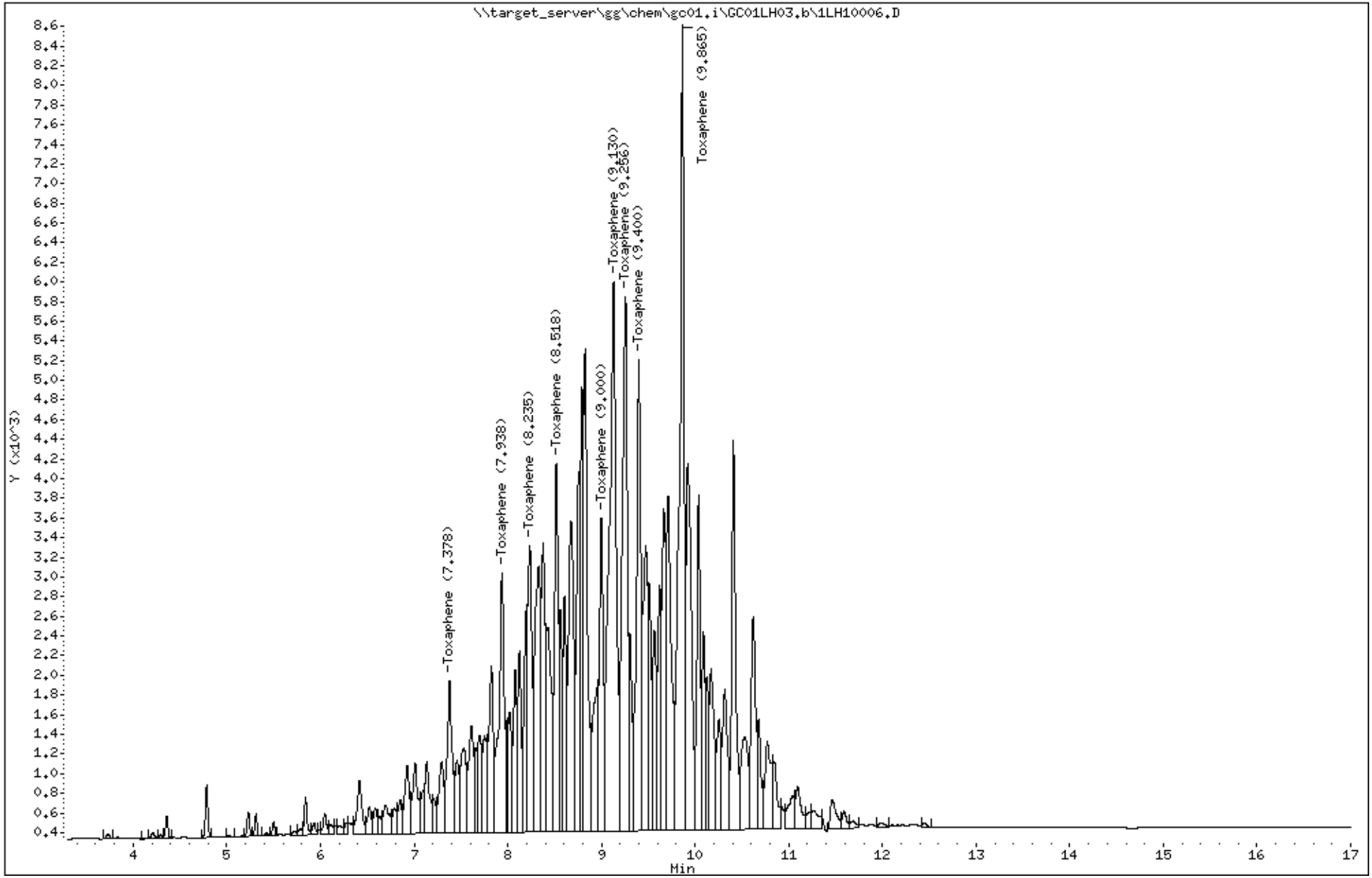
				AMOUNTS					
				CAL-AMT	ON-COL				
RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	TARGET RANGE	RATIO	REVIEW CODE	
18 Toxaphene						CAS #: 8001-35-2			
7.377	7.386	-0.009	1547	2.50000	2.45	80.00- 120.00	100.00(M)	M5	
7.937	7.946	-0.009	2631	2.50000	2.47	144.59- 216.88	170.07	M5	
8.234	8.242	-0.008	2916	2.50000	2.52	154.86- 232.29	188.49	M5	
8.517	8.527	-0.010	3744	2.50000	2.37	189.36- 284.04	242.02	M5	
8.997	9.007	-0.010	3184	2.50000	2.38	173.94- 260.92	205.82	M5	
9.129	9.137	-0.008	5584	2.50000	2.38	344.95- 517.43	360.96	M5	
9.256	9.264	-0.008	5436	2.50000	2.38	415.41- 623.12	351.39	M5	
9.399	9.409	-0.010	4784	2.50000	2.39	231.19- 346.79	309.24	M5	
9.864	9.874	-0.010	8191	2.50000	2.37	377.98- 566.97	529.48	M5	
Average of Peak Amounts =					2.41222				

AC
9:19 am, Aug 18, 2018

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10006.D
Date : 03-AUG-2018 14:55
Client ID:
Instrument: gc01.i
Sample Info: WG233898-3
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000036

Data File: 1LH10006.D
Report Date: 18-Aug-2018 09:10

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LH03.b\GC01LH03.b\1LH10006.D
Lab Smp Id: WG233898-3
Inj Date : 03-AUG-2018 14:55
Operator : AC   Inst ID: gc01.i
Smp Info : WG233898-3
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH03.b\PEST218.m\PEST218.m
Meth Date : 06-Aug-2018 08:40 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 09:02   Cal File: 1LD10089.D
Als bottle: 4   Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: Tox.sub
Target Version: 4.12   Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

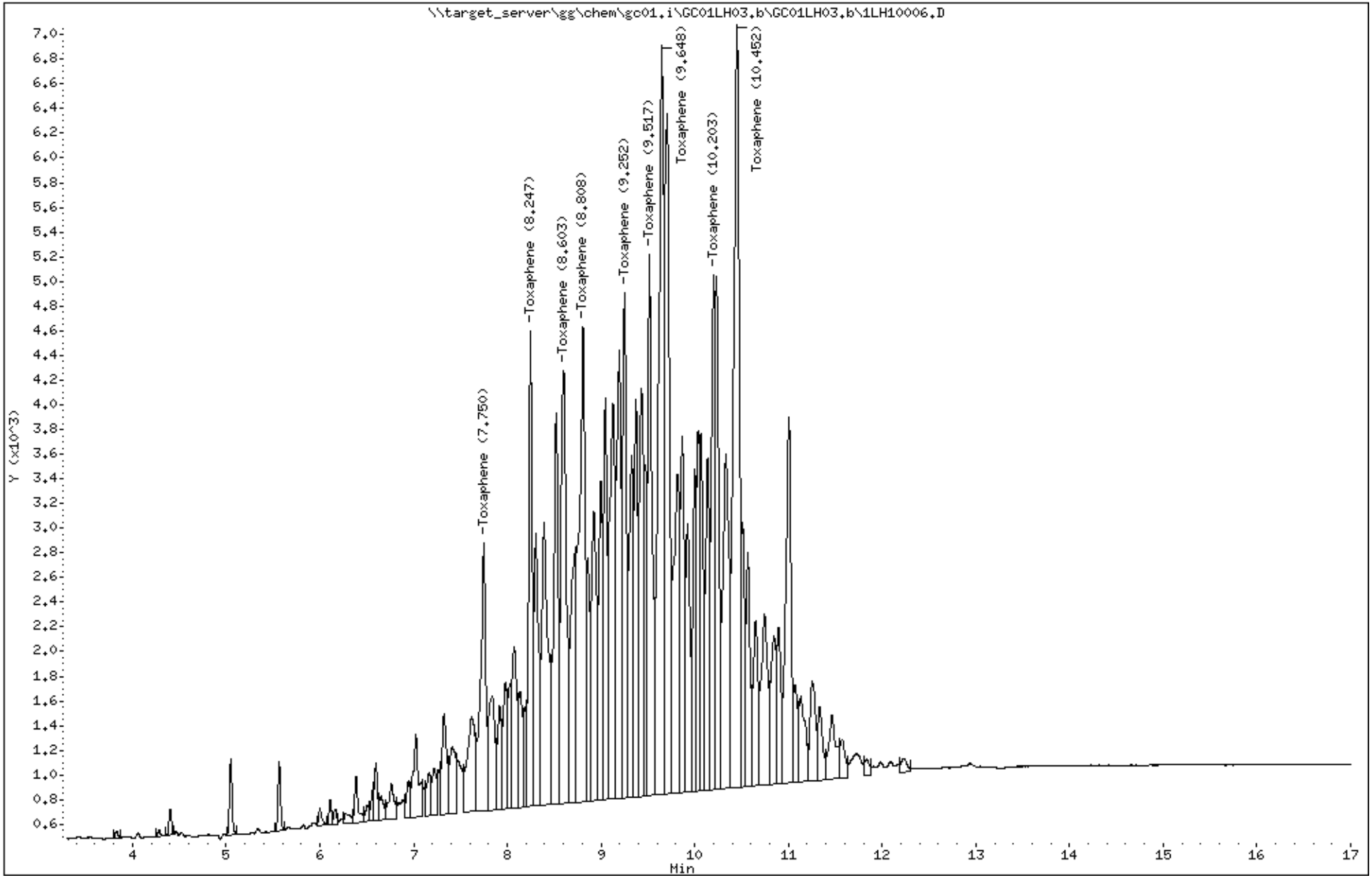
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
18 Toxaphene					CAS #: 8001-35-2			
7.749	7.748	0.001	2172	2.50000	2.36	80.00- 120.00	100.00(M)	M5
8.246	8.244	0.002	3849	2.50000	2.42	48.71- 73.07	177.21	M5
8.601	8.601	0.000	3502	2.50000	2.41	37.80- 56.69	161.23	M5
8.808	8.806	0.002	3848	2.50000	2.37	77.06- 115.59	177.16	M5
9.251	9.249	0.002	4097	2.50000	2.34	102.68- 154.02	188.63	M5
9.516	9.516	0.000	4383	2.50000	2.38	61.52- 92.28	201.80	M5
9.648	9.648	0.000	6066	2.50000	2.33	70.97- 106.46	279.28	M5
10.203	10.201	0.002	4165	2.50000	2.26	54.59- 81.89	191.76	M5
10.451	10.449	0.002	6182	2.50000	2.32	74.33- 111.50	284.62	M5
		Average of Peak Amounts =			2.35444			

AC
9:19 am, Aug 18, 2018

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\GC01LH03.b\1LH10006.D
Date : 03-AUG-2018 14:55
Client ID:
Instrument: gc01.i
Sample Info: WG233898-3
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000038

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10007.D
Report Date: 18-Aug-2018 09:10

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10007.D
Lab Smp Id: WG233898-4
Inj Date : 03-AUG-2018 15:14
Operator : AC Inst ID: gc01.i
Smp Info : WG233898-4
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH03.b\PEST218.m
Meth Date : 06-Aug-2018 08:00 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 09:40 Cal File: 1LD10091.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Tox.sub
Target Version: 4.12 Sample Matrix: WATER

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

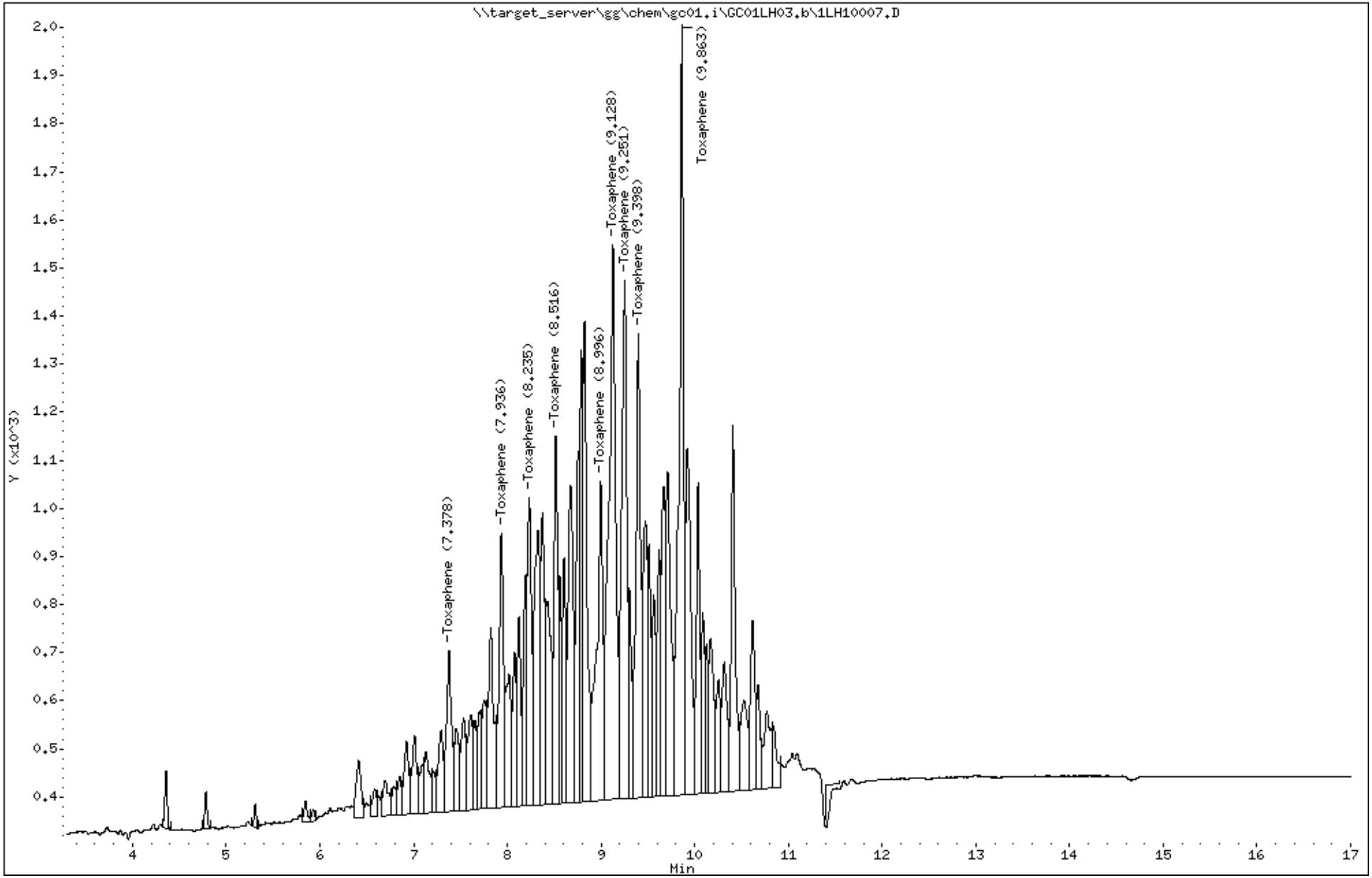
				AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)			
RT	EXP RT	DLT RT	RESPONSE			TARGET RANGE	RATIO	REVIEW CODE
18 Toxaphene					CAS #: 8001-35-2			
7.377	7.386	-0.009	334	0.50000	0.572	80.00- 120.00	100.00(M)	M5
7.936	7.946	-0.010	570	0.50000	0.578	144.59- 216.88	170.66	M5
8.232	8.242	-0.010	640	0.50000	0.577	154.86- 232.29	191.62	M5
8.516	8.527	-0.011	765	0.50000	0.554	189.36- 284.04	229.04	M5
8.996	9.007	-0.011	662	0.50000	0.555	173.94- 260.92	198.20	M5
9.127	9.137	-0.010	1152	0.50000	0.546	344.95- 517.43	344.91	M5
9.251	9.264	-0.013	1077	0.50000	0.540	415.41- 623.12	322.46	M5
9.397	9.409	-0.012	965	0.50000	0.536	231.19- 346.79	288.92	M5
9.862	9.874	-0.012	1601	0.50000	0.522	377.98- 566.97	479.34	M5
Average of Peak Amounts =					0.55333			

AC
9:19 am, Aug 18, 2018

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10007.D
Date : 03-AUG-2018 15:14
Client ID:
Instrument: gc01.i
Sample Info: WG233898-4
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000040

Data File: 1LH10007.D
Report Date: 18-Aug-2018 09:10

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LH03.b\GC01LH03.b\1LH10007.D
Lab Smp Id: WG233898-4
Inj Date : 03-AUG-2018 15:15
Operator : AC Inst ID: gc01.i
Smp Info : WG233898-4
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH03.b\PEST218.m\PEST218.m
Meth Date : 06-Aug-2018 08:40 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 09:40 Cal File: 1LD10091.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Tox.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

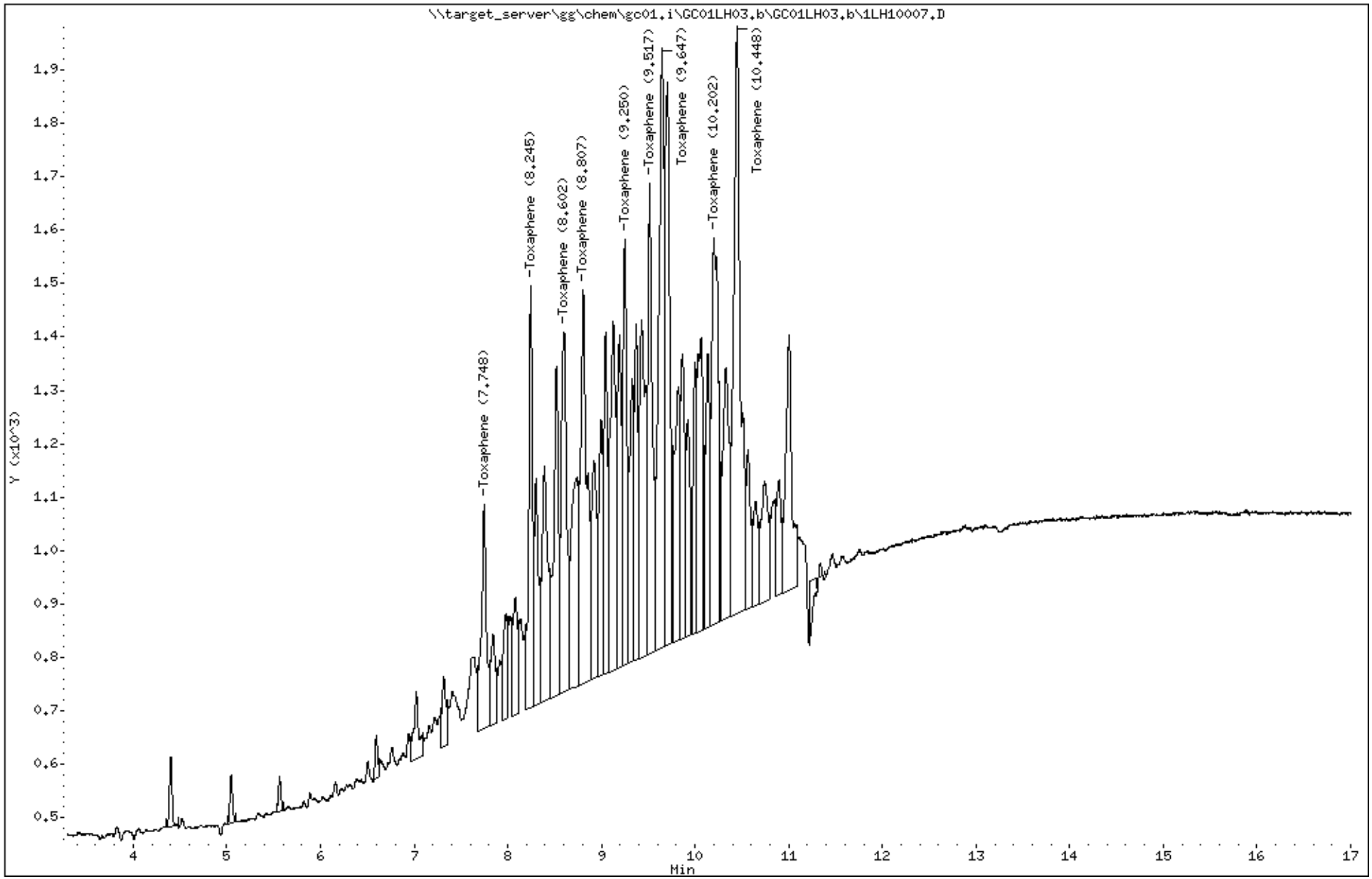
				AMOUNTS					
RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	TARGET RANGE	RATIO	REVIEW CODE	
18 Toxaphene					CAS #: 8001-35-2				
7.748	7.748	0.000	419	0.50000	0.446	80.00- 120.00	100.00(M)	M5	
8.244	8.244	0.000	790	0.50000	0.540	48.71- 73.07	188.54	M5	
8.601	8.601	0.000	674	0.50000	0.527	37.80- 56.69	160.86	M5	
8.806	8.806	0.000	736	0.50000	0.511	77.06- 115.59	175.66	M5	
9.249	9.249	0.000	795	0.50000	0.503	102.68- 154.02	189.74	M5	
9.516	9.516	0.000	881	0.50000	0.511	61.52- 92.28	210.26	M5	
9.646	9.648	-0.002	1123	0.50000	0.505	70.97- 106.46	268.02	M5	
10.199	10.201	-0.002	723	0.50000	0.508	54.59- 81.89	172.55	M5	
10.448	10.449	-0.001	1100	0.50000	0.544	74.33- 111.50	262.53	M5	
Average of Peak Amounts =					0.51056				

AC
9:19 am, Aug 18, 2018

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\GC01LH03.b\1LH10007.D
Date : 03-AUG-2018 15:15
Client ID:
Instrument: gc01.i
Sample Info: WG233898-4
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000042

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10008.D
Report Date: 18-Aug-2018 09:10

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10008.D
Lab Smp Id: WG233898-5
Inj Date : 03-AUG-2018 15:34
Operator : AC Inst ID: gc01.i
Smp Info : WG233898-5
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH03.b\PEST218.m
Meth Date : 06-Aug-2018 08:00 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 10:00 Cal File: 1LD10092.D
Als bottle: 6 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Tox.sub
Target Version: 4.12 Sample Matrix: WATER

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

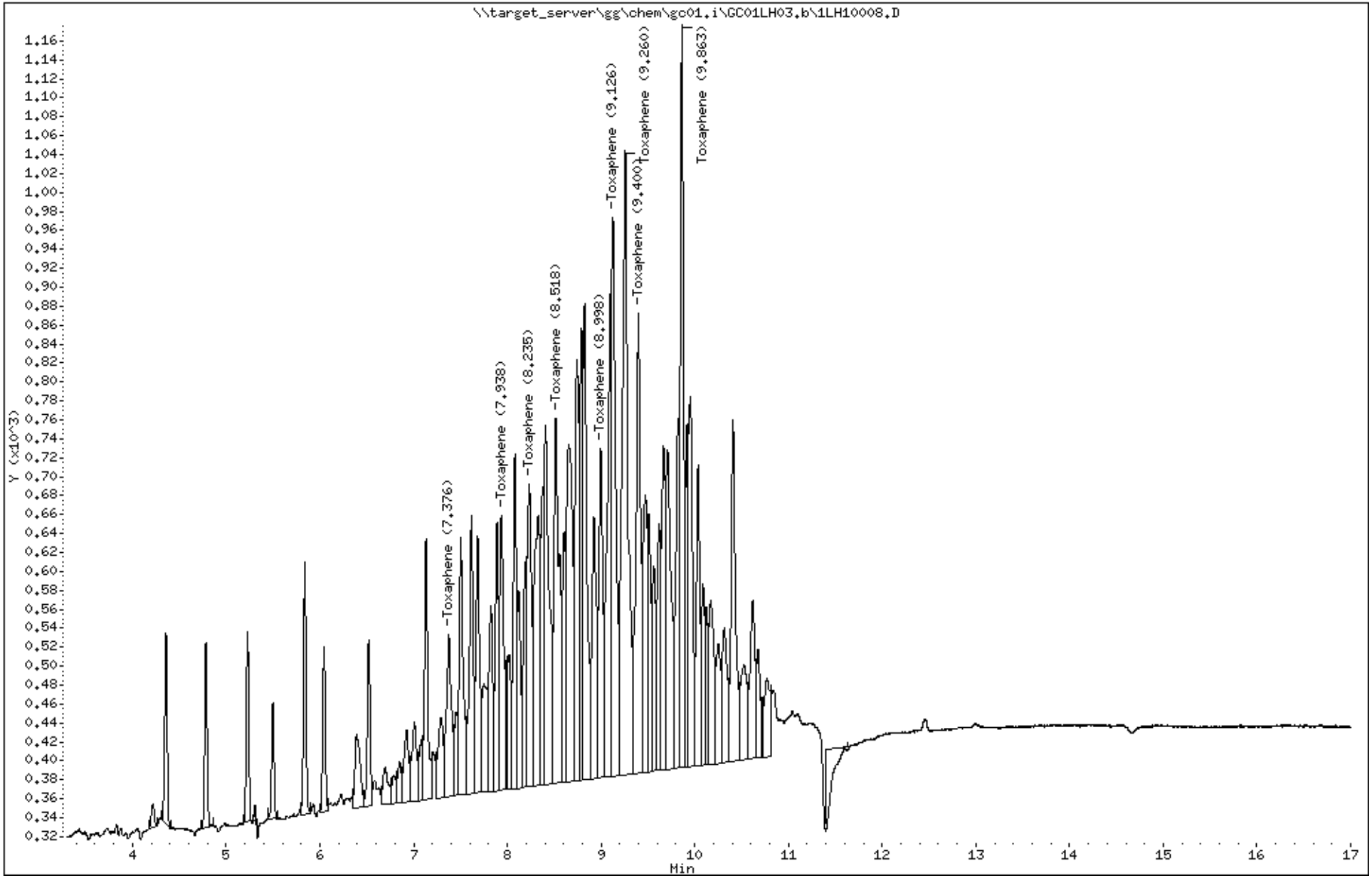
				AMOUNTS					
				CAL-AMT	ON-COL				
RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	TARGET RANGE	RATIO	REVIEW CODE	
18 Toxaphene						CAS #: 8001-35-2			
7.374	7.386	-0.012	170	0.25000	0.304	80.00- 120.00	100.00(M)	M5	
7.936	7.946	-0.010	289	0.25000	0.312	144.59- 216.88	170.00	M5	
8.234	8.242	-0.008	319	0.25000	0.293	154.86- 232.29	187.65	M5	
8.518	8.527	-0.009	385	0.25000	0.318	189.36- 284.04	226.47	M5	
8.998	9.007	-0.009	347	0.25000	0.320	173.94- 260.92	204.12	M5	
9.126	9.137	-0.011	589	0.25000	0.310	344.95- 517.43	346.47	M5	
9.258	9.264	-0.006	658	0.25000	0.360	415.41- 623.12	387.06	M5	
9.399	9.409	-0.010	485	0.25000	0.299	231.19- 346.79	285.29	M5	
9.863	9.874	-0.011	784	0.25000	0.296	377.98- 566.97	461.18	M5	
Average of Peak Amounts =					0.31244				

AC
9:19 am, Aug 18, 2018

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10008.D
Date : 03-AUG-2018 15:34
Client ID:
Instrument: gc01.i
Sample Info: WG233898-5
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000044

Data File: 1LH10008.D
Report Date: 18-Aug-2018 09:10

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LH03.b\GC01LH03.b\1LH10008.D
Lab Smp Id: WG233898-5
Inj Date : 03-AUG-2018 15:34
Operator : AC Inst ID: gc01.i
Smp Info : WG233898-5
Misc Info :
Comment :
Method : \\target_server\gg\chem\gc01.i\GC01LH03.b\PEST218.m\PEST218.m
Meth Date : 06-Aug-2018 08:40 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 10:00 Cal File: 1LD10092.D
Als bottle: 6 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Tox.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

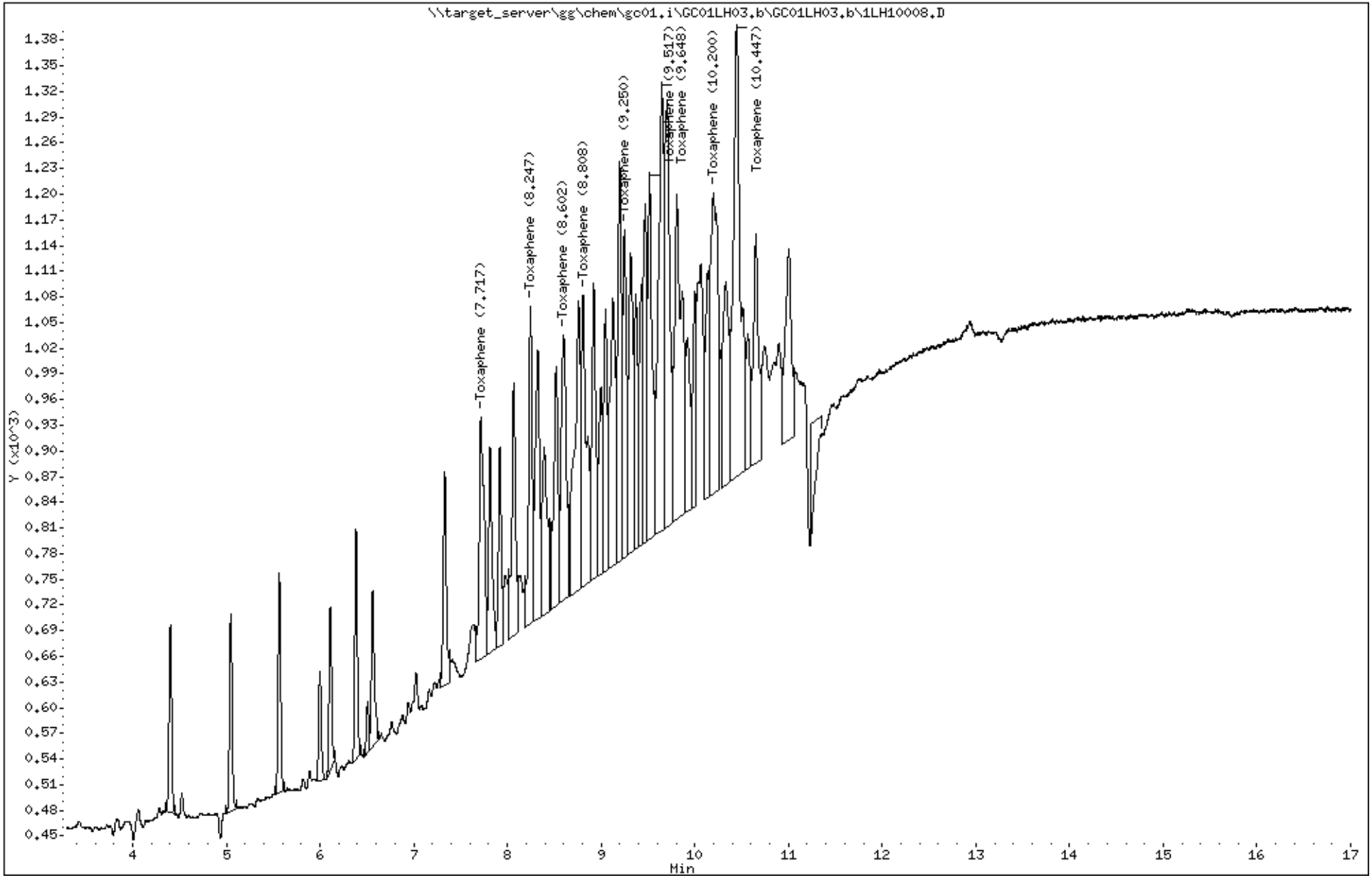
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
18 Toxaphene					CAS #: 8001-35-2			
7.716	7.748	-0.032	283	0.25000	0.292	80.00- 120.00	100.00(M)	M5
8.245	8.244	0.001	370	0.25000	0.277	48.71- 73.07	130.74	M5
8.601	8.601	0.000	309	0.25000	0.273	37.80- 56.69	109.19	M5
8.806	8.806	0.000	339	0.25000	0.264	77.06- 115.59	119.79	M5
9.250	9.249	0.001	381	0.25000	0.259	102.68- 154.02	134.63	M5
9.516	9.516	0.000	429	0.25000	0.256	61.52- 92.28	151.59	M5
9.646	9.648	-0.002	523	0.25000	0.273	70.97- 106.46	184.81	M5
10.200	10.201	-0.001	350	0.25000	0.303	54.59- 81.89	123.67	M5
10.446	10.449	-0.003	528	0.25000	0.338	74.33- 111.50	186.57	M5
Average of Peak Amounts =					0.28167			

AC
9:19 am, Aug 18, 2018

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\GC01LH03.b\1LH10008.D
Date : 03-AUG-2018 15:34
Client ID:
Instrument: gc01.i
Sample Info: WG233898-5
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000046

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10009.D
Report Date: 18-Aug-2018 09:10

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10009.D
Lab Smp Id: WG233898-6
Inj Date : 03-AUG-2018 16:24
Operator : AC Inst ID: gc01.i
Smp Info : WG233898-6
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH03.b\PEST218.m
Meth Date : 06-Aug-2018 08:00 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 10:19 Cal File: 1LD10093.D
Als bottle: 7 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Tox.sub
Target Version: 4.12 Sample Matrix: WATER

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

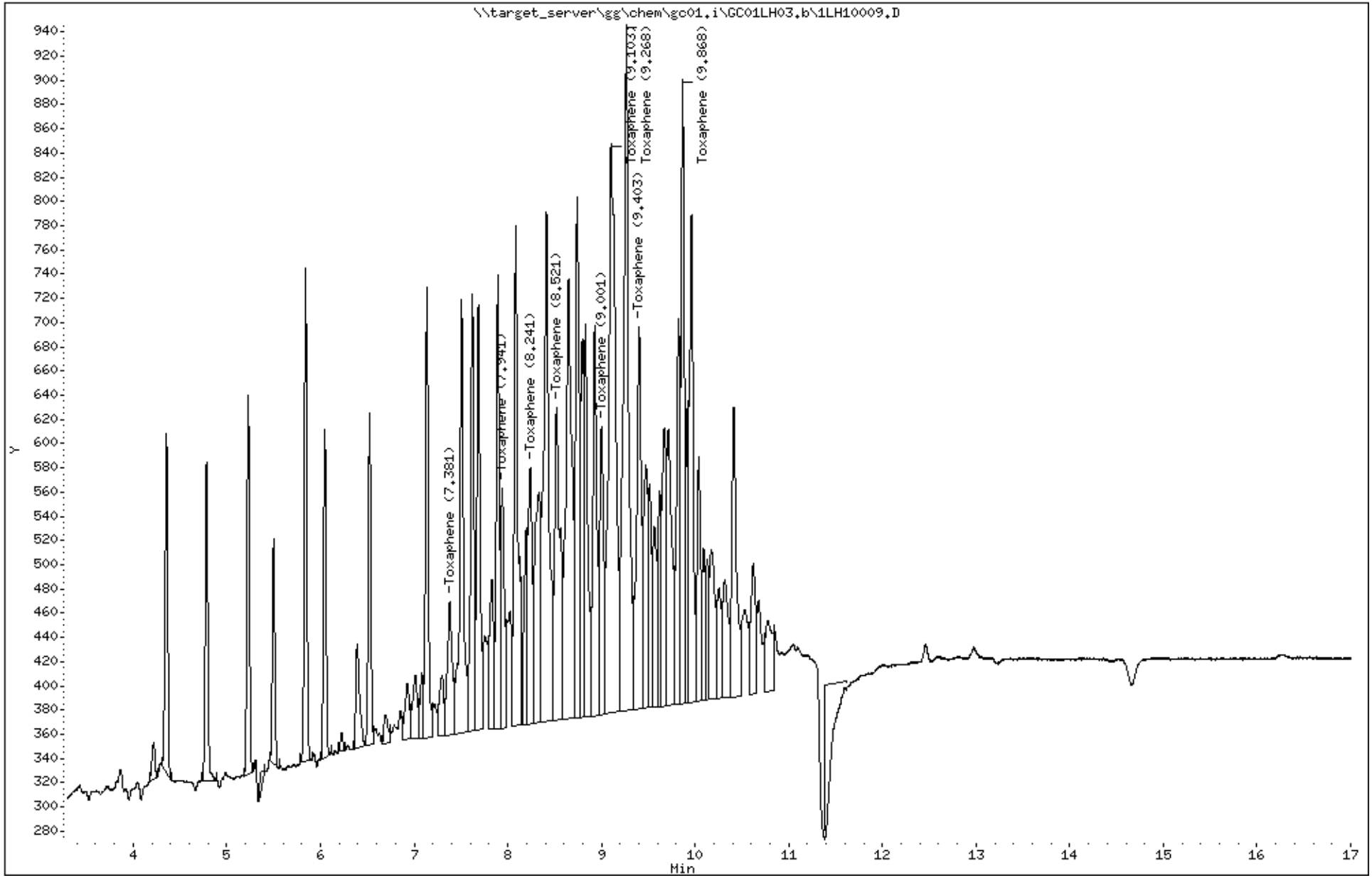
				AMOUNTS					
				CAL-AMT	ON-COL				
RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	TARGET RANGE	RATIO	REVIEW CODE	
18 Toxaphene						CAS #: 8001-35-2			
7.379	7.386	-0.007	109	0.10000	0.198	80.00- 120.00	100.00(M)	M5	
7.939	7.946	-0.007	197	0.10000	0.219	144.59- 216.88	180.73	M5	
8.239	8.242	-0.003	211	0.10000	0.193	154.86- 232.29	193.58	M5	
8.521	8.527	-0.006	258	0.10000	0.235	189.36- 284.04	236.70	M5	
8.999	9.007	-0.008	237	0.10000	0.231	173.94- 260.92	217.43	M5	
9.103	9.137	-0.034	470	0.10000	0.255	344.95- 517.43	431.19	M5	
9.266	9.264	0.002	566	0.10000	0.306	415.41- 623.12	519.27	M5	
9.401	9.409	-0.008	315	0.10000	0.211	231.19- 346.79	288.99	M5	
9.868	9.874	-0.006	515	0.10000	0.220	377.98- 566.97	472.48	M5	
Average of Peak Amounts =					0.22978				

AC
9:19 am, Aug 18, 2018

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10009.D
Date : 03-AUG-2018 16:24
Client ID:
Instrument: gc01.i
Sample Info: WG233898-6
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000048

Data File: 1LH10009.D
Report Date: 18-Aug-2018 09:10

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LH03.b\GC01LH03.b\1LH10009.D
Lab Smp Id: WG233898-6
Inj Date : 03-AUG-2018 16:24
Operator : AC Inst ID: gc01.i
Smp Info : WG233898-6
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH03.b\PEST218.m\PEST218.m
Meth Date : 06-Aug-2018 08:40 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 10:19 Cal File: 1LD10093.D
Als bottle: 7 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Tox.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

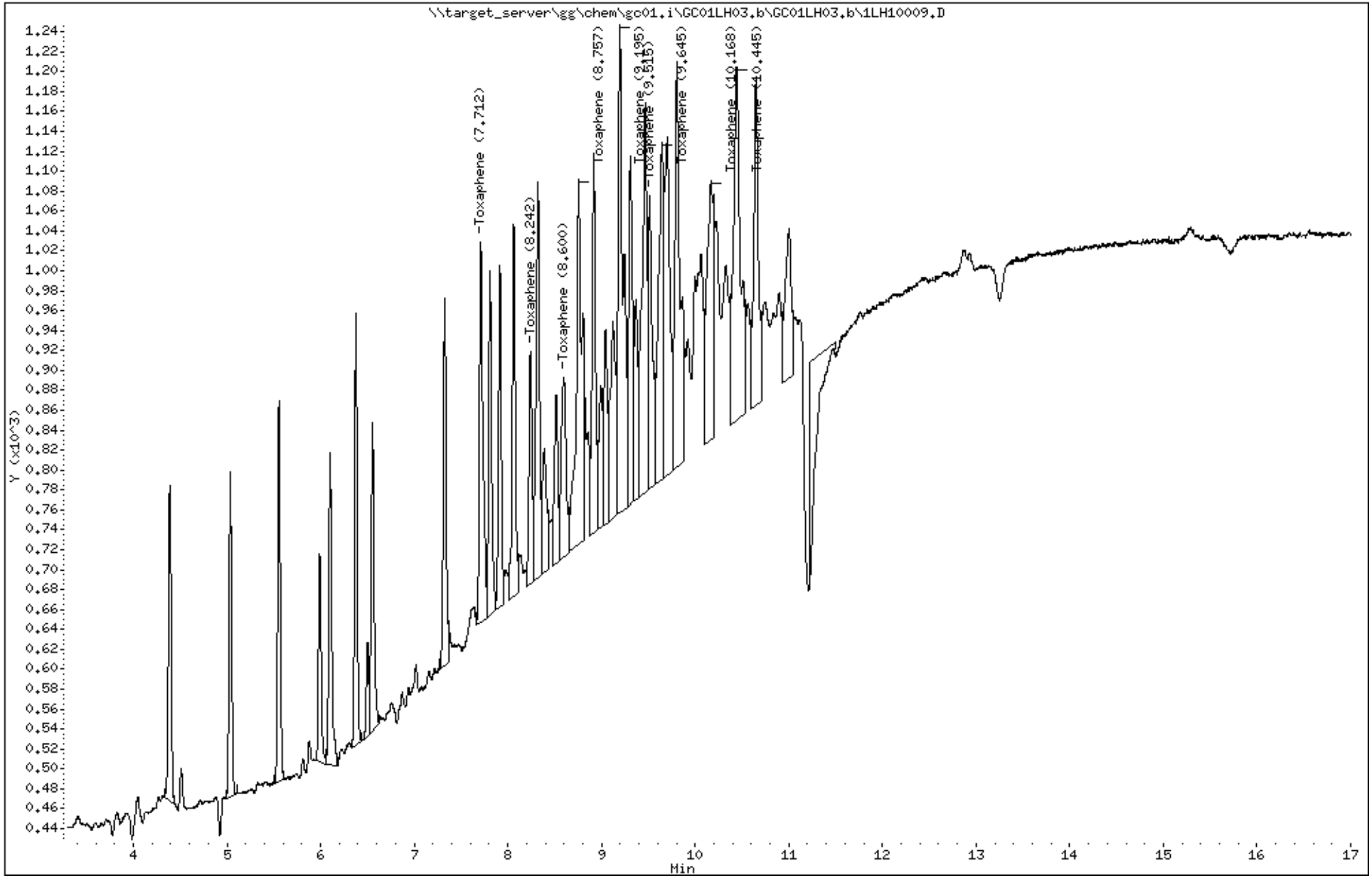
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
18 Toxaphene					CAS #: 8001-35-2			
7.710	7.748	-0.038	381	0.10000	0.397	80.00- 120.00	100.00(M)	M5
8.241	8.244	-0.003	232	0.10000	0.190	48.71- 73.07	60.89	M5
8.598	8.601	-0.003	180	0.10000	0.183	37.80- 56.69	47.24	M5
8.756	8.806	-0.050	367	0.10000	0.269	77.06- 115.59	96.33	M5
9.195	9.249	-0.054	489	0.10000	0.310	102.68- 154.02	128.35	M5
9.513	9.516	-0.003	293	0.10000	0.174	61.52- 92.28	76.90	M5
9.645	9.648	-0.003	338	0.10000	0.198	70.97- 106.46	88.71	M5
10.168	10.201	-0.033	260	0.10000	0.239	54.59- 81.89	68.24	M5
10.441	10.449	-0.008	354	0.10000	0.270	74.33- 111.50	92.91	M5
Average of Peak Amounts =					0.24778			

AC
9:19 am, Aug 18, 2018

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\GC01LH03.b\1LH10009.D
Date : 03-AUG-2018 16:24
Client ID:
Instrument: gc01.i
Sample Info: WG233898-6
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000050

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10010.D
Report Date: 18-Aug-2018 09:29

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10010.D
Lab Smp Id: WG233898-7
Inj Date : 03-AUG-2018 16:44
Operator : AC   Inst ID: gc01.i
Smp Info : WG233898-7,SL7227
Misc Info : WG233898,WG233898,WG233898,SL7227-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH03.b\PEST218.m
Meth Date : 06-Aug-2018 08:00 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 10:19   Cal File: 1LD10093.D
Als bottle: 8   QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: Tox.sub
Target Version: 4.12   Sample Matrix: WATER

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

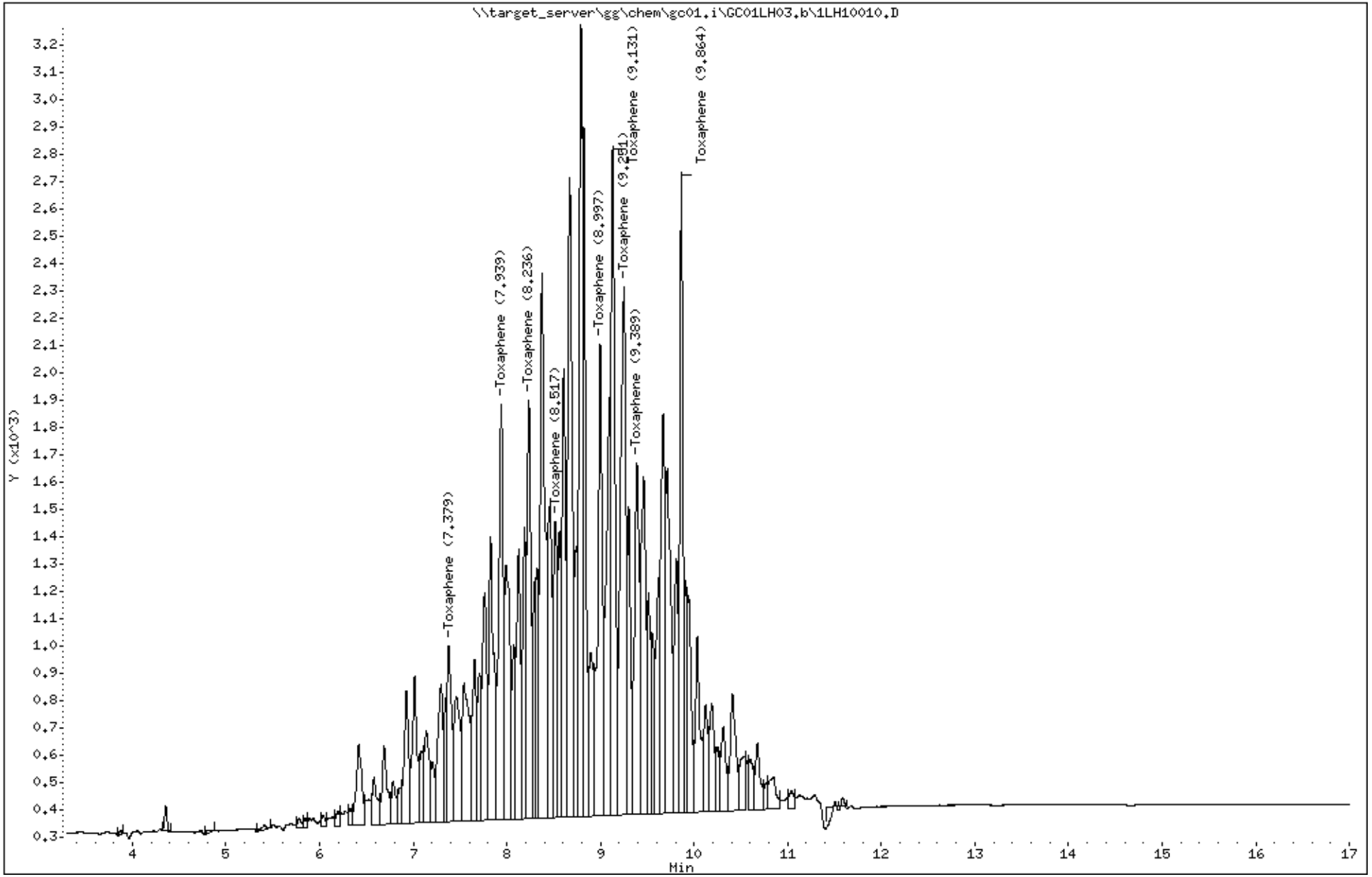
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

				CONCENTRATIONS ON-COL	FINAL			
RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/L)	TARGET RANGE	RATIO	REVIEW CODE
18 Toxaphene					CAS #: 8001-35-2			
7.377	7.386	-0.009	641	1.01042	1.01	80.00- 120.00	100.00(M)	
7.939	7.946	-0.007	1516	1.41921	1.42	144.59- 216.88	236.51	M5
8.235	8.242	-0.007	1527	1.30978	1.31	154.86- 232.29	238.22	
8.517	8.527	-0.010	1081	0.72901	0.729	189.36- 284.04	168.64	
8.997	9.007	-0.010	1724	1.30111	1.30	173.94- 260.92	268.95	
9.130	9.137	-0.007	2446	1.06430	1.06	344.95- 517.43	381.59	
9.250	9.264	-0.014	1930	0.85969	0.860	415.41- 623.12	301.09	AC
9.389	9.409	-0.020	1283	0.67195	0.672	231.19- 346.79	200.16	9:35 am, Aug 18, 2018
9.864	9.874	-0.010	2342	0.73093	0.731	377.98- 566.97	365.37	
		Average of Peak Concentrations =			1.01			

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10010.D
Date : 03-AUG-2018 16:44
Client ID:
Instrument: gc01.i
Sample Info: WG233898-7,SL7227
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000052

Data File: 1LH10010.D
Report Date: 18-Aug-2018 09:29

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LH03.b\GC01LH03.b\1LH10010.D
Lab Smp Id: WG233898-7
Inj Date : 03-AUG-2018 16:44
Operator : AC   Inst ID: gc01.i
Smp Info : WG233898-7,SL7227
Misc Info : WG233898,WG233898,WG233898,SL7227-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH03.b\PEST218.m\PEST218.m
Meth Date : 06-Aug-2018 08:40 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 10:19   Cal File: 1LD10093.D
Als bottle: 8   QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: Tox.sub
Target Version: 4.12   Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

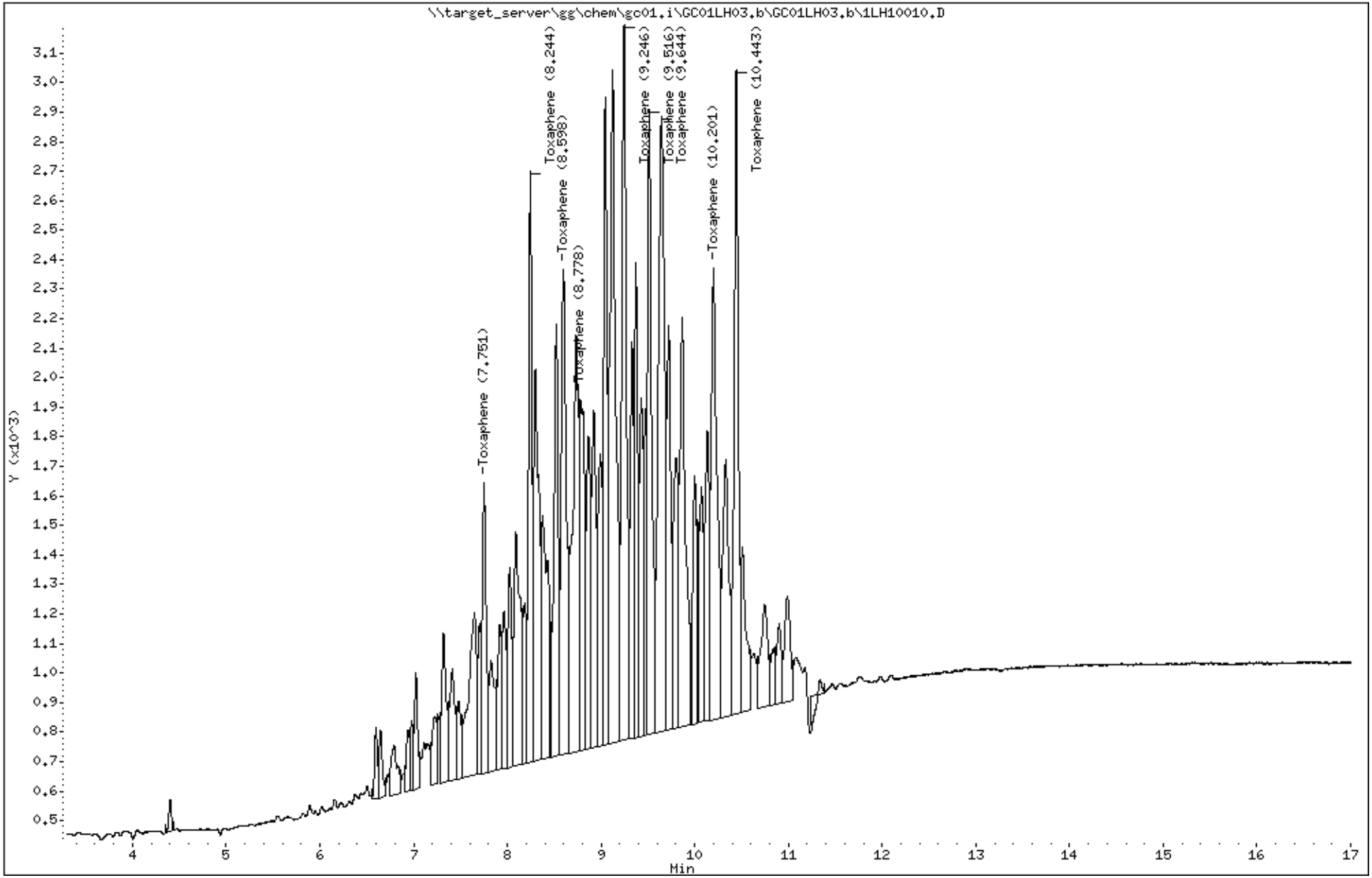
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/mL)	CONCENTRATIONS FINAL (ug/L)	TARGET RANGE	RATIO	REVIEW CODE
18 Toxaphene					CAS #: 8001-35-2			
7.751	7.748	0.003	983	1.05080	1.05	80.00- 120.00	100.00(M)	
8.244	8.244	0.000	2000	1.27249	1.27	48.71- 73.07	203.46	
8.597	8.601	-0.004	1643	1.15222	1.15	37.80- 56.69	167.14	M5
8.777	8.806	-0.029	1188	0.75485	0.755	77.06- 115.59	120.85	
9.246	9.249	-0.003	2423	1.37475	1.37	102.68- 154.02	246.49	
9.514	9.516	-0.002	2116	1.13741	1.14	61.52- 92.28	215.26	AC
9.644	9.648	-0.004	2083	0.83795	0.838	70.97- 106.46	211.90	
10.201	10.201	0.000	1529	0.87753	0.878	54.59- 81.89	155.54	9:35 am, Aug 18, 2018
10.442	10.449	-0.007	2180	0.90519	0.905	74.33- 111.50	221.77	
		Average of Peak Concentrations =			1.04			

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\GC01LH03.b\1LH10010.D
Date : 03-AUG-2018 16:44
Client ID:
Instrument: gc01.i
Sample Info: WG233898-7,SL7227
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000054

Katahdin
ANALYTICAL SERVICES

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL7420
Project : Cornhusker Army Ammunition Plant
Instrument ID: GC01
Lab File IDs : 1LD10093.D 1LD10092.D 1LD10091.D 1LD10100.D 1LD10089.D 1LD10088.D
Column ID: A
Calibration Date(s): 16-FEB-18 15:00 03-AUG-18 21:53

	Level 1 0.0050000	Level 2 0.0100000	Level 3 0.0250000	Level 4 0.0500000	Level 5 0.1000000	Level 6 0.2500000	Crv New	b	m1	m2	%RSD	Max %RSD	
Technical Chlordane(1)	3840	3730	4088	3980	4363	4668	AVG		4112		8.49858	20.00000	O
Technical Chlordane(2)	23380	20730	20416	19672	20857	19810	AVG		20811		6.46934	20.00000	O
Technical Chlordane(3)	22460	19520	19476	18788	20116	18947	AVG		19885		6.77236	20.00000	O

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029
http://katahdinlab.com
sales@katahdinlab.com

Katahdin
ANALYTICAL SERVICES

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL7420
Project : Cornhusker Army Ammunition Plant
Instrument ID: GC01
Lab File IDs : 1LD10093.D 1LD10092.D 1LD10091.D 1LD10100.D 1LD10089.D 1LD10088.D
Column ID: B
Calibration Date(s): 16-FEB-18 15:00 03-AUG-18 18:40

	0.005000(Level 1	0.010000(Level 2	0.025000(Level 3	0.050000(Level 4	0.1000000 Level 5	0.2500000 Level 6	New Crv	b	m1	m2	%RSD	Max %RSD	
Technical Chlordane(1)	6660	4870	4196	4270	4800	5185	AVG		4997		17.95787	20.00000	O
Technical Chlordane(2)	21660	18940	18032	17818	18824	18291	AVG		18928		7.43998	20.00000	O
Technical Chlordane(3)	16420	13800	12368	12590	13397	13087	AVG		13610		10.81551	20.00000	O

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

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http://katahdinlab.com
sales@katahdinlab.com

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10017.D
Report Date: 18-Aug-2018 09:29

Katahdin Analytical Services

RECOVERY REPORT

Client Name: Client SDG: SDGa00508
Sample Matrix: LIQUID Fraction: PESTICIDE
Lab Smp Id: WG233899-7
Level: LOW Operator: AC
Data Type: GC MULTI COMP SampleType: LCS
SpikeList File: tc_ind.spk Quant Type: ESTD
Sublist File: TC.sub
Method File: \\target_server\gg\chem\gc01.i\GC01LH03.b\PEST218.m
Misc Info: WG233899,WG233899,WG233899,SL7227-1

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
14 Technical Chlordan	0.500	0.482	96.40	80-120

Data File: 1LH10017.D
Report Date: 18-Aug-2018 09:29

Katahdin Analytical Services

RECOVERY REPORT

Client Name: Client SDG: SDGa00508
Sample Matrix: LIQUID Fraction: PESTICIDE
Lab Smp Id: WG233899-7
Level: LOW Operator: AC
Data Type: GC MULTI COMP SampleType: LCS
SpikeList File: tc_ind.spk Quant Type: ESTD
Sublist File: TC.sub
Method File: \\target_server\gg\chem\gc01.i\GC01LH03.b\PEST218.m\PEST218.m
Misc Info: WG233899,WG233899,WG233899,SL7227-1

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
14 Technical Chlordan	0.500	0.502	100.40	80-120

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10011.D
Report Date: 18-Aug-2018 09:10

Katahdin Analytical Services

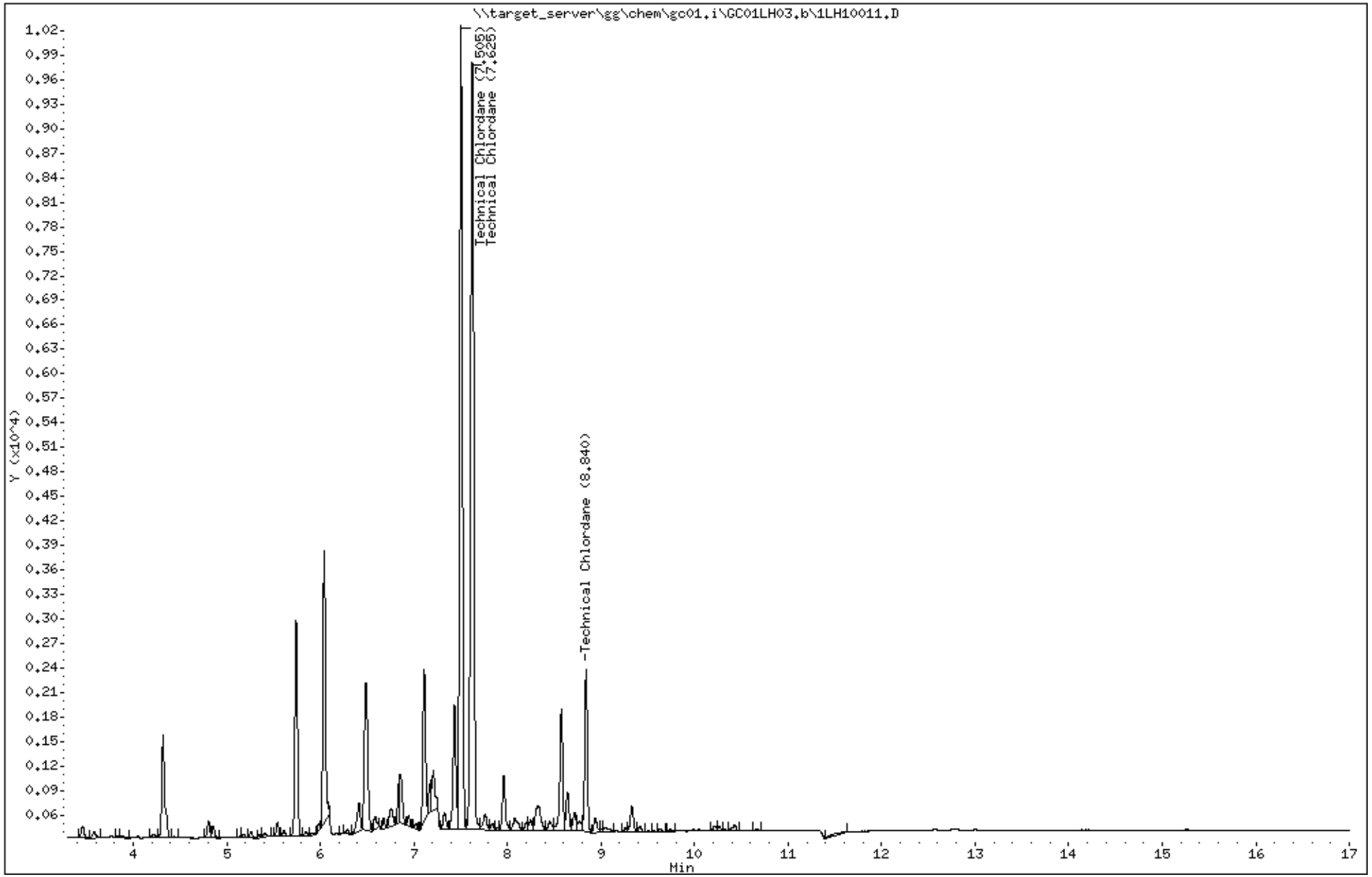
Data file : \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10011.D
Lab Smp Id: WG233899-1
Inj Date : 03-AUG-2018 17:03
Operator : AC   Inst ID: gc01.i
Smp Info : WG233899-1
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH03.b\PEST218.m
Meth Date : 06-Aug-2018 08:00 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 13:22   Cal File: 1LD10100.D
Als bottle: 9   Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: TC.sub
Target Version: 4.12   Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

				AMOUNTS					
				CAL-AMT	ON-COL				
RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	TARGET RANGE	RATIO	REVIEW CODE	
14 Technical Chlordane						CAS #: 12789-03-6			
8.840	8.840	0.000	1990	0.50000	0.470	80.00- 120.00	100.00		
7.505	7.505	0.000	9836	0.50000	0.489	487.08- 730.63	494.27		
7.625	7.625	0.000	9394	0.50000	0.483	467.92- 701.87	472.06		
		Average of Peak Amounts =			0.48067				

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10011.D
Date : 03-AUG-2018 17:03
Client ID:
Instrument: gc01.i
Sample Info: WG233899-1
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000060

Data File: 1LH10011.D
Report Date: 18-Aug-2018 09:10

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LH03.b\GC01LH03.b\1LH10011.D
Lab Smp Id: WG233899-1
Inj Date : 03-AUG-2018 17:03
Operator : AC   Inst ID: gc01.i
Smp Info : WG233899-1
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH03.b\PEST218.m\PEST218.m
Meth Date : 06-Aug-2018 08:40 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 13:22   Cal File: 1LD10100.D
Als bottle: 9   Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: TC.sub
Target Version: 4.12   Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

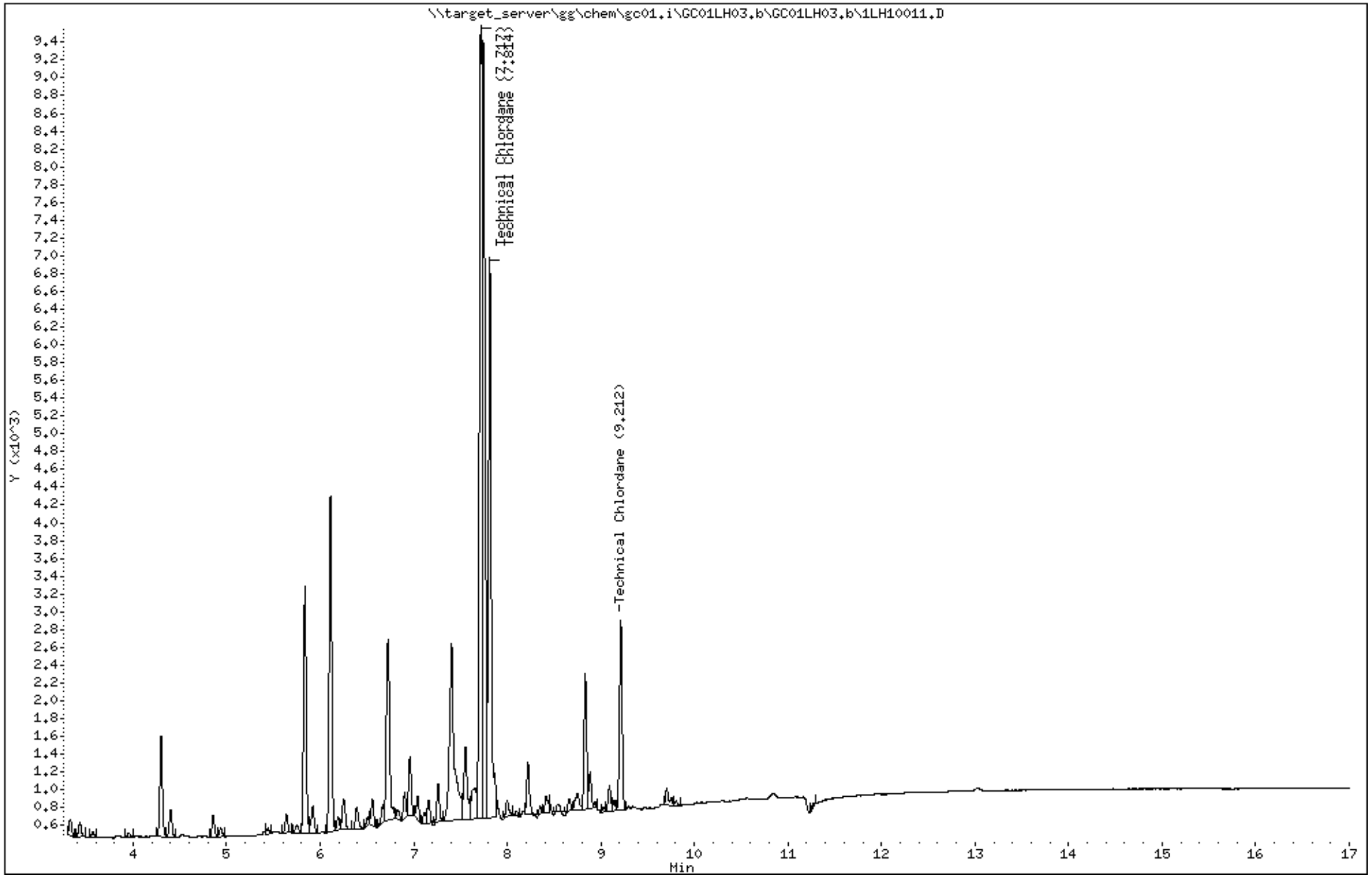
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
14 Technical Chlordane					CAS #: 12789-03-6			
9.212	9.212	0.000	2135	0.50000	0.477	80.00- 120.00	100.00(M)	M5
7.717	7.717	0.000	8909	0.50000	0.532	260.18- 390.27	417.28	M5
7.813	7.813	0.000	6295	0.50000	0.522	197.24- 295.86	294.85	M5
Average of Peak Amounts =					0.51033			

AC
9:21 am, Aug 18, 2018

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\GC01LH03.b\1LH10011.D
Date : 03-AUG-2018 17:03
Client ID:
Instrument: gc01.i
Sample Info: WG233899-1
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000062

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10012.D
Report Date: 18-Aug-2018 09:10

Katahdin Analytical Services

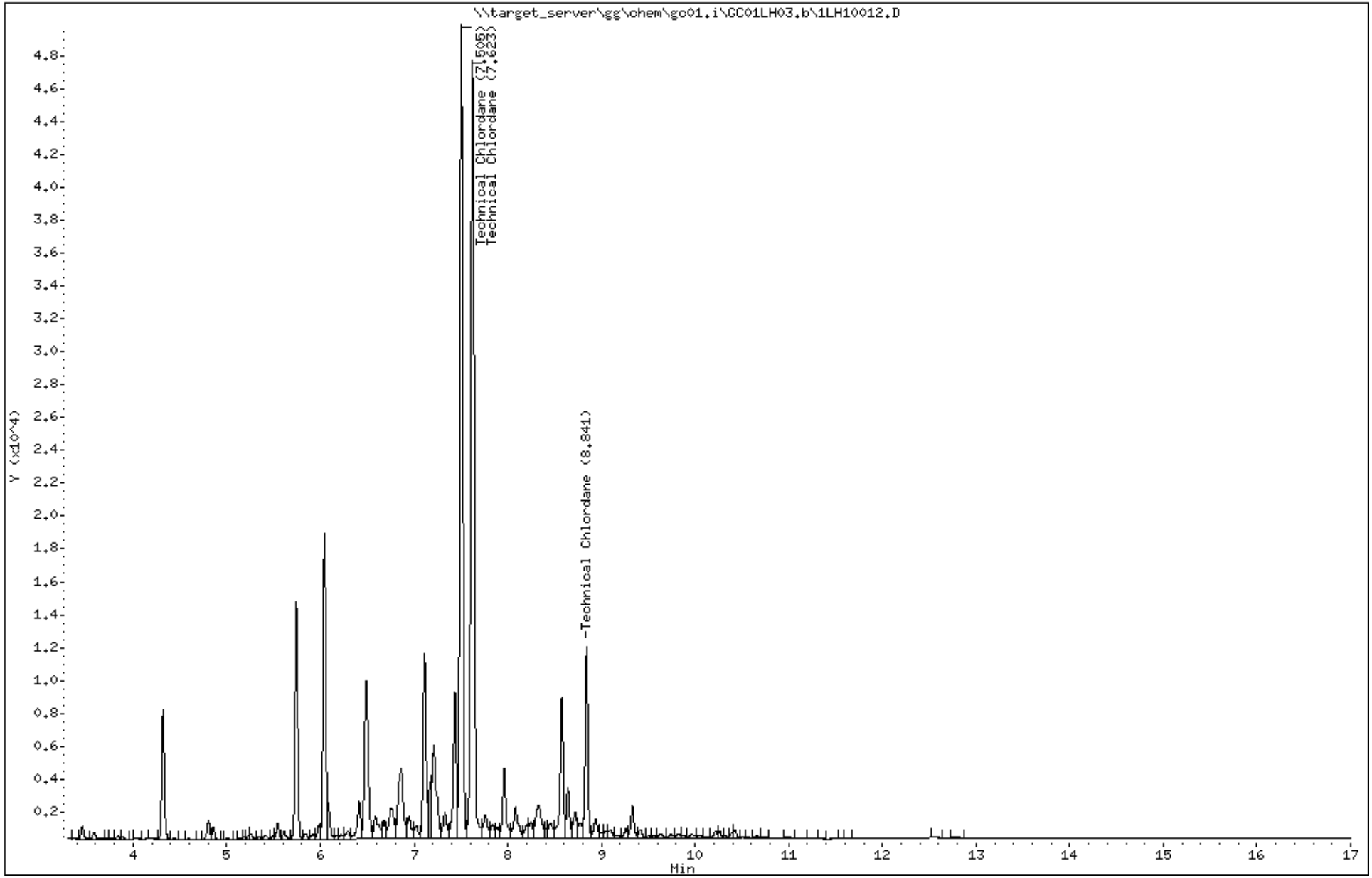
Data file : \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10012.D
Lab Smp Id: WG233899-2
Inj Date : 03-AUG-2018 17:22
Operator : AC   Inst ID: gc01.i
Smp Info : WG233899-2
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH03.b\PEST218.m
Meth Date : 06-Aug-2018 08:00 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 08:42   Cal File: 1LD10088.D
Als bottle: 10   Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: TC.sub
Target Version: 4.12   Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

				AMOUNTS					
				CAL-AMT	ON-COL				
RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	TARGET RANGE	RATIO	REVIEW CODE	
14 Technical Chlordane						CAS #: 12789-03-6			
8.841	8.840	0.001	11671	2.50000	2.74	80.00- 120.00	100.00		
7.504	7.505	-0.001	49526	2.50000	2.45	487.08- 730.63	424.35		
7.623	7.625	-0.002	47368	2.50000	2.43	467.92- 701.87	405.86		
		Average of Peak Amounts =			2.54000				

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10012.D
Date : 03-AUG-2018 17:22
Client ID:
Instrument: gc01.i
Sample Info: WG233899-2
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000064

Data File: 1LH10012.D
Report Date: 18-Aug-2018 09:10

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LH03.b\GC01LH03.b\1LH10012.D
Lab Smp Id: WG233899-2
Inj Date : 03-AUG-2018 17:22
Operator : AC Inst ID: gc01.i
Smp Info : WG233899-2
Misc Info :
Comment :
Method : \\target_server\gg\chem\gc01.i\GC01LH03.b\PEST218.m\PEST218.m
Meth Date : 06-Aug-2018 08:40 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 08:42 Cal File: 1LD10088.D
Als bottle: 10 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TC.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

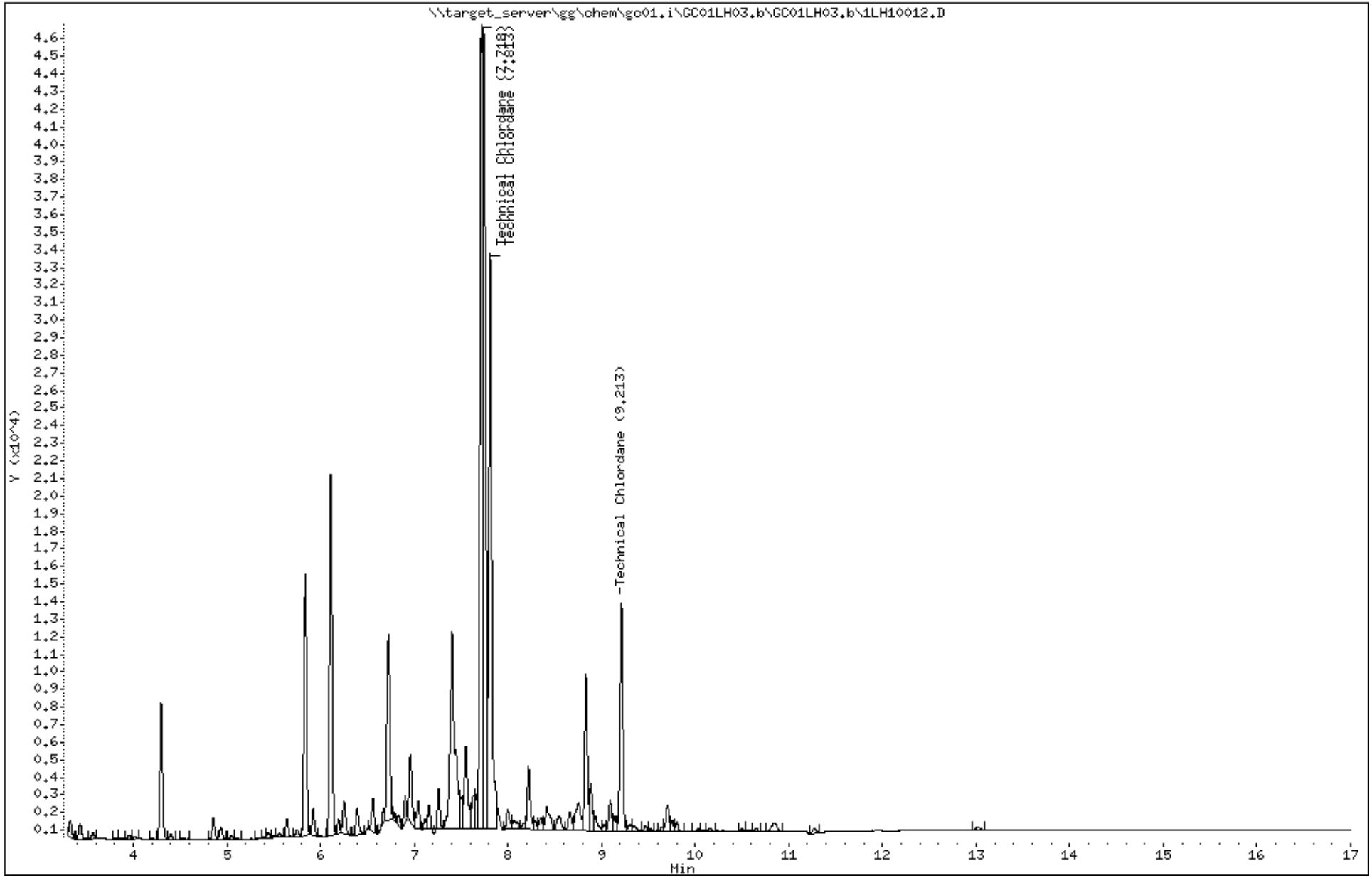
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
14 Technical Chlordane					CAS #: 12789-03-6			
9.213	9.212	0.001	12962	2.50000	2.59	80.00- 120.00	100.00(M)	M5
7.718	7.717	0.001	45728	2.50000	2.44	260.18- 390.27	352.79	
7.813	7.813	0.000	32717	2.50000	2.44	197.24- 295.86	252.41	
Average of Peak Amounts =					2.49000			

AC
9:21 am, Aug 18, 2018

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\GC01LH03.b\1LH10012.D
Date : 03-AUG-2018 17:22
Client ID:
Instrument: gc01.i
Sample Info: WG233899-2
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000066

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10013.D
Report Date: 18-Aug-2018 09:10

Katahdin Analytical Services

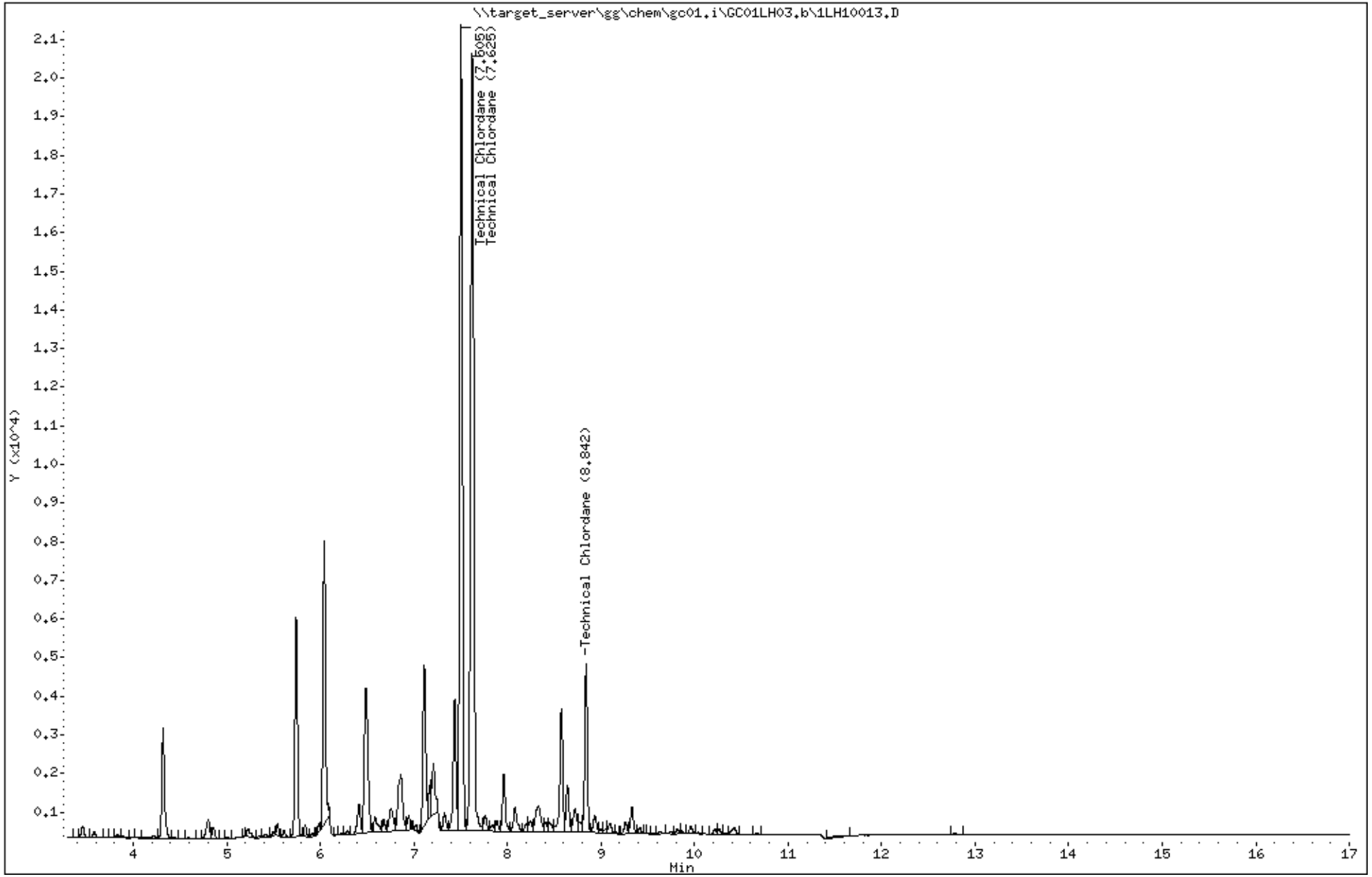
Data file : \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10013.D
Lab Smp Id: WG233899-3
Inj Date : 03-AUG-2018 17:42
Operator : AC   Inst ID: gc01.i
Smp Info : WG233899-3
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH03.b\PEST218.m
Meth Date : 06-Aug-2018 08:00 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 09:02   Cal File: 1LD10089.D
Als bottle: 11   Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: TC.sub
Target Version: 4.12   Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

				AMOUNTS					
				CAL-AMT	ON-COL				
RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	TARGET RANGE	RATIO	REVIEW CODE	
14 Technical Chlordane						CAS #: 12789-03-6			
8.841	8.840	0.001	4363	1.00000	1.03	80.00- 120.00	100.00		
7.505	7.505	0.000	20857	1.00000	1.03	487.08- 730.63	478.04		
7.625	7.625	0.000	20116	1.00000	1.03	467.92- 701.87	461.06		
		Average of Peak Amounts =			1.03000				

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10013.D
Date : 03-AUG-2018 17:42
Client ID:
Instrument: gc01.i
Sample Info: WG233899-3
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000068

Data File: 1LH10013.D
Report Date: 18-Aug-2018 09:10

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LH03.b\GC01LH03.b\1LH10013.D
Lab Smp Id: WG233899-3
Inj Date : 03-AUG-2018 17:42
Operator : AC Inst ID: gc01.i
Smp Info : WG233899-3
Misc Info :
Comment :
Method : \\target_server\gg\chem\gc01.i\GC01LH03.b\PEST218.m\PEST218.m
Meth Date : 06-Aug-2018 08:40 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 09:02 Cal File: 1LD10089.D
Als bottle: 11 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TC.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

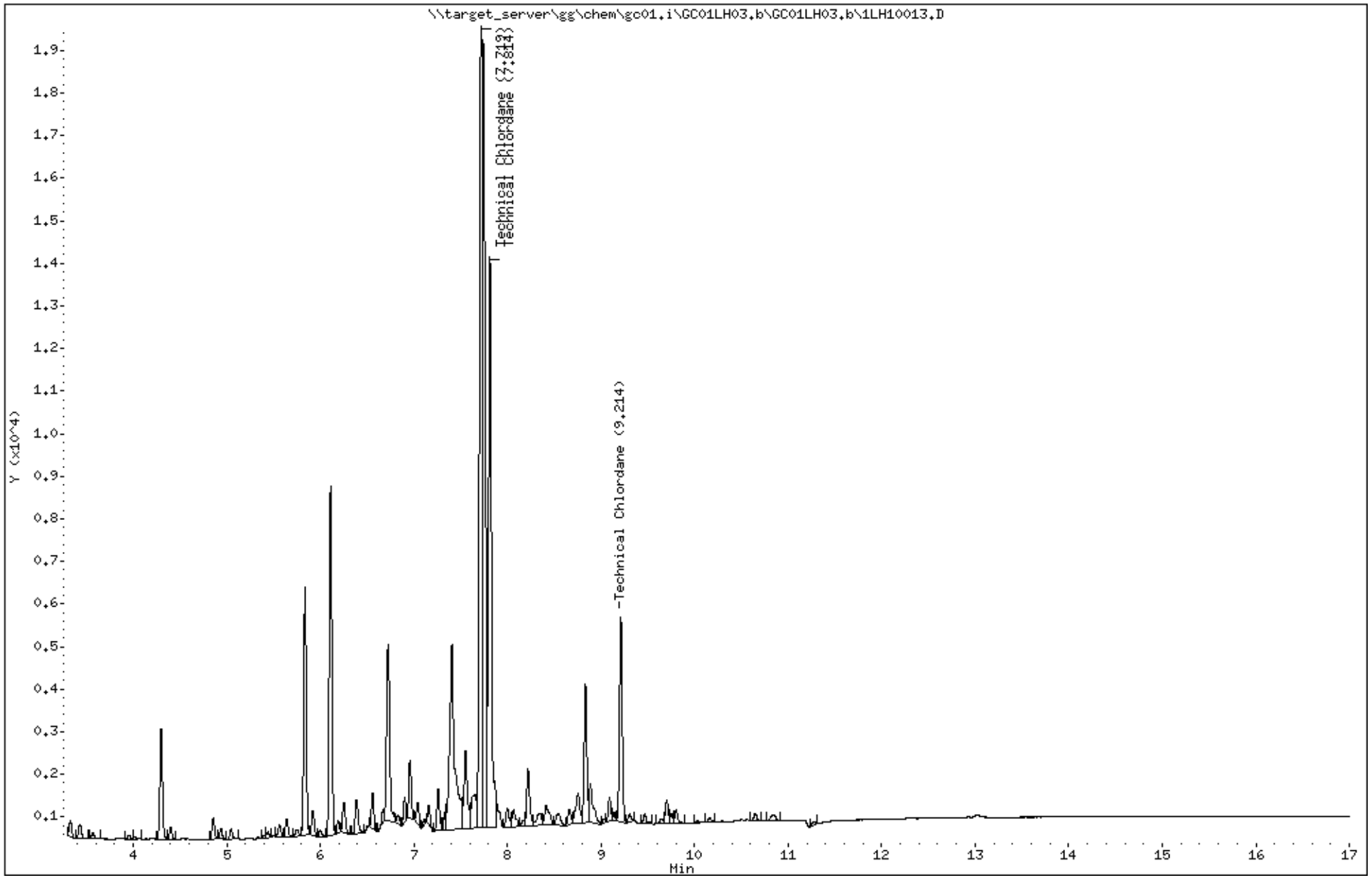
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
14 Technical Chlordane					CAS #: 12789-03-6			
9.213	9.212	0.001	4800	1.00000	0.961	80.00- 120.00	100.00(M)	M5
7.718	7.717	0.001	18824	1.00000	0.999	260.18- 390.27	392.17	M5
7.813	7.813	0.000	13397	1.00000	0.992	197.24- 295.86	279.10	M5
Average of Peak Amounts =					0.98400			

AC
9:21 am, Aug 18, 2018

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\GC01LH03.b\1LH10013.D
Date : 03-AUG-2018 17:42
Client ID:
Instrument: gc01.i
Sample Info: WG233899-3
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000070

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10014.D
Report Date: 18-Aug-2018 09:10

Katahdin Analytical Services

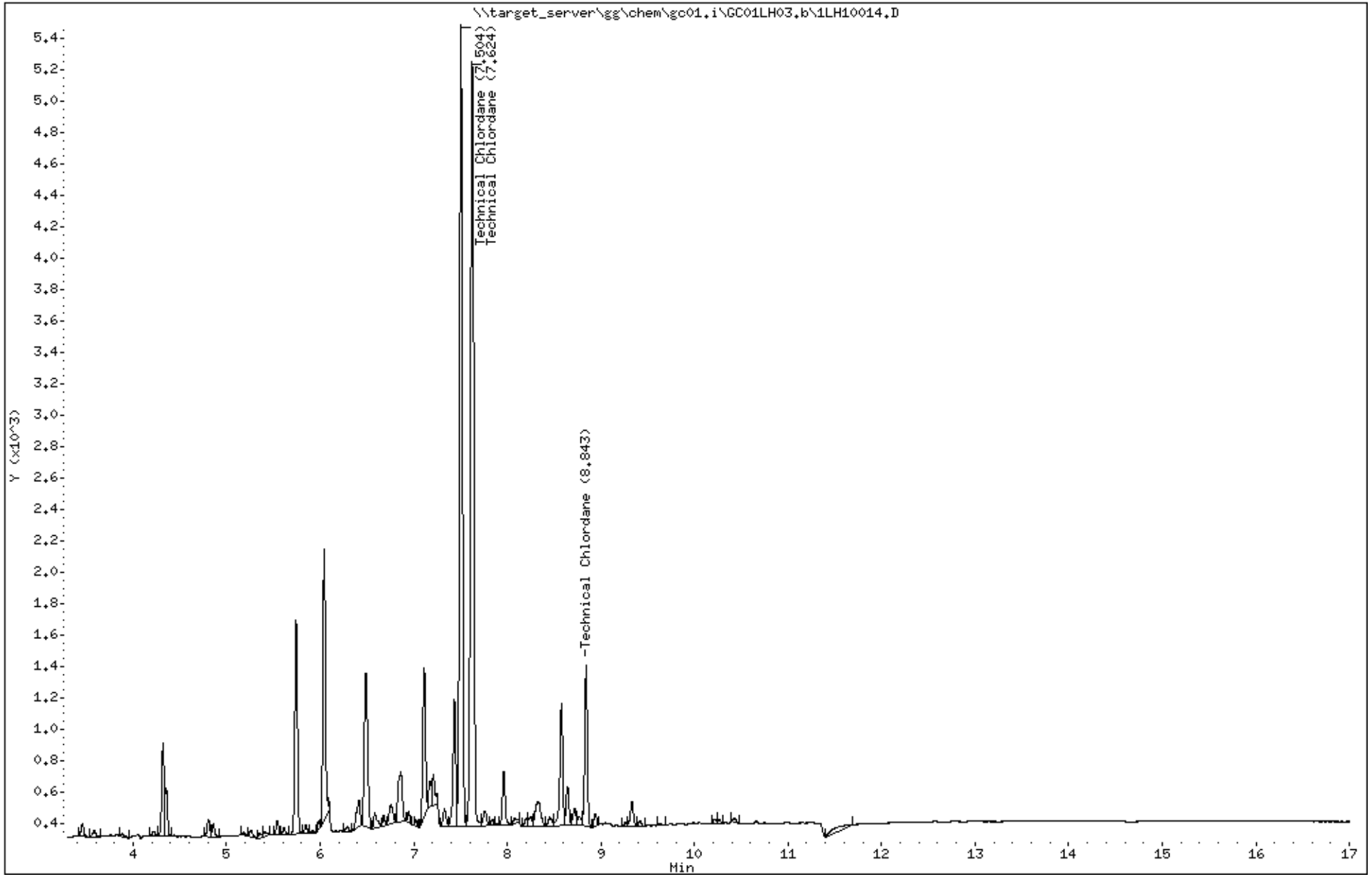
Data file : \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10014.D
Lab Smp Id: WG233899-4
Inj Date : 03-AUG-2018 18:01
Operator : AC   Inst ID: gc01.i
Smp Info : WG233899-4
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH03.b\PEST218.m
Meth Date : 06-Aug-2018 08:00 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 09:40   Cal File: 1LD10091.D
Als bottle: 12   Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: TC.sub
Target Version: 4.12   Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

				AMOUNTS					
RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
14 Technical Chlordane					CAS #: 12789-03-6			
8.842	8.840	0.002	1022	0.25000	0.242	80.00- 120.00	100.00	
7.504	7.505	-0.001	5104	0.25000	0.255	487.08- 730.63	499.41	
7.624	7.625	-0.001	4869	0.25000	0.252	467.92- 701.87	476.42	
		Average of Peak Amounts =			0.24967			

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10014.D
Date : 03-AUG-2018 18:01
Client ID:
Instrument: gc01.i
Sample Info: WG233899-4
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000072

Data File: 1LH10014.D
Report Date: 18-Aug-2018 09:10

Katahdin Analytical Services

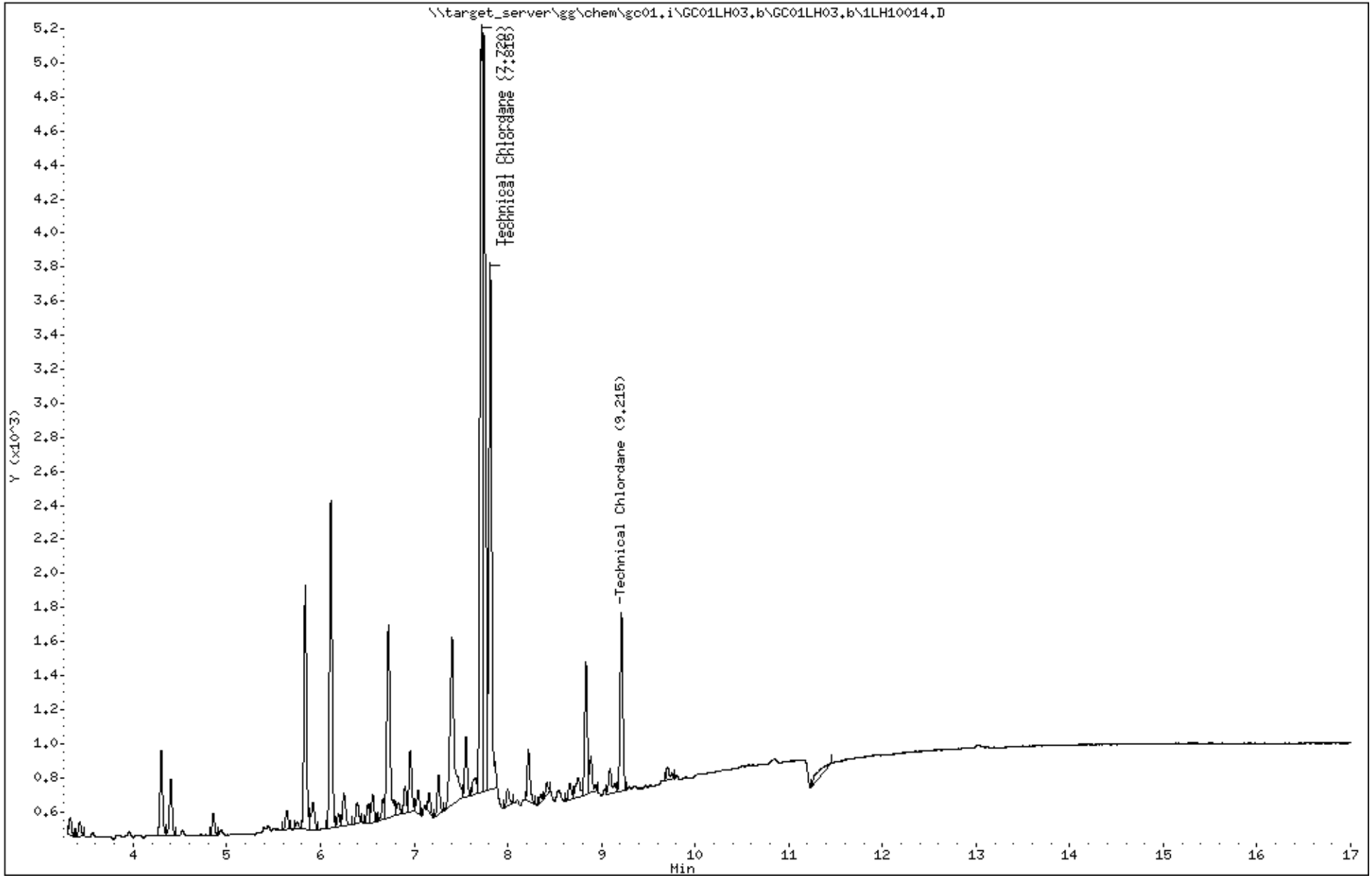
Data file : \\target_server\gg\chem\gc01.i\GC01LH03.b\GC01LH03.b\1LH10014.D
Lab Smp Id: WG233899-4
Inj Date : 03-AUG-2018 18:01
Operator : AC   Inst ID: gc01.i
Smp Info : WG233899-4
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH03.b\PEST218.m\PEST218.m
Meth Date : 06-Aug-2018 08:40 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 09:40   Cal File: 1LD10091.D
Als bottle: 12   Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: TC.sub
Target Version: 4.12   Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

				AMOUNTS					
RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
14 Technical Chlordane					CAS #: 12789-03-6			
9.214	9.212	0.002	1049	0.25000	0.234	80.00- 120.00	100.00	
7.719	7.717	0.002	4508	0.25000	0.260	260.18- 390.27	429.74	
7.814	7.813	0.001	3092	0.25000	0.252	197.24- 295.86	294.76	
Average of Peak Amounts =					0.24867			

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\GC01LH03.b\1LH10014.D
Date : 03-AUG-2018 18:01
Client ID:
Instrument: gc01.i
Sample Info: WG233899-4
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000074

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10015.D
Report Date: 18-Aug-2018 09:10

Katahdin Analytical Services

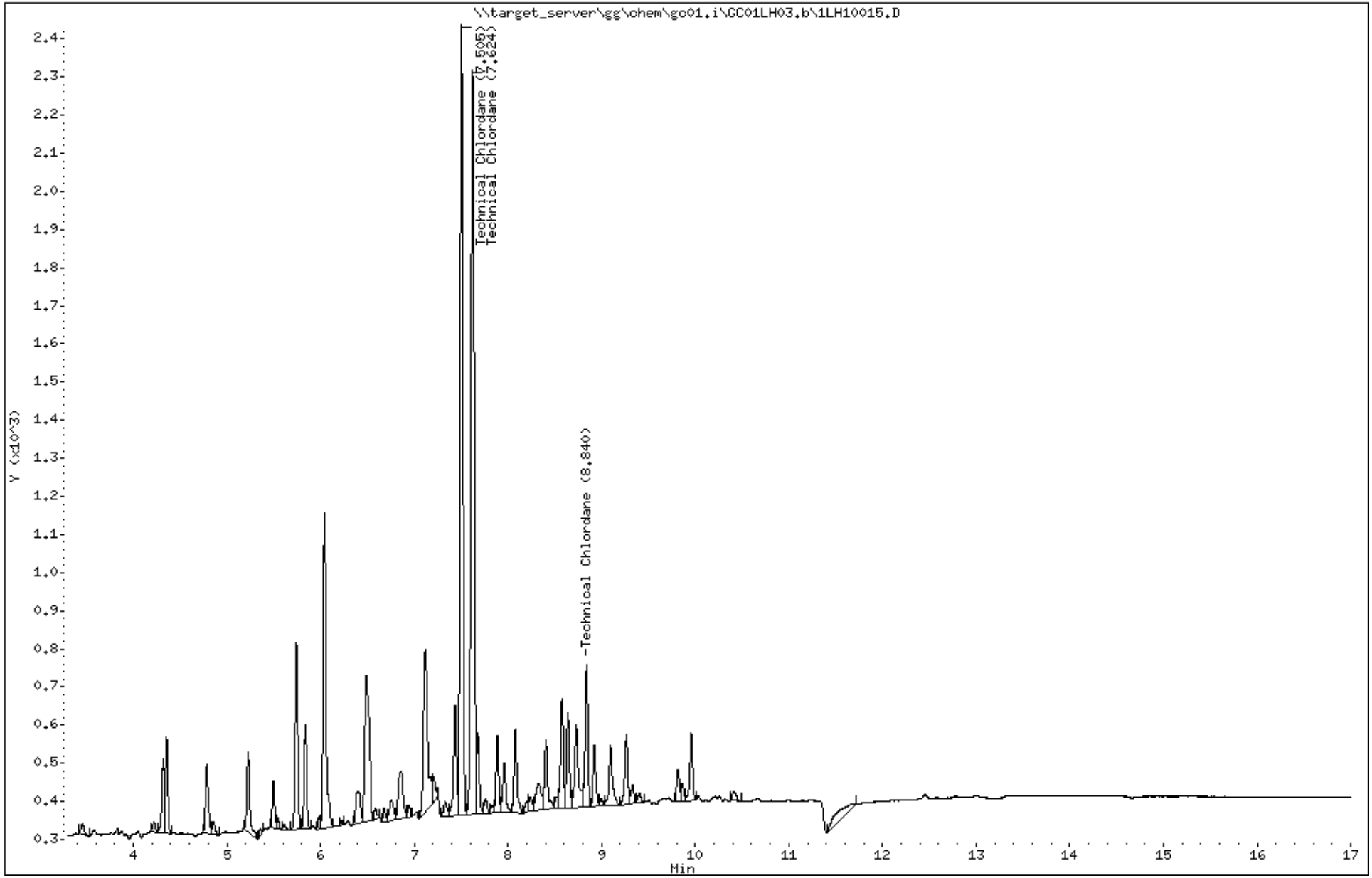
Data file : \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10015.D
Lab Smp Id: WG233899-5
Inj Date : 03-AUG-2018 18:20
Operator : AC   Inst ID: gc01.i
Smp Info : WG233899-5
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH03.b\PEST218.m
Meth Date : 06-Aug-2018 08:00 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 10:00   Cal File: 1LD10092.D
Als bottle: 13   Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: TC.sub
Target Version: 4.12   Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
14 Technical Chlordane					CAS #: 12789-03-6			
8.840	8.840	0.000	373	0.10000	0.0898	80.00- 120.00	100.00	
7.505	7.505	0.000	2073	0.10000	0.103	487.08- 730.63	555.76	
7.623	7.625	-0.002	1952	0.10000	0.101	467.92- 701.87	523.32	
		Average of Peak Amounts =			0.09793			

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10015.D
Date : 03-AUG-2018 18:20
Client ID:
Instrument: gc01.i
Sample Info: WG233899-5
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000076

Data File: 1LH10015.D
Report Date: 18-Aug-2018 09:10

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LH03.b\GC01LH03.b\1LH10015.D
Lab Smp Id: WG233899-5
Inj Date : 03-AUG-2018 18:20
Operator : AC   Inst ID: gc01.i
Smp Info : WG233899-5
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH03.b\PEST218.m\PEST218.m
Meth Date : 06-Aug-2018 08:40 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 10:00   Cal File: 1LD10092.D
Als bottle: 13   Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: TC.sub
Target Version: 4.12   Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

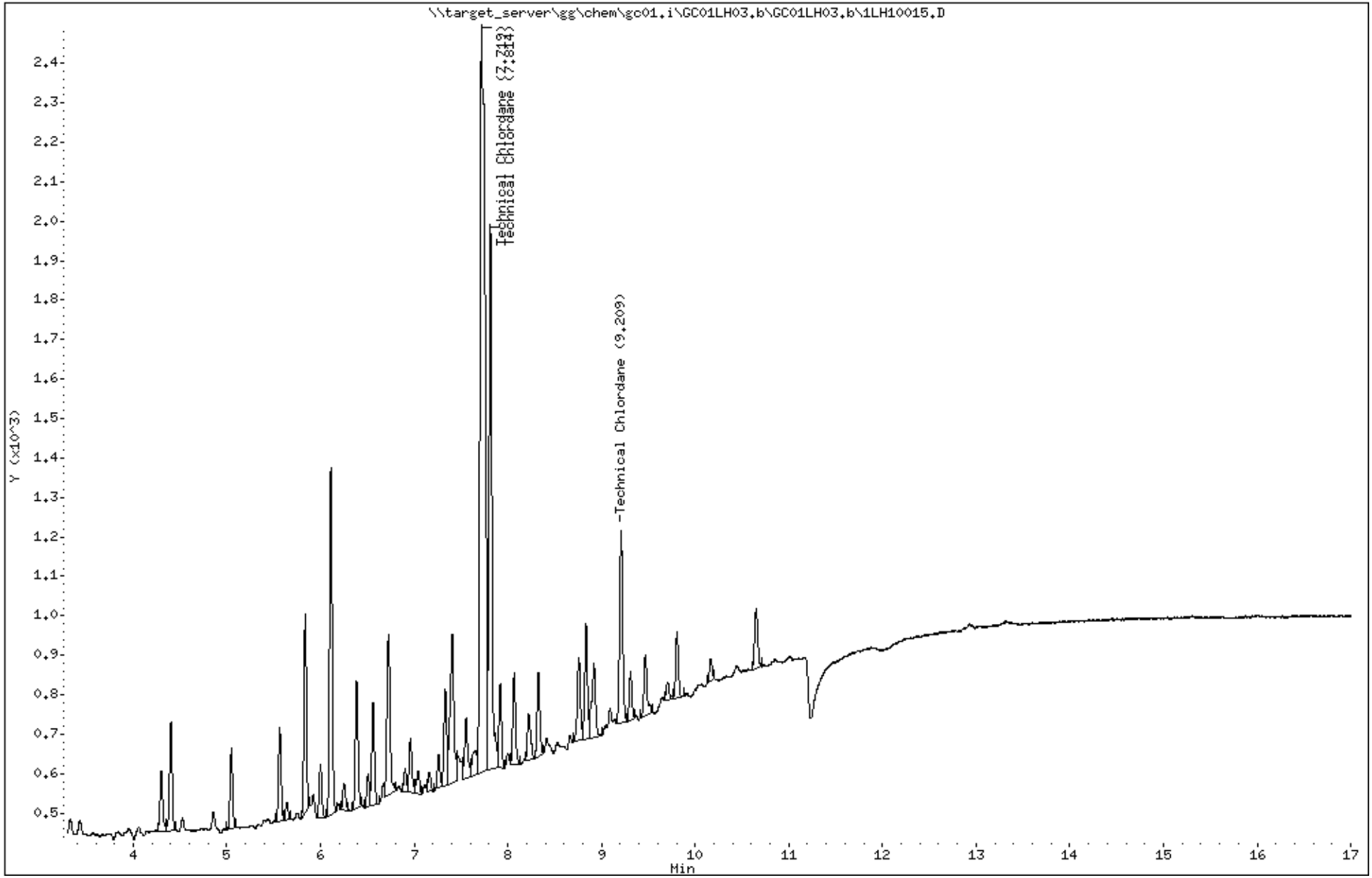
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
14 Technical Chlordane					CAS #: 12789-03-6			
9.208	9.212	-0.004	487	0.10000	0.0975	80.00- 120.00	100.00(M)	M5
7.718	7.717	0.001	1894	0.10000	0.100	260.18- 390.27	388.91	M5
7.813	7.813	0.000	1380	0.10000	0.102	197.24- 295.86	283.37	M5
Average of Peak Amounts =					0.09983			

AC
9:21 am, Aug 18, 2018

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\GC01LH03.b\1LH10015.D
Date : 03-AUG-2018 18:20
Client ID:
Instrument: gc01.i
Sample Info: WG233899-5
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000078

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10016.D
Report Date: 18-Aug-2018 09:10

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10016.D
Lab Smp Id: WG233899-6
Inj Date : 03-AUG-2018 18:40
Operator : AC Inst ID: gc01.i
Smp Info : WG233899-6
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH03.b\PEST218.m
Meth Date : 06-Aug-2018 08:00 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 10:19 Cal File: 1LD10093.D
Als bottle: 14 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TC.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

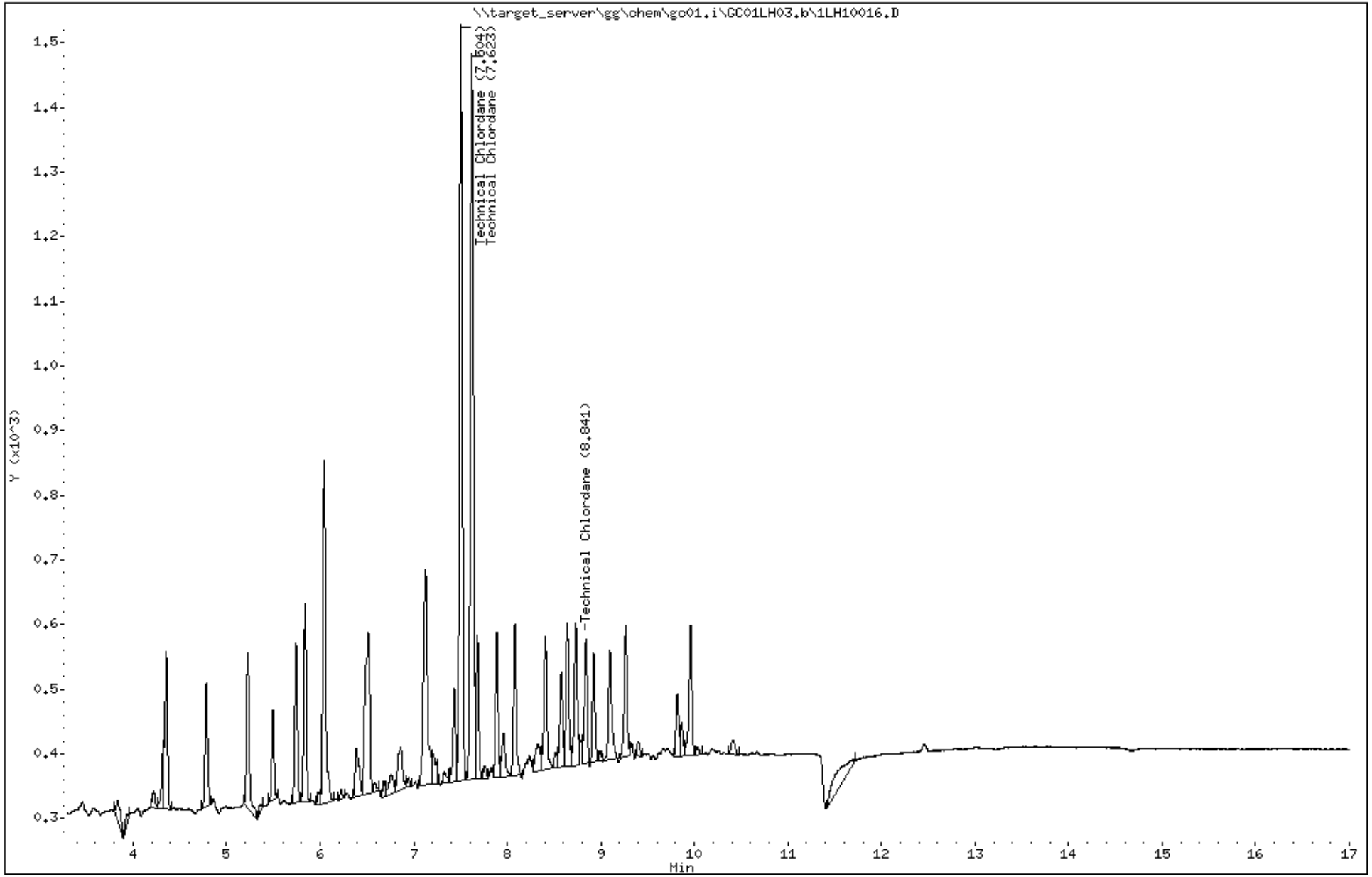
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
14 Technical Chlordane					CAS #: 12789-03-6			
8.839	8.840	-0.001	192	0.05000	0.0467	80.00- 120.00	100.00(M)	M5
7.504	7.505	-0.001	1169	0.05000	0.0562	487.08- 730.63	608.85	M5
7.622	7.625	-0.003	1123	0.05000	0.0565	467.92- 701.87	584.90	M5
Average of Peak Amounts =					0.05313			

AC
9:21 am, Aug 18, 2018

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10016.D
Date : 03-AUG-2018 18:40
Client ID:
Instrument: gc01.i
Sample Info: WG233899-6
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000080

Data File: 1LH10016.D
Report Date: 18-Aug-2018 09:10

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LH03.b\GC01LH03.b\1LH10016.D
Lab Smp Id: WG233899-6
Inj Date : 03-AUG-2018 18:40
Operator : AC Inst ID: gc01.i
Smp Info : WG233899-6
Misc Info :
Comment :
Method : \\target_server\gg\chem\gc01.i\GC01LH03.b\PEST218.m\PEST218.m
Meth Date : 06-Aug-2018 08:40 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 10:19 Cal File: 1LD10093.D
Als bottle: 14 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TC.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

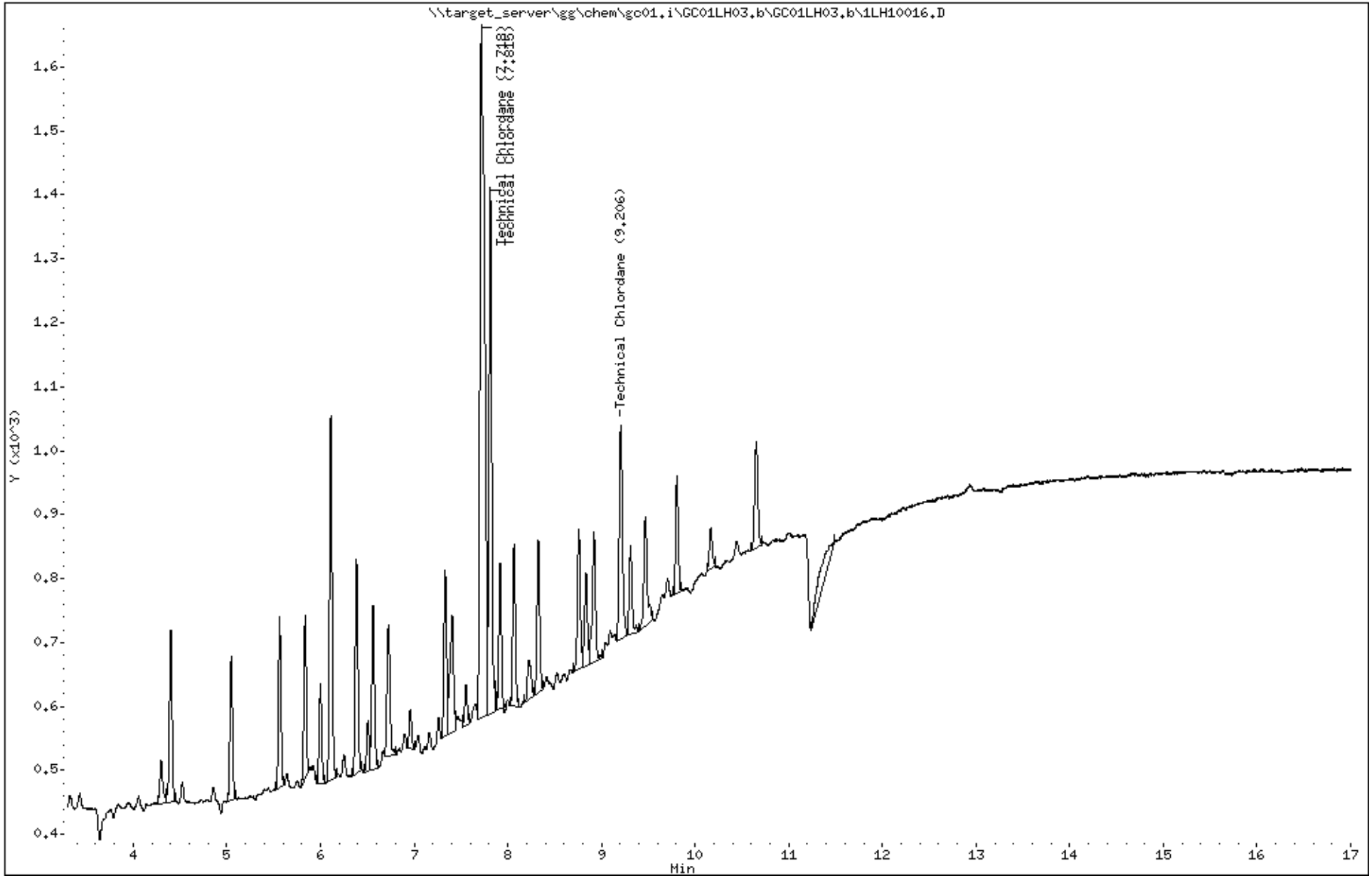
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
14 Technical Chlordane					CAS #: 12789-03-6			
9.206	9.212	-0.006	333	0.05000	0.0666	80.00- 120.00	100.00(M)	M5
7.716	7.717	-0.001	1083	0.05000	0.0572	260.18- 390.27	325.23	M5
7.814	7.813	0.001	821	0.05000	0.0603	197.24- 295.86	246.55	M5
Average of Peak Amounts =					0.06137			

AC
9:21 am, Aug 18, 2018

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\GC01LH03.b\1LH10016.D
Date : 03-AUG-2018 18:40
Client ID:
Instrument: gc01.i
Sample Info: WG233899-6
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000082

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10017.D
Report Date: 18-Aug-2018 09:29

Katahdin Analytical Services

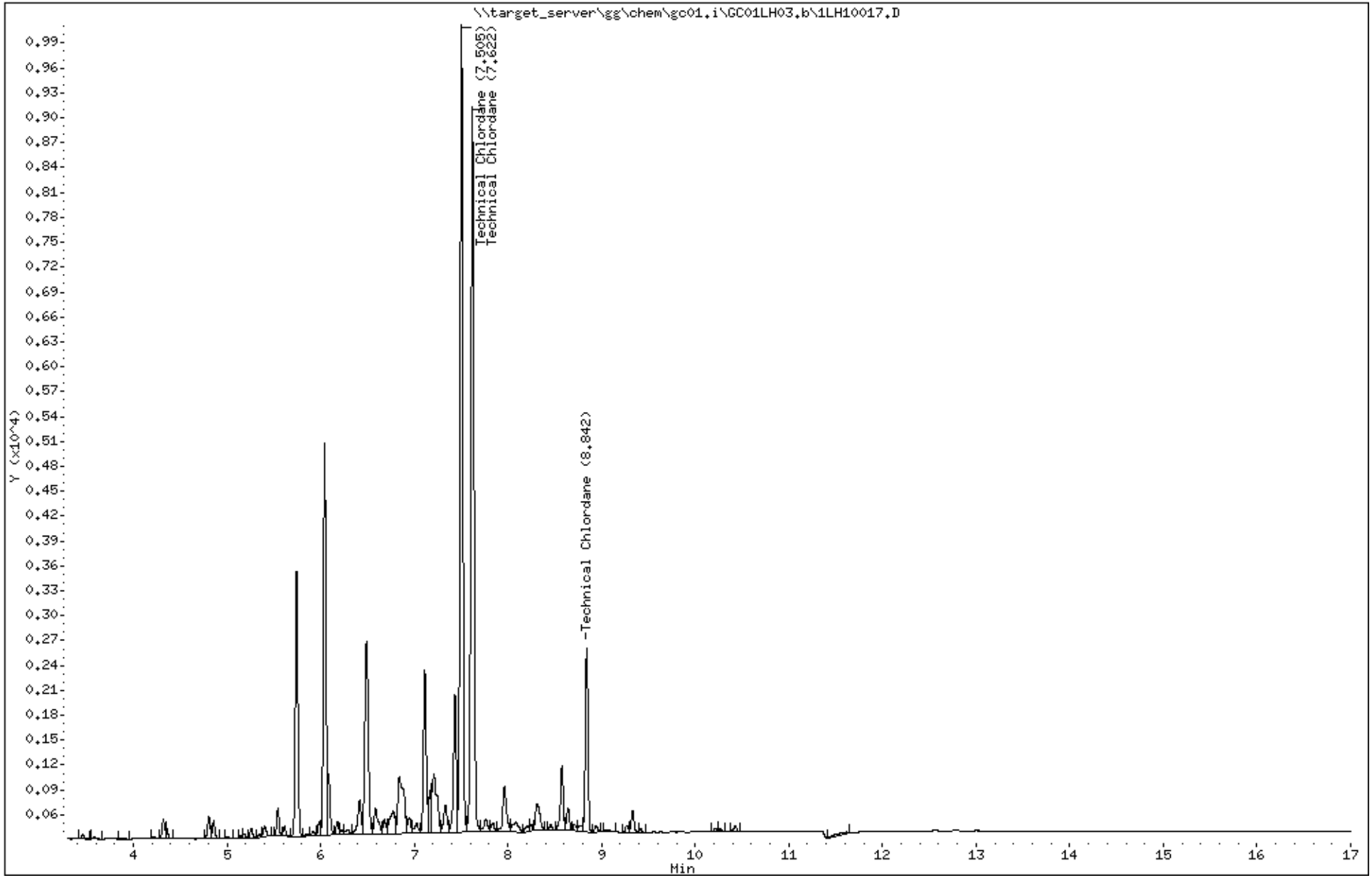
Data file : \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10017.D
Lab Smp Id: WG233899-7
Inj Date : 03-AUG-2018 18:59
Operator : AC   Inst ID: gc01.i
Smp Info : WG233899-7,SL7227
Misc Info : WG233899,WG233899,WG233899,SL7227-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH03.b\PEST218.m
Meth Date : 06-Aug-2018 08:00 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 10:19   Cal File: 1LD10093.D
Als bottle: 15   QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: TC.sub
Target Version: 4.12   Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/mL)	FINAL (ug/L)	TARGET RANGE	RATIO	REVIEW CODE
14 Technical Chlordane					CAS #: 12789-03-6			
8.841	8.840	0.001	2210	0.53751	0.538	80.00- 120.00	100.00	
7.505	7.505	0.000	9730	0.46754	0.468	487.08- 730.63	440.27	
7.621	7.625	-0.004	8740	0.43954	0.440	467.92- 701.87	395.48	
		Average of Peak Concentrations =			0.482			

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\1LH10017.D
Date : 03-AUG-2018 18:59
Client ID:
Instrument: gc01.i
Sample Info: WG233899-7,SL7227
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000084

Data File: 1LH10017.D
Report Date: 18-Aug-2018 09:29

Katahdin Analytical Services

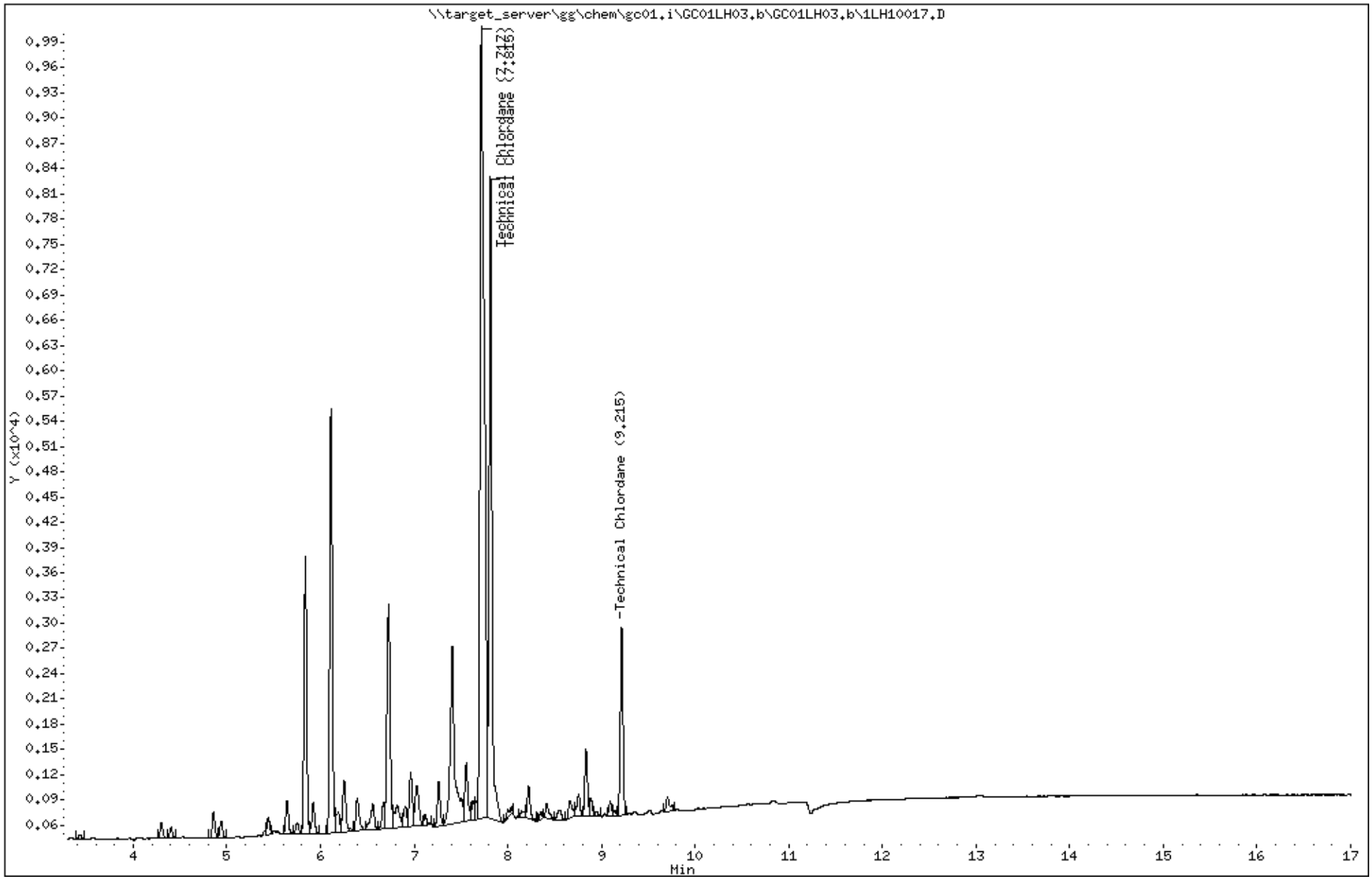
Data file : \\target_server\gg\chem\gc01.i\GC01LH03.b\GC01LH03.b\1LH10017.D
Lab Smp Id: WG233899-7
Inj Date : 03-AUG-2018 18:59
Operator : AC   Inst ID: gc01.i
Smp Info : WG233899-7,SL7227
Misc Info : WG233899,WG233899,WG233899,SL7227-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH03.b\PEST218.m\PEST218.m
Meth Date : 06-Aug-2018 08:40 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 10:19   Cal File: 1LD10093.D
Als bottle: 15   QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: TC.sub
Target Version: 4.12   Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/mL)	FINAL (ug/L)	TARGET RANGE	RATIO	REVIEW CODE
14 Technical Chlordane					CAS #: 12789-03-6			
9.215	9.212	0.003	2235	0.44729	0.447	80.00- 120.00	100.00	
7.717	7.717	0.000	9407	0.49700	0.497	260.18- 390.27	420.89	
7.815	7.813	0.002	7627	0.56038	0.560	197.24- 295.86	341.25	
		Average of Peak Concentrations =			0.502			

Data File: \\target_server\gg\chem\gc01.i\GC01LH03.b\GC01LH03.b\1LH10017.D
Date : 03-AUG-2018 18:59
Client ID:
Instrument: gc01.i
Sample Info: WG233899-7,SL7227
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000086

Katahdin
ANALYTICAL SERVICES

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL7420
Project : Cornhusker Army Ammunition Plant
Instrument ID: GC01
Lab File IDs : 1LD10093.D 1LD10092.D 1LD10091.D 1LD10100.D 1LD10089.D 1LD10088.D
Column ID: A
Calibration Date(s): 16-FEB-18 15:00 06-AUG-18 14:11

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Crv					Max	
	0.0050000	0.0100000	0.0250000	0.0500000	0.1000000	0.2500000	New	b	m1	m2	%RSD	%RSD	
gamma-BHC	226400	196300	247920	213360	230730	229292	AVG		224000		7.81370	20.00000	O
Heptachlor	165400	145700	181480	157200	173850	180064	AVG		167282		8.36512	20.00000	O
Heptachlor Epoxide	178200	145700	185400	147760	170530	165396	AVG		165498		9.70309	20.00000	O
4,4'-DDE	169800	136800	179360	149760	176390	183012	AVG		165854		11.13905	20.00000	O
Endrin	140600	111400	148440	123240	143350	144976	AVG		135334		10.83871	20.00000	O
Endrin	140600	111400	148440	123240	143350	144976	AVG		135334		10.83871	20.00000	O
4,4'-DDD	130600	102600	134040	113700	138020	143592	AVG		127092		12.34827	20.00000	O
4,4'-DDT	103000	81500	117280	104280	126030	138876	AVG		111828		17.96367	20.00000	O
Endrin Aldehyde	120200	92500	110280	92080	106600	109884	AVG		105257		10.47741	20.00000	O
Methoxychlor	55400	41500	54960	46700	56390	61560	AVG		52752		13.82510	20.00000	O
Endrin Ketone	134000	102900	134080	115340	137970	137864	AVG		127026		11.43132	20.00000	O
Tetrachloro-m-Xylene	161000	146300	174200	158000	156040	153492	AVG		158172		5.87877	20.00000	
Decachlorobiphenyl	87400	65300	79480	65080	75240	79980	AVG		75413		11.71354	20.00000	

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

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http://katahdinlab.com
sales@katahdinlab.com

Katahdin
ANALYTICAL SERVICES

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL7420
Project : Cornhusker Army Ammunition Plant
Instrument ID: GC01
Lab File IDs : 1LD10093.D 1LD10092.D 1LD10091.D 1LD10100.D 1LD10089.D 1LD10088.D
Column ID: B
Calibration Date(s): 16-FEB-18 15:00 06-AUG-18 14:11

	0.0050000(Level 1	0.0100000(Level 2	0.0250000(Level 3	0.0500000(Level 4	0.1000000 Level 5	0.2500000 Level 6	New Crv	b	m1	m2	%RSD	Max %RSD	
gamma-BHC	257400	216300	276440	242300	269630	262536	AVG		254101		8.60485	20.00000	O
Heptachlor	198200	161300	215560	183020	208610	212344	AVG		196506		10.6371(	20.00000	O
Heptachlor Epoxide	201800	159500	206560	172100	198870	196736	AVG		189261		9.98301	20.00000	O
4,4'-DDE	185200	148400	205200	171400	200040	209444	AVG		186614		12.5458(	20.00000	O
Endrin	147000	112100	153600	128240	153520	162248	AVG		142785		13.2213(	20.00000	O
Endrin	147000	112100	153600	128240	153520	162248	AVG		142785		13.2213(	20.00000	O
4,4'-DDD	141400	111700	151360	127360	156380	163904	AVG		142017		13.7513(	20.00000	O
4,4'-DDT	432	721	2871	5124	13184	38340	LNR	0.00888	156883		0.99556	0.99000	D
Endrin Aldehyde	120600	93600	113920	94720	117990	122344	AVG		110529		11.7595(	20.00000	O
Methoxychlor	192	307	1123	2089	5379	16426	LNR	0.01020	67356		0.99348	0.99000	D
Endrin Ketone	115800	92600	124400	106940	130970	143888	AVG		119100		15.2269(	20.00000	O
Tetrachloro-m-Xylene	197200	173200	210080	184720	189930	183700	AVG		189805		6.68353	20.00000	
Decachlorobiphenyl	92400	73000	90560	74620	87930	94744	AVG		85542		10.9561(	20.00000	

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

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sales@katahdinlab.com

Data File: \\target_server\gg\chem\gc01.i\GC01LH06.b\1LH10051.D
Report Date: 18-Aug-2018 09:28

Katahdin Analytical Services

RECOVERY REPORT

Client Name: Client SDG: SDGa00508
Sample Matrix: LIQUID Fraction: PESTICIDE
Lab Smp Id: WG233901-8
Level: LOW Operator: AC
Data Type: GC MULTI COMP SampleType: LCS
SpikeList File: IND.spk Quant Type: ESTD
Sublist File: IND.sub
Method File: \\target_server\gg\chem\gc01.i\GC01LH06.b\PEST218.m
Misc Info: WG233901,WG233901,WG233901-2,SL7227-1

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
5 alpha-BHC	0.0500	0.0536	107.23	80-120
6 gamma-BHC	0.0500	0.0564	112.86	80-120
7 beta-BHC	0.0500	0.0535	106.92	80-120
8 delta-BHC	0.0500	0.0528	105.71	80-120
9 Heptachlor	0.0500	0.0559	111.87	80-120
10 Aldrin	0.0500	0.0548	109.70	80-120
13 Heptachlor Epoxide	0.0500	0.0526	105.20	80-120
15 gamma-Chlordane	0.0500	0.0526	105.23	80-120
17 alpha-Chlordane	0.0500	0.0534	106.87	80-120
19 4,4'-DDE	0.0500	0.0543	108.67	80-120
20 Endosulfan I	0.0500	0.0516	103.20	80-120
21 Dieldrin	0.0500	0.0502	100.46	80-120
23 Endrin	0.0500	0.0520	103.92	80-120
24 4,4'-DDD	0.0500	0.0535	107.02	80-120
26 Endosulfan II	0.0500	0.0501	100.13	80-120
27 4,4'-DDT	0.0500	0.0548	109.60	80-120
28 Endrin Aldehyde	0.0500	0.0472	94.51	80-120
29 Methoxychlor	0.0500	0.0526	105.29	80-120
32 Endosulfan sulfate	0.0500	0.0493	98.56	80-120
33 Endrin Ketone	0.0500	0.0503	100.59	80-120

Data File: 1LH10051.D
Report Date: 18-Aug-2018 09:28

Katahdin Analytical Services

RECOVERY REPORT

Client Name: Client SDG: SDGa00508
Sample Matrix: LIQUID Fraction: PESTICIDE
Lab Smp Id: WG233901-8
Level: LOW Operator: AC
Data Type: GC MULTI COMP SampleType: LCS
SpikeList File: IND.spk Quant Type: ESTD
Sublist File: IND.sub
Method File: \\target_server\gg\chem\gc01.i\GC01LH06.b\PEST218.m\PEST218.m
Misc Info: WG233901,WG233901,WG233901-2,SL7227-1

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
5 alpha-BHC	0.0500	0.0538	107.54	80-120
6 gamma-BHC	0.0500	0.0544	108.78	80-120
7 beta-BHC	0.0500	0.0526	105.31	80-120
8 delta-BHC	0.0500	0.0518	103.69	80-120
9 Heptachlor	0.0500	0.0566	113.29	80-120
10 Aldrin	0.0500	0.0539	107.80	80-120
13 Heptachlor Epoxide	0.0500	0.0511	102.13	80-120
15 gamma-Chlordane	0.0500	0.0535	106.92	80-120
17 alpha-Chlordane	0.0500	0.0522	104.32	80-120
19 4,4'-DDE	0.0500	0.0540	108.01	80-120
20 Endosulfan I	0.0500	0.0518	103.60	80-120
21 Dieldrin	0.0500	0.0507	101.49	80-120
23 Endrin	0.0500	0.0529	105.89	80-120
24 4,4'-DDD	0.0500	0.0536	107.30	80-120
26 Endosulfan II	0.0500	0.0523	104.63	80-120
27 4,4'-DDT	0.0500	0.0478	95.51	80-120
28 Endrin Aldehyde	0.0500	0.0484	96.86	80-120
29 Methoxychlor	0.0500	0.0468	93.67	80-120
32 Endosulfan sulfate	0.0500	0.0482	96.44	80-120
33 Endrin Ketone	0.0500	0.0503	100.57	80-120

Data File: \\target_server\gg\chem\gc01.i\GC01LH06.b\1LH10048.D
Report Date: 18-Aug-2018 09:17

Katahdin Analytical Services

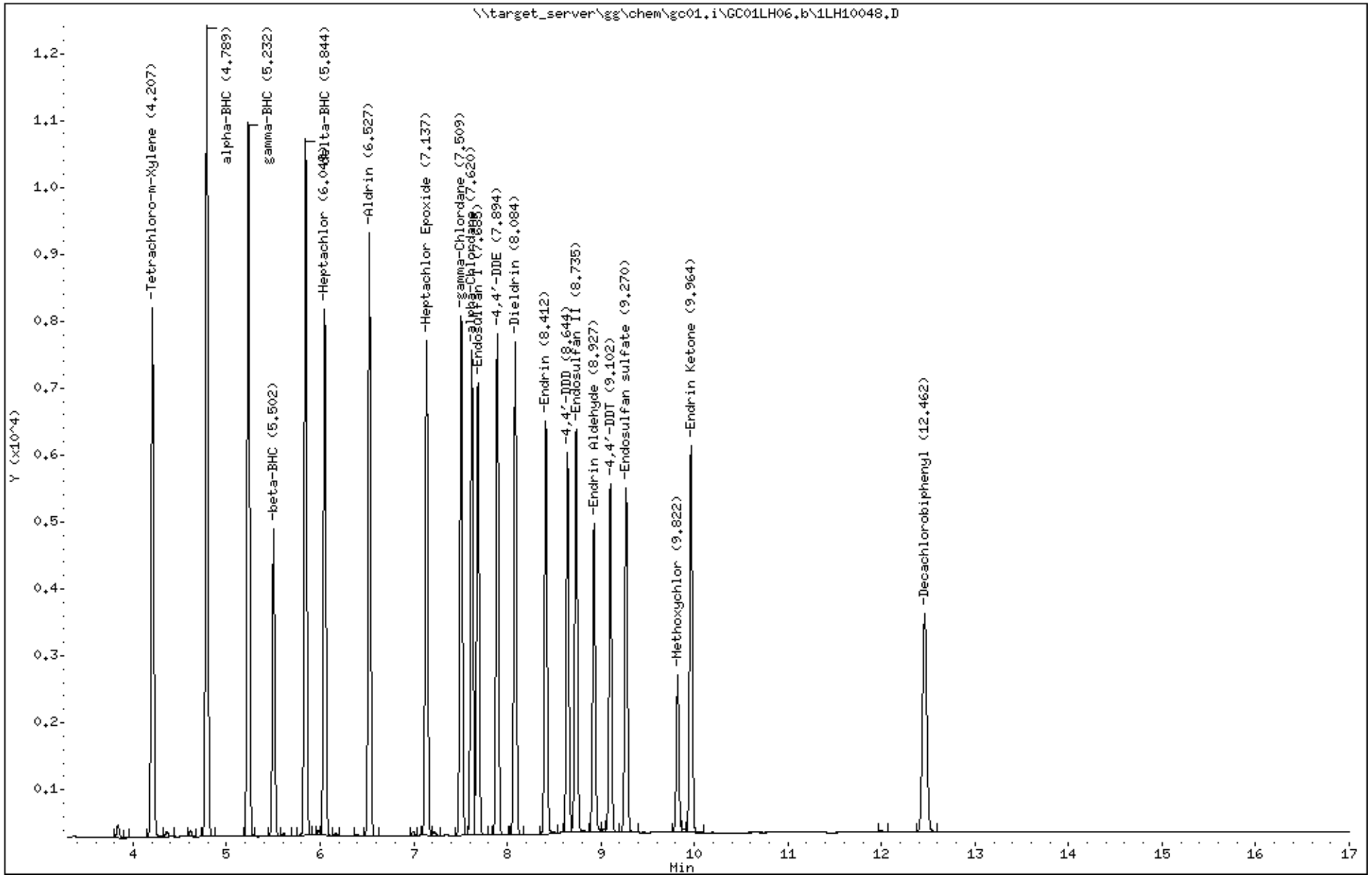
Data file : \\target_server\gg\chem\gc01.i\GC01LH06.b\1LH10048.D
Lab Smp Id: WG233901-2
Inj Date : 06-AUG-2018 13:19
Operator : AC   Inst ID: gc01.i
Smp Info : WG233901-2
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH06.b\PEST218.m
Meth Date : 09-Aug-2018 13:08 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 13:22   Cal File: 1LD10100.D
Als bottle: 46   Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						AMOUNTS		
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	REVIEW CODE
$	4 Tetrachloro-m-Xylene	4.206	4.192	0.014	7900	0.05000	0.0500	
	5 alpha-BHC	4.788	4.773	0.015	12118	0.05000	0.0514	
	6 gamma-BHC	5.231	5.218	0.013	10668	0.05000	0.0481	
	7 beta-BHC	5.501	5.488	0.013	4583	0.05000	0.0470	
	8 delta-BHC	5.843	5.830	0.013	10416	0.05000	0.0481	
	9 Heptachlor	6.048	6.035	0.013	7860	0.05000	0.0477	
	10 Aldrin	6.526	6.513	0.013	9005	0.05000	0.0482	
	13 Heptachlor Epoxide	7.136	7.127	0.009	7388	0.05000	0.0458	
	15 gamma-Chlordane	7.508	7.495	0.013	7746	0.05000	0.0462	
	17 alpha-Chlordane	7.620	7.612	0.008	7235	0.05000	0.0454	
	19 4,4'-DDE	7.893	7.883	0.010	7488	0.05000	0.0462	
	20 Endosulfan I	7.685	7.675	0.010	6752	0.05000	0.0462	
	21 Dieldrin	8.083	8.075	0.008	7360	0.05000	0.0471	
	23 Endrin	8.411	8.402	0.009	6162	0.05000	0.0466	
	24 4,4'-DDD	8.643	8.635	0.008	5685	0.05000	0.0459	
	26 Endosulfan II	8.735	8.725	0.010	6013	0.05000	0.0461	
	27 4,4'-DDT	9.101	9.092	0.009	5214	0.05000	0.0480	
	28 Endrin Aldehyde	8.926	8.917	0.009	4604	0.05000	0.0446	
	29 Methoxychlor	9.821	9.812	0.009	2335	0.05000	0.0456	
	32 Endosulfan sulfate	9.270	9.260	0.010	5136	0.05000	0.0455	
	33 Endrin Ketone	9.963	9.953	0.010	5767	0.05000	0.0468	
$	34 Decachlorobiphenyl	12.461	12.447	0.014	3254	0.05000	0.0444	

Data File: \\target_server\gg\chem\gc01.i\GC01LH06.b\1LH10048.D
Date : 06-AUG-2018 13:19
Client ID:
Instrument: gc01.i
Sample Info: WG233901-2
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000092

Data File: 1LH10048.D
Report Date: 18-Aug-2018 09:17

Katahdin Analytical Services

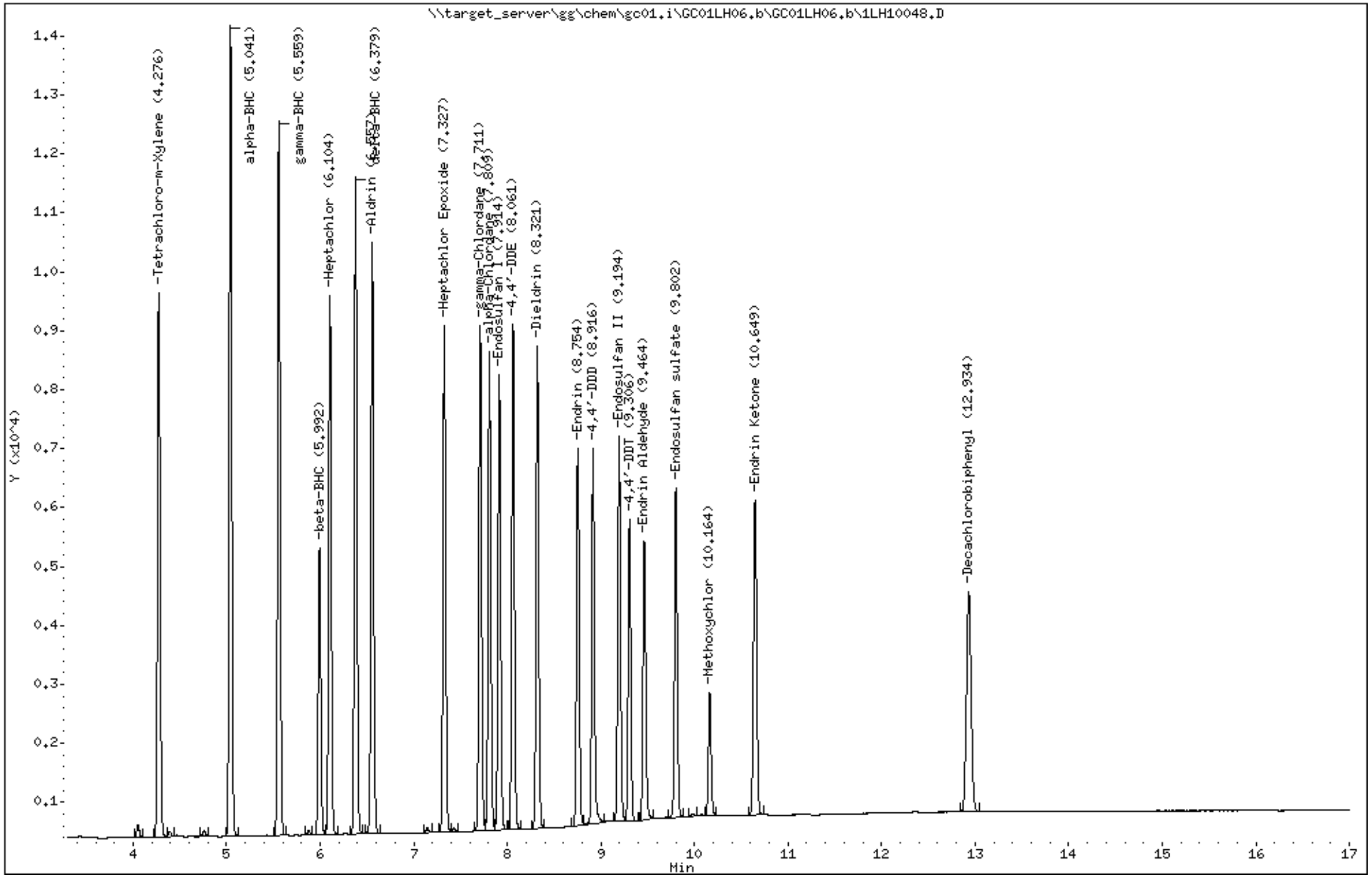
Data file : \\target_server\gg\chem\gc01.i\GC01LH06.b\GC01LH06.b\1LH10048.D
Lab Smp Id: WG233901-2
Inj Date : 06-AUG-2018 13:19
Operator : AC   Inst ID: gc01.i
Smp Info : WG233901-2
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH06.b\PEST218.m\PEST218.m
Meth Date : 07-Aug-2018 11:48 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 13:22   Cal File: 1LD10100.D
Als bottle: 46   Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						AMOUNTS		
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	REVIEW CODE
$	4 Tetrachloro-m-Xylene	4.275	4.277	-0.002	9236	0.05000	0.0494	
	5 alpha-BHC	5.040	5.042	-0.002	13760	0.05000	0.0490	
	6 gamma-BHC	5.558	5.559	-0.001	12115	0.05000	0.0486	
	7 beta-BHC	5.992	5.992	0.000	4858	0.05000	0.0450	
	8 delta-BHC	6.378	6.379	-0.001	11157	0.05000	0.0470	
	9 Heptachlor	6.103	6.104	-0.001	9151	0.05000	0.0472	
	10 Aldrin	6.557	6.557	0.000	10032	0.05000	0.0478	
	13 Heptachlor Epoxide	7.327	7.326	0.001	8605	0.05000	0.0470	
	15 gamma-Chlordane	7.710	7.709	0.001	8583	0.05000	0.0460	
	17 alpha-Chlordane	7.808	7.807	0.001	8119	0.05000	0.0463	
	19 4,4'-DDE	8.060	8.061	-0.001	8570	0.05000	0.0473	
	20 Endosulfan I	7.913	7.912	0.001	7723	0.05000	0.0468	
	21 Dieldrin	8.320	8.319	0.001	8195	0.05000	0.0465	
	23 Endrin	8.753	8.752	0.001	6412	0.05000	0.0460	
	24 4,4'-DDD	8.915	8.914	0.001	6368	0.05000	0.0460	
	26 Endosulfan II	9.193	9.192	0.001	6532	0.05000	0.0460	
	27 4,4'-DDT	9.305	9.304	0.001	5124	0.05000	0.0466	
	28 Endrin Aldehyde	9.463	9.462	0.001	4736	0.05000	0.0453	
	29 Methoxychlor	10.163	10.161	0.002	2089	0.05000	0.0452	
	32 Endosulfan sulfate	9.802	9.797	0.005	5589	0.05000	0.0458	
	33 Endrin Ketone	10.648	10.644	0.004	5347	0.05000	0.0461	
$	34 Decachlorobiphenyl	12.933	12.924	0.009	3731	0.05000	0.0454	

Data File: \\target_server\gg\chem\gc01.i\GC01LH06.b\GC01LH06.b\1LH10048.D
Date : 06-AUG-2018 13:19
Client ID:
Instrument: gc01.i
Sample Info: WG233901-2
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000094

Data File: \\target_server\gg\chem\gc01.i\GC01LH06.b\1LH10043.D
Report Date: 18-Aug-2018 09:16

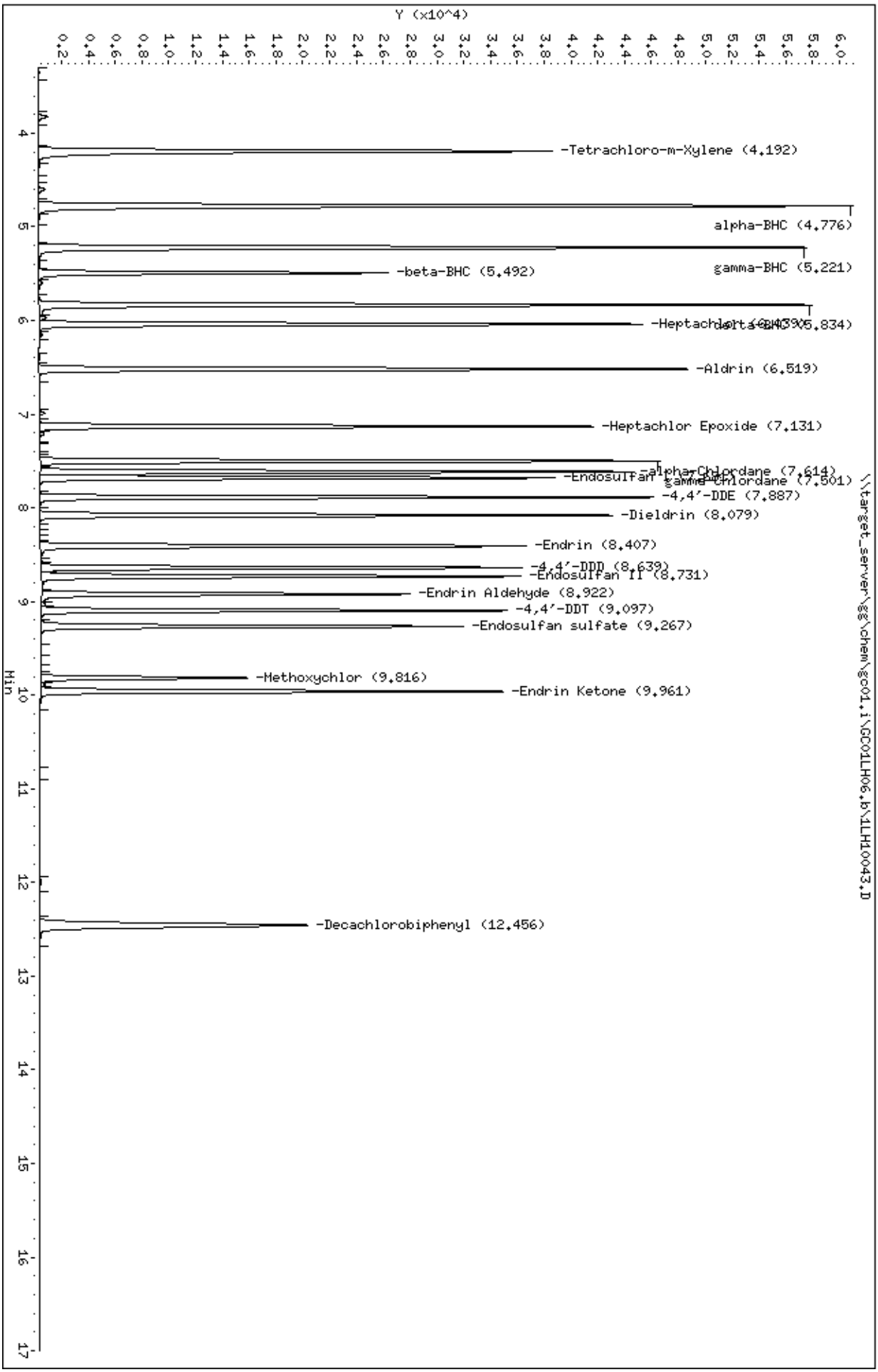
Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LH06.b\1LH10043.D
Lab Smp Id: WG233901-3
Inj Date : 06-AUG-2018 11:32
Operator : AC   Inst ID: gc01.i
Smp Info : WG233901-3
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH06.b\PEST218.m
Meth Date : 09-Aug-2018 13:08 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 08:42   Cal File: 1LD10088.D
Als bottle: 40   Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						AMOUNTS		
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	REVIEW CODE
$	4 Tetrachloro-m-Xylene	4.192	4.192	0.000	38373	0.25000	0.223	
	5 alpha-BHC	4.775	4.773	0.002	60753	0.25000	0.232	
	6 gamma-BHC	5.220	5.218	0.002	57323	0.25000	0.240	
	7 beta-BHC	5.492	5.488	0.004	26041	0.25000	0.247	
	8 delta-BHC	5.834	5.830	0.004	57677	0.25000	0.247	
	9 Heptachlor	6.039	6.035	0.004	45016	0.25000	0.238	
	10 Aldrin	6.519	6.513	0.006	48417	0.25000	0.248	
	13 Heptachlor Epoxide	7.130	7.127	0.003	41349	0.25000	0.243	
	15 gamma-Chlordane	7.500	7.495	0.005	46269	0.25000	0.262(A)	
	17 alpha-Chlordane	7.614	7.612	0.002	44096	0.25000	0.262(A)	
	19 4,4'-DDE	7.887	7.883	0.004	45753	0.25000	0.267(A)	
	20 Endosulfan I	7.680	7.675	0.005	38410	0.25000	0.250	
	21 Dieldrin	8.079	8.075	0.004	42709	0.25000	0.262(A)	
	23 Endrin	8.407	8.402	0.005	36244	0.25000	0.257(A)	
	24 4,4'-DDD	8.639	8.635	0.004	35898	0.25000	0.270(A)	
	26 Endosulfan II	8.730	8.725	0.005	35799	0.25000	0.260(A)	
	27 4,4'-DDT	9.097	9.092	0.005	34719	0.25000	0.274(A)	
	28 Endrin Aldehyde	8.922	8.917	0.005	27471	0.25000	0.261(A)	
	29 Methoxychlor	9.815	9.812	0.003	15390	0.25000	0.249	
	32 Endosulfan sulfate	9.267	9.260	0.007	31513	0.25000	0.261(A)	
	33 Endrin Ketone	9.960	9.953	0.007	34466	0.25000	0.264(A)	
$	34 Decachlorobiphenyl	12.455	12.447	0.008	19995	0.25000	0.262(A)	


Data File: \\target_server\gg\chem\gc01.i\GC01LH06.b\1LH10043.D
Date : 06-AUG-2018 11:32
Client ID:
Sample Info: WG233901-3
Purge Volume: 1.0
Column phase: ZB-Multiresidue-1
Instrument: gc01.i
Operator: AC
Column diameter: 0.53
\\target_server\gg\chem\gc01.i\GC01LH06.b\1LH10043.D
Y (x10^4)
Min
-Tetrachloro-m-Xylene (4.192)
alpha-BHC (4.776)
gamma-BHC (5.221)
-beta-BHC (5.492)
-Heptachlor (5.834)
-Aldrin (6.519)
-Heptachlor Epoxide (7.131)
-alpha-Chlordane (7.614)
-Endosulfan I (7.501)
gamma-Chlordane (7.501)
-4,4'-DDE (7.887)
-Dieldrin (8.079)
-Endrin (8.407)
-4,4'-DDD (8.639)
-Endosulfan II (8.731)
-Endrin Aldehyde (8.922)
-4,4'-DDT (9.097)
-Endosulfan sulfate (9.267)
-Methoxychlor (9.816)
-Endrin Ketone (9.961)
-Decachlorobiphenyl (12.456)

Data File: 1LH10043.D
Report Date: 18-Aug-2018 09:17

Katahdin Analytical Services

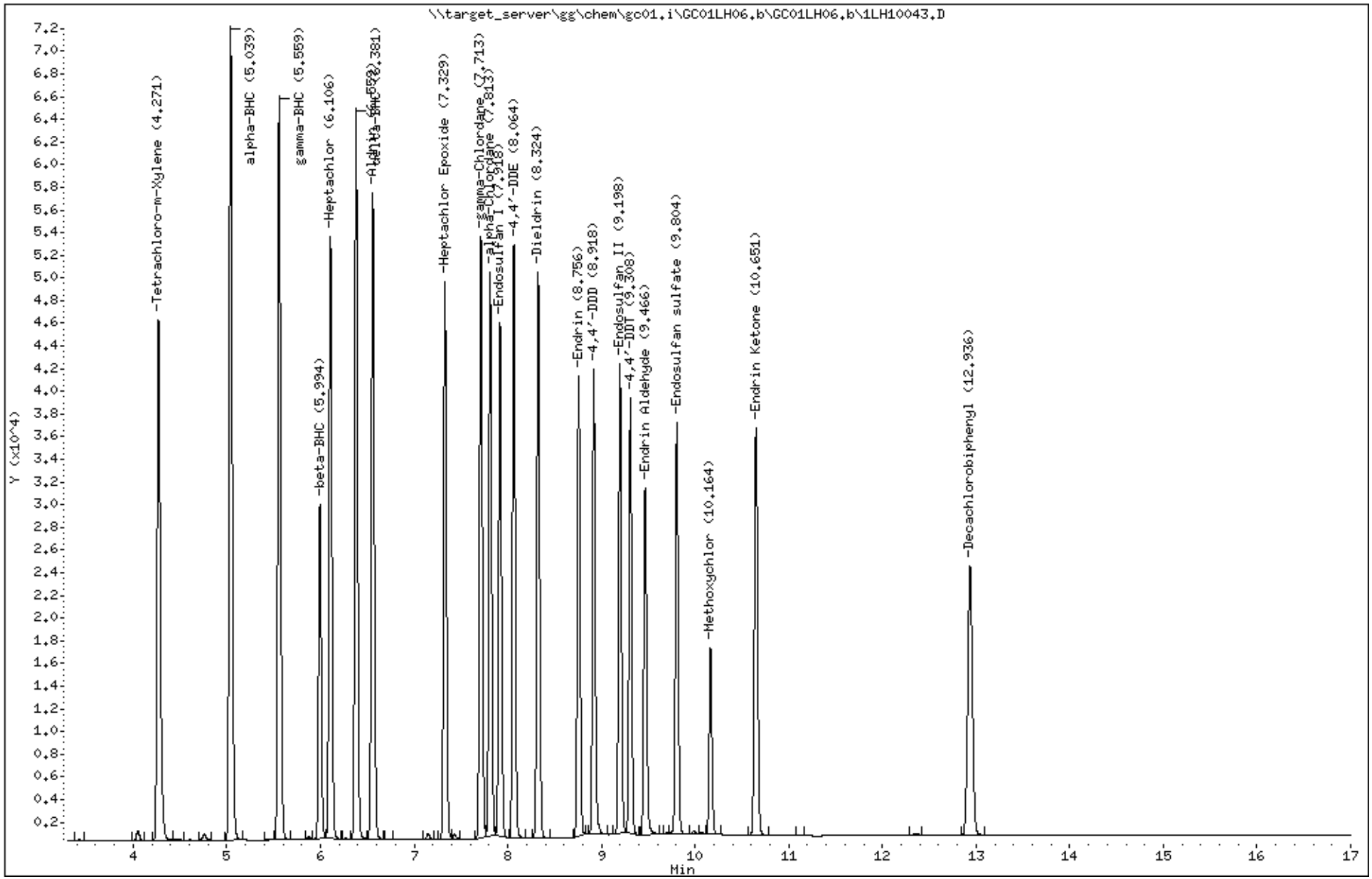
Data file : \\target_server\gg\chem\gc01.i\GC01LH06.b\GC01LH06.b\1LH10043.D
Lab Smp Id: WG233901-3
Inj Date : 06-AUG-2018 11:32
Operator : AC   Inst ID: gc01.i
Smp Info : WG233901-3
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH06.b\PEST218.m\PEST218.m
Meth Date : 07-Aug-2018 11:48 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 08:42   Cal File: 1LD10088.D
Als bottle: 40   Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						AMOUNTS		
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	REVIEW CODE
$ 4	Tetrachloro-m-Xylene	4.271	4.277	-0.006	45925	0.25000	0.260(A)	
5	alpha-BHC	5.039	5.042	-0.003	71783	0.25000	0.269(A)	
6	gamma-BHC	5.559	5.559	0.000	65634	0.25000	0.276(A)	
7	beta-BHC	5.994	5.992	0.002	29490	0.25000	0.284(A)	
8	delta-BHC	6.381	6.379	0.002	64421	0.25000	0.281(A)	
9	Heptachlor	6.106	6.104	0.002	53086	0.25000	0.270(A)	
10	Aldrin	6.559	6.557	0.002	57019	0.25000	0.297(A)	
13	Heptachlor Epoxide	7.329	7.326	0.003	49184	0.25000	0.292(A)	
15	gamma-Chlordane	7.712	7.709	0.003	53025	0.25000	0.304(A)	
17	alpha-Chlordane	7.812	7.807	0.005	49747	0.25000	0.302(A)	
19	4,4'-DDE	8.064	8.061	0.003	52361	0.25000	0.309(A)	
20	Endosulfan I	7.917	7.912	0.005	45243	0.25000	0.297(A)	
21	Dieldrin	8.324	8.319	0.005	49962	0.25000	0.304(A)	
23	Endrin	8.756	8.752	0.004	40562	0.25000	0.302(A)	
24	4,4'-DDD	8.917	8.914	0.003	40976	0.25000	0.306(A)	
26	Endosulfan II	9.197	9.192	0.005	41377	0.25000	0.308(A)	
27	4,4'-DDT	9.307	9.304	0.003	38340	0.25000	0.307(A)	
28	Endrin Aldehyde	9.466	9.462	0.004	30586	0.25000	0.315(A)	
29	Methoxychlor	10.164	10.161	0.003	16426	0.25000	0.293(A)	
32	Endosulfan sulfate	9.804	9.797	0.007	36309	0.25000	0.306(A)	
33	Endrin Ketone	10.651	10.644	0.007	35972	0.25000	0.314(A)	
$ 34	Decachlorobiphenyl	12.936	12.924	0.012	23686	0.25000	0.327(A)	

Data File: \\target_server\gg\chem\gc01.i\GC01LH06.b\GC01LH06.b\1LH10043.D
Date : 06-AUG-2018 11:32
Client ID:
Instrument: gc01.i
Sample Info: WG233901-3
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000098

Data File: \\target_server\gg\chem\gc01.i\GC01LH06.b\1LH10049.D
Report Date: 18-Aug-2018 09:17

Katahdin Analytical Services

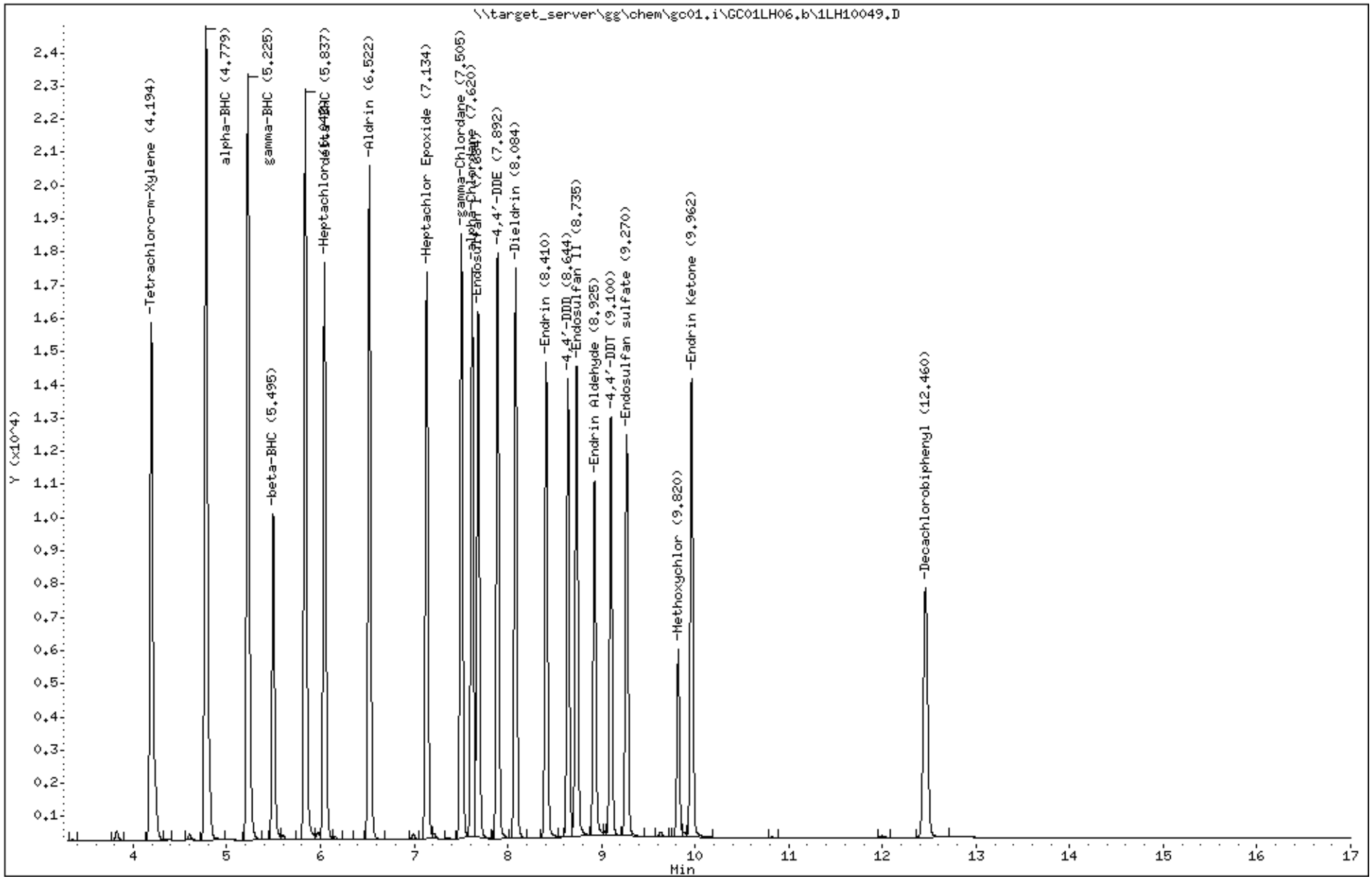
Data file : \\target_server\gg\chem\gc01.i\GC01LH06.b\1LH10049.D
Lab Smp Id: WG233901-4
Inj Date : 06-AUG-2018 14:11
Operator : AC   Inst ID: gc01.i
Smp Info : WG233901-4
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH06.b\PEST218.m
Meth Date : 09-Aug-2018 13:08 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 09:02   Cal File: 1LD10089.D
Als bottle: 47   Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						AMOUNTS		
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	REVIEW CODE
$	4 Tetrachloro-m-Xylene	4.193	4.192	0.001	15604	0.10000	0.0986	
	5 alpha-BHC	4.778	4.773	0.005	24513	0.10000	0.102	
	6 gamma-BHC	5.225	5.218	0.007	23073	0.10000	0.103	
	7 beta-BHC	5.495	5.488	0.007	9809	0.10000	0.0997	
	8 delta-BHC	5.837	5.830	0.007	22620	0.10000	0.103	
	9 Heptachlor	6.042	6.035	0.007	17385	0.10000	0.104	
	10 Aldrin	6.522	6.513	0.009	20279	0.10000	0.106	
	13 Heptachlor Epoxide	7.133	7.127	0.006	17053	0.10000	0.103	
	15 gamma-Chlordane	7.505	7.495	0.010	18165	0.10000	0.106	
	17 alpha-Chlordane	7.620	7.612	0.008	17128	0.10000	0.105	
	19 4,4'-DDE	7.892	7.883	0.009	17639	0.10000	0.106	
	20 Endosulfan I	7.683	7.675	0.008	15836	0.10000	0.105	
	21 Dieldrin	8.083	8.075	0.008	17151	0.10000	0.107	
	23 Endrin	8.410	8.402	0.008	14335	0.10000	0.106	
	24 4,4'-DDD	8.643	8.635	0.008	13802	0.10000	0.108	
	26 Endosulfan II	8.735	8.725	0.010	14162	0.10000	0.105	
	27 4,4'-DDT	9.100	9.092	0.008	12603	0.10000	0.113	
	28 Endrin Aldehyde	8.925	8.917	0.008	10660	0.10000	0.101	
	29 Methoxychlor	9.820	9.812	0.008	5639	0.10000	0.107	
	32 Endosulfan sulfate	9.270	9.260	0.010	12072	0.10000	0.105	
	33 Endrin Ketone	9.962	9.953	0.009	13797	0.10000	0.109	
$	34 Decachlorobiphenyl	12.460	12.447	0.013	7524	0.10000	0.0998	

Data File: \\target_server\gg\chem\gc01.i\GC01LH06.b\1LH10049.D
Date : 06-AUG-2018 14:11
Client ID:
Instrument: gc01.i
Sample Info: WG233901-4
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000100

Data File: 1LH10049.D
Report Date: 18-Aug-2018 09:17

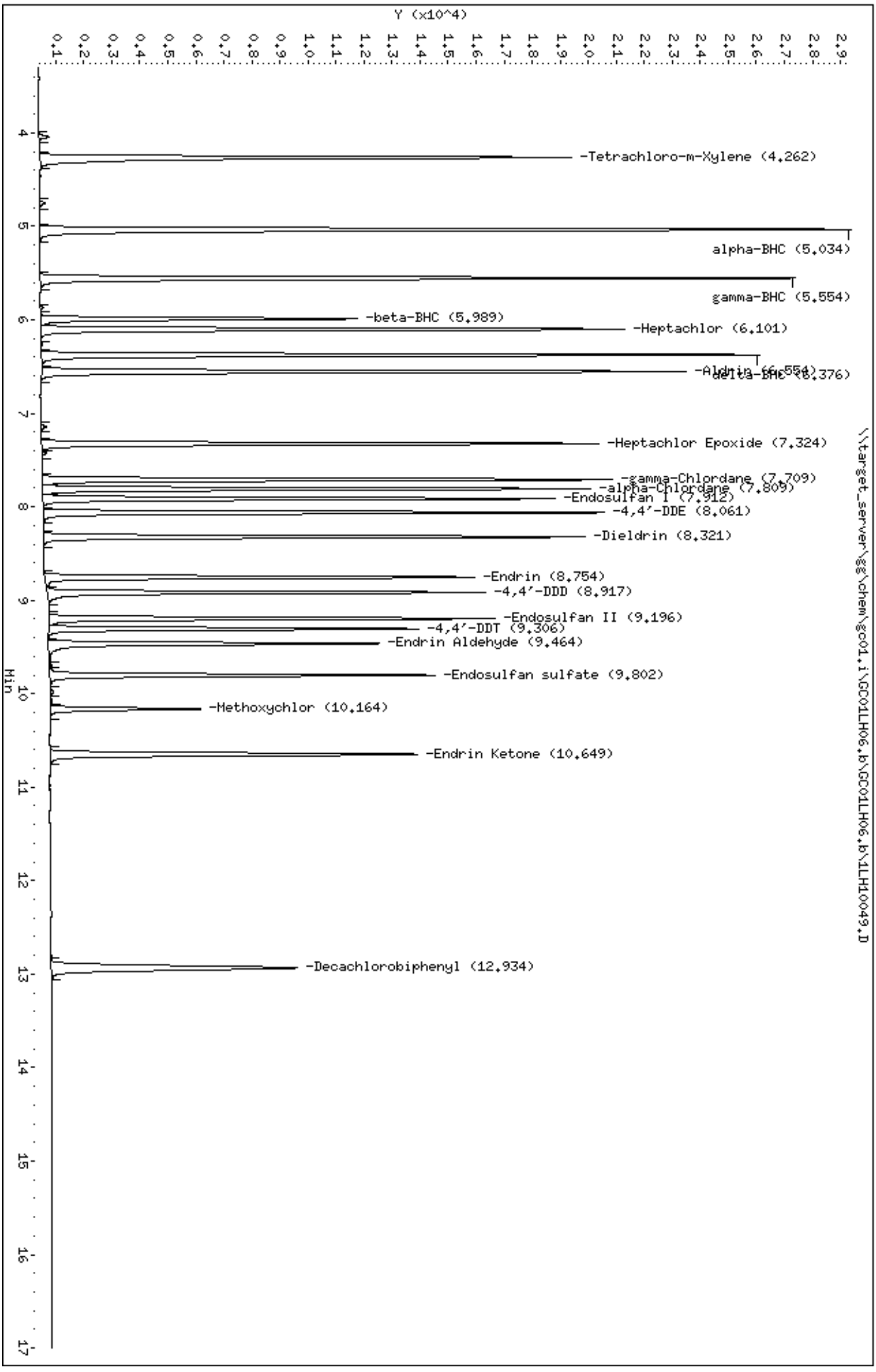
Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LH06.b\GC01LH06.b\1LH10049.D
Lab Smp Id: WG233901-4
Inj Date : 06-AUG-2018 14:11
Operator : AC   Inst ID: gc01.i
Smp Info : WG233901-4
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH06.b\PEST218.m\PEST218.m
Meth Date : 07-Aug-2018 11:48 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 09:02   Cal File: 1LD10089.D
Als bottle: 47   Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						AMOUNTS		
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	REVIEW CODE
$ 4	Tetrachloro-m-Xylene	4.262	4.277	-0.015	18993	0.10000	0.100	
5	alpha-BHC	5.034	5.042	-0.008	28962	0.10000	0.102	
6	gamma-BHC	5.554	5.559	-0.005	26963	0.10000	0.106	
7	beta-BHC	5.989	5.992	-0.003	11294	0.10000	0.103	
8	delta-BHC	6.375	6.379	-0.004	25642	0.10000	0.106	
9	Heptachlor	6.100	6.104	-0.004	20861	0.10000	0.106	
10	Aldrin	6.554	6.557	-0.003	23006	0.10000	0.106	
13	Heptachlor Epoxide	7.324	7.326	-0.002	19887	0.10000	0.105	
15	gamma-Chlordane	7.709	7.709	0.000	20366	0.10000	0.106	
17	alpha-Chlordane	7.809	7.807	0.002	19559	0.10000	0.108	
19	4,4'-DDE	8.060	8.061	-0.001	20004	0.10000	0.107	
20	Endosulfan I	7.912	7.912	0.000	18295	0.10000	0.107	
21	Dieldrin	8.320	8.319	0.001	19350	0.10000	0.107	
23	Endrin	8.754	8.752	0.002	15352	0.10000	0.108	
24	4,4'-DDD	8.917	8.914	0.003	15638	0.10000	0.110	
26	Endosulfan II	9.195	9.192	0.003	15923	0.10000	0.108	
27	4,4'-DDT	9.305	9.304	0.001	13184	0.10000	0.120	
28	Endrin Aldehyde	9.464	9.462	0.002	11799	0.10000	0.109	
29	Methoxychlor	10.164	10.161	0.003	5379	0.10000	0.117	
32	Endosulfan sulfate	9.802	9.797	0.005	13749	0.10000	0.110	
33	Endrin Ketone	10.649	10.644	0.005	13097	0.10000	0.110	
$ 34	Decachlorobiphenyl	12.934	12.924	0.010	8793	0.10000	0.103	


Data File: \\target_server\gg\chem\gc01.i\GC01LH06.b\GC01LH06.b\1LH10049.D
Date : 06-AUG-2018 14:11
Client ID:
Sample Info: WG233901-4
Purge Volume: 1.0
Column phase: ZB-Multiresidue-2
Instrument: gc01.i
Operator: AC
Column diameter: 0.53
\\target_server\gg\chem\gc01.i\GC01LH06.b\GC01LH06.b\1LH10049.D
Y (x10^4)
Min
-Tetrachloro-m-Xylene (4.262)
alpha-BHC (5.034)
gamma-BHC (5.554)
-beta-BHC (5.989)
-Heptachlor (6.101)
-Aldrin (6.554)
delta-BHC (6.376)
-Heptachlor Epoxide (7.324)
-gamma-Chlordane (7.709)
-alpha-Chlordane (7.809)
-Endosulfan I (7.912)
-4,4'-DDE (8.061)
-Dieldrin (8.321)
-Endrin (8.754)
-4,4'-DDD (8.917)
-Endosulfan II (9.196)
-4,4'-DDT (9.306)
-Endrin Aldehyde (9.464)
-Endosulfan sulfate (9.802)
-Methoxychlor (10.164)
-Endrin Ketone (10.649)
-Decachlorobiphenyl (12.934)

Data File: \\target_server\gg\chem\gc01.i\GC01LH06.b\1LH10045.D
Report Date: 18-Aug-2018 09:16

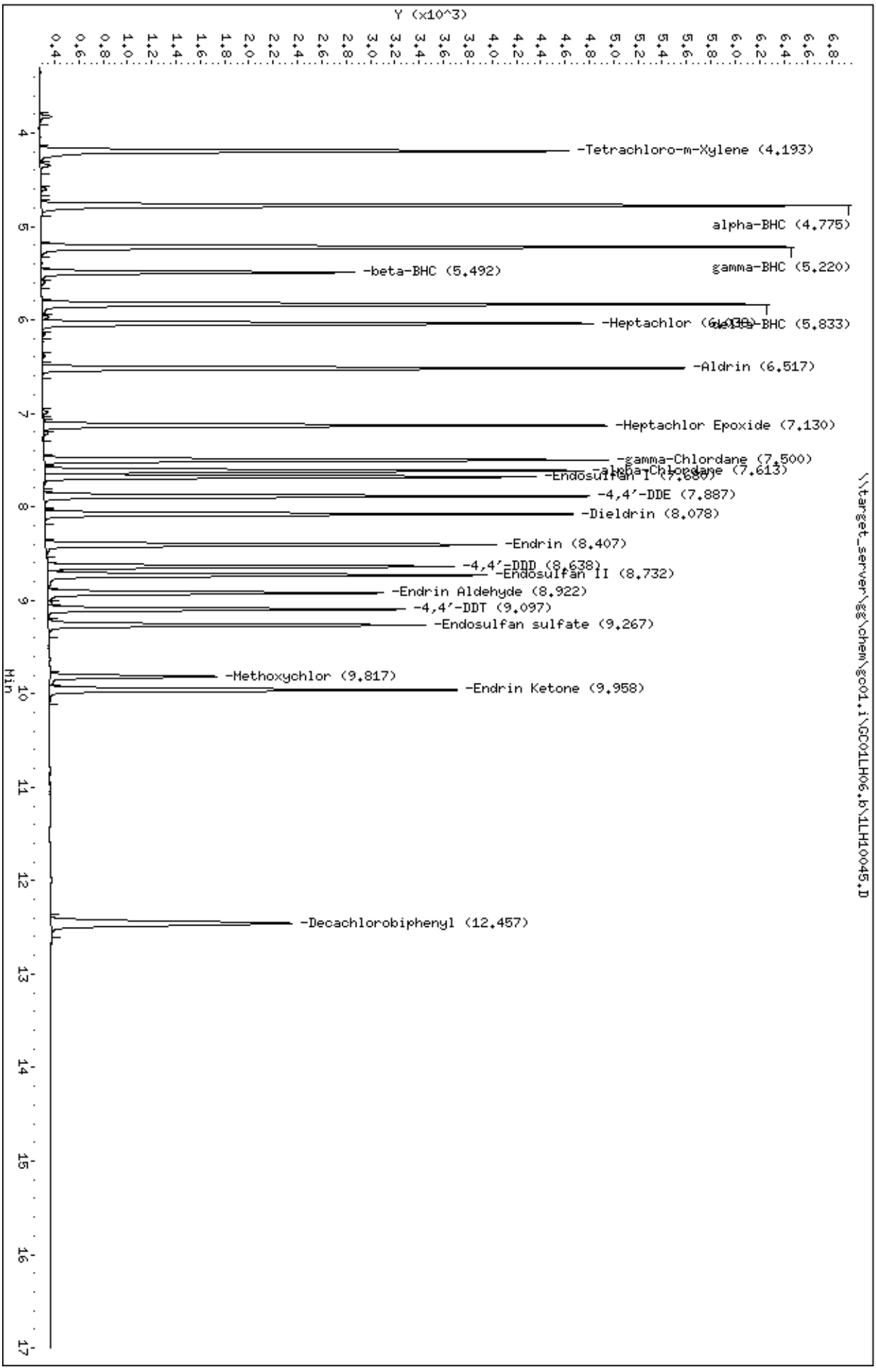
Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LH06.b\1LH10045.D
Lab Smp Id: WG233901-5
Inj Date : 06-AUG-2018 12:11
Operator : AC   Inst ID: gc01.i
Smp Info : WG233901-5
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH06.b\PEST218.m
Meth Date : 09-Aug-2018 13:08 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 09:40   Cal File: 1LD10091.D
Als bottle: 42   Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						AMOUNTS		
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	REVIEW CODE
$ 4	Tetrachloro-m-Xylene	4.193	4.192	0.001	4355	0.02500	0.0257	
5	alpha-BHC	4.775	4.773	0.002	6663	0.02500	0.0262	
6	gamma-BHC	5.220	5.218	0.002	6198	0.02500	0.0262	
7	beta-BHC	5.491	5.488	0.003	2573	0.02500	0.0247	
8	delta-BHC	5.833	5.830	0.003	5980	0.02500	0.0258	
9	Heptachlor	6.038	6.035	0.003	4537	0.02500	0.0248	
10	Aldrin	6.516	6.513	0.003	5288	0.02500	0.0268	
13	Heptachlor Epoxide	7.130	7.127	0.003	4635	0.02500	0.0272	
15	gamma-Chlordane	7.500	7.495	0.005	4638	0.02500	0.0261	
17	alpha-Chlordane	7.613	7.612	0.001	4440	0.02500	0.0262	
19	4,4'-DDE	7.886	7.883	0.003	4484	0.02500	0.0261	
20	Endosulfan I	7.680	7.675	0.005	4047	0.02500	0.0265	
21	Dieldrin	8.078	8.075	0.003	4346	0.02500	0.0265	
23	Endrin	8.406	8.402	0.004	3711	0.02500	0.0264	
24	4,4'-DDD	8.638	8.635	0.003	3351	0.02500	0.0253	
26	Endosulfan II	8.731	8.725	0.006	3615	0.02500	0.0263	
27	4,4'-DDT	9.096	9.092	0.004	2932	0.02500	0.0241	
28	Endrin Aldehyde	8.921	8.917	0.004	2757	0.02500	0.0259	
29	Methoxychlor	9.816	9.812	0.004	1374	0.02500	0.0235	
32	Endosulfan sulfate	9.266	9.260	0.006	3103	0.02500	0.0258	
33	Endrin Ketone	9.958	9.953	0.005	3352	0.02500	0.0258	
$ 34	Decachlorobiphenyl	12.456	12.447	0.009	1987	0.02500	0.0261	


Data File: \\target_server\gs\chem\gc01.i\GC01LH06.b\1LH10045.D
Date : 06-AUG-2018 12:11
Client ID:
Sample Info: WG233901-5
Purge Volume: 1.0
Column phase: ZB-Multiresidue-1
Instrument: gc01.i
Operator: AC
Column diameter: 0.53
\\target_server\gs\chem\gc01.i\GC01LH06.b\1LH10045.D
Y (x10^3)
Min
-Tetrachloro-m-Xylene (4.193)
alpha-BHC (4.775)
gamma-BHC (5.220)
-beta-BHC (5.492)
-Heptachlor (6.030)
-delta-BHC (5.833)
-Aldrin (6.517)
-Heptachlor Epoxide (7.130)
-gamma-Chlordane (7.500)
-alpha-Chlordane (7.613)
-Endosulfan I (7.680)
-4,4'-DDE (7.887)
-Dieldrin (8.078)
-Endrin (8.407)
-4,4'-DDD (8.638)
-Endosulfan II (8.732)
-Endrin Aldehyde (8.922)
-4,4'-DDT (9.097)
-Endosulfan sulfate (9.267)
-Methoxychlor (9.817)
-Endrin Ketone (9.958)
-Decachlorobiphenyl (12.457)

Data File: 1LH10045.D
Report Date: 18-Aug-2018 09:17

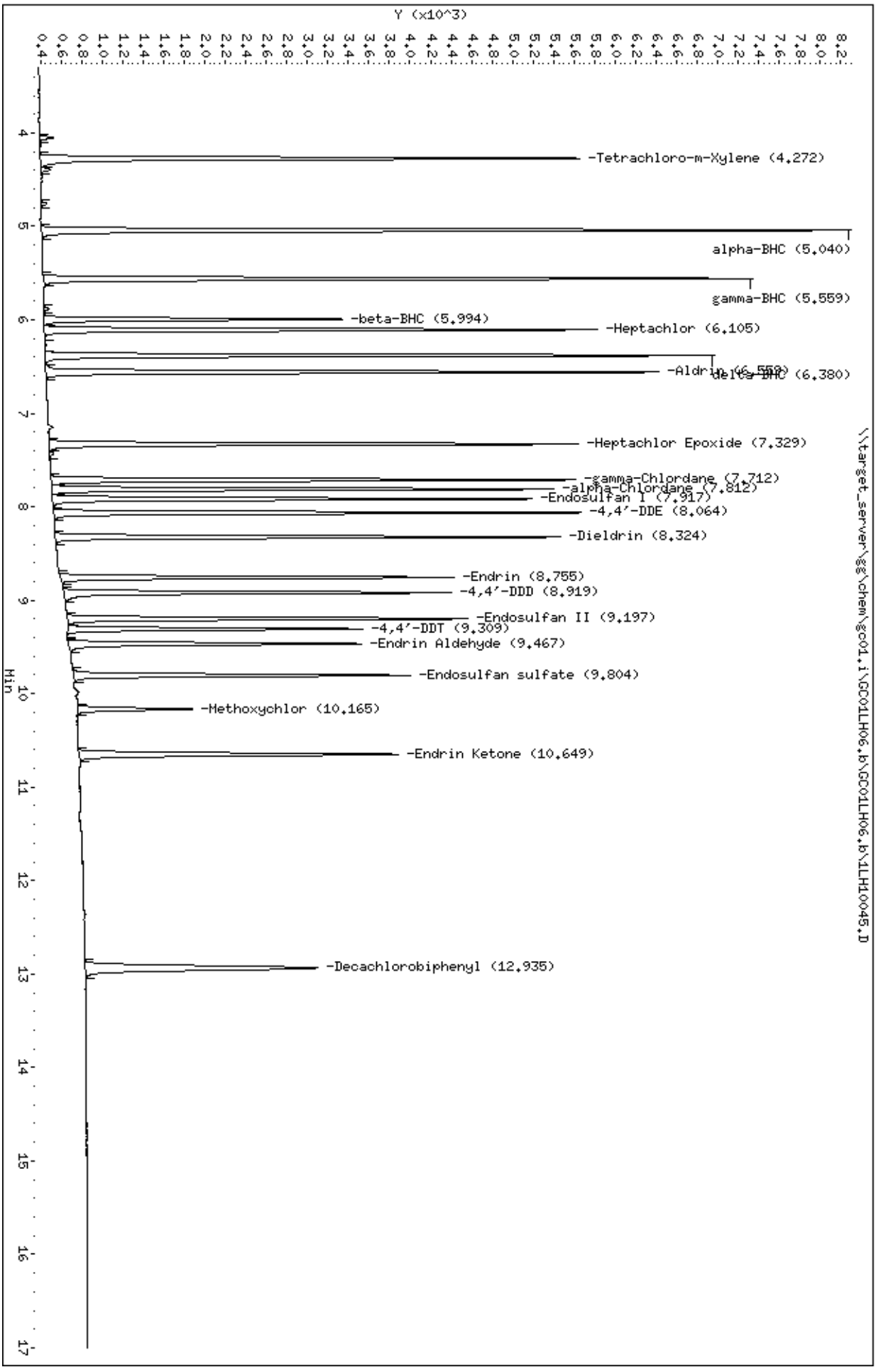
Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LH06.b\GC01LH06.b\1LH10045.D
Lab Smp Id: WG233901-5
Inj Date : 06-AUG-2018 12:11
Operator : AC   Inst ID: gc01.i
Smp Info : WG233901-5
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH06.b\PEST218.m\PEST218.m
Meth Date : 07-Aug-2018 11:48 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 09:40   Cal File: 1LD10091.D
Als bottle: 42   Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						AMOUNTS		
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	REVIEW CODE
$	4 Tetrachloro-m-Xylene	4.272	4.277	-0.005	5252	0.02500	0.0291	
	5 alpha-BHC	5.040	5.042	-0.002	7889	0.02500	0.0290	
	6 gamma-BHC	5.558	5.559	-0.001	6911	0.02500	0.0286	
	7 beta-BHC	5.993	5.992	0.001	2912	0.02500	0.0276	
	8 delta-BHC	6.380	6.379	0.001	6523	0.02500	0.0280	
	9 Heptachlor	6.105	6.104	0.001	5389	0.02500	0.0273	
	10 Aldrin	6.558	6.557	0.001	5966	0.02500	0.0300	
	13 Heptachlor Epoxide	7.328	7.326	0.002	5164	0.02500	0.0297	
	15 gamma-Chlordane	7.712	7.709	0.003	5115	0.02500	0.0286	
	17 alpha-Chlordane	7.812	7.807	0.005	4898	0.02500	0.0289	
	19 4,4'-DDE	8.063	8.061	0.002	5130	0.02500	0.0294	
	20 Endosulfan I	7.917	7.912	0.005	4664	0.02500	0.0297	
	21 Dieldrin	8.323	8.319	0.004	4927	0.02500	0.0292	
	23 Endrin	8.755	8.752	0.003	3840	0.02500	0.0281	
	24 4,4'-DDD	8.918	8.914	0.004	3784	0.02500	0.0278	
	26 Endosulfan II	9.197	9.192	0.005	3909	0.02500	0.0283	
	27 4,4'-DDT	9.308	9.304	0.004	2871	0.02500	0.0234	
	28 Endrin Aldehyde	9.467	9.462	0.005	2848	0.02500	0.0285	
	29 Methoxychlor	10.165	10.161	0.004	1123	0.02500	0.0208	
	32 Endosulfan sulfate	9.803	9.797	0.006	3284	0.02500	0.0272	
	33 Endrin Ketone	10.648	10.644	0.004	3110	0.02500	0.0268	
$	34 Decachlorobiphenyl	12.935	12.924	0.011	2264	0.02500	0.0299	


Data File: \\target_server\gg\chem\gc01.i\GC01LH06.b\GC01LH06.b\1LH10045.D
Date : 06-AUG-2018 12:11
Client ID:
Sample Info: WG233901-5
Purge Volume: 1.0
Column phase: ZB-Multiresidue-2
Instrument: gc01.i
Operator: AC
Column diameter: 0.53
\\target_server\gg\chem\gc01.i\GC01LH06.b\GC01LH06.b\1LH10045.D
Y (x10^3)
Min
-Tetrachloro-m-Xylene (4.272)
alpha-BHC (5.040)
gamma-BHC (5.559)
-beta-BHC (5.994)
-Heptachlor (6.105)
-Aldrin (6.558)
delta-BHC (6.380)
-Heptachlor Epoxide (7.329)
-gamma-Chlordane (7.712)
-alpha-Chlordane (7.812)
-Endosulfan I (7.917)
-4,4'-DDE (8.064)
-Dieldrin (8.324)
-Endrin (8.755)
-4,4'-DDD (8.919)
-Endosulfan II (9.197)
-4,4'-DDT (9.309)
-Endrin Aldehyde (9.467)
-Endosulfan sulfate (9.804)
-Methoxychlor (10.165)
-Endrin Ketone (10.649)
-Decachlorobiphenyl (12.935)

Data File: \\target_server\gg\chem\gc01.i\GC01LH06.b\1LH10046.D
Report Date: 18-Aug-2018 09:17

Katahdin Analytical Services

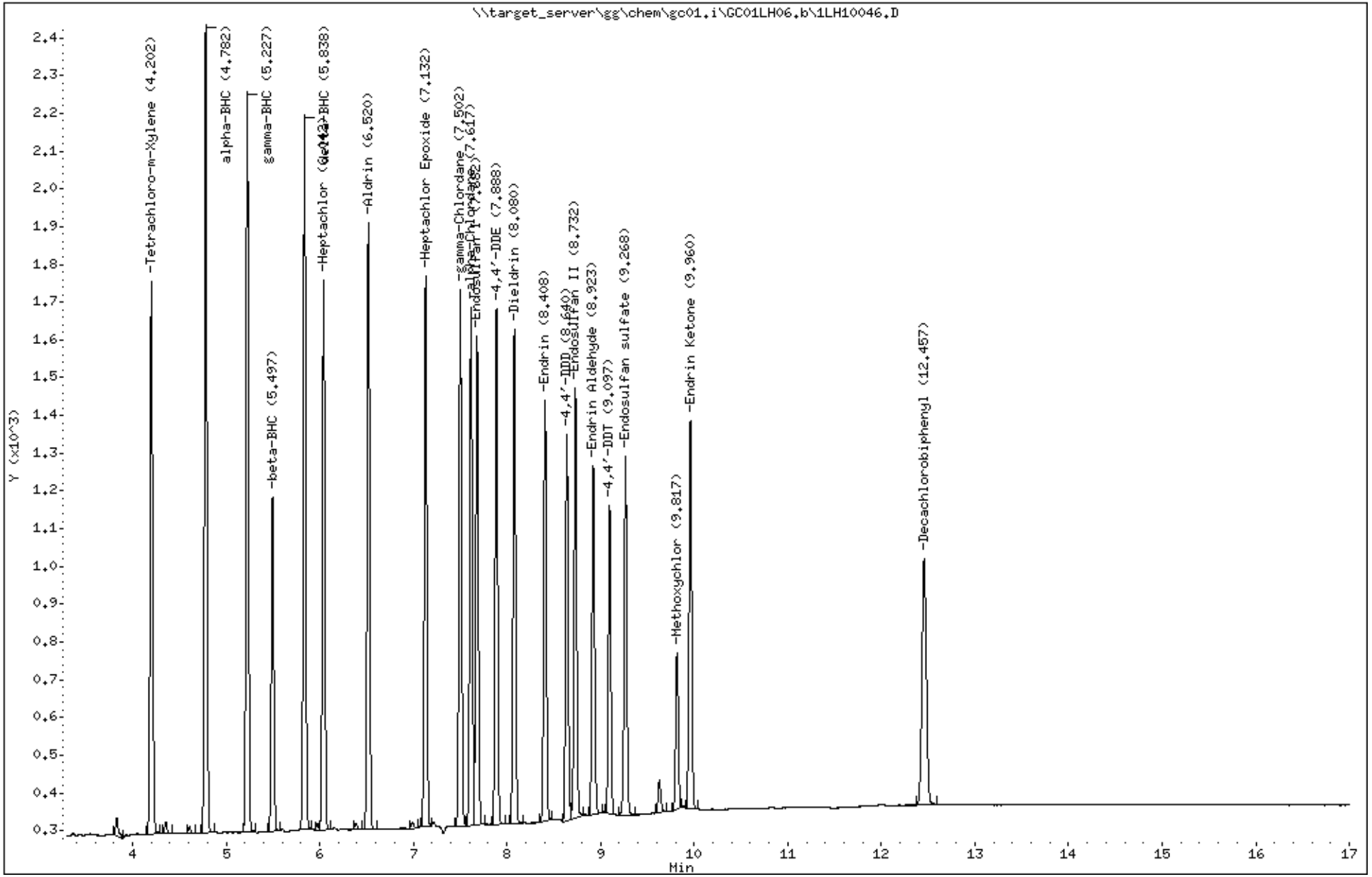
Data file : \\target_server\gg\chem\gc01.i\GC01LH06.b\1LH10046.D
Lab Smp Id: WG233901-6
Inj Date : 06-AUG-2018 12:31
Operator : AC   Inst ID: gc01.i
Smp Info : WG233901-6
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH06.b\PEST218.m
Meth Date : 09-Aug-2018 13:08 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 10:00   Cal File: 1LD10092.D
Als bottle: 43   Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						AMOUNTS		
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	REVIEW CODE
$	4 Tetrachloro-m-Xylene	4.201	4.192	0.009	1463	0.01000	0.00876	
	5 alpha-BHC	4.781	4.773	0.008	2141	0.01000	0.00854	
	6 gamma-BHC	5.226	5.218	0.008	1963	0.01000	0.00838	
	7 beta-BHC	5.496	5.488	0.008	886	0.01000	0.00860	
	8 delta-BHC	5.838	5.830	0.008	1895	0.01000	0.00824	
	9 Heptachlor	6.041	6.035	0.006	1457	0.01000	0.00816	
	10 Aldrin	6.520	6.513	0.007	1607	0.01000	0.00824	
	13 Heptachlor Epoxide	7.131	7.127	0.004	1457	0.01000	0.00857	
	15 gamma-Chlordane	7.501	7.495	0.006	1420	0.01000	0.00804	
	17 alpha-Chlordane	7.616	7.612	0.004	1371	0.01000	0.00812	
	19 4,4'-DDE	7.888	7.883	0.005	1368	0.01000	0.00799	
	20 Endosulfan I	7.681	7.675	0.006	1294	0.01000	0.00851	
	21 Dieldrin	8.080	8.075	0.005	1309	0.01000	0.00803	
	23 Endrin	8.408	8.402	0.006	1114	0.01000	0.00802	
	24 4,4'-DDD	8.640	8.635	0.005	1026	0.01000	0.00786	
	26 Endosulfan II	8.731	8.725	0.006	1140	0.01000	0.00833	
	27 4,4'-DDT	9.096	9.092	0.004	815	0.01000	0.00692	
	28 Endrin Aldehyde	8.923	8.917	0.006	925	0.01000	0.00869	
	29 Methoxychlor	9.816	9.812	0.004	415	0.01000	0.00740	
	32 Endosulfan sulfate	9.268	9.260	0.008	950	0.01000	0.00800	
	33 Endrin Ketone	9.960	9.953	0.007	1029	0.01000	0.00801	
$	34 Decachlorobiphenyl	12.456	12.447	0.009	653	0.01000	0.00861	

Data File: \\target_server\gg\chem\gc01.i\GC01LH06.b\1LH10046.D
Date : 06-AUG-2018 12:31
Client ID:
Instrument: gc01.i
Sample Info: WG233901-6
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000108

Data File: 1LH10046.D
Report Date: 18-Aug-2018 09:17

Katahdin Analytical Services

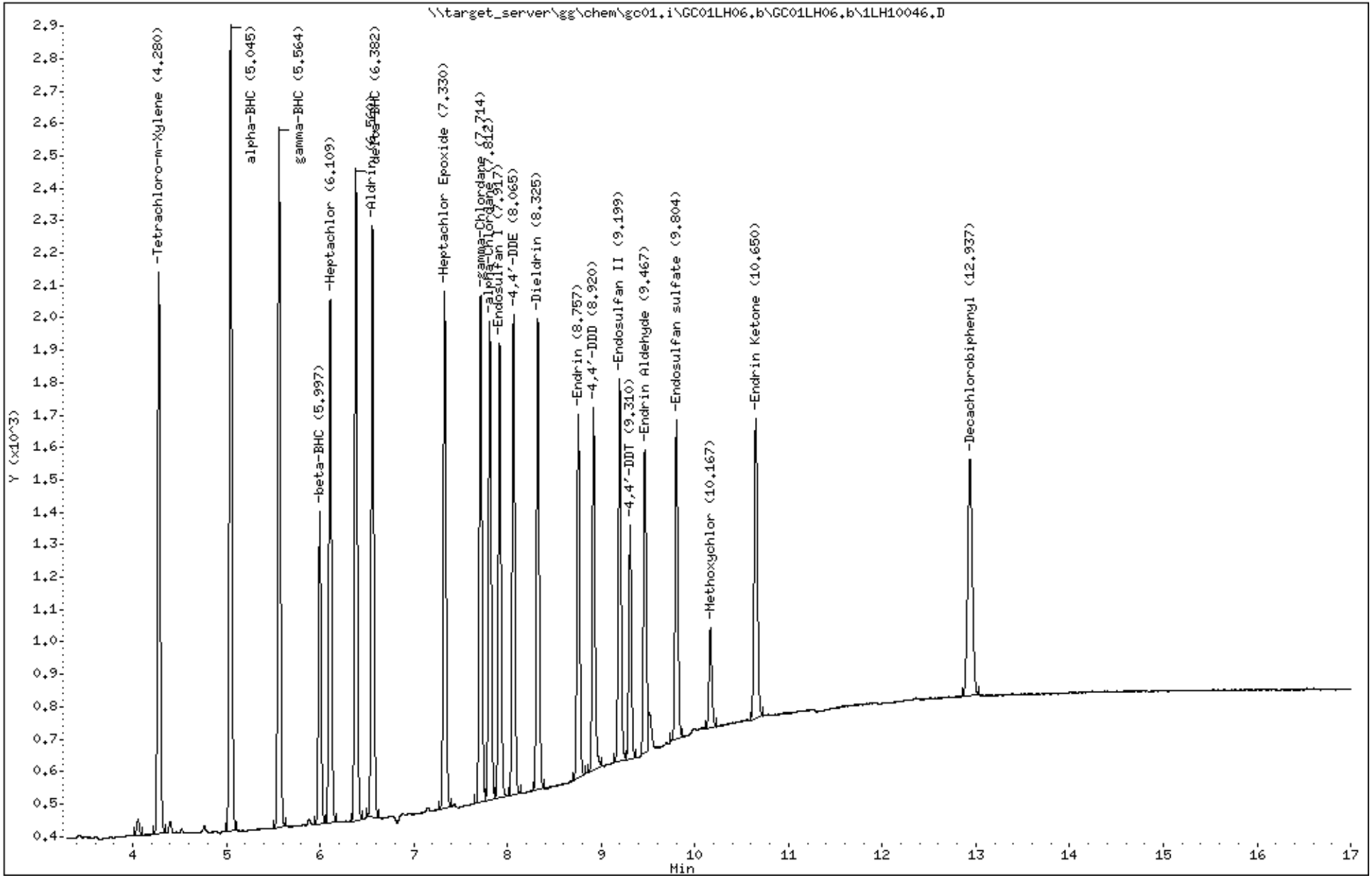
Data file : \\target_server\gg\chem\gc01.i\GC01LH06.b\GC01LH06.b\1LH10046.D
Lab Smp Id: WG233901-6
Inj Date : 06-AUG-2018 12:31
Operator : AC Inst ID: gc01.i
Smp Info : WG233901-6
Misc Info :
Comment :
Method : \\target_server\gg\chem\gc01.i\GC01LH06.b\PEST218.m\PEST218.m
Meth Date : 07-Aug-2018 11:48 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 10:00 Cal File: 1LD10092.D
Als bottle: 43 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)	REVIEW CODE
$ 4	Tetrachloro-m-Xylene	4.280	4.277	0.003	1732	0.01000	0.00912	
5	alpha-BHC	5.045	5.042	0.003	2489	0.01000	0.00875	
6	gamma-BHC	5.563	5.559	0.004	2163	0.01000	0.00851	
7	beta-BHC	5.997	5.992	0.005	962	0.01000	0.00875	
8	delta-BHC	6.382	6.379	0.003	2012	0.01000	0.00836	
9	Heptachlor	6.108	6.104	0.004	1613	0.01000	0.00821	
10	Aldrin	6.560	6.557	0.003	1824	0.01000	0.00842	
13	Heptachlor Epoxide	7.330	7.326	0.004	1595	0.01000	0.00843	
15	gamma-Chlordane	7.713	7.709	0.004	1563	0.01000	0.00816	
17	alpha-Chlordane	7.812	7.807	0.005	1477	0.01000	0.00815	
19	4,4'-DDE	8.065	8.061	0.004	1484	0.01000	0.00795	
20	Endosulfan I	7.917	7.912	0.005	1406	0.01000	0.00821	
21	Dieldrin	8.325	8.319	0.006	1455	0.01000	0.00802	
23	Endrin	8.757	8.752	0.005	1121	0.01000	0.00785	
24	4,4'-DDD	8.920	8.914	0.006	1117	0.01000	0.00786	*9:27 am, Aug 18, 2018*
26	Endosulfan II	9.198	9.192	0.006	1180	0.01000	0.00804	
27	4,4'-DDT	9.310	9.304	0.006	721	0.01000	0.00654	
28	Endrin Aldehyde	9.467	9.462	0.005	936	0.01000	0.00847(M)	M5
29	Methoxychlor	10.167	10.161	0.006	307	0.01000	0.00669	
32	Endosulfan sulfate	9.803	9.797	0.006	985	0.01000	0.00787	
33	Endrin Ketone	10.650	10.644	0.006	926	0.01000	0.00778	
$ 34	Decachlorobiphenyl	12.937	12.924	0.013	730	0.01000	0.00853	

Data File: \\target_server\gg\chem\gc01.i\GC01LH06.b\GC01LH06.b\1LH10046.D
Date : 06-AUG-2018 12:31
Client ID:
Instrument: gc01.i
Sample Info: WG233901-6
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000110

Data File: \\target_server\gg\chem\gc01.i\GC01LH06.b\1LH10047.D
Report Date: 18-Aug-2018 09:17

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LH06.b\1LH10047.D
Lab Smp Id: WG233901-7
Inj Date : 06-AUG-2018 12:50
Operator : AC Inst ID: gc01.i
Smp Info : WG233901-7
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH06.b\PEST218.m
Meth Date : 09-Aug-2018 13:08 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 10:19 Cal File: 1LD10093.D
Als bottle: 44 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: T8-D4700

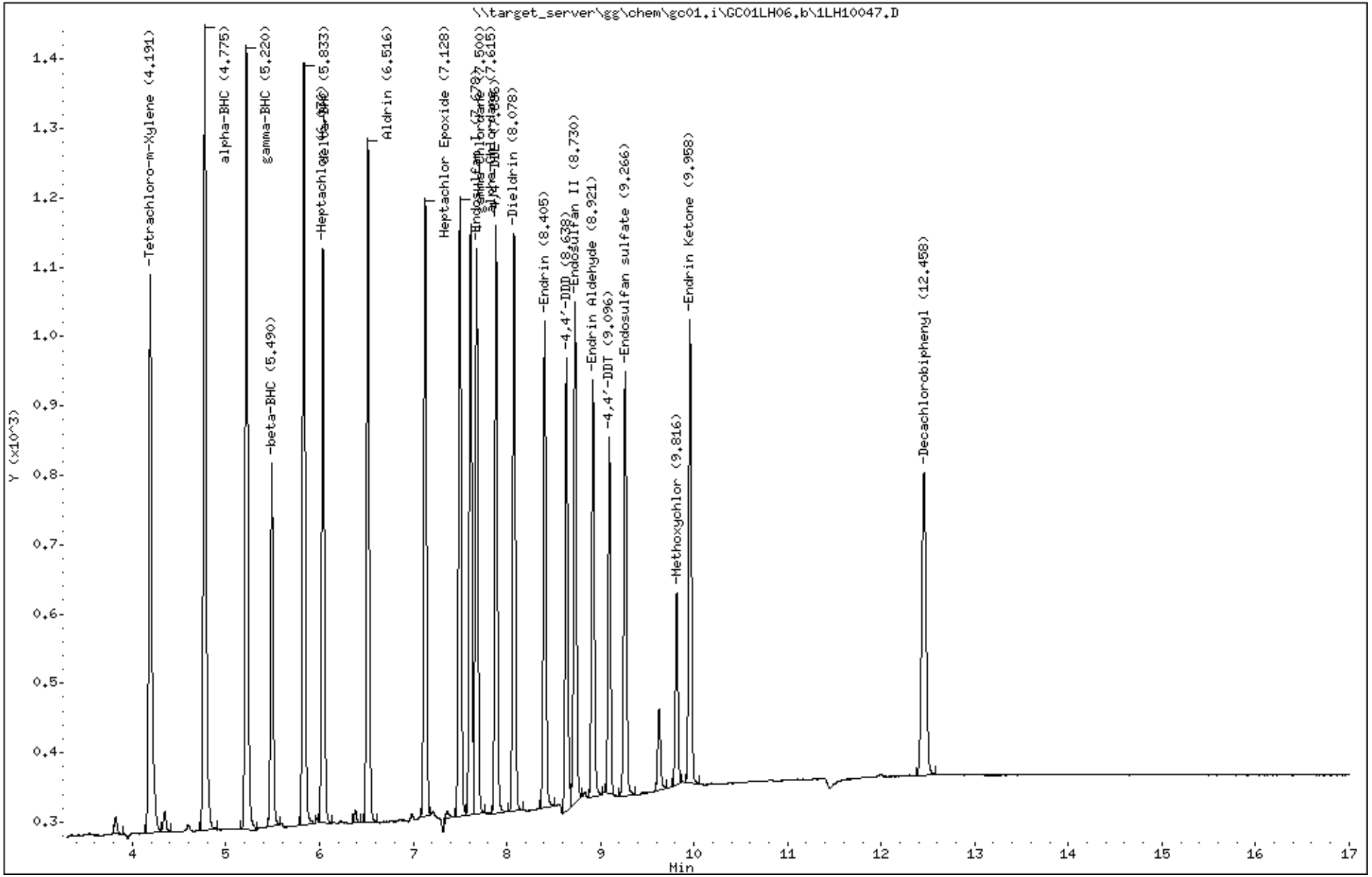
Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)	REVIEW CODE
$ 4	Tetrachloro-m-Xylene	4.191	4.192	-0.001	805	0.00500	0.00484	
5	alpha-BHC	4.774	4.773	0.001	1163	0.00500	0.00464	
6	gamma-BHC	5.219	5.218	0.001	1132	0.00500	0.00478	
7	beta-BHC	5.489	5.488	0.001	524	0.00500	0.00505	
8	delta-BHC	5.832	5.830	0.002	1100	0.00500	0.00473	
9	Heptachlor	6.036	6.035	0.001	827	0.00500	0.00469	
10	Aldrin	6.516	6.513	0.003	987	0.00500	0.00495	
13	Heptachlor Epoxide	7.127	7.127	0.000	891	0.00500	0.00513	
15	gamma-Chlordane	7.499	7.495	0.004	892	0.00500	0.00492(M)	M5
17	alpha-Chlordane	7.614	7.612	0.002	851	0.00500	0.00494(M)	
19	4,4'-DDE	7.886	7.883	0.003	849	0.00500	0.00484	
20	Endosulfan I	7.677	7.675	0.002	814	0.00500	0.00522(M)	
21	Dieldrin	8.077	8.075	0.002	833	0.00500	0.00498	
23	Endrin	8.404	8.402	0.002	703	0.00500	0.00494	
24	4,4'-DDD	8.637	8.635	0.002	653	0.00500	0.00489	
26	Endosulfan II	8.729	8.725	0.004	724	0.00500	0.00516	
27	4,4'-DDT	9.096	9.092	0.004	515	0.00500	0.00438	
28	Endrin Aldehyde	8.921	8.917	0.004	601	0.00500	0.00544	
29	Methoxychlor	9.816	9.812	0.004	277	0.00500	0.00500	
32	Endosulfan sulfate	9.266	9.260	0.006	611	0.00500	0.00504	
33	Endrin Ketone	9.957	9.953	0.004	670	0.00500	0.00509	
$ 34	Decachlorobiphenyl	12.457	12.447	0.010	437	0.00500	0.00559	

AC
9:27 am, Aug 18, 2018

Data File: \\target_server\gg\chem\gc01.i\GC01LH06.b\1LH10047.D
Date : 06-AUG-2018 12:50
Client ID:
Instrument: gc01.i
Sample Info: WG233901-7
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000112

Data File: 1LH10047.D
Report Date: 18-Aug-2018 09:17

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LH06.b\GC01LH06.b\1LH10047.D
Lab Smp Id: WG233901-7
Inj Date : 06-AUG-2018 12:50
Operator : AC Inst ID: gc01.i
Smp Info : WG233901-7
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH06.b\PEST218.m\PEST218.m
Meth Date : 07-Aug-2018 11:48 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 10:19 Cal File: 1LD10093.D
Als bottle: 44 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: T8-D4700

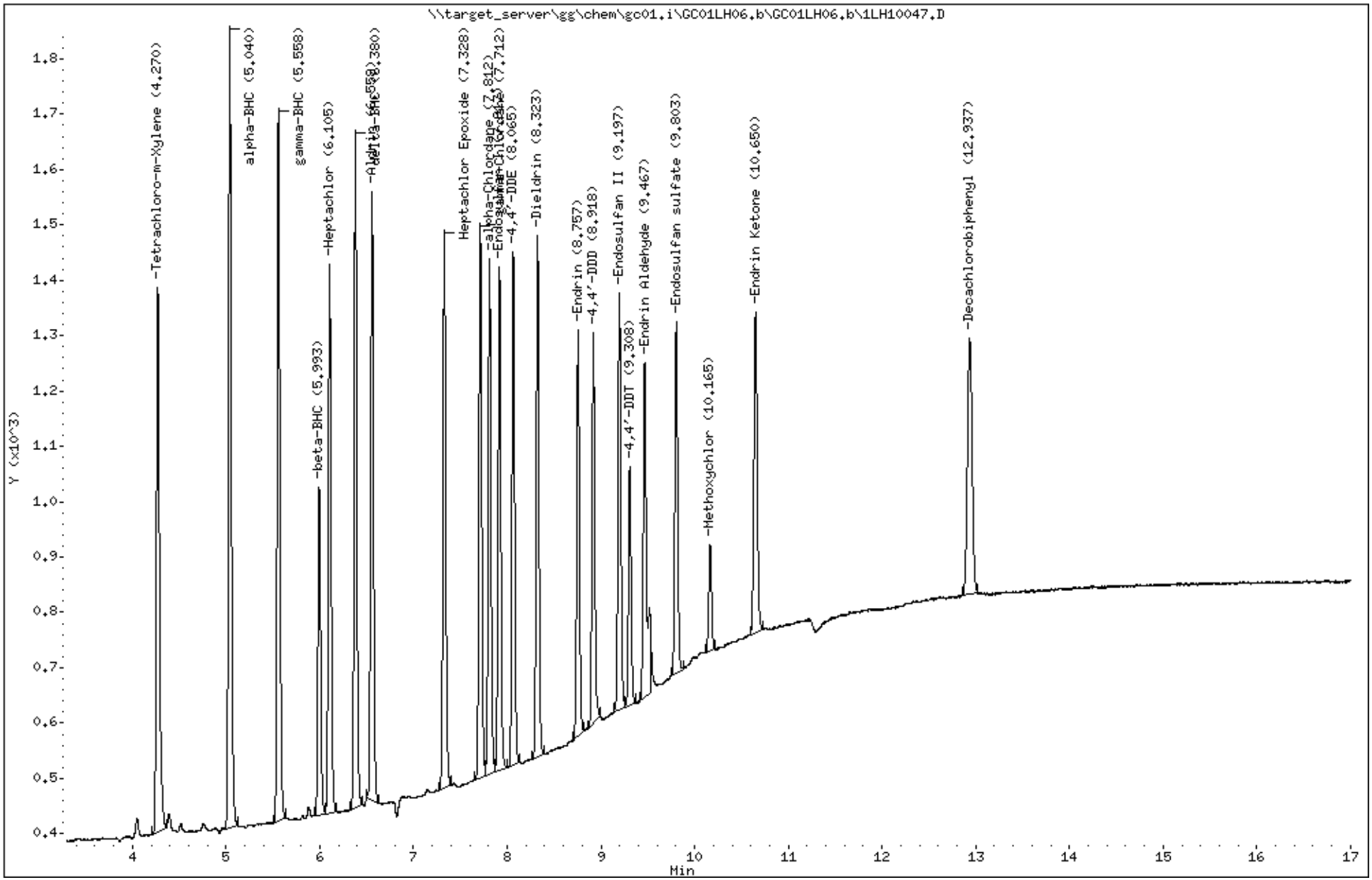
Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)	REVIEW CODE
$ 4	Tetrachloro-m-Xylene	4.269	4.277	-0.008	986	0.00500	0.00519	
5	alpha-BHC	5.039	5.042	-0.003	1448	0.00500	0.00509	
6	gamma-BHC	5.558	5.559	-0.001	1287	0.00500	0.00506	
7	beta-BHC	5.993	5.992	0.001	593	0.00500	0.00540	
8	delta-BHC	6.379	6.379	0.000	1225	0.00500	0.00509	
9	Heptachlor	6.104	6.104	0.000	991	0.00500	0.00504	
10	Aldrin	6.558	6.557	0.001	1101	0.00500	0.00508	
13	Heptachlor Epoxide	7.328	7.326	0.002	1009	0.00500	0.00533	
15	gamma-Chlordane	7.711	7.709	0.002	1003	0.00500	0.00524	
17	alpha-Chlordane	7.811	7.807	0.004	931	0.00500	0.00514	
19	4,4'-DDE	8.064	8.061	0.003	926	0.00500	0.00496	
20	Endosulfan I	7.916	7.912	0.004	910	0.00500	0.00531	
21	Dieldrin	8.323	8.319	0.004	943	0.00500	0.00520	
23	Endrin	8.756	8.752	0.004	735	0.00500	0.00515	
24	4,4'-DDD	8.918	8.914	0.004	707	0.00500	0.00498	
26	Endosulfan II	9.196	9.192	0.004	753	0.00500	0.00513	
27	4,4'-DDT	9.308	9.304	0.004	432	0.00500	0.00392	
28	Endrin Aldehyde	9.466	9.462	0.004	603	0.00500	0.00550(M)	M9
29	Methoxychlor	10.164	10.161	0.003	192	0.00500	0.00418	
32	Endosulfan sulfate	9.803	9.797	0.006	634	0.00500	0.00506	
33	Endrin Ketone	10.649	10.644	0.005	579	0.00500	0.00486	
$ 34	Decachlorobiphenyl	12.936	12.924	0.012	462	0.00500	0.00540	

AC
9:27 am, Aug 18, 2018

Data File: \\target_server\gg\chem\gc01.i\GC01LH06.b\GC01LH06.b\1LH10047.D
Date : 06-AUG-2018 12:50
Client ID:
Instrument: gc01.i
Sample Info: WG233901-7
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000114

Data File: \\target_server\gg\chem\gc01.i\GC01LH06.b\1LH10051.D
Report Date: 18-Aug-2018 09:28

Katahdin Analytical Services

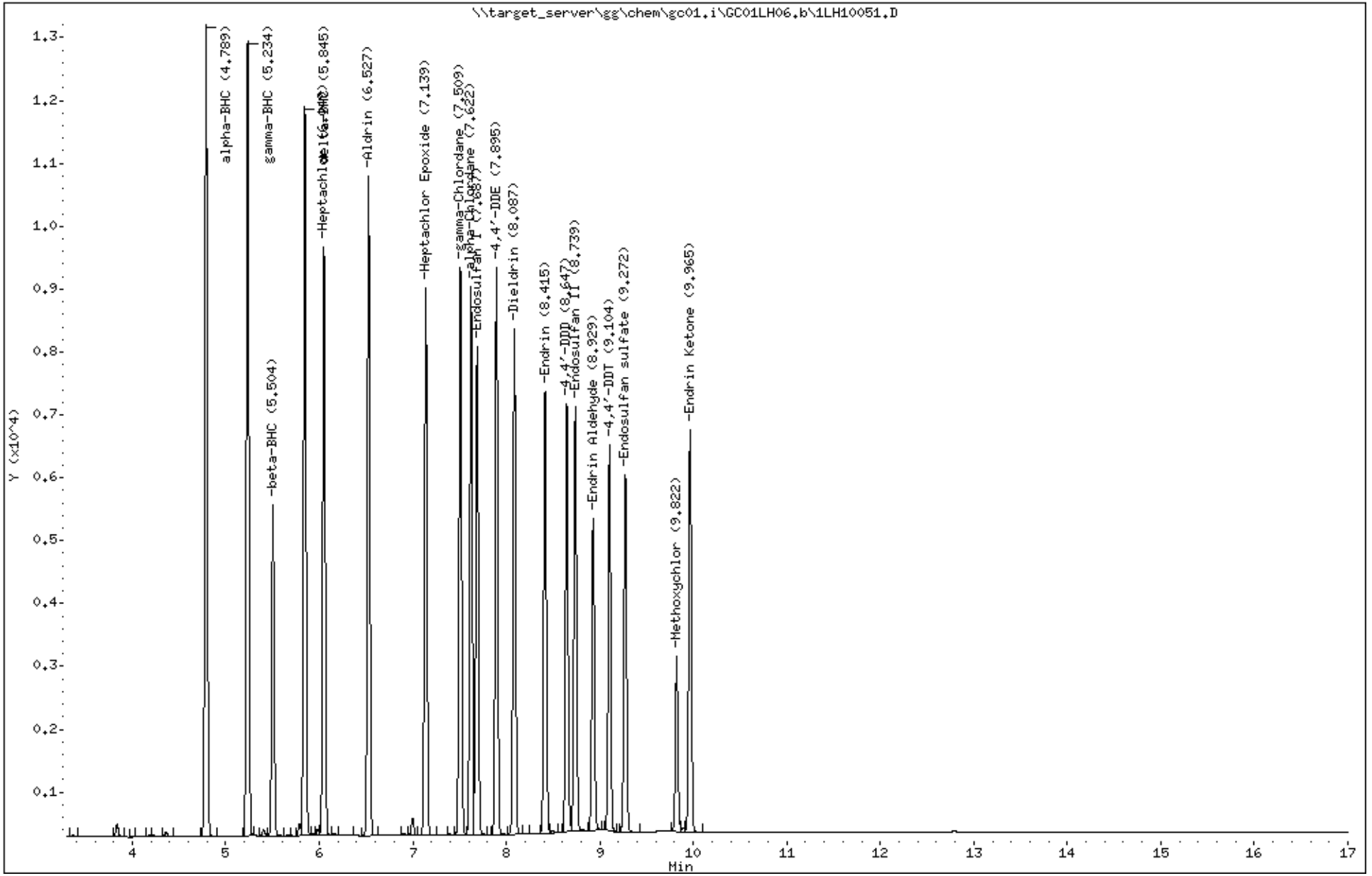
Data file : \\target_server\gg\chem\gc01.i\GC01LH06.b\1LH10051.D
Lab Smp Id: WG233901-8
Inj Date : 06-AUG-2018 15:31
Operator : AC   Inst ID: gc01.i
Smp Info : WG233901-8,SL7227
Misc Info : WG233901,WG233901,WG233901-2,SL7227-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH06.b\PEST218.m
Meth Date : 09-Aug-2018 13:08 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 09:02   Cal File: 1LD10089.D
Als bottle: 48   QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: IND.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)	
	Compounds	RT	EXP RT	DLT RT	RESPONSE			REVIEW CODE
5	alpha-BHC	4.788	4.773	0.015	12901	0.05362	0.0536	
6	gamma-BHC	5.233	5.218	0.015	12640	0.05643	0.0564	
7	beta-BHC	5.503	5.488	0.015	5259	0.05346	0.0535	
8	delta-BHC	5.845	5.830	0.015	11575	0.05286	0.0528	
9	Heptachlor	6.048	6.035	0.013	9357	0.05594	0.0559	
10	Aldrin	6.527	6.513	0.014	10478	0.05485	0.0548	
13	Heptachlor Epoxide	7.138	7.127	0.011	8705	0.05260	0.0526	
15	gamma-Chlordane	7.508	7.495	0.013	9011	0.05262	0.0526	
17	alpha-Chlordane	7.622	7.612	0.010	8703	0.05343	0.0534	
19	4,4'-DDE	7.895	7.883	0.012	9012	0.05434	0.0543	
20	Endosulfan I	7.687	7.675	0.012	7750	0.05160	0.0516	
21	Dieldrin	8.087	8.075	0.012	8044	0.05023	0.0502	
23	Endrin	8.415	8.402	0.013	7032	0.05196	0.0520	
24	4,4'-DDD	8.647	8.635	0.012	6801	0.05351	0.0535	
26	Endosulfan II	8.738	8.725	0.013	6746	0.05006	0.0501	
27	4,4'-DDT	9.103	9.092	0.011	6128	0.05480	0.0548	
28	Endrin Aldehyde	8.928	8.917	0.011	4974	0.04726	0.0472	
29	Methoxychlor	9.822	9.812	0.010	2777	0.05264	0.0526	
32	Endosulfan sulfate	9.272	9.260	0.012	5674	0.04928	0.0493	
33	Endrin Ketone	9.965	9.953	0.012	6389	0.05030	0.0503	

Data File: \\target_server\gg\chem\gc01.i\GC01LH06.b\1LH10051.D
Date : 06-AUG-2018 15:31
Client ID:
Instrument: gc01.i
Sample Info: WG233901-8,SL7227
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000116

Data File: 1LH10051.D
Report Date: 18-Aug-2018 09:28

Katahdin Analytical Services

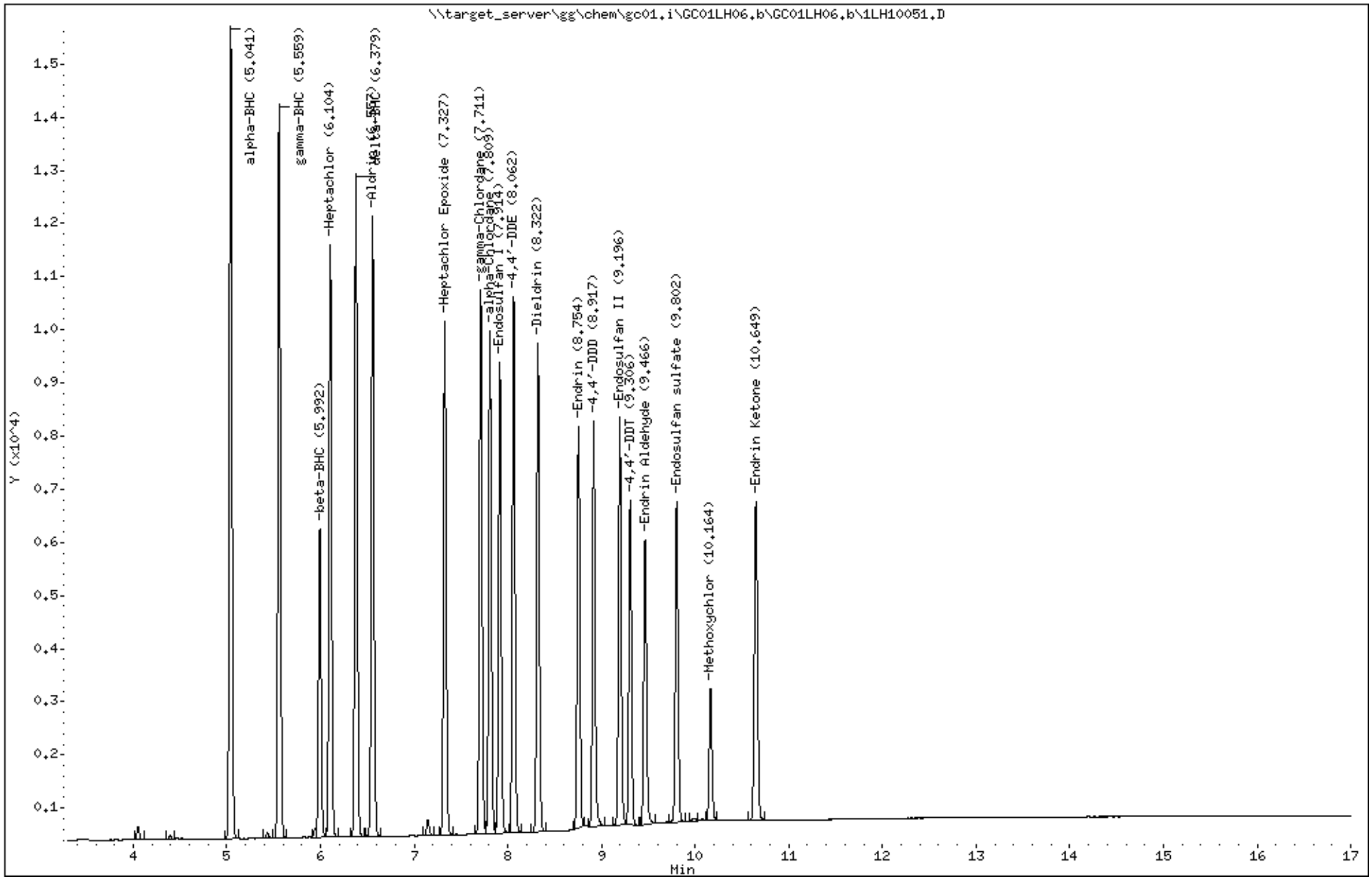
Data file : \\target_server\gg\chem\gc01.i\GC01LH06.b\GC01LH06.b\1LH10051.D
Lab Smp Id: WG233901-8
Inj Date : 06-AUG-2018 15:31
Operator : AC   Inst ID: gc01.i
Smp Info : WG233901-8,SL7227
Misc Info : WG233901,WG233901,WG233901-2,SL7227-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH06.b\PEST218.m\PEST218.m
Meth Date : 07-Aug-2018 11:48 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 10:00   Cal File: 1LD10092.D
Als bottle: 48   QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: IND.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)	
	Compounds	RT	EXP RT	DLT RT	RESPONSE			REVIEW CODE
5	alpha-BHC	5.040	5.042	-0.002	15289	0.05377	0.0538	
6	gamma-BHC	5.559	5.559	0.000	13820	0.05439	0.0544	
7	beta-BHC	5.992	5.992	0.000	5786	0.05265	0.0526	
8	delta-BHC	6.379	6.379	0.000	12481	0.05185	0.0518	
9	Heptachlor	6.104	6.104	0.000	11131	0.05664	0.0566	
10	Aldrin	6.557	6.557	0.000	11678	0.05390	0.0539	
13	Heptachlor Epoxide	7.327	7.326	0.001	9665	0.05107	0.0511	
15	gamma-Chlordane	7.710	7.709	0.001	10237	0.05346	0.0535	
17	alpha-Chlordane	7.809	7.807	0.002	9448	0.05216	0.0522	
19	4,4'-DDE	8.062	8.061	0.001	10078	0.05400	0.0540	
20	Endosulfan I	7.914	7.912	0.002	8871	0.05180	0.0518	
21	Dieldrin	8.322	8.319	0.003	9205	0.05074	0.0507	
23	Endrin	8.754	8.752	0.002	7560	0.05295	0.0529	
24	4,4'-DDD	8.917	8.914	0.003	7619	0.05365	0.0536	
26	Endosulfan II	9.195	9.192	0.003	7676	0.05232	0.0523	
27	4,4'-DDT	9.305	9.304	0.001	6099	0.04775	0.0478	
28	Endrin Aldehyde	9.465	9.462	0.003	5353	0.04843	0.0484	
29	Methoxychlor	10.164	10.161	0.003	2468	0.04684	0.0468	
32	Endosulfan sulfate	9.802	9.797	0.005	6037	0.04822	0.0482	
33	Endrin Ketone	10.649	10.644	0.005	5989	0.05029	0.0503	

Data File: \\target_server\gg\chem\gc01.i\GC01LH06.b\GC01LH06.b\1LH10051.D
Date : 06-AUG-2018 15:31
Client ID:
Instrument: gc01.i
Sample Info: WG233901-8,SL7227
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000118

Katahdin
ANALYTICAL SERVICES

Form 7D

Pesticide Calibration Verification Summary

Lab ID: WG233901-1
Client ID: Breakdown Evaluation
Init. Calib. Date(s): 16-FEB-18 -06-AUG-18
Lab File ID: 1LH10041.D

Analysis Date: 06-AUG-18
Report Date: 24-AUG-18
SDG: SL7420
Column ID: A

Lab Sample ID	Filename	% DDT Breakdown	% Endrin Breakdown
WG233901-1	1LH10041.D	1.31	2.03

QC Limits:

4,4'-DDT breakdown must be less than or equal to 15.0%

Endrin breakdown must be less than or equal to 15.0%

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://www.katahdinlab.com

Data File: \\target_server\gg\chem\gc01.i\GC01LH06.b\1LH10041.D
Report Date: 24-Aug-2018 13:02

Katahdin Analytical Services

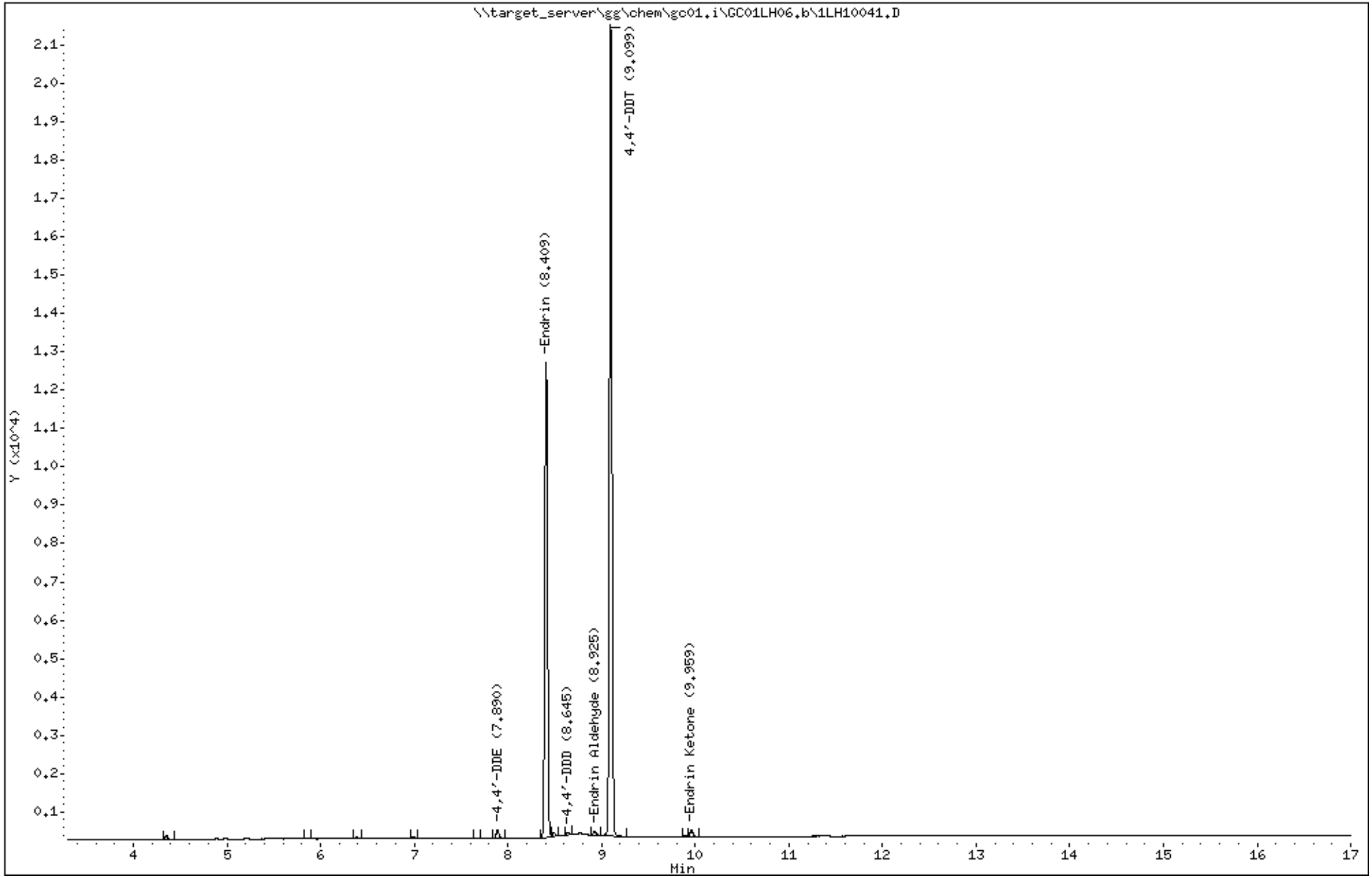
Data file : \\target_server\gg\chem\gc01.i\GC01LH06.b\1LH10041.D
Lab Smp Id: WG233901-1
Inj Date : 06-AUG-2018 10:53
Operator : AC   Inst ID: gc01.i
Smp Info : WG233901-1,SL7420
Misc Info : WG233901,WG233901,WG233901-2,SL7420-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH06.b\PEST218.m
Meth Date : 09-Aug-2018 13:08 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 09:02   Cal File: 1LD10089.D
Als bottle: 38
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: eval.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
19 4,4'-DDE	7.890	7.883	0.007	208	5.e-004	0.00503	
23 Endrin	8.408	8.402	0.006	12383	0.03618	0.362	
24 4,4'-DDD	8.645	8.635	0.010	72	2e-004	0.00214	
27 4,4'-DDT	9.098	9.092	0.006	21154	0.06374	0.637	
28 Endrin Aldehyde	8.925	8.917	0.008	83	3e-004	0.00323	
33 Endrin Ketone	9.958	9.953	0.005	174	5e-004	0.00532	

Data File: \\target_server\gg\chem\gc01.i\GC01LH06.b\1LH10041.D
Date : 06-AUG-2018 10:53
Client ID:
Instrument: gc01.i
Sample Info: WG233901-1,SL7420
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000121

Katahdin
ANALYTICAL SERVICES

Form 7D

Pesticide Calibration Verification Summary

Lab ID: WG233901-1
Client ID: Breakdown Evaluation
Init. Calib. Date(s): 16-FEB-18 -06-AUG-18
Lab File ID: 1LH10041.D

Analysis Date: 06-AUG-18
Report Date: 24-AUG-18
SDG: SL7420
Column ID: B

Lab Sample ID	Filename	% DDT Breakdown	% Endrin Breakdown
WG233901-1	1LH10041.D	2.01	2.54

QC Limits:

4,4'-DDT breakdown must be less than or equal to 15.0%

Endrin breakdown must be less than or equal to 15.0%

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://www.katahdinlab.com

Data File: 1LH10041.D
Report Date: 24-Aug-2018 13:02

Katahdin Analytical Services

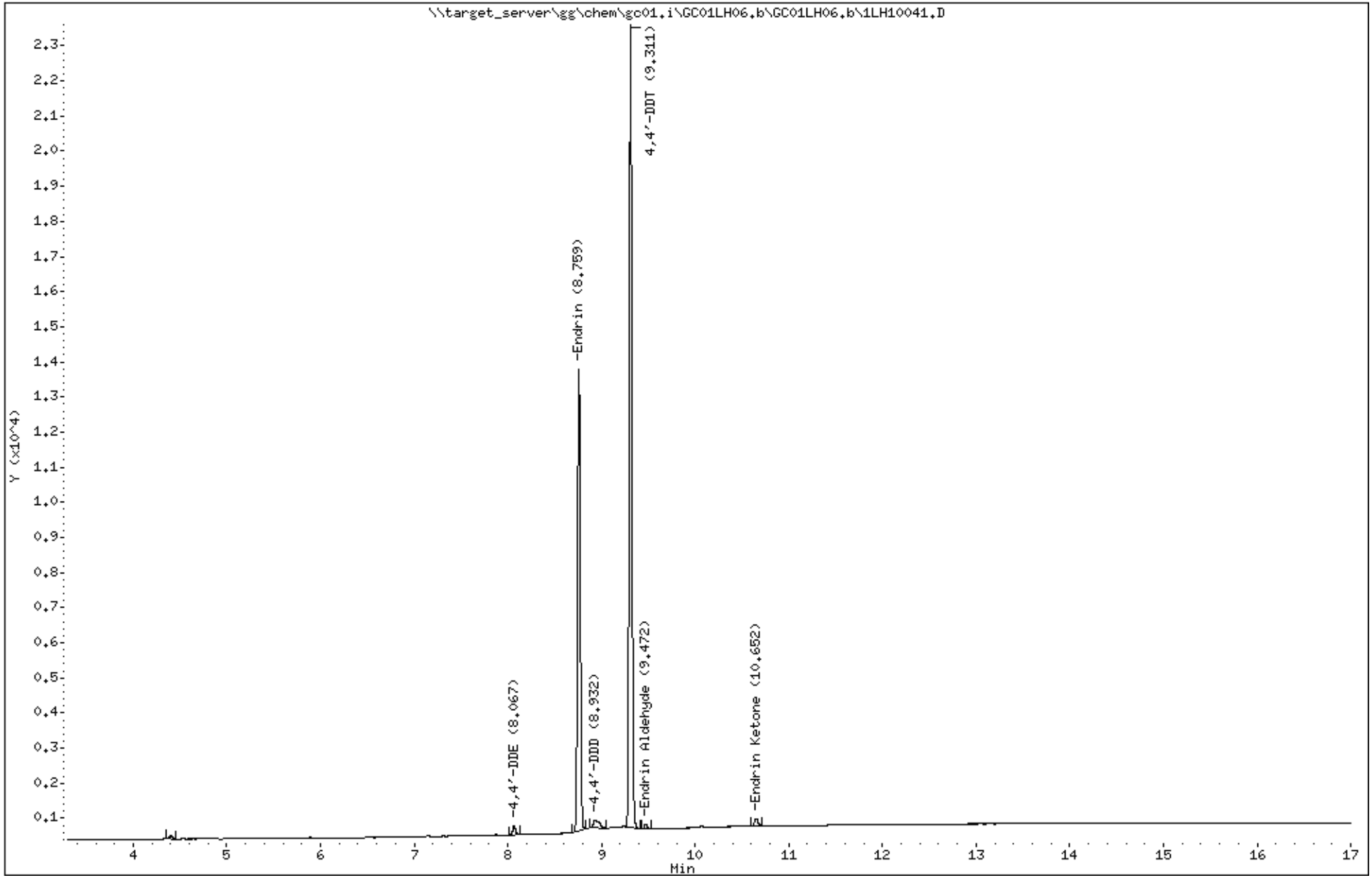
Data file : \\target_server\gg\chem\gc01.i\GC01LH06.b\GC01LH06.b\1LH10041.D
Lab Smp Id: WG233901-1
Inj Date : 06-AUG-2018 10:53
Operator : AC   Inst ID: gc01.i
Smp Info : WG233901-1,SL7420
Misc Info : WG233901,WG233901,WG233901-2,SL7420-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH06.b\PEST218.m\PEST218.m
Meth Date : 07-Aug-2018 11:48 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 10:00   Cal File: 1LD10092.D
Als bottle: 38
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: eval.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS		
					ON-COLUMN	FINAL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/L)	REVIEW CODE
19 4,4'-DDE	8.067	8.061	0.006	250	0.00134	0.0134	
23 Endrin	8.759	8.752	0.007	13133	0.09198	0.920	
24 4,4'-DDD	8.932	8.914	0.018	219	0.00154	0.0154	
27 4,4'-DDT	9.310	9.304	0.006	22867	0.20756	2.08	
28 Endrin Aldehyde	9.472	9.462	0.010	129	0.00117	0.0117	
33 Endrin Ketone	10.652	10.644	0.008	214	0.00180	0.0180	

Data File: \\target_server\gg\chem\gc01.i\GC01LH06.b\GC01LH06.b\1LH10041.D
Date : 06-AUG-2018 10:53
Client ID:
Instrument: gc01.i
Sample Info: WG233901-1,SL7420
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000124

Katahdin
ANALYTICAL SERVICES

Form 7D

Pesticide Calibration Verification Summary

Lab ID: WG233999-3
Client ID: Breakdown Evaluation
Init. Calib. Date(s): 16-FEB-18 -06-AUG-18
Lab File ID: 1LH10127.D

Analysis Date: 10-AUG-18
Report Date: 24-AUG-18
SDG: SL7420
Column ID: A

Lab Sample ID	Filename	% DDT Breakdown	% Endrin Breakdown
WG233999-3	1LH10127.D	1.18	3.09

QC Limits:

4,4'-DDT breakdown must be less than or equal to 15.0%

Endrin breakdown must be less than or equal to 15.0%

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Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10127.D
Report Date: 24-Aug-2018 12:55

Katahdin Analytical Services

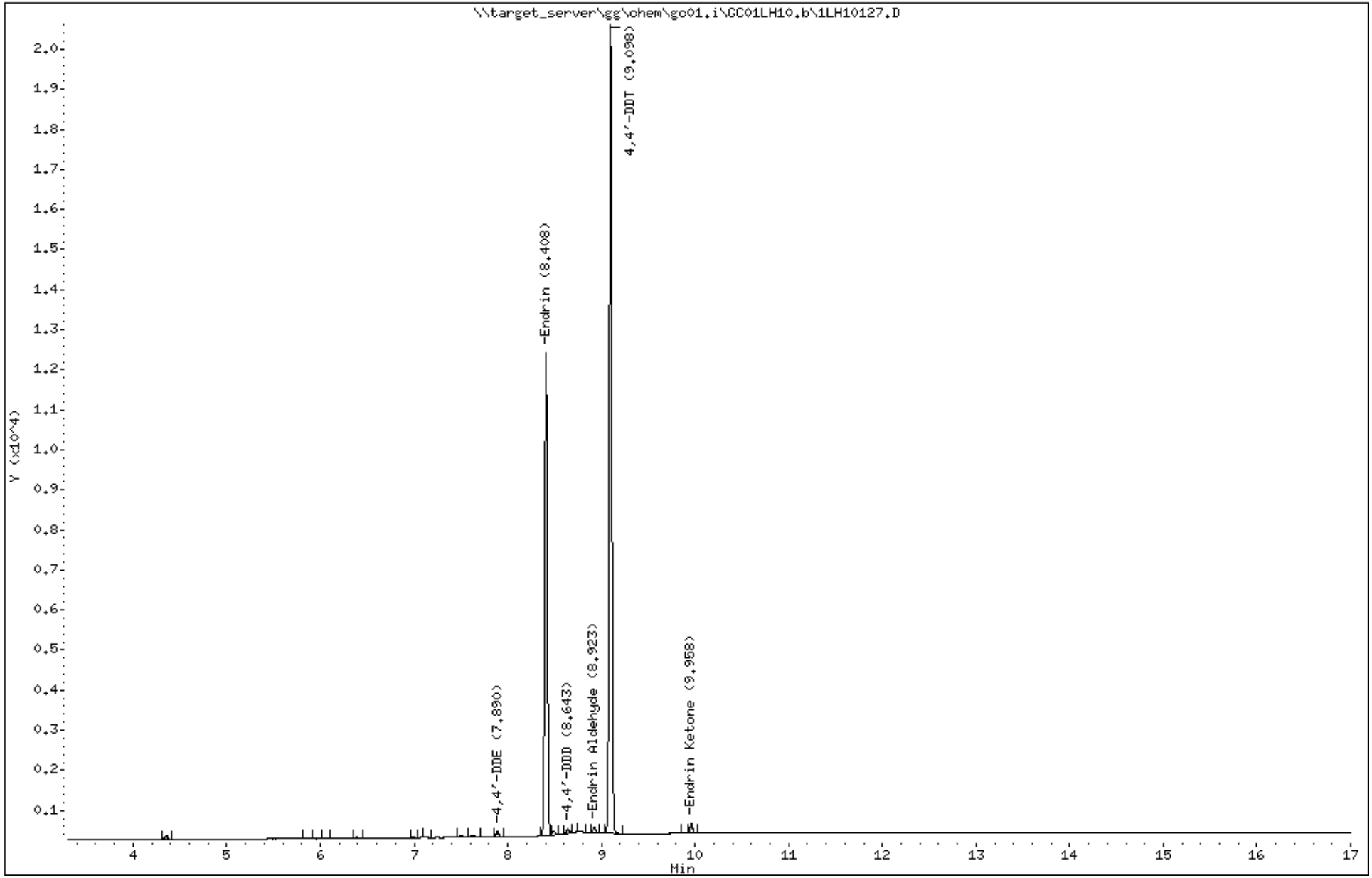
Data file : \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10127.D
Lab Smp Id: WG233999-3
Inj Date : 10-AUG-2018 13:58
Operator : AC   Inst ID: gc01.i
Smp Info : WG233999-3,SL7420
Misc Info : WG233999,WG233999,WG233901-2,SL7420-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH10.b\PEST218.m
Meth Date : 11-Aug-2018 09:31 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 09:02   Cal File: 1LD10089.D
Als bottle: 4
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: eval.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00500	Final Volume (L)
Vo	0.50000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS		
					ON-COLUMN	FINAL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/L)	REVIEW CODE
19 4,4'-DDE	7.889	7.883	0.006	135	8e-004	0.00814	
23 Endrin	8.408	8.402	0.006	12048	0.08902	0.890	
24 4,4'-DDD	8.643	8.633	0.010	106	8e-004	0.00834	
27 4,4'-DDT	9.098	9.092	0.006	20178	0.18044	1.80	
28 Endrin Aldehyde	8.923	8.917	0.006	148	0.00141	0.0141	
33 Endrin Ketone	9.958	9.955	0.003	236	0.00186	0.0186	

Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10127.D
Date : 10-AUG-2018 13:58
Client ID:
Instrument: gc01.i
Sample Info: WG233999-3,SL7420
Purge Volume: 0.5
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000127

Katahdin
ANALYTICAL SERVICES

Form 7D

Pesticide Calibration Verification Summary

Lab ID: WG233999-3
Client ID: Breakdown Evaluation
Init. Calib. Date(s): 16-FEB-18 -06-AUG-18
Lab File ID: 1LH10127.D

Analysis Date: 10-AUG-18
Report Date: 24-AUG-18
SDG: SL7420
Column ID: B

Lab Sample ID	Filename	% DDT Breakdown	% Endrin Breakdown
WG233999-3	1LH10127.D	1.29	3.56

QC Limits:

4,4'-DDT breakdown must be less than or equal to 15.0%

Endrin breakdown must be less than or equal to 15.0%

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Data File: 1LH10127.D
Report Date: 24-Aug-2018 12:55

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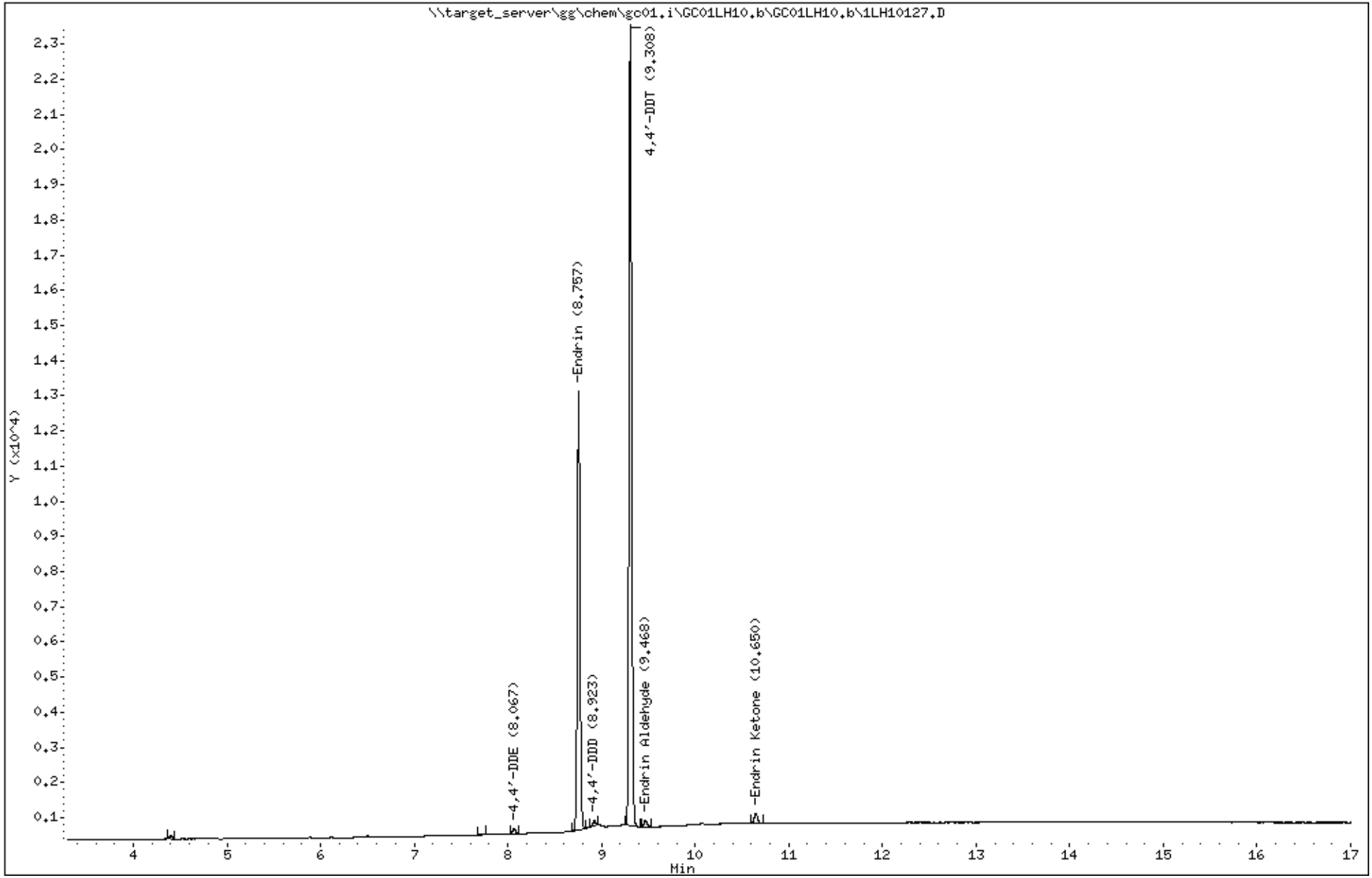
Data file : \\target_server\gg\chem\gc01.i\GC01LH10.b\GC01LH10.b\1LH10127.D
Lab Smp Id: WG233999-3
Inj Date : 10-AUG-2018 13:58
Operator : AC   Inst ID: gc01.i
Smp Info : WG233999-3,SL7420
Misc Info : WG233999,WG233999,WG233901-2,SL7420-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH10.b\PEST218.m\PEST218.m
Meth Date : 11-Aug-2018 09:31 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 10:00   Cal File: 1LD10092.D
Als bottle: 4
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: eval.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00500	Final Volume (L)
Vo	0.50000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
19 4,4'-DDE	8.066	8.060	0.006	161	9e-004	0.00863	
23 Endrin	8.756	8.754	0.002	12471	0.08734	0.873	
24 4,4'-DDD	8.923	8.915	0.008	136	1e-003	0.00958	
27 4,4'-DDT	9.308	9.304	0.004	22791	0.15415	1.54	
28 Endrin Aldehyde	9.468	9.462	0.006	178	0.00161	0.0161	
33 Endrin Ketone	10.650	10.644	0.006	283	0.00238	0.0238	

Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\GC01LH10.b\1LH10127.D
Date : 10-AUG-2018 13:58
Client ID:
Instrument: gc01.i
Sample Info: WG233999-3,SL7420
Purge Volume: 0.5
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000130

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG233999-1
Lab File ID : 1LH10125.D
Initial Calibration Date(s): 02/16/18 15:00 08/03/18 21:53

SDG: SL7420
Analytical Date: 08/10/18 13:19
Instrument ID: GC01
Column ID: A

Compound	$\overline{RRF}$/Amount	RF0.050	CCAL RRF0.050	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
18 Toxaphene(9)	1.00000	0.87599	2848	0.001	-12.40147	20.00000	Linear
18 Toxaphene(7)	1.00000	0.91886	2067	0.001	-8.11396	20.00000	Linear
18 Toxaphene(8)	1.00000	0.96113	1870	0.001	-3.88725	20.00000	Linear
18 Toxaphene(6)	1.00000	0.97144	2226	0.001	-2.85613	20.00000	Linear
18 Toxaphene(5)	1.00000	1.00245	1317	0.001	0.24479	20.00000	Linear
18 Toxaphene(4)	1.00000	1.03792	1578	0.001	3.79193	20.00000	Linear
18 Toxaphene(3)	1.00000	1.09047	1273	0.001	9.04660	20.00000	Linear
18 Toxaphene(2)	1.00000	1.10817	1180	0.001	10.81688	20.00000	Linear
18 Toxaphene(1)	1.00000	1.16048	737	0.001	16.04800	20.00000	Linear

*** = Compound out of QC criteria**

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Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10125.D
Report Date: 24-Aug-2018 12:55

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10125.D
Lab Smp Id: WG233999-1
Inj Date : 10-AUG-2018 13:19
Operator : AC Inst ID: gc01.i
Smp Info : WG233999-1,SL7420
Misc Info : WG233999,WG233999,WG233898,SL7420-1
Comment :
Method : \\target_server\gg\chem\gc01.i\GC01LH10.b\PEST218.m
Meth Date : 11-Aug-2018 09:31 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 09:02 Cal File: 1LD10089.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Tox.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00500	Final Volume (L)
Vo	0.50000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

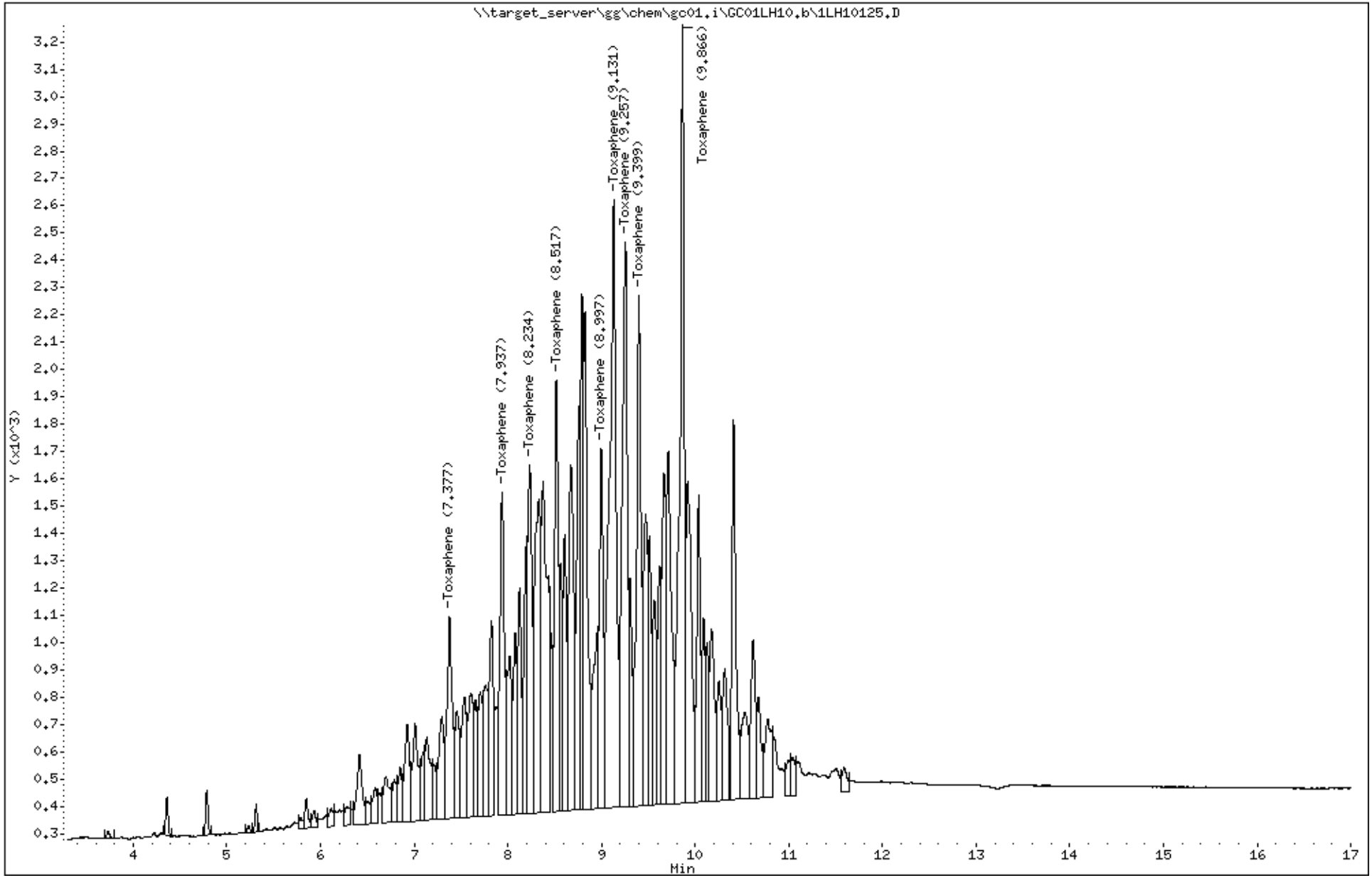
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
18 Toxaphene					CAS #: 8001-35-2			
7.377	7.374	0.003	737	1.00000	1.16	80.00- 120.00	100.00(M)	M5
7.937	7.932	0.005	1180	1.00000	1.11	132.55- 198.82	160.11	M5
8.232	8.229	0.003	1273	1.00000	1.09	143.37- 215.06	172.73	M5
8.517	8.512	0.005	1578	1.00000	1.04	180.17- 270.26	214.11	M5
8.997	8.992	0.005	1317	1.00000	1.00	152.52- 228.78	178.70	M5
9.130	9.124	0.006	2226	1.00000	0.971	262.14- 393.21	302.04	M5
9.257	9.250	0.007	2067	1.00000	0.919	250.33- 375.50	280.46	M5
9.399	9.394	0.005	1870	1.00000	0.961	226.91- 340.37	253.73	M5
9.865	9.860	0.005	2848	1.00000	0.876	355.72- 533.58	386.43	M5
Average of Peak Amounts =				1.01411				

BF
1:38 pm, Aug 24, 2018

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10125.D
Date : 10-AUG-2018 13:19
Client ID:
Instrument: gc01.i
Sample Info: WG233999-1,SL7420
Purge Volume: 0.5
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000133

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL7420
Lab ID : WG233999-1
Analytical Date: 08/10/18 13:19
Lab File ID : 1LH10125.D
Instrument ID: GC01
Initial Calibration Date(s): 02/16/18 15:00 08/03/18 21:53
Column ID: B

Compound	$\overline{RRF}$/Amount	RF0.050	CCAL RRF0.050	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
18 Toxaphene(8)	1.00000	0.89614	1566	0.001	-10.38550	20.00000	Linear
18 Toxaphene(7)	1.00000	0.93772	2355	0.001	-6.22844	20.00000	Linear
18 Toxaphene(9)	1.00000	0.96710	2358	0.001	-3.29012	20.00000	Linear
18 Toxaphene(5)	1.00000	0.97792	1702	0.001	-2.20847	20.00000	Linear
18 Toxaphene(6)	1.00000	0.98791	1833	0.001	-1.20949	20.00000	Linear
18 Toxaphene(4)	1.00000	1.03661	1664	0.001	3.66109	20.00000	Linear
18 Toxaphene(2)	1.00000	1.04852	1634	0.001	4.85159	20.00000	Linear
18 Toxaphene(3)	1.00000	1.05417	1495	0.001	5.41692	20.00000	Linear
18 Toxaphene(1)	1.00000	1.07034	1001	0.001	7.03416	20.00000	Linear

*** = Compound out of QC criteria**

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Data File: 1LH10125.D
Report Date: 24-Aug-2018 12:55

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LH10.b\GC01LH10.b\1LH10125.D
Lab Smp Id: WG233999-1
Inj Date : 10-AUG-2018 13:19
Operator : AC   Inst ID: gc01.i
Smp Info : WG233999-1,SL7420
Misc Info : WG233999,WG233999,WG233898,SL7420-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH10.b\PEST218.m\PEST218.m
Meth Date : 11-Aug-2018 09:31 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 10:00   Cal File: 1LD10092.D
Als bottle: 2   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: Tox.sub
Target Version: 4.12   Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00500	Final Volume (L)
Vo	0.50000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

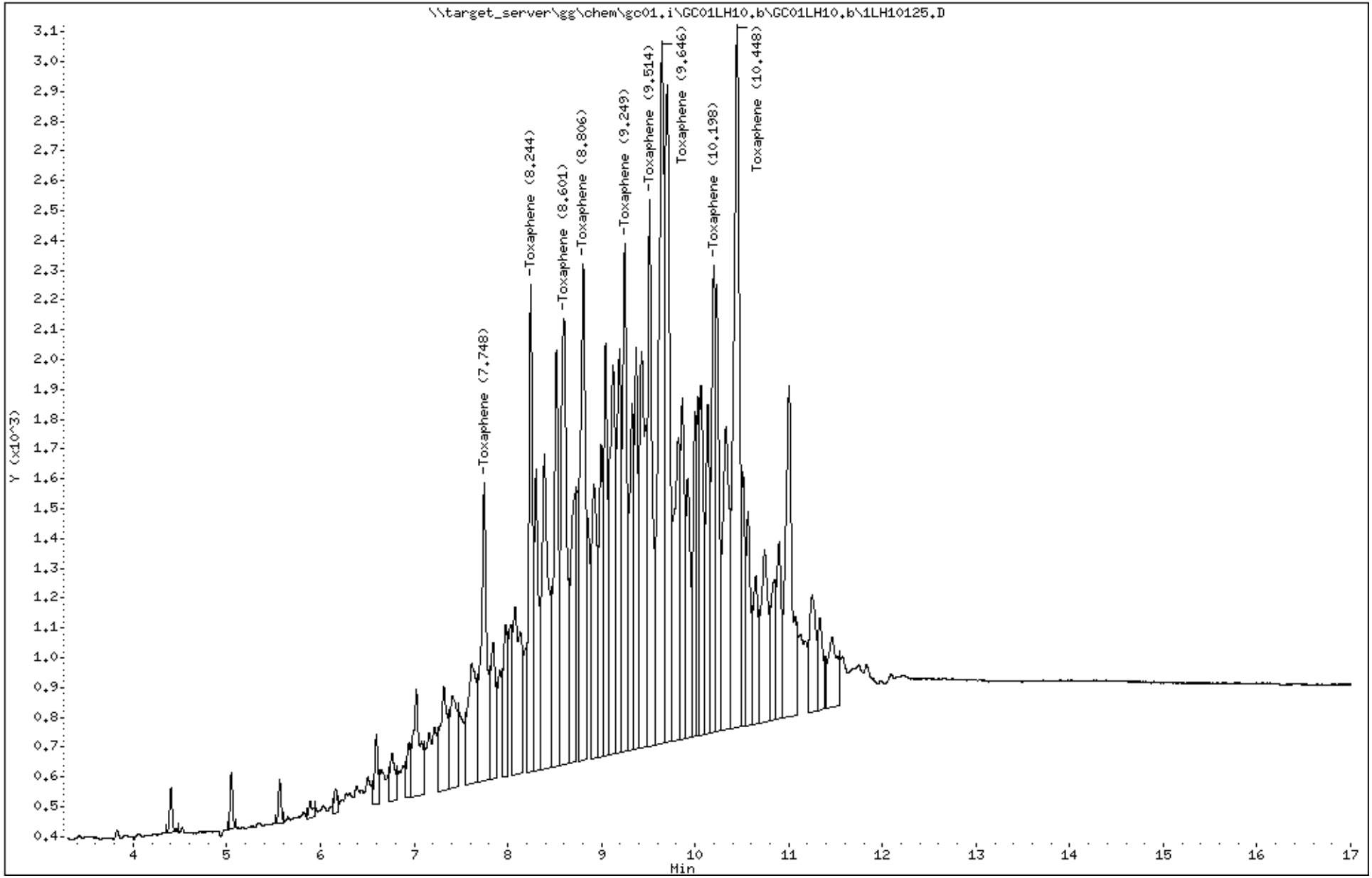
				AMOUNTS					
RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	TARGET RANGE	RATIO	REVIEW CODE	
18 Toxaphene					CAS #: 8001-35-2				
7.747	7.746	0.001	1001	1.00000	1.07	80.00- 120.00	100.00(M)	M5	
8.244	8.242	0.002	1634	1.00000	1.05	133.72- 200.58	163.24	M5	
8.599	8.597	0.002	1495	1.00000	1.05	121.08- 181.62	149.35	M5	
8.806	8.802	0.004	1664	1.00000	1.04	134.30- 201.44	166.23	M5	
9.249	9.246	0.003	1702	1.00000	0.978	137.11- 205.67	170.03	M5	
9.514	9.512	0.002	1833	1.00000	0.988	146.79- 220.18	183.12	M5	
9.646	9.642	0.004	2355	1.00000	0.938	189.17- 283.75	235.26	M5	
10.197	10.196	0.001	1566	1.00000	0.896	126.28- 189.42	156.44	M5	
10.447	10.442	0.005	2358	1.00000	0.967	193.72- 290.58	235.56	M5	
Average of Peak Amounts =					0.99744				

BF
1:39 pm, Aug 24, 2018

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\GC01LH10.b\1LH10125.D
Date : 10-AUG-2018 13:19
Client ID:
Instrument: gc01.i
Sample Info: WG233999-1,SL7420
Purge Volume: 0.5
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000136

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG233999-4
Lab File ID : 1LH10128.D
Initial Calibration Date(s): 02/16/18 15:00 08/06/18 14:11

SDG: SL7420
Analytical Date: 08/10/18 14:17
Instrument ID: GC01
Column ID: A

	Compound	$\overline{RRF}$/Amount	RF0.050	CCAL RRF0.050	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
6	gamma-BHC	224000	220340	220340	0.001	-1.63407	20.00000	Averaged
9	Heptachlor	167282	161740	161740	0.001	-3.31316	20.00000	Averaged
13	Heptachlor Epoxide	165498	147480	147480	0.001	-10.88696	20.00000	Averaged
19	4,4'-DDE	165854	149060	149060	0.001	-10.12559	20.00000	Averaged
23	Endrin	135334	120240	120240	0.001	-11.15337	20.00000	Averaged
24	4,4'-DDD	127092	110220	110220	0.001	-13.27542	20.00000	Averaged
27	4,4'-DDT	111828	102800	102800	0.001	-8.07284	20.00000	Averaged
28	Endrin Aldehyde	105257	90360	90360	0.001	-14.15325	20.00000	Averaged
29	Methoxychlor	52752	45400	45400	0.001	-13.93637	20.00000	Averaged
33	Endrin Ketone	127026	109780	109780	0.001	-13.57652	20.00000	Averaged
4	Tetrachloro-m-Xylene	158172	160020	160020	0.001	1.16835	20.00000	Averaged
34	Decachlorobiphenyl	75413	62040	62040	0.001	-17.73338	20.00000	Averaged

*** = Compound out of QC criteria**

Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10128.D
Report Date: 24-Aug-2018 12:55

Katahdin Analytical Services

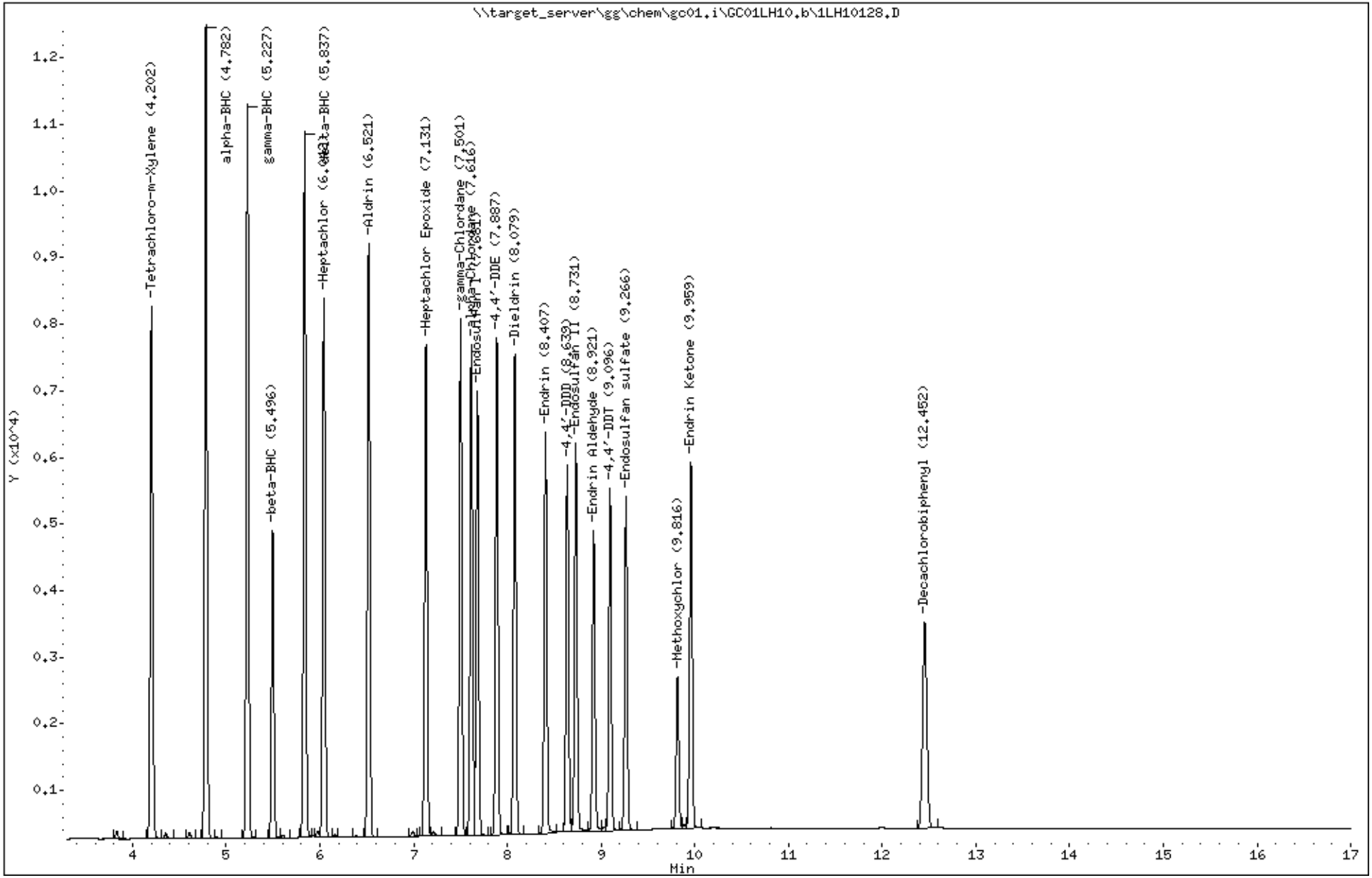
Data file : \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10128.D
Lab Smp Id: WG233999-4
Inj Date : 10-AUG-2018 14:17
Operator : AC   Inst ID: gc01.i
Smp Info : WG233999-4,SL7420
Misc Info : WG233999,WG233999,WG233901-2,SL7420-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH10.b\PEST218.m
Meth Date : 11-Aug-2018 09:31 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 09:02   Cal File: 1LD10089.D
Als bottle: 5   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00500	Final Volume (L)
Vo	0.50000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						AMOUNTS		
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	REVIEW CODE
$	4 Tetrachloro-m-Xylene	4.202	4.200	0.002	8001	0.05000	0.0506	
	5 alpha-BHC	4.782	4.780	0.002	12216	0.05000	0.0508	
	6 gamma-BHC	5.227	5.223	0.004	11017	0.05000	0.0492	
	7 beta-BHC	5.495	5.493	0.002	4622	0.05000	0.0470	
	8 delta-BHC	5.837	5.835	0.002	10588	0.05000	0.0483	
	9 Heptachlor	6.042	6.040	0.002	8087	0.05000	0.0483	
	10 Aldrin	6.520	6.518	0.002	8908	0.05000	0.0466	
	13 Heptachlor Epoxide	7.130	7.127	0.003	7374	0.05000	0.0446	
	15 gamma-Chlordane	7.500	7.497	0.003	7768	0.05000	0.0454	
	17 alpha-Chlordane	7.615	7.612	0.003	7373	0.05000	0.0453	
	19 4,4'-DDE	7.887	7.883	0.004	7453	0.05000	0.0449	
	20 Endosulfan I	7.680	7.677	0.003	6660	0.05000	0.0443	
	21 Dieldrin	8.078	8.075	0.003	7193	0.05000	0.0449	
	23 Endrin	8.407	8.402	0.005	6012	0.05000	0.0444	
	24 4,4'-DDD	8.638	8.633	0.005	5511	0.05000	0.0434	
	26 Endosulfan II	8.730	8.727	0.003	5823	0.05000	0.0432	
	27 4,4'-DDT	9.095	9.092	0.003	5140	0.05000	0.0460	
	28 Endrin Aldehyde	8.920	8.917	0.003	4518	0.05000	0.0429	
	29 Methoxychlor	9.815	9.810	0.005	2270	0.05000	0.0430	
	32 Endosulfan sulfate	9.265	9.262	0.003	5012	0.05000	0.0435	
	33 Endrin Ketone	9.958	9.955	0.003	5489	0.05000	0.0432	
$	34 Decachlorobiphenyl	12.452	12.445	0.007	3102	0.05000	0.0411	

Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10128.D
Date : 10-AUG-2018 14:17
Client ID:
Instrument: gc01.i
Sample Info: WG233999-4,SL7420
Purge Volume: 0.5
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000139

Katahdin
ANALYTICAL SERVICES

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL7420
Lab ID : WG233999-4
Analytical Date: 08/10/18 14:17
Lab File ID : 1LH10128.D
Instrument ID: GC01
Initial Calibration Date(s): 02/16/18 15:00 08/06/18 14:11
Column ID: B

	Compound	$\overline{\text{RRF}}$/Amount	RF0.050	CCAL RRF0.050	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
6	gamma-BHC	254101	241040	241040	0.001	-5.14008	20.00000	Averaged
9	Heptachlor	196506	193280	193280	0.001	-1.64151	20.00000	Averaged
13	Heptachlor Epoxide	189261	166680	166680	0.001	-11.93114	20.00000	Averaged
19	4,4'-DDE	186614	165620	165620	0.001	-11.24996	20.00000	Averaged
23	Endrin	142785	123560	123560	0.001	-13.46410	20.00000	Averaged
24	4,4'-DDD	142017	124720	124720	0.001	-12.17973	20.00000	Averaged
27	4,4'-DDT	0.05000	0.04329	107960	0.001	-13.42921	20.00000	Linear
28	Endrin Aldehyde	110529	93680	93680	0.001	-15.24396	20.00000	Averaged
29	Methoxychlor	0.05000	0.04212	43000	0.001	-15.76742	20.00000	Linear
33	Endrin Ketone	119100	104100	104100	0.001	-12.59421	20.00000	Averaged
4	Tetrachloro-m-Xylene	189805	189440	189440	0.001	-0.19230	20.00000	Averaged
34	Decachlorobiphenyl	85542	72080	72080	0.001	-15.73763	20.00000	Averaged

*** = Compound out of QC criteria**

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Data File: 1LH10128.D
Report Date: 24-Aug-2018 12:55

Katahdin Analytical Services

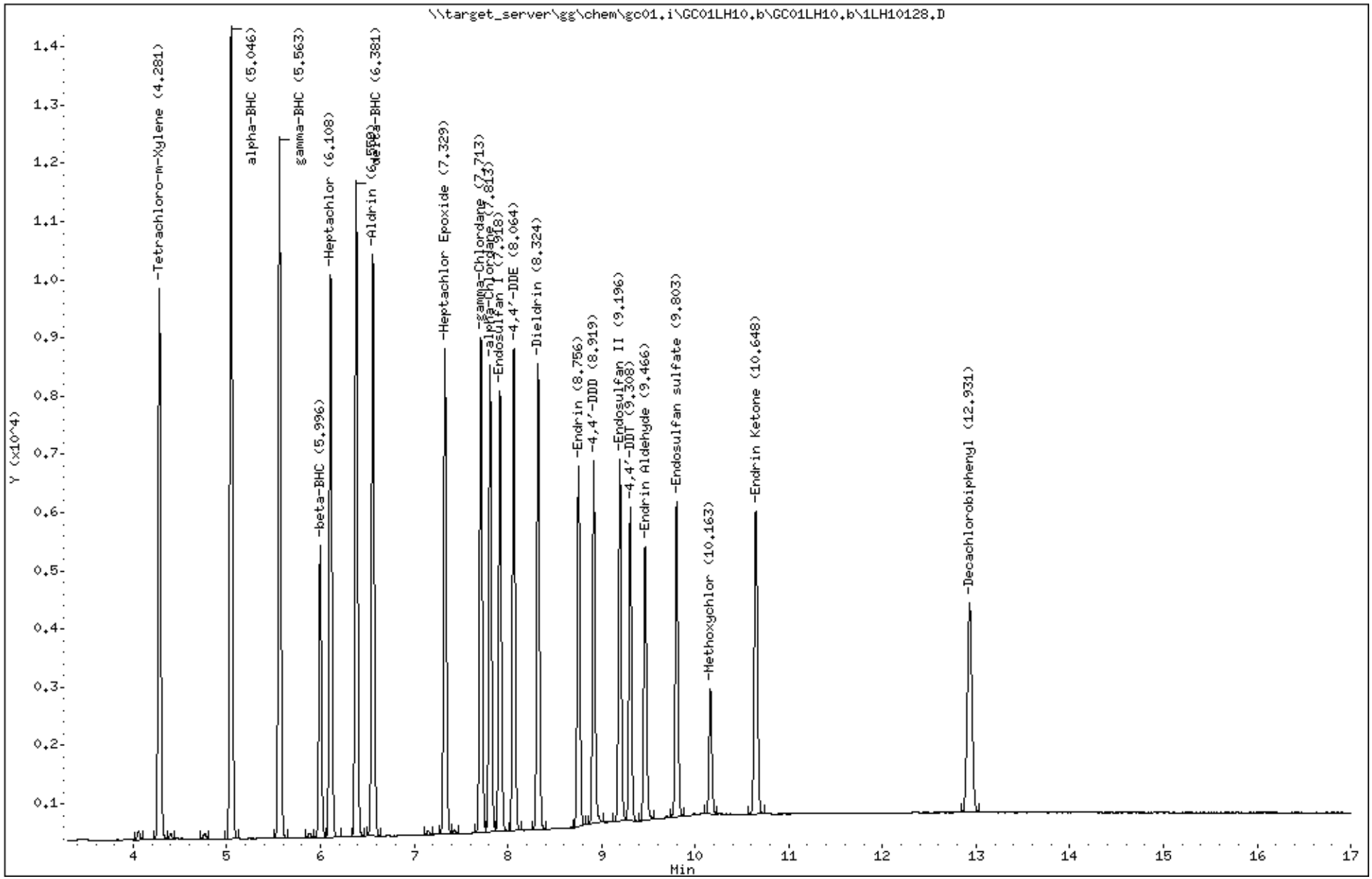
Data file : \\target_server\gg\chem\gc01.i\GC01LH10.b\GC01LH10.b\1LH10128.D
Lab Smp Id: WG233999-4
Inj Date : 10-AUG-2018 14:17
Operator : AC   Inst ID: gc01.i
Smp Info : WG233999-4,SL7420
Misc Info : WG233999,WG233999,WG233901-2,SL7420-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH10.b\PEST218.m\PEST218.m
Meth Date : 11-Aug-2018 09:31 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 10:00   Cal File: 1LD10092.D
Als bottle: 5   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00500	Final Volume (L)
Vo	0.50000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						AMOUNTS		
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	REVIEW CODE
$	4 Tetrachloro-m-Xylene	4.280	4.279	0.001	9472	0.05000	0.0499	
	5 alpha-BHC	5.045	5.044	0.001	13958	0.05000	0.0491	
	6 gamma-BHC	5.562	5.560	0.002	12052	0.05000	0.0474	
	7 beta-BHC	5.995	5.994	0.001	5017	0.05000	0.0456	
	8 delta-BHC	6.380	6.379	0.001	11260	0.05000	0.0468	
	9 Heptachlor	6.107	6.105	0.002	9664	0.05000	0.0492	
	10 Aldrin	6.559	6.557	0.002	9980	0.05000	0.0461	
	13 Heptachlor Epoxide	7.329	7.327	0.002	8334	0.05000	0.0440	
	15 gamma-Chlordane	7.712	7.709	0.003	8506	0.05000	0.0444	
	17 alpha-Chlordane	7.812	7.809	0.003	8013	0.05000	0.0442	
	19 4,4'-DDE	8.064	8.060	0.004	8281	0.05000	0.0444	
	20 Endosulfan I	7.917	7.914	0.003	7555	0.05000	0.0441	
	21 Dieldrin	8.324	8.319	0.005	7999	0.05000	0.0441	
	23 Endrin	8.755	8.754	0.001	6178	0.05000	0.0433	
	24 4,4'-DDD	8.919	8.915	0.004	6236	0.05000	0.0439	
	26 Endosulfan II	9.195	9.192	0.003	6225	0.05000	0.0424	
	27 4,4'-DDT	9.307	9.304	0.003	5398	0.05000	0.0433	
	28 Endrin Aldehyde	9.465	9.462	0.003	4684	0.05000	0.0424	
	29 Methoxychlor	10.162	10.159	0.003	2150	0.05000	0.0421	
	32 Endosulfan sulfate	9.802	9.799	0.003	5414	0.05000	0.0432	
	33 Endrin Ketone	10.647	10.644	0.003	5205	0.05000	0.0437	
$	34 Decachlorobiphenyl	12.930	12.925	0.005	3604	0.05000	0.0421	

Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\GC01LH10.b\1LH10128.D
Date : 10-AUG-2018 14:17
Client ID:
Instrument: gc01.i
Sample Info: WG233999-4,SL7420
Purge Volume: 0.5
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000142

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL7420
Lab ID : WG233999-5
Analytical Date: 08/10/18 18:59
Lab File ID : 1LH10141.D
Instrument ID: GC01
Initial Calibration Date(s): 02/16/18 15:00 08/03/18 21:53
Column ID: A

Compound	$\overline{RRF}$/Amount	RF0.025	CCAL RRF0.025	Min	%D/ %Drift	Max %D/ %Drift	Curve Type	
18 Toxaphene(9)	0.50000	0.50189	3086	0.001	0.37809	20.00000	Linear	
18 Toxaphene(7)	0.50000	0.50207	2204	0.001	0.41383	20.00000	Linear	
18 Toxaphene(6)	0.50000	0.52994	2360	0.001	5.98865	20.00000	Linear	
18 Toxaphene(8)	0.50000	0.53598	2014	0.001	7.19616	20.00000	Linear	
18 Toxaphene(5)	0.50000	0.55189	1406	0.001	10.37810	20.00000	Linear	
18 Toxaphene(4)	0.50000	0.58481	1698	0.001	16.96109	20.00000	Linear	
18 Toxaphene(3)	0.50000	0.59658	1402	0.001	19.31593	20.00000	Linear	
18 Toxaphene(2)	0.50000	0.60921	1282	0.001	21.84215	20.00000	Linear	*
18 Toxaphene(1)	0.50000	0.61184	772	0.001	22.36773	20.00000	Linear	*

*** = Compound out of QC criteria**

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Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10141.D
Report Date: 24-Aug-2018 12:55

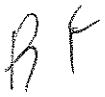
Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10141.D
Lab Smp Id: WG233999-5
Inj Date : 10-AUG-2018 18:59
Operator : AC Inst ID: gc01.i
Smp Info : WG233999-5,SL7420
Misc Info : WG233999,WG233999,WG233898,SL7420-1
Comment :
Method : \\target_server\gg\chem\gc01.i\GC01LH10.b\PEST218.m
Meth Date : 11-Aug-2018 09:31 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 09:02 Cal File: 1LD10089.D
Als bottle: 18 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Tox.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
18 Toxaphene					CAS #: 8001-35-2			
7.375	7.374	0.001	386	1.00000	0.612	80.00- 120.00	100.00(M)	M5
7.936	7.932	0.004	641	1.00000	0.609	132.55- 198.82	166.06	M5
8.233	8.229	0.004	701	1.00000	0.596	143.37- 215.06	181.61	M5
8.515	8.512	0.003	849	1.00000	0.585	180.17- 270.26	219.95	M5
8.996	8.992	0.004	703	1.00000	0.552	152.52- 228.78	182.12	M5
9.126	9.124	0.002	1180	1.00000	0.530	262.14- 393.21	305.70	M5
9.251	9.250	0.001	1102	1.00000	0.502	250.33- 375.50	285.49	M5
9.398	9.394	0.004	1007	1.00000	0.536	226.91- 340.37	260.88	M5
9.863	9.860	0.003	1543	1.00000	0.502	355.72- 533.58	399.74	M5
Average of Peak Amounts =					0.55822			

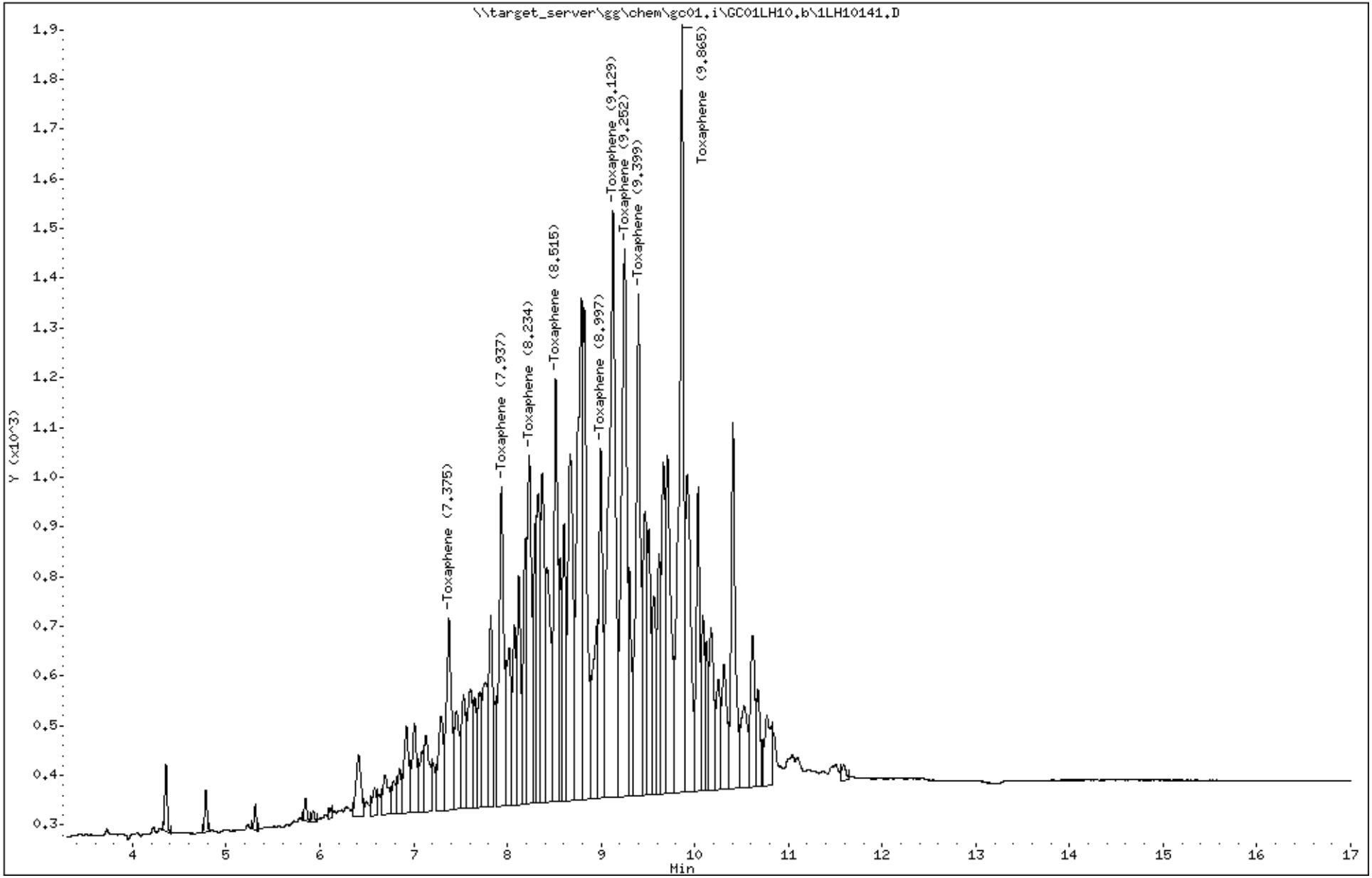


1:39 pm, Aug 24, 2018

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10141.D
Date : 10-AUG-2018 18:59
Client ID:
Instrument: gc01.i
Sample Info: WG233999-5,SL7420
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000145

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL7420
Lab ID : WG233999-5
Analytical Date: 08/10/18 18:59
Lab File ID : 1LH10141.D
Instrument ID: GC01
Initial Calibration Date(s): 02/16/18 15:00 08/03/18 21:53
Column ID: B

Compound	$\overline{RRF}$/Amount	RF0.025	CCAL RRF0.025	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
18 Toxaphene(8)	0.50000	0.45833	1392	0.001	-8.33458	20.00000	Linear
18 Toxaphene(7)	0.50000	0.48474	2240	0.001	-3.05137	20.00000	Linear
18 Toxaphene(6)	0.50000	0.49606	1804	0.001	-0.78709	20.00000	Linear
18 Toxaphene(5)	0.50000	0.50293	1678	0.001	0.58544	20.00000	Linear
18 Toxaphene(9)	0.50000	0.52331	2164	0.001	4.66111	20.00000	Linear
18 Toxaphene(1)	0.50000	0.53398	1014	0.001	6.79604	20.00000	Linear
18 Toxaphene(4)	0.50000	0.54294	1660	0.001	8.58778	20.00000	Linear
18 Toxaphene(3)	0.50000	0.56856	1524	0.001	13.71146	20.00000	Linear
18 Toxaphene(2)	0.50000	0.57549	1722	0.001	15.09720	20.00000	Linear

*** = Compound out of QC criteria**

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Data File: 1LH10141.D
Report Date: 24-Aug-2018 12:55

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Data file : \\target_server\gg\chem\gc01.i\GC01LH10.b\GC01LH10.b\1LH10141.D
Lab Smp Id: WG233999-5
Inj Date : 10-AUG-2018 18:59
Operator : AC Inst ID: gc01.i
Smp Info : WG233999-5,SL7420
Misc Info : WG233999,WG233999,WG233898,SL7420-1
Comment :
Method : \\target_server\gg\chem\gc01.i\GC01LH10.b\PEST218.m\PEST218.m
Meth Date : 11-Aug-2018 09:31 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 10:00 Cal File: 1LD10092.D
Als bottle: 18 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Tox.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
18 Toxaphene					CAS #: 8001-35-2			
7.748	7.746	0.002	507	1.00000	0.534	80.00- 120.00	100.00(M)	M5
8.243	8.242	0.001	861	1.00000	0.575	133.72- 200.58	169.82	M5
8.600	8.597	0.003	762	1.00000	0.568	121.08- 181.62	150.30	M5
8.805	8.802	0.003	830	1.00000	0.543	134.30- 201.44	163.71	M5
9.247	9.246	0.001	839	1.00000	0.503	137.11- 205.67	165.48	M5
9.515	9.512	0.003	902	1.00000	0.496	146.79- 220.18	177.91	M5
9.645	9.642	0.003	1120	1.00000	0.485	189.17- 283.75	220.91	M5
10.198	10.196	0.002	696	1.00000	0.458	126.28- 189.42	137.28	M5
10.443	10.442	0.001	1082	1.00000	0.523	193.72- 290.58	213.41	M5
Average of Peak Amounts =					0.52056			

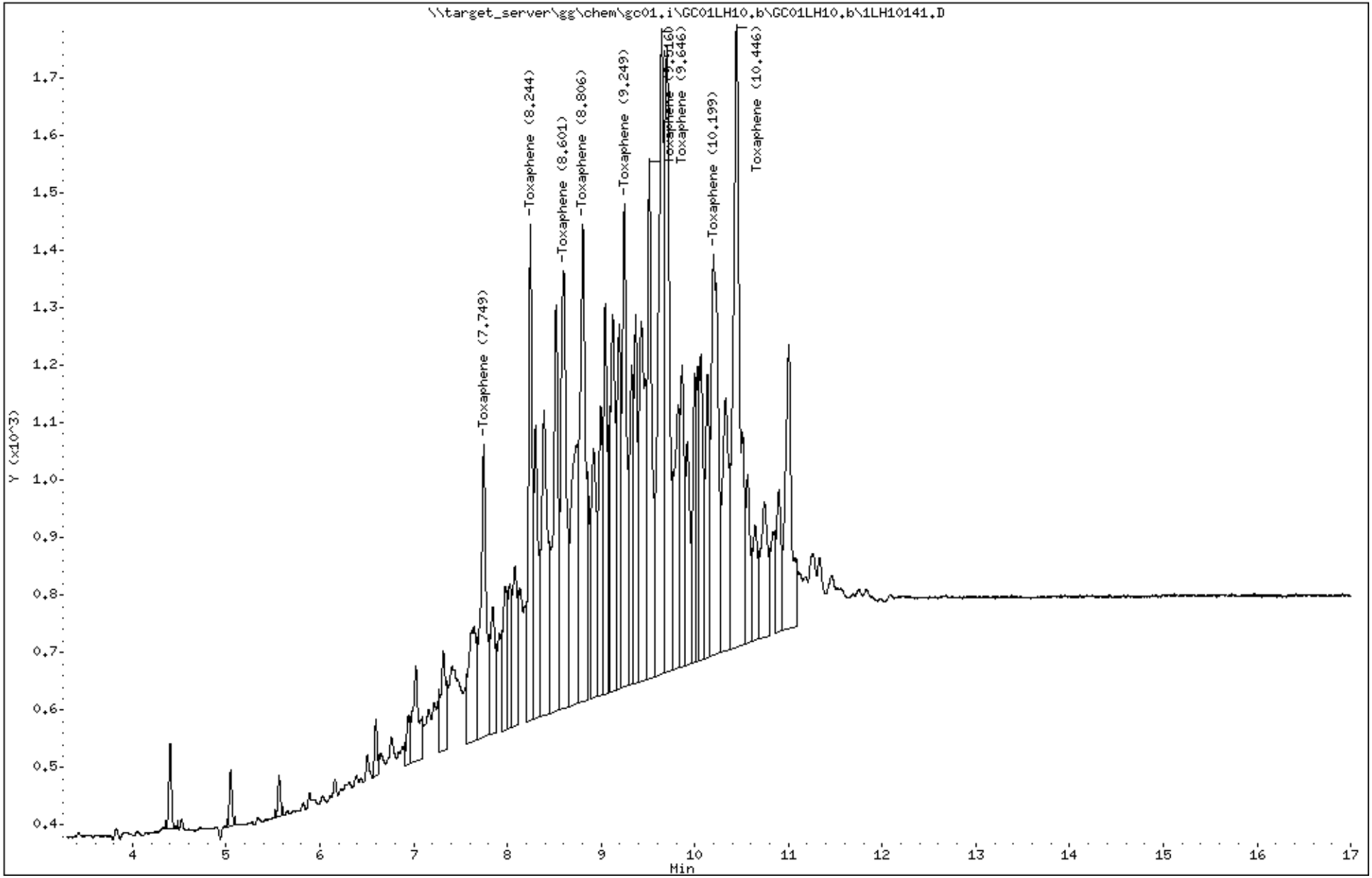
BF

1:39 pm, Aug 24, 2018

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\GC01LH10.b\1LH10141.D
Date : 10-AUG-2018 18:59
Client ID:
Instrument: gc01.i
Sample Info: WG233999-5,SL7420
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000148

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG233999-6
Lab File ID : 1LH10142.D
Initial Calibration Date(s): 02/16/18 15:00 08/03/18 21:53

SDG: SL7420
Analytical Date: 08/10/18 19:18
Instrument ID: GC01
Column ID: A

Compound	RRF/Amount	RF0.025	CCAL RRF0.025	Min	%D/ %Drift	Max %D/ %Drift	Curve Type	
14 Technical Chlordane(3)	19885	26404	26404	0.001	32.78662	20.00000	Averaged	*
14 Technical Chlordane(2)	20811	27196	27196	0.001	30.68152	20.00000	Averaged	*
14 Technical Chlordane(1)	4112	5352	5352	0.001	30.16936	20.00000	Averaged	*

*** = Compound out of QC criteria**

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Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10142.D
Report Date: 24-Aug-2018 12:55

Katahdin Analytical Services

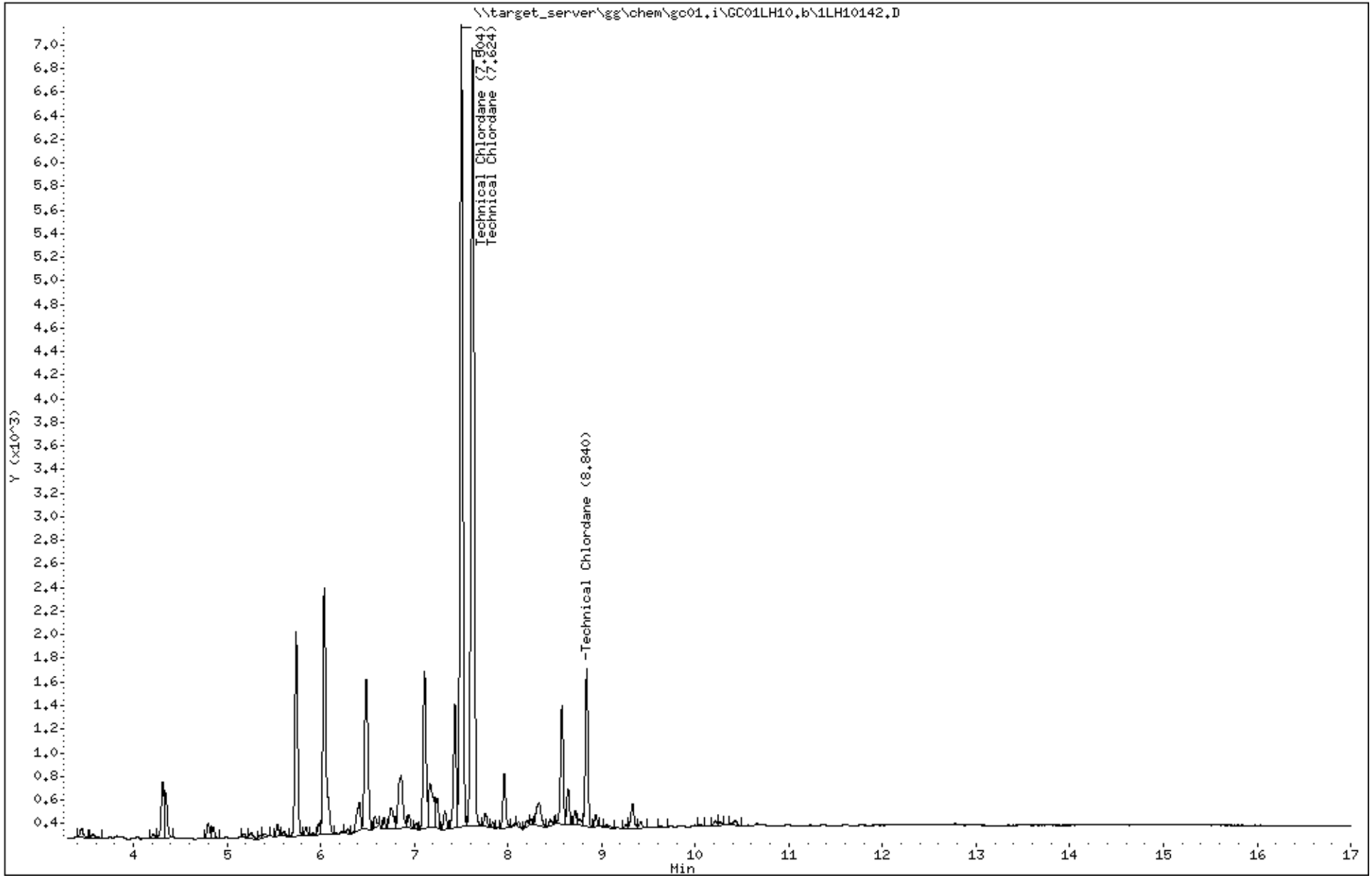
Data file : \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10142.D
Lab Smp Id: WG233999-6
Inj Date : 10-AUG-2018 19:18
Operator : AC   Inst ID: gc01.i
Smp Info : WG233999-6,SL7420
Misc Info : WG233999,WG233999,WG233899,SL7420-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH10.b\PEST218.m
Meth Date : 11-Aug-2018 09:31 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 09:02   Cal File: 1LD10089.D
Als bottle: 19   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: TC.sub
Target Version: 4.12   Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

				AMOUNTS					
RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
14 Technical Chlordane					CAS #: 12789-03-6			
8.840	8.836	0.004	1338	0.50000	0.325	80.00- 120.00	100.00	
7.503	7.501	0.002	6799	0.50000	0.327	393.70- 590.55	508.15	
7.623	7.621	0.002	6601	0.50000	0.332	372.09- 558.14	493.35	
		Average of Peak Amounts =			0.32800			

Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10142.D
Date : 10-AUG-2018 19:18
Client ID:
Instrument: gc01.i
Sample Info: WG233999-6,SL7420
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000151

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG233999-6
Lab File ID : 1LH10142.D
Initial Calibration Date(s): 02/16/18 15:00 08/03/18 21:53

SDG: SL7420
Analytical Date: 08/10/18 19:18
Instrument ID: GC01
Column ID: B

Compound	RRF/Amount	RF0.025	CCAL RRF0.025	Min	%D/ %Drift	Max %D/ %Drift	Curve Type	
14 Technical Chlordane(3)	13610	17500	17500	0.001	28.57909	20.00000	Averaged	*
14 Technical Chlordane(2)	18928	25216	25216	0.001	33.22391	20.00000	Averaged	*
14 Technical Chlordane(1)	4997	5672	5672	0.001	13.51265	20.00000	Averaged	

*** = Compound out of QC criteria**

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Data File: 1LH10142.D
Report Date: 24-Aug-2018 12:55

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LH10.b\GC01LH10.b\1LH10142.D
Lab Smp Id: WG233999-6
Inj Date : 10-AUG-2018 19:18
Operator : AC Inst ID: gc01.i
Smp Info : WG233999-6,SL7420
Misc Info : WG233999,WG233999,WG233899,SL7420-1
Comment :
Method : \\target_server\gg\chem\gc01.i\GC01LH10.b\PEST218.m\PEST218.m
Meth Date : 11-Aug-2018 09:31 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 10:00 Cal File: 1LD10092.D
Als bottle: 19 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TC.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
14 Technical Chlordane					CAS #: 12789-03-6			
9.212	9.208	0.004	1418	0.50000	0.284	80.00- 120.00	100.00(M)	M5
7.719	7.713	0.006	6304	0.50000	0.333	329.23- 493.85	444.57	M5
7.812	7.810	0.002	4375	0.50000	0.321	229.68- 344.52	308.53	M5
Average of Peak Amounts =					0.31267			

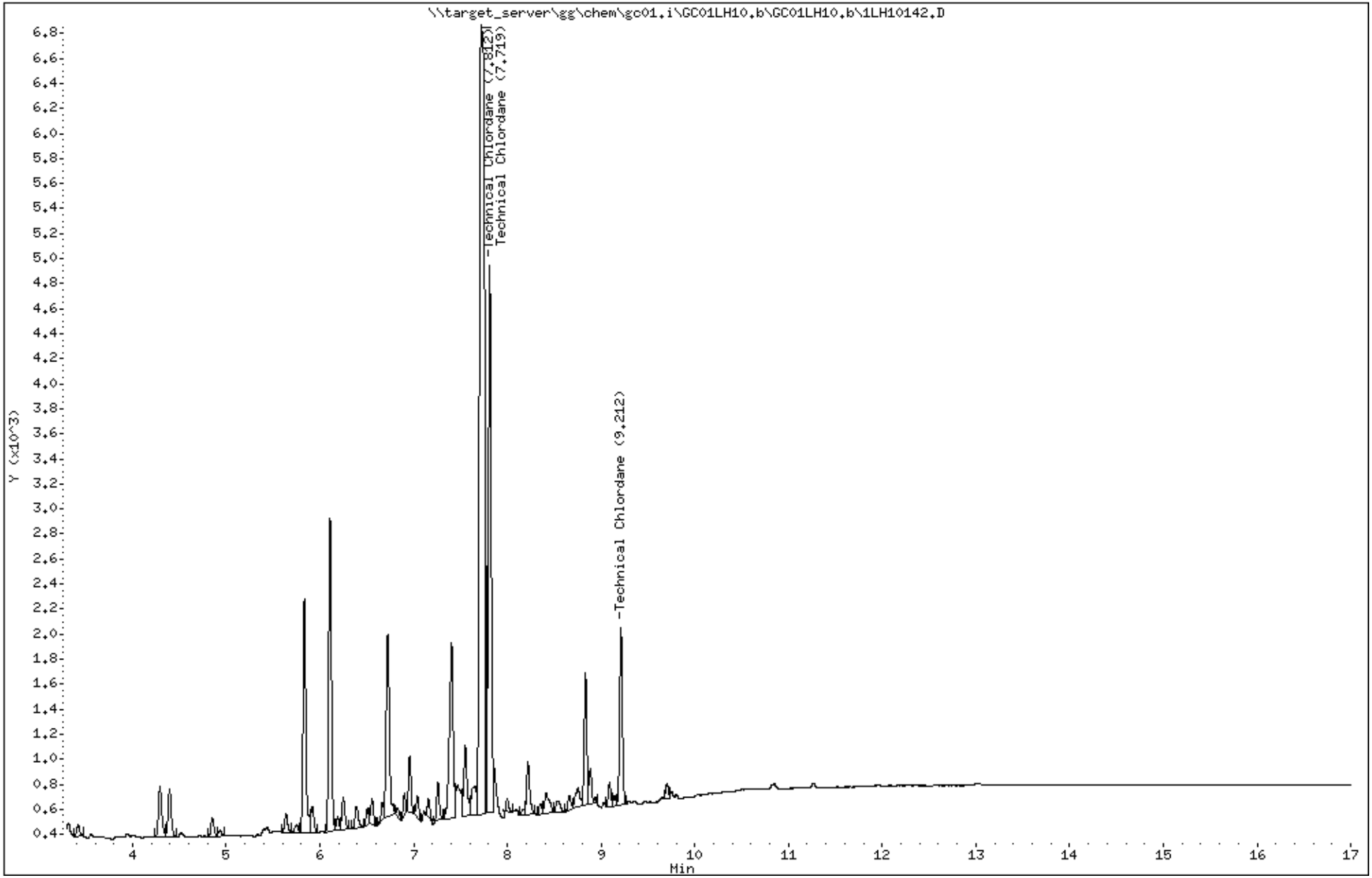
BF

1:39 pm, Aug 24, 2018

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\GC01LH10.b\1LH10142.D
Date : 10-AUG-2018 19:18
Client ID:
Instrument: gc01.i
Sample Info: WG233999-6,SL7420
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000154

Katahdin
ANALYTICAL SERVICES

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG233999-7
Lab File ID : 1LH10143.D
Initial Calibration Date(s): 02/16/18 15:00 08/06/18 14:11

SDG: SL7420
Analytical Date: 08/10/18 19:38
Instrument ID: GC01
Column ID: A

	Compound	$\overline{\text{RRF}}$/Amount	RF0.025	CCAL RRF0.025	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
6	gamma-BHC	224000	225760	225760	0.001	0.78556	20.00000	Averaged
9	Heptachlor	167282	169480	169480	0.001	1.31375	20.00000	Averaged
13	Heptachlor Epoxide	165498	163120	163120	0.001	-1.43668	20.00000	Averaged
19	4,4'-DDE	165854	155200	155200	0.001	-6.42353	20.00000	Averaged
23	Endrin	135334	126440	126440	0.001	-6.57212	20.00000	Averaged
24	4,4'-DDD	127092	115440	115440	0.001	-9.16816	20.00000	Averaged
27	4,4'-DDT	111828	101280	101280	0.001	-9.43207	20.00000	Averaged
28	Endrin Aldehyde	105257	96400	96400	0.001	-8.41493	20.00000	Averaged
29	Methoxychlor	52752	46280	46280	0.001	-12.26817	20.00000	Averaged
33	Endrin Ketone	127026	117600	117600	0.001	-7.42029	20.00000	Averaged
4	Tetrachloro-m-Xylene	158172	168720	168720	0.001	6.66869	20.00000	Averaged
34	Decachlorobiphenyl	75413	66160	66160	0.001	-12.27016	20.00000	Averaged

*** = Compound out of QC criteria**

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Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10143.D
Report Date: 24-Aug-2018 12:55

Katahdin Analytical Services

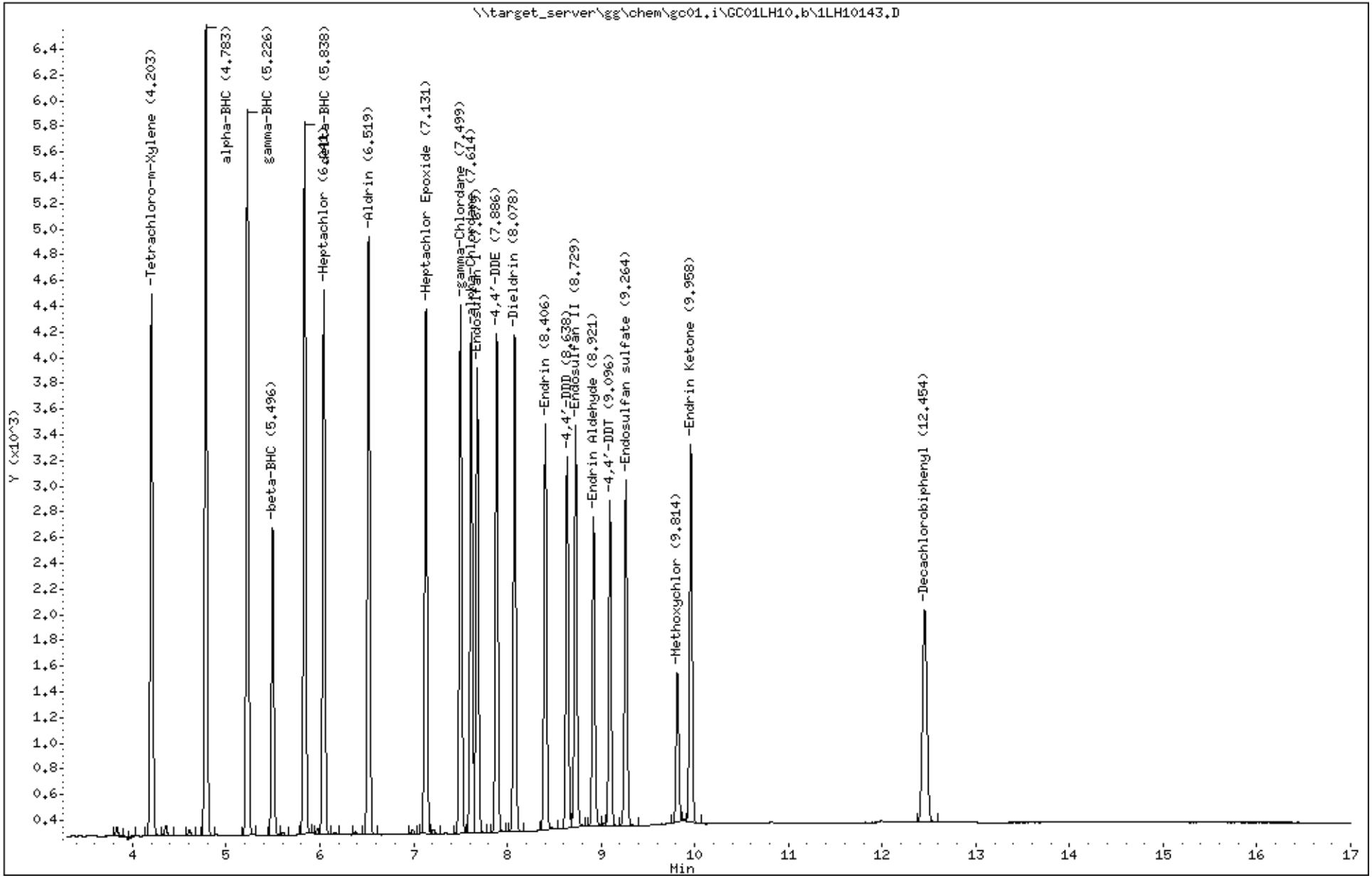
Data file : \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10143.D
Lab Smp Id: WG233999-7
Inj Date : 10-AUG-2018 19:38
Operator : AC   Inst ID: gc01.i
Smp Info : WG233999-7,SL7420
Misc Info : WG233999,WG233999,WG233901-2,SL7420-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH10.b\PEST218.m
Meth Date : 11-Aug-2018 09:31 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 09:02   Cal File: 1LD10089.D
Als bottle: 20   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						AMOUNTS		
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	REVIEW CODE
$	4 Tetrachloro-m-Xylene	4.202	4.200	0.002	4218	0.05000	0.0267	
	5 alpha-BHC	4.782	4.780	0.002	6309	0.05000	0.0262	
	6 gamma-BHC	5.226	5.223	0.003	5644	0.05000	0.0252	
	7 beta-BHC	5.496	5.493	0.003	2396	0.05000	0.0244	
	8 delta-BHC	5.837	5.835	0.002	5545	0.05000	0.0253	
	9 Heptachlor	6.041	6.040	0.001	4237	0.05000	0.0253	
	10 Aldrin	6.519	6.518	0.001	4650	0.05000	0.0243	
	13 Heptachlor Epoxide	7.131	7.127	0.004	4078	0.05000	0.0246	
	15 gamma-Chlordane	7.499	7.497	0.002	4112	0.05000	0.0240	
	17 alpha-Chlordane	7.614	7.612	0.002	3890	0.05000	0.0239	
	19 4,4'-DDE	7.886	7.883	0.003	3880	0.05000	0.0234	
	20 Endosulfan I	7.679	7.677	0.002	3615	0.05000	0.0241	
	21 Dieldrin	8.077	8.075	0.002	3861	0.05000	0.0241	
	23 Endrin	8.406	8.402	0.004	3161	0.05000	0.0234	
	24 4,4'-DDD	8.637	8.633	0.004	2886	0.05000	0.0227	
	26 Endosulfan II	8.729	8.727	0.002	3129	0.05000	0.0232	
	27 4,4'-DDT	9.096	9.092	0.004	2532	0.05000	0.0226	
	28 Endrin Aldehyde	8.921	8.917	0.004	2410	0.05000	0.0229	
	29 Methoxychlor	9.814	9.810	0.004	1157	0.05000	0.0219	
	32 Endosulfan sulfate	9.264	9.262	0.002	2689	0.05000	0.0234	
	33 Endrin Ketone	9.957	9.955	0.002	2940	0.05000	0.0231	
$	34 Decachlorobiphenyl	12.454	12.445	0.009	1654	0.05000	0.0219	

Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10143.D
Date : 10-AUG-2018 19:38
Client ID:
Instrument: gc01.i
Sample Info: WG233999-7,SL7420
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000157

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL7420
Lab ID : WG233999-7
Analytical Date: 08/10/18 19:38
Lab File ID : 1LH10143.D
Instrument ID: GC01
Initial Calibration Date(s): 02/16/18 15:00 08/06/18 14:11
Column ID: B

	Compound	$\overline{RRF}$/Amount	RF0.025	CCAL RRF0.025	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
6	gamma-BHC	254101	247360	247360	0.001	-2.65288	20.00000	Averaged
9	Heptachlor	196506	199440	199440	0.001	1.49326	20.00000	Averaged
13	Heptachlor Epoxide	189261	179760	179760	0.001	-5.02005	20.00000	Averaged
19	4,4'-DDE	186614	174680	174680	0.001	-6.39502	20.00000	Averaged
23	Endrin	142785	131440	131440	0.001	-7.94530	20.00000	Averaged
24	4,4'-DDD	142017	126440	126440	0.001	-10.96861	20.00000	Averaged
27	4,4'-DDT	0.02500	0.02491	100600	0.001	-0.36562	20.00000	Linear
28	Endrin Aldehyde	110529	98080	98080	0.001	-11.26311	20.00000	Averaged
29	Methoxychlor	0.02500	0.02543	41040	0.001	1.71568	20.00000	Linear
33	Endrin Ketone	119100	107640	107640	0.001	-9.62191	20.00000	Averaged
4	Tetrachloro-m-Xylene	189805	196560	196560	0.001	3.55892	20.00000	Averaged
34	Decachlorobiphenyl	85542	78040	78040	0.001	-8.77032	20.00000	Averaged

*** = Compound out of QC criteria**

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Data File: 1LH10143.D
Report Date: 24-Aug-2018 12:55

Katahdin Analytical Services

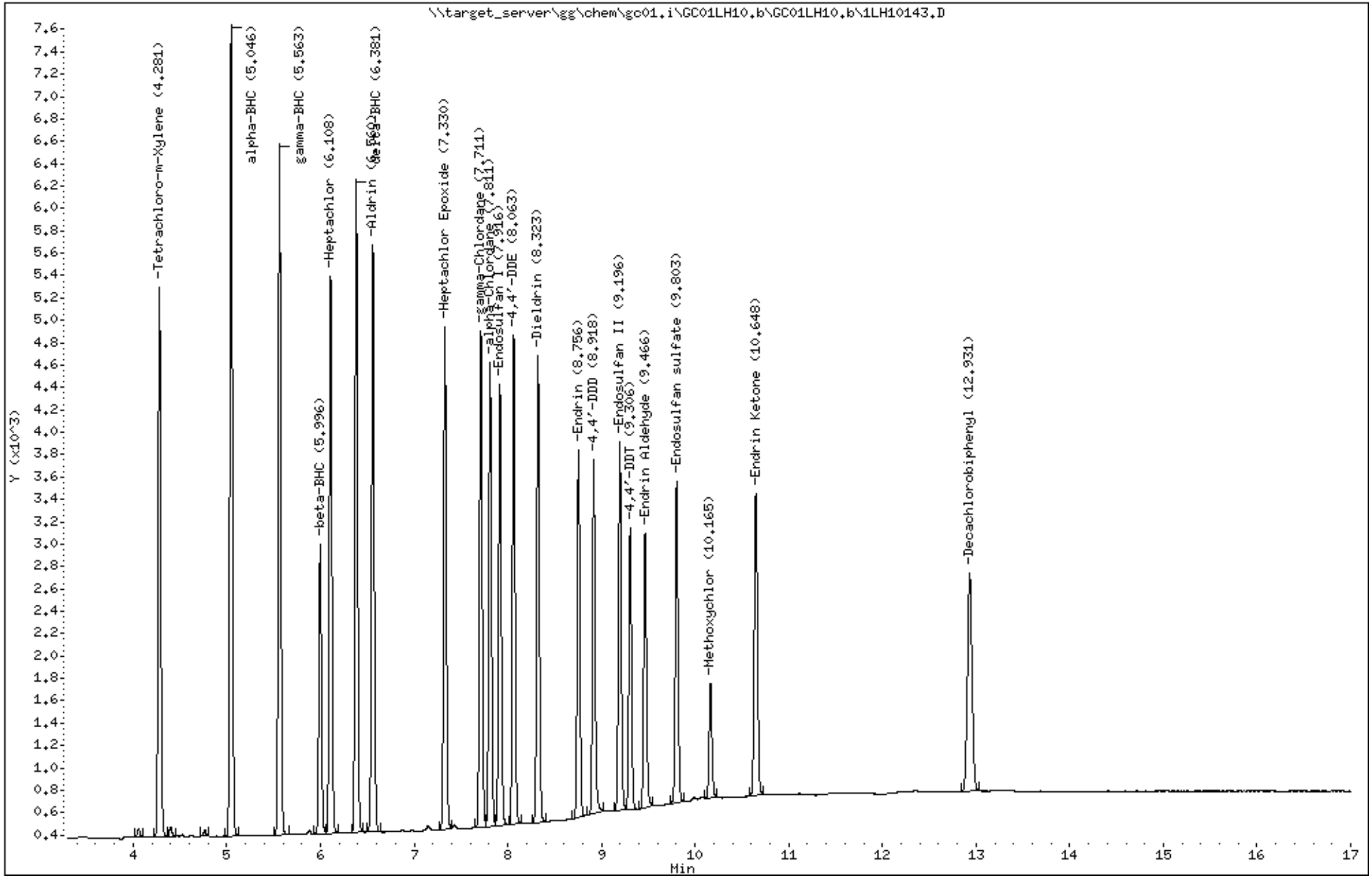
Data file : \\target_server\gg\chem\gc01.i\GC01LH10.b\GC01LH10.b\1LH10143.D
Lab Smp Id: WG233999-7
Inj Date : 10-AUG-2018 19:38
Operator : AC   Inst ID: gc01.i
Smp Info : WG233999-7,SL7420
Misc Info : WG233999,WG233999,WG233901-2,SL7420-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH10.b\PEST218.m\PEST218.m
Meth Date : 11-Aug-2018 09:31 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 10:00   Cal File: 1LD10092.D
Als bottle: 20   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						AMOUNTS		
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	REVIEW CODE
$ 4	Tetrachloro-m-Xylene	4.281	4.279	0.002	4914	0.05000	0.0259	
5	alpha-BHC	5.046	5.044	0.002	7250	0.05000	0.0255	
6	gamma-BHC	5.563	5.560	0.003	6184	0.05000	0.0243	
7	beta-BHC	5.996	5.994	0.002	2591	0.05000	0.0236	
8	delta-BHC	6.381	6.379	0.002	5843	0.05000	0.0243	
9	Heptachlor	6.108	6.105	0.003	4986	0.05000	0.0254	
10	Aldrin	6.559	6.557	0.002	5249	0.05000	0.0242	
13	Heptachlor Epoxide	7.329	7.327	0.002	4494	0.05000	0.0237	
15	gamma-Chlordane	7.711	7.709	0.002	4438	0.05000	0.0232	
17	alpha-Chlordane	7.811	7.809	0.002	4142	0.05000	0.0229	
19	4,4'-DDE	8.063	8.060	0.003	4367	0.05000	0.0234	
20	Endosulfan I	7.916	7.914	0.002	3940	0.05000	0.0230	
21	Dieldrin	8.323	8.319	0.004	4170	0.05000	0.0230	
23	Endrin	8.756	8.754	0.002	3286	0.05000	0.0230	
24	4,4'-DDD	8.918	8.915	0.003	3161	0.05000	0.0222	
26	Endosulfan II	9.196	9.192	0.004	3288	0.05000	0.0224	
27	4,4'-DDT	9.306	9.304	0.002	2515	0.05000	0.0249	
28	Endrin Aldehyde	9.466	9.462	0.004	2452	0.05000	0.0222	
29	Methoxychlor	10.164	10.159	0.005	1026	0.05000	0.0254	
32	Endosulfan sulfate	9.803	9.799	0.004	2876	0.05000	0.0230	
33	Endrin Ketone	10.648	10.644	0.004	2691	0.05000	0.0226	
$ 34	Decachlorobiphenyl	12.931	12.925	0.006	1951	0.05000	0.0228	

Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\GC01LH10.b\1LH10143.D
Date : 10-AUG-2018 19:38
Client ID:
Instrument: gc01.i
Sample Info: WG233999-7,SL7420
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000160

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG233999-8
Lab File ID : 1LH10154.D
Initial Calibration Date(s): 02/16/18 15:00 08/03/18 21:53

SDG: SL7420
Analytical Date: 08/10/18 23:10
Instrument ID: GC01
Column ID: A

Compound	RRF/Amount	RF0.050	CCAL RRF0.050	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
14 Technical Chlordane(3)	19885	20428	20428	0.001	2.73311	20.00000	Averaged
14 Technical Chlordane(2)	20811	21614	21614	0.001	3.85904	20.00000	Averaged
14 Technical Chlordane(1)	4112	4392	4392	0.001	6.82060	20.00000	Averaged

*** = Compound out of QC criteria**

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Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10154.D
Report Date: 24-Aug-2018 12:55

Katahdin Analytical Services

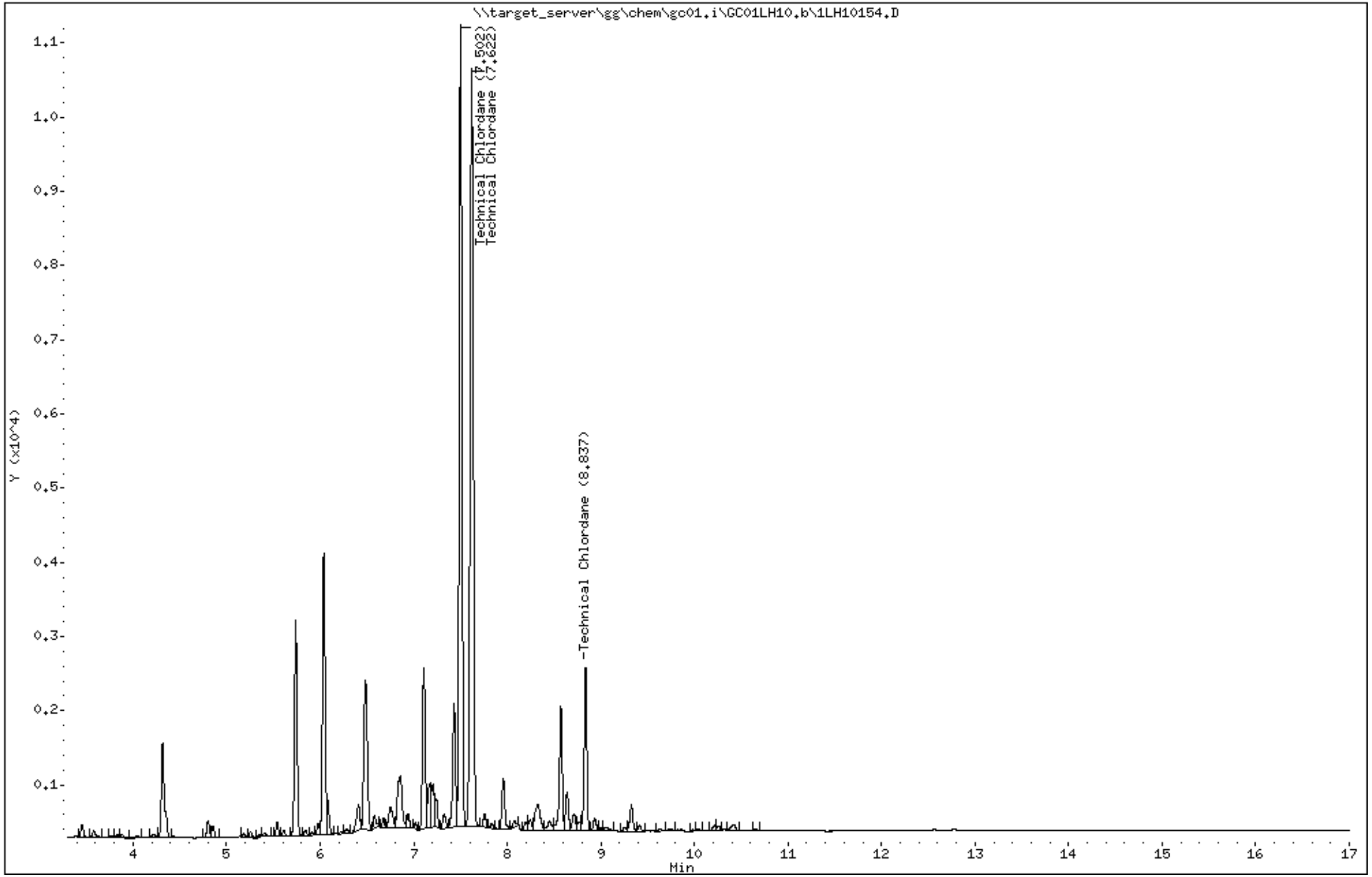
Data file : \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10154.D
Lab Smp Id: WG233999-8
Inj Date : 10-AUG-2018 23:10
Operator : AC   Inst ID: gc01.i
Smp Info : WG233999-8,SL7420
Misc Info : WG233999,WG233999,WG233899,SL7420-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH10.b\PEST218.m
Meth Date : 11-Aug-2018 09:31 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 09:02   Cal File: 1LD10089.D
Als bottle: 31   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: TC.sub
Target Version: 4.12   Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

				AMOUNTS				
				CAL-AMT	ON-COL			
RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
14 Technical Chlordane					CAS #: 12789-03-6			
8.836	8.836	0.000	2196	0.50000	0.534	80.00- 120.00	100.00	
7.501	7.501	0.000	10807	0.50000	0.519	393.70- 590.55	492.12	
7.621	7.621	0.000	10214	0.50000	0.514	372.09- 558.14	465.12	
		Average of Peak Amounts =			0.52233			

Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10154.D
Date : 10-AUG-2018 23:10
Client ID:
Instrument: gc01.i
Sample Info: WG233999-8,SL7420
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000163

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG233999-8
Lab File ID : 1LH10154.D
Initial Calibration Date(s): 02/16/18 15:00 08/03/18 21:53

SDG: SL7420
Analytical Date: 08/10/18 23:10
Instrument ID: GC01
Column ID: B

Compound	RRF/Amount	RF0.050	CCAL RRF0.050	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
14 Technical Chlordane(3)	13610	13580	13580	0.001	-0.22263	20.00000	Averaged
14 Technical Chlordane(2)	18928	19466	19466	0.001	2.84489	20.00000	Averaged
14 Technical Chlordane(1)	4997	4730	4730	0.001	-5.33942	20.00000	Averaged

*** = Compound out of QC criteria**

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Data File: 1LH10154.D
Report Date: 24-Aug-2018 12:55

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LH10.b\GC01LH10.b\1LH10154.D
Lab Smp Id: WG233999-8
Inj Date : 10-AUG-2018 23:10
Operator : AC Inst ID: gc01.i
Smp Info : WG233999-8,SL7420
Misc Info : WG233999,WG233999,WG233899,SL7420-1
Comment :
Method : \\target_server\gg\chem\gc01.i\GC01LH10.b\PEST218.m\PEST218.m
Meth Date : 11-Aug-2018 09:31 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 10:00 Cal File: 1LD10092.D
Als bottle: 31 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TC.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)	TARGET RANGE	RATIO	REVIEW CODE
14 Technical Chlordane					CAS #: 12789-03-6			
9.208	9.208	0.000	2365	0.50000	0.473	80.00- 120.00	100.00(M)	M5
7.713	7.713	0.000	9733	0.50000	0.514	329.23- 493.85	411.54	M5
7.810	7.810	0.000	6790	0.50000	0.499	229.68- 344.52	287.10	M5
Average of Peak Amounts =					0.49533			

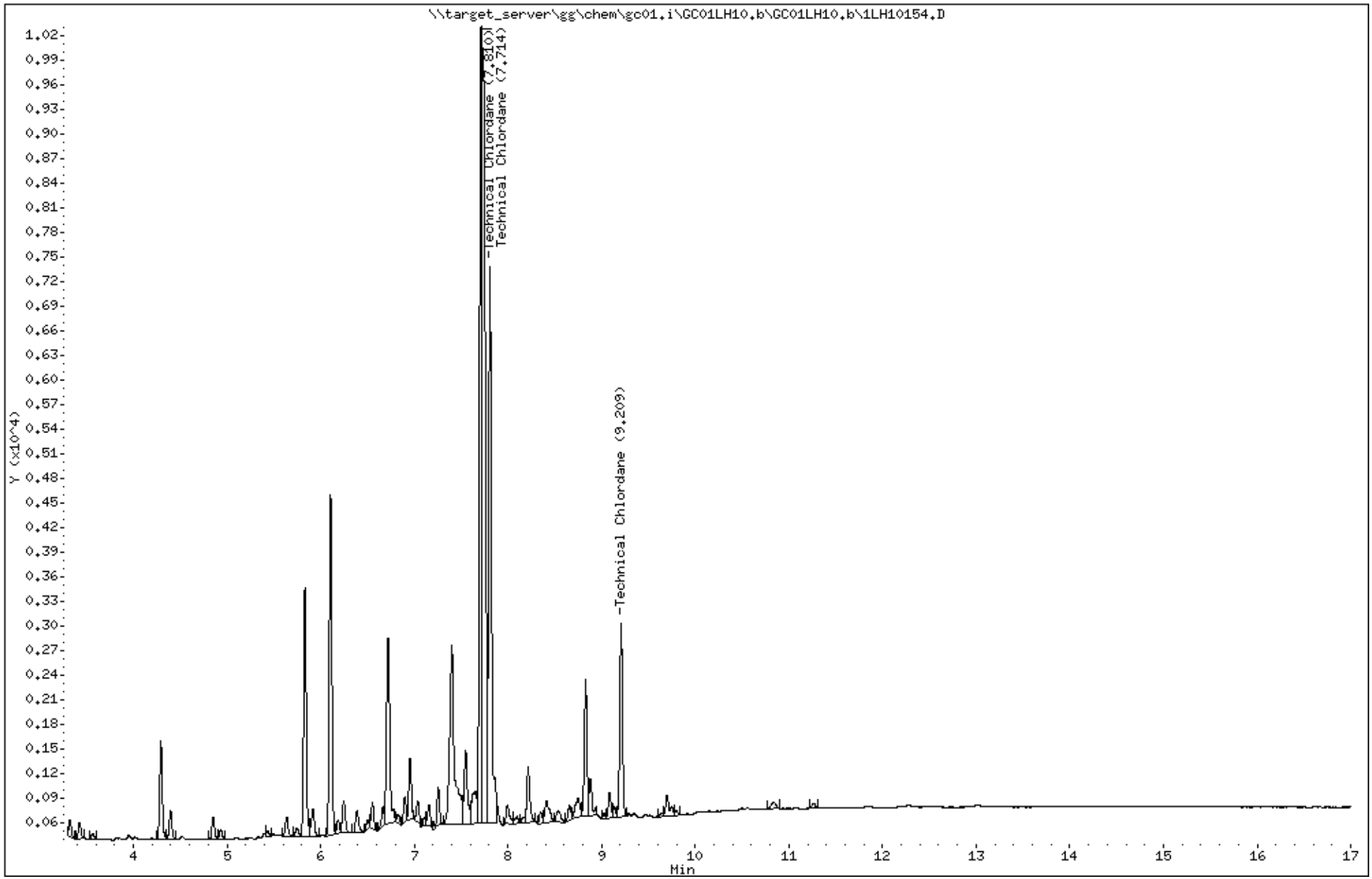
BF

1:40 pm, Aug 24, 2018

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\GC01LH10.b\1LH10154.D
Date : 10-AUG-2018 23:10
Client ID:
Instrument: gc01.i
Sample Info: WG233999-8,SL7420
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000166

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG233999-10
Lab File ID : 1LH10156.D
Initial Calibration Date(s): 02/16/18 15:00 08/06/18 14:11

SDG: SL7420
Analytical Date: 08/10/18 23:49
Instrument ID: GC01
Column ID: A

	Compound	RRF/Amount	RF0.050	CCAL RRF0.050	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
6	gamma-BHC	224000	226760	226760	0.001	1.23199	20.00000	Averaged
9	Heptachlor	167282	170560	170560	0.001	1.95936	20.00000	Averaged
13	Heptachlor Epoxide	165498	158920	158920	0.001	-3.97448	20.00000	Averaged
19	4,4'-DDE	165854	159100	159100	0.001	-4.07206	20.00000	Averaged
23	Endrin	135334	130500	130500	0.001	-3.57214	20.00000	Averaged
24	4,4'-DDD	127092	121220	121220	0.001	-4.62028	20.00000	Averaged
27	4,4'-DDT	111828	117200	117200	0.001	4.80412	20.00000	Averaged
28	Endrin Aldehyde	105257	96600	96600	0.001	-8.22492	20.00000	Averaged
29	Methoxychlor	52752	51180	51180	0.001	-2.97937	20.00000	Averaged
33	Endrin Ketone	127026	116920	116920	0.001	-7.95561	20.00000	Averaged
4	Tetrachloro-m-Xylene	158172	168840	168840	0.001	6.74456	20.00000	Averaged
34	Decachlorobiphenyl	75413	69340	69340	0.001	-8.05339	20.00000	Averaged

*** = Compound out of QC criteria**

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Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10156.D
Report Date: 24-Aug-2018 12:55

Katahdin Analytical Services

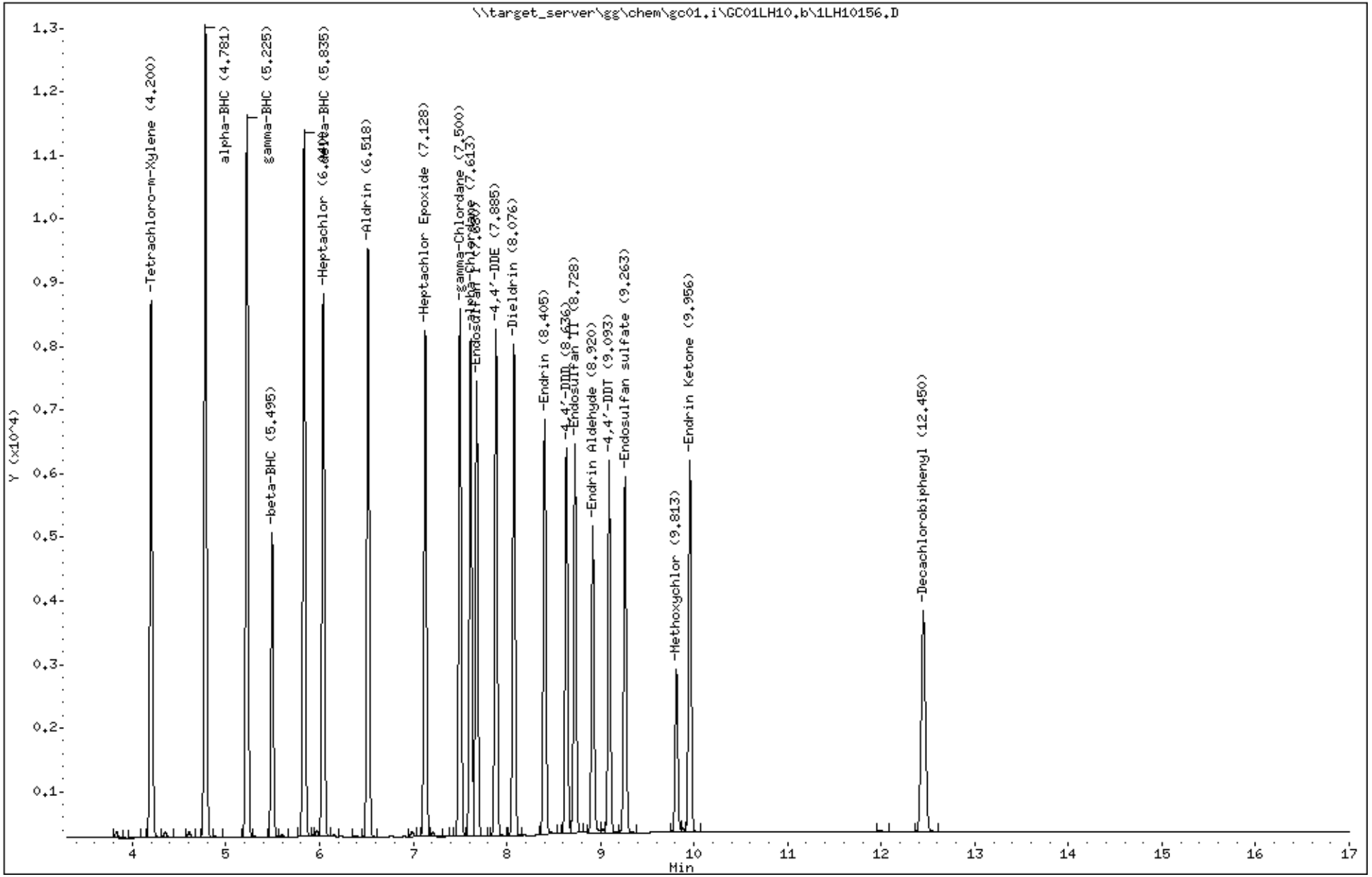
Data file : \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10156.D
Lab Smp Id: WG233999-10
Inj Date : 10-AUG-2018 23:49
Operator : AC   Inst ID: gc01.i
Smp Info : WG233999-10,SL7420
Misc Info : WG233999,WG233999,WG233901-2,SL7420-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH10.b\PEST218.m
Meth Date : 11-Aug-2018 09:31 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 09:02   Cal File: 1LD10089.D
Als bottle: 33   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						AMOUNTS		
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	REVIEW CODE
$	4 Tetrachloro-m-Xylene	4.199	4.200	-0.001	8442	0.05000	0.0534	
	5 alpha-BHC	4.781	4.780	0.001	12769	0.05000	0.0531	
	6 gamma-BHC	5.224	5.223	0.001	11338	0.05000	0.0506	
	7 beta-BHC	5.494	5.493	0.001	4783	0.05000	0.0486	
	8 delta-BHC	5.834	5.835	-0.001	11103	0.05000	0.0507	
	9 Heptachlor	6.039	6.040	-0.001	8528	0.05000	0.0510	
	10 Aldrin	6.517	6.518	-0.001	9247	0.05000	0.0484	
	13 Heptachlor Epoxide	7.127	7.127	0.000	7946	0.05000	0.0480	
	15 gamma-Chlordane	7.499	7.497	0.002	8284	0.05000	0.0484	
	17 alpha-Chlordane	7.612	7.612	0.000	7813	0.05000	0.0480	
	19 4,4'-DDE	7.884	7.883	0.001	7955	0.05000	0.0480	
	20 Endosulfan I	7.679	7.677	0.002	7140	0.05000	0.0475	
	21 Dieldrin	8.076	8.075	0.001	7716	0.05000	0.0482	
	23 Endrin	8.404	8.402	0.002	6525	0.05000	0.0482	
	24 4,4'-DDD	8.636	8.633	0.003	6061	0.05000	0.0477	
	26 Endosulfan II	8.727	8.727	0.000	6108	0.05000	0.0453	
	27 4,4'-DDT	9.092	9.092	0.000	5860	0.05000	0.0524	
	28 Endrin Aldehyde	8.919	8.917	0.002	4830	0.05000	0.0459	
	29 Methoxychlor	9.812	9.810	0.002	2559	0.05000	0.0485	
	32 Endosulfan sulfate	9.262	9.262	0.000	5587	0.05000	0.0485	
	33 Endrin Ketone	9.956	9.955	0.001	5846	0.05000	0.0460	
$	34 Decachlorobiphenyl	12.449	12.445	0.004	3467	0.05000	0.0460	

Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10156.D
Date : 10-AUG-2018 23:49
Client ID:
Instrument: gc01.i
Sample Info: WG233999-10,SL7420
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000169

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG233999-10
Lab File ID : 1LH10156.D
Initial Calibration Date(s): 02/16/18 15:00 08/06/18 14:11

SDG: SL7420
Analytical Date: 08/10/18 23:49
Instrument ID: GC01
Column ID: B

	Compound	RRF/Amount	RF0.050	CCAL RRF0.050	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
6	gamma-BHC	254101	248840	248840	0.001	-2.07044	20.00000	Averaged
9	Heptachlor	196506	203800	203800	0.001	3.71202	20.00000	Averaged
13	Heptachlor Epoxide	189261	177320	177320	0.001	-6.30928	20.00000	Averaged
19	4,4'-DDE	186614	173580	173580	0.001	-6.98447	20.00000	Averaged
23	Endrin	142785	134220	134220	0.001	-5.99831	20.00000	Averaged
24	4,4'-DDD	142017	133680	133680	0.001	-5.87064	20.00000	Averaged
27	4,4'-DDT	0.05000	0.04690	119300	0.001	-6.20087	20.00000	Linear
28	Endrin Aldehyde	110529	100240	100240	0.001	-9.30887	20.00000	Averaged
29	Methoxychlor	0.05000	0.04719	49840	0.001	-5.61248	20.00000	Linear
33	Endrin Ketone	119100	114100	114100	0.001	-4.19788	20.00000	Averaged
4	Tetrachloro-m-Xylene	189805	196520	196520	0.001	3.53784	20.00000	Averaged
34	Decachlorobiphenyl	85542	79020	79020	0.001	-7.62468	20.00000	Averaged

*** = Compound out of QC criteria**

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Data File: 1LH10156.D
Report Date: 24-Aug-2018 12:55

Katahdin Analytical Services

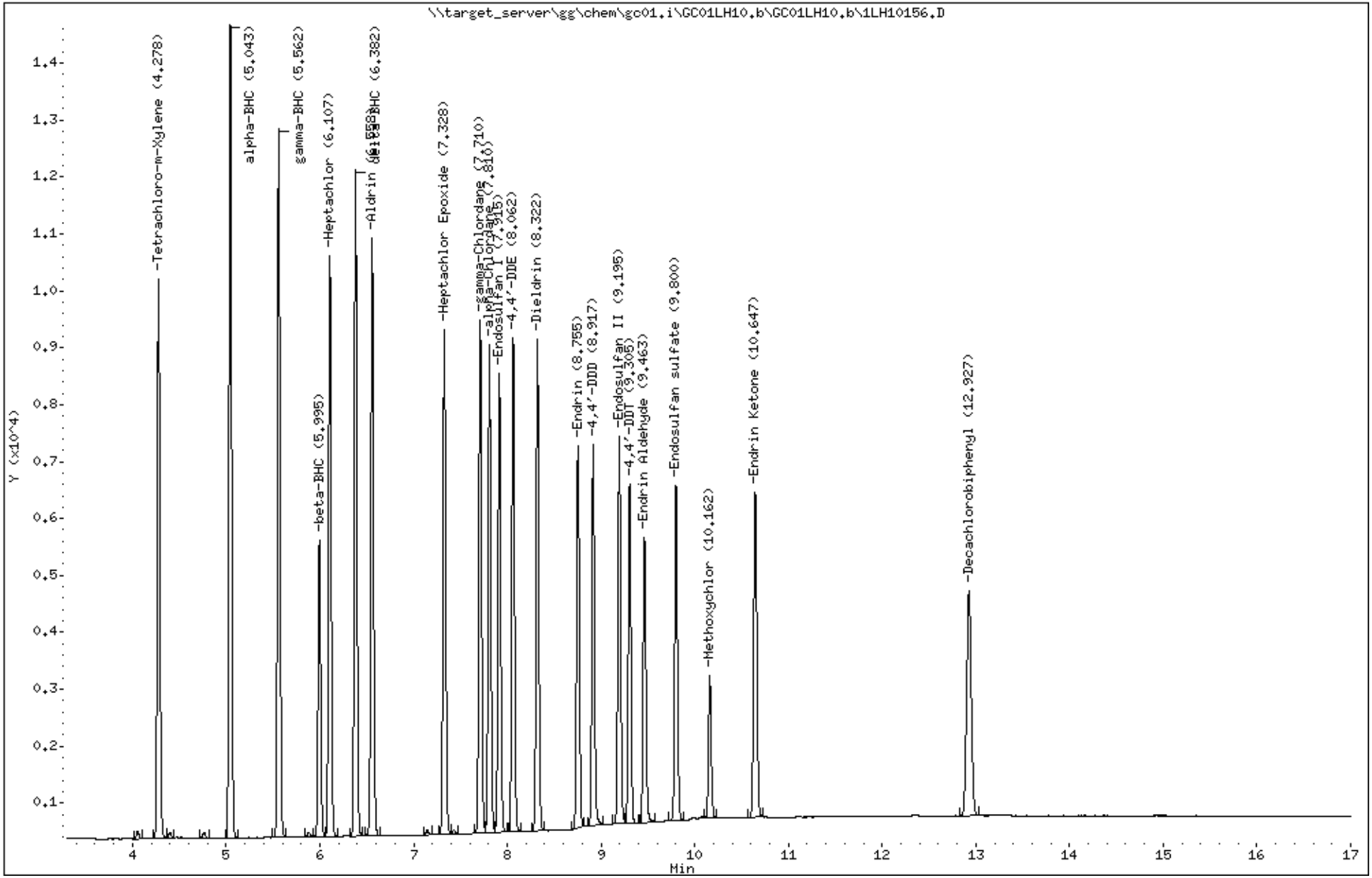
Data file : \\target_server\gg\chem\gc01.i\GC01LH10.b\GC01LH10.b\1LH10156.D
Lab Smp Id: WG233999-10
Inj Date : 10-AUG-2018 23:49
Operator : AC   Inst ID: gc01.i
Smp Info : WG233999-10,SL7420
Misc Info : WG233999,WG233999,WG233901-2,SL7420-1
Comment   :
Method   : \\target_server\gg\chem\gc01.i\GC01LH10.b\PEST218.m\PEST218.m
Meth Date : 11-Aug-2018 09:31 acronin   Quant Type: ESTD
Cal Date : 09-APR-2018 10:00   Cal File: 1LD10092.D
Als bottle: 33   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						AMOUNTS		
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	REVIEW CODE
$	4 Tetrachloro-m-Xylene	4.278	4.279	-0.001	9826	0.05000	0.0518	
	5 alpha-BHC	5.043	5.044	-0.001	14278	0.05000	0.0502	
	6 gamma-BHC	5.561	5.560	0.001	12442	0.05000	0.0490	
	7 beta-BHC	5.994	5.994	0.000	5217	0.05000	0.0475	
	8 delta-BHC	6.381	6.379	0.002	11707	0.05000	0.0486	
	9 Heptachlor	6.106	6.105	0.001	10190	0.05000	0.0518	
	10 Aldrin	6.558	6.557	0.001	10482	0.05000	0.0484	
	13 Heptachlor Epoxide	7.328	7.327	0.001	8866	0.05000	0.0468	
	15 gamma-Chlordane	7.709	7.709	0.000	9013	0.05000	0.0471	
	17 alpha-Chlordane	7.809	7.809	0.000	8565	0.05000	0.0473	
	19 4,4'-DDE	8.061	8.060	0.001	8679	0.05000	0.0465	
	20 Endosulfan I	7.914	7.914	0.000	8063	0.05000	0.0471	
	21 Dieldrin	8.321	8.319	0.002	8638	0.05000	0.0476	
	23 Endrin	8.754	8.754	0.000	6711	0.05000	0.0470	
	24 4,4'-DDD	8.916	8.915	0.001	6684	0.05000	0.0471	
	26 Endosulfan II	9.194	9.192	0.002	6796	0.05000	0.0463	
	27 4,4'-DDT	9.304	9.304	0.000	5965	0.05000	0.0469	
	28 Endrin Aldehyde	9.463	9.462	0.001	5012	0.05000	0.0453	
	29 Methoxychlor	10.161	10.159	0.002	2492	0.05000	0.0472	
	32 Endosulfan sulfate	9.799	9.799	0.000	5881	0.05000	0.0470	
	33 Endrin Ketone	10.646	10.644	0.002	5705	0.05000	0.0479	
$	34 Decachlorobiphenyl	12.926	12.925	0.001	3951	0.05000	0.0462	

Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\GC01LH10.b\1LH10156.D
Date : 10-AUG-2018 23:49
Client ID:
Instrument: gc01.i
Sample Info: WG233999-10,SL7420
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000172

Raw QC Data Section

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client:
Lab ID: WG233964-1
Client ID: Method Blank Sample
Project:
SDG: SL7420
Lab File ID: 1LH10138.D

Sample Date:
Received Date:
Extract Date: 10-AUG-18
Extracted By: DP
Extraction Method: SW846 3510C
Lab Prep Batch: WG233964

Analysis Date: 10-AUG-18
Analyst: AC
Analysis Method: SW846 8081B
Matrix: AQ
% Solids: NA
Report Date: 24-AUG-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
gamma-BHC	U	0.025	ug/L	1	.05	0.050	0.0072	0.025
Heptachlor	U	0.025	ug/L	1	.05	0.050	0.0080	0.025
Heptachlor Epoxide	U	0.025	ug/L	1	.05	0.050	0.0074	0.025
Endrin	U	0.050	ug/L	1	.1	0.10	0.0084	0.050
Methoxychlor	U	0.25	ug/L	1	.5	0.50	0.0084	0.25
Technical Chlordane	U	0.25	ug/L	1	.5	0.50	0.083	0.25
Toxaphene	U	0.50	ug/L	1	1	1.0	0.17	0.50
Tetrachloro-M-Xylene		73.9	%					
Decachlorobiphenyl		67.0	%					

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Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10138.D
Report Date: 24-Aug-2018 12:55

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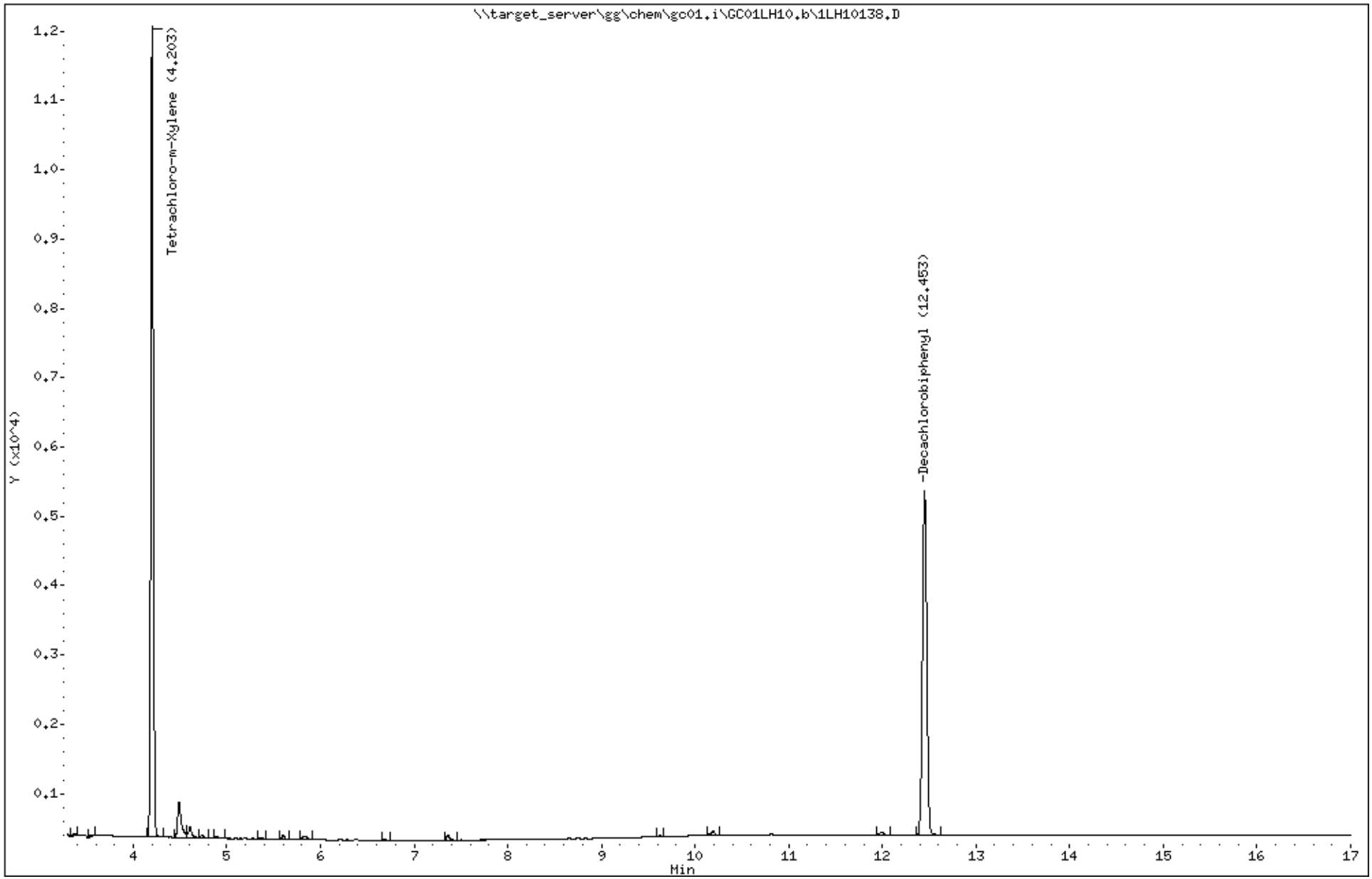
Data file : \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10138.D
Lab Smp Id: WG233964-1 Client Smp ID: WG233964-Blank
Inj Date : 10-AUG-2018 18:01
Operator : AC Inst ID: gc01.i
Smp Info : WG233964-1,SL7420
Misc Info : WG233999,WG233964,WG233898-1,SL7420-1
Comment :
Method : \\target_server\gg\chem\gc01.i\GC01LH10.b\PEST218.m
Meth Date : 11-Aug-2018 09:31 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 09:02 Cal File: 1LD10089.D
Als bottle: 15 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8081+TC.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS		
					ON-COLUMN	FINAL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/L)	REVIEW CODE
$ 4 Tetrachloro-m-Xylene	4.202	4.200	0.002	11696	0.07394	0.739	
$ 34 Decachlorobiphenyl	12.452	12.445	0.007	4958	0.06574	0.657	

Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10138.D
Date : 10-AUG-2018 18:01
Client ID: WG233964-Blank
Instrument: gc01.i
Sample Info: WG233964-1,SL7420
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000176

Data File: 1LH10138.D
Report Date: 24-Aug-2018 12:55

Katahdin Analytical Services

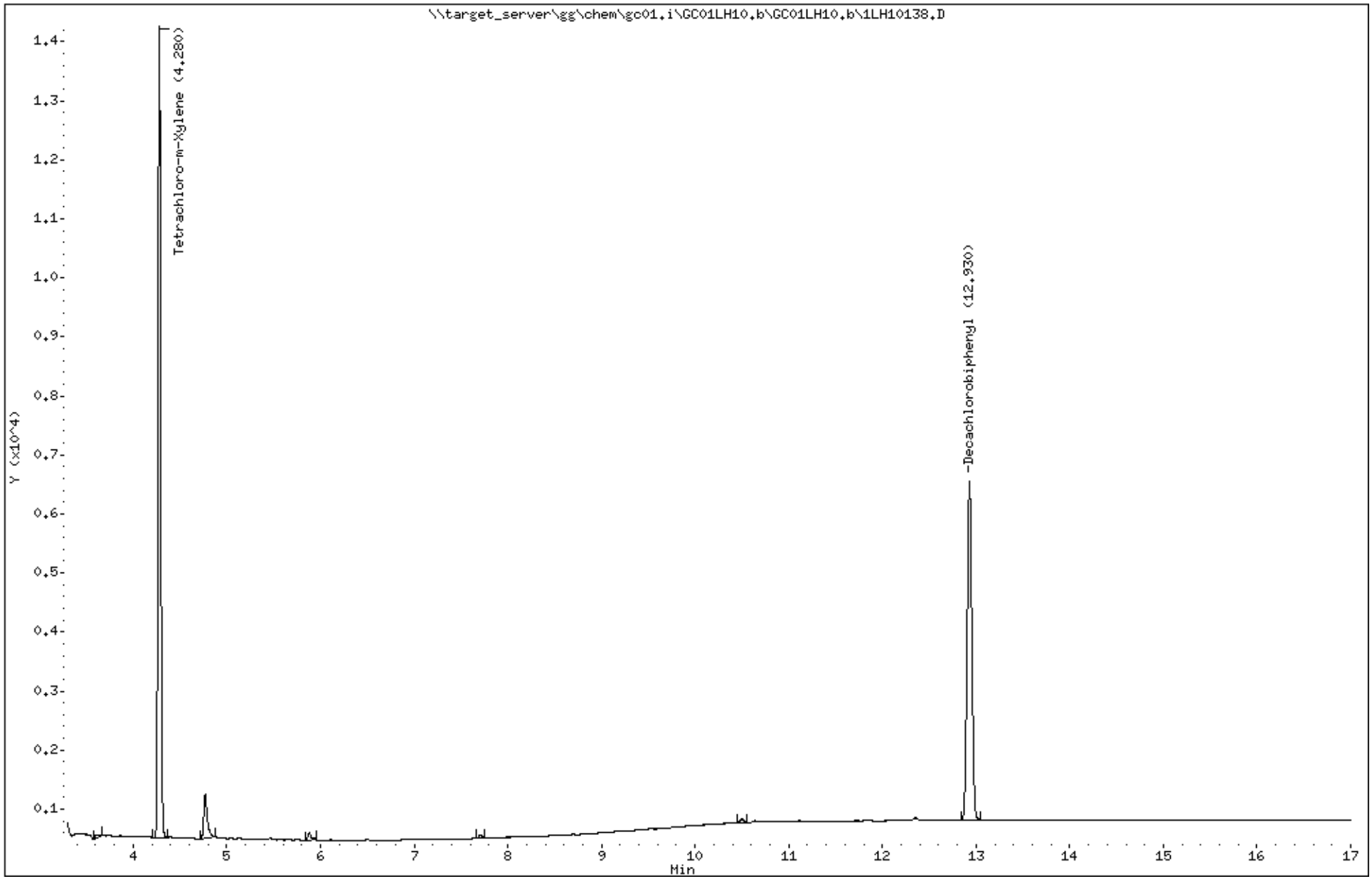
Data file : \\target_server\gg\chem\gc01.i\GC01LH10.b\GC01LH10.b\1LH10138.D
Lab Smp Id: WG233964-1 Client Smp ID: WG233964-Blank
Inj Date : 10-AUG-2018 18:01
Operator : AC Inst ID: gc01.i
Smp Info : WG233964-1,SL7420
Misc Info : WG233999,WG233964,WG233898-1,SL7420-1
Comment :
Method : \\target_server\gg\chem\gc01.i\GC01LH10.b\PEST218.m\PEST218.m
Meth Date : 11-Aug-2018 09:31 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 10:00 Cal File: 1LD10092.D
Als bottle: 15 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8081+TC.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS		
					ON-COLUMN	FINAL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/L)	REVIEW CODE
$ 4 Tetrachloro-m-Xylene	4.279	4.279	0.000	13743	0.07241	0.724	
$ 34 Decachlorobiphenyl	12.929	12.925	0.004	5734	0.06703	0.670	

Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\GC01LH10.b\1LH10138.D
Date : 10-AUG-2018 18:01
Client ID: WG233964-Blank
Instrument: gc01.i
Sample Info: WG233964-1,SL7420
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000178

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ANALYTICAL SERVICES

Report of Analytical Results

Client:
Lab ID: WG233964-5
Client ID: TCLP Blank
Project:
SDG: SL7420
Lab File ID: 1LH10145.D

Sample Date:
Received Date:
Extract Date: 10-AUG-18
Extracted By: DP
Extraction Method: 3510C/1311
Lab Prep Batch: WG233964

Analysis Date: 10-AUG-18
Analyst: AC
Analysis Method: SW846 8081B
Matrix: AQ
% Solids: NA
Report Date: 24-AUG-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
gamma-BHC	U	0.12	ug/L	1	.05	0.25	0.036	0.12
Heptachlor	U	0.12	ug/L	1	.05	0.25	0.040	0.12
Heptachlor Epoxide	U	0.12	ug/L	1	.05	0.25	0.037	0.12
Endrin	U	0.25	ug/L	1	.1	0.50	0.042	0.25
Methoxychlor	U	1.2	ug/L	1	.5	2.5	0.042	1.2
Technical Chlordane	U	1.2	ug/L	1	.5	2.5	0.42	1.2
Toxaphene	U	2.5	ug/L	1	1	5.0	0.85	2.5
Tetrachloro-M-Xylene		92.4	%					
Decachlorobiphenyl		98.2	%					

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Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10145.D
Report Date: 24-Aug-2018 12:55

Katahdin Analytical Services

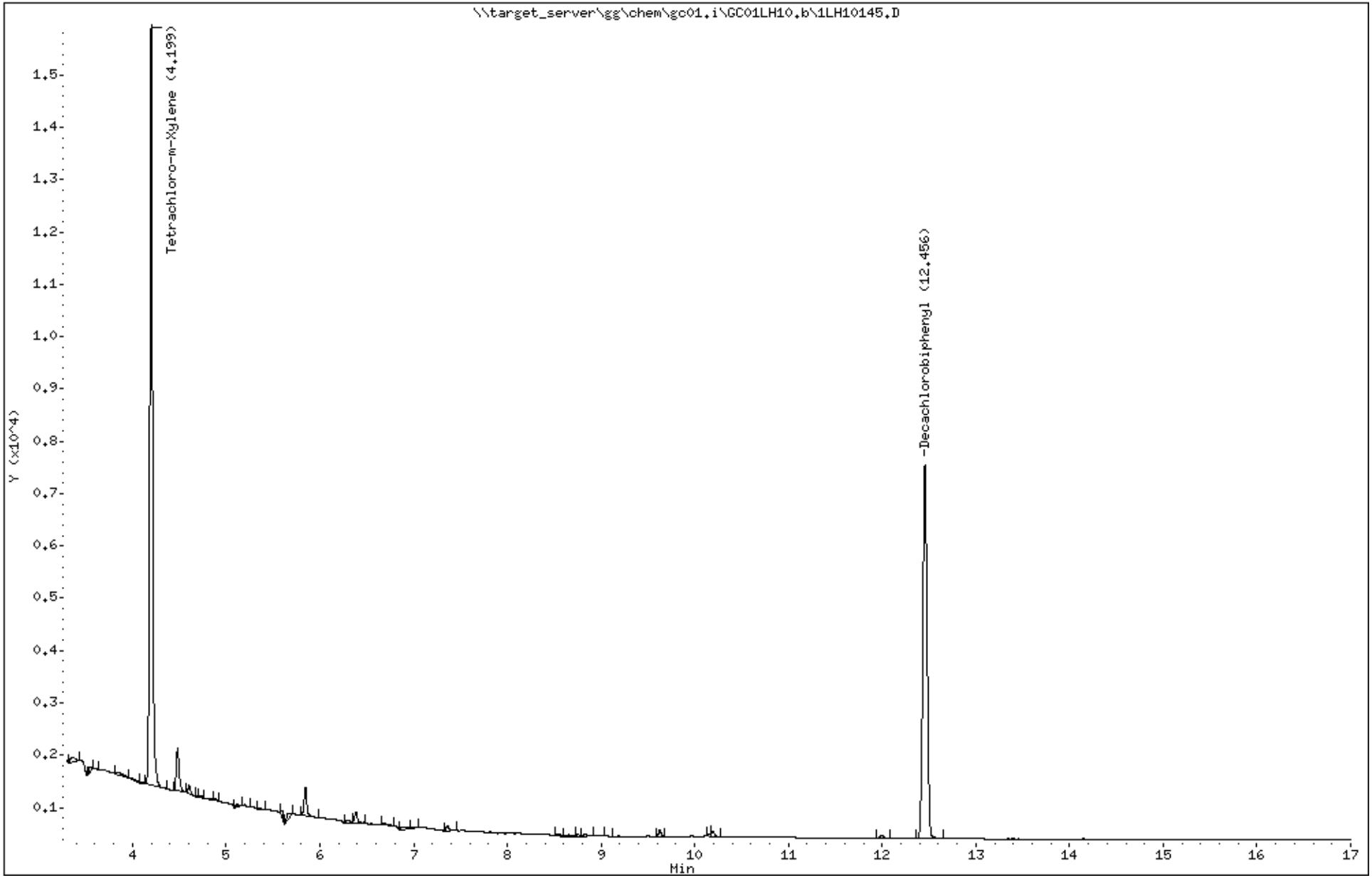
Data file : \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10145.D
Lab Smp Id: WG233964-5 Client Smp ID: WG233964-TclpBlank
Inj Date : 10-AUG-2018 20:16
Operator : AC Inst ID: gc01.i
Smp Info : WG233964-5,SL7420
Misc Info : WG233999,WG233964,WG233901-2,SL7420-1
Comment :
Method : \\target_server\gg\chem\gc01.i\GC01LH10.b\PEST218.m
Meth Date : 11-Aug-2018 09:31 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 09:02 Cal File: 1LD10089.D
Als bottle: 22 QC Sample: TCLPBLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TCLP-SW8081.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	0.20000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS		
					ON-COLUMN	FINAL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/L)	REVIEW CODE
$ 4 Tetrachloro-m-Xylene	4.199	4.200	-0.001	14534	0.09189	4.59	
$ 34 Decachlorobiphenyl	12.456	12.445	0.011	7142	0.09470	4.74	

Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10145.D
Date : 10-AUG-2018 20:16
Client ID: WG233964-TclpBlank
Instrument: gc01.i
Sample Info: WG233964-5,SL7420
Purge Volume: 0.2
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000181

Data File: 1LH10145.D
Report Date: 24-Aug-2018 12:55

Katahdin Analytical Services

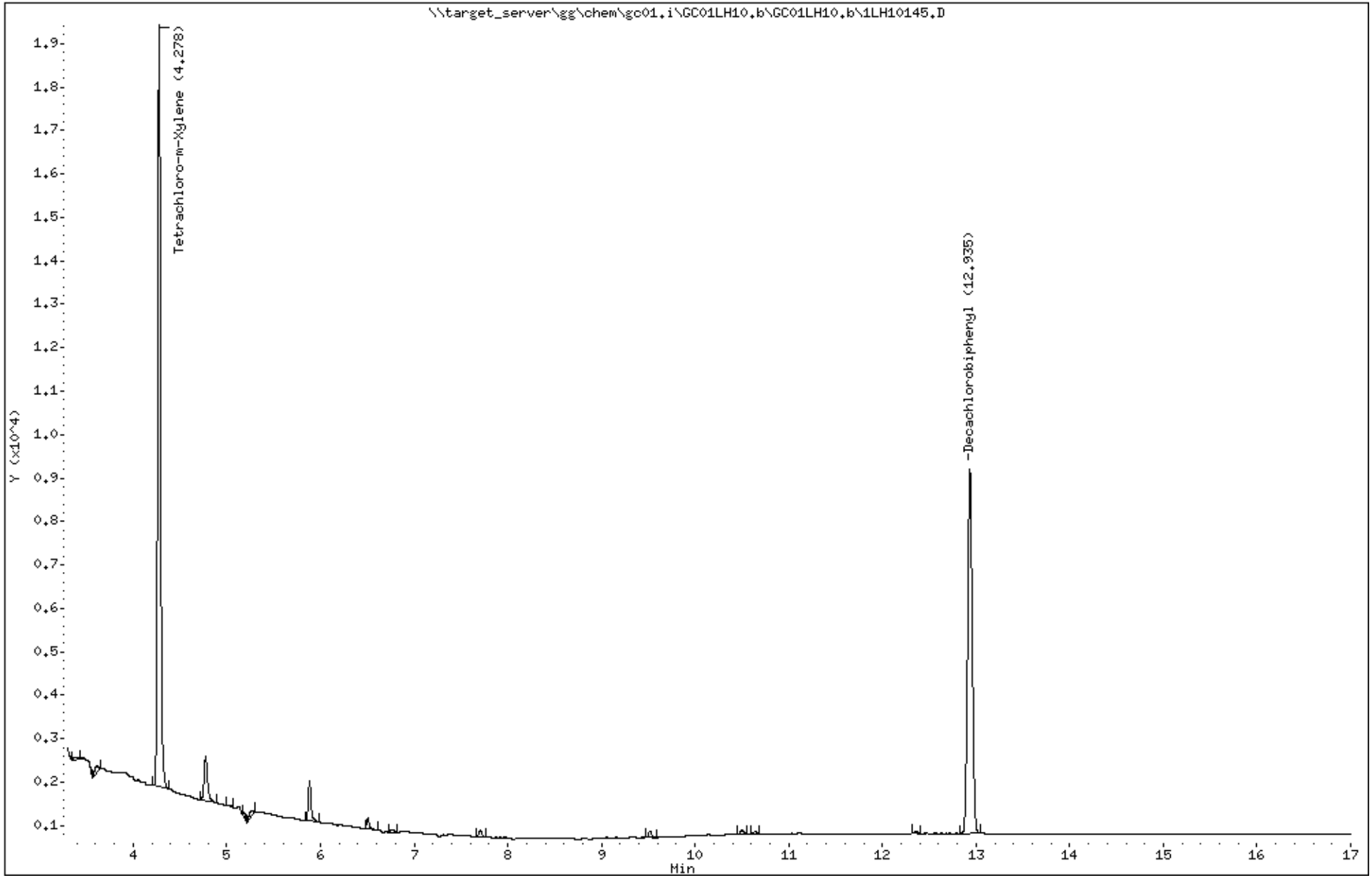
Data file : \\target_server\gg\chem\gc01.i\GC01LH10.b\GC01LH10.b\1LH10145.D
Lab Smp Id: WG233964-5 Client Smp ID: WG233964-TclpBlank
Inj Date : 10-AUG-2018 20:16
Operator : AC Inst ID: gc01.i
Smp Info : WG233964-5,SL7420
Misc Info : WG233999,WG233964,WG233901-2,SL7420-1
Comment :
Method : \\target_server\gg\chem\gc01.i\GC01LH10.b\PEST218.m\PEST218.m
Meth Date : 11-Aug-2018 09:31 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 10:00 Cal File: 1LD10092.D
Als bottle: 22 QC Sample: TCLPBLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TCLP-SW8081.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	0.20000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS		
					ON-COLUMN	FINAL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/L)	REVIEW CODE
$ 4 Tetrachloro-m-Xylene	4.278	4.279	-0.001	17545	0.09244	4.62	
$ 34 Decachlorobiphenyl	12.934	12.925	0.009	8401	0.09821	4.91	

Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\GC01LH10.b\1LH10145.D
Date : 10-AUG-2018 20:16
Client ID: WG233964-TclpBlank
Instrument: gc01.i
Sample Info: WG233964-5,SL7420
Purge Volume: 0.2
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000183

Katahdin
ANALYTICAL SERVICES

LCS Recovery Report

Client:
Lab ID: WG233964-2
Client ID: LCS
Project:
SDG: SL7420
LCS File ID: 1LH10139.D

Sample Date:
Received Date:
Extract Date: 10-AUG-18
Extracted By: DP
Extraction Method: SW846 3510C
Lab Prep Batch: WG233964

Analysis Date: 10-AUG-18
Analyst: AC
Analysis Method: SW846 8081B
Matrix: AQ
% Solids: NA
Report Date: 24-AUG-18

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
gamma-BHC	92.2	0.500	0.461	ug/L	59-134
Heptachlor	92.8	0.500	0.464	ug/L	54-130
Heptachlor Epoxide	85.6	0.500	0.428	ug/L	61-133
Endrin	86.8	0.500	0.434	ug/L	60-138
Methoxychlor	91.0	0.500	0.455	ug/L	54-145
Tetrachloro-M-Xylene	87.9				44-124
Decachlorobiphenyl	77.0				41-131

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Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10139.D
Report Date: 24-Aug-2018 12:55

Katahdin Analytical Services

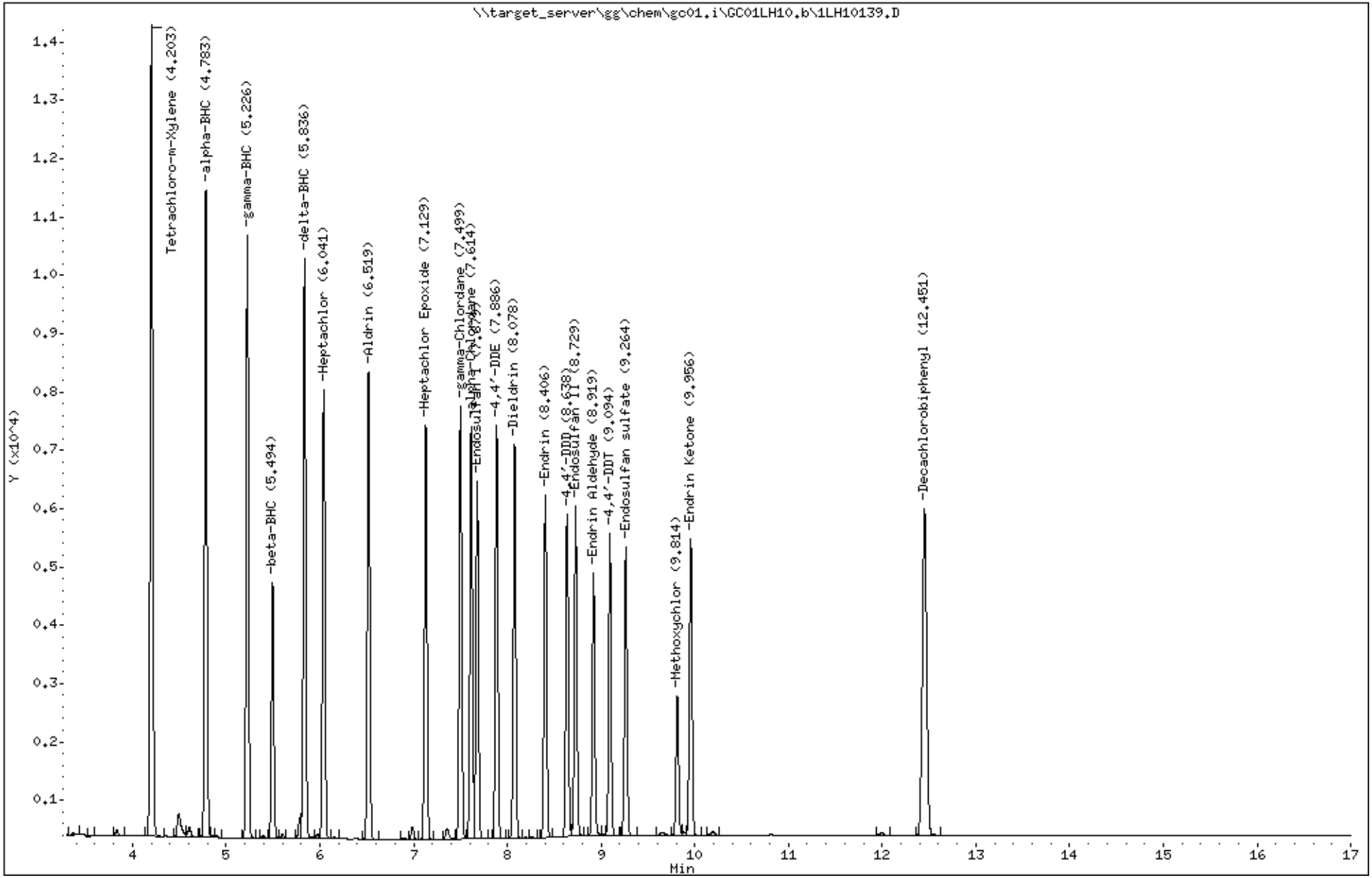
Data file : \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10139.D
Lab Smp Id: WG233964-2 Client Smp ID: WG233964-LCS
Inj Date : 10-AUG-2018 18:20
Operator : AC Inst ID: gc01.i
Smp Info : WG233964-2,SL7420
Misc Info : WG233999,WG233964,WG233899-1,SL7420-1
Comment :
Method : \\target_server\gg\chem\gc01.i\GC01LH10.b\PEST218.m
Meth Date : 11-Aug-2018 09:31 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 09:02 Cal File: 1LD10089.D
Als bottle: 16 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: LCS.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 4 Tetrachloro-m-Xylene	4.202	4.200	0.002	13908	0.08793	0.879	
5 alpha-BHC	4.782	4.780	0.002	11076	0.04603	0.460	
6 gamma-BHC	5.225	5.223	0.002	10318	0.04606	0.461	
7 beta-BHC	5.494	5.493	0.001	4395	0.04468	0.447	
8 delta-BHC	5.835	5.835	0.000	9942	0.04540	0.454	
9 Heptachlor	6.040	6.040	0.000	7699	0.04602	0.460	
10 Aldrin	6.519	6.518	0.001	8012	0.04194	0.419	
13 Heptachlor Epoxide	7.129	7.127	0.002	7085	0.04281	0.428	
15 gamma-Chlordane	7.499	7.497	0.002	7416	0.04330	0.433	
17 alpha-Chlordane	7.614	7.612	0.002	7065	0.04338	0.434	
20 Endosulfan I	7.679	7.677	0.002	6135	0.04085	0.408	
19 4,4'-DDE	7.885	7.883	0.002	7073	0.04265	0.426	
21 Dieldrin	8.077	8.075	0.002	6746	0.04212	0.421	
23 Endrin	8.405	8.402	0.003	5879	0.04344	0.434	
24 4,4'-DDD	8.637	8.633	0.004	5529	0.04350	0.435	
26 Endosulfan II	8.729	8.727	0.002	5645	0.04189	0.419	
28 Endrin Aldehyde	8.919	8.917	0.002	4502	0.04277	0.428	
27 4,4'-DDT	9.094	9.092	0.002	5185	0.04637	0.464	
32 Endosulfan sulfate	9.264	9.262	0.002	4944	0.04294	0.429	
29 Methoxychlor	9.814	9.810	0.004	2400	0.04550	0.455(a)	
33 Endrin Ketone	9.955	9.955	0.000	5091	0.04008	0.401	
$ 34 Decachlorobiphenyl	12.450	12.445	0.005	5605	0.07432	0.743	

Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10139.D
Date : 10-AUG-2018 18:20
Client ID: WG233964-LCS
Instrument: gc01.i
Sample Info: WG233964-2,SL7420
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000186

Data File: 1LH10139.D
Report Date: 24-Aug-2018 12:55

Katahdin Analytical Services

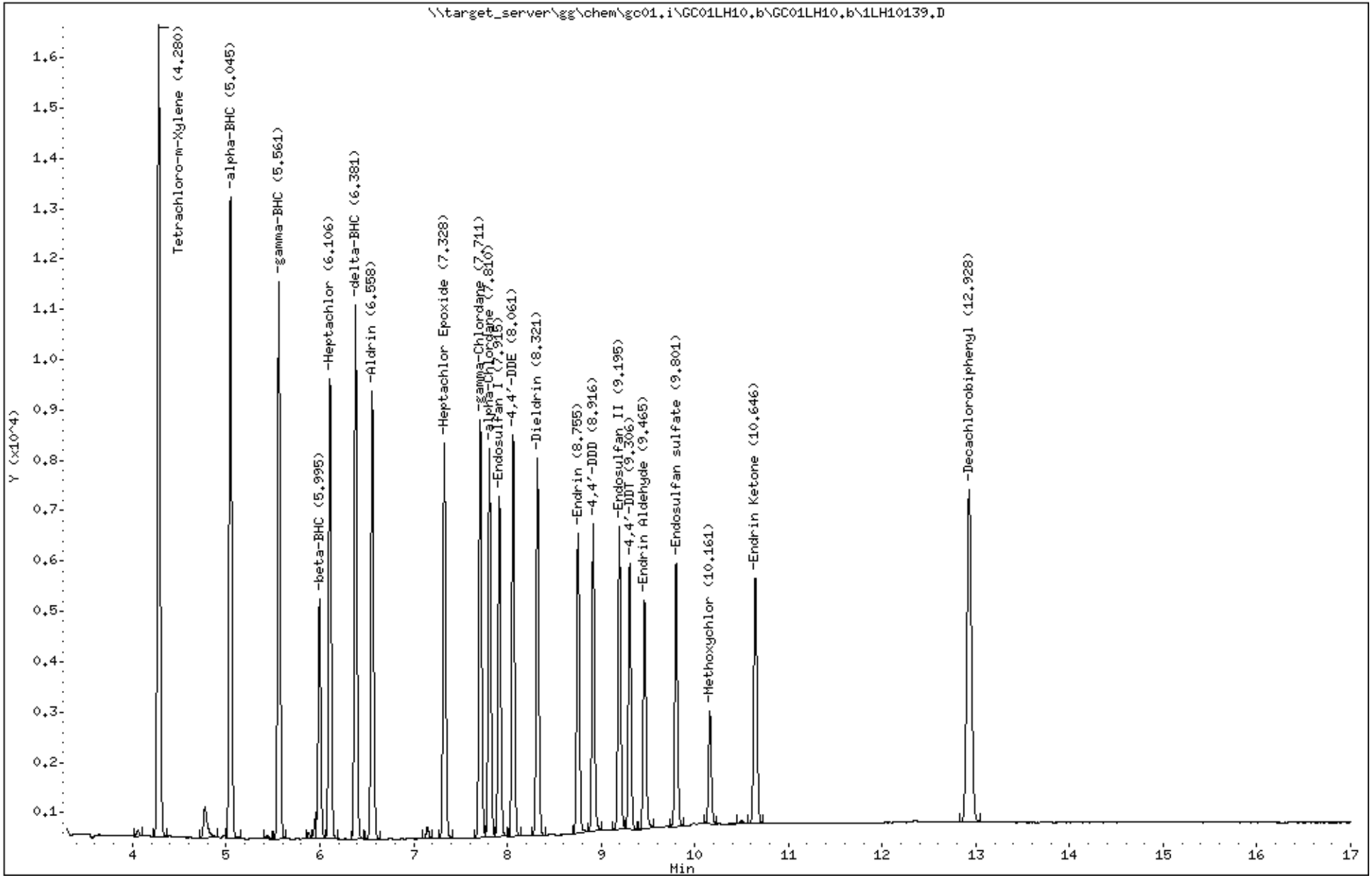
Data file : \\target_server\gg\chem\gc01.i\GC01LH10.b\GC01LH10.b\1LH10139.D
Lab Smp Id: WG233964-2 Client Smp ID: WG233964-LCS
Inj Date : 10-AUG-2018 18:20
Operator : AC Inst ID: gc01.i
Smp Info : WG233964-2,SL7420
Misc Info : WG233999,WG233964,WG233899-1,SL7420-1
Comment :
Method : \\target_server\gg\chem\gc01.i\GC01LH10.b\PEST218.m\PEST218.m
Meth Date : 11-Aug-2018 09:31 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 10:00 Cal File: 1LD10092.D
Als bottle: 16 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: LCS.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 4	Tetrachloro-m-Xylene	4.279	4.279	0.000	16122	0.08494	0.849	
5	alpha-BHC	5.044	5.044	0.000	12729	0.04477	0.448	
6	gamma-BHC	5.561	5.560	0.001	11072	0.04357	0.436	
7	beta-BHC	5.994	5.994	0.000	4757	0.04329	0.433	
8	delta-BHC	6.381	6.379	0.002	10612	0.04408	0.441	
9	Heptachlor	6.106	6.105	0.001	9116	0.04639	0.464	
10	Aldrin	6.557	6.557	0.000	8908	0.04111	0.411	
13	Heptachlor Epoxide	7.327	7.327	0.000	7847	0.04146	0.415	
15	gamma-Chlordane	7.711	7.709	0.002	8295	0.04332	0.433	
17	alpha-Chlordane	7.809	7.809	0.000	7718	0.04261	0.426	
20	Endosulfan I	7.914	7.914	0.000	6753	0.03943	0.394	
19	4,4'-DDE	8.061	8.060	0.001	7977	0.04275	0.427	
21	Dieldrin	8.321	8.319	0.002	7485	0.04126	0.413	
23	Endrin	8.754	8.754	0.000	5950	0.04167	0.417	
24	4,4'-DDD	8.916	8.915	0.001	6113	0.04304	0.430	
26	Endosulfan II	9.194	9.192	0.002	6008	0.04095	0.409	
28	Endrin Aldehyde	9.464	9.462	0.002	4538	0.04106	0.410	
27	4,4'-DDT	9.306	9.304	0.002	5292	0.04261	0.426	
32	Endosulfan sulfate	9.801	9.799	0.002	5228	0.04176	0.418	
29	Methoxychlor	10.161	10.159	0.002	2243	0.04350	0.435(a)	
33	Endrin Ketone	10.646	10.644	0.002	4874	0.04092	0.409	
$ 34	Decachlorobiphenyl	12.927	12.925	0.002	6589	0.07703	0.770	

Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\GC01LH10.b\1LH10139.D
Date : 10-AUG-2018 18:20
Client ID: WG233964-LCS
Instrument: gc01.i
Sample Info: WG233964-2,SL7420
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000188

Katahdin
ANALYTICAL SERVICES

LCS Recovery Report

Client:
Lab ID: WG233964-3
Client ID: LCS1
Project:
SDG: SL7420
LCS File ID: 1LH10140.D

Sample Date:
Received Date:
Extract Date: 10-AUG-18
Extracted By: DP
Extraction Method: SW846 3510C
Lab Prep Batch: WG233964

Analysis Date: 10-AUG-18
Analyst: AC
Analysis Method: SW846 8081B
Matrix: AQ
% Solids: NA
Report Date: 24-AUG-18

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
Toxaphene	93.3	10.0	9.33	ug/L	33-134
Tetrachloro-M-Xylene	84.7				44-124
Decachlorobiphenyl	51.8				41-131

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http://www.katahdinlab.com

Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10140.D
Report Date: 24-Aug-2018 12:55

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10140.D
Lab Smp Id: WG233964-3 Client Smp ID: WG233964-LCS1
Inj Date : 10-AUG-2018 18:39
Operator : AC Inst ID: gc01.i
Smp Info : WG233964-3,SL7420
Misc Info : WG233999,WG233964,WG233901-2,SL7420-1
Comment :
Method : \\target_server\gg\chem\gc01.i\GC01LH10.b\PEST218.m
Meth Date : 11-Aug-2018 09:31 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 09:02 Cal File: 1LD10089.D
Als bottle: 17 QC Sample: LCS1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: DoD5_toxLCS.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

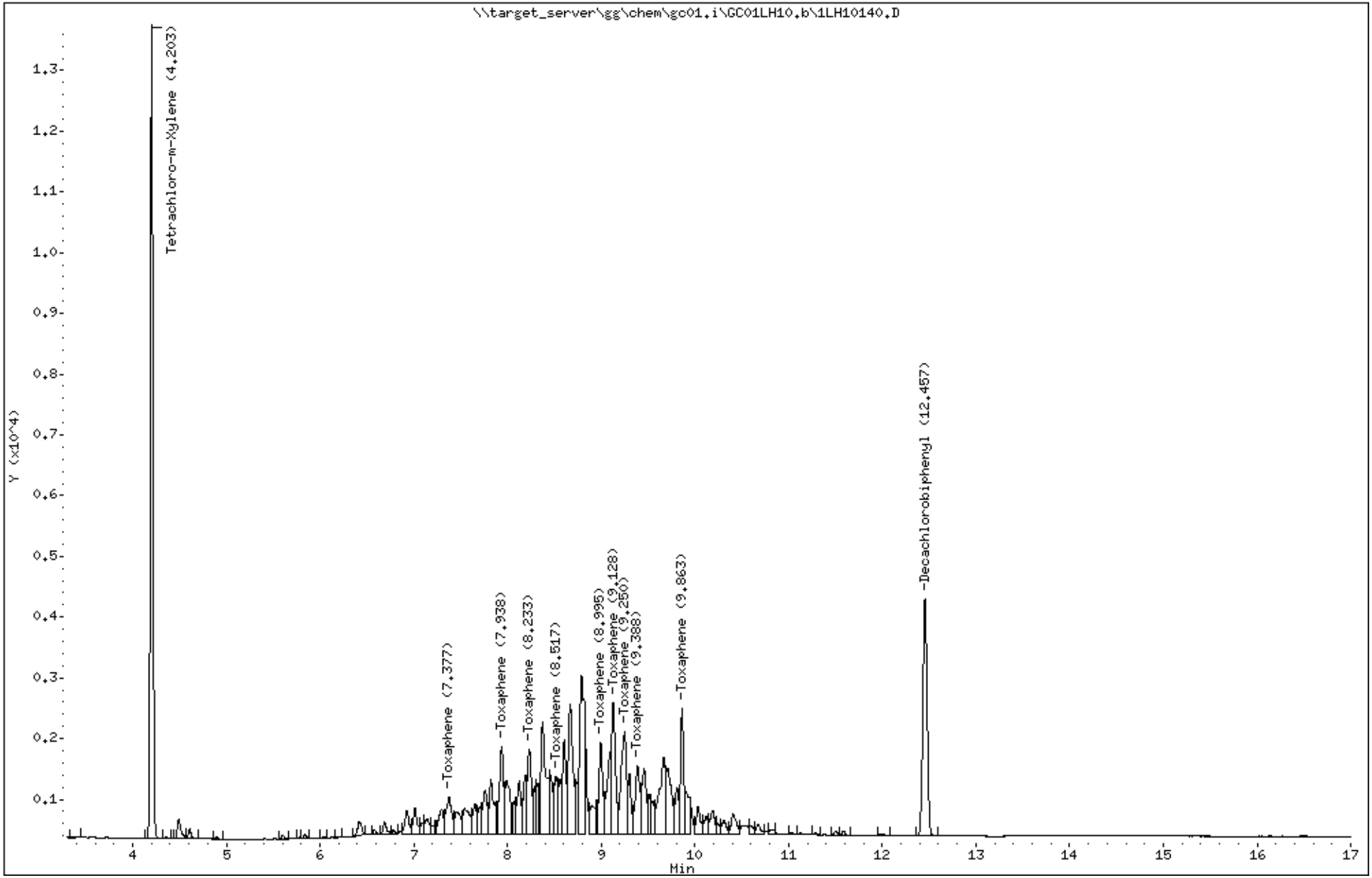
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/mL)	CONCENTRATIONS FINAL (ug/L)	TARGET RANGE	RATIO	REVIEW CODE
$ 4 Tetrachloro-m-Xylene					CAS #: 877-09-8			
4.203	4.200	0.003	13394	0.08468	0.847			
18 Toxaphene					CAS #: 8001-35-2			
7.376	7.374	0.002	602	0.94946	9.49	80.00- 120.00	100.00(M)	M5
7.938	7.932	0.006	1428	1.33775	13.4	132.55- 198.82	237.21	M5
8.231	8.229	0.002	1396	1.19667	12.0	143.37- 215.06	231.89	M5
8.515	8.512	0.003	941	0.64199	6.42	180.17- 270.26	156.31	M5
8.995	8.992	0.003	1498	1.13527	11.4	152.52- 228.78	248.84	M5
9.128	9.124	0.004	2158	0.94274	9.43	262.14- 393.21	358.47	M5
9.250	9.250	0.000	1687	0.75474	7.55	250.33- 375.50	280.23	M5
9.388	9.394	-0.006	1115	0.58919	5.89	226.91- 340.37	185.22	M5
9.863	9.860	0.003	2064	0.65124	6.51	355.72- 533.58	342.86	M5
			Average of Peak Concentrations =		9.11			
$ 34 Decachlorobiphenyl					CAS #: 2051-24-3			
12.456	12.445	0.011	3909	0.05183	0.518			

BF

1:35 pm, Aug 24, 2018

Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10140.D
Date : 10-AUG-2018 18:39
Client ID: WG233964-LCS1
Instrument: gc01.i
Sample Info: WG233964-3,SL7420
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000191

Data File: 1LH10140.D
Report Date: 24-Aug-2018 12:55

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LH10.b\GC01LH10.b\1LH10140.D
Lab Smp Id: WG233964-3 Client Smp ID: WG233964-LCS1
Inj Date : 10-AUG-2018 18:39
Operator : AC Inst ID: gc01.i
Smp Info : WG233964-3,SL7420
Misc Info : WG233999,WG233964,WG233901-2,SL7420-1
Comment :
Method : \\target_server\gg\chem\gc01.i\GC01LH10.b\PEST218.m\PEST218.m
Meth Date : 11-Aug-2018 09:31 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 10:00 Cal File: 1LD10092.D
Als bottle: 17 QC Sample: LCS1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: DoD5_toxLCS.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: T8-D4700

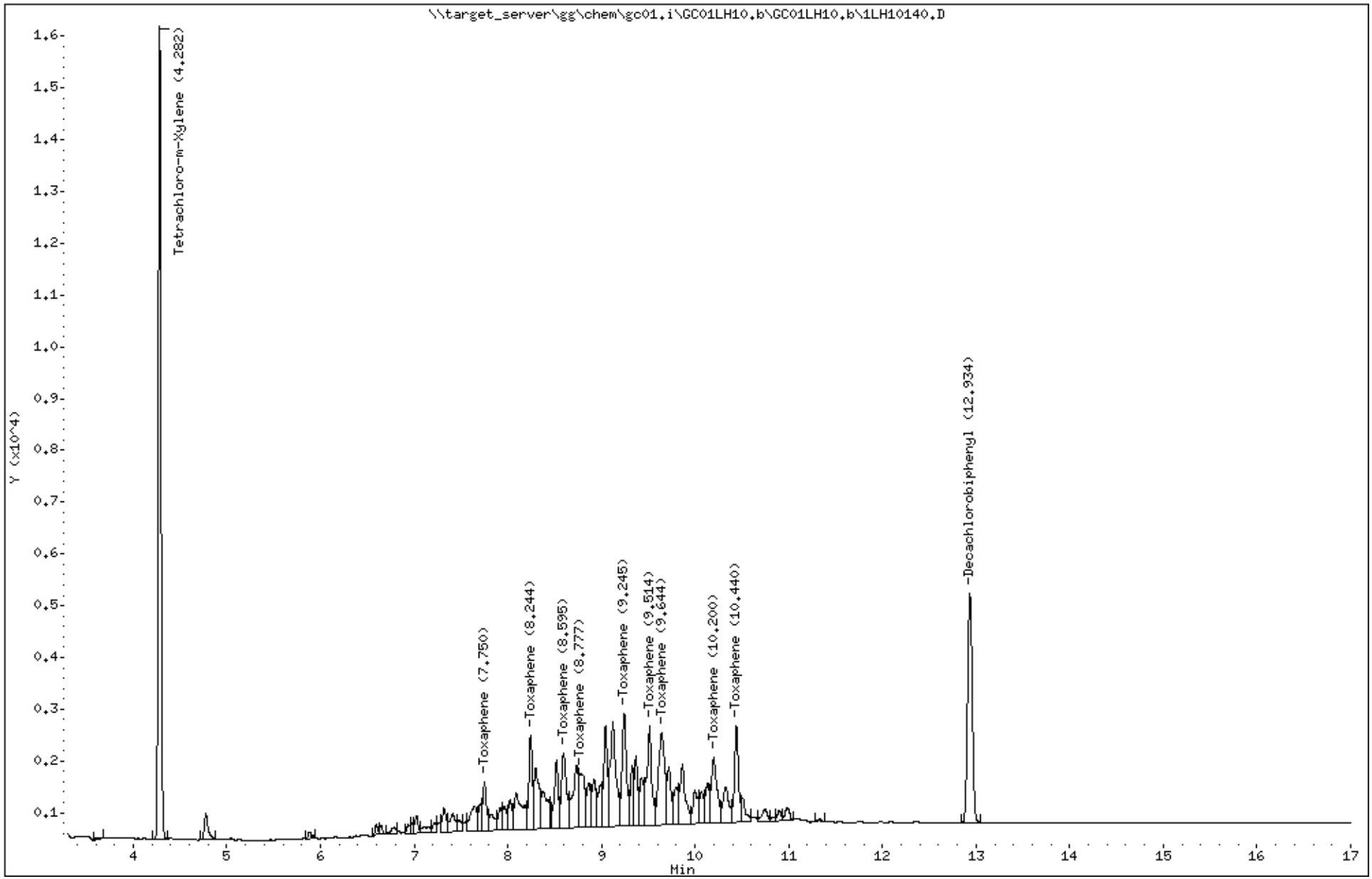
Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

				CONCENTRATIONS ON-COL (ug/mL)	FINAL (ug/L)	TARGET RANGE	RATIO	REVIEW CODE
$ 4 Tetrachloro-m-Xylene						CAS #: 877-09-8		
4.282	4.279	0.003	15700	0.08272	0.827			
18 Toxaphene						CAS #: 8001-35-2		
7.750	7.746	0.004	937	1.00085	10.0	80.00- 120.00	100.00(M)	M5
8.243	8.242	0.001	1817	1.16050	11.6	133.72- 200.58	193.92	M5
8.595	8.597	-0.002	1448	1.02303	10.2	121.08- 181.62	154.54	M5
8.777	8.802	-0.025	1046	0.67080	6.71	134.30- 201.44	111.63	M5
9.245	9.246	-0.001	2168	1.23440	12.3	137.11- 205.67	231.38	M5
9.513	9.512	0.001	1908	1.02753	10.3	146.79- 220.18	203.63	M5
9.643	9.642	0.001	1791	0.73085	7.31	189.17- 283.75	191.14	M5
10.200	10.196	0.004	1276	0.75021	7.50	126.28- 189.42	136.18	M5
10.440	10.442	-0.002	1872	0.79807	7.98	193.72- 290.58	199.79	M5
Average of Peak Concentrations =					9.33			
$ 34 Decachlorobiphenyl						CAS #: 2051-24-3		
12.933	12.925	0.008	4427	0.05175	0.518			

BF
1:35 pm, Aug 24, 2018

Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\GC01LH10.b\1LH10140.D
Date : 10-AUG-2018 18:39
Client ID: WG233964-LCS1
Instrument: gc01.i
Sample Info: WG233964-3,SL7420
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000193

Katahdin
ANALYTICAL SERVICES

LCS Recovery Report

Client:
Lab ID: WG233964-4
Client ID: LCS2
Project:
SDG: SL7420
LCS File ID: 1LH10144.D

Sample Date:
Received Date:
Extract Date: 10-AUG-18
Extracted By: DP
Extraction Method: SW846 3510C
Lab Prep Batch: WG233964

Analysis Date: 10-AUG-18
Analyst: AC
Analysis Method: SW846 8081B
Matrix: AQ
% Solids: NA
Report Date: 24-AUG-18

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
Technical Chlordane	* 228.	10.0	22.8	ug/L	62-140
Tetrachloro-M-Xylene	* 131.				44-124
Decachlorobiphenyl	* 148.				41-131

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Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10144.D
Report Date: 24-Aug-2018 13:25

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10144.D
Lab Smp Id: WG233964-4 Client Smp ID: WG233964-LCS2
Inj Date : 10-AUG-2018 19:57
Operator : AC Inst ID: gc01.i
Smp Info : WG233964-4,SL7420
Misc Info : WG233999,WG233964,WG233901-2,SL7420-1
Comment :
Method : \\target_server\gg\chem\gc01.i\GC01LH10.b\PEST218.m
Meth Date : 11-Aug-2018 09:31 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 09:02 Cal File: 1LD10089.D
Als bottle: 21 QC Sample: LCS2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: DoD5_tcLCS.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

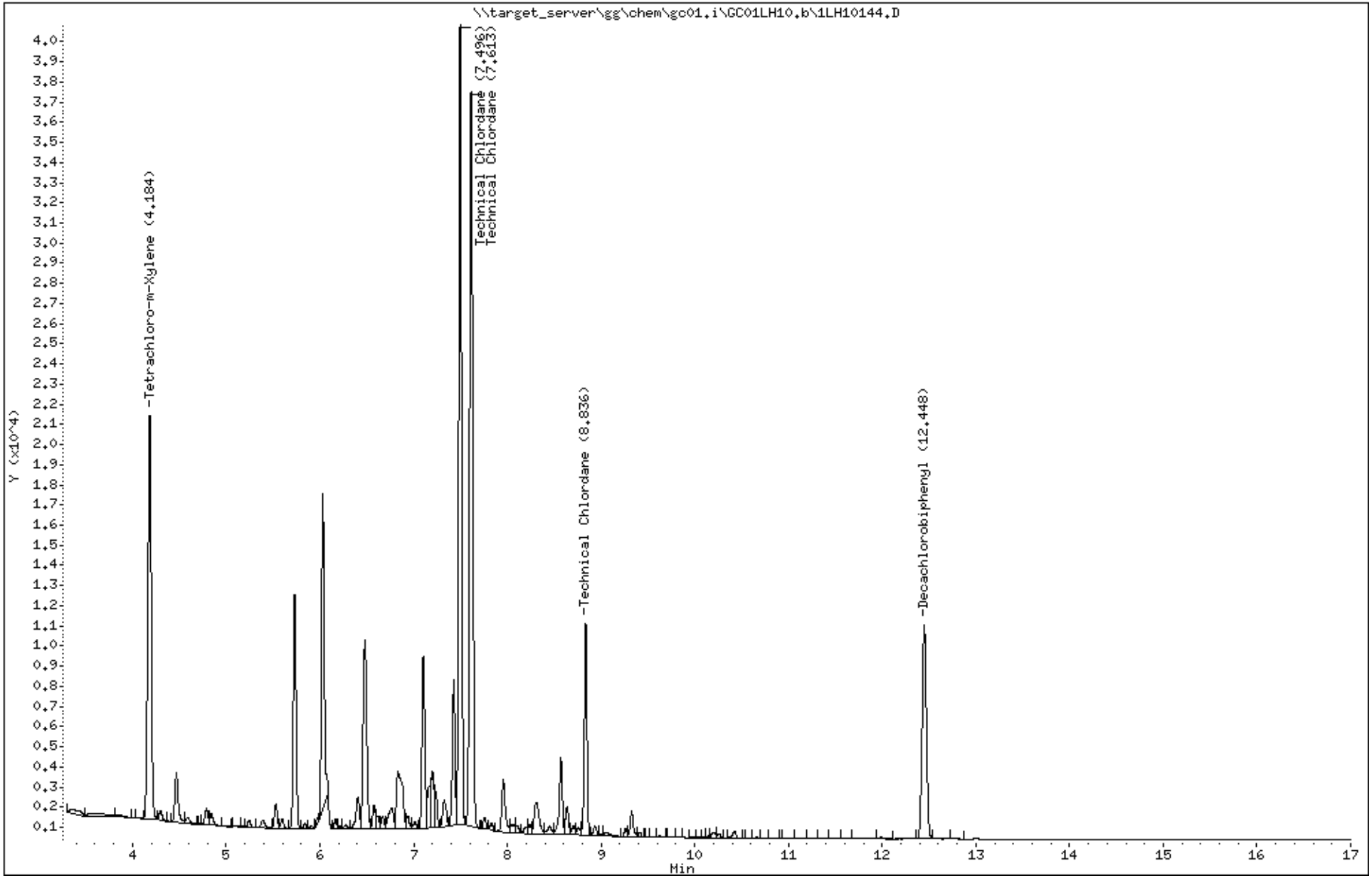
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/mL)	FINAL (ug/L)	TARGET RANGE	RATIO	REVIEW CODE
$ 4 Tetrachloro-m-Xylene					CAS #: 877-09-8			
4.184	4.200	-0.016	19997	0.12643	1.26			(R)
14 Technical Chlordane					CAS #: 12789-03-6			
8.836	8.836	0.000	10524	2.55961	25.6	80.00- 120.00	100.00	(R)
7.496	7.501	-0.005	39710	1.90813	19.1	393.70- 590.55	377.33	
7.612	7.621	-0.009	36442	1.83268	18.3	372.09- 558.14	346.28	
		Average of Peak Concentrations =			21.0			
$ 34 Decachlorobiphenyl					CAS #: 2051-24-3			
12.447	12.445	0.002	10590	0.14043	1.40			(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\1LH10144.D
Date : 10-AUG-2018 19:57
Client ID: WG233964-LCS2
Instrument: gc01.i
Sample Info: WG233964-4,SL7420
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-1
Column diameter: 0.53



Katahdin Analytical Services 6000196

Data File: 1LH10144.D
Report Date: 24-Aug-2018 13:25

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc01.i\GC01LH10.b\GC01LH10.b\1LH10144.D
Lab Smp Id: WG233964-4 Client Smp ID: WG233964-LCS2
Inj Date : 10-AUG-2018 19:57
Operator : AC Inst ID: gc01.i
Smp Info : WG233964-4,SL7420
Misc Info : WG233999,WG233964,WG233901-2,SL7420-1
Comment :
Method : \\target_server\gg\chem\gc01.i\GC01LH10.b\PEST218.m\PEST218.m
Meth Date : 11-Aug-2018 09:31 acronin Quant Type: ESTD
Cal Date : 09-APR-2018 10:00 Cal File: 1LD10092.D
Als bottle: 21 QC Sample: LCS2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: DoD5_tcLCS.sub
Target Version: 4.12 Sample Matrix: WATER
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

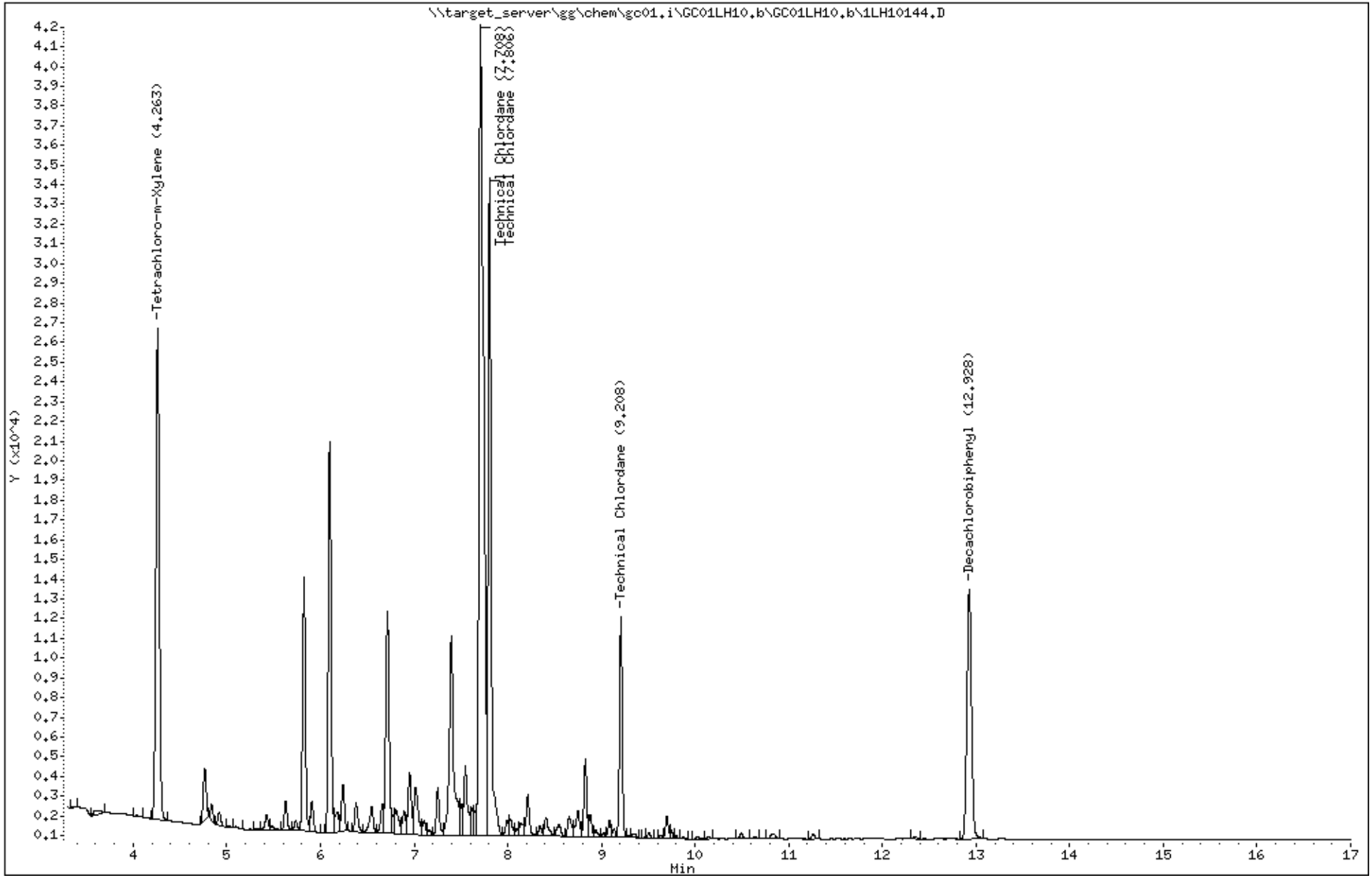
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.01000	Final Volume (L)
Vo	1.000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/mL)	FINAL (ug/L)	TARGET RANGE	RATIO	REVIEW CODE
$ 4 Tetrachloro-m-Xylene					CAS #: 877-09-8			
4.263	4.279	-0.016	24920	0.13129	1.31			(R)
14 Technical Chlordane					CAS #: 12789-03-6			
9.208	9.208	0.000	11149	2.23123	22.3	80.00- 120.00	100.00	(R)
7.708	7.713	-0.005	41113	2.17213	21.7	329.23- 493.85	368.76	
7.806	7.810	-0.004	33326	2.44859	24.5	229.68- 344.52	298.91	
		Average of Peak Concentrations =			22.8			
$ 34 Decachlorobiphenyl					CAS #: 2051-24-3			
12.928	12.925	0.003	12639	0.14775	1.48			(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: \\target_server\gg\chem\gc01.i\GC01LH10.b\GC01LH10.b\1LH10144.D
Date : 10-AUG-2018 19:57
Client ID: WG233964-LCS2
Instrument: gc01.i
Sample Info: WG233964-4,SL7420
Purge Volume: 1.0
Operator: AC
Column phase: ZB-Multiresidue-2
Column diameter: 0.53



Katahdin Analytical Services 6000198

Logbooks and Supporting Documents

KATAHDIN ANALYTICAL SERVICES, LLC. Non-Volatile TCLP/SPLP Extraction Log

I. EXTRACTION CONDITIONS

Extraction Method:	SW846 1311 (TCLP) ☑		Balance ID: BAL-15	Rotary Extractor ID: 2		
	SW846 1312 (SPLP) ☐		pH Meter ID: Orion 520A s/n 7422	pH Probe ID: 573352600388		
Solid pH Determination:	Date: 8-9-18	Analyst: AMJ	Room Thermometer ID: Dig 70	(Room Temp Criteria. 23(±2)°C)		
Rotary Extraction Started:	Date: 8/9/18	Time: 1321	Analyst: AMJ	RoomTemp(°C):	Start: 22.4	End: 23.2
Rotary Extraction Completed:	Date: 8/10/18	Time: 0521	Analyst: AMJ	Room Temp (°C):	Min. 22-4	Max. 23.4
Extraction Filtered:	Date: 8/10/18	Time: 0753	Analyst: AMJ	Filter Lot #: R7SA02387 / R7MA33010		
Elapsed Extraction Time (HH:MM): 16:00		5% HNO_3 ID (used to wash filters): HP2074		HNO_3 Lot # (used to preserve extracts): N5K110		
Fluid 1 pH (Day of use): PBT1470A - 4.95 PBT1472A - 4.94		Fluid 1 Expiration Date: 8/11/19 / 8/9/19		Rotary Extractor Rotation Rate Checked? ✓		
Fluid 2 pH (Day of use): PBT1471A - 2.92		Fluid 2 Expiration Date: 8/6/19		Criteria. 30 ± 2 RPM (29)		

II. EXTRACTION SETUP

TCLP Fluid pH: #1 - 4.93 ± 0.05 #2 - 2.88 ± 0.05 SPLP Fluid pH: #1 - 4.20 ± 0.05 #2 - 5.00 ± 0.05

Katahdin Sample No. (include bottle ID)	Matrix	Check One: 100% Wet Solids- waste will yield no liquid upon filtration	Check One: < 100% Wet Solids (Perform Solids Determination below)	SPLP FLUID # (1 for east and 2 for west of Mississippi River)	TCLP pH Determination and Fluid Selection (date & init. above): Initial pH of solid phase: (If <5, use Fluid #1; if >5 add 3.5 mL of 1 N HCl)	TCLP pH Determination and Fluid Selection (date & init. above): pH after 1 N HCL addition (If <5, use Fluid #1; If >5, use Fluid #2	Extraction Setup: Volume of Extraction Fluid (mL)	Extraction Setup: Fluid # used	Extraction Setup: Associated Extraction Blank ID:	Weight of Waste (g)	pH of extract after extraction:	Extract to be analyzed for: Metals (M), SVOA (S), PEST (P), HERB (H), Cyanide (C)	Extraction Bottle ID (if applicable)
SL7472-1A	SL	✓	—	—	11.66	11.17	2000	2	PBT1471A	100.19	10.36	M	NA
SL7472-2A	SL	✓	—	—	11.66	11.17	2000	2	1	100.12	10.36	M	NA
SL7420-1C	SL	✓	—	—	7.54	1.88	2000	1	PBT1470B	100.03	5.01	M,H,P S,V	38
SL7420-2C	SL	✓	—	—	8.56	2.02	2000	1	↓	100.10	6.03	M,H,P S,V	47
SL7425-1B	SL	✓	—	—	7.95	1.95	2000	1	↓	100.05	5.09	M,H,P SV	54
SL7426-1B	SL	✓	—	—	10.49	2.09	2000	1	PBT1472A	100.15	8.55	M,H,P SV	33
PBT1471A	AQ	—	—	—	—	—	2000	2	NA	NA	2.41	M	NA
PBT1470A/B	AQ	—	—	—	—	—	2000	1	NA	NA	4.74	H,P,S,V	53
PBT1472A	AQ	—	—	—	—	—	2000	1	NA	NA	8.486	M,H,P,S	49

AMJ 8/9/18 AMJ 8/9/18 JS 8/9/18 AMJ 8/10/18



III. SOLIDS DETERMINATION

Date AQ Filtered:

Katahdin Sample No. (include bottle ID)	AQ or SL	Time Filt'd	A Weight of filter (g)	B Weight of filtrate vessel (g)	C Weight of weigh boat + waste (g)	D Weight of weigh boat + residue (g)	E Weight of waste (C-D) (g)	F Weight of filtrate vessel + filtrate (g)	G Weight of liquid phase (F-B) (g)	H Percent wet solids [(E-G)/E x 100%]	I Weight of filter + dry solids (g)	J Weight of dry solids (I-A) (g)	K Percent dry solids (J/E x 100%)

IV. PHASE SEPARATION

Katahdin Sample No. (include bottle ID)	Matrix	Percent dry solids [1] <0.5%	Percent dry solids [1] >0.5%	L Weight of filtrate vessel (g)	M Weight of weigh boat + waste (g)	N Weight of weigh boat + residue (g)	O Weight of waste (M-N) (g)	P Weight of filtrate vessel + filtrate (g)	Q Weight of liquid phase (P-L) (g)	R Volume of liquid phase (mL) [2]	S Weight of wet solids (O - Q) (g)

AMJ 8/10/18

1) If dry solids is <0.5%, filter sufficient volume of waste to support all required analyses. If dry solids >0.5% and wet solids <100%, perform phase separation (steps L – S above).

2) If miscible, proportionately combine pre-extraction filtrate with rotary extract. If not miscible, analyze aliquots separately and mathematically combine results.

V. COMMENTS:

Reviewed By_____ Date_____

Katahdin Analytical Services 6000200

KATAHDIN ANALYTICAL SERVICES, LLC.
ORGANIC EXTRACTIONS LOG - AQUEOUS PESTICIDE/PCB

Extraction Method: (check one)	SW846 3510 (SEP) ✓		SW846 3520 (CLLE)	SW846 3535 (SPE)
Analytical Method:(check one)	SW846 8081 ✓	SW846 8082 ✓	EPA 608 Other:	
Surrogate ID: GC1897	Spike ID: GC1894 (PCB) ~~PEST~~		Spike ID: GC1869	—
Methylene Chloride Lot #: DU514-43	Hexane Lot #: DT922		Acetone Lot #: —	—
KI Starch Paper ID: 102017	pH Paper Lot # HC739245		Sample pH between 5 and 9? Yes	Note samples requiring pH adjustment in comments section.
$NaSO_4$ Lot # 0796B002	Filter Paper Lot #: 1408/047		Boiling Stones ID: 03272019	H_2SO_4 or NaOH Lot #: 165389
Nitrogen Bath Temperature: 36°	Vial Lot #: 180 44413		—	—
Prep Start Time: 12:15	Prep End Time: 13:00		CLLE Start Time: —	CLLE End Date & Time: —

Date Extracted	Ext. Init.	Sample ID	Initial Vol. (mL)	Surr. Vol.	Spike Vol.	Fraction: Pest	Fraction: PCB	Final Vol. mL	Date Conc.	Tray Location	Initials	Clean-Up: GPC	Clean-Up: Flor.	Clean-Up: Acid Wash	Clean-Up: Other	Comments
										PEST: R485511						PEST: R485511
08-10-18	DP	WG233964-1	1000	1.00	NR	✓	✓	10.00	08-10-18	C2	KF			✓		PCB: R485512
		WG233965-1														
		WG233964-2			1.00					C3						
		-3								C4						
		-4								C5						TOX: GC1893
		-5	200		NR					C6						TCHLOR: GC1892
		-6	200							C7						PBT1470B Dilute to 1000
		WG233965-2	1000		1.00		✓			C8				✓		PBT1472A Dilute to 1000
																DP 08-10-18

Date Extracted	Ext. Init.	Sample ID	Initial Vol. mL	Surr. Vol.	Spike Vol.	Fraction: Pest	Fraction: PCB	Final Vol. mL	Date Conc.	Tray Location	Initials	Clean-Up: GPC	Clean-Up: Flor.	Clean-Up: Acid Wash	Clean-Up: Other	Comments
08-10-18	DP	SL7125-6H	960	1.00	NR	✓		10.00	08-10-18	C9	KF					RE
		SL7420-1C	200							C10						
		-2C								C11						
		SL7425-1B								C12						
		SL7426-1B								D1						
		SL7503-1I5	990				✓			D2				✓		
		SL7496-9E	1050			✓	✓			D3				✓		
																DP 08-10-18

Katahdin Analytical Services

GC Laboratory Instrument Runlog
Instrument: GC01
Amount Injected: 2 uL
Column Numbers: 473/474
Method: SW846 8011 / 8081 / 8082 / 8151
(circle) EPA 504.1 / 556 / 608

Standard	Standard ID	
EVAL	P9029	
IndAB 0.05 0.025	P9158	P9159
Tox 1.0 0.5	P9025	P9026
TC 0.5 0.25	P9114	P9115

Date	Init.	Result File	Sample ID	Y/N	Analytical Workgroup	Method	Comments
7-26-18	AC	ILG10419	Tox 1.0	Y	WG232982-8	Pest217	
7-27-18		420	TC 0.5	Y	WG232982-9		
		421	IndAB 0.05	Y	-10		2TB
		422	SL6946-1	Y			608 Tox IndA
		423	SL6738-1	Y			608? B
		424	Rinse	N			dark sample
		425	SL6560-1	Y	WG232427		
		426	-2	Y	↓		
		427	Rinse	N			dark samples
		428	IndAB 0.025	Y			2x A+B matrix
			Change Liner/septa clip guard column				
8-3-18	AC	ILH10001	Prime		NA		
		2	Tox 1.0	N		Pest218	RDPs?
		3	TC 0.5	↓	↓		↓
		4	Tox 1.0	Y	WG233898-1		P9187
		5	10	Y	-2		P9186
		6	2.5	Y	-3		50→200 P9186
		7	0.5	Y	-4		P9188
		8	0.25	Y	-5		50→200 P9187
		9	0.1	Y	-6		20→200 P9187
		10	IND	Y	-7		P9028
		11	TC 0.5	Y	WG233899-1		P9114
		12	2.5	Y	-2		P9113 50→200
		13	1.0	Y	-3		20→200 P9113
		14	0.25	Y	-4		P9115
		15	0.1	Y	-5		50→250 P9114
		16	0.05	Y	-6		20→200 P9114
		17	IND	Y	-7		P9196
		18	Extras 0.05	N	NA		
		19	0.25	↓	↓		

Katahdin Analytical Services

GC Laboratory Instrument Runlog
Instrument: GC01
Amount Injected: 2 uL
Column Numbers: 473/474
Method: SW846 8011 / 8081 / 8082 / 8151
(circle) EPA 504.1 / 556 / 608

Standard	Standard ID

Date	Init.	Result File	Sample ID	Y/N	Analytical Workgroup	Method	Comments
8-3-18	AC	ILH10020	8 extras 0.025	N	NA	Pest218	
		21	0.025 ~~0.1~~	N			response ↑
		22	0.01 ~~0.025~~				
		23	0.005 ~~0.01~~				
		24	IND ~~0.005~~	↓			
		25	EVAL ~~IND~~	Y			
		26	INDAB 0.05	N			standard prepped wrong
		27	0.25				
		28	0.1				
		29	0.025				
		30	0.01				
		31	0.005				✓
↓	↓	32	IND	↓	↓	↓	↓
8-6-18		33	Prime	N			
		34	8 extra 0.025	Y	WG233900-4		P9175
		35	0.05	Y	-1		P9174
		36	0.25	Y	-2		P9173
		37	0.1	Y	-3		100→250 P9173
		38	0.01	Y	-5		50→250 P9174
		39	0.005	Y	-6		20→200 P9174
		~~840~~	IND	Y	-7		P9193
		41	EVAL	Y	WG233901-1		P9024
		42	INDAB 0.05	N			responses ↑
		43	0.25	Y	-3		P9199 50→200
		44	0.1	N			prepped wrong
		45	0.025	Y	-5		P9201
		46	0.01	Y	-6		P9200 50→250
		47	0.005	Y	-7		P9200 20→200
		48	0.05	Y	-2		P9200
↓	↓	49	0.1	Y	-4	↓	P9199 20→200

Katahdin Analytical Services

GC Laboratory Instrument Runlog
Instrument: GC01
Amount Injected: 2 uL
Column Numbers: 473/474
Method: SW846 8011 / 8081 / 8082 / 8151
(circle) EPA 504.1 / 556 / 608

Standard	Standard ID	
EVAC	P9029	
INDAB 0.05 0.025	P9200	P9201
Tox 1.0 0.5	P9188	P9189
TC 0.5 0.25	P9114	P9115

Date	Init.	Result File	Sample ID	Y/N	Analytical Workgroup	Method	Comments
8-6-18	AC	ILH10050	INAB INJ.	N	WG233901	Pest218	alpha BHC ↑
		51	INDAB INJ	Y	-8		P9198
		52	Tox 1.0	Y	-9		
		53	TC 0.5	Y	-10		
		54	SL6787-23	Y			
		55	-25	Y			DL 1:10
		56	-26	N			DL 1:2
		57	SL6788-2	Y			DL 1:6
		58	-3	Y			
		59	-4	Y			
		60	WG233416-1	Y			
		61	-2	Y			
		62	-3	Y			
		63	-4	Y			
		64	SL7178-1	Y			
		65	SL7179-1	Y			
		66	SL7227-1	Y			Tcx ↑ 18
		67	Tox 0.5	Y	-11		
		68	TC 0.25	Y	-12		
		69	EVAC	N	-13		not needed
		70	INDAB 0.025	Y	-14		
		71	WG233230-1	N			
		72	-2				
		73	-3				
		74	-4				
		75	WG233225-1				
		76	-2				
		77	-3				
8-7-18		78	-4				
		79	-5				

Katahdin Analytical Services

GC Laboratory Instrument Runlog
Instrument: GC01
Amount Injected: 2 uL
Column Numbers: 473/474
Method: SW846 8011 / (8081) / 8082 / 8151
(circle) EPA 504.1 / 556 / 608

Standard	Standard ID	
EVAL	P9029	
IWDAB 005 0.025	P9200	P9201
Tox 1.0 0.5	P9188	P9189
TC 0.5 0.25	P9114	P9115

Date	Init.	Result File	Sample ID	Y/N	Analytical Workgroup	Method	Comments
8-7-18	AC	ILH10 110	IWDAB 0.025	Y	WG233901-21	Rest218	
		111	SL7125-6	Y			DCB↓A+B
		112	-1	Y			
		113	-2	Y			
		114	-3	Y			
		115	-4	Y			DL 1:4
		116	-5	Y			
		117	-4DL	Y			1:4 100/400
		118	-5DL	Y			1:4 100/400
		119	WG233225-5	Y			several ↓
		120	-6	Y			↓
		121	Tox 1.0	Y			
		122	TC 0.5	Y			
		123	IWDAB 0.05	Y	-22		
8-10-18		124	Prime	N			
		125	Tox 1.0	Y	WG233999-1		
		126	TC 0.5	Y	-2		
		127	EVAL	Y	-3		
		128	IWDAB 0.05	Y	-4		
		129	WG233717-1	Y			
		130	-2	Y			
		131	3550 LOD1	Y			
		132	LOD2				
		133	LOQ				
		134	Tox LOD				
		135	LOQ				
		136	TC LOD				
		137	LOQ				
		138	WG233964-1	Y			
		139	-2	Y			

Katahdin Analytical Services

GC Laboratory Instrument Runlog
Instrument: GC01
Amount Injected: 2 uL
Column Numbers: 473/474
Method: SW846 8011 / (8081) / 8082 / 8151
(Circle) EPA 504.1 / 556 / 608

Standard	Standard ID	
EVAL	P9029	
IWDAB 0.05 0.025	P9200	P9201
Tox 1.0 0.5	P9188	P9189
TC 0.5 0.25	P9114	P9115

Date	Init.	Result File	Sample ID	Y/N	Analytical Workgroup	Method	Comments
8-10-18	AC	1LHID140	WG233964-3	Y	WG233999	Pest2181	
		141	Tox 0.5	Y	-5		
		142	TC 0.25	Y	-6		TCTA
		143	IWDAB 0.025	Y	-7		
		144	WG233964-4	Y			All ↑ Samples clean
		145	-5	Y			
		146	-6	Y			
		147	SL7125-6Re	Y			
		148	SL7420-1	Y			TCXTAIB PCBTB
		149	SL7420-2	Y			
		150	SL7425-1	Y			
		151	SL7426-1	Y			
		152	SL7503-11	Y			OCBTB
		153	SL7496-9	Y			
		154	~~Tox 1.0~~ TC 0.5	Y	-8		
		155	~~AC 8-11-18 TC 0.5 Tox 1.0~~	Y	-9		
		156	IWDAB 0.05	Y	-10		
8-11-18		157	SL7197-7	Y			
		158	IWDAB 0.025	Y			
		159	Hexane	N			
8-13-18		160	AC ~~Tox~~ Prime	N	WG234710		
		161	Tox 1.0	N	-1		
		162	TC 0.5	Y			
		163	EVAL	Y	-2		
		164	IWDAB 0.05	Y	-3		
		165	WG234185-1	Y			
		166	-2	Y			
		167	-3	Y			
		168	-4	Y			
		169	-5	Y			

APPENDIX I
FINAL
DATA QUALITY EVALUATION

REMEDIAL INVESTIGATION (RI)
BURNING GROUNDS, SANITARY LANDFILL, AND PISTOL RANGE AREAS
(REMAINING PROPERTY OF THE U.S. GOVERNMENT)

CORNHUSKER ARMY AMMUNITION PLANT
GRAND ISLAND, NEBRASKA

Prepared for:

U.S. Army Corps of Engineers
Omaha District

Contract W9128F-16-D-0014
Task Order 0002

Prepared by

ATI, Inc.
9220 Rumsey Road, Suite 100
Columbia, MD 21045

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June 2021

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µg/L	micrograms per liter
mg/kg	milligrams per kilogram
%D	percent difference
%R	percent recovery
ATI	ATI, Inc.
CCB	continuing calibration blank
CHAAP	Cornhusker Army Ammunition Plant
DAF	dilution attenuation factor
DQO	data quality objective
EPA	U.S. Environmental Protection Agency
FS	Feasibility Study
HGL	HydroGeoLogic, Inc.
HMX	octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine
ICB	initial calibration blank
ICS	interference check sample
Katahdin	Katahdin Analytical Services, Inc.
LCS	laboratory control sample
LCSD	laboratory control sample duplicate
LOD	limit of detection
LOQ	limit of quantitation
MCL	maximum contaminant level
MS	matrix spike
MSD	matrix spike duplicate
PAH	polynuclear aromatic hydrocarbon
PAL	project action level
QAPP	Quality Assurance Project Plan
QC	quality control
RDX	1,3,5-trinitroperhydro-1,3,5-triazine
RI	Remedial Investigation
RPD	relative percent difference
RSL	Regional Screening Level

SDG	sample delivery group
SIM	selection ion monitoring
SPLP	synthetic precipitation leaching procedure
SSL	soil screening level
UFP	Uniform Federal Policy
USACE	U.S. Army Corps of Engineers
VOC	volatile organic compounds

APPENDIX I
DATA QUALITY EVALUATION

REMEDIAL INVESTIGATION (RI)
BURNING GROUNDS, SANITARY LANDFILL, AND PISTOL RANGE AREAS
(REMAINING PROPERTY OF THE U.S. GOVERNMENT)

CORNHUSKER ARMY AMMUNITION PLANT
GRAND ISLAND, NEBRASKA

1.0 DATA QUALITY EVALUATION OVERVIEW

This section describes the data quality evaluation process used to review and evaluate laboratory analytical data collected in support of the Remedial Investigation (RI) performed at seven sites within five Government-owned tracts of land that include, or are adjacent to, the former Demolition Burning Grounds, the Sanitary Landfill area, and the Pistol Range of the former Cornhusker Army Ammunition Plant (CHAAP), Grand Island, Nebraska. ATI, Inc. (ATI) and HydroGeoLogic, Inc. (HGL) have prepared this document under U.S. Army Corps of Engineers (USACE) - Omaha District Contract No. W9128F16-D-0014, Task Order Number 0002.

Environmental samples were analyzed by Katahdin Analytical Services, Inc. (Katahdin) of Scarborough, Maine. The data from the combined RI sampling events was delivered in 60 sample delivery groups (SDG). Project groundwater, surface soil, and subsurface soil samples were analyzed for the following parameters, with methods and analyte lists selected based on site- and sample-specific data quality objectives (DQOs):

- Volatile organic compounds (VOC) by SW-846 Method 8260B;
- Polynuclear aromatic hydrocarbons (PAH) by SW-846 Method 8270D-selected ion monitoring (SIM);
- Explosives by SW-846 Method 8330B;
- Metals/mercury by SW-846 Method 6020A/7470A (water) or 6020A/7471B (soil); and
- Hexavalent chromium by SW-846 Method 7196A.

A subset of soil samples was extracted using the synthetic precipitation leaching procedure (SPLP), which is SW-846 Method 1312. The resulting leachates were analyzed as aqueous samples for explosives, metals, and mercury as required on a sample-specific basis.

Laboratory Data Consultants, Inc. of Carlsbad, California, performed data validation on the analytical results. All results were validated to U.S. Environmental Protection Agency (EPA) Stage

2B data review, as described in Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use (EPA, 2009).

The Laboratory Data Consultants, Inc. validator compared the performance of the quality control (QC) elements presented in the laboratory analytical reports to the criteria presented in the Uniform Federal Policy (UFP)-Quality Assurance Project Plan (QAPP) prepared for the RI at the Burning Grounds, Sanitary Landfill, and Pistol Range Areas (ATI/HGL, 2018) (hereafter, referred to as "the QAPP") to determine whether project criteria for precision, accuracy, and representativeness were met. The validator examined the laboratory signed chain of custody records and sample receiving documentation to verify sample receipt and condition. Data points associated with nonconformances were qualified in accordance with the QAPP using the data qualifiers presented in Table I.1. The final validation reports were reviewed by an HGL senior chemist. The complete set of CHAAP analytical data reports are provided in Appendix J. The validation reports and HGL's review memoranda are provided in Appendix K.

2.0 SUMMARY OF FINDINGS

Below is a summary of all QC discrepancies noted, including a discussion of those results with qualifier changes based on validation in accordance with the UFP-QAPP (ATI/HGL, 2018).

2.1 VOLATILE ORGANIC COMPOUNDS

2.1.1 Groundwater Samples

The analysis of groundwater samples yielded 11,561 VOCs results. No VOCs results were rejected in groundwater samples. Sporadic QC discrepancies caused VOCs results to be qualified J as estimated results, U as potential artifacts, or UJ as non-detections associated with a potentially estimated limit of detection (LOD).

Six acetone results, five methylene chloride results, and four toluene results in groundwater samples were qualified U as artifacts due to equipment and/or trip blank contamination; one acetone result and five 1,1,2-trichloro-1,2,2-trifluoroethane results were qualified U as artifacts due to method blank contamination. All results identified as artifacts were at concentrations below the associated project action levels (PAL), which are the May 2021 EPA Regional Screening Levels (RSL) for tap water (using a hazard index of 1) and the Federal maximum contaminant levels (MCL) for drinking water.

Sixteen VOCs field duplicate pairs were collected in association with groundwater samples. All VOCs results in field duplicates met the precision criteria with one exception. The field duplicate pair collected at CHAAP-19C-LGIA-DPT14 did not meet the precision criteria for naphthalene. The non-detected naphthalene result reported for sample CHAAP-19C-LGIA-DPT14 was qualified UJ and the detected naphthalene result for field duplicate CHAAP-19C-LGIA-DPT114 was qualified J.

A majority of the groundwater VOCs results that required a J or UJ qualifier were due to minor discrepancies in holding time or calibration. Additional results required J or UJ qualification for percent recovery (%R) discrepancies in matrix spike (MS)/matrix spike duplicate (MSD) pairs,

laboratory control samples (LCS) or LCS duplicates (LCSD), or surrogates. The 1,1,2-trichloro-1,2,2-trifluoroethane result for sample CHAAP-21C-UGIA-MW01 was reported at 210 micrograms per liter (µg/L), which is above the upper end of the calibrated range (150 µg/L). The laboratory attempted diluted reanalysis but the reanalyses also were associated with QC issues and the laboratory reported the original result; the affected result was qualified J by the validators.

2.1.2 Soil Samples

The analysis of soil samples yielded 5,082 VOCs results. No VOCs results were rejected in soil samples. Sporadic QC discrepancies caused VOCs results to be qualified J as estimated results, U as potential artifacts, or UJ as non-detections associated with a potentially estimated LOD.

One acetone result in a soil sample was qualified U as an artifact due to equipment and/or trip blank contamination; five 1,2,3-trichlorobenzene results, five 1,2,4-trichlorobenzene results, two carbon disulfide results, and eight naphthalene results were qualified U as artifacts due to method blank contamination. All results identified as artifacts were at concentrations below the associated PALs, which are the May 2021 RSLs for residential soil (using a hazard index of 1) and the soil screening levels (SSL) for groundwater protection, using a dilution attenuation factor (DAF) of 20.

Eight VOCs field duplicate pairs were collected in association with site and background soil samples. All VOCs results in field duplicates met the precision criteria.

A majority of the soil VOCs results that required a J or UJ qualifier were due to minor discrepancies in surrogate %Rs or internal standard peak areas. Additional results required J or UJ qualification for %R discrepancies in MS/MSD pairs, holding time exceedances, or calibration discrepancies.

2.2 POLYNUCLEAR AROMATIC HYDROCARBONS

2.2.1 Groundwater Samples

The analysis of groundwater samples yielded 1,396 PAHs results. No PAHs results were rejected in groundwater samples. Sporadic QC discrepancies caused PAHs results to be qualified J as estimated results, U as potential artifacts, or UJ as non-detections associated with a potentially estimated LOD.

Multiple PAHs results in groundwater samples were qualified U as artifacts due to equipment blank contamination. The affected results include:

- Ten benzo[a]anthracene results ranging from 0.044 µg/L to 0.074 µg/L. All eight affected results are above the tap water RSL of 0.03 µg/L.
- Three benzo[a]pyrene results ranging from 0.065 µg/L to 0.094 µg/L. All three affected results are above the tap water RSL of 0.025 µg/L but below the MCL of 0.2 µg/L.
- Seventeen benzo[b]fluoranthene results ranging from 0.092 µg/L and 0.2 µg/L µg/L. All 17 affected results are below the tap water RSL of 0.25 µg/L.

- One benzo[g,h,i]perylene result of 0.18 µg/L; this compound does not have an associated PAL.
- Two benzo[k]fluoranthene results of 0.068 µg/L; both affected results are below the tap water RSL of 2.5 µg/L.
- Thirty-three chrysene results ranging from 0.036 µg/L to 0.16 µg/L. All 33 affected results are below the tap water RSL of 25 µg/L.
- One indeno[1,2,3-cd]pyrene result of 0.18 µg/L; this result is below the tap water RSL of 0.25 µg/L.
- Nine pyrene results ranging from 0.056 µg/L to 0.11 µg/L. All nine affected results are below the tap water RSL of 120 µg/L.

Many of the results qualified as artifacts due to equipment blank contamination also were qualified as artifacts due to contamination in the associated method blank. In addition to the artifacts described above, the following results were determined to be artifacts based on method blank results alone:

- Four benzo[a]anthracene results ranging from 0.046 µg/L to 0.05. All four affected results are above the tap water RSL of 0.03 µg/L.
- Three benzo[a]pyrene results ranging from 0.064 µg/L to 0.078. All three affected results are above the tap water RSL of 0.025 µg/L but below the MCL of 0.2 µg/L.

Seven PAHs field duplicate pairs were collected in association with site groundwater samples. All PAHs results in field duplicates met the precision criteria.

In some cases, groundwater PAHs results required a J or UJ qualifier due to minor discrepancies in calibration, MS/MSD %Rs, surrogate %Rs, or internal standard peak areas.

2.2.2 Soil Samples

The analysis of soil samples yielded 2,550 PAHs results. No PAHs results were rejected in soil samples. Sporadic QC discrepancies caused PAHs results to be qualified J as estimated results, U as potential artifacts, or UJ as non-detections associated with a potentially estimated LOD.

Fifty PAHs results in soil samples were qualified U as artifacts due to equipment blank contamination. The affected results include:

- Thirty-three benzo[a]anthracene results ranging from 2.8 µg/kg to 10 µg/kg. All affected results are below the residential soil RSL of 1,100 µg/kg and below the groundwater protection SSL of 220 µg/kg.
- Three chrysene results ranging from 2.5 µg/kg to 2.7 µg/kg. All affected results are below the residential soil RSL of 110,000 µg/kg and the groundwater protection SSL of 18,000 µg/kg.

- Two dibenz[a]anthracene results of 9.6 µg/kg and 10 µg/kg. Both affected results are below the residential soil RSL of 110 µg/kg and below the groundwater protection SSL of 1,920 µg/kg.
- Eleven indeno[1,2,3-cd]pyrene results ranging from 2.5 µg/kg to 11 µg/kg. All affected results are below the residential soil RSL of 1,100 µg/kg and the groundwater protection SSL of 19,600 µg/kg.
- One naphthalene result of 5.3 µg/kg. The affected result is below the residential soil RSL of 200 µg/kg and the groundwater protection SSL of 76 µg/kg.

Many of the results qualified as artifacts due to equipment blank contamination also were qualified as artifacts due to contamination in the associated method blank. In addition to the artifacts described above, the following results were determined to be artifacts based on method blank results alone:

- Fourteen benzo[a]anthracene results ranging from 2.6 µg/kg to 14 µg/kg. All affected results are below the residential soil RSL of 1,100 µg/kg and below the groundwater protection SSL of 220 µg/kg.
- Five benzo[a]pyrene results ranging from 4.0 µg/kg to 7.1 µg/kg. All affected results are below the residential soil RSL of 110 µg/kg and below the groundwater protection SSL of 580 µg/kg.
- Nine benzo[b]fluoranthene results ranging from 2.8 µg/kg to 5.7 µg/kg. All affected results are below the residential soil RSL of 1,100 µg/kg and below the groundwater protection SSL of 6,000 µg/kg.
- Five benzo[g,h,i]perylene results ranging from 2.6 µg/kg to 6.1 µg/kg; this compound does not have an associated PAL.
- Two benzo[k]fluoranthene results of 4.1 µg/kg and 4.6 µg/kg. All affected results are below the residential soil RSL of 11,00 µg/kg and below the groundwater protection SSL of 58,000 µg/kg.
- Three chrysene results ranging from 2.2 µg/kg to 4.1 µg/kg. All affected results are below the residential soil RSL of 110,000 µg/kg and the groundwater protection SSL of 18,000 µg/kg.
- Two dibenz[a]anthracene results of 5.0 µg/kg and 6.4 µg/kg. Both affected results are below the residential soil RSL of 110 µg/kg and below the groundwater protection SSL of 1,920 µg/kg.
- Three fluoranthene results ranging from 2.8 µg/kg to 5.8 µg/kg. All affected results are below the residential soil RSL of 2,400,000 µg/kg and the groundwater protection SSL of 1,780,000 µg/kg.
- Six indeno[1,2,3-cd]pyrene results ranging from 2.5 µg/kg to 3.8 µg/kg. All affected results are below the residential soil RSL of 1,100 µg/kg and the groundwater protection SSL of 19,600 µg/kg.

- Five pyrene results ranging from 2.8 µg/kg to 5.4 µg/kg. All affected results are below the residential soil RSL of 1,800,000 µg/kg and the groundwater protection SSL of 260,000 µg/kg.

Fifteen PAHs field duplicate pairs were collected in association with site and background soil samples. All PAHs results in field duplicates met the precision criteria.

A majority of the soil PAHs results that required a J or UJ qualifier were due to minor discrepancies in surrogate %Rs. Additional results required J or UJ qualification for %R discrepancies in MS/MSD pairs, holding time exceedances, or calibration discrepancies.

2.3 EXPLOSIVES

2.3.1 Groundwater Samples

The analysis of groundwater samples yielded 2,822 explosives results. No explosives results were rejected in groundwater samples. Sporadic QC discrepancies caused explosives results to be qualified J as estimated result or UJ as non-detections associated with a potentially estimated LOD. No explosives results were qualified U as artifacts in any groundwater samples.

Sixteen explosives field duplicate pairs were collected in association with site groundwater samples. All explosives results in field duplicates met the precision criteria.

In some cases, groundwater explosives results required a J or UJ qualifier due to minor discrepancies in holding time, calibration, or internal standard peak areas.

2.3.2 Soil Samples

The analysis of soil samples yielded 7,171 explosives results. No explosives results were rejected in soil samples. Sporadic QC discrepancies caused explosives results to be qualified J as estimated result or UJ as non-detections associated with a potentially estimated LOD. No explosives results were qualified U as artifacts in any soil samples.

Forty-five explosives field duplicate pairs were collected in association with site and background soil samples. The precision criteria were not met in 11 pairs of field duplicate results, as summarized below. All other explosives results in field duplicates met the precision criteria.

- Field duplicate pair CHAAP-19B-SP09C / CHAAP-19B-SP109C showed precision discrepancies for 2,4,6-trinitrotoluene, 2-amino-4,6-dinitrotoluene, 4-amino-2,6-dinitrotoluene, HMX, and RDX. The affected results were all detections and were qualified J.
- Field duplicate pair CHAAP-19B-SP22B / CHAAP-19B-SP122B showed a precision discrepancy for 2,4,6-trinitrotoluene. The affected results were all detections and were qualified J.

- Field duplicate pair CHAAP-19B-SP09C / CHAAP-19B-SP109C showed precision discrepancies for 2,4,6-trinitrotoluene and 4-amino-2,6-dinitrotoluene. The affected results were all detections and were qualified J.
- Field duplicate pair CHAAP-19B-SP32B / CHAAP-19B-SP132B showed precision discrepancies for HMX and RDX. The affected results were all detections and were qualified J.
- Field duplicate pair CHAAP-20B-SS02 / CHAAP-20B-SS102 showed a precision discrepancy for RDX. The affected results were all detections and were qualified J.

One hundred and three detected explosives results in soil were qualified J due to a relative percent difference (RPD) greater than 40% between the primary column and the confirmation column; 68 of the affected results were below the limit of quantitation (LOQ) and were already reported with a J qualifier by the laboratory. In some cases, soil explosives results also required a J or UJ qualifier due to minor discrepancies in calibration, %R and RPD discrepancies in MS/MSD pairs, laboratory control sample %Rs, and surrogate %Rs.

2.3.3 Soil Sample SPLP Extracts

The analysis of soil sample SPLP extracts yielded 352 explosives results. No explosives results were rejected in the analysis of SPLP extracts. Sporadic QC discrepancies caused explosives results to be qualified J as estimated result or UJ as non-detections associated with a potentially estimated LOD. No explosives results were qualified U as artifacts in any SPLP extracts.

Two field duplicate pairs were extracted by SPLP. Field duplicate pair CHAAP-19B-29B-SPLP / CHAAP-19B-129B-SPLP showed a precision discrepancy for 2,4,6-trinitrotoluene. The affected results were all detections and were qualified J. Field duplicate pair CHAAP-19B-44G-SPLP / CHAAP-19B-144G-SPLP showed precision discrepancies for 1,3,5-trinitrobenzene, 2-amino-4,6-dinitrotoluene, 2,4,6-trinitrotoluene, 2,4-dinitrotoluene, 4-amino-2,6-dinitrotoluene, and HMX. The non-detected results for 1,3,5-trinitrobenzene and 2,4-dinitrotoluene were qualified UJ in sample CHAAP-19B-144G-SPLP; all other affected results were detections and were qualified J.

Fifteen detected explosives results in SPLP extracts were qualified J due to an RPD greater than 40% between the primary column and the confirmation column; two of the affected results were below the LOQ and were already reported with a J qualifier by the laboratory.

A majority of the SPLP extract explosives results that required a J or UJ qualifier were due to minor discrepancies in surrogate %Rs. Additional explosives results required J or UJ qualification for %R discrepancies in MS/MSD pairs or calibration discrepancies.

2.4 METALS

2.4.1 Groundwater Samples

The analysis of groundwater samples yielded 4,623 metals results. No metals results were rejected in groundwater samples. Sporadic QC discrepancies caused metals results to be qualified J as

estimated results, U as potential artifacts, or UJ as non-detections associated with a potentially estimated LOD.

Multiple metals results in groundwater samples were qualified U as artifacts due to equipment blank contamination. The affected results include:

- Twenty-four aluminum results ranging from 8.7 µg/L to 52.8 µg/L. All affected results are below the tap water RSL of 20,000 µg/L.
- Forty-five antimony results ranging from 0.1 µg/L to 0.593 µg/L. All affected results are below the tap water RSL of 7.8 µg/L and below the MCL of 6.0 µg/L.
- Fifteen cadmium results ranging from 0.035 µg/L to 0.16 µg/L. All affected results are below the tap water RSL of 9.2 µg/L and below the MCL of 5.0 µg/L.
- Eighty-six chromium results ranging from 0.27 µg/L to 5.04 µg/L. All affected results are below the tap water RSL of 22,000 µg/L and below the MCL of 100 µg/L.
- Sixty-one copper results ranging from 1.4 µg/L to 9.98 µg/L. All affected results are below the tap water RSL of 800 µg/L and below the MCL of 1,300 µg/L.
- Four lead results ranging from 0.14 µg/L to 0.889 µg/L. All affected results are below the tap water RSL of 15 µg/L and the MCL of 15 µg/L.
- Twenty-eight mercury results ranging from 0.013 µg/L to 0.051 µg/L. All affected results are below the tap water RSL of 0.63 µg/L and the MCL of 2 µg/L.
- Six nickel results ranging from 0.25 µg/L to 5.76 µg/L. All affected results are below the tap water RSL of 390 µg/L.
- Fifty-five selenium results ranging from 0.22 µg/L to 2.79 µg/L. All affected results are below the tap water RSL of 100 µg/L and the MCL of 50 µg/L.
- Two silver results of 0.38 µg/L to 0.39 µg/L. Both affected results are below the tap water RSL of 94 µg/L.
- Eleven vanadium results ranging from 0.56 µg/L to 7.28 µg/L. All affected results are below the tap water RSL of 86 µg/L.

Many of the results qualified as artifacts due to equipment blank contamination also were qualified as artifacts due to contamination in the associated laboratory blanks (preparation blank, initial calibration blanks [ICB], and/or continuing calibration blanks [CCB]). In addition to the artifacts described above, the following results were determined to be artifacts based on laboratory blank results alone:

- Forty-four aluminum results ranging from 7.8 µg/L to 23 µg/L. All affected results are below the tap water RSL of 20,000 µg/L.
- Sixty-eight antimony results ranging from 0.062 µg/L to 0.41 µg/L. All affected results are below the tap water RSL of 7.8 µg/L and below the MCL of 6.0 µg/L.

- Three cadmium results ranging from 0.035 µg/L to 0.088 µg/L. All affected results are below the tap water RSL of 9.2 µg/L and below the MCL of 5 µg/L.
- Twenty-six chromium results ranging from 0.56 µg/L to 7.78 µg/L. All affected results are below the tap water RSL of 22,000 µg/L and below the MCL of 100 µg/L.
- Thirteen copper results ranging from 0.84 µg/L to 2.97 µg/L. All affected results are below the tap water RSL of 800 µg/L and below the MCL of 1,300 µg/L.
- One lead result of 0.751 µg/L. The affected result is below the tap water RSL of 15 µg/L and the MCL of 15 µg/L.
- Fourteen mercury results ranging from 0.014 µg/L to 0.248 µg/L. All affected results are below the tap water RSL of 0.63 µg/L and the MCL of 2 µg/L.
- Three nickel results ranging from 1.1 µg/L to 1.55 µg/L. All affected results are below the tap water RSL of 390 µg/L.
- Forty-two selenium results ranging from 0.46 µg/L to 3.45 µg/L. All affected results are below the tap water RSL of 100 µg/L and the MCL of 50 µg/L.
- Fourteen silver results ranging from 0.16 µg/L to 1.17 µg/L. All affected results are below the tap water RSL of 94 µg/L.
- Five thallium results ranging from 0.076 µg/L to 0.25 µg/L. All results are below the MCL of 2 µg/L; however, the reported result of 0.25 µg/L in sample CHAAP-19C-UGIA-DPT17 is above the tap water RSL of 0.2 µg/L. All other affected thallium results are below the RSL.
- Twenty-seven vanadium results ranging from 0.51 µg/L to 3.6 µg/L. All affected results are below the tap water RSL of 86 µg/L.

Sixteen field duplicate pairs were collected in association with site groundwater samples. The precision criteria were not met in eight pairs of field duplicate results, as summarized below. All other explosives results in field duplicates met the precision criteria.

- Field duplicate pair 19B-UGIA-DPT19 / 19B-UGIA-DPT119 showed a precision discrepancy for iron. The affected results were all detections and were qualified J.
- Field duplicate pair 19C-LGIA-MW02 / 19C-LGIA-MW102 showed a precision discrepancy for aluminum. The affected results were all detections and were qualified J.
- Field duplicate pair CHAAP-19C-LGIA-DPT14 / CHAAP-19C-LGIA-DPT114 showed precision discrepancies for aluminum, arsenic, barium, chromium, cobalt, lead, and nickel. The affected results were all detections and were qualified J.
- Field duplicate pair CHAAP-19C-LGIA-DPT14-FF / CHAAP-19C-LGIA-DPT114-FF showed precision discrepancies for arsenic, iron, nickel, and zinc. The affected results were all detections and were qualified J.
- Field duplicate pair CHAAP-19C-LGIA-DPT16 / CHAAP-19C-LGIA-DPT116 showed precision discrepancies for aluminum, barium, chromium, cobalt, iron, and nickel. The affected results were all detections and were qualified J.

- Field duplicate pair CHAAP-20B-LGIA-MW02 / CHAAP-20B-LGIA-MW102 showed precision discrepancies for copper and lead. The affected results were all detections and were qualified J.
- Field duplicate pair CHAAP-PRGW02 / CHAAP-PRGW102 showed a precision discrepancy for aluminum. The affected results were all detections and were qualified J.

Of the groundwater metals results that required a J or UJ qualifier, a large majority were due to discrepancies in interference check sample (ICS) A concentrations. The QAPP defines a minor ICSA discrepancy as a non-spiked metal detected at a concentration with absolute value greater than the LOD but less than the LOQ; a serious ICSA discrepancy is a non-spiked metal detected at a concentration with absolute value equal to or greater than the LOQ. Although there were several metals detected at concentrations that constituted a serious discrepancy, the affected metals (primarily cobalt, copper, manganese, and nickel) are common contaminants in commercially obtained ICSA stock solutions. As a consequence, no metals results were rejected even when associated with an ICSA discrepancy that met the QAPP definition of a serious discrepancy.

In some cases, metals groundwater results also required a J or UJ qualifier due to minor discrepancies in %R and RPD discrepancies in MS/MSD pairs, negative baseline drift in ICBs/CCBs, and serial dilution percent difference (%D).

2.4.2 Soil Samples

The analysis of soil samples yielded 10,303 metals results. No metals results were rejected in soil samples. Sporadic QC discrepancies caused metals results to be qualified J as estimated results, U as potential artifacts, or UJ as non-detections associated with a potentially estimated LOD.

Two antimony results in soil samples were qualified U as artifacts due to equipment blank contamination. The affected results were 0.14 mg/kg and 0.16 mg/kg and are below the residential soil RSL of 31 mg/kg and below the groundwater protection SSL of 5.4 mg/kg. Twenty-one selenium results in soil samples were qualified U as artifacts due to equipment blank contamination. The affected results ranged from 0.26 milligrams per kilogram (mg/kg) to 0.552 mg/kg and were below the residential soil RSL of 390 mg/kg and below the groundwater protection SSL of 5.2 mg/kg.

Results for multiple metals were qualified as artifacts due to contamination in the associated laboratory blanks (preparation blank, ICBs, and/or CCBs). The affected results include:

- Seven antimony results ranging from 0.13 mg/kg to 0.272 mg/kg. All affected results are below the residential soil RSL of 31 mg/kg and below the groundwater protection SSL of 5.4 mg/kg.
- Six mercury results ranging from 0.017 mg/kg to 0.026 mg/kg. All affected results are below the residential soil RSL of 23 mg/kg and below the groundwater protection SSL of 2.0 mg/kg.

- Fifty-two selenium results ranging from 0.21 mg/kg to 0.768 mg/kg. All affected results are below the residential soil RSL of 390 mg/kg and below the groundwater protection SSL of 5.2 mg/kg.
- Five silver results ranging from 0.076 mg/kg to 0.0979 mg/kg. All affected results are below the residential soil RSL of 390 mg/kg and below the groundwater protection SSL of 16 mg/kg.

Forty-four field duplicate pairs were collected in association with site soil samples. The precision criteria were not met in eight pairs of field duplicate results, as summarized below. All other metals results in field duplicates met the precision criteria.

- Field duplicate pairs CHAAP-19B-SP03C / CHAAP-19B-SP103C, CHAAP-19B-SP16D / CHAAP-19B-SP116D, CHAAP-19B-SP36A / CHAAP-19B-SP136A, and CHAAP-19B-SP40E / CHAAP-19B-SP140E showed precision discrepancies for calcium. The affected results were all detections and were qualified J.
- Field duplicate pair CHAAP-19B-SP09C / CHAAP-19B-SP109C showed precision discrepancies for cadmium, cobalt, and manganese. The affected results were all detections and were qualified J.
- Field duplicate pair CHAAP-19B-SP29F / CHAAP-19B-SP129F showed a precision discrepancy for antimony. The affected results were all detections and were qualified J.
- Field duplicate pair CHAAP-19B-SP35E / CHAAP-19B-SP135E showed precision discrepancies for antimony, cadmium, calcium, chromium, copper, iron, lead, and zinc. The affected results were all detections and were qualified J.
- Field duplicate pair CHAAP-19B-SP43G / CHAAP-19B-SP143G showed precision discrepancies for arsenic and cobalt. The affected results were all detections and were qualified J.
- Field duplicate pairs CHAAP-19C-SB02D / CHAAP-19C-SB102D and CHAAP-19C-SB03C / CHAAP-19C-SB103C showed precision discrepancies for manganese. The affected results were all detections and were qualified J.
- Field duplicate pair CHAAP-19C-SS02D / CHAAP-19C-SS102D showed precision discrepancies for arsenic, barium, cobalt, manganese, nickel, thallium, and vanadium. The affected results were all detections and were qualified J.
- Field duplicate pair CHAAP-19C-SS05E / CHAAP-19C-SS105E showed precision discrepancies for barium, manganese, and sodium. The affected results were all detections and were qualified J.
- Field duplicate pair CHAAP-19C-SS06G / CHAAP-19C-SS106G showed precision discrepancies for barium and calcium. The affected results were all detections and were qualified J.
- Field duplicate pair CHAAP-19C-SS10G / CHAAP-19C-SS110G showed precision discrepancies for cobalt, manganese, and sodium. The affected results were all detections and were qualified J.

- Field duplicate pair CHAAP-19C-SS11C / CHAAP-19C-SS111C showed a precision discrepancy for sodium. The affected results were all detections and were qualified J.
- Field duplicate pair CHAAP-21B-BB-SS01 / CHAAP-21B-BB-SS101 showed precision discrepancies for antimony and lead. The affected results were all detections and were qualified J.
- Field duplicate pair CHAAP-21B-BB-SS06 / CHAAP-21B-BB-SS106 showed precision discrepancies for arsenic, calcium, magnesium, and thallium. The affected results were all detections and were qualified J.
- Field duplicate pair CHAAP-21B-BPA-SS04 / CHAAP-21B-BPA-SS104 showed a precision discrepancy for lead. The affected results were all detections and were qualified J.
- Field duplicate pair CHAAP-21B-BPA-SS04 / CHAAP-21B-BPA-SS104 showed a precision discrepancy for arsenic. The affected results were all detections and were qualified J.

Of the soil metals results that required a J or UJ qualifier, a majority were due to discrepancies shown by matrix QC samples, including MS/MSD pair %Rs and RPDs, post-digestion-spike %Rs, and serial dilution %Ds. Many soil sample results also required qualification for ICSA performance in the same manner as described for groundwater samples above. In some cases, metals soil results required a J or UJ qualifier due to minor discrepancies in initial or continuing calibration verification standard %Rs, negative baseline drift in ICBs/CCBs, and internal standard %Rs.

2.4.3 Soil Sample SPLP Extracts

The analysis of soil sample SPLP extracts yielded 575 metals results. No metals results were rejected in the analysis of SPLP extracts. Sporadic QC discrepancies caused metals results to be qualified J as estimated results, U as potential artifacts, or UJ as non-detections associated with a potentially estimated LOD.

Multiple metals were qualified as artifacts due to contamination in the associated laboratory blanks (preparation blank, ICBs, and/or CCBs); any results that were qualified for equipment blank contamination also were qualified for laboratory blank contamination. The following results were determined to be artifacts based on laboratory blank results alone:

- Eight antimony results ranging from 0.973 µg/L to 3.36 µg/L. All affected results are below the tap water RSL of 7.8 µg/L and below the MCL of 6.0 µg/L.
- Two barium results of 100 µg/L and 449 g/L. Both results are below the tap water RSL of 3,800 µg/L and the MCL of 2,000 µg/L.
- Five cadmium results ranging from 0.064 µg/L to 0.28 µg/L. All affected results are below the tap water RSL of 9.2 µg/L and below the MCL of 5 µg/L.
- One chromium result of 10 µg/L. This result is below the tap water RSL of 22,000 µg/L and below the MCL of 100 µg/L.

- One copper result of 3.7 µg/L. This result is below the tap water RSL of 800 µg/L and below the MCL of 1,300 µg/L.
- One lead result ranging of 0.55 µg/L. The affected result is below the tap water RSL of 15 µg/L and the MCL of 15 µg/L.
- Four mercury results ranging from 0.038 µg/L to 0.079 µg/L. All affected results are below the tap water RSL of 0.63 µg/L and the MCL of 2 µg/L.
- One nickel result of 6.2 µg/L. This result is below the tap water RSL of 390 µg/L.
- Twenty-four selenium results ranging from 0.93 µg/L to 5.8 µg/L. All affected results are below the tap water RSL of 100 µg/L and the MCL of 50 µg/L.
- One sodium result of 11,600 µg/L. There is no screening value associated with this metal.
- One thallium result of 0.38 µg/L. The affected result is below the MCL of 2.0 µg/L but is above the tap water RSL of 0.2 µg/L.
- One zinc result of 34 µg/L. This result is below the tap water RSL of 6,000 µg/L.

Three field duplicate pairs were extracted by SPLP. Field duplicate pair CHAAP-19B-29B-SPLP / CHAAP-19B-129B-SPLP showed a precision discrepancy for zinc. The affected results were all detections and were qualified J. Field duplicate pair of the SPLP extraction performed on samples CHAAP-21B-BB-SS06 / CHAAP-21B-BB-SS06 showed precision discrepancies for cobalt and nickel. The affected results were all detections and were qualified J. All other SPLP field duplicate results met precision criteria.

A majority of the SPLP extract metals results that required a J qualifier were due to discrepancies in ICSA performance. Additional metals results required J qualification for %D discrepancies in serial dilutions.

2.5 HEXAVALENT CHROMIUM

2.5.1 Groundwater Samples

The analysis of groundwater samples yielded 55 hexavalent chromium results. The non-detected hexavalent chromium result in sample CHAAP-19C-UGIA-DPT15 was rejected due to an extremely low (<30%) %R in the associated MS/MSD. Sporadic QC discrepancies caused hexavalent chromium results to be qualified J as estimated results, U as potential artifacts, or UJ as non-detections associated with a potentially estimated LOD.

Thirteen hexavalent chromium results in groundwater samples were qualified U as artifacts due to both equipment blank contamination and laboratory blank (preparation blank, ICB, and CCB) contamination. Laboratory blank contamination alone caused an additional 19 hexavalent chromium groundwater results to be qualified U. The affected hexavalent chromium concentrations ranged from 1.2 µg/L to 17 µg/L and all were above the tap water RSL of 0.035 µg/L.

Five field duplicate pairs were collected in association with site groundwater samples. All hexavalent chromium results in field duplicates met the precision criteria.

In some cases, groundwater hexavalent chromium results required a J or UJ qualifier due to minor discrepancies in MS/MSD %Rs or due to negative drift in CCBs.

2.5.2 Soil Samples

The analysis of soil samples yielded 109 hexavalent chromium results. No hexavalent chromium results were rejected in soil samples. Sporadic QC discrepancies caused hexavalent chromium results to be qualified J as estimated results, U as potential artifacts, or UJ as non-detections associated with a potentially estimated LOD.

No soil hexavalent chromium results were qualified U due as artifacts to equipment blank contamination; 64 hexavalent chromium results were qualified U due to laboratory blank (preparation blanks, ICBs, and CCBs) contamination. The concentrations in the affected samples ranged from 0.16 mg/kg to 1.7 mg/kg. All results identified as artifacts were at concentrations greater than the associated groundwater protection SSL of 0.0134 mg/kg and 52 of the 64 results also were greater than the residential soil RSL of 0.30 mg/kg.

Seven hexavalent chromium field duplicate pairs were collected in association with site and background soil samples. All PAHs results in field duplicates met the precision criteria.
Additional hexavalent chromium results required J or UJ qualification for %R discrepancies in MS/MSD pairs or negative concentrations reported in associated ICBs/CCBs.

3.0 CONCLUSIONS

All data generated during the RI field program was in compliance with the requirements of the QAPP (ATI/HGL, 2018). Comparability was achieved by using standard methods for sampling and analysis, reporting data in standard units, and using standard reporting formats. All results for QC samples, including field duplicates, equipment blanks, laboratory control samples, method blanks, and MS/MSD analyses, met the QAPP control limits, with the exceptions discussed in Section 2.0.

No data was rejected in the soil or in the SPLP soil extract data sets, and all data was determined to be usable. The project analytical data set generated by the soil sampling event consisted of 25,215 data points and the project analytical data set generated by SPLP extraction of soil samples consisted of 927 data points. All data points were usable in both data sets and the analytical completeness is calculated to be 100 percent for the soil sampling data set and the SPLP extract data set.

A single hexavalent chromium sample result was rejected in the groundwater data set. The groundwater data set consists of 20,457 data points, and completeness is calculated to be 99.995 percent.

4.0 REFERENCES

ATI, Inc./HydroGeoLogic, Inc. (ATI/HGL), 2018. *Final Uniform Federal Policy-Quality Assurance Project Plan, Remedial Investigation/Feasibility Study (RI/FS) Burning Grounds, Sanitary Landfill, and Pistol Range Areas (Remaining Property of the U.S. Government),* Cornhusker Army Ammunition Plant, Grand Island, Nebraska. March.

U.S. Environmental Protection Agency (EPA), 2009. *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use*. OSWER No. 9200.1-85. EPA 540-R-08-005. January.

TABLE

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Table I.1
Data Qualifiers
Cornhusker Army Ammunition Plant
Grand Island, Nebraska

Qualifiers	Definition
(no qualifier)	Confirmed identification. The analyte was positively identified at the reported concentration. The reported concentration is within the calibrated range of the instrument and the result is not affected by any deficiencies in the associated QC criteria.
J	The analyte was detected at the reported concentration, which is an estimate.
R	The result is rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. Following the data validation process, this result must be evaluated during the data usability evaluation to determine if R is the appropriate final qualifier.
U	Not detected. The associated number indicates the analyte LOD.
UJ	Not detected. The associated number indicates the analyte LOD, which may be inaccurate due to associated QC discrepancies.
X	Excluded. The data point is associated with reanalyses or diluted analyses and is excluded because another result has been selected as the definitive result for the analyte.

Notes:
LOD = limit of detection
QC = quality control

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APPENDIX J

LABORATORY DATA PACKAGES

(Provided on CD)

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ATI, INC.
CORNHUSKER
ARMY AMMUNITION PLANT
SL2079

KATAHDIN ANALYTICAL SERVICES
600 TECHNOLOGY WAY
SCARBOROUGH, ME 04074

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SAMPLE DATA PACKAGE

NARRATIVE
KATAHDIN ANALYTICAL SERVICES
ATI, INC.
CORNHUSKER ARMY AMMUNITION PLANT
SL2079

Sample Receipt

The following samples were received on March 15, 2018 and were logged in under Katahdin Analytical Services work order number SL2079 for a hardcopy due date of March 27, 2018.

KATAHDIN Sample No.	ATI Sample Identification
SL2079-1	CHAAP-BKRD-SB08
SL2079-2	CHAAP-BKRD-SB09
SL2079-3	CHAAP-BKRD-SB10
SL2079-4	CHAAP-BKRD-SB11
SL2079-5	CHAAP-BKRD-SB12
SL2079-6	CHAAP-BKRD-SB13
SL2079-7	CHAAP-BKRD-SS08
SL2079-8	CHAAP-BKRD-SS09
SL2079-9	CHAAP-BKRD-SS10
SL2079-10	CHAAP-BKRD-SS11
SL2079-11	CHAAP-BKRD-SS12
SL2079-12	CHAAP-BKRD-SS13
SL2079-13	CHAAP-BKRD-SS109
SL2079-14	CHAAP-BKRD-EB-031418
SL2079-15	CHAAP-BKRD-TB-031418

The samples were logged in for the analyses specified on the chain of custody form. All problems encountered and resolved during sample receipt have been documented on the applicable chain of custody forms.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in this narrative or in the Report of Analysis.

Sample analyses have been performed by the methods as noted herein.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact your Katahdin Analytical Services Project Manager, **Ms. Heather Manz**. This narrative is an integral part of the Report of Analysis.

Reissue Reason 04/20/2018

This report is being reissued for the following reasons:

1) The IS evaluation window for retention time for GC/MS methods is being corrected to ±10 seconds.

2) The LCS/MS limits are being updated to reflect Table 37 for method 8330B from the DOD 5.0 QSM with a default minimum upper limit of 125%.

3) The sample data summary section of the PDF is being updated to include all QC forms.
4) The ICSA standard for method 6020A is being updated to report to two significant figures.

Organics Analysis

The samples of Work Order SL2079 were analyzed in accordance with "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846, 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA, and IIIB 1996, 1998 & 2004, Office of Solid Waste and Emergency Response, U.S. EPA, and/or for the specific methods listed below or on the Report of Analysis.

Sample SL2079-9 was used as the matrix spike (MS) and matrix spike duplicate (MSD), as per client request.

8270D SIM Analysis

Samples SL2079-7 and 10 were manually integrated for the analytes pyrene, benzo(b)fluoranthene and/or indeno(1,2,3-cd)pyrene. The specific reason for the manual integration is indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

The CV (file N8024) had high responses for the target analyte pyrene and the surrogate pyrene-d10 which resulted in %D's that were greater than the DoD QSM acceptance limit of 20%.

Note: The Form VII has a column for %D that is set to 20%. The DoD QSM 5.0 criterion for an opening CV is 20%D and a closing CV is 50%D. All of the compounds in the CV's were evaluated to either 20% criteria for opening CVs or 50% criteria for closing CVs. This is because I can't be bothered to change the Target criteria.

The target analytes pyrene and benzo(a)anthracene were detected below ½ of the LOQ in the method blank WG225023-1. According to the DoD QSM section D.1.1.1, a method blank is considered to be contaminated if the concentration of any target analyte in the blank exceeds ½ the reporting limit and is greater than 1/10 the amount measured in any sample or 1/10 the regulatory limit (whichever is greater). Since the method blank was acceptable, no further action was taken.

The MS and MSD WG225021-3 and 4 had low recoveries for six target analytes that were outside of the DoD QSM acceptance limits. Since the associated LCS was acceptable, no further action was taken.

8330B Analysis

Sample SL2079-4 was manually integrated for the extraction surrogate 1,2-dinitrobenzene on the primary column. The specific reasons for the manual integrations are indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.
The MSD, WG225027-4, was double-spiked with the extraction surrogate 1,2-dinitrobenzene, and the surrogate recovery was adjusted to reflect this.

8260B Analysis

Samples SL2079-14, 15 and the method blank WG225300-2 had low recoveries for the surrogate p-bromofluorobenzene which exceeded the DoD QSM acceptance limit. The client was contacted and informed the laboratory to report these analyses with narration.

The calibration verification (CV) standard (file W3365) had a high response for the target analyte acetone that resulted in a %D that exceeded the DoD QSM acceptance limit of 20%.

The reported percent recovery acceptance limits for the Laboratory Control Samples (LCSs) are statistically derived for the full list of spiked compounds. The recoveries of the spiked analytes in the LCS, Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are compared to these acceptance limits. Katahdin standard operating procedure is to take corrective action only if the number of spiked analytes in the LCS that are outside of the QC limits is greater than the DoD QSM number of marginal exceedances. If the associated MS/MSD has greater than the allowable number of exceedances, no corrective action is taken, as long the LCS is acceptable.

The independent check standard file W3348), associated with the initial calibration analyzed on the W instrument on 03/26/18, had a low concentration for the target analyte trichlorofluoromethane, which exceeded the DoD QSM acceptance limit of ±20% of the expected value from the ICAL. The independent check standard recovery report consists of the full list of spiked analytes, but only the client's list of target analytes are evaluated.

The initial calibration analyzed on the W instrument on 03/23/18 had a %RSD value of 15.5% for the target analyte bromomethane that exceeded the method acceptance limit of 15%.

The closing CV (file W3336) had a high response for the target analyte trichlorofluoromethane that resulted in a %D that exceeded the DoD QSM acceptance limit of 20%. If a closing CV fails, the DoD QSM allows for the analysis of two additional CVs which do not need to be within the 12 hour window. The two additional CV's (files W3337 and W3338) were acceptable and all three CVs are reported.

There were no other protocol deviations or observations noted by the organics laboratory staff.

Metals Analysis

The samples of Katahdin Work Order SL2079 were prepared and analyzed for metals in accordance with the "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846. 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA, III, IIIA and IIIB 1996, 1998 & 2004, Office of Solid Waste and Emergency Response, U.S. EPA.

Inductively-Coupled Plasma Mass Spectrometric Analysis (ICP-MS)

Aqueous-matrix Katahdin Sample Number SL2079-14 was digested for ICP-MS analysis on 03/16/18 (QC Batch LC16IMW1) in accordance with USEPA Method 3010A.

Solid-matrix Katahdin Sample Numbers SL2079-(1-13) were digested for ICP-MS analysis on 03/19/18 (QC Batch LC19IMS1) in accordance with USEPA Method 3050B. Katahdin Sample Number SL2079-9 was prepared with duplicate matrix-spiked aliquots, per client request.

All sample digestates for method 6020A were diluted by a factor of 5 during analysis to reduce mass interferences from chlorine, which is present in the digestates from the hydrochloric acid used in digesting the samples. Per client request, samples which required an additional dilution have been identified using a "D" flag in the qualifier column on all Form 1s.

ICP-MS analyses of Katahdin Work Order SL2079 sample digestates were performed using an Agilent 7500 ICP-MS spectrometer in accordance with USEPA Methods 6020A. Results for all standards and samples are reported using the mean of 3 replicate measurements. All samples were analyzed within holding times and all analytical run QC criteria were met, except for the following:

The measured concentration of zinc (2.43 ug/L) in the Practical Quantitative Limit (PQL) analyzed at 17:40 in analytical run JLC20C is outside the project acceptance criteria. However, all field samples from Katahdin Work Order SL2079 analyzed in this analytical run had zinc concentrations greater than ten times that of the PQL value and zinc results were reported without corrective action.

Internal standard recoveries for ICP-MS analyses can be found in the raw data section of the accompanying data package. The following table indicates which analytes are associated with each internal standard element. In analytical runs JLC16A, JLC20C, and JLC21A, yttrium was used as the internal standard element associated with vanadium, chromium, manganese, iron, cobalt, nickel, copper, zinc, arsenic, selenium, silver, cadmium, strontium, and molybdenum. Due to internal standard instability caused by suspected matrix interference in select samples of Katahdin Work Order SL2079, germanium was used as the internal standard for analytical runs JLC22E, JLC26B, and JLC27A.

Internal Standard Element	Associated Analytes
Lithium	Beryllium, Boron
Scandium	Sodium, Magnesium, Aluminum, Potassium, Calcium
Germanium or Yttrium	Vanadium, Chromium, Manganese, Iron, Cobalt, Nickel, Copper, Zinc, Arsenic, Selenium, Silver, Cadmium, Strontium, Molybdenum
Terbium	Antimony, Barium, Tin, Tungsten
Bismuth	Lead, Thallium, Thorium, Uranium

Instrument tuning information can also be found in the raw data section in the reports labeled "6020 QC Tune Report". For Method 6020A, the relative standard deviation was determined from 4 replicate measurements and the peak width was measured at 10% of the peak height.

Analysis of Mercury by Cold Vapor Atomic Absorption (CVAA)

Solid-matrix Katahdin Sample Numbers SL2079-(1-13) were digested for mercury analysis on 03/16/18 (QC Batch LC16HGS1) in accordance with USEPA Method 7471B. Katahdin Sample Number SL2079-9 was prepared with duplicate matrix-spiked aliquots, per client request.

Aqueous-matrix Katahdin Sample Number SL2079-14 was digested for mercury analysis on 03/16/18 (QC Batch LC16HGW2) in accordance with USEPA Method 7470A.

Mercury analysis of the Katahdin Work Order SL2079 sample digestates were performed using a Cetac M6100 automated mercury analyzer in accordance with USEPA Method 7470A. All samples were analyzed within holding times. All analytical run QC criteria were met.

Matrix QC Summary

The measured recoveries of aluminum, antimony, calcium, iron, magnesium, manganese, and potassium in one or both of the matrix-spiked aliquots of Katahdin Sample Number SL2079-9 are outside the project acceptance criteria. For aluminum, calcium, iron, magnesium, and manganese this may be attributable to the native concentration being significantly greater than the spike added.

The matrix-spiked duplicate analysis of Katahdin Sample Number SL2079-9 is within the project acceptance criteria (<20% relative difference between duplicate matrix-spiked aliquots) for all analytes.

The measured recoveries of aluminum, barium, calcium, iron, magnesium, manganese, and mercury in the post-digestion spiked aliquot of Katahdin Sample Number SL2079-9 are outside the project acceptance criteria (80% - 120% recovery of the added element). For aluminum, barium, calcium, iron, magnesium, and manganese this may be attributable to the native concentration being significantly greater than the spike added.

The serial dilution analysis of Katahdin Sample Number SL2079-9 is outside the project acceptance criteria (<10% relative percent difference, if the concentration in the original sample is greater than 50 times the LOD) for iron and manganese.

Reporting of Metals Results

Per client request, analytical results for client samples on Form I and preparation blanks on Form IIIP have been reported using the laboratory's limits of detection (LOD). All results were evaluated down to the laboratory's method detection limits (MDLs). Results that fall between the MDL and the LOQ are flagged with "J" in the C-qualifier column, and the measured concentration appears in the concentration column. Results that are less than the MDL are flagged with "U" in the C-qualifier column, and the LOD is listed in the concentration column. These LOQs, MDLs and LODs have been adjusted for each sample based on the sample amounts used in preparation and analysis.

Analytical results on Forms VA, VD, VII, and IX for client samples, matrix QC samples (duplicates and matrix spikes), and laboratory control samples have been reported down to the laboratory's method detection limits (MDLs). Analytical results that are below the MDLs are flagged with "U" in the C-qualifier column, and the measured concentration is listed in the concentration column.

Analytical results for instrument run QC samples (ICVs, ICBs, etc.) have been reported down to the laboratory's instrument detection limits (IDLs).

IDLs, LODs, MDLs, and LOQs are listed on Form 10 of the accompanying data package.

Wet Chemistry Analysis

The samples of Work Order SL2079 were analyzed in accordance with the specific methods listed on the Report of Analysis.

Analyses for hexavalent chromium were performed according to "Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods." SW-846. 2nd edition, 1982 (revised 1984), 3rd edition, 1986, and Updates I, II, IIA,III, IIIA and IIIB 1996, 1998 & 2004, Office of Solid Waste and Emergency Response,

U.S. EPA. Trivalent chromium was calculated as the difference between total chromium and hexavalent chromium.

Analyses for total solids were performed according to "Standard Methods for the Examination of Water and Wastewater", 15th, 16th, 17th, 18th, 19th, and 20th editions, 1980, 1985, 1989, 1992, 1995, 1999. APHA-AWWA-WPCF.

All Wet Chemistry results were evaluated to Katahdin Analytical Services' Method Detection Limits (MDL). Measured concentrations that fall between the MDL and Katahdin's Limit of Quantitation (LOQ) are flagged "J". Measured concentrations that are below the MDL are flagged "U" and reported as "U LOD", where "LOD" is the numerical value of the Limit of Detection.

All analyses were performed within analytical holding times. All quality control criteria were met except the following:

In accordance with EPA Method 3060, matrix spike analysis for hexavalent chromium was performed using pre-digestion soluble matrix spikes, pre-digestion insoluble matrix spikes, and post-digestion matrix spikes. Due to constraints imposed by the laboratory's data reporting system, not all of these matrix spikes are listed on the accompanying Matrix Spike Sample Summary Report. For this reason, all of the hexavalent chromium matrix spikes that were performed on Work Order SL2079 samples are listed in the following table.

The recoveries of both of the pre-digestion matrix spikes of Katahdin Sample No. SL2079-9 in the original analysis of 03/22/18 were outside of the laboratory's acceptance limits. For this reason, this sample was redigested with soluble and insoluble hexavalent chromium matrix spikes and was reanalyzed on 03/27/18. The low recovery of the soluble hexavalent chromium matrix spike in the reanalysis confirmed the observed matrix interference for hexavalent chromium.

Katahdin Sample Number	Analysis Date	Matrix Spike Type	Recovery	Acceptance Limits
SL2079-9	03/22/18	Soluble Pre-Digestion MS	68%	75% - 125%
		Insoluble Pre-Digestion MS	71%	75% - 125%
		Post-Digestion MS	79%	75% - 125%
SL2079-9	03/27/18	Soluble Pre-Digestion MS	60%	75% - 125%
		Insoluble Pre-Digestion MS	82%	75% - 125%
		Post-Digestion MS	92%	75% - 125%

NELAP ACCREDITED LABORATORY
Lab. ID. 2001(non-air)
Lab. ID. 11121 (air only)

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Quality Assurance Officer, or their designee, as verified by the following signature.

Leslie Dimond
04.20.18

Leslie Dimond
Quality Assurance Officer

Katahdin Analytical Services, Inc.

Manual Integration Codes For GC/MS, GC, HPLC and/or IC

M1	Peak splitting.
M2	Well defined peaks on the shoulders of the other peaks.
M3	There is additional area due to a coeluting interferant.
M4	There are negative spikes in the baseline.
M5	There are rising or falling baselines.
M6	The software has failed to detect a peak or misidentified a peak.
M7	Excessive peak tailing.
M8	Analysis such as GRO, DRO and TPH require a baseline hold.
M9	Peak was not completely integrated as in GC/MS.
M10	Primary ion was correctly integrated, but secondary or tertiary ion needed manual integration as in GC/MS.
M11	For GC analysis, when a sample is diluted by 1:10 or more, the surrogate is set to undetected and then the area under the surrogate is manually integrated.
M12	Manual integration saved in method due to TurboChrom floating point error.

Katahdin Analytical Services, LLC.

Sample Receipt Condition Report

Client: ATI	KAS PM: MMM	Sampled By: Client
Project:	KIMS Entry By:	Delivered By: Fedex
KAS Work Order#: SL2079	KIMS Review By: AMH	Received By: JCB
SDG #:	Cooler: 1 of 2	Date/Time Rec.: 3.15.18 915

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?	✓				
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓				Temp (°C): 3.2
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals (except Hg soil) analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt to begin cooling process) or insufficient ice may not meet certain regulatory requirements and may invalidate certain data.
If yes, was there sufficient ice to meet temperature requirements?	✓				
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metals (except Hg soil) analysis.
6. Volatiles:					
Aqueous: No bubble larger than a pea?	✓			SO	
Soil/Sediment:					
Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
D.I. Water - Received within 48 hour HT?				✓	
Air: Refer to KAS COC for canister/flow controller requirements.	√ if air included				
7. Trip Blank present in cooler?	✓				
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2	✓				
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments.

Katahdin Analytical Services, LLC.

Sample Receipt Condition Report

Client: ~~ATE~~ ATI		KAS PM: HKM		Sampled By: Client	
Project:		KIMS Entry By:		Delivered By: Fedex	
KAS Work Order#: SL2079		KIMS Review By: AMH		Received By: JCB	
SDG #:	Cooler: 2 of 2			Date/Time Rec.: 3.15.18 915	

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?	✓				
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓				Temp (°C): 0.2
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals (except Hg soil) analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt to begin cooling process) or insufficient ice may not meet certain regulatory requirements and may invalidate certain data.
If yes, was there sufficient ice to meet temperature requirements?	✓				
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metals (except Hg soil) analysis.
6. Volatiles:					
Aqueous: No bubble larger than a pea?				✓	
Soil/Sediment:					
Received in airtight container?	✓				
Received in methanol?	✓				
Methanol covering soil?	✓				
D.I. Water - Received within 48 hour HT?	✓				
Air: Refer to KAS COC for canister/flow controller requirements.	√ if air included				
7. Trip Blank present in cooler?		✓			
8. Proper sample containers and volume?	✓				
9. Samples within hold time upon receipt?	✓				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2				✓	
Sulfide - >9				✓	
Cyanide – pH >12				✓	

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments.

Katahdin ANALYTICAL SERVICES
600 Technology Way
P.O. Box 540
Scarborough, ME 04070
Tel: (207) 874-2400
Fax: (207) 775-4029

Chain of Custody

Client:	Contact:	Phone #:	Fax #:
ATI INC.	**David Nelson**	410-992-3424	( )
Address: 9220 Rumsey Road, Suite 100	City: Columbia	State: MD	Zip Code: 21045
Purchase Order #:	Proj. Name/No.:		Katahdin Quote #:
Bill (if different than above):	Address:		
Sampler (Print/Sign): Alex Hedgepath - HGL			Copies To: Ryan Sullivan / Jennifer Spies

LAB USE ONLY
Work Order #: 562079
Katahdin Project Number
Remarks:

Shipping Info: FEDEX UPS CLIENT
Airbill No:
Temp C Temp Blank Intact Not Intact

	Sample Description	Date/Time Collected	Matrix	No. of Containers	Analysis and Container Type Preservatives: VOCs (8260) Filt. N	Explosives (8330B) Filt. N	Metals (6010) Filt. N	Metals (6010) Field Filtered Filt. Y	PAHs (8270C-SIM) Filt. N	CrVI (7196A) Filt. N	SPLP Metals (1312) Filt. N	Filt. N	Filt. N	Filt. N
1	CHAAP-BKRD-SB08	1340 - 03/14/18	Soil	5	X	X	X		X	X				
2	CHAAP-BKRD-SB09	1530 - 03/14/18	Soil	5	X	X	X		X	X				
3	CHAAP-BKRD-SB10	1510 - 03/14/18	Soil	5	X	X	X		X	X				
4	CHAAP-BKRD-SB11	1410 - 03/14/18	Soil	5	X	X	X		X	X				
5	CHAAP-BKRD-SB12	1500 - 03/14/18	Soil	5	X	X	X		X	X				
6	CHAAP-BKRD-SB13	1435 - 03/14/18	Soil	5	X	X	X		X	X				
7	CHAAP-BKRD-SS08	1410 - 03/14/18	Soil	5	X	X	X		X	X				
8	CHAAP-BKRD-SS09	1550 - 03/14/18	Soil	5	X	X	X		X	X				
9	CHAAP-BKRD-SS10	1600 - 03/14/18	Soil	5	X	X	X		X	X				
10	CHAAP-BKRD-SS11	1425 - 03/14/18	Soil	5	X	X	X		X	X				
11	CHAAP-BKRD-SS12	1440 - 03/14/18	Soil	5	X	X	X		X	X				
12	CHAAP-BKRD-SS13	1435 - 03/14/18	Soil	5	X	X	X		X	X				
13	CHAAP-BKRD-SS10-MS/MSD	1600 - 03/14/18	Soil	15	X	X	X		X	X				
14	CHAAP-BKRD-SS109	1200 - 03/14/18	Soil	5	X	X	X		X	X				
15	CHAAP-BKRD-EB-031418	1505 - 03/14/18	Water	8	X	X	X		X					
16	CHAAP-BKRD-TB-031418	1340 - 03/14/18	Water	3	X									
	- End of Samples													

COMMENTS:

Relinquished By:	Date/Time	Received By:	Relinquished By:	Date/Time	Received By:
Alex Hedgepath HGL	03/14/18 - 1700	3.15.18 915			
Relinquished By:	Date/Time	Received By:	Relinquished By:	Date/Time	Received By:

All laboratory and field work shall be governed by KATAHDIN's Standard Terms and Conditions, except where a Purchase Order or Contract supersede.

Katahdin ANALYTICAL SERVICES

Katahdin Analytical Services

Login Chain of Custody Report (lno1)

Mar. 16, 2018
12:30 PM

Login Number: SL2079

Account: ATI001 Web
ATI, Inc.

Project: ATI-CORN-AAP
Cornhusker Army Ammunition Plant

Primary Report Address:
David Nelson
ATI, Inc.
9220 Rumsey Road
Suite 100
Columbia,MD 21045
david.nelson@atiinc.com

Primary Invoice Address:
David Nelson
ATI, Inc.
9220 Rumsey Road
Suite 100
Columbia,MD 21045

Report CC Addresses:
Invoice CC Addresses:

Quote/Incoming: ATI-CORN-AAP

Login Information:

ANALYSIS INSTRUCTIONS	:	DOD 5.0, ND to LOD w/ J flags. Report all valid runs. Flag dilutions w/ "D" qualifier. Include any excedences in the case narrative. Hold extracts for 60 days. 8260B, 8270DSIM, 8330B, 6020A/7471A/7471B. No explo soil prep needed (put 8330B Mod on ROA).
CHECK NO.	:	
CLIENT PO#	:	PN:16-027
CLIENT PROJECT MANAGE	:	
CONTRACT	:	W9182F-16-D-0014
COOLER TEMPERATURE	:	3.2, 0.2
DELIVERY SERVICES	:	FedEx
EDD FORMAT	:	ERIS EDD
LOGIN INITIALS	:	JCB
PM	:	HHM
PROJECT NAME	:	Cornhusker Army Ammunition Plant
QC LEVEL	:	IV
REPORT INSTRUCTIONS	:	Check EDD, if errors, fix them or contact client. Upload PDF & EDD to SDS. Email david.nelson@atiinc.com, seichelberger@hgl.com, tsullivan@hgl.com, Teresa.offner@atiinc.com, jspies@hgl.com to tell them report is uploaded. Email invoice to jspies@hgl.com, david.nelson@atiinc.com and seichelberger@hgl.com.
SDG ID	:	
SDG STATUS	:	
VERBAL TAT	:	7

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SL2079-1	CHAAP-BKRD-SB08	14-MAR-18 13:40	15-MAR-18			27-MAR-18	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW7196A-CRVI	11-APR-18	50g Glass		
Solid	S	SW8260-S	28-MAR-18	40 mL Vial+DI+MEOH		
Solid	S	SW8270SIMPAH-S	28-MAR-18	4oz Glass		
Solid	S	SW8330-S	28-MAR-18			
Solid	P	TAL-MET-SW846-ICPMS				

SW3050MS-PREP	SW6020-ALUMINUM	SW6020-ANTIMONY
SW6020-ARSENIC	SW6020-BARIUM	SW6020-BERYLLIUM
SW6020-CADMIUM	SW6020-CALCIUM	SW6020-CHROMIUM
SW6020-COBALT	SW6020-COPPER	SW6020-IRON
SW6020-LEAD	SW6020-MAGNESIUM	SW6020-MANGANESE
SW6020-NICKEL	SW6020-POTASSIUM	SW6020-SELENIUM
SW6020-SILVER	SW6020-SODIUM	SW6020-THALLIUM
SW6020-VANADIUM	SW6020-ZINC	SW7471-MERCURY

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SL2079-2	CHAAP-BKRD-SB09	14-MAR-18 15:30	15-MAR-18			27-MAR-18	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW7196A-CRVI	11-APR-18	50g Glass		
Solid	S	SW8260-S	28-MAR-18	40 mL Vial+DI+MEOH		
Solid	S	SW8270SIMPAH-S	28-MAR-18	4oz Glass		
Solid	S	SW8330-S	28-MAR-18			
Solid	P	TAL-MET-SW846-ICPMS				

SW3050MS-PREP	SW6020-ALUMINUM	SW6020-ANTIMONY
SW6020-ARSENIC	SW6020-BARIUM	SW6020-BERYLLIUM
SW6020-CADMIUM	SW6020-CALCIUM	SW6020-CHROMIUM
SW6020-COBALT	SW6020-COPPER	SW6020-IRON
SW6020-LEAD	SW6020-MAGNESIUM	SW6020-MANGANESE
SW6020-NICKEL	SW6020-POTASSIUM	SW6020-SELENIUM
SW6020-SILVER	SW6020-SODIUM	SW6020-THALLIUM
SW6020-VANADIUM	SW6020-ZINC	SW7471-MERCURY

3-16-18

Login Number: SL2079

Quote/Incoming: ATI-CORN-AAP

Account: ATI001

ATI, Inc.

Web

Project: ATI-CORN-AAP

Cornhusker Army Ammunition Plant

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SL2079-3	CHAAP-BKRD-SB10	14-MAR-18 15:10	15-MAR-18			27-MAR-18	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW7196A-CRVI	11-APR-18	50g Glass		
Solid	S	SW8260-S	28-MAR-18	40 mL Vial+DI+MEOH		
Solid	S	SW8270SIMPAH-S	28-MAR-18	4oz Glass		
Solid	S	SW8330-S	28-MAR-18			
Solid	P	TAL-MET-SW846-ICPMS				

SW3050MS-PREP	SW6020-ALUMINUM	SW6020-ANTIMONY
SW6020-ARSENIC	SW6020-BARIUM	SW6020-BERYLLIUM
SW6020-CADMIUM	SW6020-CALCIUM	SW6020-CHROMIUM
SW6020-COBALT	SW6020-COPPER	SW6020-IRON
SW6020-LEAD	SW6020-MAGNESIUM	SW6020-MANGANESE
SW6020-NICKEL	SW6020-POTASSIUM	SW6020-SELENIUM
SW6020-SILVER	SW6020-SODIUM	SW6020-THALLIUM
SW6020-VANADIUM	SW6020-ZINC	SW7471-MERCURY

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SL2079-4	CHAAP-BKRD-SB11	14-MAR-18 14:10	15-MAR-18			27-MAR-18	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW7196A-CRVI	11-APR-18	50g Glass		
Solid	S	SW8260-S	28-MAR-18	40 mL Vial+DI+MEOH		
Solid	S	SW8270SIMPAH-S	28-MAR-18	4oz Glass		
Solid	S	SW8330-S	28-MAR-18			
Solid	P	TAL-MET-SW846-ICPMS				

SW3050MS-PREP	SW6020-ALUMINUM	SW6020-ANTIMONY
SW6020-ARSENIC	SW6020-BARIUM	SW6020-BERYLLIUM
SW6020-CADMIUM	SW6020-CALCIUM	SW6020-CHROMIUM
SW6020-COBALT	SW6020-COPPER	SW6020-IRON
SW6020-LEAD	SW6020-MAGNESIUM	SW6020-MANGANESE
SW6020-NICKEL	SW6020-POTASSIUM	SW6020-SELENIUM
SW6020-SILVER	SW6020-SODIUM	SW6020-THALLIUM
SW6020-VANADIUM	SW6020-ZINC	SW7471-MERCURY

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SL2079-5	CHAAP-BKRD-SB12	14-MAR-18 15:00	15-MAR-18			27-MAR-18	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW7196A-CRVI	11-APR-18	50g Glass		
Solid	S	SW8260-S	28-MAR-18	40 mL Vial+DI+MEOH		
Solid	S	SW8270SIMPAH-S	28-MAR-18	4oz Glass		
Solid	S	SW8330-S	28-MAR-18			
Solid	P	TAL-MET-SW846-ICPMS				

SW3050MS-PREP	SW6020-ALUMINUM	SW6020-ANTIMONY
SW6020-ARSENIC	SW6020-BARIUM	SW6020-BERYLLIUM
SW6020-CADMIUM	SW6020-CALCIUM	SW6020-CHROMIUM
SW6020-COBALT	SW6020-COPPER	SW6020-IRON
SW6020-LEAD	SW6020-MAGNESIUM	SW6020-MANGANESE
SW6020-NICKEL	SW6020-POTASSIUM	SW6020-SELENIUM
SW6020-SILVER	SW6020-SODIUM	SW6020-THALLIUM
SW6020-VANADIUM	SW6020-ZINC	SW7471-MERCURY

HHM
3-16-18

Katahdin ANALYTICAL SERVICES

Katahdin Analytical Services

Login Chain of Custody Report (lno1)

Mar. 16, 2018
12:30 PM

Login Number: SL2079 **Quote/Incoming:** ATI-CORN-AAP

Account: ATI001 Web
ATI, Inc.

Project: ATI-CORN-AAP
Cornhusker Army Ammunition Plant

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SL2079-6	CHAAP-BKRD-SB13	14-MAR-18 14:35	15-MAR-18			27-MAR-18	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW7196A-CRVI	11-APR-18	50g Glass		
Solid	S	SW8260-S	28-MAR-18	40 mL Vial+DI+MEOH		
Solid	S	SW8270SIMPAH-S	28-MAR-18	4oz Glass		
Solid	S	SW8330-S	28-MAR-18			
Solid	P	TAL-MET-SW846-ICPMS				

SW3050MS-PREP	SW6020-ALUMINUM	SW6020-ANTIMONY
SW6020-ARSENIC	SW6020-BARIUM	SW6020-BERYLLIUM
SW6020-CADMIUM	SW6020-CALCIUM	SW6020-CHROMIUM
SW6020-COBALT	SW6020-COPPER	SW6020-IRON
SW6020-LEAD	SW6020-MAGNESIUM	SW6020-MANGANESE
SW6020-NICKEL	SW6020-POTASSIUM	SW6020-SELENIUM
SW6020-SILVER	SW6020-SODIUM	SW6020-THALLIUM
SW6020-VANADIUM	SW6020-ZINC	SW7471-MERCURY

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SL2079-7	CHAAP-BKRD-SS08	14-MAR-18 14:10	15-MAR-18			27-MAR-18	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW7196A-CRVI	11-APR-18	50g Glass		
Solid	S	SW8260-S	28-MAR-18	40 mL Vial+DI+MEOH		
Solid	S	SW8270SIMPAH-S	28-MAR-18	4oz Glass		
Solid	S	SW8330-S	28-MAR-18			
Solid	P	TAL-MET-SW846-ICPMS				

SW3050MS-PREP	SW6020-ALUMINUM	SW6020-ANTIMONY
SW6020-ARSENIC	SW6020-BARIUM	SW6020-BERYLLIUM
SW6020-CADMIUM	SW6020-CALCIUM	SW6020-CHROMIUM
SW6020-COBALT	SW6020-COPPER	SW6020-IRON
SW6020-LEAD	SW6020-MAGNESIUM	SW6020-MANGANESE
SW6020-NICKEL	SW6020-POTASSIUM	SW6020-SELENIUM
SW6020-SILVER	SW6020-SODIUM	SW6020-THALLIUM
SW6020-VANADIUM	SW6020-ZINC	SW7471-MERCURY

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SL2079-8	CHAAP-BKRD-SS09	14-MAR-18 15:50	15-MAR-18			27-MAR-18	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW7196A-CRVI	11-APR-18	50g Glass		
Solid	S	SW8260-S	28-MAR-18	40 mL Vial+DI+MEOH		
Solid	S	SW8270SIMPAH-S	28-MAR-18	4oz Glass		
Solid	S	SW8330-S	28-MAR-18			
Solid	P	TAL-MET-SW846-ICPMS				

SW3050MS-PREP	SW6020-ALUMINUM	SW6020-ANTIMONY
SW6020-ARSENIC	SW6020-BARIUM	SW6020-BERYLLIUM
SW6020-CADMIUM	SW6020-CALCIUM	SW6020-CHROMIUM
SW6020-COBALT	SW6020-COPPER	SW6020-IRON
SW6020-LEAD	SW6020-MAGNESIUM	SW6020-MANGANESE
SW6020-NICKEL	SW6020-POTASSIUM	SW6020-SELENIUM
SW6020-SILVER	SW6020-SODIUM	SW6020-THALLIUM
SW6020-VANADIUM	SW6020-ZINC	SW7471-MERCURY

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3-16-18

Login Number: SL2079

Quote/Incoming: ATI-CORN-AAP

Account: ATI001

ATI, Inc.

Web

Project: ATI-CORN-AAP

Cornhusker Army Ammunition Plant

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SL2079-9	CHAAP-BKRD-SS10	14-MAR-18 16:00	15-MAR-18			27-MAR-18	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW7196A-CRVI	11-APR-18	50g Glass		MS/MSD
Solid	S	SW8260-S	28-MAR-18	40 mL Vial+DI+MEOH		
Solid	S	SW8270SIMPAH-S	28-MAR-18	4oz Glass		
Solid	S	SW8330-S	28-MAR-18			
Solid	P	TAL-MET-SW846-ICPMS				

SW3050MS-PREP	SW6020-ALUMINUM	SW6020-ANTIMONY
SW6020-ARSENIC	SW6020-BARIUM	SW6020-BERYLLIUM
SW6020-CADMIUM	SW6020-CALCIUM	SW6020-CHROMIUM
SW6020-COBALT	SW6020-COPPER	SW6020-IRON
SW6020-LEAD	SW6020-MAGNESIUM	SW6020-MANGANESE
SW6020-NICKEL	SW6020-POTASSIUM	SW6020-SELENIUM
SW6020-SILVER	SW6020-SODIUM	SW6020-THALLIUM
SW6020-VANADIUM	SW6020-ZINC	SW7471-MERCURY

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SL2079-10	CHAAP-BKRD-SS11	14-MAR-18 14:25	15-MAR-18			27-MAR-18	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW7196A-CRVI	11-APR-18	50g Glass		
Solid	S	SW8260-S	28-MAR-18	40 mL Vial+DI+MEOH		
Solid	S	SW8270SIMPAH-S	28-MAR-18	4oz Glass		
Solid	S	SW8330-S	28-MAR-18			
Solid	P	TAL-MET-SW846-ICPMS				

SW3050MS-PREP	SW6020-ALUMINUM	SW6020-ANTIMONY
SW6020-ARSENIC	SW6020-BARIUM	SW6020-BERYLLIUM
SW6020-CADMIUM	SW6020-CALCIUM	SW6020-CHROMIUM
SW6020-COBALT	SW6020-COPPER	SW6020-IRON
SW6020-LEAD	SW6020-MAGNESIUM	SW6020-MANGANESE
SW6020-NICKEL	SW6020-POTASSIUM	SW6020-SELENIUM
SW6020-SILVER	SW6020-SODIUM	SW6020-THALLIUM
SW6020-VANADIUM	SW6020-ZINC	SW7471-MERCURY

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SL2079-11	CHAAP-BKRD-SS12	14-MAR-18 14:40	15-MAR-18			27-MAR-18	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW7196A-CRVI	11-APR-18	50g Glass		
Solid	S	SW8260-S	28-MAR-18	40 mL Vial+DI+MEOH		
Solid	S	SW8270SIMPAH-S	28-MAR-18	4oz Glass		
Solid	S	SW8330-S	28-MAR-18			
Solid	P	TAL-MET-SW846-ICPMS				

SW3050MS-PREP	SW6020-ALUMINUM	SW6020-ANTIMONY
SW6020-ARSENIC	SW6020-BARIUM	SW6020-BERYLLIUM
SW6020-CADMIUM	SW6020-CALCIUM	SW6020-CHROMIUM
SW6020-COBALT	SW6020-COPPER	SW6020-IRON
SW6020-LEAD	SW6020-MAGNESIUM	SW6020-MANGANESE
SW6020-NICKEL	SW6020-POTASSIUM	SW6020-SELENIUM
SW6020-SILVER	SW6020-SODIUM	SW6020-THALLIUM
SW6020-VANADIUM	SW6020-ZINC	SW7471-MERCURY

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3-16-18

Katahdin ANALYTICAL SERVICES

Katahdin Analytical Services

Login Chain of Custody Report (lno1)

Mar. 16, 2018
12:30 PM

Login Number: SL2079

Quote/Incoming: ATI-CORN-AAP

Account: ATI001 Web
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Project: ATI-CORN-AAP
Cornhusker Army Ammunition Plant

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SL2079-12	CHAAP-BKRD-SS13	14-MAR-18 14:35	15-MAR-18			27-MAR-18	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW7196A-CRVI	11-APR-18	50g Glass		
Solid	S	SW8260-S	28-MAR-18	40 mL Vial+DI+MEOH		
Solid	S	SW8270SIMPAH-S	28-MAR-18	4oz Glass		
Solid	S	SW8330-S	28-MAR-18			
Solid	P	TAL-MET-SW846-ICPMS				

SW3050MS-PREP	SW6020-ALUMINUM	SW6020-ANTIMONY
SW6020-ARSENIC	SW6020-BARIUM	SW6020-BERYLLIUM
SW6020-CADMIUM	SW6020-CALCIUM	SW6020-CHROMIUM
SW6020-COBALT	SW6020-COPPER	SW6020-IRON
SW6020-LEAD	SW6020-MAGNESIUM	SW6020-MANGANESE
SW6020-NICKEL	SW6020-POTASSIUM	SW6020-SELENIUM
SW6020-SILVER	SW6020-SODIUM	SW6020-THALLIUM
SW6020-VANADIUM	SW6020-ZINC	SW7471-MERCURY

SL2079-13	CHAAP-BKRD-SS109	14-MAR-18 12:00	15-MAR-18			27-MAR-18	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Solid	S	SW7196A-CRVI	11-APR-18	50g Glass		
Solid	S	SW8260-S	28-MAR-18	40 mL Vial+DI+MEOH		
Solid	S	SW8270SIMPAH-S	28-MAR-18	4oz Glass		
Solid	S	SW8330-S	28-MAR-18			
Solid	P	TAL-MET-SW846-ICPMS				

SW3050MS-PREP	SW6020-ALUMINUM	SW6020-ANTIMONY
SW6020-ARSENIC	SW6020-BARIUM	SW6020-BERYLLIUM
SW6020-CADMIUM	SW6020-CALCIUM	SW6020-CHROMIUM
SW6020-COBALT	SW6020-COPPER	SW6020-IRON
SW6020-LEAD	SW6020-MAGNESIUM	SW6020-MANGANESE
SW6020-NICKEL	SW6020-POTASSIUM	SW6020-SELENIUM
SW6020-SILVER	SW6020-SODIUM	SW6020-THALLIUM
SW6020-VANADIUM	SW6020-ZINC	SW7471-MERCURY

SL2079-14	CHAAP-BKRD-EB-031418	14-MAR-18 15:05	15-MAR-18			27-MAR-18	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Aqueous	S	SW8260-S	28-MAR-18	40mL Vial+HCl		
Aqueous	S	SW8270SIMPAH-S	21-MAR-18			
Aqueous	S	SW8330-S	21-MAR-18			
Aqueous	P	TAL-MET-SW846-ICPMS				

SW3010MS-PREP	SW6020-ALUMINUM	SW6020-ANTIMONY
SW6020-ARSENIC	SW6020-BARIUM	SW6020-BERYLLIUM
SW6020-CADMIUM	SW6020-CALCIUM	SW6020-CHROMIUM
SW6020-COBALT	SW6020-COPPER	SW6020-IRON
SW6020-LEAD	SW6020-MAGNESIUM	SW6020-MANGANESE
SW6020-NICKEL	SW6020-POTASSIUM	SW6020-SELENIUM
SW6020-SILVER	SW6020-SODIUM	SW6020-THALLIUM
SW6020-VANADIUM	SW6020-ZINC	SW7470-MERCURY

SL2079-15	CHAAP-BKRD-TB-031418	14-MAR-18 13:40	15-MAR-18			27-MAR-18	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Aqueous	S	SW8260-S	28-MAR-18	40mL Vial+HCl		

Total Samples: ***15*** ***Total Analyses:*** ***70***

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3-16-18

SAMPLE DATA SUMMARY PACKAGE

KATAHDIN ANALYTICAL SERVICES - ORGANIC DATA QUALIFIERS

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.

* Compound recovery or percent RPD (relative percent difference) was outside of quality control limits.

D Indicates the result was obtained from analysis of a diluted sample. Surrogate recoveries may not be calculable.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

or

J Used for Pesticides, PCBs, Herbicides, Formaldehyde, Explosives and Method 504.1 analytes when there is a greater than 40% difference for detected concentrations between the two GC columns.

B Indicates the analyte was detected in the laboratory method blank analyzed concurrently with the sample.

C Indicates that the flagged compound did not meet DoD criteria in the corresponding daily calibration verification (CV).

L Indicates that the flagged compound did not meet DoD criteria in the corresponding Laboratory Control Sample (LCS) and/or Laboratory Control Sample Duplicate (LCSD) prepared and/or analyzed concurrently with the sample.

M Indicates that the flagged compound did not meet DoD criteria in the Matrix Spike and/or Matrix Spike Duplicate prepared and/or analyzed concurrently with the native sample.

N Presumptive evidence of a compound based on a mass spectral library search.

A Indicates that a tentatively identified compound is a suspected aldol-condensation product.

P Used for Pesticide/Aroclor analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. (for CLP methods only).

METALS SAMPLE FLAGGING

FLAG	SPECIFIED MEANING
E	The reported value is estimated because of the presence of interference (as indicated by serial dilution).
N	The pre-digestion spiked sample recovery is not within control limits.
*	The duplicate sample analysis relative percent difference (RPD) is not within control limits.
B	Indicates the analyte was detected in the laboratory method blank analyzed concurrently with the sample.
A	The post-digestion spiked sample recovery is not within control limits.
•	Analytical run QC sample (e.g. ICV, CCV, ICB, CCB, ICSA, ICSAB) not within control limits.
U	The analyte was not detected above the specified level. This level may be the Limit of Quantitation (LOQ) (previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client. Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.
J	The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ) (previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).
Q	One or more quality control criteria failed (e.g., LCS recovery, surrogate spike recovery or CCV).

KATAHDIN ANALYTICAL SERVICES – INORGANIC DATA QUALIFIERS

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Practical Quantitation Level (PQL) (also called Limit of Quantitation (LOQ)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL "U" LOQ or "U" LOD, where the rate of false negatives is <1%.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Practical Quantitation Level (PQL) (also called Limit of Quantitation (LOQ)), but above the Method Detection Limit (MDL).

I-7 The laboratory's Practical Quantitation Level (PQL) or LOQ could not be achieved for this parameter due to sample composition, matrix effects, sample volume, or quantity used for analysis.

A-4 Please refer to cover letter or narrative for further information.

H_ Please note that the regulatory holding time for _____ is "analyze immediately". Ideally, this analysis must be performed in the field at the time of sample collection. _____ for this sample was not performed at the time of sample collection. The analysis was performed as soon as possible after receipt by the laboratory.

H1 - pH H2 - DO H3 - sulfite H4 - residual chlorine

T1 The client did not provide the full volume of at least one liter for analysis of TSS. Therefore, the PQL of 2.5 mg/L could not be achieved.

T2 The client provided the required volume of at least one liter for analysis of TSS, but the laboratory could not filter the full one liter volume due to the sample matrix. Therefore, the PQL of 2.5 mg/L could not be achieved.

M1 The matrix spike and/or matrix spike duplicate recovery performed on this sample was outside of the laboratory acceptance criteria. Sample matrix is suspected. The laboratory criteria was met for the Laboratory Control Sample (LCS) analyzed concurrently with this sample.

M2 The matrix spike and/or matrix spike duplicate recovery was outside of the laboratory acceptance criteria. The native sample concentration is greater than four times the spike added concentration so the spike added could not be distinguished from the native sample concentration.

R1 The relative percent difference (RPD) between the duplicate analyses performed on this sample was outside of the laboratory acceptance criteria (when both values are greater than ten times the PQL).

MCL	Maximum Contaminant Level	NL	No limit
NFL	No Free Liquid Present	FLP	Free Liquid Present
NOD	No Odor Detected	TON	Threshold Odor Number

D-1 As required by Method 5210B, APHA Standard Methods for the Examination of Water and Wastewater (21st edition), the BOD value reported for this sample is 'qualified' because the check standard run concurrently with the sample analysis did not meet the criteria specified in the method (198 +/- 30.5 mg/L). These results may not be reportable for compliance purposes.

D-2 The measured final dissolved oxygen concentrations of all dilutions were less than the method-specified limit of 1 mg/L. The reported BOD result was calculated assuming a final oxygen concentration equal to 1 mg/L. The reported value should be considered a minimum value.

D-3 The dilution water used to prepare this sample did not meet the method and/or regulatory criteria of less than 0.2 or 0.4 mg/L dissolved oxygen (DO) uptake over the five day period of incubation. These results may not be reportable for compliance purposes.

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-1RA
Client ID: CHAAP-BKRD-SB08
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3325.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 24-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225350

Analysis Date: 24-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 81.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,1,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
1,1,1-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.42	2.5
1,1,2,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.84	2.5
Freon-113	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
1,1,2-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.97	2.5
1,1-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.7	2.5
1,1-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.93	2.5
1,1-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
1,2,3-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.76	2.5
1,2,3-Trichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
1,2,4-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.79	2.5
1,2,4-Trimethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.87	2.5
1,2-Dibromo-3-Chloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.5	2.5
1,2-Dibromoethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
1,2-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
1,2-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
1,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
1,3,5-Trimethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.67	2.5
1,3-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.62	2.5
1,3-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	0.94	2.5
1,4-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.44	2.5
2,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	0.50	2.5
2-Butanone	U	12	ug/Kgdrywt	1	25	25.	5.9	12.
2-Chlorotoluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
2-Hexanone	U	12	ug/Kgdrywt	1	25	25.	4.8	12.
4-Chlorotoluene	U	2.5	ug/Kgdrywt	1	5	5.0	0.49	2.5
P-Isopropyltoluene	U	2.5	ug/Kgdrywt	1	5	5.0	0.76	2.5
4-Methyl-2-Pentanone	U	12	ug/Kgdrywt	1	25	25.	5.9	12.
Acetone	U	12	ug/Kgdrywt	1	25	25.	5.1	12.
Benzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
Bromobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.74	2.5
Bromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Bromodichloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.60	2.5
Bromoform	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
Bromomethane	U	5.0	ug/Kgdrywt	1	10	10.	1.1	5.0

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-1RA
Client ID: CHAAP-BKRD-SB08
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3325.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 24-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225350

Analysis Date: 24-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 81.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Carbon Disulfide	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
Carbon Tetrachloride	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
Chlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Dibromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	7.0	2.5
Chloroethane	U	5.0	ug/Kgdrywt	1	10	10.	1.3	5.0
Chloroform	U	2.5	ug/Kgdrywt	1	5	5.0	0.35	2.5
Chloromethane	U	5.0	ug/Kgdrywt	1	10	10.	1.4	5.0
cis-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
cis-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.72	2.5
Dibromomethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Dichlorodifluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.92	5.0
Ethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.65	2.5
Hexachlorobutadiene	U	2.5	ug/Kgdrywt	1	5	5.0	0.74	2.5
Isopropylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
m+p-Xylenes	U	5.0	ug/Kgdrywt	1	10	10.	1.7	5.0
Methyl tert-butyl Ether	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
Methylene Chloride	U	12	ug/Kgdrywt	1	25	25.	7.9	12.
N-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
N-Propylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.83	2.5
Naphthalene	U	2.5	ug/Kgdrywt	1	5	5.0	0.88	2.5
o-Xylene	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
sec-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Styrene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
tert-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Tetrachloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
Toluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
trans-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.71	2.5
trans-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.86	2.5
Trichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.59	2.5
Trichlorofluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.91	5.0
Vinyl Chloride	U	5.0	ug/Kgdrywt	1	10	10.	0.87	5.0
1,2-Dichloroethane-D4		119.	%					
p-Bromofluorobenzene		100.	%					
Dibromofluoromethane		114.	%					
Toluene-D8		99.6	%					

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-2RA
Client ID: CHAAP-BKRD-SB09
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3326.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 24-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225350

Analysis Date: 24-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 86.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,1,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.69	2.5
1,1,1-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.42	2.5
1,1,2,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.83	2.5
Freon-113	U	2.5	ug/Kgdrywt	1	5	5.0	0.89	2.5
1,1,2-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.96	2.5
1,1-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.7	2.5
1,1-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
1,1-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
1,2,3-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.75	2.5
1,2,3-Trichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
1,2,4-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
1,2,4-Trimethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.86	2.5
1,2-Dibromo-3-Chloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.5	2.5
1,2-Dibromoethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
1,2-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.77	2.5
1,2-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.99	2.5
1,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
1,3,5-Trimethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.66	2.5
1,3-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.61	2.5
1,3-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	0.93	2.5
1,4-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.44	2.5
2,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	0.50	2.5
2-Butanone	U	12	ug/Kgdrywt	1	25	25.	5.8	12.
2-Chlorotoluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
2-Hexanone	U	12	ug/Kgdrywt	1	25	25.	4.8	12.
4-Chlorotoluene	U	2.5	ug/Kgdrywt	1	5	5.0	0.48	2.5
P-Isopropyltoluene	U	2.5	ug/Kgdrywt	1	5	5.0	0.75	2.5
4-Methyl-2-Pentanone	U	12	ug/Kgdrywt	1	25	25.	5.8	12.
Acetone	U	12	ug/Kgdrywt	1	25	25.	5.0	12.
Benzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Bromobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.73	2.5
Bromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Bromodichloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.59	2.5
Bromoform	U	2.5	ug/Kgdrywt	1	5	5.0	0.69	2.5
Bromomethane	U	5.0	ug/Kgdrywt	1	10	9.9	1.1	5.0

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-2RA
Client ID: CHAAP-BKRD-SB09
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3326.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 24-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225350

Analysis Date: 24-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 86.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Carbon Disulfide	U	2.5	ug/Kgdrywt	1	5	5.0	0.77	2.5
Carbon Tetrachloride	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
Chlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.50	2.5
Dibromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	6.9	2.5
Chloroethane	U	5.0	ug/Kgdrywt	1	10	9.9	1.3	5.0
Chloroform	U	2.5	ug/Kgdrywt	1	5	5.0	0.35	2.5
Chloromethane	U	5.0	ug/Kgdrywt	1	10	9.9	1.4	5.0
cis-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
cis-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.71	2.5
Dibromomethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.50	2.5
Dichlorodifluoromethane	U	5.0	ug/Kgdrywt	1	10	9.9	0.91	5.0
Ethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.64	2.5
Hexachlorobutadiene	U	2.5	ug/Kgdrywt	1	5	5.0	0.73	2.5
Isopropylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
m+p-Xylenes	U	5.0	ug/Kgdrywt	1	10	9.9	1.7	5.0
Methyl tert-butyl Ether	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
Methylene Chloride	U	12	ug/Kgdrywt	1	25	25.	7.8	12.
N-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
N-Propylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.82	2.5
Naphthalene	U	2.5	ug/Kgdrywt	1	5	5.0	0.87	2.5
o-Xylene	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
sec-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Styrene	U	2.5	ug/Kgdrywt	1	5	5.0	0.50	2.5
tert-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.89	2.5
Tetrachloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
Toluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
trans-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
trans-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.85	2.5
Trichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.58	2.5
Trichlorofluoromethane	U	5.0	ug/Kgdrywt	1	10	9.9	0.90	5.0
Vinyl Chloride	U	5.0	ug/Kgdrywt	1	10	9.9	0.86	5.0
1,2-Dichloroethane-D4		125.	%					
p-Bromofluorobenzene		103.	%					
Dibromofluoromethane		117.	%					
Toluene-D8		100.	%					

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-3RA
Client ID: CHAAP-BKRD-SB10
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3327.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 24-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225350

Analysis Date: 24-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 84.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,1,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
1,1,1-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.42	2.5
1,1,2,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.84	2.5
Freon-113	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
1,1,2-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.97	2.5
1,1-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.7	2.5
1,1-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.93	2.5
1,1-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
1,2,3-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.76	2.5
1,2,3-Trichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
1,2,4-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.79	2.5
1,2,4-Trimethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.87	2.5
1,2-Dibromo-3-Chloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.5	2.5
1,2-Dibromoethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
1,2-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
1,2-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
1,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
1,3,5-Trimethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.67	2.5
1,3-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.62	2.5
1,3-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	0.94	2.5
1,4-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.44	2.5
2,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	0.50	2.5
2-Butanone	U	12	ug/Kgdrywt	1	25	25.	5.9	12.
2-Chlorotoluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
2-Hexanone	U	12	ug/Kgdrywt	1	25	25.	4.8	12.
4-Chlorotoluene	U	2.5	ug/Kgdrywt	1	5	5.0	0.49	2.5
P-Isopropyltoluene	U	2.5	ug/Kgdrywt	1	5	5.0	0.76	2.5
4-Methyl-2-Pentanone	U	12	ug/Kgdrywt	1	25	25.	5.9	12.
Acetone	U	12	ug/Kgdrywt	1	25	25.	5.1	12.
Benzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
Bromobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.74	2.5
Bromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Bromodichloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.60	2.5
Bromoform	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
Bromomethane	U	5.0	ug/Kgdrywt	1	10	10.	1.1	5.0

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-3RA
Client ID: CHAAP-BKRD-SB10
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3327.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 24-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225350

Analysis Date: 24-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 84.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Carbon Disulfide	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
Carbon Tetrachloride	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
Chlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Dibromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	7.0	2.5
Chloroethane	U	5.0	ug/Kgdrywt	1	10	10.	1.3	5.0
Chloroform	U	2.5	ug/Kgdrywt	1	5	5.0	0.35	2.5
Chloromethane	U	5.0	ug/Kgdrywt	1	10	10.	1.4	5.0
cis-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
cis-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.72	2.5
Dibromomethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Dichlorodifluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.92	5.0
Ethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.65	2.5
Hexachlorobutadiene	U	2.5	ug/Kgdrywt	1	5	5.0	0.74	2.5
Isopropylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
m+p-Xylenes	U	5.0	ug/Kgdrywt	1	10	10.	1.7	5.0
Methyl tert-butyl Ether	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
Methylene Chloride	U	12	ug/Kgdrywt	1	25	25.	7.9	12.
N-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
N-Propylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.83	2.5
Naphthalene	U	2.5	ug/Kgdrywt	1	5	5.0	0.88	2.5
o-Xylene	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
sec-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Styrene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
tert-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Tetrachloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
Toluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
trans-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.71	2.5
trans-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.86	2.5
Trichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.59	2.5
Trichlorofluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.91	5.0
Vinyl Chloride	U	5.0	ug/Kgdrywt	1	10	10.	0.87	5.0
1,2-Dichloroethane-D4		129.	%					
p-Bromofluorobenzene		103.	%					
Dibromofluoromethane		117.	%					
Toluene-D8		102.	%					

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-4RA
Client ID: CHAAP-BKRD-SB11
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3328.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 24-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225350

Analysis Date: 24-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 80.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,1,2-Tetrachloroethane	U	2.4	ug/Kgdrywt	1	5	4.9	0.69	2.4
1,1,1-Trichloroethane	U	2.4	ug/Kgdrywt	1	5	4.9	0.41	2.4
1,1,2,2-Tetrachloroethane	U	2.4	ug/Kgdrywt	1	5	4.9	0.82	2.4
Freon-113	U	2.4	ug/Kgdrywt	1	5	4.9	0.88	2.4
1,1,2-Trichloroethane	U	2.4	ug/Kgdrywt	1	5	4.9	0.95	2.4
1,1-Dichloroethane	U	2.4	ug/Kgdrywt	1	5	4.9	1.7	2.4
1,1-Dichloroethene	U	2.4	ug/Kgdrywt	1	5	4.9	0.91	2.4
1,1-Dichloropropene	U	2.4	ug/Kgdrywt	1	5	4.9	0.89	2.4
1,2,3-Trichlorobenzene	U	2.4	ug/Kgdrywt	1	5	4.9	0.74	2.4
1,2,3-Trichloropropane	U	2.4	ug/Kgdrywt	1	5	4.9	1.2	2.4
1,2,4-Trichlorobenzene	U	2.4	ug/Kgdrywt	1	5	4.9	0.77	2.4
1,2,4-Trimethylbenzene	U	2.4	ug/Kgdrywt	1	5	4.9	0.85	2.4
1,2-Dibromo-3-Chloropropane	U	2.4	ug/Kgdrywt	1	5	4.9	1.5	2.4
1,2-Dibromoethane	U	2.4	ug/Kgdrywt	1	5	4.9	1.2	2.4
1,2-Dichlorobenzene	U	2.4	ug/Kgdrywt	1	5	4.9	0.76	2.4
1,2-Dichloroethane	U	2.4	ug/Kgdrywt	1	5	4.9	0.98	2.4
1,2-Dichloropropane	U	2.4	ug/Kgdrywt	1	5	4.9	1.4	2.4
1,3,5-Trimethylbenzene	U	2.4	ug/Kgdrywt	1	5	4.9	0.66	2.4
1,3-Dichlorobenzene	U	2.4	ug/Kgdrywt	1	5	4.9	0.61	2.4
1,3-Dichloropropane	U	2.4	ug/Kgdrywt	1	5	4.9	0.92	2.4
1,4-Dichlorobenzene	U	2.4	ug/Kgdrywt	1	5	4.9	0.43	2.4
2,2-Dichloropropane	U	2.4	ug/Kgdrywt	1	5	4.9	0.49	2.4
2-Butanone	U	12	ug/Kgdrywt	1	25	24.	5.8	12.
2-Chlorotoluene	U	2.4	ug/Kgdrywt	1	5	4.9	1.1	2.4
2-Hexanone	U	12	ug/Kgdrywt	1	25	24.	4.7	12.
4-Chlorotoluene	U	2.4	ug/Kgdrywt	1	5	4.9	0.48	2.4
P-Isopropyltoluene	U	2.4	ug/Kgdrywt	1	5	4.9	0.74	2.4
4-Methyl-2-Pentanone	U	12	ug/Kgdrywt	1	25	24.	5.8	12.
Acetone	U	12	ug/Kgdrywt	1	25	24.	5.0	12.
Benzene	U	2.4	ug/Kgdrywt	1	5	4.9	0.90	2.4
Bromobenzene	U	2.4	ug/Kgdrywt	1	5	4.9	0.72	2.4
Bromochloromethane	U	2.4	ug/Kgdrywt	1	5	4.9	0.89	2.4
Bromodichloromethane	U	2.4	ug/Kgdrywt	1	5	4.9	0.59	2.4
Bromoform	U	2.4	ug/Kgdrywt	1	5	4.9	0.69	2.4
Bromomethane	U	4.9	ug/Kgdrywt	1	10	9.8	1.1	4.9

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-4RA
Client ID: CHAAP-BKRD-SB11
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3328.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 24-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225350

Analysis Date: 24-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 80.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Carbon Disulfide	U	2.4	ug/Kgdrywt	1	5	4.9	0.76	2.4
Carbon Tetrachloride	U	2.4	ug/Kgdrywt	1	5	4.9	1.3	2.4
Chlorobenzene	U	2.4	ug/Kgdrywt	1	5	4.9	0.50	2.4
Dibromochloromethane	U	2.4	ug/Kgdrywt	1	5	4.9	6.9	2.4
Chloroethane	U	4.9	ug/Kgdrywt	1	10	9.8	1.3	4.9
Chloroform	U	2.4	ug/Kgdrywt	1	5	4.9	0.34	2.4
Chloromethane	U	4.9	ug/Kgdrywt	1	10	9.8	1.4	4.9
cis-1,2-Dichloroethene	U	2.4	ug/Kgdrywt	1	5	4.9	0.89	2.4
cis-1,3-Dichloropropene	U	2.4	ug/Kgdrywt	1	5	4.9	0.70	2.4
Dibromomethane	U	2.4	ug/Kgdrywt	1	5	4.9	0.50	2.4
Dichlorodifluoromethane	U	4.9	ug/Kgdrywt	1	10	9.8	0.90	4.9
Ethylbenzene	U	2.4	ug/Kgdrywt	1	5	4.9	0.64	2.4
Hexachlorobutadiene	U	2.4	ug/Kgdrywt	1	5	4.9	0.72	2.4
Isopropylbenzene	U	2.4	ug/Kgdrywt	1	5	4.9	0.90	2.4
m+p-Xylenes	U	4.9	ug/Kgdrywt	1	10	9.8	1.7	4.9
Methyl tert-butyl Ether	U	2.4	ug/Kgdrywt	1	5	4.9	1.1	2.4
Methylene Chloride	U	12	ug/Kgdrywt	1	25	24.	7.7	12.
N-Butylbenzene	U	2.4	ug/Kgdrywt	1	5	4.9	0.90	2.4
N-Propylbenzene	U	2.4	ug/Kgdrywt	1	5	4.9	0.81	2.4
Naphthalene	U	2.4	ug/Kgdrywt	1	5	4.9	0.86	2.4
o-Xylene	U	2.4	ug/Kgdrywt	1	5	4.9	1.3	2.4
sec-Butylbenzene	U	2.4	ug/Kgdrywt	1	5	4.9	0.89	2.4
Styrene	U	2.4	ug/Kgdrywt	1	5	4.9	0.50	2.4
tert-Butylbenzene	U	2.4	ug/Kgdrywt	1	5	4.9	0.88	2.4
Tetrachloroethene	U	2.4	ug/Kgdrywt	1	5	4.9	1.2	2.4
Toluene	U	2.4	ug/Kgdrywt	1	5	4.9	1.4	2.4
trans-1,2-Dichloroethene	U	2.4	ug/Kgdrywt	1	5	4.9	0.70	2.4
trans-1,3-Dichloropropene	U	2.4	ug/Kgdrywt	1	5	4.9	0.84	2.4
Trichloroethene	U	2.4	ug/Kgdrywt	1	5	4.9	0.58	2.4
Trichlorofluoromethane	U	4.9	ug/Kgdrywt	1	10	9.8	0.89	4.9
Vinyl Chloride	U	4.9	ug/Kgdrywt	1	10	9.8	0.85	4.9
1,2-Dichloroethane-D4		134.	%					
p-Bromofluorobenzene		106.	%					
Dibromofluoromethane		122.	%					
Toluene-D8		102.	%					

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-5RA2
Client ID: CHAAP-BKRD-SB12
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3369.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 27-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225463

Analysis Date: 27-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 83.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,1,2-Tetrachloroethane	U	2.4	ug/Kgdrywt	1	5	4.8	0.67	2.4
1,1,1-Trichloroethane	U	2.4	ug/Kgdrywt	1	5	4.8	0.40	2.4
1,1,2,2-Tetrachloroethane	U	2.4	ug/Kgdrywt	1	5	4.8	0.81	2.4
Freon-113	U	2.4	ug/Kgdrywt	1	5	4.8	0.86	2.4
1,1,2-Trichloroethane	U	2.4	ug/Kgdrywt	1	5	4.8	0.93	2.4
1,1-Dichloroethane	U	2.4	ug/Kgdrywt	1	5	4.8	1.6	2.4
1,1-Dichloroethene	U	2.4	ug/Kgdrywt	1	5	4.8	0.89	2.4
1,1-Dichloropropene	U	2.4	ug/Kgdrywt	1	5	4.8	0.87	2.4
1,2,3-Trichlorobenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.73	2.4
1,2,3-Trichloropropane	U	2.4	ug/Kgdrywt	1	5	4.8	1.2	2.4
1,2,4-Trichlorobenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.76	2.4
1,2,4-Trimethylbenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.84	2.4
1,2-Dibromo-3-Chloropropane	U	2.4	ug/Kgdrywt	1	5	4.8	1.4	2.4
1,2-Dibromoethane	U	2.4	ug/Kgdrywt	1	5	4.8	1.2	2.4
1,2-Dichlorobenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.75	2.4
1,2-Dichloroethane	U	2.4	ug/Kgdrywt	1	5	4.8	0.96	2.4
1,2-Dichloropropane	U	2.4	ug/Kgdrywt	1	5	4.8	1.3	2.4
1,3,5-Trimethylbenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.64	2.4
1,3-Dichlorobenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.60	2.4
1,3-Dichloropropane	U	2.4	ug/Kgdrywt	1	5	4.8	0.90	2.4
1,4-Dichlorobenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.42	2.4
2,2-Dichloropropane	U	2.4	ug/Kgdrywt	1	5	4.8	0.48	2.4
2-Butanone	U	12	ug/Kgdrywt	1	25	24.	5.7	12.
2-Chlorotoluene	U	2.4	ug/Kgdrywt	1	5	4.8	1.0	2.4
2-Hexanone	U	12	ug/Kgdrywt	1	25	24.	4.6	12.
4-Chlorotoluene	U	2.4	ug/Kgdrywt	1	5	4.8	0.47	2.4
P-Isopropyltoluene	U	2.4	ug/Kgdrywt	1	5	4.8	0.73	2.4
4-Methyl-2-Pentanone	U	12	ug/Kgdrywt	1	25	24.	5.7	12.
Acetone	U	12	ug/Kgdrywt	1	25	24.	4.9	12.
Benzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.88	2.4
Bromobenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.71	2.4
Bromochloromethane	U	2.4	ug/Kgdrywt	1	5	4.8	0.87	2.4
Bromodichloromethane	U	2.4	ug/Kgdrywt	1	5	4.8	0.58	2.4
Bromoform	U	2.4	ug/Kgdrywt	1	5	4.8	0.67	2.4
Bromomethane	U	4.8	ug/Kgdrywt	1	10	9.6	1.0	4.8

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-5RA2
Client ID: CHAAP-BKRD-SB12
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3369.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 27-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225463

Analysis Date: 27-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 83.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Carbon Disulfide	U	2.4	ug/Kgdrywt	1	5	4.8	0.75	2.4
Carbon Tetrachloride	U	2.4	ug/Kgdrywt	1	5	4.8	1.2	2.4
Chlorobenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.49	2.4
Dibromochloromethane	U	2.4	ug/Kgdrywt	1	5	4.8	6.7	2.4
Chloroethane	U	4.8	ug/Kgdrywt	1	10	9.6	1.2	4.8
Chloroform	U	2.4	ug/Kgdrywt	1	5	4.8	0.34	2.4
Chloromethane	U	4.8	ug/Kgdrywt	1	10	9.6	1.3	4.8
cis-1,2-Dichloroethene	U	2.4	ug/Kgdrywt	1	5	4.8	0.87	2.4
cis-1,3-Dichloropropene	U	2.4	ug/Kgdrywt	1	5	4.8	0.69	2.4
Dibromomethane	U	2.4	ug/Kgdrywt	1	5	4.8	0.49	2.4
Dichlorodifluoromethane	U	4.8	ug/Kgdrywt	1	10	9.6	0.88	4.8
Ethylbenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.62	2.4
Hexachlorobutadiene	U	2.4	ug/Kgdrywt	1	5	4.8	0.71	2.4
Isopropylbenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.88	2.4
m+p-Xylenes	U	4.8	ug/Kgdrywt	1	10	9.6	1.6	4.8
Methyl tert-butyl Ether	U	2.4	ug/Kgdrywt	1	5	4.8	1.0	2.4
Methylene Chloride	U	12	ug/Kgdrywt	1	25	24.	7.6	12.
N-Butylbenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.88	2.4
N-Propylbenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.80	2.4
Naphthalene	U	2.4	ug/Kgdrywt	1	5	4.8	0.84	2.4
o-Xylene	U	2.4	ug/Kgdrywt	1	5	4.8	1.2	2.4
sec-Butylbenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.87	2.4
Styrene	U	2.4	ug/Kgdrywt	1	5	4.8	0.49	2.4
tert-Butylbenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.86	2.4
Tetrachloroethene	U	2.4	ug/Kgdrywt	1	5	4.8	1.2	2.4
Toluene	U	2.4	ug/Kgdrywt	1	5	4.8	1.3	2.4
trans-1,2-Dichloroethene	U	2.4	ug/Kgdrywt	1	5	4.8	0.68	2.4
trans-1,3-Dichloropropene	U	2.4	ug/Kgdrywt	1	5	4.8	0.82	2.4
Trichloroethene	U	2.4	ug/Kgdrywt	1	5	4.8	0.57	2.4
Trichlorofluoromethane	U	4.8	ug/Kgdrywt	1	10	9.6	0.87	4.8
Vinyl Chloride	U	4.8	ug/Kgdrywt	1	10	9.6	0.84	4.8
1,2-Dichloroethane-D4		111.	%					
p-Bromofluorobenzene		99.7	%					
Dibromofluoromethane		113.	%					
Toluene-D8		100.	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-6RA2
Client ID: CHAAP-BKRD-SB13
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3370.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 27-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225463

Analysis Date: 27-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 80.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,1,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.69	2.5
1,1,1-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.42	2.5
1,1,2,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.83	2.5
Freon-113	U	2.5	ug/Kgdrywt	1	5	5.0	0.89	2.5
1,1,2-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.96	2.5
1,1-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.7	2.5
1,1-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
1,1-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
1,2,3-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.75	2.5
1,2,3-Trichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
1,2,4-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
1,2,4-Trimethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.86	2.5
1,2-Dibromo-3-Chloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.5	2.5
1,2-Dibromoethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
1,2-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.77	2.5
1,2-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.99	2.5
1,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
1,3,5-Trimethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.66	2.5
1,3-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.61	2.5
1,3-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	0.93	2.5
1,4-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.44	2.5
2,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	0.50	2.5
2-Butanone	U	12	ug/Kgdrywt	1	25	25.	5.8	12.
2-Chlorotoluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
2-Hexanone	U	12	ug/Kgdrywt	1	25	25.	4.8	12.
4-Chlorotoluene	U	2.5	ug/Kgdrywt	1	5	5.0	0.48	2.5
P-Isopropyltoluene	U	2.5	ug/Kgdrywt	1	5	5.0	0.75	2.5
4-Methyl-2-Pentanone	U	12	ug/Kgdrywt	1	25	25.	5.8	12.
Acetone	U	12	ug/Kgdrywt	1	25	25.	5.0	12.
Benzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Bromobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.73	2.5
Bromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Bromodichloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.59	2.5
Bromoform	U	2.5	ug/Kgdrywt	1	5	5.0	0.69	2.5
Bromomethane	U	5.0	ug/Kgdrywt	1	10	9.9	1.1	5.0

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-6RA2
Client ID: CHAAP-BKRD-SB13
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3370.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 27-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225463

Analysis Date: 27-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 80.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Carbon Disulfide	U	2.5	ug/Kgdrywt	1	5	5.0	0.77	2.5
Carbon Tetrachloride	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
Chlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.50	2.5
Dibromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	6.9	2.5
Chloroethane	U	5.0	ug/Kgdrywt	1	10	9.9	1.3	5.0
Chloroform	U	2.5	ug/Kgdrywt	1	5	5.0	0.35	2.5
Chloromethane	U	5.0	ug/Kgdrywt	1	10	9.9	1.4	5.0
cis-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
cis-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.71	2.5
Dibromomethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.50	2.5
Dichlorodifluoromethane	U	5.0	ug/Kgdrywt	1	10	9.9	0.91	5.0
Ethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.64	2.5
Hexachlorobutadiene	U	2.5	ug/Kgdrywt	1	5	5.0	0.73	2.5
Isopropylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
m+p-Xylenes	U	5.0	ug/Kgdrywt	1	10	9.9	1.7	5.0
Methyl tert-butyl Ether	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
Methylene Chloride	U	12	ug/Kgdrywt	1	25	25.	7.8	12.
N-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
N-Propylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.82	2.5
Naphthalene	U	2.5	ug/Kgdrywt	1	5	5.0	0.87	2.5
o-Xylene	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
sec-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Styrene	U	2.5	ug/Kgdrywt	1	5	5.0	0.50	2.5
tert-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.89	2.5
Tetrachloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
Toluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
trans-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
trans-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.85	2.5
Trichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.58	2.5
Trichlorofluoromethane	U	5.0	ug/Kgdrywt	1	10	9.9	0.90	5.0
Vinyl Chloride	U	5.0	ug/Kgdrywt	1	10	9.9	0.86	5.0
1,2-Dichloroethane-D4		117.	%					
p-Bromofluorobenzene		97.7	%					
Dibromofluoromethane		114.	%					
Toluene-D8		102.	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-7
Client ID: CHAAP-BKRD-SS08
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3351.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 79.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,1,2-Tetrachloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.84	3.0
1,1,1-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.50	3.0
1,1,2,2-Tetrachloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
Freon-113	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,1,2-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
1,1-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	2.0	3.0
1,1-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,1-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,2,3-Trichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.91	3.0
1,2,3-Trichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
1,2,4-Trichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.95	3.0
1,2,4-Trimethylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,2-Dibromo-3-Chloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.8	3.0
1,2-Dibromoethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
1,2-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.94	3.0
1,2-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
1,2-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
1,3,5-Trimethylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.80	3.0
1,3-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.74	3.0
1,3-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,4-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.53	3.0
2,2-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	0.60	3.0
2-Butanone	U	15	ug/Kgdrywt	1	25	30.	7.1	15.
2-Chlorotoluene	U	3.0	ug/Kgdrywt	1	5	6.0	1.3	3.0
2-Hexanone	U	15	ug/Kgdrywt	1	25	30.	5.8	15.
4-Chlorotoluene	U	3.0	ug/Kgdrywt	1	5	6.0	0.59	3.0
P-Isopropyltoluene	U	3.0	ug/Kgdrywt	1	5	6.0	0.91	3.0
4-Methyl-2-Pentanone	U	15	ug/Kgdrywt	1	25	30.	7.1	15.
Acetone	U	15	ug/Kgdrywt	1	25	30.	6.1	15.
Benzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Bromobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.89	3.0
Bromochloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Bromodichloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.72	3.0
Bromoform	U	3.0	ug/Kgdrywt	1	5	6.0	0.84	3.0
Bromomethane	U	6.0	ug/Kgdrywt	1	10	12.	1.3	6.0

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-7
Client ID: CHAAP-BKRD-SS08
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3351.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 79.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Carbon Disulfide	U	3.0	ug/Kgdrywt	1	5	6.0	0.94	3.0
Carbon Tetrachloride	U	3.0	ug/Kgdrywt	1	5	6.0	1.6	3.0
Chlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
Dibromochloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	8.4	3.0
Chloroethane	U	6.0	ug/Kgdrywt	1	10	12.	1.6	6.0
Chloroform	U	3.0	ug/Kgdrywt	1	5	6.0	0.42	3.0
Chloromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.7	6.0
cis-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
cis-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	0.86	3.0
Dibromomethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
Dichlorodifluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
Ethylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.78	3.0
Hexachlorobutadiene	U	3.0	ug/Kgdrywt	1	5	6.0	0.89	3.0
Isopropylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
m+p-Xylenes	U	6.0	ug/Kgdrywt	1	10	12.	2.0	6.0
Methyl tert-butyl Ether	U	3.0	ug/Kgdrywt	1	5	6.0	1.3	3.0
Methylene Chloride	U	15	ug/Kgdrywt	1	25	30.	9.5	15.
N-Butylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
N-Propylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
Naphthalene	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
o-Xylene	U	3.0	ug/Kgdrywt	1	5	6.0	1.6	3.0
sec-Butylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Styrene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
tert-Butylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Tetrachloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
Toluene	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
trans-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.85	3.0
trans-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
Trichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.71	3.0
Trichlorofluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
Vinyl Chloride	U	6.0	ug/Kgdrywt	1	10	12.	1.0	6.0
1,2-Dichloroethane-D4		105.	%					
p-Bromofluorobenzene		83.6	%					
Dibromofluoromethane		110.	%					
Toluene-D8		101.	%					

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-8
Client ID: CHAAP-BKRD-SS09
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3352.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 83.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,1,2-Tetrachloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.77	2.8
1,1,1-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.46	2.8
1,1,2,2-Tetrachloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.92	2.8
Freon-113	U	2.8	ug/Kgdrywt	1	5	5.5	0.99	2.8
1,1,2-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
1,1-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.9	2.8
1,1-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
1,1-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
1,2,3-Trichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.84	2.8
1,2,3-Trichloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.3	2.8
1,2,4-Trichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.87	2.8
1,2,4-Trimethylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.96	2.8
1,2-Dibromo-3-Chloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.6	2.8
1,2-Dibromoethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.3	2.8
1,2-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.86	2.8
1,2-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
1,2-Dichloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
1,3,5-Trimethylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.74	2.8
1,3-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.68	2.8
1,3-Dichloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
1,4-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.48	2.8
2,2-Dichloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	0.55	2.8
2-Butanone	U	14	ug/Kgdrywt	1	25	28.	6.5	14.
2-Chlorotoluene	U	2.8	ug/Kgdrywt	1	5	5.5	1.2	2.8
2-Hexanone	U	14	ug/Kgdrywt	1	25	28.	5.3	14.
4-Chlorotoluene	U	2.8	ug/Kgdrywt	1	5	5.5	0.54	2.8
P-Isopropyltoluene	U	2.8	ug/Kgdrywt	1	5	5.5	0.84	2.8
4-Methyl-2-Pentanone	U	14	ug/Kgdrywt	1	25	28.	6.5	14.
Acetone	U	14	ug/Kgdrywt	1	25	28.	5.6	14.
Benzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Bromobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.81	2.8
Bromochloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Bromodichloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.66	2.8
Bromoform	U	2.8	ug/Kgdrywt	1	5	5.5	0.77	2.8
Bromomethane	U	5.5	ug/Kgdrywt	1	10	11.	1.2	5.5

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-8
Client ID: CHAAP-BKRD-SS09
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3352.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 83.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Carbon Disulfide	U	2.8	ug/Kgdrywt	1	5	5.5	0.86	2.8
Carbon Tetrachloride	U	2.8	ug/Kgdrywt	1	5	5.5	1.4	2.8
Chlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8
Dibromochloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	7.7	2.8
Chloroethane	U	5.5	ug/Kgdrywt	1	10	11.	1.4	5.5
Chloroform	U	2.8	ug/Kgdrywt	1	5	5.5	0.38	2.8
Chloromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.5	5.5
cis-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
cis-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.79	2.8
Dibromomethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8
Dichlorodifluoromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
Ethylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.72	2.8
Hexachlorobutadiene	U	2.8	ug/Kgdrywt	1	5	5.5	0.81	2.8
Isopropylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
m+p-Xylenes	U	5.5	ug/Kgdrywt	1	10	11.	1.9	5.5
Methyl tert-butyl Ether	U	2.8	ug/Kgdrywt	1	5	5.5	1.2	2.8
Methylene Chloride	U	14	ug/Kgdrywt	1	25	28.	8.7	14.
N-Butylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
N-Propylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.91	2.8
Naphthalene	U	2.8	ug/Kgdrywt	1	5	5.5	0.97	2.8
o-Xylene	U	2.8	ug/Kgdrywt	1	5	5.5	1.4	2.8
sec-Butylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Styrene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8
tert-Butylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.99	2.8
Tetrachloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.3	2.8
Toluene	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
trans-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.78	2.8
trans-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.95	2.8
Trichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.65	2.8
Trichlorofluoromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
Vinyl Chloride	U	5.5	ug/Kgdrywt	1	10	11.	0.96	5.5
1,2-Dichloroethane-D4		108.	%					
p-Bromofluorobenzene		88.9	%					
Dibromofluoromethane		110.	%					
Toluene-D8		101.	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-9
Client ID: CHAAP-BKRD-SS10
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3357.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 75.
Report Date: 29-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,1,2-Tetrachloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.84	3.0
1,1,1-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.50	3.0
1,1,2,2-Tetrachloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
Freon-113	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,1,2-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
1,1-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	2.0	3.0
1,1-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,1-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,2,3-Trichlorobenzene	UMM	3.0	ug/Kgdrywt	1	5	6.0	0.91	3.0
1,2,3-Trichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
1,2,4-Trichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.95	3.0
1,2,4-Trimethylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,2-Dibromo-3-Chloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.8	3.0
1,2-Dibromoethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
1,2-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.94	3.0
1,2-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
1,2-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
1,3,5-Trimethylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.80	3.0
1,3-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.74	3.0
1,3-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,4-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.53	3.0
2,2-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	0.60	3.0
2-Butanone	U	15	ug/Kgdrywt	1	25	30.	7.1	15.
2-Chlorotoluene	U	3.0	ug/Kgdrywt	1	5	6.0	1.3	3.0
2-Hexanone	UMM	15	ug/Kgdrywt	1	25	30.	5.8	15.
4-Chlorotoluene	U	3.0	ug/Kgdrywt	1	5	6.0	0.59	3.0
P-Isopropyltoluene	U	3.0	ug/Kgdrywt	1	5	6.0	0.91	3.0
4-Methyl-2-Pentanone	UM	15	ug/Kgdrywt	1	25	30.	7.1	15.
Acetone	J	9.1	ug/Kgdrywt	1	25	30.	6.1	15.
Benzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Bromobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.89	3.0
Bromochloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Bromodichloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.72	3.0
Bromoform	U	3.0	ug/Kgdrywt	1	5	6.0	0.84	3.0
Bromomethane	U	6.0	ug/Kgdrywt	1	10	12.	1.3	6.0

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-9
Client ID: CHAAP-BKRD-SS10
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3357.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 75.
Report Date: 29-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Carbon Disulfide	U	3.0	ug/Kgdrywt	1	5	6.0	0.94	3.0
Carbon Tetrachloride	U	3.0	ug/Kgdrywt	1	5	6.0	1.6	3.0
Chlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
Dibromochloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	8.4	3.0
Chloroethane	U	6.0	ug/Kgdrywt	1	10	12.	1.6	6.0
Chloroform	U	3.0	ug/Kgdrywt	1	5	6.0	0.42	3.0
Chloromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.7	6.0
cis-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
cis-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	0.86	3.0
Dibromomethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
Dichlorodifluoromethane	UMM	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
Ethylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.78	3.0
Hexachlorobutadiene	U	3.0	ug/Kgdrywt	1	5	6.0	0.89	3.0
Isopropylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
m+p-Xylenes	U	6.0	ug/Kgdrywt	1	10	12.	2.0	6.0
Methyl tert-butyl Ether	U	3.0	ug/Kgdrywt	1	5	6.0	1.3	3.0
Methylene Chloride	U	15	ug/Kgdrywt	1	25	30.	9.5	15.
N-Butylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
N-Propylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
Naphthalene	UMM	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
o-Xylene	U	3.0	ug/Kgdrywt	1	5	6.0	1.6	3.0
sec-Butylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Styrene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
tert-Butylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Tetrachloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
Toluene	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
trans-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.85	3.0
trans-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
Trichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.71	3.0
Trichlorofluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
Vinyl Chloride	U	6.0	ug/Kgdrywt	1	10	12.	1.0	6.0
1,2-Dichloroethane-D4		131.	%					
p-Bromofluorobenzene		85.2	%					
Dibromofluoromethane		123.	%					
Toluene-D8		102.	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-10
Client ID: CHAAP-BKRD-SS11
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3353.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 81.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,1,2-Tetrachloroethane	U	3.8	ug/Kgdrywt	1	5	7.5	1.0	3.8
1,1,1-Trichloroethane	U	3.8	ug/Kgdrywt	1	5	7.5	0.63	3.8
1,1,2,2-Tetrachloroethane	U	3.8	ug/Kgdrywt	1	5	7.5	1.3	3.8
Freon-113	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
1,1,2-Trichloroethane	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
1,1-Dichloroethane	U	3.8	ug/Kgdrywt	1	5	7.5	2.6	3.8
1,1-Dichloroethene	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
1,1-Dichloropropene	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
1,2,3-Trichlorobenzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.1	3.8
1,2,3-Trichloropropane	U	3.8	ug/Kgdrywt	1	5	7.5	1.8	3.8
1,2,4-Trichlorobenzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.2	3.8
1,2,4-Trimethylbenzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.3	3.8
1,2-Dibromo-3-Chloropropane	U	3.8	ug/Kgdrywt	1	5	7.5	2.2	3.8
1,2-Dibromoethane	U	3.8	ug/Kgdrywt	1	5	7.5	1.8	3.8
1,2-Dichlorobenzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.2	3.8
1,2-Dichloroethane	U	3.8	ug/Kgdrywt	1	5	7.5	1.5	3.8
1,2-Dichloropropane	U	3.8	ug/Kgdrywt	1	5	7.5	2.1	3.8
1,3,5-Trimethylbenzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.0	3.8
1,3-Dichlorobenzene	U	3.8	ug/Kgdrywt	1	5	7.5	0.93	3.8
1,3-Dichloropropane	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
1,4-Dichlorobenzene	U	3.8	ug/Kgdrywt	1	5	7.5	0.66	3.8
2,2-Dichloropropane	U	3.8	ug/Kgdrywt	1	5	7.5	0.75	3.8
2-Butanone	U	19	ug/Kgdrywt	1	25	38.	8.8	19.
2-Chlorotoluene	U	3.8	ug/Kgdrywt	1	5	7.5	1.6	3.8
2-Hexanone	U	19	ug/Kgdrywt	1	25	38.	7.2	19.
4-Chlorotoluene	U	3.8	ug/Kgdrywt	1	5	7.5	0.74	3.8
P-Isopropyltoluene	U	3.8	ug/Kgdrywt	1	5	7.5	1.1	3.8
4-Methyl-2-Pentanone	U	19	ug/Kgdrywt	1	25	38.	8.8	19.
Acetone	J	27	ug/Kgdrywt	1	25	38.	7.6	19.
Benzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
Bromobenzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.1	3.8
Bromochloromethane	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
Bromodichloromethane	U	3.8	ug/Kgdrywt	1	5	7.5	0.90	3.8
Bromoform	U	3.8	ug/Kgdrywt	1	5	7.5	1.0	3.8
Bromomethane	J	2.5	ug/Kgdrywt	1	10	15.	1.6	7.5

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-10
Client ID: CHAAP-BKRD-SS11
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3353.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 81.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Carbon Disulfide	U	3.8	ug/Kgdrywt	1	5	7.5	1.2	3.8
Carbon Tetrachloride	U	3.8	ug/Kgdrywt	1	5	7.5	2.0	3.8
Chlorobenzene	U	3.8	ug/Kgdrywt	1	5	7.5	0.76	3.8
Dibromochloromethane	U	3.8	ug/Kgdrywt	1	5	7.5	10.	3.8
Chloroethane	U	7.5	ug/Kgdrywt	1	10	15.	2.0	7.5
Chloroform	U	3.8	ug/Kgdrywt	1	5	7.5	0.52	3.8
Chloromethane	U	7.5	ug/Kgdrywt	1	10	15.	2.1	7.5
cis-1,2-Dichloroethene	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
cis-1,3-Dichloropropene	U	3.8	ug/Kgdrywt	1	5	7.5	1.1	3.8
Dibromomethane	U	3.8	ug/Kgdrywt	1	5	7.5	0.76	3.8
Dichlorodifluoromethane	U	7.5	ug/Kgdrywt	1	10	15.	1.4	7.5
Ethylbenzene	U	3.8	ug/Kgdrywt	1	5	7.5	0.98	3.8
Hexachlorobutadiene	U	3.8	ug/Kgdrywt	1	5	7.5	1.1	3.8
Isopropylbenzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
m+p-Xylenes	U	7.5	ug/Kgdrywt	1	10	15.	2.6	7.5
Methyl tert-butyl Ether	U	3.8	ug/Kgdrywt	1	5	7.5	1.6	3.8
Methylene Chloride	U	19	ug/Kgdrywt	1	25	38.	12.	19.
N-Butylbenzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
N-Propylbenzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.2	3.8
Naphthalene	U	3.8	ug/Kgdrywt	1	5	7.5	1.3	3.8
o-Xylene	U	3.8	ug/Kgdrywt	1	5	7.5	2.0	3.8
sec-Butylbenzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
Styrene	U	3.8	ug/Kgdrywt	1	5	7.5	0.76	3.8
tert-Butylbenzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
Tetrachloroethene	U	3.8	ug/Kgdrywt	1	5	7.5	1.8	3.8
Toluene	U	3.8	ug/Kgdrywt	1	5	7.5	2.1	3.8
trans-1,2-Dichloroethene	U	3.8	ug/Kgdrywt	1	5	7.5	1.1	3.8
trans-1,3-Dichloropropene	U	3.8	ug/Kgdrywt	1	5	7.5	1.3	3.8
Trichloroethene	U	3.8	ug/Kgdrywt	1	5	7.5	0.88	3.8
Trichlorofluoromethane	U	7.5	ug/Kgdrywt	1	10	15.	1.4	7.5
Vinyl Chloride	U	7.5	ug/Kgdrywt	1	10	15.	1.3	7.5
1,2-Dichloroethane-D4		105.	%					
p-Bromofluorobenzene		83.5	%					
Dibromofluoromethane		105.	%					
Toluene-D8		100.	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-11
Client ID: CHAAP-BKRD-SS12
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3354.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 78.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,1,2-Tetrachloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.77	2.8
1,1,1-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.46	2.8
1,1,2,2-Tetrachloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.92	2.8
Freon-113	U	2.8	ug/Kgdrywt	1	5	5.5	0.99	2.8
1,1,2-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
1,1-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.9	2.8
1,1-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
1,1-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
1,2,3-Trichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.84	2.8
1,2,3-Trichloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.3	2.8
1,2,4-Trichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.87	2.8
1,2,4-Trimethylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.96	2.8
1,2-Dibromo-3-Chloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.6	2.8
1,2-Dibromoethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.3	2.8
1,2-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.86	2.8
1,2-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
1,2-Dichloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
1,3,5-Trimethylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.74	2.8
1,3-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.68	2.8
1,3-Dichloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
1,4-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.48	2.8
2,2-Dichloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	0.55	2.8
2-Butanone	U	14	ug/Kgdrywt	1	25	28.	6.5	14.
2-Chlorotoluene	U	2.8	ug/Kgdrywt	1	5	5.5	1.2	2.8
2-Hexanone	U	14	ug/Kgdrywt	1	25	28.	5.3	14.
4-Chlorotoluene	U	2.8	ug/Kgdrywt	1	5	5.5	0.54	2.8
P-Isopropyltoluene	U	2.8	ug/Kgdrywt	1	5	5.5	0.84	2.8
4-Methyl-2-Pentanone	U	14	ug/Kgdrywt	1	25	28.	6.5	14.
Acetone	U	14	ug/Kgdrywt	1	25	28.	5.6	14.
Benzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Bromobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.81	2.8
Bromochloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Bromodichloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.66	2.8
Bromoform	U	2.8	ug/Kgdrywt	1	5	5.5	0.77	2.8
Bromomethane	U	5.5	ug/Kgdrywt	1	10	11.	1.2	5.5

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-11
Client ID: CHAAP-BKRD-SS12
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3354.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 78.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Carbon Disulfide	U	2.8	ug/Kgdrywt	1	5	5.5	0.86	2.8
Carbon Tetrachloride	U	2.8	ug/Kgdrywt	1	5	5.5	1.4	2.8
Chlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8
Dibromochloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	7.7	2.8
Chloroethane	U	5.5	ug/Kgdrywt	1	10	11.	1.4	5.5
Chloroform	U	2.8	ug/Kgdrywt	1	5	5.5	0.38	2.8
Chloromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.5	5.5
cis-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
cis-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.79	2.8
Dibromomethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8
Dichlorodifluoromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
Ethylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.72	2.8
Hexachlorobutadiene	U	2.8	ug/Kgdrywt	1	5	5.5	0.81	2.8
Isopropylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
m+p-Xylenes	U	5.5	ug/Kgdrywt	1	10	11.	1.9	5.5
Methyl tert-butyl Ether	U	2.8	ug/Kgdrywt	1	5	5.5	1.2	2.8
Methylene Chloride	U	14	ug/Kgdrywt	1	25	28.	8.7	14.
N-Butylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
N-Propylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.91	2.8
Naphthalene	U	2.8	ug/Kgdrywt	1	5	5.5	0.97	2.8
o-Xylene	U	2.8	ug/Kgdrywt	1	5	5.5	1.4	2.8
sec-Butylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Styrene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8
tert-Butylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.99	2.8
Tetrachloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.3	2.8
Toluene	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
trans-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.78	2.8
trans-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.95	2.8
Trichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.65	2.8
Trichlorofluoromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
Vinyl Chloride	U	5.5	ug/Kgdrywt	1	10	11.	0.96	5.5
1,2-Dichloroethane-D4		120.	%					
p-Bromofluorobenzene		83.2	%					
Dibromofluoromethane		115.	%					
Toluene-D8		101.	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-12
Client ID: CHAAP-BKRD-SS13
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3355.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 78.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,1,2-Tetrachloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	0.91	3.2
1,1,1-Trichloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	0.55	3.2
1,1,2,2-Tetrachloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.1	3.2
Freon-113	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
1,1,2-Trichloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.3	3.2
1,1-Dichloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	2.2	3.2
1,1-Dichloroethene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
1,1-Dichloropropene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
1,2,3-Trichlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	0.99	3.2
1,2,3-Trichloropropane	U	3.2	ug/Kgdrywt	1	5	6.5	1.6	3.2
1,2,4-Trichlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.0	3.2
1,2,4-Trimethylbenzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.1	3.2
1,2-Dibromo-3-Chloropropane	U	3.2	ug/Kgdrywt	1	5	6.5	2.0	3.2
1,2-Dibromoethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.6	3.2
1,2-Dichlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.0	3.2
1,2-Dichloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.3	3.2
1,2-Dichloropropane	U	3.2	ug/Kgdrywt	1	5	6.5	1.8	3.2
1,3,5-Trimethylbenzene	U	3.2	ug/Kgdrywt	1	5	6.5	0.87	3.2
1,3-Dichlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	0.81	3.2
1,3-Dichloropropane	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
1,4-Dichlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	0.57	3.2
2,2-Dichloropropane	U	3.2	ug/Kgdrywt	1	5	6.5	0.65	3.2
2-Butanone	U	16	ug/Kgdrywt	1	25	32.	7.7	16.
2-Chlorotoluene	U	3.2	ug/Kgdrywt	1	5	6.5	1.4	3.2
2-Hexanone	U	16	ug/Kgdrywt	1	25	32.	6.2	16.
4-Chlorotoluene	U	3.2	ug/Kgdrywt	1	5	6.5	0.64	3.2
P-Isopropyltoluene	U	3.2	ug/Kgdrywt	1	5	6.5	0.99	3.2
4-Methyl-2-Pentanone	U	16	ug/Kgdrywt	1	25	32.	7.7	16.
Acetone	U	16	ug/Kgdrywt	1	25	32.	6.6	16.
Benzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
Bromobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	0.96	3.2
Bromochloromethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
Bromodichloromethane	U	3.2	ug/Kgdrywt	1	5	6.5	0.78	3.2
Bromoform	U	3.2	ug/Kgdrywt	1	5	6.5	0.91	3.2
Bromomethane	U	6.5	ug/Kgdrywt	1	10	13.	1.4	6.5

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-12
Client ID: CHAAP-BKRD-SS13
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3355.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 78.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Carbon Disulfide	U	3.2	ug/Kgdrywt	1	5	6.5	1.0	3.2
Carbon Tetrachloride	U	3.2	ug/Kgdrywt	1	5	6.5	1.7	3.2
Chlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	0.66	3.2
Dibromochloromethane	U	3.2	ug/Kgdrywt	1	5	6.5	9.1	3.2
Chloroethane	U	6.5	ug/Kgdrywt	1	10	13.	1.7	6.5
Chloroform	U	3.2	ug/Kgdrywt	1	5	6.5	0.46	3.2
Chloromethane	U	6.5	ug/Kgdrywt	1	10	13.	1.8	6.5
cis-1,2-Dichloroethene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
cis-1,3-Dichloropropene	U	3.2	ug/Kgdrywt	1	5	6.5	0.94	3.2
Dibromomethane	U	3.2	ug/Kgdrywt	1	5	6.5	0.66	3.2
Dichlorodifluoromethane	U	6.5	ug/Kgdrywt	1	10	13.	1.2	6.5
Ethylbenzene	U	3.2	ug/Kgdrywt	1	5	6.5	0.84	3.2
Hexachlorobutadiene	U	3.2	ug/Kgdrywt	1	5	6.5	0.96	3.2
Isopropylbenzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
m+p-Xylenes	U	6.5	ug/Kgdrywt	1	10	13.	2.2	6.5
Methyl tert-butyl Ether	U	3.2	ug/Kgdrywt	1	5	6.5	1.4	3.2
Methylene Chloride	U	16	ug/Kgdrywt	1	25	32.	10.	16.
N-Butylbenzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
N-Propylbenzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.1	3.2
Naphthalene	U	3.2	ug/Kgdrywt	1	5	6.5	1.1	3.2
o-Xylene	U	3.2	ug/Kgdrywt	1	5	6.5	1.7	3.2
sec-Butylbenzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
Styrene	U	3.2	ug/Kgdrywt	1	5	6.5	0.66	3.2
tert-Butylbenzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
Tetrachloroethene	U	3.2	ug/Kgdrywt	1	5	6.5	1.6	3.2
Toluene	U	3.2	ug/Kgdrywt	1	5	6.5	1.8	3.2
trans-1,2-Dichloroethene	U	3.2	ug/Kgdrywt	1	5	6.5	0.92	3.2
trans-1,3-Dichloropropene	U	3.2	ug/Kgdrywt	1	5	6.5	1.1	3.2
Trichloroethene	U	3.2	ug/Kgdrywt	1	5	6.5	0.77	3.2
Trichlorofluoromethane	U	6.5	ug/Kgdrywt	1	10	13.	1.2	6.5
Vinyl Chloride	U	6.5	ug/Kgdrywt	1	10	13.	1.1	6.5
1,2-Dichloroethane-D4		120.	%					
p-Bromofluorobenzene		85.0	%					
Dibromofluoromethane		116.	%					
Toluene-D8		98.7	%					

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-13
Client ID: CHAAP-BKRD-SS109
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3356.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 83.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,1,2-Tetrachloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.84	3.0
1,1,1-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.50	3.0
1,1,2,2-Tetrachloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
Freon-113	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,1,2-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
1,1-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	2.0	3.0
1,1-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,1-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,2,3-Trichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.91	3.0
1,2,3-Trichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
1,2,4-Trichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.95	3.0
1,2,4-Trimethylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,2-Dibromo-3-Chloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.8	3.0
1,2-Dibromoethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
1,2-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.94	3.0
1,2-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
1,2-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
1,3,5-Trimethylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.80	3.0
1,3-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.74	3.0
1,3-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,4-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.53	3.0
2,2-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	0.60	3.0
2-Butanone	U	15	ug/Kgdrywt	1	25	30.	7.1	15.
2-Chlorotoluene	U	3.0	ug/Kgdrywt	1	5	6.0	1.3	3.0
2-Hexanone	U	15	ug/Kgdrywt	1	25	30.	5.8	15.
4-Chlorotoluene	U	3.0	ug/Kgdrywt	1	5	6.0	0.59	3.0
P-Isopropyltoluene	U	3.0	ug/Kgdrywt	1	5	6.0	0.91	3.0
4-Methyl-2-Pentanone	U	15	ug/Kgdrywt	1	25	30.	7.1	15.
Acetone	U	15	ug/Kgdrywt	1	25	30.	6.1	15.
Benzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Bromobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.89	3.0
Bromochloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Bromodichloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.72	3.0
Bromoform	U	3.0	ug/Kgdrywt	1	5	6.0	0.84	3.0
Bromomethane	U	6.0	ug/Kgdrywt	1	10	12.	1.3	6.0

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-13
Client ID: CHAAP-BKRD-SS109
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3356.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 83.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Carbon Disulfide	U	3.0	ug/Kgdrywt	1	5	6.0	0.94	3.0
Carbon Tetrachloride	U	3.0	ug/Kgdrywt	1	5	6.0	1.6	3.0
Chlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
Dibromochloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	8.4	3.0
Chloroethane	U	6.0	ug/Kgdrywt	1	10	12.	1.6	6.0
Chloroform	U	3.0	ug/Kgdrywt	1	5	6.0	0.42	3.0
Chloromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.7	6.0
cis-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
cis-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	0.86	3.0
Dibromomethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
Dichlorodifluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
Ethylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.78	3.0
Hexachlorobutadiene	U	3.0	ug/Kgdrywt	1	5	6.0	0.89	3.0
Isopropylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
m+p-Xylenes	U	6.0	ug/Kgdrywt	1	10	12.	2.0	6.0
Methyl tert-butyl Ether	U	3.0	ug/Kgdrywt	1	5	6.0	1.3	3.0
Methylene Chloride	U	15	ug/Kgdrywt	1	25	30.	9.5	15.
N-Butylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
N-Propylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
Naphthalene	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
o-Xylene	U	3.0	ug/Kgdrywt	1	5	6.0	1.6	3.0
sec-Butylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Styrene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
tert-Butylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Tetrachloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
Toluene	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
trans-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.85	3.0
trans-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
Trichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.71	3.0
Trichlorofluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
Vinyl Chloride	U	6.0	ug/Kgdrywt	1	10	12.	1.0	6.0
1,2-Dichloroethane-D4		125.	%					
p-Bromofluorobenzene		98.2	%					
Dibromofluoromethane		117.	%					
Toluene-D8		102.	%					

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-14
Client ID: CHAAP-BKRD-EB-031418
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: P4883.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 23-MAR-18
Extracted By: hg
Extraction Method: SW846 5030
Lab Prep Batch: WG225300

Analysis Date: 23-MAR-18
Analyst: hg
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,1,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.19	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
1,1-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.21	0.50
1,2,3-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.27	0.50
1,2,3-Trichloropropane	U	0.50	ug/L	1	1	1.0	0.19	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
1,2,4-Trimethylbenzene	U	0.50	ug/L	1	1	1.0	0.19	0.50
1,2-Dibromo-3-Chloropropane	U	0.50	ug/L	1	1	1.0	0.50	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,3,5-Trimethylbenzene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,3-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
2,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
2-Chlorotoluene	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
4-Chlorotoluene	U	0.50	ug/L	1	1	1.0	0.26	0.50
P-Isopropyltoluene	U	0.50	ug/L	1	1	1.0	0.25	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
Bromobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-14
Client ID: CHAAP-BKRD-EB-031418
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: P4883.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 23-MAR-18
Extracted By: hg
Extraction Method: SW846 5030
Lab Prep Batch: WG225300

Analysis Date: 23-MAR-18
Analyst: hg
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Bromochloromethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Dibromomethane	U	0.50	ug/L	1	1	1.0	0.46	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
Hexachlorobutadiene	U	0.75	ug/L	1	1	1.0	0.52	0.75
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
m+p-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
Naphthalene	U	0.50	ug/L	1	1	1.0	0.30	0.50
N-Butylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
N-Propylbenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
sec-Butylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
tert-Butylbenzene	U	0.50	ug/L	1	1	1.0	0.31	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Dibromofluoromethane		106.	%					
1,2-Dichloroethane-d4		107.	%					
Toluene-d8		95.7	%					
P-Bromofluorobenzene	*	79.9	%					

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-15
Client ID: CHAAP-BKRD-TB-031418
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: P4884.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 23-MAR-18
Extracted By: hg
Extraction Method: SW846 5030
Lab Prep Batch: WG225300

Analysis Date: 23-MAR-18
Analyst: hg
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,1,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.19	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
1,1-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.21	0.50
1,2,3-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.27	0.50
1,2,3-Trichloropropane	U	0.50	ug/L	1	1	1.0	0.19	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
1,2,4-Trimethylbenzene	U	0.50	ug/L	1	1	1.0	0.19	0.50
1,2-Dibromo-3-Chloropropane	U	0.50	ug/L	1	1	1.0	0.50	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,3,5-Trimethylbenzene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,3-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
2,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
2-Chlorotoluene	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
4-Chlorotoluene	U	0.50	ug/L	1	1	1.0	0.26	0.50
P-Isopropyltoluene	U	0.50	ug/L	1	1	1.0	0.25	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
Bromobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-15
Client ID: CHAAP-BKRD-TB-031418
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: P4884.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 23-MAR-18
Extracted By: hg
Extraction Method: SW846 5030
Lab Prep Batch: WG225300

Analysis Date: 23-MAR-18
Analyst: hg
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Bromochloromethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Dibromomethane	U	0.50	ug/L	1	1	1.0	0.46	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
Hexachlorobutadiene	U	0.75	ug/L	1	1	1.0	0.52	0.75
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
m+p-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
Naphthalene	U	0.50	ug/L	1	1	1.0	0.30	0.50
N-Butylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
N-Propylbenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
sec-Butylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
tert-Butylbenzene	U	0.50	ug/L	1	1	1.0	0.31	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Dibromofluoromethane		107.	%					
1,2-Dichloroethane-d4		109.	%					
Toluene-d8		97.3	%					
P-Bromofluorobenzene	*	82.7	%					

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Report of Analytical Results

Client:
Lab ID: WG225300-2
Client ID: Method Blank Sample
Project:
SDG: SL2079
Lab File ID: P4882.D

Sample Date:
Received Date:
Extract Date: 23-MAR-18
Extracted By: hg
Extraction Method: SW846 5030
Lab Prep Batch: WG225300

Analysis Date: 23-MAR-18
Analyst: hg
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,1,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.19	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
1,1-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.21	0.50
1,2,3-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.27	0.50
1,2,3-Trichloropropane	U	0.50	ug/L	1	1	1.0	0.19	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
1,2,4-Trimethylbenzene	U	0.50	ug/L	1	1	1.0	0.19	0.50
1,2-Dibromo-3-Chloropropane	U	0.50	ug/L	1	1	1.0	0.50	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,3,5-Trimethylbenzene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,3-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
2,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
2-Chlorotoluene	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
4-Chlorotoluene	U	0.50	ug/L	1	1	1.0	0.26	0.50
P-Isopropyltoluene	U	0.50	ug/L	1	1	1.0	0.25	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
Bromobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50

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Report of Analytical Results

Client:
Lab ID: WG225300-2
Client ID: Method Blank Sample
Project:
SDG: SL2079
Lab File ID: P4882.D

Sample Date:
Received Date:
Extract Date: 23-MAR-18
Extracted By: hg
Extraction Method: SW846 5030
Lab Prep Batch: WG225300

Analysis Date: 23-MAR-18
Analyst: hg
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Bromochloromethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Dibromomethane	U	0.50	ug/L	1	1	1.0	0.46	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
Hexachlorobutadiene	U	0.75	ug/L	1	1	1.0	0.52	0.75
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
m+p-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
Naphthalene	U	0.50	ug/L	1	1	1.0	0.30	0.50
N-Butylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
N-Propylbenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
sec-Butylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
tert-Butylbenzene	U	0.50	ug/L	1	1	1.0	0.31	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Dibromofluoromethane		106.	%					
1,2-Dichloroethane-d4		108.	%					

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Report of Analytical Results

Client:
Lab ID: WG225300-2
Client ID: Method Blank Sample
Project:
SDG: SL2079
Lab File ID: P4882.D

Sample Date:
Received Date:
Extract Date: 23-MAR-18
Extracted By: hg
Extraction Method: SW846 5030
Lab Prep Batch: WG225300

Analysis Date: 23-MAR-18
Analyst: hg
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Toluene-d8		95.1	%					
P-Bromofluorobenzene	*	80.0	%					

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Report of Analytical Results

Client:
Lab ID: WG225350-2
Client ID: Method Blank Sample
Project:
SDG: SL2079
Lab File ID: W3324.D

Sample Date:
Received Date:
Extract Date: 24-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225350

Analysis Date: 24-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: NA
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,1,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
1,1,1-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.42	2.5
1,1,2,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.84	2.5
Freon-113	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
1,1,2-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.97	2.5
1,1-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.7	2.5
1,1-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.93	2.5
1,1-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
1,2,3-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.76	2.5
1,2,3-Trichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
1,2,4-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.79	2.5
1,2,4-Trimethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.87	2.5
1,2-Dibromo-3-Chloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.5	2.5
1,2-Dibromoethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
1,2-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
1,2-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
1,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
1,3,5-Trimethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.67	2.5
1,3-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.62	2.5
1,3-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	0.94	2.5
1,4-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.44	2.5
2,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	0.50	2.5
2-Butanone	U	12	ug/Kgdrywt	1	25	25.	5.9	12.
2-Chlorotoluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
2-Hexanone	U	12	ug/Kgdrywt	1	25	25.	4.8	12.
4-Chlorotoluene	U	2.5	ug/Kgdrywt	1	5	5.0	0.49	2.5
P-Isopropyltoluene	U	2.5	ug/Kgdrywt	1	5	5.0	0.76	2.5
4-Methyl-2-Pentanone	U	12	ug/Kgdrywt	1	25	25.	5.9	12.
Acetone	U	12	ug/Kgdrywt	1	25	25.	5.1	12.
Benzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
Bromobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.74	2.5
Bromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Bromodichloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.60	2.5
Bromoform	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5

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Report of Analytical Results

Client:
Lab ID: WG225350-2
Client ID: Method Blank Sample
Project:
SDG: SL2079
Lab File ID: W3324.D

Sample Date:
Received Date:
Extract Date: 24-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225350

Analysis Date: 24-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: NA
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Bromomethane	U	5.0	ug/Kgdrywt	1	10	10.	1.1	5.0
Carbon Disulfide	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
Carbon Tetrachloride	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
Chlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Dibromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	7.0	2.5
Chloroethane	U	5.0	ug/Kgdrywt	1	10	10.	1.3	5.0
Chloroform	U	2.5	ug/Kgdrywt	1	5	5.0	0.35	2.5
Chloromethane	U	5.0	ug/Kgdrywt	1	10	10.	1.4	5.0
cis-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
cis-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.72	2.5
Dibromomethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Dichlorodifluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.92	5.0
Ethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.65	2.5
Hexachlorobutadiene	U	2.5	ug/Kgdrywt	1	5	5.0	0.74	2.5
Isopropylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
m+p-Xylenes	U	5.0	ug/Kgdrywt	1	10	10.	1.7	5.0
Methyl tert-butyl Ether	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
Methylene Chloride	U	12	ug/Kgdrywt	1	25	25.	7.9	12.
N-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
N-Propylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.83	2.5
Naphthalene	U	2.5	ug/Kgdrywt	1	5	5.0	0.88	2.5
o-Xylene	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
sec-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Styrene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
tert-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Tetrachloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
Toluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
trans-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.71	2.5
trans-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.86	2.5
Trichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.59	2.5
Trichlorofluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.91	5.0
Vinyl Chloride	U	5.0	ug/Kgdrywt	1	10	10.	0.87	5.0
1,2-Dichloroethane-D4		117.	%					
p-Bromofluorobenzene		102.	%					

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Report of Analytical Results

Client:
Lab ID: WG225350-2
Client ID: Method Blank Sample
Project:
SDG: SL2079
Lab File ID: W3324.D

Sample Date:
Received Date:
Extract Date: 24-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225350

Analysis Date: 24-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: NA
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dibromofluoromethane		110.	%					
Toluene-D8		100.	%					

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Report of Analytical Results

Client:
Lab ID: WG225400-9
Client ID: Method Blank Sample
Project:
SDG: SL2079
Lab File ID: W3350.D

Sample Date:
Received Date:
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: NA
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,1,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
1,1,1-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.42	2.5
1,1,2,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.84	2.5
Freon-113	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
1,1,2-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.97	2.5
1,1-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.7	2.5
1,1-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.93	2.5
1,1-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
1,2,3-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.76	2.5
1,2,3-Trichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
1,2,4-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.79	2.5
1,2,4-Trimethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.87	2.5
1,2-Dibromo-3-Chloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.5	2.5
1,2-Dibromoethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
1,2-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
1,2-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
1,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
1,3,5-Trimethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.67	2.5
1,3-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.62	2.5
1,3-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	0.94	2.5
1,4-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.44	2.5
2,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	0.50	2.5
2-Butanone	U	12	ug/Kgdrywt	1	25	25.	5.9	12.
2-Chlorotoluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
2-Hexanone	U	12	ug/Kgdrywt	1	25	25.	4.8	12.
4-Chlorotoluene	U	2.5	ug/Kgdrywt	1	5	5.0	0.49	2.5
P-Isopropyltoluene	U	2.5	ug/Kgdrywt	1	5	5.0	0.76	2.5
4-Methyl-2-Pentanone	U	12	ug/Kgdrywt	1	25	25.	5.9	12.
Acetone	U	12	ug/Kgdrywt	1	25	25.	5.1	12.
Benzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
Bromobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.74	2.5
Bromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Bromodichloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.60	2.5
Bromoform	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5

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Report of Analytical Results

Client:
Lab ID: WG225400-9
Client ID: Method Blank Sample
Project:
SDG: SL2079
Lab File ID: W3350.D

Sample Date:
Received Date:
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: NA
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Bromomethane	U	5.0	ug/Kgdrywt	1	10	10.	1.1	5.0
Carbon Disulfide	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
Carbon Tetrachloride	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
Chlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Dibromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	7.0	2.5
Chloroethane	U	5.0	ug/Kgdrywt	1	10	10.	1.3	5.0
Chloroform	U	2.5	ug/Kgdrywt	1	5	5.0	0.35	2.5
Chloromethane	U	5.0	ug/Kgdrywt	1	10	10.	1.4	5.0
cis-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
cis-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.72	2.5
Dibromomethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Dichlorodifluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.92	5.0
Ethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.65	2.5
Hexachlorobutadiene	U	2.5	ug/Kgdrywt	1	5	5.0	0.74	2.5
Isopropylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
m+p-Xylenes	U	5.0	ug/Kgdrywt	1	10	10.	1.7	5.0
Methyl tert-butyl Ether	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
Methylene Chloride	U	12	ug/Kgdrywt	1	25	25.	7.9	12.
N-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
N-Propylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.83	2.5
Naphthalene	U	2.5	ug/Kgdrywt	1	5	5.0	0.88	2.5
o-Xylene	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
sec-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Styrene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
tert-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Tetrachloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
Toluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
trans-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.71	2.5
trans-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.86	2.5
Trichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.59	2.5
Trichlorofluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.91	5.0
Vinyl Chloride	U	5.0	ug/Kgdrywt	1	10	10.	0.87	5.0
1,2-Dichloroethane-D4		99.7	%					
p-Bromofluorobenzene		94.6	%					

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Report of Analytical Results

Client:
Lab ID: WG225400-9
Client ID: Method Blank Sample
Project:
SDG: SL2079
Lab File ID: W3350.D

Sample Date:
Received Date:
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: NA
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dibromofluoromethane		103.	%					
Toluene-D8		99.6	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG225463-2
Client ID: Method Blank Sample
Project:
SDG: SL2079
Lab File ID: W3368.D

Sample Date:
Received Date:
Extract Date: 27-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225463

Analysis Date: 27-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: NA
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,1,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
1,1,1-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.42	2.5
1,1,2,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.84	2.5
Freon-113	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
1,1,2-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.97	2.5
1,1-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.7	2.5
1,1-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.93	2.5
1,1-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
1,2,3-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.76	2.5
1,2,3-Trichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
1,2,4-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.79	2.5
1,2,4-Trimethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.87	2.5
1,2-Dibromo-3-Chloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.5	2.5
1,2-Dibromoethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
1,2-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
1,2-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
1,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
1,3,5-Trimethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.67	2.5
1,3-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.62	2.5
1,3-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	0.94	2.5
1,4-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.44	2.5
2,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	0.50	2.5
2-Butanone	U	12	ug/Kgdrywt	1	25	25.	5.9	12.
2-Chlorotoluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
2-Hexanone	U	12	ug/Kgdrywt	1	25	25.	4.8	12.
4-Chlorotoluene	U	2.5	ug/Kgdrywt	1	5	5.0	0.49	2.5
P-Isopropyltoluene	U	2.5	ug/Kgdrywt	1	5	5.0	0.76	2.5
4-Methyl-2-Pentanone	U	12	ug/Kgdrywt	1	25	25.	5.9	12.
Acetone	U	12	ug/Kgdrywt	1	25	25.	5.1	12.
Benzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
Bromobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.74	2.5
Bromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Bromodichloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.60	2.5
Bromoform	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5

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Report of Analytical Results

Client:
Lab ID: WG225463-2
Client ID: Method Blank Sample
Project:
SDG: SL2079
Lab File ID: W3368.D

Sample Date:
Received Date:
Extract Date: 27-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225463

Analysis Date: 27-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: NA
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Bromomethane	U	5.0	ug/Kgdrywt	1	10	10.	1.1	5.0
Carbon Disulfide	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
Carbon Tetrachloride	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
Chlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Dibromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	7.0	2.5
Chloroethane	U	5.0	ug/Kgdrywt	1	10	10.	1.3	5.0
Chloroform	U	2.5	ug/Kgdrywt	1	5	5.0	0.35	2.5
Chloromethane	U	5.0	ug/Kgdrywt	1	10	10.	1.4	5.0
cis-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
cis-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.72	2.5
Dibromomethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Dichlorodifluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.92	5.0
Ethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.65	2.5
Hexachlorobutadiene	U	2.5	ug/Kgdrywt	1	5	5.0	0.74	2.5
Isopropylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
m+p-Xylenes	U	5.0	ug/Kgdrywt	1	10	10.	1.7	5.0
Methyl tert-butyl Ether	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
Methylene Chloride	U	12	ug/Kgdrywt	1	25	25.	7.9	12.
N-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
N-Propylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.83	2.5
Naphthalene	U	2.5	ug/Kgdrywt	1	5	5.0	0.88	2.5
o-Xylene	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
sec-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Styrene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
tert-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Tetrachloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
Toluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
trans-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.71	2.5
trans-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.86	2.5
Trichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.59	2.5
Trichlorofluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.91	5.0
Vinyl Chloride	U	5.0	ug/Kgdrywt	1	10	10.	0.87	5.0
1,2-Dichloroethane-D4		107.	%					
p-Bromofluorobenzene		99.8	%					

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Report of Analytical Results

Client:
Lab ID: WG225463-2
Client ID: Method Blank Sample
Project:
SDG: SL2079
Lab File ID: W3368.D

Sample Date:
Received Date:
Extract Date: 27-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225463

Analysis Date: 27-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: NA
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dibromofluoromethane		107.	%					
Toluene-D8		100.	%					

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Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** Cornhusker Army Ammunition Plant **Matrix:** SL
Lab Code: KAS **SDG:** SL2079

Client Sample ID	Lab Sample ID	Col. ID	BFB	#	DBF	#	DCA	#	TOL	#
CHAAP-BKRD-SS11	SL2079-10		83.5		105.		105.		100.	
CHAAP-BKRD-SS12	SL2079-11		83.2		115.		120.		101.	
CHAAP-BKRD-SS13	SL2079-12		85.0		116.		120.		98.7	
CHAAP-BKRD-SS109	SL2079-13		98.2		117.		125.		102.	
CHAAP-BKRD-SB08	SL2079-1RA		100.		114.		119.		99.6	
CHAAP-BKRD-SB09	SL2079-2RA		103.		117.		125.		100.	
CHAAP-BKRD-SB10	SL2079-3RA		103.		117.		129.		102.	
CHAAP-BKRD-SB11	SL2079-4RA		106.		122.		134.		102.	
CHAAP-BKRD-SB12	SL2079-5RA2		99.7		113.		111.		100.	
CHAAP-BKRD-SB13	SL2079-6RA2		97.7		114.		117.		102.	
CHAAP-BKRD-SS08	SL2079-7		83.6		110.		105.		101.	
CHAAP-BKRD-SS09	SL2079-8		88.9		110.		108.		101.	
CHAAP-BKRD-SS10	SL2079-9		85.2		123.		131.		102.	
Laboratory Control S	WG225350-1		104.		103.		104.		100.	
Method Blank Sample	WG225350-2		102.		110.		117.		100.	
Matrix Spike	WG225400-12		99.2		105.		112.		102.	
Matrix Spike Duplica	WG225400-13		96.8		107.		108.		100.	
Laboratory Control S	WG225400-8		95.2		95.5		87.0		98.6	
Method Blank Sample	WG225400-9		94.6		103.		99.7		99.6	
Laboratory Control S	WG225463-1		98.0		96.3		93.0		99.8	
Method Blank Sample	WG225463-2		99.8		107.		107.		100.	

		QC Limits
TOL	TOLUENE-D8	85-125
DCA	1,2-DICHLOROETHANE-D4	71-136
DBF	DIBROMOFLUOROMETHANE	78-125
BFB	P-BROMOFLUOROBENZENE	79-125

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

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Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** Cornhusker Army Ammunition Plant **Matrix:** AQ
Lab Code: KAS **SDG:** SL2079

Client Sample ID	Lab Sample ID	Col. ID	BFB	#	DBF	#	DCA	#	TOL	#
CHAAP-BKRD-EB-031418	SL2079-14		79.9	*	106.		107.		95.7	
CHAAP-BKRD-TB-031418	SL2079-15		82.7	*	107.		109.		97.3	
Laboratory Control S	WG225300-1		88.3		98.6		97.9		98.1	
Method Blank Sample	WG225300-2		80.0	*	106.		108.		95.1	

		QC Limits
TOL	TOLUENE-D8	89-120
DCA	1,2-DICHLOROETHANE-D4	81-120
DBF	DIBROMOFLUOROMETHANE	80-120
BFB	P-BROMOFLUOROBENZENE	85-120

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

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LCS Recovery Report

Client:
Lab ID: WG225300-1
Client ID: LCS
Project:
SDG: SL2079
LCS File ID: P4880.D

Sample Date:
Received Date:
Extract Date: 23-MAR-18
Extracted By: hg
Extraction Method: SW846 5030
Lab Prep Batch: WG225300

Analysis Date: 23-MAR-18
Analyst: hg
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 28-MAR-18

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
1,1,1,2-Tetrachloroethane	109.	50.0	54.7	ug/L	78-125
1,1,1-Trichloroethane	95.0	50.0	47.5	ug/L	74-131
1,1,2,2-Tetrachloroethane	109.	50.0	54.6	ug/L	71-121
Freon-113	99.4	50.0	49.7	ug/L	70-136
1,1,2-Trichloroethane	88.6	50.0	44.3	ug/L	80-120
1,1-Dichloroethane	99.4	50.0	49.7	ug/L	77-125
1,1-Dichloroethene	100.	50.0	50.2	ug/L	71-131
1,1-Dichloropropene	98.0	50.0	49.0	ug/L	79-125
1,2,3-Trichlorobenzene	106.	50.0	52.9	ug/L	69-129
1,2,3-Trichloropropane	104.	50.0	52.1	ug/L	73-122
1,2,4-Trichlorobenzene	111.	50.0	55.7	ug/L	69-130
1,2,4-Trimethylbenzene	101.	50.0	50.7	ug/L	76-124
1,2-Dibromo-3-Chloropropane	96.8	50.0	48.4	ug/L	62-128
1,2-Dichlorobenzene	110.	50.0	55.2	ug/L	80-120
1,2-Dichloroethane	93.8	50.0	46.9	ug/L	73-128
1,2-Dichloropropane	96.0	50.0	48.0	ug/L	78-122
1,3,5-Trimethylbenzene	101.	50.0	50.4	ug/L	75-124
1,3-Dichlorobenzene	111.	50.0	55.4	ug/L	80-120
1,3-Dichloropropane	102.	50.0	51.1	ug/L	80-120
1,4-Dichlorobenzene	105.	50.0	52.5	ug/L	79-120
2,2-Dichloropropane	107.	50.0	53.3	ug/L	60-139
2-Butanone	101.	50.0	50.6	ug/L	56-143
2-Chlorotoluene	111.	50.0	55.3	ug/L	79-122
2-Hexanone	93.0	50.0	46.5	ug/L	57-139
4-Chlorotoluene	102.	50.0	51.1	ug/L	78-122
P-Isopropyltoluene	103.	50.0	51.6	ug/L	77-127
4-Methyl-2-Pentanone	87.6	50.0	43.8	ug/L	67-130
Acetone	121.	50.0	60.4	ug/L	39-160
Benzene	94.6	50.0	47.3	ug/L	79-120
Bromobenzene	108.	50.0	53.9	ug/L	80-120
Bromoform	95.8	50.0	47.9	ug/L	66-130
Bromomethane	107.	50.0	53.4	ug/L	53-141
Carbon Disulfide	108.	50.0	54.2	ug/L	64-133
Carbon Tetrachloride	102.	50.0	50.9	ug/L	72-136
Chlorobenzene	104.	50.0	52.1	ug/L	82-120

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LCS Recovery Report

Client:
Lab ID: WG225300-1
Client ID: LCS
Project:
SDG: SL2079
LCS File ID: P4880.D

Sample Date:
Received Date:
Extract Date: 23-MAR-18
Extracted By: hg
Extraction Method: SW846 5030
Lab Prep Batch: WG225300

Analysis Date: 23-MAR-18
Analyst: hg
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 28-MAR-18

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
Bromochloromethane	93.0	50.0	46.5	ug/L	78-123
Dibromochloromethane	101.	50.0	50.4	ug/L	74-126
Chloroethane	96.4	50.0	48.2	ug/L	60-138
Chloroform	96.2	50.0	48.1	ug/L	79-124
Chloromethane	93.4	50.0	46.7	ug/L	50-139
cis-1,2-Dichloroethene	89.2	50.0	44.6	ug/L	78-123
cis-1,3-Dichloropropene	85.6	50.0	42.8	ug/L	75-124
Dibromomethane	88.8	50.0	44.4	ug/L	79-123
Bromodichloromethane	103.	50.0	51.4	ug/L	79-125
Dichlorodifluoromethane	84.2	50.0	42.1	ug/L	32-152
Ethylbenzene	96.2	50.0	48.1	ug/L	79-121
1,2-Dibromoethane	87.6	50.0	43.8	ug/L	77-121
Hexachlorobutadiene	108.	50.0	54.0	ug/L	66-134
Isopropylbenzene	105.	50.0	52.4	ug/L	72-131
Methyl tert-butyl Ether	88.8	50.0	44.4	ug/L	71-124
Methylene Chloride	90.6	50.0	45.3	ug/L	74-124
m+p-Xylenes	96.6	100.	96.6	ug/L	80-121
Naphthalene	98.0	50.0	49.0	ug/L	61-128
N-Butylbenzene	108.	50.0	53.8	ug/L	75-128
N-Propylbenzene	114.	50.0	57.2	ug/L	76-126
o-Xylene	95.2	50.0	47.6	ug/L	78-122
sec-Butylbenzene	105.	50.0	52.3	ug/L	77-126
Styrene	95.0	50.0	47.5	ug/L	78-123
tert-Butylbenzene	99.2	50.0	49.6	ug/L	78-124
Tetrachloroethene	105.	50.0	52.6	ug/L	74-129
Toluene	95.6	50.0	47.8	ug/L	80-121
trans-1,2-Dichloroethene	94.2	50.0	47.1	ug/L	75-124
trans-1,3-Dichloropropene	86.8	50.0	43.4	ug/L	73-127
Trichloroethene	98.0	50.0	49.0	ug/L	79-123
Trichlorofluoromethane	93.8	50.0	46.9	ug/L	65-141
Vinyl Chloride	92.6	50.0	46.3	ug/L	58-137
Dibromofluoromethane	98.6				80-120
1,2-Dichloroethane-d4	97.9				81-120
Toluene-d8	98.1				89-120
P-Bromofluorobenzene	88.3				85-120

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LCS Recovery Report

Client:
Lab ID: WG225350-1
Client ID: LCS
Project:
SDG: SL2079
LCS File ID: W3322.D

Sample Date:
Received Date:
Extract Date: 24-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225350

Analysis Date: 24-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: NA
Report Date: 28-MAR-18

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
1,1,1,2-Tetrachloroethane	111.	50.0	55.6	ug/Kgdrywt	78-125
1,1,1-Trichloroethane	113.	50.0	56.6	ug/Kgdrywt	73-130
1,1,2,2-Tetrachloroethane	105.	50.0	52.5	ug/Kgdrywt	70-125
Freon-113	114.	50.0	56.8	ug/Kgdrywt	66-136
1,1,2-Trichloroethane	106.	50.0	53.0	ug/Kgdrywt	78-125
1,1-Dichloroethane	116.	50.0	57.8	ug/Kgdrywt	76-125
1,1-Dichloroethene	101.	50.0	50.7	ug/Kgdrywt	70-131
1,1-Dichloropropene	113.	50.0	56.4	ug/Kgdrywt	76-125
1,2,3-Trichlorobenzene	111.	50.0	55.4	ug/Kgdrywt	66-130
1,2,3-Trichloropropane	100.	50.0	50.0	ug/Kgdrywt	73-125
1,2,4-Trichlorobenzene	111.	50.0	55.4	ug/Kgdrywt	67-129
1,2,4-Trimethylbenzene	109.	50.0	54.6	ug/Kgdrywt	75-125
1,2-Dibromo-3-Chloropropane	115.	50.0	57.4	ug/Kgdrywt	61-132
1,2-Dibromoethane	105.	50.0	52.4	ug/Kgdrywt	78-125
1,2-Dichlorobenzene	106.	50.0	53.2	ug/Kgdrywt	78-125
1,2-Dichloroethane	108.	50.0	54.2	ug/Kgdrywt	73-128
1,2-Dichloropropane	108.	50.0	53.8	ug/Kgdrywt	76-125
1,3,5-Trimethylbenzene	110.	50.0	55.1	ug/Kgdrywt	73-125
1,3-Dichlorobenzene	109.	50.0	54.4	ug/Kgdrywt	77-125
1,3-Dichloropropane	102.	50.0	51.1	ug/Kgdrywt	77-125
1,4-Dichlorobenzene	106.	50.0	52.8	ug/Kgdrywt	75-120
2,2-Dichloropropane	120.	50.0	59.8	ug/Kgdrywt	67-133
2-Butanone	102.	50.0	50.8	ug/Kgdrywt	51-148
2-Chlorotoluene	110.	50.0	54.8	ug/Kgdrywt	75-125
2-Hexanone	98.4	50.0	49.2	ug/Kgdrywt	53-145
4-Chlorotoluene	109.	50.0	54.5	ug/Kgdrywt	72-125
P-Isopropyltoluene	111.	50.0	55.4	ug/Kgdrywt	73-127
4-Methyl-2-Pentanone	99.8	50.0	49.9	ug/Kgdrywt	65-135
Acetone	103.	50.0	51.7	ug/Kgdrywt	36-164
Benzene	109.	50.0	54.6	ug/Kgdrywt	77-125
Bromobenzene	107.	50.0	53.6	ug/Kgdrywt	78-125
Bromochloromethane	104.	50.0	51.9	ug/Kgdrywt	78-125
Bromodichloromethane	115.	50.0	57.6	ug/Kgdrywt	75-127
Bromoform	110.	50.0	54.8	ug/Kgdrywt	67-132
Bromomethane	103.	50.0	51.4	ug/Kgdrywt	53-143

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LCS Recovery Report

Client:
Lab ID: WG225350-1
Client ID: LCS
Project:
SDG: SL2079
LCS File ID: W3322.D

Sample Date:
Received Date:
Extract Date: 24-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225350

Analysis Date: 24-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: NA
Report Date: 28-MAR-18

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
Carbon Disulfide	121.	50.0	60.4	ug/Kgdrywt	63-132
Carbon Tetrachloride	114.	50.0	56.9	ug/Kgdrywt	70-135
Chlorobenzene	106.	50.0	53.0	ug/Kgdrywt	79-125
Dibromochloromethane	114.	50.0	56.9	ug/Kgdrywt	74-126
Chloroethane	114.	50.0	57.1	ug/Kgdrywt	59-139
Chloroform	114.	50.0	57.2	ug/Kgdrywt	78-125
Chloromethane	101.	50.0	50.7	ug/Kgdrywt	50-136
cis-1,2-Dichloroethene	111.	50.0	55.7	ug/Kgdrywt	77-125
cis-1,3-Dichloropropene	108.	50.0	54.2	ug/Kgdrywt	74-126
Dibromomethane	112.	50.0	56.0	ug/Kgdrywt	78-125
Dichlorodifluoromethane	89.2	50.0	44.6	ug/Kgdrywt	29-149
Ethylbenzene	108.	50.0	54.0	ug/Kgdrywt	76-125
Hexachlorobutadiene	105.	50.0	52.7	ug/Kgdrywt	61-135
Isopropylbenzene	114.	50.0	57.0	ug/Kgdrywt	68-134
m+p-Xylenes	107.	100.	107.	ug/Kgdrywt	77-125
Methyl tert-butyl Ether	106.	50.0	53.0	ug/Kgdrywt	73-125
Methylene Chloride	97.0	50.0	48.5	ug/Kgdrywt	70-128
N-Butylbenzene	112.	50.0	56.2	ug/Kgdrywt	70-128
N-Propylbenzene	108.	50.0	54.1	ug/Kgdrywt	73-125
Naphthalene	112.	50.0	56.0	ug/Kgdrywt	62-129
o-Xylene	110.	50.0	54.8	ug/Kgdrywt	77-125
sec-Butylbenzene	110.	50.0	54.9	ug/Kgdrywt	73-126
Styrene	109.	50.0	54.6	ug/Kgdrywt	76-125
tert-Butylbenzene	109.	50.0	54.4	ug/Kgdrywt	73-125
Tetrachloroethene	108.	50.0	53.9	ug/Kgdrywt	73-128
Toluene	107.	50.0	53.7	ug/Kgdrywt	77-125
trans-1,2-Dichloroethene	108.	50.0	54.2	ug/Kgdrywt	74-125
trans-1,3-Dichloropropene	113.	50.0	56.4	ug/Kgdrywt	71-130
Trichloroethene	108.	50.0	53.8	ug/Kgdrywt	77-125
Trichlorofluoromethane	105.	50.0	52.7	ug/Kgdrywt	62-140
Vinyl Chloride	103.	50.0	51.5	ug/Kgdrywt	56-135
1,2-Dichloroethane-D4	104.				71-136
p-Bromofluorobenzene	104.				79-125
Dibromofluoromethane	103.				78-125
Toluene-D8	100.				85-125

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LCS Recovery Report

Client:
Lab ID: WG225400-8
Client ID: LCS
Project:
SDG: SL2079
LCS File ID: W3348.D

Sample Date:
Received Date:
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: NA
Report Date: 28-MAR-18

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
1,1,1,2-Tetrachloroethane	95.8	50.0	47.9	ug/Kgdrywt	78-125
1,1,1-Trichloroethane	88.0	50.0	44.0	ug/Kgdrywt	73-130
1,1,2,2-Tetrachloroethane	93.8	50.0	46.9	ug/Kgdrywt	70-125
Freon-113	93.4	50.0	46.7	ug/Kgdrywt	66-136
1,1,2-Trichloroethane	94.0	50.0	47.0	ug/Kgdrywt	78-125
1,1-Dichloroethane	96.0	50.0	48.0	ug/Kgdrywt	76-125
1,1-Dichloroethene	92.2	50.0	46.1	ug/Kgdrywt	70-131
1,1-Dichloropropene	93.0	50.0	46.5	ug/Kgdrywt	76-125
1,2,3-Trichlorobenzene	96.2	50.0	48.1	ug/Kgdrywt	66-130
1,2,3-Trichloropropane	86.8	50.0	43.4	ug/Kgdrywt	73-125
1,2,4-Trichlorobenzene	98.8	50.0	49.4	ug/Kgdrywt	67-129
1,2,4-Trimethylbenzene	92.0	50.0	46.0	ug/Kgdrywt	75-125
1,2-Dibromo-3-Chloropropane	95.4	50.0	47.7	ug/Kgdrywt	61-132
1,2-Dibromoethane	94.6	50.0	47.3	ug/Kgdrywt	78-125
1,2-Dichlorobenzene	93.6	50.0	46.8	ug/Kgdrywt	78-125
1,2-Dichloroethane	88.4	50.0	44.2	ug/Kgdrywt	73-128
1,2-Dichloropropane	96.4	50.0	48.2	ug/Kgdrywt	76-125
1,3,5-Trimethylbenzene	92.0	50.0	46.0	ug/Kgdrywt	73-125
1,3-Dichlorobenzene	93.6	50.0	46.8	ug/Kgdrywt	77-125
1,3-Dichloropropane	91.6	50.0	45.8	ug/Kgdrywt	77-125
1,4-Dichlorobenzene	90.6	50.0	45.3	ug/Kgdrywt	75-120
2,2-Dichloropropane	93.4	50.0	46.7	ug/Kgdrywt	67-133
2-Butanone	89.8	50.0	44.9	ug/Kgdrywt	51-148
2-Chlorotoluene	91.2	50.0	45.6	ug/Kgdrywt	75-125
2-Hexanone	97.4	50.0	48.7	ug/Kgdrywt	53-145
4-Chlorotoluene	90.4	50.0	45.2	ug/Kgdrywt	72-125
P-Isopropyltoluene	93.4	50.0	46.7	ug/Kgdrywt	73-127
4-Methyl-2-Pentanone	91.6	50.0	45.8	ug/Kgdrywt	65-135
Acetone	91.8	50.0	45.9	ug/Kgdrywt	36-164
Benzene	95.6	50.0	47.8	ug/Kgdrywt	77-125
Bromobenzene	93.8	50.0	46.9	ug/Kgdrywt	78-125
Bromochloromethane	99.4	50.0	49.7	ug/Kgdrywt	78-125
Bromodichloromethane	93.6	50.0	46.8	ug/Kgdrywt	75-127
Bromoform	98.6	50.0	49.3	ug/Kgdrywt	67-132
Bromomethane	96.0	50.0	48.0	ug/Kgdrywt	53-143

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LCS Recovery Report

Client:
Lab ID: WG225400-8
Client ID: LCS
Project:
SDG: SL2079
LCS File ID: W3348.D

Sample Date:
Received Date:
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: NA
Report Date: 28-MAR-18

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
Carbon Disulfide	104.	50.0	52.2	ug/Kgdrywt	63-132
Carbon Tetrachloride	89.2	50.0	44.6	ug/Kgdrywt	70-135
Chlorobenzene	94.6	50.0	47.3	ug/Kgdrywt	79-125
Dibromochloromethane	98.0	50.0	49.0	ug/Kgdrywt	74-126
Chloroethane	92.6	50.0	46.3	ug/Kgdrywt	59-139
Chloroform	91.6	50.0	45.8	ug/Kgdrywt	78-125
Chloromethane	107.	50.0	53.7	ug/Kgdrywt	50-136
cis-1,2-Dichloroethene	98.8	50.0	49.4	ug/Kgdrywt	77-125
cis-1,3-Dichloropropene	93.4	50.0	46.7	ug/Kgdrywt	74-126
Dibromomethane	92.8	50.0	46.4	ug/Kgdrywt	78-125
Dichlorodifluoromethane	103.	50.0	51.4	ug/Kgdrywt	29-149
Ethylbenzene	94.4	50.0	47.2	ug/Kgdrywt	76-125
Hexachlorobutadiene	88.8	50.0	44.4	ug/Kgdrywt	61-135
Isopropylbenzene	98.2	50.0	49.1	ug/Kgdrywt	68-134
m+p-Xylenes	94.6	100.	94.6	ug/Kgdrywt	77-125
Methyl tert-butyl Ether	94.6	50.0	47.3	ug/Kgdrywt	73-125
Methylene Chloride	90.6	50.0	45.3	ug/Kgdrywt	70-128
N-Butylbenzene	91.0	50.0	45.5	ug/Kgdrywt	70-128
N-Propylbenzene	90.2	50.0	45.1	ug/Kgdrywt	73-125
Naphthalene	105.	50.0	52.5	ug/Kgdrywt	62-129
o-Xylene	97.6	50.0	48.8	ug/Kgdrywt	77-125
sec-Butylbenzene	91.8	50.0	45.9	ug/Kgdrywt	73-126
Styrene	98.0	50.0	49.0	ug/Kgdrywt	76-125
tert-Butylbenzene	92.6	50.0	46.3	ug/Kgdrywt	73-125
Tetrachloroethene	96.4	50.0	48.2	ug/Kgdrywt	73-128
Toluene	94.2	50.0	47.1	ug/Kgdrywt	77-125
trans-1,2-Dichloroethene	97.6	50.0	48.8	ug/Kgdrywt	74-125
trans-1,3-Dichloropropene	94.6	50.0	47.3	ug/Kgdrywt	71-130
Trichloroethene	89.8	50.0	44.9	ug/Kgdrywt	77-125
Trichlorofluoromethane	77.4	50.0	38.7	ug/Kgdrywt	62-140
Vinyl Chloride	97.6	50.0	48.8	ug/Kgdrywt	56-135
1,2-Dichloroethane-D4	87.0				71-136
p-Bromofluorobenzene	95.2				79-125
Dibromofluoromethane	95.5				78-125
Toluene-D8	98.6				85-125

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LCS Recovery Report

Client:
Lab ID: WG225463-1
Client ID: LCS
Project:
SDG: SL2079
LCS File ID: W3366.D

Sample Date:
Received Date:
Extract Date: 27-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225463

Analysis Date: 27-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: NA
Report Date: 28-MAR-18

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
1,1,1,2-Tetrachloroethane	89.6	50.0	44.8	ug/Kgdrywt	78-125
1,1,1-Trichloroethane	82.0	50.0	41.0	ug/Kgdrywt	73-130
1,1,2,2-Tetrachloroethane	94.0	50.0	47.0	ug/Kgdrywt	70-125
Freon-113	84.4	50.0	42.2	ug/Kgdrywt	66-136
1,1,2-Trichloroethane	90.6	50.0	45.3	ug/Kgdrywt	78-125
1,1-Dichloroethane	89.0	50.0	44.5	ug/Kgdrywt	76-125
1,1-Dichloroethene	83.2	50.0	41.6	ug/Kgdrywt	70-131
1,1-Dichloropropene	85.2	50.0	42.6	ug/Kgdrywt	76-125
1,2,3-Trichlorobenzene	95.4	50.0	47.7	ug/Kgdrywt	66-130
1,2,3-Trichloropropane	87.6	50.0	43.8	ug/Kgdrywt	73-125
1,2,4-Trichlorobenzene	98.6	50.0	49.3	ug/Kgdrywt	67-129
1,2,4-Trimethylbenzene	89.4	50.0	44.7	ug/Kgdrywt	75-125
1,2-Dibromo-3-Chloropropane	87.6	50.0	43.8	ug/Kgdrywt	61-132
1,2-Dibromoethane	91.6	50.0	45.8	ug/Kgdrywt	78-125
1,2-Dichlorobenzene	90.4	50.0	45.2	ug/Kgdrywt	78-125
1,2-Dichloroethane	86.4	50.0	43.2	ug/Kgdrywt	73-128
1,2-Dichloropropane	89.0	50.0	44.5	ug/Kgdrywt	76-125
1,3,5-Trimethylbenzene	88.8	50.0	44.4	ug/Kgdrywt	73-125
1,3-Dichlorobenzene	90.0	50.0	45.0	ug/Kgdrywt	77-125
1,3-Dichloropropane	90.6	50.0	45.3	ug/Kgdrywt	77-125
1,4-Dichlorobenzene	87.2	50.0	43.6	ug/Kgdrywt	75-120
2,2-Dichloropropane	87.2	50.0	43.6	ug/Kgdrywt	67-133
2-Butanone	95.6	50.0	47.8	ug/Kgdrywt	51-148
2-Chlorotoluene	86.8	50.0	43.4	ug/Kgdrywt	75-125
2-Hexanone	104.	50.0	51.9	ug/Kgdrywt	53-145
4-Chlorotoluene	87.0	50.0	43.5	ug/Kgdrywt	72-125
P-Isopropyltoluene	91.0	50.0	45.5	ug/Kgdrywt	73-127
4-Methyl-2-Pentanone	92.4	50.0	46.2	ug/Kgdrywt	65-135
Acetone	112.	50.0	56.0	ug/Kgdrywt	36-164
Benzene	86.6	50.0	43.3	ug/Kgdrywt	77-125
Bromobenzene	89.4	50.0	44.7	ug/Kgdrywt	78-125
Bromochloromethane	92.0	50.0	46.0	ug/Kgdrywt	78-125
Bromodichloromethane	89.2	50.0	44.6	ug/Kgdrywt	75-127
Bromoform	95.8	50.0	47.9	ug/Kgdrywt	67-132
Bromomethane	81.8	50.0	40.9	ug/Kgdrywt	53-143

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LCS Recovery Report

Client:
Lab ID: WG225463-1
Client ID: LCS
Project:
SDG: SL2079
LCS File ID: W3366.D

Sample Date:
Received Date:
Extract Date: 27-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225463

Analysis Date: 27-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: NA
Report Date: 28-MAR-18

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
Carbon Disulfide	90.0	50.0	45.0	ug/Kgdrywt	63-132
Carbon Tetrachloride	83.2	50.0	41.6	ug/Kgdrywt	70-135
Chlorobenzene	87.4	50.0	43.7	ug/Kgdrywt	79-125
Dibromochloromethane	94.2	50.0	47.1	ug/Kgdrywt	74-126
Chloroethane	81.6	50.0	40.8	ug/Kgdrywt	59-139
Chloroform	85.6	50.0	42.8	ug/Kgdrywt	78-125
Chloromethane	86.8	50.0	43.4	ug/Kgdrywt	50-136
cis-1,2-Dichloroethene	90.6	50.0	45.3	ug/Kgdrywt	77-125
cis-1,3-Dichloropropene	88.8	50.0	44.4	ug/Kgdrywt	74-126
Dibromomethane	91.2	50.0	45.6	ug/Kgdrywt	78-125
Dichlorodifluoromethane	80.6	50.0	40.3	ug/Kgdrywt	29-149
Ethylbenzene	86.0	50.0	43.0	ug/Kgdrywt	76-125
Hexachlorobutadiene	84.8	50.0	42.4	ug/Kgdrywt	61-135
Isopropylbenzene	92.4	50.0	46.2	ug/Kgdrywt	68-134
m+p-Xylenes	87.8	100.	87.8	ug/Kgdrywt	77-125
Methyl tert-butyl Ether	92.4	50.0	46.2	ug/Kgdrywt	73-125
Methylene Chloride	85.4	50.0	42.7	ug/Kgdrywt	70-128
N-Butylbenzene	90.6	50.0	45.3	ug/Kgdrywt	70-128
N-Propylbenzene	86.2	50.0	43.1	ug/Kgdrywt	73-125
Naphthalene	103.	50.0	51.6	ug/Kgdrywt	62-129
o-Xylene	89.8	50.0	44.9	ug/Kgdrywt	77-125
sec-Butylbenzene	87.4	50.0	43.7	ug/Kgdrywt	73-126
Styrene	91.8	50.0	45.9	ug/Kgdrywt	76-125
tert-Butylbenzene	87.2	50.0	43.6	ug/Kgdrywt	73-125
Tetrachloroethene	94.2	50.0	47.1	ug/Kgdrywt	73-128
Toluene	85.6	50.0	42.8	ug/Kgdrywt	77-125
trans-1,2-Dichloroethene	84.8	50.0	42.4	ug/Kgdrywt	74-125
trans-1,3-Dichloropropene	92.4	50.0	46.2	ug/Kgdrywt	71-130
Trichloroethene	83.0	50.0	41.5	ug/Kgdrywt	77-125
Trichlorofluoromethane	74.0	50.0	37.0	ug/Kgdrywt	62-140
Vinyl Chloride	81.6	50.0	40.8	ug/Kgdrywt	56-135
1,2-Dichloroethane-D4	93.0				71-136
p-Bromofluorobenzene	98.0				79-125
Dibromofluoromethane	96.3				78-125
Toluene-D8	99.8				85-125

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MS/MSD Recovery Report

MS ID: WG225400-12
MSD ID: WG225400-13
Sample ID: SL2079-9
Client ID: CHAAP-BKRD-SS10
Project:
SDG: SL2079
MS File ID: W3358.D

Received Date:
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400
Report Date: 29-MAR-18
MSD File ID: W3359.D

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 75.

Compound	MS Spike	MSD Spike	Conc Units	Samp Conc	MS Conc	MSD Conc	MS Rec (%)	MSD Rec (%)	RPD (%)	RPD Limit	Limits
1,1,1,2-Tetrachloroethane	92.0	79.0	ug/Kgdrywt	U3.0	100	82.	110.	103.	21*	20	78-125
1,1,1-Trichloroethane	92.0	79.0	ug/Kgdrywt	U3.0	110	94.	124.	119.	20	20	73-130
1,1,2,2-Tetrachloroethane	92.0	79.0	ug/Kgdrywt	U3.0	94.	78.	102.	98.9	18	20	70-125
Freon-113	92.0	79.0	ug/Kgdrywt	U3.0	110	88.	120.	112.	22*	20	66-136
1,1,2-Trichloroethane	92.0	79.0	ug/Kgdrywt	U3.0	93.	77.	102.	97.7	19	20	78-125
1,1-Dichloroethane	92.0	79.0	ug/Kgdrywt	U3.0	110	93.	122.	117.	19	20	76-125
1,1-Dichloroethene	92.0	79.0	ug/Kgdrywt	U3.0	110	88.	115.	112.	18	20	70-131
1,1-Dichloropropene	92.0	79.0	ug/Kgdrywt	U3.0	110	90.	120.	113.	20	20	76-125
1,2,3-Trichlorobenzene	92.0	79.0	ug/Kgdrywt	UMM3.0	57.	50.	62.4*	62.8*	14	20	66-130
1,2,3-Trichloropropane	92.0	79.0	ug/Kgdrywt	U3.0	92.	75.	99.4	94.9	20	20	73-125
1,2,4-Trichlorobenzene	92.0	79.0	ug/Kgdrywt	U3.0	66.	54.	71.3	67.7	20	20	67-129
1,2,4-Trimethylbenzene	92.0	79.0	ug/Kgdrywt	U3.0	100	83.	112.	106.	21*	20	75-125
1,2-Dibromo-3-Chloropropane	92.0	79.0	ug/Kgdrywt	U3.0	87.	78.	94.8	98.2	12	20	61-132
1,2-Dibromoethane	92.0	79.0	ug/Kgdrywt	U3.0	88.	73.	96.1	92.2	19	20	78-125
1,2-Dichlorobenzene	92.0	79.0	ug/Kgdrywt	U3.0	83.	67.	90.6	84.7	22*	20	78-125
1,2-Dichloroethane	92.0	79.0	ug/Kgdrywt	U3.0	100	83.	113.	104.	23*	20	73-128
1,2-Dichloropropane	92.0	79.0	ug/Kgdrywt	U3.0	100	82.	110.	104.	21*	20	76-125
1,3,5-Trimethylbenzene	92.0	79.0	ug/Kgdrywt	U3.0	110	87.	116.	110.	21*	20	73-125
1,3-Dichlorobenzene	92.0	79.0	ug/Kgdrywt	U3.0	87.	70.	95.0	88.1	23*	20	77-125
1,3-Dichloropropane	92.0	79.0	ug/Kgdrywt	U3.0	91.	77.	99.1	97.5	17	20	77-125
1,4-Dichlorobenzene	92.0	79.0	ug/Kgdrywt	U3.0	84.	66.	91.3	83.8	24*	20	75-120
2,2-Dichloropropane	92.0	79.0	ug/Kgdrywt	U3.0	120	94.	125.	119.	20	20	67-133
2-Butanone	92.0	79.0	ug/Kgdrywt	U15	72.	57.	78.7	71.6	24*	20	51-148
2-Chlorotoluene	92.0	79.0	ug/Kgdrywt	U3.0	100	82.	110.	103.	21*	20	75-125
2-Hexanone	92.0	79.0	ug/Kgdrywt	UMM15	38.	31.	40.9*	39.0*	20	20	53-145
4-Chlorotoluene	92.0	79.0	ug/Kgdrywt	U3.0	98.	77.	107.	97.7	24*	20	72-125
P-Isopropyltoluene	92.0	79.0	ug/Kgdrywt	U3.0	110	89.	118.	112.	21*	20	73-127
4-Methyl-2-Pentanone	92.0	79.0	ug/Kgdrywt	UM15	62.	51.	67.7	64.4*	20	20	65-135
Acetone	92.0	79.0	ug/Kgdrywt	J9.1	97.	85.	95.4	95.6	14	20	36-164
Benzene	92.0	79.0	ug/Kgdrywt	U3.0	100	83.	111.	105.	21*	20	77-125
Bromobenzene	92.0	79.0	ug/Kgdrywt	U3.0	87.	72.	94.6	91.5	18	20	78-125
Bromochloromethane	92.0	79.0	ug/Kgdrywt	U3.0	99.	84.	107.	107.	16	20	78-125
Bromodichloromethane	92.0	79.0	ug/Kgdrywt	U3.0	110	84.	117.	106.	25*	20	75-127

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MS/MSD Recovery Report

MS ID: WG225400-12
MSD ID: WG225400-13
Sample ID: SL2079-9
Client ID: CHAAP-BKRD-SS10
Project:
SDG: SL2079
MS File ID: W3358.D

Received Date:
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400
Report Date: 29-MAR-18
MSD File ID: W3359.D

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 75.

Compound	MS Spike	MSD Spike	Conc Units	Samp Conc	MS Conc	MSD Conc	MS Rec (%)	MSD Rec (%)	RPD (%)	RPD Limit	Limits
Bromoform	92.0	79.0	ug/Kgdrywt	U3.0	92.	71.	100.	90.4	25*	20	67-132
Bromomethane	92.0	79.0	ug/Kgdrywt	U6.0	93.	72.	101.	90.9	26*	20	53-143
Carbon Disulfide	92.0	79.0	ug/Kgdrywt	U3.0	110	91.	120.	116.	18	20	63-132
Carbon Tetrachloride	92.0	79.0	ug/Kgdrywt	U3.0	120	92.	126.	117.	23*	20	70-135
Chlorobenzene	92.0	79.0	ug/Kgdrywt	U3.0	94.	75.	103.	94.9	23*	20	79-125
Dibromochloromethane	92.0	79.0	ug/Kgdrywt	U3.0	100	77.	108.	97.8	25*	20	74-126
Chloroethane	92.0	79.0	ug/Kgdrywt	U6.0	120	97.	129.	123.	20	20	59-139
Chloroform	92.0	79.0	ug/Kgdrywt	U3.0	110	91.	122.	116.	20	20	78-125
Chloromethane	92.0	79.0	ug/Kgdrywt	U6.0	120	100	125.	126.	14	20	50-136
cis-1,2-Dichloroethene	92.0	79.0	ug/Kgdrywt	U3.0	100	86.	113.	109.	19	20	77-125
cis-1,3-Dichloropropene	92.0	79.0	ug/Kgdrywt	U3.0	82.	63.	89.6	79.7	27*	20	74-126
Dibromomethane	92.0	79.0	ug/Kgdrywt	U3.0	100	82.	112.	104.	22*	20	78-125
Dichlorodifluoromethane	92.0	79.0	ug/Kgdrywt	UMM6.0	140	120	154.*	149.*	18	20	29-149
Ethylbenzene	92.0	79.0	ug/Kgdrywt	U3.0	100	81.	108.	102.	21*	20	76-125
Hexachlorobutadiene	92.0	79.0	ug/Kgdrywt	U3.0	82.	66.	89.3	83.3	22*	20	61-135
Isopropylbenzene	92.0	79.0	ug/Kgdrywt	U3.0	110	94.	124.	119.	19	20	68-134
m+p-Xylenes	180.	160.	ug/Kgdrywt	U6.0	200	160	112.	103.	20	20	77-125
Methyl tert-butyl Ether	92.0	79.0	ug/Kgdrywt	U3.0	98.	83.	107.	105.	16	20	73-125
Methylene Chloride	92.0	79.0	ug/Kgdrywt	U15	96.	80.	105.	101.	19	20	70-128
N-Butylbenzene	92.0	79.0	ug/Kgdrywt	U3.0	110	86.	116.	109.	22*	20	70-128
N-Propylbenzene	92.0	79.0	ug/Kgdrywt	U3.0	110	86.	115.	109.	20	20	73-125
Naphthalene	92.0	79.0	ug/Kgdrywt	UMM3.0	51.	45.	55.9*	57.5*	12	20	62-129
o-Xylene	92.0	79.0	ug/Kgdrywt	U3.0	100	81.	109.	103.	21*	20	77-125
sec-Butylbenzene	92.0	79.0	ug/Kgdrywt	U3.0	110	88.	117.	111.	20	20	73-126
Styrene	92.0	79.0	ug/Kgdrywt	U3.0	87.	67.	94.3	84.7	26*	20	76-125
tert-Butylbenzene	92.0	79.0	ug/Kgdrywt	U3.0	110	87.	117.	110.	22*	20	73-125
Tetrachloroethene	92.0	79.0	ug/Kgdrywt	U3.0	110	87.	115.	110.	20	20	73-128
Toluene	92.0	79.0	ug/Kgdrywt	U3.0	99.	81.	108.	102.	20	20	77-125
trans-1,2-Dichloroethene	92.0	79.0	ug/Kgdrywt	U3.0	100	86.	113.	108.	19	20	74-125
trans-1,3-Dichloropropene	92.0	79.0	ug/Kgdrywt	U3.0	89.	69.	96.5	87.1	25*	20	71-130
Trichloroethene	92.0	79.0	ug/Kgdrywt	U3.0	100	84.	113.	106.	22*	20	77-125
Trichlorofluoromethane	92.0	79.0	ug/Kgdrywt	U6.0	120	96.	130.	121.	23*	20	62-140
Vinyl Chloride	92.0	79.0	ug/Kgdrywt	U6.0	110	98.	122.	124.	13	20	56-135

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MS/MSD Recovery Report

MS ID: WG225400-12
MSD ID: WG225400-13
Sample ID: SL2079-9
Client ID: CHAAP-BKRD-SS10
Project:
SDG: SL2079
MS File ID: W3358.D

Received Date:
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400
Report Date: 29-MAR-18
MSD File ID: W3359.D

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 75.

1,2-Dichloroethane-D4	112.	108.	71-136
p-Bromofluorobenzene	99.2	96.8	79-125
Dibromofluoromethane	105.	107.	78-125
Toluene-D8	102.	100.	85-125

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Form 4
Method Blank Summary - VOA

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : P4882.D
Instrument ID : GCMS-P
Heated Purge : No

SDG : SL2079
Lab Sample ID : WG225300-2
Date Analyzed : 23-MAR-18
Time Analyzed : 09:49

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG225300-1	P4880.D	03/23/18	08:35
CHAAP-BKRD-EB-031418	SL2079-14	P4883.D	03/23/18	10:25
CHAAP-BKRD-TB-031418	SL2079-15	P4884.D	03/23/18	11:00

Form 4
Method Blank Summary - VOA

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : W3324.D
Instrument ID : GCMS-W
Heated Purge : Yes

SDG : SL2079
Lab Sample ID : WG225350-2
Date Analyzed : 24-MAR-18
Time Analyzed : 11:32

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG225350-1	W3322.D	03/24/18	10:10
CHAAP-BKRD-SB08	SL2079-1RA	W3325.D	03/24/18	12:09
CHAAP-BKRD-SB09	SL2079-2RA	W3326.D	03/24/18	12:46
CHAAP-BKRD-SB10	SL2079-3RA	W3327.D	03/24/18	13:23
CHAAP-BKRD-SB11	SL2079-4RA	W3328.D	03/24/18	14:01

Form 4
Method Blank Summary - VOA

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : W3350.D
Instrument ID : GCMS-W
Heated Purge : Yes

SDG : SL2079
Lab Sample ID : WG225400-9
Date Analyzed : 26-MAR-18
Time Analyzed : 15:10

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG225400-8	W3348.D	03/26/18	13:56
CHAAP-BKRD-SS08	SL2079-7	W3351.D	03/26/18	15:47
CHAAP-BKRD-SS09	SL2079-8	W3352.D	03/26/18	16:24
CHAAP-BKRD-SS11	SL2079-10	W3353.D	03/26/18	17:01
CHAAP-BKRD-SS12	SL2079-11	W3354.D	03/26/18	17:38
CHAAP-BKRD-SS13	SL2079-12	W3355.D	03/26/18	18:15
CHAAP-BKRD-SS109	SL2079-13	W3356.D	03/26/18	18:52
CHAAP-BKRD-SS10	SL2079-9	W3357.D	03/26/18	19:29
Matrix Spike	WG225400-12	W3358.D	03/26/18	20:06
Matrix Spike Duplica	WG225400-13	W3359.D	03/26/18	20:43

Form 4
Method Blank Summary - VOA

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : W3368.D
Instrument ID : GCMS-W
Heated Purge : Yes

SDG : SL2079
Lab Sample ID : WG225463-2
Date Analyzed : 27-MAR-18
Time Analyzed : 11:06

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG225463-1	W3366.D	03/27/18	09:36
CHAAP-BKRD-SB12	SL2079-5RA2	W3369.D	03/27/18	11:43
CHAAP-BKRD-SB13	SL2079-6RA2	W3370.D	03/27/18	12:20

Form 5
Volatile Organic Instrument Performance Check

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : PB983A.D
Instrument ID : GCMS-P

SDG : SL2079
Date Analyzed : 19-MAR-18
Time Analyzed : 14:29
Heated Purge : No

m/e	Ion Abundance Criteria	% Relative Abundance		
50	15.0 - 40.0% of mass 95	19.5		
75	30.0 - 60.0% of mass 95	50.1		
95	Base Peak, 100% relative abundance	100		
96	5.0 - 9.0% of mass 95	6.5		
173	Less than 2.0% of mass 174	0.5	0.69	1
174	Greater than 50.0% of mass 95	75.3		
175	5.0 - 9.0% of mass 174	4.8	6.43	1
176	95.0 - 101.0% of mass 174	76.0	100.84	1
177	5.0 - 9.0% of mass 176	4.6	6.10	2

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following samples, LCS, MS, MSD and standards:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Initial Calibration	WG225041-4	P4806.D	03/19/18	16:00
Initial Calibration	WG225041-3	P4807.D	03/19/18	16:34
Initial Calibration	WG225041-2	P4808.D	03/19/18	17:08
Initial Calibration	WG225041-1	P4809.D	03/19/18	17:42
Initial Calibration	WG225041-6	P4810.D	03/19/18	18:17
Initial Calibration	WG225041-5	P4811.D	03/19/18	18:51
Independent Source	WG225041-7	P4812.D	03/19/18	19:25

Form 5
Volatile Organic Instrument Performance Check

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : PB987A.D
Instrument ID : GCMS-P

SDG : SL2079
Date Analyzed : 23-MAR-18
Time Analyzed : 07:30
Heated Purge : No

m/e	Ion Abundance Criteria	% Relative Abundance		
50	15.0 - 40.0% of mass 95	20.5		
75	30.0 - 60.0% of mass 95	53.6		
95	Base Peak, 100% relative abundance	100		
96	5.0 - 9.0% of mass 95	7.4		
173	Less than 2.0% of mass 174	0.6	0.68	1
174	Greater than 50.0% of mass 95	81.4		
175	5.0 - 9.0% of mass 174	5.9	7.26	1
176	95.0 - 101.0% of mass 174	81.3	99.88	1
177	5.0 - 9.0% of mass 176	7.0	8.63	2

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following samples, LCS, MS, MSD and standards:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Continuing Calibrati	WG225300-4	P4879.D	03/23/18	07:53
Laboratory Control S	WG225300-1	P4880.D	03/23/18	08:35
Method Blank Sample	WG225300-2	P4882.D	03/23/18	09:49
CHAAP-BKRD-EB-031418	SL2079-14	P4883.D	03/23/18	10:25
CHAAP-BKRD-TB-031418	SL2079-15	P4884.D	03/23/18	11:00
Continuing Calibrati	WG225300-5	P4898.D	03/23/18	18:58

Form 5
Volatile Organic Instrument Performance Check

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : WB800A.D
Instrument ID : GCMS-W

SDG : SL2079
Date Analyzed : 23-MAR-18
Time Analyzed : 08:34
Heated Purge : Yes

m/e	Ion Abundance Criteria	% Relative Abundance		
50	15.0 - 40.0% of mass 95	20.9		
75	30.0 - 60.0% of mass 95	55.0		
95	Base Peak, 100% relative abundance	100		
96	5.0 - 9.0% of mass 95	7.2		
173	Less than 2.0% of mass 174	0.0	0.0	1
174	Greater than 50.0% of mass 95	67.0		
175	5.0 - 9.0% of mass 174	5.1	7.57	1
176	95.0 - 101.0% of mass 174	66.9	99.88	1
177	5.0 - 9.0% of mass 176	4.4	6.59	2

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following samples, LCS, MS, MSD and standards:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Initial Calibration	WG225302-4	W3295.D	03/23/18	09:41
Initial Calibration	WG225302-3	W3296.D	03/23/18	10:19
Initial Calibration	WG225302-2	W3297.D	03/23/18	10:57
Initial Calibration	WG225302-1	W3298.D	03/23/18	11:34
Initial Calibration	WG225302-6	W3299.D	03/23/18	12:37
Initial Calibration	WG225302-5	W3300.D	03/23/18	13:16
Independent Source	WG225302-7	W3301.D	03/23/18	13:53

Form 5
Volatile Organic Instrument Performance Check

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : WB801A.D
Instrument ID : GCMS-W

SDG : SL2079
Date Analyzed : 24-MAR-18
Time Analyzed : 07:19
Heated Purge : Yes

m/e	Ion Abundance Criteria	% Relative Abundance		
50	15.0 - 40.0% of mass 95	18.9		
75	30.0 - 60.0% of mass 95	54.5		
95	Base Peak, 100% relative abundance	100		
96	5.0 - 9.0% of mass 95	6.2		
173	Less than 2.0% of mass 174	0.0	0.0	1
174	Greater than 50.0% of mass 95	64.8		
175	5.0 - 9.0% of mass 174	5.2	8.05	1
176	95.0 - 101.0% of mass 174	61.9	95.52	1
177	5.0 - 9.0% of mass 176	3.8	6.16	2

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following samples, LCS, MS, MSD and standards:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Continuing Calibrati	WG225350-4	W3321.D	03/24/18	09:25
Laboratory Control S	WG225350-1	W3322.D	03/24/18	10:10
Method Blank Sample	WG225350-2	W3324.D	03/24/18	11:32
CHAAP-BKRD-SB08	SL2079-1RA	W3325.D	03/24/18	12:09
CHAAP-BKRD-SB09	SL2079-2RA	W3326.D	03/24/18	12:46
CHAAP-BKRD-SB10	SL2079-3RA	W3327.D	03/24/18	13:23
CHAAP-BKRD-SB11	SL2079-4RA	W3328.D	03/24/18	14:01
Continuing Calibrati	WG225350-5	W3336.D	03/24/18	18:58
Continuing Calibrati	WG225350-6	W3337.D	03/24/18	19:35
Continuing Calibrati	WG225350-7	W3338.D	03/24/18	20:12

Form 5
Volatile Organic Instrument Performance Check

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : WB802A.D
Instrument ID : GCMS-W

SDG : SL2079
Date Analyzed : 26-MAR-18
Time Analyzed : 09:46
Heated Purge : Yes

m/e	Ion Abundance Criteria	% Relative Abundance		
50	15.0 - 40.0% of mass 95	20.6		
75	30.0 - 60.0% of mass 95	57.8		
95	Base Peak, 100% relative abundance	100		
96	5.0 - 9.0% of mass 95	6.7		
173	Less than 2.0% of mass 174	0.0	0.0	1
174	Greater than 50.0% of mass 95	60.7		
175	5.0 - 9.0% of mass 174	4.6	7.61	1
176	95.0 - 101.0% of mass 174	57.7	95.00	1
177	5.0 - 9.0% of mass 176	3.9	6.82	2

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following samples, LCS, MS, MSD and standards:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Initial Calibration	WG225400-4	W3342.D	03/26/18	10:13
Initial Calibration	WG225400-3	W3343.D	03/26/18	10:50
Initial Calibration	WG225400-2	W3344.D	03/26/18	11:27
Initial Calibration	WG225400-1	W3345.D	03/26/18	12:04
Initial Calibration	WG225400-6	W3346.D	03/26/18	12:41
Initial Calibration	WG225400-5	W3347.D	03/26/18	13:19
Laboratory Control S	WG225400-8	W3348.D	03/26/18	13:56
Independent Source	WG225400-7	W3348A.D	03/26/18	13:56
Method Blank Sample	WG225400-9	W3350.D	03/26/18	15:10
CHAAP-BKRD-SS08	SL2079-7	W3351.D	03/26/18	15:47
CHAAP-BKRD-SS09	SL2079-8	W3352.D	03/26/18	16:24
CHAAP-BKRD-SS11	SL2079-10	W3353.D	03/26/18	17:01
CHAAP-BKRD-SS12	SL2079-11	W3354.D	03/26/18	17:38
CHAAP-BKRD-SS13	SL2079-12	W3355.D	03/26/18	18:15
CHAAP-BKRD-SS109	SL2079-13	W3356.D	03/26/18	18:52
CHAAP-BKRD-SS10	SL2079-9	W3357.D	03/26/18	19:29
Matrix Spike	WG225400-12	W3358.D	03/26/18	20:06
Matrix Spike Duplica	WG225400-13	W3359.D	03/26/18	20:43
Continuing Calibrati	WG225400-11	W3360.D	03/26/18	21:20

Form 5
Volatile Organic Instrument Performance Check

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : WB803A.D
Instrument ID : GCMS-W

SDG : SL2079
Date Analyzed : 27-MAR-18
Time Analyzed : 07:33
Heated Purge : Yes

m/e	Ion Abundance Criteria	% Relative Abundance		
50	15.0 - 40.0% of mass 95	19.7		
75	30.0 - 60.0% of mass 95	59.8		
95	Base Peak, 100% relative abundance	100		
96	5.0 - 9.0% of mass 95	6.5		
173	Less than 2.0% of mass 174	0.0	0.0	1
174	Greater than 50.0% of mass 95	61.4		
175	5.0 - 9.0% of mass 174	5.1	8.28	1
176	95.0 - 101.0% of mass 174	59.1	96.29	1
177	5.0 - 9.0% of mass 176	4.2	7.19	2

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following samples, LCS, MS, MSD and standards:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Continuing Calibrati	WG225463-4	W3365.D	03/27/18	08:47
Laboratory Control S	WG225463-1	W3366.D	03/27/18	09:36
Method Blank Sample	WG225463-2	W3368.D	03/27/18	11:06
CHAAP-BKRD-SB12	SL2079-5RA2	W3369.D	03/27/18	11:43
CHAAP-BKRD-SB13	SL2079-6RA2	W3370.D	03/27/18	12:20
Continuing Calibrati	WG225463-5	W3381.D	03/27/18	19:08

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL2079
Project : Cornhusker Army Ammunition Plant
Instrument ID: GCMS-P
Lab File IDs : P4809.D P4808.D P4807.D P4806.D P4811.D P4810.D
Column ID:
Calibration Date(s): 19-MAR-18 16:00 19-MAR-18 18:51

	Level 1 1.0000	Level 2 5.0000	Level 3 20.0000	Level 4 50.0000	Level 5 100.0000	Level 6 150.0000	Crv New	b	m1	m2	%RSD	Max %RSD	
Dichlorodifluoromethane	0.39326	0.39750	0.44648	0.41815	0.40532	0.40170	AVG		0.41040		4.77953	15.00000	O
Chloromethane	0.63263	0.59022	0.59482	0.57054	0.56254	0.56069	AVG		0.58524		4.64578	15.00000	O
Vinyl chloride	0.61848	0.61810	0.62897	0.62243	0.59506	0.59924	AVG		0.61371		2.19532	15.00000	O
Bromomethane	0.31515	0.29147	0.25952	0.23756	0.26584	0.26279	AVG		0.27205		10.00749	15.00000	O
Chloroethane	0.43041	0.38739	0.40842	0.39496	0.34743	0.38482	AVG		0.39224		7.04026	15.00000	O
Trichlorofluoromethane	0.85868	0.80317	0.87209	0.85673	0.80880	0.84944	AVG		0.84149		3.38813	15.00000	O
1,1-Dichloroethene	0.29383	0.40410	0.38288	0.41217	0.38374	0.40667	AVG		0.38056		11.61673	15.00000	O
Freon-113	0.28592	0.27520	0.27511	0.29442	0.27998	0.29200	AVG		0.28377		2.94177	15.00000	O
Carbon Disulfide	1.11508	1.30874	1.27771	1.38711	1.31708	1.37408	AVG		1.29664		7.56179	15.00000	O
Methylene Chloride	7357	30384	111266	273005	568786	819335	LNR	-0.00908	0.46169		0.99998	0.99000	O
Acetone	0.13254	0.13842	0.13226	0.13239	0.12890	0.12404	AVG		0.13142		3.61240	15.00000	O
trans-1,2-Dichloroethene	0.33023	0.41605	0.41707	0.43881	0.43246	0.44349	AVG		0.41302		10.18667	15.00000	O
Methyl Acetate	0.38321	0.34653	0.36476	0.31686	0.42057	0.40932	AVG		0.37354		10.44008	15.00000	O
Methyl tert-butyl ether	0.84472	1.14369	1.23635	1.24948	1.34812	1.31904	AVG		1.19023		15.43296	15.00000	WC
1,1-Dichloroethane	0.58924	0.79728	0.76707	0.81314	0.81885	0.83086	AVG		0.76941		11.82316	15.00000	O
cis-1,2-Dichloroethene	3143	25601	106453	273456	577626	838953	LNR	0.00891	0.47440		0.99996	0.99000	O
2,2-Dichloropropane	0.39317	0.52075	0.52570	0.57521	0.54266	0.58234	AVG		0.52330		13.10109	15.00000	O
Bromochloromethane	1431	12205	49779	125915	229318	341318	LNR	-0.02192	0.19129		0.99798	0.99000	O
Cyclohexane	4762	35717	159738	442638	900807	1375358	LNR	0.02389	0.77137		0.99894	0.99000	O
Chloroform	0.58226	0.74887	0.74428	0.76783	0.77254	0.78144	AVG		0.73287		10.25180	15.00000	O
Carbon Tetrachloride	0.23320	0.30452	0.29386	0.31805	0.32669	0.33539	AVG		0.30195		12.20296	15.00000	O
1,1,1-Trichloroethane	0.45816	0.65677	0.64711	0.68790	0.67151	0.68569	AVG		0.63452		13.84613	15.00000	O
2-Butanone	0.14816	0.21130	0.21895	0.22890	0.23484	0.23359	AVG		0.21262		15.44920	15.00000	WC
1,1-Dichloropropene	0.23932	0.34012	0.34331	0.36363	0.36439	0.38317	AVG		0.33899		15.13356	15.00000	WC
Benzene	0.78992	1.04722	1.04422	1.07023	1.09292	1.08133	AVG		1.02097		11.24125	15.00000	O
1,2-Dichloroethane	0.37714	0.40069	0.37208	0.36820	0.38933	0.39489	AVG		0.38372		3.42534	15.00000	O
Methylcyclohexane	5259	32409	158250	433319	938512	1397126	LNR	0.03074	0.78913		0.99936	0.99000	O
Trichloroethene	0.18169	0.24404	0.24593	0.25340	0.25888	0.26778	AVG		0.24195		12.71974	15.00000	O
Dibromomethane	1859	14896	62638	159976	347438	519675	LNR	0.02701	0.17197		0.99908	0.99000	O
1,2-Dichloropropane	0.19085	0.25360	0.26508	0.26714	0.28271	0.28700	AVG		0.25773		13.56796	15.00000	O
Bromodichloromethane	0.23601	0.31515	0.32617	0.33968	0.36250	0.37477	AVG		0.32571		15.11162	15.00000	WC
cis-1,3-dichloropropene	4306	37640	178493	484214	1040076	1560847	LNR	0.03393	0.51765		0.99910	0.99000	O
Toluene	0.53111	0.66431	0.64959	0.69108	0.70738	0.73084	AVG		0.66239		10.66141	15.00000	O
Tetrachloroethene	0.16318	0.18027	0.17536	0.18470	0.18289	0.19003	AVG		0.17941		5.18797	15.00000	O
4-methyl-2-pentanone	12745	123446	583655	1557305	3448173	5048920	LNR	0.16264	0.33686		0.99925	0.99000	O
trans-1,3-Dichloropropene	4225	34284	158881	437791	964476	1463346	LNR	0.04349	0.48485		0.99831	0.99000	O
1,1,2-Trichloroethane	2442	19200	80731	212526	453419	680134	LNR	0.02659	0.22502		0.99920	0.99000	O

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL2079
Project : Cornhusker Army Ammunition Plant
Instrument ID: GCMS-P
Lab File IDs : P4809.D P4808.D P4807.D P4806.D P4811.D P4810.D
Column ID:
Calibration Date(s): 19-MAR-18 16:00 19-MAR-18 18:51

Dibromochloromethane	2759	21679	96816	260045	575976	873738	LNR	0.02953	0.25980		0.99931	0.99000	O
1,3-Dichloropropane	0.31081	0.43815	0.44939	0.46734	0.47620	0.47626	AVG		0.43636		14.52064	15.00000	O
1,2-Dibromoethane	2865	22370	96392	256603	557288	831807	LNR	0.03086	0.27584		0.99910	0.99000	O
2-Hexanone	7169	76868	385212	1068792	2356981	3488947	LNR	0.13889	0.20909		0.99964	0.99000	O
Chlorobenzene	0.59484	0.71409	0.70023	0.71270	0.71986	0.73963	AVG		0.69689		7.40770	15.00000	O
Ethylbenzene	4883	36679	156073	425787	903630	1396948	LNR	0.02548	0.41316		0.99921	0.99000	O
1,1,1,2-Tetrachloroethane	0.16968	0.22330	0.23344	0.24674	0.25380	0.26526	AVG		0.23203		14.62886	15.00000	O
m+p-Xylenes	10731	87426	390236	1079323	2306445	3512534	LNR	0.05060	0.52168		0.99954	0.99000	O
o-Xylene	4276	37776	183701	506796	1079294	1635274	LNR	0.02481	0.48660		0.99968	0.99000	O
Styrene	5896	61441	307786	871381	1928413	2945626	LNR	0.03883	0.87717		0.99909	0.99000	O
Bromoform	1537	13226	63004	179890	416610	630831	LNR	0.04583	0.18847		0.99851	0.99000	O
Isopropylbenzene	9742	93275	441106	1246776	2599648	3939388	LNR	0.01838	2.14066		0.99975	0.99000	O
Bromobenzene	0.40122	0.50516	0.52378	0.53158	0.53388	0.54282	AVG		0.50641		10.47934	15.00000	O
N-Propylbenzene	1.67898	2.36812	2.50666	2.66684	2.61230	2.59814	AVG		2.40517		15.41862	15.00000	WC
1,1,2,2-Tetrachloroethane	0.44697	0.59886	0.60532	0.61691	0.63716	0.64056	AVG		0.59097		12.26519	15.00000	O
2-Chlorotoluene	1.02815	1.36918	1.50646	1.56597	1.57417	1.60259	AVG		1.44109		15.18249	15.00000	WC
1,2,3-Trichloropropane	0.39434	0.54735	0.54579	0.56253	0.59356	0.60413	AVG		0.54128		14.01749	15.00000	O
1,3,5-Trimethylbenzene	8907	81328	379779	1068997	2293197	3474073	LNR	0.02402	1.88883		0.99966	0.99000	O
4-Chlorotoluene	10824	84442	365152	990332	2097332	3147615	LNR	0.01257	1.71035		0.99990	0.99000	O
tert-Butylbenzene	9422	79038	374433	1064207	2302266	3511430	LNR	0.02884	1.90761		0.99944	0.99000	O
1,2,4-Trimethylbenzene	8467	86614	402303	1113908	2381876	3569647	LNR	0.01880	1.94425		0.99986	0.99000	O
sec-Butylbenzene	11786	104273	463527	1312829	2737973	4141257	LNR	0.01655	2.24993		0.99977	0.99000	O
P-Isopropyltoluene	8320	79229	384616	1103867	2338969	3556952	LNR	0.02500	1.93364		0.99962	0.99000	O
1,3-Dichlorobenzene	0.76250	1.01545	1.01322	1.01205	1.02387	1.04976	AVG		0.97948		10.94684	15.00000	O
1,4-Dichlorobenzene	0.97699	1.13501	1.05773	1.07500	1.08051	1.09247	AVG		1.06962		4.88795	15.00000	O
N-Butylbenzene	8451	71598	344293	982785	2083483	3179931	LNR	0.02520	1.72671		0.99955	0.99000	O
1,2-Dichloroethylene (total	+++++	+++++	+++++	+++++	+++++	+++++	AVG		0.000e+00		0.000e+0	15.00000	M C
1,2-Dichlorobenzene	0.71607	0.96923	0.94707	0.97645	0.98275	1.00680	AVG		0.93306		11.58072	15.00000	O
1,2-Dibromo-3-Chloropropane	531	5039	24058	63197	141057	216989	LNR	0.03152	0.11752		0.99898	0.99000	O
Hexachlorobutadiene	0.17926	0.19547	0.19556	0.19501	0.19650	0.20505	AVG		0.19448		4.30140	15.00000	O
1,2,4-Trichlorobenzene	0.48623	0.54428	0.57223	0.59968	0.62205	0.64782	AVG		0.57871		10.03820	15.00000	O
Naphthalene	9897	70949	361473	946106	2229245	3227573	LNR	0.02761	1.77587		0.99895	0.99000	O
1,2,3-Trichlorobenzene	0.47108	0.53161	0.54912	0.52625	0.55617	0.56308	AVG		0.53288		6.27046	15.00000	O
Xylenes (total)	+++++	+++++	+++++	+++++	+++++	+++++	AVG		0.000e+00		0.000e+0	15.00000	M C
Dibromofluoromethane	0.48804	0.49075	0.48318	0.49345	0.49662	0.49601	AVG		0.49134		1.04566	15.00000	
1,2-Dichloroethane-D4	0.69619	0.68494	0.67902	0.68630	0.70887	0.72371	AVG		0.69650		2.43363	15.00000	
Toluene-D8	1.25664	1.27099	1.27362	1.25126	1.27907	1.27257	AVG		1.26736		0.85768	15.00000	
P-Bromofluorobenzene	0.52725	0.53984	0.55270	0.55513	0.56926	0.56531	AVG		0.55158		2.86050	15.00000	

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL2079
Project : Cornhusker Army Ammunition Plant
Instrument ID: GCMS-P
Lab File IDs : P4809.D P4808.D P4807.D P4806.D P4811.D P4810.D
Column ID:
Calibration Date(s): 19-MAR-18 16:00
19-MAR-18 18:51

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://katahdinlab.com
sales@katahdinlab.com

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL2079
Project : Cornhusker Army Ammunition Plant
Instrument ID: GCMS-W
Lab File IDs : W3298.D W3297.D W3296.D W3295.D W3300.D W3299.D
Column ID:
Calibration Date(s): 23-MAR-18 09:41, 23-MAR-18 13:16

	5.0000 Level 1	10.0000 Level 2	20.0000 Level 3	50.0000 Level 4	100.0000 Level 5	150.0000 Level 6	New Crv	b	m1	m2	%RSD	Max %RSD	
Dichlorodifluoromethane	0.79336	0.71457	0.64305	0.74356	0.72372	0.64224	AVG		0.71008		8.29778	15.00000	O
Chloromethane	0.99817	0.84537	0.76182	0.80985	0.82454	0.71164	AVG		0.82523		11.80783	15.00000	O
Vinyl chloride	0.88149	0.77700	0.71700	0.79816	0.83216	0.71082	AVG		0.78611		8.41696	15.00000	O
Bromomethane	0.58099	0.47046	0.42103	0.43431	0.43988	0.37261	AVG		0.45321		15.50593	15.00000	W(
Chloroethane	0.58151	0.50620	0.46221	0.51134	0.48590	0.37514	AVG		0.48705		13.93175	15.00000	O
Trichlorofluoromethane	1.15923	1.05625	0.93919	1.05543	1.06744	0.96788	AVG		1.04090		7.54398	15.00000	O
1,1-Dichloroethene	0.52632	0.47094	0.43485	0.52453	0.54028	0.47281	AVG		0.49495		8.37552	15.00000	O
Carbon Disulfide	1.93664	1.71356	1.59753	1.89789	1.96719	1.68974	AVG		1.80043		8.49004	15.00000	O
Freon-113	0.38029	0.33588	0.32714	0.38122	0.38348	0.33644	AVG		0.35741		7.49668	15.00000	O
Methylene Chloride	0.98327	0.84292	0.71325	0.71338	0.74717	0.67979	AVG		0.77996		14.65109	15.00000	O
Acetone	0.29516	0.29017	0.25482	0.26076	0.26927	0.29542	AVG		0.27760		6.55550	15.00000	O
trans-1,2-Dichloroethene	0.61045	0.55739	0.50154	0.57424	0.61393	0.52999	AVG		0.56459		7.86325	15.00000	O
Methyl tert-butyl ether	2.08440	2.02944	1.91089	2.13756	2.32622	2.25044	AVG		2.12316		7.08017	15.00000	O
1,1-Dichloroethane	1.18583	1.12435	1.01307	1.17060	1.21398	1.07519	AVG		1.13050		6.68135	15.00000	O
cis-1,2-Dichloroethene	0.65678	0.61183	0.55549	0.63082	0.68422	0.60581	AVG		0.62416		7.13650	15.00000	O
2,2-Dichloropropane	0.92610	0.85950	0.78465	0.92823	0.97671	0.85012	AVG		0.88755		7.78410	15.00000	O
Bromochloromethane	0.27646	0.25977	0.23826	0.27739	0.28757	0.26549	AVG		0.26749		6.47459	15.00000	O
Chloroform	1.20330	1.13532	1.05033	1.14510	1.21822	1.08746	AVG		1.13995		5.68167	15.00000	O
Carbon Tetrachloride	0.46119	0.45056	0.39688	0.47986	0.49107	0.43242	AVG		0.45200		7.54248	15.00000	O
1,1,1-Trichloroethane	1.01538	0.94664	0.85738	1.02578	1.04202	0.92271	AVG		0.96832		7.41937	15.00000	O
1,1-Dichloropropene	0.51102	0.48119	0.43691	0.52936	0.54693	0.47702	AVG		0.49707		8.04551	15.00000	O
2-Butanone	0.39879	0.36456	0.36359	0.38734	0.40391	0.44644	AVG		0.39410		7.78538	15.00000	O
Benzene	1.53769	1.41231	1.26339	1.45293	1.54320	1.33815	AVG		1.42461		7.77044	15.00000	O
1,2-Dichloroethane	0.61623	0.56399	0.52212	0.57252	0.57671	0.55930	AVG		0.56848		5.34582	15.00000	O
Trichloroethene	0.37714	0.35195	0.31428	0.35851	0.37269	0.32321	AVG		0.34963		7.37095	15.00000	O
Dibromomethane	0.22323	0.21523	0.20582	0.22394	0.23370	0.23014	AVG		0.22201		4.57571	15.00000	O
1,2-Dichloropropane	0.39789	0.36716	0.33729	0.38666	0.40664	0.36961	AVG		0.37754		6.63189	15.00000	O
Bromodichloromethane	0.53031	0.50035	0.45677	0.52402	0.54655	0.51306	AVG		0.51184		6.09133	15.00000	O
cis-1,3-dichloropropene	0.63790	0.61032	0.58009	0.70607	0.74313	0.69265	AVG		0.66169		9.41965	15.00000	O
Toluene	0.94690	0.87041	0.79990	0.91510	0.95991	0.85017	AVG		0.89040		6.89429	15.00000	O
4-methyl-2-pentanone	0.43469	0.40254	0.41239	0.44759	0.46846	0.50960	AVG		0.44588		8.80019	15.00000	O
Tetrachloroethene	0.26142	0.25205	0.22337	0.25172	0.27746	0.23480	AVG		0.25014		7.65218	15.00000	O
trans-1,3-Dichloropropene	0.61213	0.56795	0.55145	0.64000	0.67882	0.65336	AVG		0.61729		8.06710	15.00000	O
1,1,2-Trichloroethane	0.32596	0.28739	0.26186	0.30078	0.31674	0.31107	AVG		0.30063		7.71388	15.00000	O
Dibromochloromethane	0.35230	0.33677	0.33591	0.36320	0.41324	0.38524	AVG		0.36444		8.27074	15.00000	O
1,3-Dichloropropane	0.76007	0.68355	0.65811	0.70866	0.75877	0.71307	AVG		0.71371		5.67636	15.00000	O
1,2-Dibromoethane	0.34393	0.32438	0.31869	0.34603	0.38160	0.37363	AVG		0.34804		7.29569	15.00000	O

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL2079
Project : Cornhusker Army Ammunition Plant
Instrument ID: GCMS-W
Lab File IDs : W3298.D W3297.D W3296.D W3295.D W3300.D W3299.D
Column ID:
Calibration Date(s): 23-MAR-18 09:41 23-MAR-18 13:16

2-Hexanone	0.32779	0.30928	0.31829	0.33896	0.36803	0.39394	AVG		0.34272		9.42456	15.00000	O
Chlorobenzene	1.09885	1.00662	0.93918	1.01694	1.09919	0.95719	AVG		1.01966		6.67391	15.00000	O
Ethylbenzene	0.56421	0.53145	0.49195	0.56125	0.60918	0.52218	AVG		0.54670		7.43150	15.00000	O
1,1,1,2-Tetrachloroethane	0.36098	0.33495	0.31604	0.35639	0.39363	0.35254	AVG		0.35242		7.41711	15.00000	O
m+p-Xylenes	0.71884	0.65857	0.62572	0.69828	0.75111	0.64768	AVG		0.68337		6.95106	15.00000	O
o-Xylene	0.61182	0.60516	0.59382	0.67901	0.74810	0.65424	AVG		0.64869		9.01465	15.00000	O
Styrene	1.04767	1.05536	1.04934	1.16726	1.28372	1.13762	AVG		1.12350		8.31918	15.00000	O
Bromoform	0.25508	0.24255	0.24079	0.26787	0.31307	0.31098	AVG		0.27172		12.03827	15.00000	O
Isopropylbenzene	2.63492	2.50769	2.43137	2.81633	2.97896	2.56485	AVG		2.65569		7.73934	15.00000	O
Bromobenzene	0.69799	0.67659	0.64237	0.69285	0.76908	0.68716	AVG		0.69434		5.99710	15.00000	O
N-Propylbenzene	3.96502	3.67349	3.49251	3.84753	3.98749	3.37768	AVG		3.72395		6.78124	15.00000	O
1,1,2,2-Tetrachloroethane	1.04435	0.94527	0.91890	0.96488	1.03292	1.03253	AVG		0.98981		5.40146	15.00000	O
1,3,5-Trimethylbenzene	2.60273	2.44716	2.38119	2.67010	2.85463	2.43677	AVG		2.56543		6.98310	15.00000	O
2-Chlorotoluene	2.36935	2.20297	2.10233	2.31528	2.46272	2.14190	AVG		2.26576		6.17803	15.00000	O
1,2,3-Trichloropropane	0.95991	0.85492	0.83130	0.87212	0.95089	0.95652	AVG		0.90428		6.40921	15.00000	O
4-Chlorotoluene	2.55897	2.37404	2.28272	2.50324	2.63510	2.28859	AVG		2.44044		6.02865	15.00000	O
tert-Butylbenzene	2.43482	2.31017	2.27703	2.58851	2.78630	2.40475	AVG		2.46693		7.74052	15.00000	O
1,2,4-Trimethylbenzene	2.69529	2.62999	2.57602	2.85372	3.03883	2.59017	AVG		2.73067		6.65544	15.00000	O
P-Isopropyltoluene	2.65965	2.55179	2.54626	2.91399	3.04913	2.55099	AVG		2.71197		8.01538	15.00000	O
1,3-Dichlorobenzene	1.57925	1.39885	1.31594	1.43300	1.53836	1.34503	AVG		1.43507		7.31325	15.00000	O
1,4-Dichlorobenzene	1.66732	1.46617	1.37623	1.50034	1.59815	1.39866	AVG		1.50115		7.55769	15.00000	O
N-Butylbenzene	2.90665	2.78577	2.70481	3.03443	3.11691	2.57939	AVG		2.85466		7.12373	15.00000	O
sec-Butylbenzene	3.35116	3.15599	3.03596	3.44005	3.65971	3.05828	AVG		3.28352		7.44605	15.00000	O
1,2-Dichlorobenzene	1.55116	1.38290	1.34502	1.42220	1.54754	1.36129	AVG		1.43502		6.42965	15.00000	O
1,2-Dibromo-3-Chloropropane	0.27011	0.22710	0.24037	0.25907	0.25714	0.19557	AVG		0.24156		11.24537	15.00000	O
Hexachlorobutadiene	0.51680	0.47525	0.44400	0.50570	0.52111	0.42318	AVG		0.48100		8.44291	15.00000	O
1,2,4-Trichlorobenzene	0.91759	0.87588	0.87545	0.97910	1.02642	0.87957	AVG		0.92567		6.86588	15.00000	O
Naphthalene	2.39231	2.39507	2.50458	2.65375	2.91106	2.73840	AVG		2.59920		7.94145	15.00000	O
1,2,3-Trichlorobenzene	0.92458	0.89466	0.84835	0.90758	0.97523	0.84101	AVG		0.89857		5.56095	15.00000	O
Dibromofluoromethane	0.52149	0.52289	0.51572	0.53548	0.51656	0.53216	AVG		0.52405		1.54941	15.00000	
1,2-Dichloroethane-D4	0.74105	0.75056	0.73413	0.75059	0.70463	0.75260	AVG		0.73892		2.46747	15.00000	
Toluene-D8	1.26872	1.25933	1.24732	1.28107	1.24347	1.28398	AVG		1.26398		1.33983	15.00000	
P-Bromofluorobenzene	0.56980	0.57955	0.55529	0.58517	0.57736	0.61052	AVG		0.57961		3.16181	15.00000	

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL2079
Project : Cornhusker Army Ammunition Plant
Instrument ID: GCMS-W
Lab File IDs : W3345.D W3344.D W3343.D W3342.D W3347.D W3346.D
Column ID:
Calibration Date(s): 26-MAR-18 10:13, 26-MAR-18 13:19

	5.0000 Level 1	10.0000 Level 2	20.0000 Level 3	50.0000 Level 4	100.0000 Level 5	150.0000 Level 6	New Crv	b	m1	m2	%RSD	Max %RSD	
Dichlorodifluoromethane	0.91827	0.80373	0.99540	0.90963	0.79177	0.82378	AVG		0.87376		9.18273	15.00000	O
Chloromethane	0.93304	0.89545	1.02150	0.88235	0.88345	0.82472	AVG		0.90675		7.29099	15.00000	O
Vinyl chloride	0.93127	0.88382	1.04684	0.94346	0.90719	0.88761	AVG		0.93337		6.46706	15.00000	O
Bromomethane	0.60403	0.52486	0.60414	0.54639	0.52055	0.51939	AVG		0.55323		7.33652	15.00000	O
Chloroethane	0.66256	0.60167	0.70070	0.66085	0.61076	0.61118	AVG		0.64129		6.14829	15.00000	O
Trichlorofluoromethane	1.56351	1.40673	1.62481	1.58922	1.37640	1.53323	AVG		1.51565		6.67543	15.00000	O
1,1-Dichloroethene	0.56237	0.54497	0.55428	0.54903	0.53268	0.54004	AVG		0.54723		1.91786	15.00000	O
Carbon Disulfide	2.21800	1.97873	2.06675	2.02821	2.00444	1.99668	AVG		2.04880		4.30895	15.00000	O
Freon-113	0.50992	0.47268	0.52736	0.47305	0.47347	0.46753	AVG		0.48734		5.12200	15.00000	O
Methylene Chloride	0.98886	0.83469	0.85417	0.75361	0.77488	0.76130	AVG		0.82792		10.7234(	15.00000	O
Acetone	0.36056	0.31190	0.33037	0.32262	0.29218	0.31541	AVG		0.32217		7.06689	15.00000	O
trans-1,2-Dichloroethene	0.68419	0.60373	0.64513	0.61702	0.62518	0.62010	AVG		0.63256		4.53044	15.00000	O
Methyl tert-butyl ether	2.46862	2.27815	2.43873	2.47229	2.55363	2.58235	AVG		2.46563		4.34152	15.00000	O
1,1-Dichloroethane	1.52407	1.38473	1.36011	1.37812	1.32155	1.36099	AVG		1.38826		5.04691	15.00000	O
cis-1,2-Dichloroethene	0.75252	0.68234	0.68657	0.68046	0.69231	0.71797	AVG		0.70203		4.02386	15.00000	O
2,2-Dichloropropane	1.21741	1.13629	1.17756	1.23501	1.12715	1.20230	AVG		1.18262		3.70358	15.00000	O
Bromochloromethane	0.29975	0.27871	0.28515	0.27820	0.29099	0.29289	AVG		0.28761		2.95208	15.00000	O
Chloroform	1.64030	1.43979	1.43937	1.44431	1.35908	1.42766	AVG		1.45842		6.49087	15.00000	O
Carbon Tetrachloride	0.66317	0.58783	0.60283	0.63007	0.57946	0.61392	AVG		0.61288		4.98719	15.00000	O
1,1,1-Trichloroethane	1.41525	1.31091	1.31137	1.34312	1.20231	1.29309	AVG		1.31268		5.27969	15.00000	O
1,1-Dichloropropene	0.61788	0.60139	0.59966	0.64207	0.59591	0.61944	AVG		0.61272		2.84086	15.00000	O
2-Butanone	0.44590	0.39856	0.45033	0.45049	0.43945	0.45276	AVG		0.43958		4.69630	15.00000	O
Benzene	1.74840	1.57695	1.62444	1.62043	1.62174	1.64184	AVG		1.63897		3.52418	15.00000	O
1,2-Dichloroethane	0.84762	0.75442	0.75018	0.77843	0.69983	0.75368	AVG		0.76403		6.33350	15.00000	O
Trichloroethene	0.48764	0.42838	0.42366	0.43100	0.40411	0.42406	AVG		0.43314		6.53996	15.00000	O
Dibromomethane	0.29165	0.25510	0.26508	0.26816	0.26522	0.27357	AVG		0.26980		4.55086	15.00000	O
1,2-Dichloropropane	0.44001	0.41827	0.42770	0.43467	0.43579	0.44483	AVG		0.43355		2.17142	15.00000	O
Bromodichloromethane	0.74433	0.63678	0.65765	0.68850	0.64277	0.68518	AVG		0.67587		5.87713	15.00000	O
cis-1,3-dichloropropene	0.80366	0.72037	0.76762	0.83086	0.82067	0.86319	AVG		0.80106		6.30845	15.00000	O
Toluene	1.12429	1.01459	1.00521	1.03688	1.02172	1.05583	AVG		1.04309		4.17840	15.00000	O
4-methyl-2-pentanone	0.49981	0.48187	0.52857	0.53002	0.52477	0.54147	AVG		0.51775		4.30915	15.00000	O
Tetrachloroethene	0.31152	0.29142	0.28529	0.29080	0.28776	0.29136	AVG		0.29302		3.20112	15.00000	O
trans-1,3-Dichloropropene	0.79285	0.73109	0.77011	0.80242	0.77484	0.81800	AVG		0.78155		3.88670	15.00000	O
1,1,2-Trichloroethane	0.36962	0.33178	0.33627	0.35207	0.34282	0.36041	AVG		0.34883		4.17725	15.00000	O
Dibromochloromethane	0.47363	0.44643	0.46372	0.46695	0.47519	0.49661	AVG		0.47042		3.49462	15.00000	O
1,3-Dichloropropane	0.92361	0.83682	0.86283	0.86775	0.87011	0.89731	AVG		0.87640		3.43468	15.00000	O
1,2-Dibromoethane	0.40606	0.37546	0.39458	0.40867	0.41040	0.42550	AVG		0.40344		4.19302	15.00000	O

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL2079
Project : Cornhusker Army Ammunition Plant
Instrument ID: GCMS-W
Lab File IDs : W3345.D W3344.D W3343.D W3342.D W3347.D W3346.D
Column ID:
Calibration Date(s): 26-MAR-18 10:13 26-MAR-18 13:19

2-Hexanone	0.38301	0.38962	0.42538	0.42604	0.42517	0.44059	AVG		0.41497		5.55391	15.00000	O
Chlorobenzene	1.32774	1.20881	1.19903	1.22434	1.21537	1.25947	AVG		1.23913		3.88301	15.00000	O
Ethylbenzene	0.67118	0.65618	0.65868	0.65969	0.66170	0.69035	AVG		0.66630		1.93069	15.00000	O
1,1,1,2-Tetrachloroethane	0.46444	0.44651	0.43641	0.44620	0.45184	0.47642	AVG		0.45364		3.18150	15.00000	O
m+p-Xylenes	0.79238	0.78775	0.82865	0.83866	0.83022	0.88029	AVG		0.82632		4.09531	15.00000	O
o-Xylene	0.69483	0.71653	0.77638	0.81252	0.82882	0.87508	AVG		0.78403		8.77723	15.00000	O
Styrene	1.24401	1.24070	1.35927	1.40089	1.42467	1.51346	AVG		1.36383		7.82894	15.00000	O
Bromoform	0.30706	0.30786	0.33488	0.34118	0.36201	0.38885	AVG		0.34031		9.30733	15.00000	O
Isopropylbenzene	3.34400	3.24821	3.54160	3.54641	3.45099	3.54334	AVG		3.44576		3.63043	15.00000	O
Bromobenzene	0.96744	0.83611	0.86489	0.83976	0.85987	0.87259	AVG		0.87344		5.51951	15.00000	O
N-Propylbenzene	5.30869	4.94288	5.18464	5.03492	4.67607	4.77378	AVG		4.98683		4.82047	15.00000	O
1,1,2,2-Tetrachloroethane	1.32788	1.20014	1.29134	1.19397	1.20619	1.22298	AVG		1.24042		4.48823	15.00000	O
1,3,5-Trimethylbenzene	3.36202	3.28963	3.46995	3.45637	3.33135	3.47326	AVG		3.39710		2.34472	15.00000	O
2-Chlorotoluene	3.22548	2.97124	3.11158	3.01827	2.93946	2.99601	AVG		3.04367		3.49834	15.00000	O
1,2,3-Trichloropropane	1.30528	1.15549	1.23492	1.14736	1.15107	1.20245	AVG		1.19943		5.20024	15.00000	O
4-Chlorotoluene	3.47614	3.19596	3.38802	3.30464	3.15489	3.23885	AVG		3.29308		3.69748	15.00000	O
tert-Butylbenzene	3.09509	3.06850	3.36072	3.30161	3.23858	3.37764	AVG		3.24036		4.08781	15.00000	O
1,2,4-Trimethylbenzene	3.65096	3.55016	3.78987	3.67262	3.54020	3.64677	AVG		3.64176		2.50774	15.00000	O
P-Isopropyltoluene	3.39155	3.36706	3.70814	3.69646	3.51742	3.60642	AVG		3.54784		4.16640	15.00000	O
1,3-Dichlorobenzene	1.95618	1.75080	1.81296	1.75582	1.75451	1.77489	AVG		1.80086		4.41652	15.00000	O
1,4-Dichlorobenzene	2.12848	1.87908	1.91113	1.82114	1.81839	1.85167	AVG		1.90165		6.13079	15.00000	O
N-Butylbenzene	3.78228	3.76903	4.08936	4.04278	3.60771	3.70140	AVG		3.83209		5.01221	15.00000	O
sec-Butylbenzene	4.35734	4.32719	4.47250	4.41063	4.17299	4.30311	AVG		4.34063		2.35533	15.00000	O
1,2-Dichlorobenzene	1.95442	1.75222	1.82921	1.72525	1.76972	1.77301	AVG		1.80064		4.59388	15.00000	O
1,2-Dibromo-3-Chloropropane	0.37735	0.32427	0.38623	0.35411	0.35322	0.34836	AVG		0.35726		6.17904	15.00000	O
Hexachlorobutadiene	0.65701	0.61958	0.62773	0.64147	0.58394	0.59060	AVG		0.62006		4.59324	15.00000	O
1,2,4-Trichlorobenzene	1.05209	1.07492	1.13370	1.14708	1.13425	1.15944	AVG		1.11691		3.85432	15.00000	O
Naphthalene	2.70219	2.79462	3.23300	3.14543	3.31517	3.24483	AVG		3.07254		8.41197	15.00000	O
1,2,3-Trichlorobenzene	1.09711	1.07829	1.12746	1.07594	1.08653	1.07149	AVG		1.08947		1.89967	15.00000	O
Dibromofluoromethane	0.59299	0.57938	0.58757	0.59635	0.55835	0.55612	AVG		0.57846		3.01273	15.00000	
1,2-Dichloroethane-D4	0.96123	0.93220	0.97552	0.99013	0.83917	0.92029	AVG		0.93642		5.80304	15.00000	
Toluene-D8	1.28261	1.27671	1.27924	1.29597	1.28453	1.27925	AVG		1.28305		0.53834	15.00000	
P-Bromofluorobenzene	0.58457	0.57307	0.58639	0.60963	0.58183	0.61178	AVG		0.59121		2.67084	15.00000	

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL2079
Lab ID : WG225300-4
Analytical Date: 03/23/18 07:53
Lab File ID : P4879.D
Instrument ID: GCMS-P
Initial Calibration Date(s): 03/19/18 16:00 03/19/18 18:51
Column ID:

	Compound	$\overline{\text{RRF}}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
1	Dichlorodifluoromethane	0.41040	0.36517	0.36517	0.010	-11.02184	20.00000	Averaged
2	Chloromethane	0.58524	0.53502	0.53502	0.100	-8.58022	20.00000	Averaged
3	Vinyl chloride	0.61371	0.58653	0.58653	0.010	-4.42993	20.00000	Averaged
4	Bromomethane	0.27205	0.30956	0.30956	0.010	13.78565	20.00000	Averaged
5	Chloroethane	0.39224	0.37623	0.37623	0.010	-4.08073	20.00000	Averaged
6	Trichlorofluoromethane	0.84149	0.87126	0.87126	0.010	3.53855	20.00000	Averaged
8	1,1-Dichloroethene	0.38056	0.36671	0.36671	0.100	-3.63979	20.00000	Averaged
9	Freon-113	0.28377	0.26442	0.26442	0.010	-6.81798	20.00000	Averaged
10	Carbon Disulfide	1.29664	1.26450	1.26450	0.010	-2.47820	20.00000	Averaged
14	Methylene Chloride	50.00000	44.31260	0.41337	0.010	-11.37480	20.00000	Linear
15	Acetone	0.13142	0.12185	0.12185	0.010	-7.28173	20.00000	Averaged
16	trans-1,2-Dichloroethene	0.41302	0.38124	0.38124	0.010	-7.69422	20.00000	Averaged
18	Methyl tert-butyl ether	1.19023	0.99922	0.99922	0.010	-16.04868	20.00000	Averaged
23	1,1-Dichloroethane	0.76941	0.70626	0.70626	0.100	-8.20822	20.00000	Averaged
27	cis-1,2-Dichloroethene	50.00000	42.63164	0.40026	0.010	-14.73672	20.00000	Linear
28	2,2-Dichloropropane	0.52330	0.52643	0.52643	0.010	0.59657	20.00000	Averaged
29	Bromochloromethane	50.00000	47.83397	0.18720	0.010	-4.33205	20.00000	Linear
31	Chloroform	0.73287	0.68140	0.68140	0.010	-7.02357	20.00000	Averaged
32	Carbon Tetrachloride	0.30195	0.30814	0.30814	0.010	2.04931	20.00000	Averaged
35	1,1,1-Trichloroethane	0.63452	0.59238	0.59238	0.010	-6.64136	20.00000	Averaged
36	2-Butanone	0.21262	0.19543	0.19543	0.010	-8.08698	20.00000	Averaged
37	1,1-Dichloropropene	0.33899	0.33300	0.33300	0.010	-1.76568	20.00000	Averaged
38	Benzene	1.02097	0.98232	0.98232	0.010	-3.78605	20.00000	Averaged
44	1,2-Dichloroethane	0.38372	0.36300	0.36300	0.010	-5.40035	20.00000	Averaged
47	Trichloroethene	0.24195	0.24164	0.24164	0.010	-0.12965	20.00000	Averaged
49	Dibromomethane	50.00000	44.50381	0.14843	0.010	-10.99237	20.00000	Linear
50	1,2-Dichloropropane	0.25773	0.25012	0.25012	0.010	-2.95202	20.00000	Averaged
51	Bromodichloromethane	0.32571	0.32656	0.32656	0.010	0.26033	20.00000	Averaged
57	cis-1,3-dichloropropene	50.00000	44.46038	0.44273	0.010	-11.07925	20.00000	Linear
59	Toluene	0.66239	0.63917	0.63917	0.010	-3.50444	20.00000	Averaged
60	Tetrachloroethene	0.17941	0.18941	0.18941	0.010	5.57449	20.00000	Averaged
61	4-methyl-2-pentanone	250	214	0.27744	0.010	-14.38715	20.00000	Linear
62	trans-1,3-Dichloropropene	50.00000	43.92316	0.40484	0.010	-12.15369	20.00000	Linear
63	1,1,2-Trichloroethane	50.00000	43.76072	0.19096	0.010	-12.47856	20.00000	Linear
64	Dibromochloromethane	50.00000	49.73041	0.25073	0.010	-0.53918	20.00000	Linear
65	1,3-Dichloropropane	0.43636	0.45708	0.45708	0.010	4.74902	20.00000	Averaged
66	1,2-Dibromoethane	50.00000	43.29511	0.23034	0.010	-13.40978	20.00000	Linear
67	2-Hexanone	250	235	0.19067	0.010	-6.03156	20.00000	Linear
69	Chlorobenzene	0.69689	0.74024	0.74024	0.300	6.22053	20.00000	Averaged
71	Ethylbenzene	50.00000	49.35989	0.39734	0.010	-1.28021	20.00000	Linear
72	1,1,1,2-Tetrachloroethane	0.23203	0.25753	0.25753	0.010	10.98715	20.00000	Averaged

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG225300-4
Lab File ID : P4879.D
Initial Calibration Date(s): 03/19/18 16:00 03/19/18 18:51

SDG: SL2079
Analytical Date: 03/23/18 07:53
Instrument ID: GCMS-P
Column ID:

Compound	$\overline{\text{RRF}}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
73 m+p-Xylenes	100	98.77580	0.50210	0.010	-1.22420	20.00000	Linear
74 o-Xylene	50.00000	49.10464	0.46582	0.010	-1.79071	20.00000	Linear
75 Styrene	50.00000	48.40886	0.81520	0.010	-3.18228	20.00000	Linear
76 Bromoform	50.00000	46.74039	0.16755	0.100	-6.51923	20.00000	Linear
77 Isopropylbenzene	50.00000	51.96425	2.18541	0.010	3.92850	20.00000	Linear
80 Bromobenzene	0.50641	0.57221	0.57221	0.010	12.99390	20.00000	Averaged
81 N-Propylbenzene	2.40517	2.85078	2.85078	0.010	18.52685	20.00000	Averaged
82 1,1,2,2-Tetrachloroethane	0.59097	0.63368	0.63368	0.300	7.22745	20.00000	Averaged
83 2-Chlorotoluene	1.44109	1.66836	1.66836	0.010	15.77080	20.00000	Averaged
84 1,2,3-Trichloropropane	0.54128	0.57920	0.57920	0.010	7.00461	20.00000	Averaged
85 1,3,5-Trimethylbenzene	50.00000	52.53166	1.93911	0.010	5.06332	20.00000	Linear
87 4-Chlorotoluene	50.00000	52.57020	1.77676	0.010	5.14040	20.00000	Linear
88 tert-Butylbenzene	50.00000	51.55093	1.91176	0.010	3.10186	20.00000	Linear
90 1,2,4-Trimethylbenzene	50.00000	53.09373	2.02799	0.010	6.18746	20.00000	Linear
91 sec-Butylbenzene	50.00000	53.93534	2.38977	0.010	7.87068	20.00000	Linear
92 P-Isopropyltoluene	50.00000	52.57438	1.98486	0.010	5.14876	20.00000	Linear
93 1,3-Dichlorobenzene	0.97948	1.10250	1.10250	0.010	12.55968	20.00000	Averaged
95 1,4-Dichlorobenzene	1.06962	1.16934	1.16934	0.010	9.32285	20.00000	Averaged
97 N-Butylbenzene	50.00000	54.40886	1.83546	0.010	8.81771	20.00000	Linear
99 1,2-Dichlorobenzene	0.93306	1.05254	1.05254	0.010	12.80536	20.00000	Averaged
100 1,2-Dibromo-3-Chloropropane	50.00000	46.43313	0.10543	0.010	-7.13374	20.00000	Linear
102 Hexachlorobutadiene	0.19448	0.21334	0.21334	0.010	9.69811	20.00000	Averaged
103 1,2,4-Trichlorobenzene	0.57871	0.65065	0.65065	0.010	12.42960	20.00000	Averaged
104 Naphthalene	50.00000	46.90097	1.61676	0.010	-6.19806	20.00000	Linear
105 1,2,3-Trichlorobenzene	0.53288	0.56099	0.56099	0.010	5.27350	20.00000	Averaged
34 Dibromofluoromethane	0.49134	0.48217	0.48217	0.010	-1.86697	20.00000	Averaged
42 1,2-Dichloroethane-D4	0.69650	0.66188	0.66188	0.010	-4.97063	20.00000	Averaged
58 Toluene-D8	1.26736	1.22699	1.22699	0.010	-3.18550	20.00000	Averaged
78 P-Bromofluorobenzene	0.55158	0.48537	0.48537	0.010	-12.00386	20.00000	Averaged

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG225300-4
Lab File ID : P4879.D
Initial Calibration Date(s): 03/19/18 16:00 03/19/18 18:51

SDG: SL2079
Analytical Date: 03/23/18 07:53
Instrument ID: GCMS-P
Column ID:

*** = Compound out of QC criteria**

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Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG225300-5
Lab File ID : P4898.D
Initial Calibration Date(s): 03/19/18 16:00 03/19/18 18:51

SDG: SL2079
Analytical Date: 03/23/18 18:58
Instrument ID: GCMS-P
Column ID:

	Compound	$\overline{RRF}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
1	Dichlorodifluoromethane	0.41040	0.34611	0.34611	0.010	-15.66513	50.00000	Averaged
2	Chloromethane	0.58524	0.53883	0.53883	0.100	-7.92970	50.00000	Averaged
3	Vinyl chloride	0.61371	0.52993	0.52993	0.010	-13.65141	50.00000	Averaged
4	Bromomethane	0.27205	0.29912	0.29912	0.010	9.94873	50.00000	Averaged
5	Chloroethane	0.39224	0.38338	0.38338	0.010	-2.25843	50.00000	Averaged
6	Trichlorofluoromethane	0.84149	0.87671	0.87671	0.010	4.18598	50.00000	Averaged
8	1,1-Dichloroethene	0.38056	0.35866	0.35866	0.100	-5.75553	50.00000	Averaged
9	Freon-113	0.28377	0.30531	0.30531	0.010	7.59262	50.00000	Averaged
10	Carbon Disulfide	1.29664	1.21933	1.21933	0.010	-5.96228	50.00000	Averaged
14	Methylene Chloride	50.00000	42.73653	0.39882	0.010	-14.52694	50.00000	Linear
15	Acetone	0.13142	0.12588	0.12588	0.010	-4.21666	50.00000	Averaged
16	trans-1,2-Dichloroethene	0.41302	0.35916	0.35916	0.010	-13.03969	50.00000	Averaged
18	Methyl tert-butyl ether	1.19023	0.96483	0.96483	0.010	-18.93767	50.00000	Averaged
23	1,1-Dichloroethane	0.76941	0.69805	0.69805	0.100	-9.27464	50.00000	Averaged
27	cis-1,2-Dichloroethene	50.00000	41.42025	0.38877	0.010	-17.15949	50.00000	Linear
28	2,2-Dichloropropane	0.52330	0.36708	0.36708	0.010	-29.85378	50.00000	Averaged
29	Bromochloromethane	50.00000	48.22266	0.18869	0.010	-3.55469	50.00000	Linear
31	Chloroform	0.73287	0.67070	0.67070	0.010	-8.48317	50.00000	Averaged
32	Carbon Tetrachloride	0.30195	0.29466	0.29466	0.010	-2.41362	50.00000	Averaged
35	1,1,1-Trichloroethane	0.63452	0.58642	0.58642	0.010	-7.58050	50.00000	Averaged
36	2-Butanone	0.21262	0.20710	0.20710	0.010	-2.59939	50.00000	Averaged
37	1,1-Dichloropropene	0.33899	0.32097	0.32097	0.010	-5.31681	50.00000	Averaged
38	Benzene	1.02097	0.95110	0.95110	0.010	-6.84411	50.00000	Averaged
44	1,2-Dichloroethane	0.38372	0.35629	0.35629	0.010	-7.14982	50.00000	Averaged
47	Trichloroethene	0.24195	0.23032	0.23032	0.010	-4.80902	50.00000	Averaged
49	Dibromomethane	50.00000	45.39370	0.15149	0.010	-9.21259	50.00000	Linear
50	1,2-Dichloropropane	0.25773	0.24195	0.24195	0.010	-6.12094	50.00000	Averaged
51	Bromodichloromethane	0.32571	0.31791	0.31791	0.010	-2.39533	50.00000	Averaged
57	cis-1,3-dichloropropene	50.00000	41.45556	0.41162	0.010	-17.08889	50.00000	Linear
59	Toluene	0.66239	0.62517	0.62517	0.010	-5.61759	50.00000	Averaged
60	Tetrachloroethene	0.17941	0.17662	0.17662	0.010	-1.55177	50.00000	Averaged
61	4-methyl-2-pentanone	250	225	0.29236	0.010	-9.95769	50.00000	Linear
62	trans-1,3-Dichloropropene	50.00000	42.06564	0.38682	0.010	-15.86871	50.00000	Linear
63	1,1,2-Trichloroethane	50.00000	45.44039	0.19852	0.010	-9.11923	50.00000	Linear
64	Dibromochloromethane	50.00000	47.95654	0.24151	0.010	-4.08691	50.00000	Linear
65	1,3-Dichloropropane	0.43636	0.45632	0.45632	0.010	4.57488	50.00000	Averaged
66	1,2-Dibromoethane	50.00000	43.06904	0.22909	0.010	-13.86192	50.00000	Linear
67	2-Hexanone	250	242	0.19700	0.010	-3.00430	50.00000	Linear
69	Chlorobenzene	0.69689	0.71818	0.71818	0.300	3.05498	50.00000	Averaged
71	Ethylbenzene	50.00000	48.24576	0.38813	0.010	-3.50848	50.00000	Linear
72	1,1,1,2-Tetrachloroethane	0.23203	0.24815	0.24815	0.010	6.94636	50.00000	Averaged

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL2079
Lab ID : WG225300-5
Analytical Date: 03/23/18 18:58
Lab File ID : P4898.D
Instrument ID: GCMS-P
Initial Calibration Date(s): 03/19/18 16:00 03/19/18 18:51
Column ID:

Compound	RRF/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
73 m+p-Xylenes	100	96.15297	0.48841	0.010	-3.84703	50.00000	Linear
74 o-Xylene	50.00000	47.76591	0.45279	0.010	-4.46817	50.00000	Linear
75 Styrene	50.00000	46.93076	0.78927	0.010	-6.13848	50.00000	Linear
76 Bromoform	50.00000	45.92369	0.16447	0.100	-8.15261	50.00000	Linear
77 Isopropylbenzene	50.00000	49.30430	2.07153	0.010	-1.39141	50.00000	Linear
80 Bromobenzene	0.50641	0.54734	0.54734	0.010	8.08293	50.00000	Averaged
81 N-Propylbenzene	2.40517	2.71500	2.71500	0.010	12.88154	50.00000	Averaged
82 1,1,2,2-Tetrachloroethane	0.59097	0.62696	0.62696	0.300	6.09008	50.00000	Averaged
83 2-Chlorotoluene	1.44109	1.57961	1.57961	0.010	9.61252	50.00000	Averaged
84 1,2,3-Trichloropropane	0.54128	0.57591	0.57591	0.010	6.39723	50.00000	Averaged
85 1,3,5-Trimethylbenzene	50.00000	50.15065	1.84916	0.010	0.30129	50.00000	Linear
87 4-Chlorotoluene	50.00000	50.38103	1.70187	0.010	0.76205	50.00000	Linear
88 tert-Butylbenzene	50.00000	49.13485	1.81958	0.010	-1.73031	50.00000	Linear
90 1,2,4-Trimethylbenzene	50.00000	50.64434	1.93275	0.010	1.28868	50.00000	Linear
91 sec-Butylbenzene	50.00000	51.30281	2.27131	0.010	2.60562	50.00000	Linear
92 P-Isopropyltoluene	50.00000	49.76792	1.87632	0.010	-0.46416	50.00000	Linear
93 1,3-Dichlorobenzene	0.97948	1.05547	1.05547	0.010	7.75833	50.00000	Averaged
95 1,4-Dichlorobenzene	1.06962	1.11979	1.11979	0.010	4.69031	50.00000	Averaged
97 N-Butylbenzene	50.00000	50.78661	1.71037	0.010	1.57321	50.00000	Linear
99 1,2-Dichlorobenzene	0.93306	1.03260	1.03260	0.010	10.66805	50.00000	Averaged
100 1,2-Dibromo-3-Chloropropane	50.00000	49.44722	0.11252	0.010	-1.10556	50.00000	Linear
102 Hexachlorobutadiene	0.19448	0.19102	0.19102	0.010	-1.77957	50.00000	Averaged
103 1,2,4-Trichlorobenzene	0.57871	0.62251	0.62251	0.010	7.56791	50.00000	Averaged
104 Naphthalene	50.00000	45.82142	1.57842	0.010	-8.35715	50.00000	Linear
105 1,2,3-Trichlorobenzene	0.53288	0.54166	0.54166	0.010	1.64598	50.00000	Averaged
34 Dibromofluoromethane	0.49134	0.49432	0.49432	0.010	0.60701	50.00000	Averaged
42 1,2-Dichloroethane-D4	0.69650	0.68691	0.68691	0.010	-1.37808	50.00000	Averaged
58 Toluene-D8	1.26736	1.23766	1.23766	0.010	-2.34338	50.00000	Averaged
78 P-Bromofluorobenzene	0.55158	0.49890	0.49890	0.010	-9.55088	50.00000	Averaged

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG225300-5
Lab File ID : P4898.D
Initial Calibration Date(s): 03/19/18 16:00 03/19/18 18:51

SDG: SL2079
Analytical Date: 03/23/18 18:58
Instrument ID: GCMS-P
Column ID:

*** = Compound out of QC criteria**

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Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL2079
Lab ID : WG225350-4
Analytical Date: 03/24/18 09:25
Lab File ID : W3321.D
Instrument ID: GCMS-W
Initial Calibration Date(s): 03/23/18 09:41 03/23/18 13:16
Column ID:

	Compound	$\overline{\text{RRF}}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type	
1	Dichlorodifluoromethane	0.71008	0.56466	0.56466	0.010	-20.47947	20.00000	Averaged	*
2	Chloromethane	0.82523	0.67265	0.67265	0.100	-18.49004	20.00000	Averaged	
3	Vinyl chloride	0.78611	0.66718	0.66718	0.010	-15.12840	20.00000	Averaged	
4	Bromomethane	0.45321	0.38789	0.38789	0.010	-14.41280	20.00000	Averaged	
5	Chloroethane	0.48705	0.45670	0.45670	0.010	-6.23236	20.00000	Averaged	
6	Trichlorofluoromethane	1.04090	0.93242	0.93242	0.010	-10.42215	20.00000	Averaged	
9	1,1-Dichloroethene	0.49495	0.43317	0.43317	0.010	-12.48240	20.00000	Averaged	
10	Carbon Disulfide	1.80043	1.56613	1.56613	0.010	-13.01324	20.00000	Averaged	
11	Freon-113	0.35741	0.31967	0.31967	0.010	-10.56014	20.00000	Averaged	
14	Methylene Chloride	0.77996	0.66341	0.66341	0.010	-14.94343	20.00000	Averaged	
15	Acetone	0.27760	0.29173	0.29173	0.010	5.08961	20.00000	Averaged	
17	trans-1,2-Dichloroethene	0.56459	0.49299	0.49299	0.010	-12.68109	20.00000	Averaged	
19	Methyl tert-butyl ether	2.12316	2.21251	2.21251	0.010	4.20834	20.00000	Averaged	
25	1,1-Dichloroethane	1.13050	1.06329	1.06329	0.100	-5.94570	20.00000	Averaged	
29	cis-1,2-Dichloroethene	0.62416	0.58973	0.58973	0.010	-5.51571	20.00000	Averaged	
32	2,2-Dichloropropane	0.88755	0.83421	0.83421	0.010	-6.00996	20.00000	Averaged	
33	Bromochloromethane	0.26749	0.26478	0.26478	0.010	-1.01156	20.00000	Averaged	
34	Chloroform	1.13995	1.11579	1.11579	0.010	-2.11966	20.00000	Averaged	
35	Carbon Tetrachloride	0.45200	0.40368	0.40368	0.010	-10.69035	20.00000	Averaged	
38	1,1,1-Trichloroethane	0.96832	0.90332	0.90332	0.010	-6.71271	20.00000	Averaged	
39	1,1-Dichloropropene	0.49707	0.43896	0.43896	0.010	-11.69120	20.00000	Averaged	
40	2-Butanone	0.39410	0.41876	0.41876	0.010	6.25599	20.00000	Averaged	
41	Benzene	1.42461	1.28237	1.28237	0.010	-9.98463	20.00000	Averaged	
47	1,2-Dichloroethane	0.56848	0.57757	0.57757	0.010	1.59816	20.00000	Averaged	
48	Trichloroethene	0.34963	0.30531	0.30531	0.010	-12.67541	20.00000	Averaged	
50	Dibromomethane	0.22201	0.22121	0.22121	0.010	-0.35806	20.00000	Averaged	
51	1,2-Dichloropropane	0.37754	0.35996	0.35996	0.010	-4.65632	20.00000	Averaged	
52	Bromodichloromethane	0.51184	0.50855	0.50855	0.010	-0.64310	20.00000	Averaged	
53	cis-1,3-dichloropropene	0.66169	0.66101	0.66101	0.010	-0.10325	20.00000	Averaged	
57	Toluene	0.89040	0.78296	0.78296	0.010	-12.06591	20.00000	Averaged	
58	4-methyl-2-pentanone	0.44588	0.46899	0.46899	0.010	5.18467	20.00000	Averaged	
59	Tetrachloroethene	0.25014	0.20688	0.20688	0.010	-17.29114	20.00000	Averaged	
60	trans-1,3-Dichloropropene	0.61729	0.62750	0.62750	0.010	1.65466	20.00000	Averaged	
61	1,1,2-Trichloroethane	0.30063	0.29966	0.29966	0.010	-0.32187	20.00000	Averaged	
62	Dibromochloromethane	0.36444	0.36234	0.36234	0.010	-0.57812	20.00000	Averaged	
63	1,3-Dichloropropane	0.71371	0.70294	0.70294	0.010	-1.50906	20.00000	Averaged	
64	1,2-Dibromoethane	0.34804	0.34567	0.34567	0.010	-0.68247	20.00000	Averaged	
65	2-Hexanone	0.34272	0.36287	0.36287	0.010	5.88050	20.00000	Averaged	
67	Chlorobenzene	1.01966	0.90880	0.90880	0.300	-10.87202	20.00000	Averaged	
68	Ethylbenzene	0.54670	0.47022	0.47022	0.010	-13.98880	20.00000	Averaged	
69	1,1,1,2-Tetrachloroethane	0.35242	0.33551	0.33551	0.010	-4.79871	20.00000	Averaged	

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG225350-4
Lab File ID : W3321.D
Initial Calibration Date(s): 03/23/18 09:41 03/23/18 13:16

SDG: SL2079
Analytical Date: 03/24/18 09:25
Instrument ID: GCMS-W
Column ID:

Compound	RRF/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
71 m+p-Xylenes	0.68337	0.58921	0.58921	0.010	-13.77887	20.00000	Averaged
72 o-Xylene	0.64869	0.59198	0.59198	0.010	-8.74250	20.00000	Averaged
73 Styrene	1.12350	1.04971	1.04971	0.010	-6.56779	20.00000	Averaged
74 Bromoform	0.27172	0.27300	0.27300	0.100	0.47088	20.00000	Averaged
75 Isopropylbenzene	2.65569	2.34280	2.34280	0.010	-11.78167	20.00000	Averaged
79 Bromobenzene	0.69434	0.63964	0.63964	0.010	-7.87841	20.00000	Averaged
80 N-Propylbenzene	3.72395	3.25553	3.25553	0.010	-12.57860	20.00000	Averaged
81 1,1,2,2-Tetrachloroethane	0.98981	0.97249	0.97249	0.300	-1.74929	20.00000	Averaged
82 1,3,5-Trimethylbenzene	2.56543	2.26299	2.26299	0.010	-11.78903	20.00000	Averaged
83 2-Chlorotoluene	2.26576	2.04289	2.04289	0.010	-9.83631	20.00000	Averaged
84 1,2,3-Trichloropropane	0.90428	0.90869	0.90869	0.010	0.48740	20.00000	Averaged
85 4-Chlorotoluene	2.44044	2.23384	2.23384	0.010	-8.46600	20.00000	Averaged
86 tert-Butylbenzene	2.46693	2.19548	2.19548	0.010	-11.00378	20.00000	Averaged
88 1,2,4-Trimethylbenzene	2.73067	2.48258	2.48258	0.010	-9.08522	20.00000	Averaged
89 P-Isopropyltoluene	2.71197	2.39680	2.39680	0.010	-11.62127	20.00000	Averaged
90 1,3-Dichlorobenzene	1.43507	1.29676	1.29676	0.010	-9.63783	20.00000	Averaged
92 1,4-Dichlorobenzene	1.50115	1.37713	1.37713	0.010	-8.26161	20.00000	Averaged
93 N-Butylbenzene	2.85466	2.52958	2.52958	0.010	-11.38766	20.00000	Averaged
94 sec-Butylbenzene	3.28352	2.84782	2.84782	0.010	-13.26942	20.00000	Averaged
95 1,2-Dichlorobenzene	1.43502	1.34958	1.34958	0.010	-5.95426	20.00000	Averaged
96 1,2-Dibromo-3-Chloropropane	0.25309	0.28461	0.28461	0.010	12.45063	20.00000	Averaged
98 Hexachlorobutadiene	0.48100	0.41765	0.41765	0.010	-13.17126	20.00000	Averaged
99 1,2,4-Trichlorobenzene	0.92567	0.93214	0.93214	0.010	0.69927	20.00000	Averaged
101 Naphthalene	2.59920	2.78494	2.78494	0.010	7.14636	20.00000	Averaged
102 1,2,3-Trichlorobenzene	0.89857	0.91012	0.91012	0.010	1.28538	20.00000	Averaged
37 Dibromofluoromethane	0.52405	0.55162	0.55162	0.010	5.26164	20.00000	Averaged
45 1,2-Dichloroethane-D4	0.73892	0.80324	0.80324	0.010	8.70426	20.00000	Averaged
55 Toluene-D8	1.26398	1.27033	1.27033	0.010	0.50188	20.00000	Averaged
76 P-Bromofluorobenzene	0.57961	0.60240	0.60240	0.010	3.93136	20.00000	Averaged

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG225350-4
Lab File ID : W3321.D
Initial Calibration Date(s): 03/23/18 09:41 03/23/18 13:16

SDG: SL2079
Analytical Date: 03/24/18 09:25
Instrument ID: GCMS-W
Column ID:

*** = Compound out of QC criteria**

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Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL2079
Lab ID : WG225350-5
Analytical Date: 03/24/18 18:58
Lab File ID : W3336.D
Instrument ID: GCMS-W
Initial Calibration Date(s): 03/23/18 09:41 03/23/18 13:16
Column ID:

	Compound	$\overline{\text{RRF}}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type	
1	Dichlorodifluoromethane	0.71008	0.88805	0.88805	0.010	25.06268	50.00000	Averaged	
2	Chloromethane	0.82523	0.90308	0.90308	0.100	9.43365	50.00000	Averaged	
3	Vinyl chloride	0.78611	0.93545	0.93545	0.010	18.99818	50.00000	Averaged	
4	Bromomethane	0.45321	0.58342	0.58342	0.010	28.72917	50.00000	Averaged	
5	Chloroethane	0.48705	0.68028	0.68028	0.010	39.67261	50.00000	Averaged	
6	Trichlorofluoromethane	1.04090	1.65486	1.65486	0.010	58.98270	50.00000	Averaged	*
9	1,1-Dichloroethene	0.49495	0.56637	0.56637	0.010	14.42887	50.00000	Averaged	
10	Carbon Disulfide	1.80043	2.13356	2.13356	0.010	18.50313	50.00000	Averaged	
11	Freon-113	0.35741	0.41874	0.41874	0.010	17.15977	50.00000	Averaged	
14	Methylene Chloride	0.77996	0.81769	0.81769	0.010	4.83736	50.00000	Averaged	
15	Acetone	0.27760	0.31507	0.31507	0.010	13.49559	50.00000	Averaged	
17	trans-1,2-Dichloroethene	0.56459	0.65318	0.65318	0.010	15.69094	50.00000	Averaged	
19	Methyl tert-butyl ether	2.12316	2.54735	2.54735	0.010	19.97942	50.00000	Averaged	
25	1,1-Dichloroethane	1.13050	1.46757	1.46757	0.100	29.81572	50.00000	Averaged	
29	cis-1,2-Dichloroethene	0.62416	0.73854	0.73854	0.010	18.32536	50.00000	Averaged	
32	2,2-Dichloropropane	0.88755	1.18712	1.18712	0.010	33.75266	50.00000	Averaged	
33	Bromochloromethane	0.26749	0.30252	0.30252	0.010	13.09408	50.00000	Averaged	
34	Chloroform	1.13995	1.58418	1.58418	0.010	38.96906	50.00000	Averaged	
35	Carbon Tetrachloride	0.45200	0.63575	0.63575	0.010	40.65315	50.00000	Averaged	
38	1,1,1-Trichloroethane	0.96832	1.40658	1.40658	0.010	45.25973	50.00000	Averaged	
39	1,1-Dichloropropene	0.49707	0.63526	0.63526	0.010	27.80126	50.00000	Averaged	
40	2-Butanone	0.39410	0.45888	0.45888	0.010	16.43555	50.00000	Averaged	
41	Benzene	1.42461	1.62794	1.62794	0.010	14.27230	50.00000	Averaged	
47	1,2-Dichloroethane	0.56848	0.78904	0.78904	0.010	38.79879	50.00000	Averaged	
48	Trichloroethene	0.34963	0.42831	0.42831	0.010	22.50455	50.00000	Averaged	
50	Dibromomethane	0.22201	0.27076	0.27076	0.010	21.96026	50.00000	Averaged	
51	1,2-Dichloropropane	0.37754	0.44318	0.44318	0.010	17.38598	50.00000	Averaged	
52	Bromodichloromethane	0.51184	0.69870	0.69870	0.010	36.50670	50.00000	Averaged	
53	cis-1,3-dichloropropene	0.66169	0.79655	0.79655	0.010	20.38052	50.00000	Averaged	
57	Toluene	0.89040	1.03599	1.03599	0.010	16.35099	50.00000	Averaged	
58	4-methyl-2-pentanone	0.44588	0.54136	0.54136	0.010	21.41403	50.00000	Averaged	
59	Tetrachloroethene	0.25014	0.28056	0.28056	0.010	12.16180	50.00000	Averaged	
60	trans-1,3-Dichloropropene	0.61729	0.77587	0.77587	0.010	25.69131	50.00000	Averaged	
61	1,1,2-Trichloroethane	0.30063	0.35182	0.35182	0.010	17.02738	50.00000	Averaged	
62	Dibromochloromethane	0.36444	0.43654	0.43654	0.010	19.78341	50.00000	Averaged	
63	1,3-Dichloropropane	0.71371	0.84030	0.84030	0.010	17.73789	50.00000	Averaged	
64	1,2-Dibromoethane	0.34804	0.41149	0.41149	0.010	18.23004	50.00000	Averaged	
65	2-Hexanone	0.34272	0.40778	0.40778	0.010	18.98399	50.00000	Averaged	
67	Chlorobenzene	1.01966	1.13746	1.13746	0.300	11.55228	50.00000	Averaged	
68	Ethylbenzene	0.54670	0.60966	0.60966	0.010	11.51585	50.00000	Averaged	
69	1,1,1,2-Tetrachloroethane	0.35242	0.42724	0.42724	0.010	21.23127	50.00000	Averaged	

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL2079
Lab ID : WG225350-5
Analytical Date: 03/24/18 18:58
Lab File ID : W3336.D
Instrument ID: GCMS-W
Initial Calibration Date(s): 03/23/18 09:41 03/23/18 13:16
Column ID:

Compound	RRF/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
71 m+p-Xylenes	0.68337	0.76629	0.76629	0.010	12.13387	50.00000	Averaged
72 o-Xylene	0.64869	0.75915	0.75915	0.010	17.02813	50.00000	Averaged
73 Styrene	1.12350	1.29711	1.29711	0.010	15.45277	50.00000	Averaged
74 Bromoform	0.27172	0.31947	0.31947	0.100	17.57078	50.00000	Averaged
75 Isopropylbenzene	2.65569	3.18945	3.18945	0.010	20.09887	50.00000	Averaged
79 Bromobenzene	0.69434	0.74306	0.74306	0.010	7.01657	50.00000	Averaged
80 N-Propylbenzene	3.72395	4.52262	4.52262	0.010	21.44663	50.00000	Averaged
81 1,1,2,2-Tetrachloroethane	0.98981	1.09810	1.09810	0.300	10.94089	50.00000	Averaged
82 1,3,5-Trimethylbenzene	2.56543	3.08073	3.08073	0.010	20.08628	50.00000	Averaged
83 2-Chlorotoluene	2.26576	2.77704	2.77704	0.010	22.56571	50.00000	Averaged
84 1,2,3-Trichloropropane	0.90428	1.08116	1.08116	0.010	19.56094	50.00000	Averaged
85 4-Chlorotoluene	2.44044	2.94205	2.94205	0.010	20.55382	50.00000	Averaged
86 tert-Butylbenzene	2.46693	2.92438	2.92438	0.010	18.54317	50.00000	Averaged
88 1,2,4-Trimethylbenzene	2.73067	3.27236	3.27236	0.010	19.83732	50.00000	Averaged
89 P-Isopropyltoluene	2.71197	3.15770	3.15770	0.010	16.43571	50.00000	Averaged
90 1,3-Dichlorobenzene	1.43507	1.51330	1.51330	0.010	5.45107	50.00000	Averaged
92 1,4-Dichlorobenzene	1.50115	1.58624	1.58624	0.010	5.66878	50.00000	Averaged
93 N-Butylbenzene	2.85466	3.36449	3.36449	0.010	17.85975	50.00000	Averaged
94 sec-Butylbenzene	3.28352	3.88719	3.88719	0.010	18.38455	50.00000	Averaged
95 1,2-Dichlorobenzene	1.43502	1.58082	1.58082	0.010	10.16016	50.00000	Averaged
96 1,2-Dibromo-3-Chloropropane	0.25309	0.32323	0.32323	0.010	27.70994	50.00000	Averaged
98 Hexachlorobutadiene	0.48100	0.53754	0.53754	0.010	11.75375	50.00000	Averaged
99 1,2,4-Trichlorobenzene	0.92567	0.93910	0.93910	0.010	1.45137	50.00000	Averaged
101 Naphthalene	2.59920	2.91914	2.91914	0.010	12.30956	50.00000	Averaged
102 1,2,3-Trichlorobenzene	0.89857	0.93439	0.93439	0.010	3.98619	50.00000	Averaged
37 Dibromofluoromethane	0.52405	0.58735	0.58735	0.010	12.07892	50.00000	Averaged
45 1,2-Dichloroethane-D4	0.73892	0.97588	0.97588	0.010	32.06813	50.00000	Averaged
55 Toluene-D8	1.26398	1.31955	1.31955	0.010	4.39622	50.00000	Averaged
76 P-Bromofluorobenzene	0.57961	0.65664	0.65664	0.010	13.28833	50.00000	Averaged

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG225350-5
Lab File ID : W3336.D
Initial Calibration Date(s): 03/23/18 09:41 03/23/18 13:16

SDG: SL2079
Analytical Date: 03/24/18 18:58
Instrument ID: GCMS-W
Column ID:

*** = Compound out of QC criteria**

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Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL2079
Lab ID : WG225350-6
Analytical Date: 03/24/18 19:35
Lab File ID : W3337.D
Instrument ID: GCMS-W
Initial Calibration Date(s): 03/23/18 09:41 03/23/18 13:16
Column ID:

	Compound	$\overline{\text{RRF}}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
1	Dichlorodifluoromethane	0.71008	0.90069	0.90069	0.010	26.84292	50.00000	Averaged
2	Chloromethane	0.82523	0.90895	0.90895	0.100	10.14453	50.00000	Averaged
3	Vinyl chloride	0.78611	0.93619	0.93619	0.010	19.09154	50.00000	Averaged
4	Bromomethane	0.45321	0.53791	0.53791	0.010	18.68699	50.00000	Averaged
5	Chloroethane	0.48705	0.64268	0.64268	0.010	31.95418	50.00000	Averaged
6	Trichlorofluoromethane	1.04090	1.48194	1.48194	0.010	42.37095	50.00000	Averaged
9	1,1-Dichloroethene	0.49495	0.53535	0.53535	0.010	8.16067	50.00000	Averaged
10	Carbon Disulfide	1.80043	2.03219	2.03219	0.010	12.87281	50.00000	Averaged
11	Freon-113	0.35741	0.43298	0.43298	0.010	21.14411	50.00000	Averaged
14	Methylene Chloride	0.77996	0.78580	0.78580	0.010	0.74886	50.00000	Averaged
15	Acetone	0.27760	0.31118	0.31118	0.010	12.09651	50.00000	Averaged
17	trans-1,2-Dichloroethene	0.56459	0.62054	0.62054	0.010	9.90998	50.00000	Averaged
19	Methyl tert-butyl ether	2.12316	2.51713	2.51713	0.010	18.55597	50.00000	Averaged
25	1,1-Dichloroethane	1.13050	1.35652	1.35652	0.100	19.99289	50.00000	Averaged
29	cis-1,2-Dichloroethene	0.62416	0.70525	0.70525	0.010	12.99254	50.00000	Averaged
32	2,2-Dichloropropane	0.88755	1.11439	1.11439	0.010	25.55775	50.00000	Averaged
33	Bromochloromethane	0.26749	0.29767	0.29767	0.010	11.28059	50.00000	Averaged
34	Chloroform	1.13995	1.46163	1.46163	0.010	28.21801	50.00000	Averaged
35	Carbon Tetrachloride	0.45200	0.59735	0.59735	0.010	32.15823	50.00000	Averaged
38	1,1,1-Trichloroethane	0.96832	1.28126	1.28126	0.010	32.31760	50.00000	Averaged
39	1,1-Dichloropropene	0.49707	0.60542	0.60542	0.010	21.79695	50.00000	Averaged
40	2-Butanone	0.39410	0.45497	0.45497	0.010	15.44438	50.00000	Averaged
41	Benzene	1.42461	1.59624	1.59624	0.010	12.04735	50.00000	Averaged
47	1,2-Dichloroethane	0.56848	0.74992	0.74992	0.010	31.91725	50.00000	Averaged
48	Trichloroethene	0.34963	0.40928	0.40928	0.010	17.06216	50.00000	Averaged
50	Dibromomethane	0.22201	0.27451	0.27451	0.010	23.64858	50.00000	Averaged
51	1,2-Dichloropropane	0.37754	0.42958	0.42958	0.010	13.78249	50.00000	Averaged
52	Bromodichloromethane	0.51184	0.66395	0.66395	0.010	29.71725	50.00000	Averaged
53	cis-1,3-dichloropropene	0.66169	0.79535	0.79535	0.010	20.19924	50.00000	Averaged
57	Toluene	0.89040	1.00224	1.00224	0.010	12.56126	50.00000	Averaged
58	4-methyl-2-pentanone	0.44588	0.54246	0.54246	0.010	21.66193	50.00000	Averaged
59	Tetrachloroethene	0.25014	0.27265	0.27265	0.010	8.99880	50.00000	Averaged
60	trans-1,3-Dichloropropene	0.61729	0.75198	0.75198	0.010	21.82097	50.00000	Averaged
61	1,1,2-Trichloroethane	0.30063	0.34602	0.34602	0.010	15.09662	50.00000	Averaged
62	Dibromochloromethane	0.36444	0.44342	0.44342	0.010	21.66965	50.00000	Averaged
63	1,3-Dichloropropane	0.71371	0.83917	0.83917	0.010	17.57993	50.00000	Averaged
64	1,2-Dibromoethane	0.34804	0.39995	0.39995	0.010	14.91416	50.00000	Averaged
65	2-Hexanone	0.34272	0.41481	0.41481	0.010	21.03600	50.00000	Averaged
67	Chlorobenzene	1.01966	1.13471	1.13471	0.300	11.28339	50.00000	Averaged
68	Ethylbenzene	0.54670	0.60305	0.60305	0.010	10.30715	50.00000	Averaged
69	1,1,1,2-Tetrachloroethane	0.35242	0.41925	0.41925	0.010	18.96274	50.00000	Averaged

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG225350-6
Lab File ID : W3337.D
Initial Calibration Date(s): 03/23/18 09:41 03/23/18 13:16

SDG: SL2079
Analytical Date: 03/24/18 19:35
Instrument ID: GCMS-W
Column ID:

Compound	RRF/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
71 m+p-Xylenes	0.68337	0.75666	0.75666	0.010	10.72503	50.00000	Averaged
72 o-Xylene	0.64869	0.74749	0.74749	0.010	15.23041	50.00000	Averaged
73 Styrene	1.12350	1.30785	1.30785	0.010	16.40907	50.00000	Averaged
74 Bromoform	0.27172	0.32740	0.32740	0.100	20.49181	50.00000	Averaged
75 Isopropylbenzene	2.65569	3.07358	3.07358	0.010	15.73573	50.00000	Averaged
79 Bromobenzene	0.69434	0.74731	0.74731	0.010	7.62821	50.00000	Averaged
80 N-Propylbenzene	3.72395	4.28318	4.28318	0.010	15.01693	50.00000	Averaged
81 1,1,2,2-Tetrachloroethane	0.98981	1.08141	1.08141	0.300	9.25436	50.00000	Averaged
82 1,3,5-Trimethylbenzene	2.56543	2.96658	2.96658	0.010	15.63667	50.00000	Averaged
83 2-Chlorotoluene	2.26576	2.67203	2.67203	0.010	17.93118	50.00000	Averaged
84 1,2,3-Trichloropropane	0.90428	1.04440	1.04440	0.010	15.49548	50.00000	Averaged
85 4-Chlorotoluene	2.44044	2.83065	2.83065	0.010	15.98925	50.00000	Averaged
86 tert-Butylbenzene	2.46693	2.81302	2.81302	0.010	14.02931	50.00000	Averaged
88 1,2,4-Trimethylbenzene	2.73067	3.21144	3.21144	0.010	17.60634	50.00000	Averaged
89 P-Isopropyltoluene	2.71197	3.08165	3.08165	0.010	13.63178	50.00000	Averaged
90 1,3-Dichlorobenzene	1.43507	1.52329	1.52329	0.010	6.14748	50.00000	Averaged
92 1,4-Dichlorobenzene	1.50115	1.56704	1.56704	0.010	4.38967	50.00000	Averaged
93 N-Butylbenzene	2.85466	3.29618	3.29618	0.010	15.46658	50.00000	Averaged
94 sec-Butylbenzene	3.28352	3.76058	3.76058	0.010	14.52869	50.00000	Averaged
95 1,2-Dichlorobenzene	1.43502	1.55426	1.55426	0.010	8.30942	50.00000	Averaged
96 1,2-Dibromo-3-Chloropropane	0.25309	0.31386	0.31386	0.010	24.00783	50.00000	Averaged
98 Hexachlorobutadiene	0.48100	0.51783	0.51783	0.010	7.65590	50.00000	Averaged
99 1,2,4-Trichlorobenzene	0.92567	0.94323	0.94323	0.010	1.89684	50.00000	Averaged
101 Naphthalene	2.59920	2.98838	2.98838	0.010	14.97345	50.00000	Averaged
102 1,2,3-Trichlorobenzene	0.89857	0.95425	0.95425	0.010	6.19701	50.00000	Averaged
37 Dibromofluoromethane	0.52405	0.57188	0.57188	0.010	9.12659	50.00000	Averaged
45 1,2-Dichloroethane-D4	0.73892	0.91246	0.91246	0.010	23.48463	50.00000	Averaged
55 Toluene-D8	1.26398	1.28713	1.28713	0.010	1.83144	50.00000	Averaged
76 P-Bromofluorobenzene	0.57961	0.65185	0.65185	0.010	12.46308	50.00000	Averaged

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG225350-6
Lab File ID : W3337.D
Initial Calibration Date(s): 03/23/18 09:41 03/23/18 13:16

SDG: SL2079
Analytical Date: 03/24/18 19:35
Instrument ID: GCMS-W
Column ID:

*** = Compound out of QC criteria**

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Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL2079
Lab ID : WG225350-7
Analytical Date: 03/24/18 20:12
Lab File ID : W3338.D
Instrument ID: GCMS-W
Initial Calibration Date(s): 03/23/18 09:41 03/23/18 13:16
Column ID:

	Compound	$\overline{\text{RRF}}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
1	Dichlorodifluoromethane	0.71008	0.91394	0.91394	0.010	28.70921	50.00000	Averaged
2	Chloromethane	0.82523	0.96385	0.96385	0.100	16.79760	50.00000	Averaged
3	Vinyl chloride	0.78611	0.98406	0.98406	0.010	25.18185	50.00000	Averaged
4	Bromomethane	0.45321	0.56953	0.56953	0.010	25.66401	50.00000	Averaged
5	Chloroethane	0.48705	0.66080	0.66080	0.010	35.67362	50.00000	Averaged
6	Trichlorofluoromethane	1.04090	1.49854	1.49854	0.010	43.96491	50.00000	Averaged
9	1,1-Dichloroethene	0.49495	0.59378	0.59378	0.010	19.96591	50.00000	Averaged
10	Carbon Disulfide	1.80043	2.15575	2.15575	0.010	19.73561	50.00000	Averaged
11	Freon-113	0.35741	0.45327	0.45327	0.010	26.82051	50.00000	Averaged
14	Methylene Chloride	0.77996	0.82147	0.82147	0.010	5.32139	50.00000	Averaged
15	Acetone	0.27760	0.40892	0.40892	0.010	47.30426	50.00000	Averaged
17	trans-1,2-Dichloroethene	0.56459	0.67193	0.67193	0.010	19.01259	50.00000	Averaged
19	Methyl tert-butyl ether	2.12316	2.69449	2.69449	0.010	26.90944	50.00000	Averaged
25	1,1-Dichloroethane	1.13050	1.46641	1.46641	0.100	29.71272	50.00000	Averaged
29	cis-1,2-Dichloroethene	0.62416	0.74620	0.74620	0.010	19.55274	50.00000	Averaged
32	2,2-Dichloropropane	0.88755	1.17698	1.17698	0.010	32.60956	50.00000	Averaged
33	Bromochloromethane	0.26749	0.30538	0.30538	0.010	14.16509	50.00000	Averaged
34	Chloroform	1.13995	1.53695	1.53695	0.010	34.82530	50.00000	Averaged
35	Carbon Tetrachloride	0.45200	0.61101	0.61101	0.010	35.18097	50.00000	Averaged
38	1,1,1-Trichloroethane	0.96832	1.33039	1.33039	0.010	37.39175	50.00000	Averaged
39	1,1-Dichloropropene	0.49707	0.62203	0.62203	0.010	25.13990	50.00000	Averaged
40	2-Butanone	0.39410	0.50571	0.50571	0.010	28.32005	50.00000	Averaged
41	Benzene	1.42461	1.66947	1.66947	0.010	17.18770	50.00000	Averaged
47	1,2-Dichloroethane	0.56848	0.77540	0.77540	0.010	36.39861	50.00000	Averaged
48	Trichloroethene	0.34963	0.42372	0.42372	0.010	21.19076	50.00000	Averaged
50	Dibromomethane	0.22201	0.27760	0.27760	0.010	25.03832	50.00000	Averaged
51	1,2-Dichloropropane	0.37754	0.45227	0.45227	0.010	19.79347	50.00000	Averaged
52	Bromodichloromethane	0.51184	0.68514	0.68514	0.010	33.85819	50.00000	Averaged
53	cis-1,3-dichloropropene	0.66169	0.82112	0.82112	0.010	24.09377	50.00000	Averaged
57	Toluene	0.89040	1.02817	1.02817	0.010	15.47332	50.00000	Averaged
58	4-methyl-2-pentanone	0.44588	0.55320	0.55320	0.010	24.07018	50.00000	Averaged
59	Tetrachloroethene	0.25014	0.35110	0.35110	0.010	40.36234	50.00000	Averaged
60	trans-1,3-Dichloropropene	0.61729	0.77384	0.77384	0.010	25.36108	50.00000	Averaged
61	1,1,2-Trichloroethane	0.30063	0.35975	0.35975	0.010	19.66597	50.00000	Averaged
62	Dibromochloromethane	0.36444	0.45857	0.45857	0.010	25.82839	50.00000	Averaged
63	1,3-Dichloropropane	0.71371	0.85753	0.85753	0.010	20.15144	50.00000	Averaged
64	1,2-Dibromoethane	0.34804	0.41221	0.41221	0.010	18.43672	50.00000	Averaged
65	2-Hexanone	0.34272	0.43144	0.43144	0.010	25.89018	50.00000	Averaged
67	Chlorobenzene	1.01966	1.16698	1.16698	0.300	14.44810	50.00000	Averaged
68	Ethylbenzene	0.54670	0.62760	0.62760	0.010	14.79711	50.00000	Averaged
69	1,1,1,2-Tetrachloroethane	0.35242	0.43491	0.43491	0.010	23.40581	50.00000	Averaged

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL2079
Lab ID : WG225350-7
Analytical Date: 03/24/18 20:12
Lab File ID : W3338.D
Instrument ID: GCMS-W
Initial Calibration Date(s): 03/23/18 09:41 03/23/18 13:16
Column ID:

Compound	RRF/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
71 m+p-Xylenes	0.68337	0.78404	0.78404	0.010	14.73153	50.00000	Averaged
72 o-Xylene	0.64869	0.78112	0.78112	0.010	20.41466	50.00000	Averaged
73 Styrene	1.12350	1.34537	1.34537	0.010	19.74865	50.00000	Averaged
74 Bromoform	0.27172	0.33788	0.33788	0.100	24.34589	50.00000	Averaged
75 Isopropylbenzene	2.65569	3.12791	3.12791	0.010	17.78159	50.00000	Averaged
79 Bromobenzene	0.69434	0.77806	0.77806	0.010	12.05763	50.00000	Averaged
80 N-Propylbenzene	3.72395	4.37461	4.37461	0.010	17.47210	50.00000	Averaged
81 1,1,2,2-Tetrachloroethane	0.98981	1.08882	1.08882	0.300	10.00312	50.00000	Averaged
82 1,3,5-Trimethylbenzene	2.56543	3.05306	3.05306	0.010	19.00783	50.00000	Averaged
83 2-Chlorotoluene	2.26576	2.72198	2.72198	0.010	20.13561	50.00000	Averaged
84 1,2,3-Trichloropropane	0.90428	1.06998	1.06998	0.010	18.32449	50.00000	Averaged
85 4-Chlorotoluene	2.44044	2.90590	2.90590	0.010	19.07247	50.00000	Averaged
86 tert-Butylbenzene	2.46693	2.71631	2.71631	0.010	10.10900	50.00000	Averaged
88 1,2,4-Trimethylbenzene	2.73067	3.25144	3.25144	0.010	19.07124	50.00000	Averaged
89 P-Isopropyltoluene	2.71197	3.18866	3.18866	0.010	17.57738	50.00000	Averaged
90 1,3-Dichlorobenzene	1.43507	1.56600	1.56600	0.010	9.12356	50.00000	Averaged
92 1,4-Dichlorobenzene	1.50115	1.64310	1.64310	0.010	9.45648	50.00000	Averaged
93 N-Butylbenzene	2.85466	3.36525	3.36525	0.010	17.88608	50.00000	Averaged
94 sec-Butylbenzene	3.28352	3.82518	3.82518	0.010	16.49625	50.00000	Averaged
95 1,2-Dichlorobenzene	1.43502	1.61956	1.61956	0.010	12.85968	50.00000	Averaged
96 1,2-Dibromo-3-Chloropropane	0.25309	0.33847	0.33847	0.010	33.73367	50.00000	Averaged
98 Hexachlorobutadiene	0.48100	0.53484	0.53484	0.010	11.19318	50.00000	Averaged
99 1,2,4-Trichlorobenzene	0.92567	1.00756	1.00756	0.010	8.84679	50.00000	Averaged
101 Naphthalene	2.59920	3.10572	3.10572	0.010	19.48768	50.00000	Averaged
102 1,2,3-Trichlorobenzene	0.89857	1.00413	1.00413	0.010	11.74816	50.00000	Averaged
37 Dibromofluoromethane	0.52405	0.57166	0.57166	0.010	9.08547	50.00000	Averaged
45 1,2-Dichloroethane-D4	0.73892	0.90326	0.90326	0.010	22.24004	50.00000	Averaged
55 Toluene-D8	1.26398	1.30081	1.30081	0.010	2.91356	50.00000	Averaged
76 P-Bromofluorobenzene	0.57961	0.63598	0.63598	0.010	9.72413	50.00000	Averaged

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG225350-7
Lab File ID : W3338.D
Initial Calibration Date(s): 03/23/18 09:41 03/23/18 13:16

SDG: SL2079
Analytical Date: 03/24/18 20:12
Instrument ID: GCMS-W
Column ID:

*** = Compound out of QC criteria**

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Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL2079
Lab ID : WG225400-11
Analytical Date: 03/26/18 21:20
Lab File ID : W3360.D
Instrument ID: GCMS-W
Initial Calibration Date(s): 03/26/18 10:13 03/26/18 13:19
Column ID:

	Compound	$\overline{\text{RRF}}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
1	Dichlorodifluoromethane	0.87376	0.97521	0.97521	0.010	11.60981	50.00000	Averaged
2	Chloromethane	0.90675	0.99703	0.99703	0.100	9.95593	50.00000	Averaged
3	Vinyl chloride	0.93337	0.99288	0.99288	0.010	6.37638	50.00000	Averaged
4	Bromomethane	0.55323	0.58235	0.58235	0.010	5.26420	50.00000	Averaged
5	Chloroethane	0.64129	0.68871	0.68871	0.010	7.39480	50.00000	Averaged
6	Trichlorofluoromethane	1.51565	1.59605	1.59605	0.010	5.30435	50.00000	Averaged
9	1,1-Dichloroethene	0.54723	0.53320	0.53320	0.010	-2.56347	50.00000	Averaged
10	Carbon Disulfide	2.04880	2.03242	2.03242	0.010	-0.79974	50.00000	Averaged
11	Freon-113	0.48734	0.47840	0.47840	0.010	-1.83432	50.00000	Averaged
14	Methylene Chloride	0.82792	0.77323	0.77323	0.010	-6.60592	50.00000	Averaged
15	Acetone	0.32217	0.31153	0.31153	0.010	-3.30471	50.00000	Averaged
17	trans-1,2-Dichloroethene	0.63256	0.62813	0.62813	0.010	-0.69978	50.00000	Averaged
19	Methyl tert-butyl ether	2.46563	2.45577	2.45577	0.010	-0.39980	50.00000	Averaged
25	1,1-Dichloroethane	1.38826	1.39190	1.39190	0.100	0.26197	50.00000	Averaged
29	cis-1,2-Dichloroethene	0.70203	0.70542	0.70542	0.010	0.48333	50.00000	Averaged
32	2,2-Dichloropropane	1.18262	1.18621	1.18621	0.010	0.30334	50.00000	Averaged
33	Bromochloromethane	0.28761	0.29102	0.29102	0.010	1.18469	50.00000	Averaged
34	Chloroform	1.45842	1.51619	1.51619	0.010	3.96099	50.00000	Averaged
35	Carbon Tetrachloride	0.61288	0.60544	0.60544	0.010	-1.21334	50.00000	Averaged
38	1,1,1-Trichloroethane	1.31268	1.33954	1.33954	0.010	2.04632	50.00000	Averaged
39	1,1-Dichloropropene	0.61272	0.61041	0.61041	0.010	-0.37811	50.00000	Averaged
40	2-Butanone	0.43958	0.44582	0.44582	0.010	1.41983	50.00000	Averaged
41	Benzene	1.63897	1.62749	1.62749	0.010	-0.69993	50.00000	Averaged
47	1,2-Dichloroethane	0.76403	0.75070	0.75070	0.010	-1.74370	50.00000	Averaged
48	Trichloroethene	0.43314	0.41883	0.41883	0.010	-3.30483	50.00000	Averaged
50	Dibromomethane	0.26980	0.26466	0.26466	0.010	-1.90230	50.00000	Averaged
51	1,2-Dichloropropane	0.43355	0.42047	0.42047	0.010	-3.01518	50.00000	Averaged
52	Bromodichloromethane	0.67587	0.66639	0.66639	0.010	-1.40285	50.00000	Averaged
53	cis-1,3-dichloropropene	0.80106	0.79161	0.79161	0.010	-1.17903	50.00000	Averaged
57	Toluene	1.04309	0.99886	0.99886	0.010	-4.23999	50.00000	Averaged
58	4-methyl-2-pentanone	0.51775	0.51786	0.51786	0.010	0.02045	50.00000	Averaged
59	Tetrachloroethene	0.29302	0.29470	0.29470	0.010	0.57219	50.00000	Averaged
60	trans-1,3-Dichloropropene	0.78155	0.75810	0.75810	0.010	-3.00104	50.00000	Averaged
61	1,1,2-Trichloroethane	0.34883	0.33047	0.33047	0.010	-5.26406	50.00000	Averaged
62	Dibromochloromethane	0.47042	0.46880	0.46880	0.010	-0.34506	50.00000	Averaged
63	1,3-Dichloropropane	0.87640	0.86422	0.86422	0.010	-1.39087	50.00000	Averaged
64	1,2-Dibromoethane	0.40344	0.39213	0.39213	0.010	-2.80434	50.00000	Averaged
65	2-Hexanone	0.41497	0.42115	0.42115	0.010	1.48830	50.00000	Averaged
67	Chlorobenzene	1.23913	1.18634	1.18634	0.300	-4.26022	50.00000	Averaged
68	Ethylbenzene	0.66630	0.65311	0.65311	0.010	-1.97949	50.00000	Averaged
69	1,1,1,2-Tetrachloroethane	0.45364	0.44271	0.44271	0.010	-2.40766	50.00000	Averaged

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL2079
Lab ID : WG225400-11
Analytical Date: 03/26/18 21:20
Lab File ID : W3360.D
Instrument ID: GCMS-W
Initial Calibration Date(s): 03/26/18 10:13 03/26/18 13:19
Column ID:

Compound	RRF/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
71 m+p-Xylenes	0.82632	0.81084	0.81084	0.010	-1.87445	50.00000	Averaged
72 o-Xylene	0.78403	0.79756	0.79756	0.010	1.72650	50.00000	Averaged
73 Styrene	1.36383	1.36628	1.36628	0.010	0.17932	50.00000	Averaged
74 Bromoform	0.34031	0.34052	0.34052	0.100	0.06334	50.00000	Averaged
75 Isopropylbenzene	3.44576	3.48252	3.48252	0.010	1.06675	50.00000	Averaged
79 Bromobenzene	0.87344	0.82179	0.82179	0.010	-5.91368	50.00000	Averaged
80 N-Propylbenzene	4.98683	4.87936	4.87936	0.010	-2.15510	50.00000	Averaged
81 1,1,2,2-Tetrachloroethane	1.24042	1.20010	1.20010	0.300	-3.24984	50.00000	Averaged
82 1,3,5-Trimethylbenzene	3.39710	3.37087	3.37087	0.010	-0.77210	50.00000	Averaged
83 2-Chlorotoluene	3.04367	3.00058	3.00058	0.010	-1.41594	50.00000	Averaged
84 1,2,3-Trichloropropane	1.19943	1.15122	1.15122	0.010	-4.01967	50.00000	Averaged
85 4-Chlorotoluene	3.29308	3.18967	3.18967	0.010	-3.14043	50.00000	Averaged
86 tert-Butylbenzene	3.24036	3.21192	3.21192	0.010	-0.87773	50.00000	Averaged
88 1,2,4-Trimethylbenzene	3.64176	3.58904	3.58904	0.010	-1.44773	50.00000	Averaged
89 P-Isopropyltoluene	3.54784	3.53089	3.53089	0.010	-0.47788	50.00000	Averaged
90 1,3-Dichlorobenzene	1.80086	1.66892	1.66892	0.010	-7.32633	50.00000	Averaged
92 1,4-Dichlorobenzene	1.90165	1.73837	1.73837	0.010	-8.58605	50.00000	Averaged
93 N-Butylbenzene	3.83209	3.77769	3.77769	0.010	-1.41978	50.00000	Averaged
94 sec-Butylbenzene	4.34063	4.31046	4.31046	0.010	-0.69509	50.00000	Averaged
95 1,2-Dichlorobenzene	1.80064	1.71387	1.71387	0.010	-4.81889	50.00000	Averaged
96 1,2-Dibromo-3-Chloropropane	0.35726	0.37988	0.37988	0.010	6.33223	50.00000	Averaged
98 Hexachlorobutadiene	0.62006	0.59008	0.59008	0.010	-4.83372	50.00000	Averaged
99 1,2,4-Trichlorobenzene	1.11691	1.04221	1.04221	0.010	-6.68800	50.00000	Averaged
101 Naphthalene	3.07254	3.16549	3.16549	0.010	3.02527	50.00000	Averaged
102 1,2,3-Trichlorobenzene	1.08947	1.02721	1.02721	0.010	-5.71418	50.00000	Averaged
37 Dibromofluoromethane	0.57846	0.58962	0.58962	0.010	1.93004	50.00000	Averaged
45 1,2-Dichloroethane-D4	0.93642	0.96389	0.96389	0.010	2.93329	50.00000	Averaged
55 Toluene-D8	1.28305	1.29485	1.29485	0.010	0.91934	50.00000	Averaged
76 P-Bromofluorobenzene	0.59121	0.59782	0.59782	0.010	1.11740	50.00000	Averaged

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG225400-11
Lab File ID : W3360.D
Initial Calibration Date(s): 03/26/18 10:13 03/26/18 13:19

SDG: SL2079
Analytical Date: 03/26/18 21:20
Instrument ID: GCMS-W
Column ID:

*** = Compound out of QC criteria**

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Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL2079
Lab ID : WG225463-4
Analytical Date: 03/27/18 08:47
Lab File ID : W3365.D
Instrument ID: GCMS-W
Initial Calibration Date(s): 03/26/18 10:13 03/26/18 13:19
Column ID:

	Compound	$\overline{\text{RRF}}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type	
1	Dichlorodifluoromethane	0.87376	0.94400	0.94400	0.010	8.03872	20.00000	Averaged	
2	Chloromethane	0.90675	0.94633	0.94633	0.100	4.36501	20.00000	Averaged	
3	Vinyl chloride	0.93337	0.99683	0.99683	0.010	6.79981	20.00000	Averaged	
4	Bromomethane	0.55323	0.55719	0.55719	0.010	0.71692	20.00000	Averaged	
5	Chloroethane	0.64129	0.65792	0.65792	0.010	2.59368	20.00000	Averaged	
6	Trichlorofluoromethane	1.51565	1.50842	1.50842	0.010	-0.47700	20.00000	Averaged	
9	1,1-Dichloroethene	0.54723	0.57078	0.57078	0.010	4.30383	20.00000	Averaged	
10	Carbon Disulfide	2.04880	2.08810	2.08810	0.010	1.91796	20.00000	Averaged	
11	Freon-113	0.48734	0.49805	0.49805	0.010	2.19873	20.00000	Averaged	
14	Methylene Chloride	0.82792	0.78905	0.78905	0.010	-4.69538	20.00000	Averaged	
15	Acetone	0.32217	0.39882	0.39882	0.010	23.78956	20.00000	Averaged	*
17	trans-1,2-Dichloroethene	0.63256	0.64977	0.64977	0.010	2.72065	20.00000	Averaged	
19	Methyl tert-butyl ether	2.46563	2.42586	2.42586	0.010	-1.61273	20.00000	Averaged	
25	1,1-Dichloroethane	1.38826	1.39876	1.39876	0.100	0.75598	20.00000	Averaged	
29	cis-1,2-Dichloroethene	0.70203	0.71123	0.71123	0.010	1.31036	20.00000	Averaged	
32	2,2-Dichloropropane	1.18262	1.20702	1.20702	0.010	2.06326	20.00000	Averaged	
33	Bromochloromethane	0.28761	0.29125	0.29125	0.010	1.26496	20.00000	Averaged	
34	Chloroform	1.45842	1.45235	1.45235	0.010	-0.41600	20.00000	Averaged	
35	Carbon Tetrachloride	0.61288	0.61083	0.61083	0.010	-0.33463	20.00000	Averaged	
38	1,1,1-Trichloroethane	1.31268	1.30212	1.30212	0.010	-0.80430	20.00000	Averaged	
39	1,1-Dichloropropene	0.61272	0.63677	0.63677	0.010	3.92396	20.00000	Averaged	
40	2-Butanone	0.43958	0.45679	0.45679	0.010	3.91446	20.00000	Averaged	
41	Benzene	1.63897	1.64994	1.64994	0.010	0.66969	20.00000	Averaged	
47	1,2-Dichloroethane	0.76403	0.69858	0.69858	0.010	-8.56641	20.00000	Averaged	
48	Trichloroethene	0.43314	0.42446	0.42446	0.010	-2.00405	20.00000	Averaged	
50	Dibromomethane	0.26980	0.26032	0.26032	0.010	-3.51046	20.00000	Averaged	
51	1,2-Dichloropropane	0.43355	0.43038	0.43038	0.010	-0.72925	20.00000	Averaged	
52	Bromodichloromethane	0.67587	0.63875	0.63875	0.010	-5.49223	20.00000	Averaged	
53	cis-1,3-dichloropropene	0.80106	0.80046	0.80046	0.010	-0.07464	20.00000	Averaged	
57	Toluene	1.04309	1.04487	1.04487	0.010	0.17146	20.00000	Averaged	
58	4-methyl-2-pentanone	0.51775	0.49092	0.49092	0.010	-5.18274	20.00000	Averaged	
59	Tetrachloroethene	0.29302	0.31080	0.31080	0.010	6.06523	20.00000	Averaged	
60	trans-1,3-Dichloropropene	0.78155	0.75722	0.75722	0.010	-3.11320	20.00000	Averaged	
61	1,1,2-Trichloroethane	0.34883	0.33214	0.33214	0.010	-4.78292	20.00000	Averaged	
62	Dibromochloromethane	0.47042	0.46337	0.46337	0.010	-1.49898	20.00000	Averaged	
63	1,3-Dichloropropane	0.87640	0.84808	0.84808	0.010	-3.23153	20.00000	Averaged	
64	1,2-Dibromoethane	0.40344	0.38241	0.38241	0.010	-5.21461	20.00000	Averaged	
65	2-Hexanone	0.41497	0.42060	0.42060	0.010	1.35664	20.00000	Averaged	
67	Chlorobenzene	1.23913	1.24070	1.24070	0.300	0.12681	20.00000	Averaged	
68	Ethylbenzene	0.66630	0.68171	0.68171	0.010	2.31283	20.00000	Averaged	
69	1,1,1,2-Tetrachloroethane	0.45364	0.44848	0.44848	0.010	-1.13647	20.00000	Averaged	

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL2079
Lab ID : WG225463-4
Analytical Date: 03/27/18 08:47
Lab File ID : W3365.D
Instrument ID: GCMS-W
Initial Calibration Date(s): 03/26/18 10:13 03/26/18 13:19
Column ID:

Compound	$\overline{RRF}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
71 m+p-Xylenes	0.82632	0.86893	0.86893	0.010	5.15625	20.00000	Averaged
72 o-Xylene	0.78403	0.82836	0.82836	0.010	5.65488	20.00000	Averaged
73 Styrene	1.36383	1.42914	1.42914	0.010	4.78801	20.00000	Averaged
74 Bromoform	0.34031	0.32934	0.32934	0.100	-3.22324	20.00000	Averaged
75 Isopropylbenzene	3.44576	3.67432	3.67432	0.010	6.63327	20.00000	Averaged
79 Bromobenzene	0.87344	0.84245	0.84245	0.010	-3.54810	20.00000	Averaged
80 N-Propylbenzene	4.98683	5.17432	5.17432	0.010	3.75974	20.00000	Averaged
81 1,1,2,2-Tetrachloroethane	1.24042	1.14604	1.14604	0.300	-7.60816	20.00000	Averaged
82 1,3,5-Trimethylbenzene	3.39710	3.53778	3.53778	0.010	4.14119	20.00000	Averaged
83 2-Chlorotoluene	3.04367	3.09474	3.09474	0.010	1.67776	20.00000	Averaged
84 1,2,3-Trichloropropane	1.19943	1.09377	1.09377	0.010	-8.80957	20.00000	Averaged
85 4-Chlorotoluene	3.29308	3.33710	3.33710	0.010	1.33658	20.00000	Averaged
86 tert-Butylbenzene	3.24036	3.38521	3.38521	0.010	4.47022	20.00000	Averaged
88 1,2,4-Trimethylbenzene	3.64176	3.77192	3.77192	0.010	3.57410	20.00000	Averaged
89 P-Isopropyltoluene	3.54784	3.82009	3.82009	0.010	7.67362	20.00000	Averaged
90 1,3-Dichlorobenzene	1.80086	1.84184	1.84184	0.010	2.27555	20.00000	Averaged
92 1,4-Dichlorobenzene	1.90165	1.88001	1.88001	0.010	-1.13788	20.00000	Averaged
93 N-Butylbenzene	3.83209	4.20411	4.20411	0.010	9.70786	20.00000	Averaged
94 sec-Butylbenzene	4.34063	4.58835	4.58835	0.010	5.70706	20.00000	Averaged
95 1,2-Dichlorobenzene	1.80064	1.79179	1.79179	0.010	-0.49172	20.00000	Averaged
96 1,2-Dibromo-3-Chloropropane	0.35726	0.32161	0.32161	0.010	-9.97918	20.00000	Averaged
98 Hexachlorobutadiene	0.62006	0.66925	0.66925	0.010	7.93383	20.00000	Averaged
99 1,2,4-Trichlorobenzene	1.11691	1.21068	1.21068	0.010	8.39536	20.00000	Averaged
101 Naphthalene	3.07254	3.14980	3.14980	0.010	2.51454	20.00000	Averaged
102 1,2,3-Trichlorobenzene	1.08947	1.11261	1.11261	0.010	2.12362	20.00000	Averaged
37 Dibromofluoromethane	0.57846	0.56956	0.56956	0.010	-1.53808	20.00000	Averaged
45 1,2-Dichloroethane-D4	0.93642	0.86805	0.86805	0.010	-7.30154	20.00000	Averaged
55 Toluene-D8	1.28305	1.27319	1.27319	0.010	-0.76901	20.00000	Averaged
76 P-Bromofluorobenzene	0.59121	0.57683	0.57683	0.010	-2.43244	20.00000	Averaged

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG225463-4
Lab File ID : W3365.D
Initial Calibration Date(s): 03/26/18 10:13 03/26/18 13:19

SDG: SL2079
Analytical Date: 03/27/18 08:47
Instrument ID: GCMS-W
Column ID:

*** = Compound out of QC criteria**

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Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL2079
Lab ID : WG225463-5
Analytical Date: 03/27/18 19:08
Lab File ID : W3381.D
Instrument ID: GCMS-W
Initial Calibration Date(s): 03/26/18 10:13 03/26/18 13:19
Column ID:

	Compound	$\overline{\text{RRF}}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
1	Dichlorodifluoromethane	0.87376	0.83859	0.83859	0.010	-4.02521	50.00000	Averaged
2	Chloromethane	0.90675	0.88737	0.88737	0.100	-2.13692	50.00000	Averaged
3	Vinyl chloride	0.93337	0.85741	0.85741	0.010	-8.13798	50.00000	Averaged
4	Bromomethane	0.55323	0.54881	0.54881	0.010	-0.79899	50.00000	Averaged
5	Chloroethane	0.64129	0.61849	0.61849	0.010	-3.55492	50.00000	Averaged
6	Trichlorofluoromethane	1.51565	1.45507	1.45507	0.010	-3.99717	50.00000	Averaged
9	1,1-Dichloroethene	0.54723	0.44726	0.44726	0.010	-18.26748	50.00000	Averaged
10	Carbon Disulfide	2.04880	1.70874	1.70874	0.010	-16.59804	50.00000	Averaged
11	Freon-113	0.48734	0.38484	0.38484	0.010	-21.03138	50.00000	Averaged
14	Methylene Chloride	0.82792	0.70113	0.70113	0.010	-15.31387	50.00000	Averaged
15	Acetone	0.32217	0.29032	0.29032	0.010	-9.88554	50.00000	Averaged
17	trans-1,2-Dichloroethene	0.63256	0.52096	0.52096	0.010	-17.64231	50.00000	Averaged
19	Methyl tert-butyl ether	2.46563	2.36537	2.36537	0.010	-4.06605	50.00000	Averaged
25	1,1-Dichloroethane	1.38826	1.23271	1.23271	0.100	-11.20512	50.00000	Averaged
29	cis-1,2-Dichloroethene	0.70203	0.62467	0.62467	0.010	-11.01979	50.00000	Averaged
32	2,2-Dichloropropane	1.18262	1.04119	1.04119	0.010	-11.95890	50.00000	Averaged
33	Bromochloromethane	0.28761	0.26992	0.26992	0.010	-6.15058	50.00000	Averaged
34	Chloroform	1.45842	1.37810	1.37810	0.010	-5.50734	50.00000	Averaged
35	Carbon Tetrachloride	0.61288	0.53395	0.53395	0.010	-12.87880	50.00000	Averaged
38	1,1,1-Trichloroethane	1.31268	1.19063	1.19063	0.010	-9.29784	50.00000	Averaged
39	1,1-Dichloropropene	0.61272	0.53104	0.53104	0.010	-13.33220	50.00000	Averaged
40	2-Butanone	0.43958	0.40467	0.40467	0.010	-7.94245	50.00000	Averaged
41	Benzene	1.63897	1.40095	1.40095	0.010	-14.52254	50.00000	Averaged
47	1,2-Dichloroethane	0.76403	0.74644	0.74644	0.010	-2.30217	50.00000	Averaged
48	Trichloroethene	0.43314	0.36731	0.36731	0.010	-15.19942	50.00000	Averaged
50	Dibromomethane	0.26980	0.25281	0.25281	0.010	-6.29662	50.00000	Averaged
51	1,2-Dichloropropane	0.43355	0.38990	0.38990	0.010	-10.06801	50.00000	Averaged
52	Bromodichloromethane	0.67587	0.63640	0.63640	0.010	-5.83906	50.00000	Averaged
53	cis-1,3-dichloropropene	0.80106	0.73111	0.73111	0.010	-8.73170	50.00000	Averaged
57	Toluene	1.04309	0.89501	0.89501	0.010	-14.19628	50.00000	Averaged
58	4-methyl-2-pentanone	0.51775	0.48676	0.48676	0.010	-5.98583	50.00000	Averaged
59	Tetrachloroethene	0.29302	0.24286	0.24286	0.010	-17.11881	50.00000	Averaged
60	trans-1,3-Dichloropropene	0.78155	0.73118	0.73118	0.010	-6.44440	50.00000	Averaged
61	1,1,2-Trichloroethane	0.34883	0.32491	0.32491	0.010	-6.85546	50.00000	Averaged
62	Dibromochloromethane	0.47042	0.43133	0.43133	0.010	-8.30891	50.00000	Averaged
63	1,3-Dichloropropane	0.87640	0.79188	0.79188	0.010	-9.64462	50.00000	Averaged
64	1,2-Dibromoethane	0.40344	0.36726	0.36726	0.010	-8.96778	50.00000	Averaged
65	2-Hexanone	0.41497	0.37253	0.37253	0.010	-10.22683	50.00000	Averaged
67	Chlorobenzene	1.23913	1.05082	1.05082	0.300	-15.19654	50.00000	Averaged
68	Ethylbenzene	0.66630	0.55892	0.55892	0.010	-16.11592	50.00000	Averaged
69	1,1,1,2-Tetrachloroethane	0.45364	0.40147	0.40147	0.010	-11.50029	50.00000	Averaged

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL2079
Lab ID : WG225463-5
Analytical Date: 03/27/18 19:08
Lab File ID : W3381.D
Instrument ID: GCMS-W
Initial Calibration Date(s): 03/26/18 10:13 03/26/18 13:19
Column ID:

Compound	RRF/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
71 m+p-Xylenes	0.82632	0.70646	0.70646	0.010	-14.50522	50.00000	Averaged
72 o-Xylene	0.78403	0.70799	0.70799	0.010	-9.69854	50.00000	Averaged
73 Styrene	1.36383	1.22908	1.22908	0.010	-9.88028	50.00000	Averaged
74 Bromoform	0.34031	0.31403	0.31403	0.100	-7.72085	50.00000	Averaged
75 Isopropylbenzene	3.44576	3.07128	3.07128	0.010	-10.86783	50.00000	Averaged
79 Bromobenzene	0.87344	0.73990	0.73990	0.010	-15.28951	50.00000	Averaged
80 N-Propylbenzene	4.98683	4.38788	4.38788	0.010	-12.01073	50.00000	Averaged
81 1,1,2,2-Tetrachloroethane	1.24042	1.11482	1.11482	0.300	-10.12520	50.00000	Averaged
82 1,3,5-Trimethylbenzene	3.39710	3.02049	3.02049	0.010	-11.08625	50.00000	Averaged
83 2-Chlorotoluene	3.04367	2.72302	2.72302	0.010	-10.53517	50.00000	Averaged
84 1,2,3-Trichloropropane	1.19943	1.07953	1.07953	0.010	-9.99609	50.00000	Averaged
85 4-Chlorotoluene	3.29308	2.93127	2.93127	0.010	-10.98717	50.00000	Averaged
86 tert-Butylbenzene	3.24036	2.91326	2.91326	0.010	-10.09463	50.00000	Averaged
88 1,2,4-Trimethylbenzene	3.64176	3.30339	3.30339	0.010	-9.29144	50.00000	Averaged
89 P-Isopropyltoluene	3.54784	3.14768	3.14768	0.010	-11.27906	50.00000	Averaged
90 1,3-Dichlorobenzene	1.80086	1.55450	1.55450	0.010	-13.68012	50.00000	Averaged
92 1,4-Dichlorobenzene	1.90165	1.60076	1.60076	0.010	-15.82236	50.00000	Averaged
93 N-Butylbenzene	3.83209	3.35857	3.35857	0.010	-12.35678	50.00000	Averaged
94 sec-Butylbenzene	4.34063	3.80172	3.80172	0.010	-12.41554	50.00000	Averaged
95 1,2-Dichlorobenzene	1.80064	1.58955	1.58955	0.010	-11.72278	50.00000	Averaged
96 1,2-Dibromo-3-Chloropropane	0.35726	0.32603	0.32603	0.010	-8.74155	50.00000	Averaged
98 Hexachlorobutadiene	0.62006	0.52013	0.52013	0.010	-16.11633	50.00000	Averaged
99 1,2,4-Trichlorobenzene	1.11691	0.97720	0.97720	0.010	-12.50929	50.00000	Averaged
101 Naphthalene	3.07254	2.91052	2.91052	0.010	-5.27317	50.00000	Averaged
102 1,2,3-Trichlorobenzene	1.08947	0.97848	0.97848	0.010	-10.18790	50.00000	Averaged
37 Dibromofluoromethane	0.57846	0.61239	0.61239	0.010	5.86607	50.00000	Averaged
45 1,2-Dichloroethane-D4	0.93642	1.02300	1.02300	0.010	9.24494	50.00000	Averaged
55 Toluene-D8	1.28305	1.31299	1.31299	0.010	2.33328	50.00000	Averaged
76 P-Bromofluorobenzene	0.59121	0.62046	0.62046	0.010	4.94699	50.00000	Averaged

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG225463-5
Lab File ID : W3381.D
Initial Calibration Date(s): 03/26/18 10:13 03/26/18 13:19

SDG: SL2079
Analytical Date: 03/27/18 19:08
Instrument ID: GCMS-W
Column ID:

*** = Compound out of QC criteria**

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Form 8
Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition I
Lab ID : WG225400-4
Lab File ID : W3342.D

SDG: SL2079
Analytical Date: 03/26/18 10:13
Instrument ID: GCMS-W

		1,4-DICHLOROBENZENE-D4			
		Area	#	RT	#
	Std .	187501		16.42	
	Upper Limit	375002		16.59	
	Lower Limit	93750.5		16.25	
Client Sample ID	Lab Sample ID				
Laboratory Control S	WG225400-8	237835		16.42	
Method Blank Sample	WG225400-9	190927		16.42	
CHAAP-BKRD-SS08	SL2079-7	129275		16.42	
CHAAP-BKRD-SS09	SL2079-8	145372		16.43	
CHAAP-BKRD-SS11	SL2079-10	126120		16.42	
CHAAP-BKRD-SS12	SL2079-11	95988		16.42	
CHAAP-BKRD-SS13	SL2079-12	100514		16.42	
CHAAP-BKRD-SS109	SL2079-13	135409		16.42	
CHAAP-BKRD-SS10	SL2079-9	99294		16.42	
Matrix Spike	WG225400-12	145422		16.42	
Matrix Spike Duplica	WG225400-13	156584		16.42	
Continuing Calibrati	WG225400-11	188941		16.42	
Continuing Calibrati	WG225463-4	213587		16.43	
Laboratory Control S	WG225463-1	218351		16.43	
Method Blank Sample	WG225463-2	177808		16.43	
CHAAP-BKRD-SB12	SL2079-5RA2	154517		16.43	
CHAAP-BKRD-SB13	SL2079-6RA2	139179		16.43	
Continuing Calibrati	WG225463-5	166458		16.43	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 10 seconds of internal standard RT
RT Lower Limit = - 10 seconds of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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Form 8
Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition I
Lab ID : WG225041-4
Lab File ID : P4806.D

SDG: SL2079
Analytical Date: 03/19/18 16:00
Instrument ID: GCMS-P

		PENTAFLUOROBENZENE				1,4-DIFLUOROBENZENE				CHLOROBENZENE-D5			
		Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
	Std .	586253		6.53		1018640		7.46		1086918		11.87	
	Upper Limit	1172506		6.70		2037280		7.63		2173836		12.04	
	Lower Limit	293126.5		6.37		509320		7.30		543459		11.71	
Client Sample ID	Lab Sample ID												
Continuing Calibrati	WG225300-4	462745		6.53		753459		7.46		754620		11.87	
Laboratory Control S	WG225300-1	480356		6.53		791836		7.46		786218		11.87	
Method Blank Sample	WG225300-2	392542		6.54		700536		7.47		661139		11.87	
CHAAP-BKRD-EB-03	SL2079-14	375772		6.54		659855		7.46		630798		11.87	
CHAAP-BKRD-TB-03	SL2079-15	364851		6.53		645313		7.46		609305		11.87	
Continuing Calibrati	WG225300-5	419927		6.53		691512		7.46		705055		11.87	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 10 seconds of internal standard RT
RT Lower Limit = - 10 seconds of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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Form 8
Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition I
Lab ID : WG225041-4
Lab File ID : P4806.D

SDG: SL2079
Analytical Date: 03/19/18 16:00
Instrument ID: GCMS-P

		1,4-DICHLOROBENZENE-D4			
		Area	#	RT	#
	Std .	590652		14.83	
	Upper Limit	1181304		14.99	
	Lower Limit	295326		14.66	
Client Sample ID	Lab Sample ID				
Continuing Calibrati	WG225300-4	399864		14.82	
Laboratory Control S	WG225300-1	422216		14.83	
Method Blank Sample	WG225300-2	331920		14.83	
CHAAP-BKRD-EB-03	SL2079-14	321309		14.83	
CHAAP-BKRD-TB-03	SL2079-15	314551		14.83	
Continuing Calibrati	WG225300-5	379256		14.83	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 10 seconds of internal standard RT
RT Lower Limit = - 10 seconds of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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Form 8
Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition I
Lab ID : WG225302-4
Lab File ID : W3295.D

SDG: SL2079
Analytical Date: 03/23/18 09:41
Instrument ID: GCMS-W

		PENTAFLUOROBENZENE		1,4-DIFLUOROBENZENE		CHLOROBENZENE-D5	
		Area #	RT #	Area #	RT #	Area #	RT #
	Std .	309236	8.08	534601	8.95	527322	13.39
	Upper Limit	618472	8.24	1069202	9.11	1054644	13.55
	Lower Limit	154618	7.91	267300.5	8.78	263661	13.22
Client Sample ID	Lab Sample ID						
Continuing Calibrati	WG225350-4	248991	8.09	446332	8.96	437949	13.40
Laboratory Control S	WG225350-1	268733	8.09	474956	8.96	458495	13.40
Method Blank Sample	WG225350-2	210205	8.10	388627	8.96	377122	13.40
CHAAP-BKRD-SB08	SL2079-1RA	208958	8.09	394862	8.96	381800	13.40
CHAAP-BKRD-SB09	SL2079-2RA	190389	8.09	366739	8.96	352639	13.40
CHAAP-BKRD-SB10	SL2079-3RA	180427	8.09	347622	8.96	337191	13.40
CHAAP-BKRD-SB11	SL2079-4RA	162907	8.09	319523	8.97	308664	13.40
Continuing Calibrati	WG225350-5	162127	8.09	293094	8.96	294995	13.40
Continuing Calibrati	WG225350-6	192935	8.08	340416	8.95	334581	13.40
Continuing Calibrati	WG225350-7	201532	8.09	363859	8.96	359046	13.40

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 10 seconds of internal standard RT
RT Lower Limit = - 10 seconds of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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Form 8
Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition I
Lab ID : WG225302-4
Lab File ID : W3295.D

SDG: SL2079
Analytical Date: 03/23/18 09:41
Instrument ID: GCMS-W

		1,4-DICHLOROBENZENE-D4			
		Area	#	RT	#
	Std .	324387		16.44	
	Upper Limit	648774		16.61	
	Lower Limit	162193.5		16.27	
Client Sample ID	Lab Sample ID				
Continuing Calibrati	WG225350-4	271993		16.46	
Laboratory Control S	WG225350-1	285275		16.46	
Method Blank Sample	WG225350-2	224500		16.46	
CHAAP-BKRD-SB08	SL2079-1RA	220446		16.45	
CHAAP-BKRD-SB09	SL2079-2RA	208751		16.45	
CHAAP-BKRD-SB10	SL2079-3RA	195422		16.45	
CHAAP-BKRD-SB11	SL2079-4RA	182755		16.45	
Continuing Calibrati	WG225350-5	185331		16.45	
Continuing Calibrati	WG225350-6	213852		16.45	
Continuing Calibrati	WG225350-7	228816		16.45	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 10 seconds of internal standard RT
RT Lower Limit = - 10 seconds of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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Form 8
Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition I
Lab ID : WG225400-4
Lab File ID : W3342.D

SDG: SL2079
Analytical Date: 03/26/18 10:13
Instrument ID: GCMS-W

		PENTAFLUOROBENZENE			1,4-DIFLUOROBENZENE			CHLOROBENZENE-D5		
		Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
	Std .	181807		8.03		319414		8.91		304550		13.36	
	Upper Limit	363614		8.20		638828		9.07		609100		13.53	
	Lower Limit	90903.5		7.87		159707		8.74		152275		13.19	
Client Sample ID	Lab Sample ID												
Laboratory Control S	WG225400-8	248041		8.04		430697		8.91		394760		13.36	
Method Blank Sample	WG225400-9	203581		8.04		366514		8.91		338466		13.36	
CHAAP-BKRD-SS08	SL2079-7	178658		8.04		332514		8.91		292125		13.36	
CHAAP-BKRD-SS09	SL2079-8	169330		8.04		311053		8.91		279078		13.36	
CHAAP-BKRD-SS11	SL2079-10	171549		8.04		305314		8.91		260135		13.36	
CHAAP-BKRD-SS12	SL2079-11	135975		8.04		256852		8.91		224973		13.36	
CHAAP-BKRD-SS13	SL2079-12	145604		8.04		277901		8.91		238062		13.36	
CHAAP-BKRD-SS109	SL2079-13	138497		8.04		261630		8.91		245321		13.36	
CHAAP-BKRD-SS10	SL2079-9	123466		8.04		240758		8.91		209457		13.36	
Matrix Spike	WG225400-12	148042		8.04		266415		8.92		245713		13.36	
Matrix Spike Duplica	WG225400-13	166049		8.04		299168		8.91		270452		13.37	
Continuing Calibrati	WG225400-11	186663		8.04		335641		8.91		312752		13.36	
Continuing Calibrati	WG225463-4	216568		8.05		382180		8.92		350719		13.37	
Laboratory Control S	WG225463-1	227925		8.05		398418		8.92		365235		13.37	
Method Blank Sample	WG225463-2	187638		8.05		344800		8.92		315582		13.37	
CHAAP-BKRD-SB12	SL2079-5RA2	158763		8.06		302805		8.93		274714		13.38	
CHAAP-BKRD-SB13	SL2079-6RA2	143766		8.05		269757		8.93		253110		13.37	
Continuing Calibrati	WG225463-5	163116		8.06		292732		8.93		278583		13.38	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 10 seconds of internal standard RT
RT Lower Limit = - 10 seconds of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-1
Client ID: CHAAP-BKRD-SB08
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: N8031.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: DP
Extraction Method: SW846 3550C
Lab Prep Batch: WG225021

Analysis Date: 20-MAR-18
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: SL
% Solids: 81.
Report Date: 26-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	12	ug/Kgdrywt	1	20	24.	3.2	12.
2-Methylnaphthalene	U	12	ug/Kgdrywt	1	20	24.	2.7	12.
Acenaphthylene	U	12	ug/Kgdrywt	1	20	24.	1.5	12.
Acenaphthene	U	12	ug/Kgdrywt	1	20	24.	1.8	12.
Fluorene	U	12	ug/Kgdrywt	1	20	24.	3.9	12.
Phenanthrene	U	12	ug/Kgdrywt	1	20	24.	2.2	12.
Anthracene	U	12	ug/Kgdrywt	1	20	24.	1.5	12.
Fluoranthene	J	2.4	ug/Kgdrywt	1	20	24.	2.2	12.
Pyrene	U	12	ug/Kgdrywt	1	20	24.	2.6	12.
Benzo(a)anthracene	U	12	ug/Kgdrywt	1	20	24.	2.3	12.
Chrysene	U	12	ug/Kgdrywt	1	20	24.	2.1	12.
Benzo(b)Fluoranthene	U	12	ug/Kgdrywt	1	20	24.	3.0	12.
Benzo(k)fluoranthene	U	12	ug/Kgdrywt	1	20	24.	3.8	12.
Benzo(a)pyrene	U	12	ug/Kgdrywt	1	20	24.	4.0	12.
Indeno(1,2,3-cd)pyrene	U	12	ug/Kgdrywt	1	20	24.	2.3	12.
Dibenzo(a,h)anthracene	U	12	ug/Kgdrywt	1	20	24.	2.2	12.
Benzo(g,h,i)perylene	U	12	ug/Kgdrywt	1	20	24.	2.4	12.
2-Methylnaphthalene-D10		52.0	%					
Fluorene-D10		57.5	%					
Pyrene-D10		70.5	%					

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-2
Client ID: CHAAP-BKRD-SB09
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: N8032.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: DP
Extraction Method: SW846 3550C
Lab Prep Batch: WG225021

Analysis Date: 20-MAR-18
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: SL
% Solids: 86.
Report Date: 26-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	11	ug/Kgdrywt	1	20	22.	2.9	11.
2-Methylnaphthalene	U	11	ug/Kgdrywt	1	20	22.	2.4	11.
Acenaphthylene	U	11	ug/Kgdrywt	1	20	22.	1.3	11.
Acenaphthene	U	11	ug/Kgdrywt	1	20	22.	1.7	11.
Fluorene	U	11	ug/Kgdrywt	1	20	22.	3.6	11.
Phenanthrene	U	11	ug/Kgdrywt	1	20	22.	2.0	11.
Anthracene	U	11	ug/Kgdrywt	1	20	22.	1.3	11.
Fluoranthene	J	2.2	ug/Kgdrywt	1	20	22.	2.0	11.
Pyrene	U	11	ug/Kgdrywt	1	20	22.	2.3	11.
Benzo(a)anthracene	U	11	ug/Kgdrywt	1	20	22.	2.1	11.
Chrysene	U	11	ug/Kgdrywt	1	20	22.	1.9	11.
Benzo(b)Fluoranthene	U	11	ug/Kgdrywt	1	20	22.	2.7	11.
Benzo(k)fluoranthene	U	11	ug/Kgdrywt	1	20	22.	3.4	11.
Benzo(a)pyrene	U	11	ug/Kgdrywt	1	20	22.	3.7	11.
Indeno(1,2,3-cd)pyrene	U	11	ug/Kgdrywt	1	20	22.	2.1	11.
Dibenzo(a,h)anthracene	U	11	ug/Kgdrywt	1	20	22.	2.0	11.
Benzo(g,h,i)perylene	U	11	ug/Kgdrywt	1	20	22.	2.2	11.
2-Methylnaphthalene-D10		38.0	%					
Fluorene-D10		48.8	%					
Pyrene-D10		58.0	%					

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-3
Client ID: CHAAP-BKRD-SB10
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: N8033.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: DP
Extraction Method: SW846 3550C
Lab Prep Batch: WG225021

Analysis Date: 20-MAR-18
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: SL
% Solids: 84.
Report Date: 26-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	12	ug/Kgdrywt	1	20	23.	3.0	12.
2-Methylnaphthalene	U	12	ug/Kgdrywt	1	20	23.	2.6	12.
Acenaphthylene	U	12	ug/Kgdrywt	1	20	23.	1.4	12.
Acenaphthene	U	12	ug/Kgdrywt	1	20	23.	1.7	12.
Fluorene	U	12	ug/Kgdrywt	1	20	23.	3.7	12.
Phenanthrene	U	12	ug/Kgdrywt	1	20	23.	2.1	12.
Anthracene	U	12	ug/Kgdrywt	1	20	23.	1.4	12.
Fluoranthene	J	2.9	ug/Kgdrywt	1	20	23.	2.1	12.
Pyrene	U	12	ug/Kgdrywt	1	20	23.	2.4	12.
Benzo(a)anthracene	U	12	ug/Kgdrywt	1	20	23.	2.2	12.
Chrysene	U	12	ug/Kgdrywt	1	20	23.	2.0	12.
Benzo(b)Fluoranthene	U	12	ug/Kgdrywt	1	20	23.	2.8	12.
Benzo(k)fluoranthene	U	12	ug/Kgdrywt	1	20	23.	3.6	12.
Benzo(a)pyrene	U	12	ug/Kgdrywt	1	20	23.	3.8	12.
Indeno(1,2,3-cd)pyrene	U	12	ug/Kgdrywt	1	20	23.	2.2	12.
Dibenzo(a,h)anthracene	U	12	ug/Kgdrywt	1	20	23.	2.1	12.
Benzo(g,h,i)perylene	U	12	ug/Kgdrywt	1	20	23.	2.3	12.
2-Methylnaphthalene-D10		44.2	%					
Fluorene-D10		53.5	%					
Pyrene-D10		61.5	%					

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-4
Client ID: CHAAP-BKRD-SB11
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: N8034.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: DP
Extraction Method: SW846 3550C
Lab Prep Batch: WG225021

Analysis Date: 20-MAR-18
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: SL
% Solids: 80.
Report Date: 26-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	12	ug/Kgdrywt	1	20	25.	3.2	12.
2-Methylnaphthalene	U	12	ug/Kgdrywt	1	20	25.	2.8	12.
Acenaphthylene	U	12	ug/Kgdrywt	1	20	25.	1.5	12.
Acenaphthene	U	12	ug/Kgdrywt	1	20	25.	1.9	12.
Fluorene	U	12	ug/Kgdrywt	1	20	25.	4.0	12.
Phenanthrene	U	12	ug/Kgdrywt	1	20	25.	2.2	12.
Anthracene	U	12	ug/Kgdrywt	1	20	25.	1.5	12.
Fluoranthene	U	12	ug/Kgdrywt	1	20	25.	2.2	12.
Pyrene	U	12	ug/Kgdrywt	1	20	25.	2.6	12.
Benzo(a)anthracene	U	12	ug/Kgdrywt	1	20	25.	2.4	12.
Chrysene	U	12	ug/Kgdrywt	1	20	25.	2.1	12.
Benzo(b)Fluoranthene	U	12	ug/Kgdrywt	1	20	25.	3.0	12.
Benzo(k)fluoranthene	U	12	ug/Kgdrywt	1	20	25.	3.9	12.
Benzo(a)pyrene	U	12	ug/Kgdrywt	1	20	25.	4.1	12.
Indeno(1,2,3-cd)pyrene	U	12	ug/Kgdrywt	1	20	25.	2.4	12.
Dibenzo(a,h)anthracene	U	12	ug/Kgdrywt	1	20	25.	2.2	12.
Benzo(g,h,i)perylene	U	12	ug/Kgdrywt	1	20	25.	2.5	12.
2-Methylnaphthalene-D10		40.2	%					
Fluorene-D10		49.8	%					
Pyrene-D10		55.0	%					

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-5
Client ID: CHAAP-BKRD-SB12
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: N8035.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: DP
Extraction Method: SW846 3550C
Lab Prep Batch: WG225021

Analysis Date: 20-MAR-18
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: SL
% Solids: 83.
Report Date: 26-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	12	ug/Kgdrywt	1	20	23.	3.0	12.
2-Methylnaphthalene	U	12	ug/Kgdrywt	1	20	23.	2.6	12.
Acenaphthylene	U	12	ug/Kgdrywt	1	20	23.	1.4	12.
Acenaphthene	U	12	ug/Kgdrywt	1	20	23.	1.7	12.
Fluorene	U	12	ug/Kgdrywt	1	20	23.	3.7	12.
Phenanthrene	J	3.0	ug/Kgdrywt	1	20	23.	2.1	12.
Anthracene	U	12	ug/Kgdrywt	1	20	23.	1.4	12.
Fluoranthene	J	3.2	ug/Kgdrywt	1	20	23.	2.1	12.
Pyrene	J	4.0	ug/Kgdrywt	1	20	23.	2.4	12.
Benzo(a)anthracene	J	2.8	ug/Kgdrywt	1	20	23.	2.2	12.
Chrysene	U	12	ug/Kgdrywt	1	20	23.	2.0	12.
Benzo(b)Fluoranthene	U	12	ug/Kgdrywt	1	20	23.	2.8	12.
Benzo(k)fluoranthene	U	12	ug/Kgdrywt	1	20	23.	3.6	12.
Benzo(a)pyrene	U	12	ug/Kgdrywt	1	20	23.	3.8	12.
Indeno(1,2,3-cd)pyrene	U	12	ug/Kgdrywt	1	20	23.	2.2	12.
Dibenzo(a,h)anthracene	U	12	ug/Kgdrywt	1	20	23.	2.1	12.
Benzo(g,h,i)perylene	U	12	ug/Kgdrywt	1	20	23.	2.3	12.
2-Methylnaphthalene-D10		40.2	%					
Fluorene-D10		43.8	%					
Pyrene-D10		54.0	%					

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-6
Client ID: CHAAP-BKRD-SB13
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: N8036.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: DP
Extraction Method: SW846 3550C
Lab Prep Batch: WG225021

Analysis Date: 20-MAR-18
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: SL
% Solids: 80.
Report Date: 26-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	12	ug/Kgdrywt	1	20	25.	3.2	12.
2-Methylnaphthalene	U	12	ug/Kgdrywt	1	20	25.	2.7	12.
Acenaphthylene	U	12	ug/Kgdrywt	1	20	25.	1.5	12.
Acenaphthene	U	12	ug/Kgdrywt	1	20	25.	1.8	12.
Fluorene	U	12	ug/Kgdrywt	1	20	25.	3.9	12.
Phenanthrene	U	12	ug/Kgdrywt	1	20	25.	2.2	12.
Anthracene	U	12	ug/Kgdrywt	1	20	25.	1.5	12.
Fluoranthene	U	12	ug/Kgdrywt	1	20	25.	2.2	12.
Pyrene	U	12	ug/Kgdrywt	1	20	25.	2.6	12.
Benzo(a)anthracene	U	12	ug/Kgdrywt	1	20	25.	2.3	12.
Chrysene	U	12	ug/Kgdrywt	1	20	25.	2.1	12.
Benzo(b)Fluoranthene	U	12	ug/Kgdrywt	1	20	25.	3.0	12.
Benzo(k)fluoranthene	U	12	ug/Kgdrywt	1	20	25.	3.8	12.
Benzo(a)pyrene	U	12	ug/Kgdrywt	1	20	25.	4.1	12.
Indeno(1,2,3-cd)pyrene	U	12	ug/Kgdrywt	1	20	25.	2.3	12.
Dibenzo(a,h)anthracene	U	12	ug/Kgdrywt	1	20	25.	2.2	12.
Benzo(g,h,i)perylene	U	12	ug/Kgdrywt	1	20	25.	2.5	12.
2-Methylnaphthalene-D10		45.2	%					
Fluorene-D10		53.5	%					
Pyrene-D10		63.0	%					

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-7
Client ID: CHAAP-BKRD-SS08
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: N8037.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: DP
Extraction Method: SW846 3550C
Lab Prep Batch: WG225021

Analysis Date: 20-MAR-18
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: SL
% Solids: 79.
Report Date: 26-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	12	ug/Kgdrywt	1	20	25.	3.2	12.
2-Methylnaphthalene	U	12	ug/Kgdrywt	1	20	25.	2.7	12.
Acenaphthylene	U	12	ug/Kgdrywt	1	20	25.	1.5	12.
Acenaphthene	U	12	ug/Kgdrywt	1	20	25.	1.9	12.
Fluorene	U	12	ug/Kgdrywt	1	20	25.	4.0	12.
Phenanthrene	U	12	ug/Kgdrywt	1	20	25.	2.2	12.
Anthracene	U	12	ug/Kgdrywt	1	20	25.	1.5	12.
Fluoranthene	J	2.5	ug/Kgdrywt	1	20	25.	2.2	12.
Pyrene	J	2.8	ug/Kgdrywt	1	20	25.	2.6	12.
Benzo(a)anthracene	U	12	ug/Kgdrywt	1	20	25.	2.4	12.
Chrysene	U	12	ug/Kgdrywt	1	20	25.	2.1	12.
Benzo(b)Fluoranthene	U	12	ug/Kgdrywt	1	20	25.	3.0	12.
Benzo(k)fluoranthene	U	12	ug/Kgdrywt	1	20	25.	3.8	12.
Benzo(a)pyrene	U	12	ug/Kgdrywt	1	20	25.	4.1	12.
Indeno(1,2,3-cd)pyrene	U	12	ug/Kgdrywt	1	20	25.	2.4	12.
Dibenzo(a,h)anthracene	U	12	ug/Kgdrywt	1	20	25.	2.2	12.
Benzo(g,h,i)perylene	U	12	ug/Kgdrywt	1	20	25.	2.5	12.
2-Methylnaphthalene-D10		49.7	%					
Fluorene-D10		51.5	%					
Pyrene-D10		45.5	%					

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-8
Client ID: CHAAP-BKRD-SS09
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: N8038.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: DP
Extraction Method: SW846 3550C
Lab Prep Batch: WG225021

Analysis Date: 20-MAR-18
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: SL
% Solids: 83.
Report Date: 26-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	12	ug/Kgdrywt	1	20	24.	3.1	12.
2-Methylnaphthalene	U	12	ug/Kgdrywt	1	20	24.	2.6	12.
Acenaphthylene	U	12	ug/Kgdrywt	1	20	24.	1.4	12.
Acenaphthene	U	12	ug/Kgdrywt	1	20	24.	1.8	12.
Fluorene	U	12	ug/Kgdrywt	1	20	24.	3.8	12.
Phenanthrene	U	12	ug/Kgdrywt	1	20	24.	2.1	12.
Anthracene	U	12	ug/Kgdrywt	1	20	24.	1.4	12.
Fluoranthene	J	2.2	ug/Kgdrywt	1	20	24.	2.1	12.
Pyrene	U	12	ug/Kgdrywt	1	20	24.	2.5	12.
Benzo(a)anthracene	U	12	ug/Kgdrywt	1	20	24.	2.2	12.
Chrysene	U	12	ug/Kgdrywt	1	20	24.	2.0	12.
Benzo(b)Fluoranthene	U	12	ug/Kgdrywt	1	20	24.	2.8	12.
Benzo(k)fluoranthene	U	12	ug/Kgdrywt	1	20	24.	3.7	12.
Benzo(a)pyrene	U	12	ug/Kgdrywt	1	20	24.	3.9	12.
Indeno(1,2,3-cd)pyrene	U	12	ug/Kgdrywt	1	20	24.	2.2	12.
Dibenzo(a,h)anthracene	U	12	ug/Kgdrywt	1	20	24.	2.1	12.
Benzo(g,h,i)perylene	U	12	ug/Kgdrywt	1	20	24.	2.4	12.
2-Methylnaphthalene-D10		58.0	%					
Fluorene-D10		54.0	%					
Pyrene-D10		36.2	%					

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-9
Client ID: CHAAP-BKRD-SS10
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: N8039.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: DP
Extraction Method: SW846 3550C
Lab Prep Batch: WG225021

Analysis Date: 20-MAR-18
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: SL
% Solids: 75.
Report Date: 26-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	13	ug/Kgdrywt	1	20	26.	3.4	13.
2-Methylnaphthalene	U	13	ug/Kgdrywt	1	20	26.	2.9	13.
Acenaphthylene	U	13	ug/Kgdrywt	1	20	26.	1.6	13.
Acenaphthene	U	13	ug/Kgdrywt	1	20	26.	2.0	13.
Fluorene	U	13	ug/Kgdrywt	1	20	26.	4.2	13.
Phenanthrene	J	3.4	ug/Kgdrywt	1	20	26.	2.4	13.
Anthracene	U	13	ug/Kgdrywt	1	20	26.	1.6	13.
Fluoranthene	J	4.0	ug/Kgdrywt	1	20	26.	2.4	13.
Pyrene	J	3.4	ug/Kgdrywt	1	20	26.	2.8	13.
Benzo(a)anthracene	U	13	ug/Kgdrywt	1	20	26.	2.5	13.
Chrysene	UMM	13	ug/Kgdrywt	1	20	26.	2.2	13.
Benzo(b)Fluoranthene	U	13	ug/Kgdrywt	1	20	26.	3.2	13.
Benzo(k)fluoranthene	UMM	13	ug/Kgdrywt	1	20	26.	4.1	13.
Benzo(a)pyrene	UMM	13	ug/Kgdrywt	1	20	26.	4.4	13.
Indeno(1,2,3-cd)pyrene	UMM	13	ug/Kgdrywt	1	20	26.	2.5	13.
Dibenzo(a,h)anthracene	UMM	13	ug/Kgdrywt	1	20	26.	2.4	13.
Benzo(g,h,i)perylene	UMM	13	ug/Kgdrywt	1	20	26.	2.6	13.
2-Methylnaphthalene-D10		44.5	%					
Fluorene-D10		46.3	%					
Pyrene-D10		37.8	%					

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-10
Client ID: CHAAP-BKRD-SS11
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: N8060.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: DP
Extraction Method: SW846 3550C
Lab Prep Batch: WG225021

Analysis Date: 21-MAR-18
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: SL
% Solids: 81.
Report Date: 26-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	12	ug/Kgdrywt	1	20	24.	3.1	12.
2-Methylnaphthalene	U	12	ug/Kgdrywt	1	20	24.	2.6	12.
Acenaphthylene	U	12	ug/Kgdrywt	1	20	24.	1.4	12.
Acenaphthene	U	12	ug/Kgdrywt	1	20	24.	1.8	12.
Fluorene	U	12	ug/Kgdrywt	1	20	24.	3.8	12.
Phenanthrene	J	4.8	ug/Kgdrywt	1	20	24.	2.2	12.
Anthracene	U	12	ug/Kgdrywt	1	20	24.	1.4	12.
Fluoranthene	J	6.4	ug/Kgdrywt	1	20	24.	2.2	12.
Pyrene	J	7.0	ug/Kgdrywt	1	20	24.	2.5	12.
Benzo(a)anthracene	J	3.7	ug/Kgdrywt	1	20	24.	2.3	12.
Chrysene	U	12	ug/Kgdrywt	1	20	24.	2.0	12.
Benzo(b)Fluoranthene	J	4.8	ug/Kgdrywt	1	20	24.	2.9	12.
Benzo(k)fluoranthene	U	12	ug/Kgdrywt	1	20	24.	3.7	12.
Benzo(a)pyrene	U	12	ug/Kgdrywt	1	20	24.	4.0	12.
Indeno(1,2,3-cd)pyrene	J	2.5	ug/Kgdrywt	1	20	24.	2.3	12.
Dibenzo(a,h)anthracene	U	12	ug/Kgdrywt	1	20	24.	2.2	12.
Benzo(g,h,i)perylene	J	2.9	ug/Kgdrywt	1	20	24.	2.4	12.
2-Methylnaphthalene-D10		55.0	%					
Fluorene-D10		52.5	%					
Pyrene-D10		44.4	%					

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Client: ATI, Inc.
Lab ID: SL2079-11
Client ID: CHAAP-BKRD-SS12
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: N8061.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: DP
Extraction Method: SW846 3550C
Lab Prep Batch: WG225021

Analysis Date: 21-MAR-18
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: SL
% Solids: 78.
Report Date: 26-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	13	ug/Kgdrywt	1	20	25.	3.3	13.
2-Methylnaphthalene	U	13	ug/Kgdrywt	1	20	25.	2.8	13.
Acenaphthylene	U	13	ug/Kgdrywt	1	20	25.	1.5	13.
Acenaphthene	U	13	ug/Kgdrywt	1	20	25.	1.9	13.
Fluorene	U	13	ug/Kgdrywt	1	20	25.	4.1	13.
Phenanthrene	U	13	ug/Kgdrywt	1	20	25.	2.3	13.
Anthracene	U	13	ug/Kgdrywt	1	20	25.	1.5	13.
Fluoranthene	J	2.3	ug/Kgdrywt	1	20	25.	2.3	13.
Pyrene	U	13	ug/Kgdrywt	1	20	25.	2.7	13.
Benzo(a)anthracene	U	13	ug/Kgdrywt	1	20	25.	2.4	13.
Chrysene	U	13	ug/Kgdrywt	1	20	25.	2.2	13.
Benzo(b)Fluoranthene	U	13	ug/Kgdrywt	1	20	25.	3.0	13.
Benzo(k)fluoranthene	U	13	ug/Kgdrywt	1	20	25.	3.9	13.
Benzo(a)pyrene	U	13	ug/Kgdrywt	1	20	25.	4.2	13.
Indeno(1,2,3-cd)pyrene	U	13	ug/Kgdrywt	1	20	25.	2.4	13.
Dibenzo(a,h)anthracene	U	13	ug/Kgdrywt	1	20	25.	2.3	13.
Benzo(g,h,i)perylene	U	13	ug/Kgdrywt	1	20	25.	2.5	13.
2-Methylnaphthalene-D10		46.4	%					
Fluorene-D10		47.8	%					
Pyrene-D10		44.8	%					

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-12
Client ID: CHAAP-BKRD-SS13
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: N8062.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: DP
Extraction Method: SW846 3550C
Lab Prep Batch: WG225021

Analysis Date: 21-MAR-18
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: SL
% Solids: 78.
Report Date: 26-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	12	ug/Kgdrywt	1	20	24.	3.2	12.
2-Methylnaphthalene	U	12	ug/Kgdrywt	1	20	24.	2.7	12.
Acenaphthylene	U	12	ug/Kgdrywt	1	20	24.	1.4	12.
Acenaphthene	U	12	ug/Kgdrywt	1	20	24.	1.8	12.
Fluorene	U	12	ug/Kgdrywt	1	20	24.	3.9	12.
Phenanthrene	U	12	ug/Kgdrywt	1	20	24.	2.2	12.
Anthracene	U	12	ug/Kgdrywt	1	20	24.	1.4	12.
Fluoranthene	J	2.4	ug/Kgdrywt	1	20	24.	2.2	12.
Pyrene	U	12	ug/Kgdrywt	1	20	24.	2.5	12.
Benzo(a)anthracene	U	12	ug/Kgdrywt	1	20	24.	2.3	12.
Chrysene	U	12	ug/Kgdrywt	1	20	24.	2.1	12.
Benzo(b)Fluoranthene	U	12	ug/Kgdrywt	1	20	24.	2.9	12.
Benzo(k)fluoranthene	U	12	ug/Kgdrywt	1	20	24.	3.8	12.
Benzo(a)pyrene	U	12	ug/Kgdrywt	1	20	24.	4.0	12.
Indeno(1,2,3-cd)pyrene	U	12	ug/Kgdrywt	1	20	24.	2.3	12.
Dibenzo(a,h)anthracene	U	12	ug/Kgdrywt	1	20	24.	2.2	12.
Benzo(g,h,i)perylene	U	12	ug/Kgdrywt	1	20	24.	2.4	12.
2-Methylnaphthalene-D10		48.1	%					
Fluorene-D10		48.2	%					
Pyrene-D10		48.6	%					

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-13
Client ID: CHAAP-BKRD-SS109
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: N8063.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: DP
Extraction Method: SW846 3550C
Lab Prep Batch: WG225021

Analysis Date: 21-MAR-18
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: SL
% Solids: 83.
Report Date: 26-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	12	ug/Kgdrywt	1	20	24.	3.1	12.
2-Methylnaphthalene	U	12	ug/Kgdrywt	1	20	24.	2.6	12.
Acenaphthylene	U	12	ug/Kgdrywt	1	20	24.	1.4	12.
Acenaphthene	U	12	ug/Kgdrywt	1	20	24.	1.8	12.
Fluorene	U	12	ug/Kgdrywt	1	20	24.	3.8	12.
Phenanthrene	U	12	ug/Kgdrywt	1	20	24.	2.2	12.
Anthracene	U	12	ug/Kgdrywt	1	20	24.	1.4	12.
Fluoranthene	U	12	ug/Kgdrywt	1	20	24.	2.2	12.
Pyrene	U	12	ug/Kgdrywt	1	20	24.	2.5	12.
Benzo(a)anthracene	U	12	ug/Kgdrywt	1	20	24.	2.3	12.
Chrysene	U	12	ug/Kgdrywt	1	20	24.	2.0	12.
Benzo(b)Fluoranthene	U	12	ug/Kgdrywt	1	20	24.	2.9	12.
Benzo(k)fluoranthene	U	12	ug/Kgdrywt	1	20	24.	3.7	12.
Benzo(a)pyrene	U	12	ug/Kgdrywt	1	20	24.	4.0	12.
Indeno(1,2,3-cd)pyrene	U	12	ug/Kgdrywt	1	20	24.	2.3	12.
Dibenzo(a,h)anthracene	U	12	ug/Kgdrywt	1	20	24.	2.2	12.
Benzo(g,h,i)perylene	U	12	ug/Kgdrywt	1	20	24.	2.4	12.
2-Methylnaphthalene-D10		56.5	%					
Fluorene-D10		52.5	%					
Pyrene-D10		37.2	%					

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-14
Client ID: CHAAP-BKRD-EB-031418
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: N8027.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: KF
Extraction Method: SW846 3510C
Lab Prep Batch: WG225023

Analysis Date: 20-MAR-18
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: AQ
% Solids: NA
Report Date: 26-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	0.097	ug/L	1	.2	0.19	0.062	0.097
2-Methylnaphthalene	U	0.097	ug/L	1	.2	0.19	0.075	0.097
Acenaphthylene	U	0.097	ug/L	1	.2	0.19	0.052	0.097
Acenaphthene	U	0.097	ug/L	1	.2	0.19	0.062	0.097
Fluorene	U	0.097	ug/L	1	.2	0.19	0.059	0.097
Phenanthrene	U	0.097	ug/L	1	.2	0.19	0.050	0.097
Anthracene	U	0.097	ug/L	1	.2	0.19	0.043	0.097
Fluoranthene	U	0.097	ug/L	1	.2	0.19	0.071	0.097
Pyrene	U	0.097	ug/L	1	.2	0.19	0.057	0.097
Benzo(a)anthracene	U	0.097	ug/L	1	.2	0.19	0.045	0.097
Chrysene	U	0.097	ug/L	1	.2	0.19	0.035	0.097
Benzo(b)Fluoranthene	U	0.097	ug/L	1	.2	0.19	0.086	0.097
Benzo(k)fluoranthene	U	0.097	ug/L	1	.2	0.19	0.048	0.097
Benzo(a)pyrene	U	0.097	ug/L	1	.2	0.19	0.064	0.097
Indeno(1,2,3-cd)pyrene	U	0.097	ug/L	1	.2	0.19	0.050	0.097
Dibenzo(a,h)anthracene	U	0.097	ug/L	1	.2	0.19	0.068	0.097
Benzo(g,h,i)perylene	U	0.097	ug/L	1	.2	0.19	0.063	0.097
2-Methylnaphthalene-D10		75.6	%					
Fluorene-D10		70.0	%					
Pyrene-D10		78.1	%					

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Report of Analytical Results

Client:
Lab ID: WG225023-1
Client ID: Method Blank Sample
Project:
SDG: SL2079
Lab File ID: N8025.D

Sample Date:
Received Date:
Extract Date: 19-MAR-18
Extracted By: KF
Extraction Method: SW846 3510C
Lab Prep Batch: WG225023

Analysis Date: 20-MAR-18
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: AQ
% Solids: NA
Report Date: 26-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	0.10	ug/L	1	.2	0.20	0.064	0.10
2-Methylnaphthalene	U	0.10	ug/L	1	.2	0.20	0.077	0.10
Acenaphthylene	U	0.10	ug/L	1	.2	0.20	0.054	0.10
Acenaphthene	U	0.10	ug/L	1	.2	0.20	0.064	0.10
Fluorene	U	0.10	ug/L	1	.2	0.20	0.061	0.10
Phenanthrene	U	0.10	ug/L	1	.2	0.20	0.051	0.10
Anthracene	U	0.10	ug/L	1	.2	0.20	0.044	0.10
Fluoranthene	U	0.10	ug/L	1	.2	0.20	0.073	0.10
Pyrene	J	0.091	ug/L	1	.2	0.20	0.059	0.10
Benzo(a)anthracene	J	0.069	ug/L	1	.2	0.20	0.046	0.10
Chrysene	U	0.10	ug/L	1	.2	0.20	0.036	0.10
Benzo(b)Fluoranthene	U	0.10	ug/L	1	.2	0.20	0.089	0.10
Benzo(k)fluoranthene	U	0.10	ug/L	1	.2	0.20	0.049	0.10
Benzo(a)pyrene	U	0.10	ug/L	1	.2	0.20	0.066	0.10
Indeno(1,2,3-cd)pyrene	U	0.10	ug/L	1	.2	0.20	0.052	0.10
Dibenzo(a,h)anthracene	U	0.10	ug/L	1	.2	0.20	0.070	0.10
Benzo(g,h,i)perylene	U	0.10	ug/L	1	.2	0.20	0.065	0.10
2-Methylnaphthalene-D10		82.6	%					
Fluorene-D10		78.7	%					
Pyrene-D10		106.	%					

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Report of Analytical Results

Client:
Lab ID: WG225021-1
Client ID: Method Blank Sample
Project:
SDG: SL2079
Lab File ID: N8029.D

Sample Date:
Received Date:
Extract Date: 19-MAR-18
Extracted By: DP
Extraction Method: SW846 3550C
Lab Prep Batch: WG225021

Analysis Date: 20-MAR-18
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: SL
% Solids: NA
Report Date: 27-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	10	ug/Kgdrywt	1	20	20.	2.6	10.
2-Methylnaphthalene	U	10	ug/Kgdrywt	1	20	20.	2.2	10.
Acenaphthylene	U	10	ug/Kgdrywt	1	20	20.	1.2	10.
Acenaphthene	U	10	ug/Kgdrywt	1	20	20.	1.5	10.
Fluorene	U	10	ug/Kgdrywt	1	20	20.	3.2	10.
Phenanthrene	U	10	ug/Kgdrywt	1	20	20.	1.8	10.
Anthracene	U	10	ug/Kgdrywt	1	20	20.	1.2	10.
Fluoranthene	U	10	ug/Kgdrywt	1	20	20.	1.8	10.
Pyrene	U	10	ug/Kgdrywt	1	20	20.	2.1	10.
Benzo(a)anthracene	U	10	ug/Kgdrywt	1	20	20.	1.9	10.
Chrysene	U	10	ug/Kgdrywt	1	20	20.	1.7	10.
Benzo(b)Fluoranthene	U	10	ug/Kgdrywt	1	20	20.	2.4	10.
Benzo(k)fluoranthene	U	10	ug/Kgdrywt	1	20	20.	3.1	10.
Benzo(a)pyrene	U	10	ug/Kgdrywt	1	20	20.	3.3	10.
Indeno(1,2,3-cd)pyrene	U	10	ug/Kgdrywt	1	20	20.	1.9	10.
Dibenzo(a,h)anthracene	U	10	ug/Kgdrywt	1	20	20.	1.8	10.
Benzo(g,h,i)perylene	U	10	ug/Kgdrywt	1	20	20.	2.0	10.
2-Methylnaphthalene-D10		77.4	%					
Fluorene-D10		67.6	%					
Pyrene-D10		83.8	%					

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Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** Cornhusker Army Ammunition Plant **Matrix:** AQ
Lab Code: KAS **SDG:** SL2079

Client Sample ID	Lab Sample ID	Col. ID	2MN	#	FLO	#	PYR	#
CHAAP-BKRD-EB-031418	SL2079-14		75.6		70.0		78.1	
Method Blank Sample	WG225023-1		82.6		78.7		106.	
Laboratory Control S	WG225023-2		86.8		83.6		86.8	

		QC Limits
FLO	FLUORENE-D10	29-120
PYR	PYRENE-D10	53-166
2MN	2-METHYLNAPHTHALENE-D10	43-120

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

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Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** Cornhusker Army Ammunition Plant **Matrix:** SL
Lab Code: KAS **SDG:** SL2079

Client Sample ID	Lab Sample ID	Col. ID	2MN	#	FLO	#	PYR	#
CHAAP-BKRD-SB08	SL2079-1		52.0		57.5		70.5	
CHAAP-BKRD-SS11	SL2079-10		55.0		52.5		44.4	
CHAAP-BKRD-SS12	SL2079-11		46.4		47.8		44.8	
CHAAP-BKRD-SS13	SL2079-12		48.1		48.2		48.6	
CHAAP-BKRD-SS109	SL2079-13		56.5		52.5		37.2	
CHAAP-BKRD-SB09	SL2079-2		38.0		48.8		58.0	
CHAAP-BKRD-SB10	SL2079-3		44.2		53.5		61.5	
CHAAP-BKRD-SB11	SL2079-4		40.2		49.8		55.0	
CHAAP-BKRD-SB12	SL2079-5		40.2		43.8		54.0	
CHAAP-BKRD-SB13	SL2079-6		45.2		53.5		63.0	
CHAAP-BKRD-SS08	SL2079-7		49.7		51.5		45.5	
CHAAP-BKRD-SS09	SL2079-8		58.0		54.0		36.2	
CHAAP-BKRD-SS10	SL2079-9		44.5		46.3		37.8	
Method Blank Sample	WG225021-1		77.4		67.6		83.8	
Laboratory Control S	WG225021-2		91.3		66.6		66.2	
Matrix Spike	WG225021-3		82.6		62.2		57.2	
Matrix Spike Duplica	WG225021-4		80.0		60.6		55.6	

		QC Limits
2MN	2-METHYLNAPHTHALENE-D10	19-125
FLO	FLUORENE-D10	20-125
PYR	PYRENE-D10	31-128

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

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ANALYTICAL SERVICES

Cert No E87604

LCS Recovery Report

Client:
Lab ID: WG225023-2
Client ID: LCS
Project:
SDG: SL2079
LCS File ID: N8026.D

Sample Date:
Received Date:
Extract Date: 19-MAR-18
Extracted By: KF
Extraction Method: SW846 3510C
Lab Prep Batch: WG225023

Analysis Date: 20-MAR-18
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: AQ
% Solids: NA
Report Date: 26-MAR-18

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
Naphthalene	81.5	2.00	1.63	ug/L	43-120
2-Methylnaphthalene	76.0	2.00	1.52	ug/L	39-120
Acenaphthylene	79.5	2.00	1.59	ug/L	35-121
Acenaphthene	83.5	2.00	1.67	ug/L	48-120
Fluorene	86.5	2.00	1.73	ug/L	50-120
Phenanthrene	84.5	2.00	1.69	ug/L	53-120
Anthracene	80.5	2.00	1.61	ug/L	53-120
Fluoranthene	88.0	2.00	1.76	ug/L	58-120
Pyrene	90.5	2.00	1.81	ug/L	53-121
Benzo(a)anthracene	93.0	2.00	1.86	ug/L	59-120
Chrysene	85.5	2.00	1.71	ug/L	57-120
Benzo(b)Fluoranthene	102.	2.00	2.04	ug/L	53-126
Benzo(k)fluoranthene	91.0	2.00	1.82	ug/L	54-125
Benzo(a)pyrene	80.5	2.00	1.61	ug/L	53-120
Indeno(1,2,3-cd)pyrene	54.0	2.00	1.08	ug/L	48-130
Dibenzo(a,h)anthracene	65.0	2.00	1.30	ug/L	44-131
Benzo(g,h,i)perylene	67.5	2.00	1.35	ug/L	44-128
2-Methylnaphthalene-D10	86.8				43-120
Fluorene-D10	83.6				29-120
Pyrene-D10	86.8				53-166

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ANALYTICAL SERVICES

Cert No E87604

LCS Recovery Report

Client:
Lab ID: WG225021-2
Client ID: LCS
Project:
SDG: SL2079
LCS File ID: N8030.D

Sample Date:
Received Date:
Extract Date: 19-MAR-18
Extracted By: DP
Extraction Method: SW846 3550C
Lab Prep Batch: WG225021

Analysis Date: 20-MAR-18
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: SL
% Solids: NA
Report Date: 26-MAR-18

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
Naphthalene	71.5	66.7	47.7	ug/Kgdrywt	38-125
2-Methylnaphthalene	65.7	66.7	43.8	ug/Kgdrywt	39-125
Acenaphthylene	64.0	66.7	42.7	ug/Kgdrywt	39-125
Acenaphthene	67.9	66.7	45.3	ug/Kgdrywt	44-125
Fluorene	70.3	66.7	46.9	ug/Kgdrywt	47-125
Phenanthrene	70.0	66.7	46.7	ug/Kgdrywt	49-125
Anthracene	64.2	66.7	42.8	ug/Kgdrywt	50-125
Fluoranthene	77.2	66.7	51.5	ug/Kgdrywt	55-125
Pyrene	69.1	66.7	46.1	ug/Kgdrywt	55-125
Benzo(a)anthracene	77.8	66.7	51.9	ug/Kgdrywt	54-125
Chrysene	72.0	66.7	48.0	ug/Kgdrywt	57-125
Benzo(b)Fluoranthene	91.0	66.7	60.7	ug/Kgdrywt	53-128
Benzo(k)fluoranthene	73.0	66.7	48.7	ug/Kgdrywt	56-125
Benzo(a)pyrene	64.5	66.7	43.0	ug/Kgdrywt	50-125
Indeno(1,2,3-cd)pyrene	51.3	66.7	34.2	ug/Kgdrywt	49-130
Dibenzo(a,h)anthracene	58.5	66.7	39.0	ug/Kgdrywt	50-129
Benzo(g,h,i)perylene	59.4	66.7	39.6	ug/Kgdrywt	49-127
2-Methylnaphthalene-D10	91.3				19-125
Fluorene-D10	66.6				20-125
Pyrene-D10	66.2				31-128

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Cert No E87604

MS/MSD Recovery Report

MS ID: WG225021-3
MSD ID: WG225021-4
Sample ID: SL2079-9
Client ID: CHAAP-BKRD-SS10
Project:
SDG: SL2079
MS File ID: N8040.D

Received Date:
Extract Date: 19-MAR-18
Extracted By: DP
Extraction Method: SW846 3550C
Lab Prep Batch: WG225021
Report Date: 26-MAR-18
MSD File ID: N8041.D

Analysis Date: 20-MAR-18
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: SL
% Solids: 75.

Compound	MS Spike	MSD Spike	Conc Units	Samp Conc	MS Conc	MSD Conc	MS Rec (%)	MSD Rec (%)	RPD (%)	RPD Limit	Limits
Naphthalene	88.2	89.0	ug/Kgdrywt	U13	55.	53.	61.9	60.0	2	20	38-125
2-Methylnaphthalene	88.2	89.0	ug/Kgdrywt	U13	52.	50.	58.5	55.7	4	20	39-125
Acenaphthylene	88.2	89.0	ug/Kgdrywt	U13	53.	52.	59.9	57.9	2	20	39-125
Acenaphthene	88.2	89.0	ug/Kgdrywt	U13	57.	56.	64.6	62.4	2	20	44-125
Fluorene	88.2	89.0	ug/Kgdrywt	U13	59.	58.	66.9	65.4	1	20	47-125
Phenanthrene	88.2	89.0	ug/Kgdrywt	J3.4	58.	56.	62.5	59.5	4	20	49-125
Anthracene	88.2	89.0	ug/Kgdrywt	U13	51.	50.	57.7	55.7	2	20	50-125
Fluoranthene	88.2	89.0	ug/Kgdrywt	J4.0	59.	56.	62.0	58.6	4	20	55-125
Pyrene	88.2	89.0	ug/Kgdrywt	J3.4	57.	54.	60.4	56.3	6	20	55-125
Benzo(a)anthracene	88.2	89.0	ug/Kgdrywt	U13	55.	51.	62.5	57.4	8	20	54-125
Chrysene	88.2	89.0	ug/Kgdrywt	UMM13	49.	46.	55.1*	51.2*	6	20	57-125
Benzo(b)Fluoranthene	88.2	89.0	ug/Kgdrywt	U13	64.	62.	72.7	69.2	4	20	53-128
Benzo(k)fluoranthene	88.2	89.0	ug/Kgdrywt	UMM13	47.	47.	53.2*	52.9*	0	20	56-125
Benzo(a)pyrene	88.2	89.0	ug/Kgdrywt	UMM13	43.	40.	48.8*	45.4*	6	20	50-125
Indeno(1,2,3-cd)pyrene	88.2	89.0	ug/Kgdrywt	UMM13	35.	31.	39.4*	35.0*	11	20	49-130
Dibenzo(a,h)anthracene	88.2	89.0	ug/Kgdrywt	UMM13	41.	38.	46.5*	42.6*	8	20	50-129
Benzo(g,h,i)perylene	88.2	89.0	ug/Kgdrywt	UMM13	36.	37.	41.2*	41.3*	1	20	49-127
2-Methylnaphthalene-D10							82.6	80.0			19-125
Fluorene-D10							62.2	60.6			20-125
Pyrene-D10							57.2	55.6			31-128

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Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : N8029.D
Instrument ID : GCMS-N
Matrix : SL

SDG : SL2079
Lab Sample ID : WG225021-1
Date Extracted : 19-MAR-18
Date Analyzed : 20-MAR-18
Time Analyzed : 13:18

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG225021-2	N8030.D	03/20/18	13:50
CHAAP-BKRD-SB08	SL2079-1	N8031.D	03/20/18	14:21
CHAAP-BKRD-SB09	SL2079-2	N8032.D	03/20/18	14:53
CHAAP-BKRD-SB10	SL2079-3	N8033.D	03/20/18	15:24
CHAAP-BKRD-SB11	SL2079-4	N8034.D	03/20/18	15:56
CHAAP-BKRD-SB12	SL2079-5	N8035.D	03/20/18	16:27
CHAAP-BKRD-SB13	SL2079-6	N8036.D	03/20/18	16:59
CHAAP-BKRD-SS08	SL2079-7	N8037.D	03/20/18	17:30
CHAAP-BKRD-SS09	SL2079-8	N8038.D	03/20/18	18:02
CHAAP-BKRD-SS10	SL2079-9	N8039.D	03/20/18	18:34
Matrix Spike	WG225021-3	N8040.D	03/20/18	19:06
Matrix Spike Duplica	WG225021-4	N8041.D	03/20/18	19:38
CHAAP-BKRD-SS11	SL2079-10	N8060.D	03/21/18	15:52
CHAAP-BKRD-SS12	SL2079-11	N8061.D	03/21/18	16:24
CHAAP-BKRD-SS13	SL2079-12	N8062.D	03/21/18	16:55
CHAAP-BKRD-SS109	SL2079-13	N8063.D	03/21/18	17:27

Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : N8025.D
Instrument ID : GCMS-N
Matrix : AQ

SDG : SL2079
Lab Sample ID : WG225023-1
Date Extracted : 19-MAR-18
Date Analyzed : 20-MAR-18
Time Analyzed : 11:11

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG225023-2	N8026.D	03/20/18	11:44
CHAAP-BKRD-EB-031418	SL2079-14	N8027.D	03/20/18	12:15

Form 5
Semivolatile Organic Instrument Performance Check

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : ND493.D
Instrument ID : GCMS-N

SDG : SL2079
Date Analyzed : 16-MAR-18
Time Analyzed : 11:43

m/e	Ion Abundance Criteria	% Relative Abundance		
51	30.0 - 60.0% of mass 198	43.5		
68	Less than 2.0% of mass 69	0.6	1.66	1
69	Less than 100.0% of mass 198	37.5		
70	Less than 2.0% of mass 69	0.2	0.44	1
127	40.0 - 60.0% of mass 198	55.9		
197	Less than 1.0% of mass 198	0.5		
198	Base Peak, 100% relative abundance	100		
199	5.0 - 9.0% of mass 198	7.1		
275	10.0 - 30.0% of mass 198	24.3		
365	1.0 - 100.0% of mass 198	3.0		
441	0.0 - 100.0% of mass 443	11.0	76.73	2
442	40.0 - 100.0% of mass 198	79.3		
443	17.0 - 23.0% of mass 442	14.4	18.13	3

1-Value is % mass 69
2-Value is % mass 443
3-Value is % mass 442

This check applies to the following samples, LCS, MS, MSD and standards:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Initial Calibration	WG224895-4	N7968.D	03/16/18	11:59
Initial Calibration	WG224895-2	N7969.D	03/16/18	12:30
Initial Calibration	WG224895-3	N7970.D	03/16/18	13:03
Initial Calibration	WG224895-5	N7971.D	03/16/18	13:34
Initial Calibration	WG224895-6	N7972.D	03/16/18	14:06
Initial Calibration	WG224895-7	N7973.D	03/16/18	14:38
Independent Source	WG224895-8	N7974.D	03/16/18	15:10

Form 5
Semivolatile Organic Instrument Performance Check

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : ND495.D
Instrument ID : GCMS-N

SDG : SL2079
Date Analyzed : 20-MAR-18
Time Analyzed : 10:23

m/e	Ion Abundance Criteria	% Relative Abundance		
51	30.0 - 60.0% of mass 198	41.0		
68	Less than 2.0% of mass 69	0.5	1.35	1
69	Less than 100.0% of mass 198	37.5		
70	Less than 2.0% of mass 69	0.1	0.21	1
127	40.0 - 60.0% of mass 198	53.9		
197	Less than 1.0% of mass 198	0.3		
198	Base Peak, 100% relative abundance	100		
199	5.0 - 9.0% of mass 198	6.7		
275	10.0 - 30.0% of mass 198	22.0		
365	1.0 - 100.0% of mass 198	2.7		
441	0.0 - 100.0% of mass 443	11.4	80.16	2
442	40.0 - 100.0% of mass 198	77.9		
443	17.0 - 23.0% of mass 442	14.2	18.21	3

1-Value is % mass 69
2-Value is % mass 443
3-Value is % mass 442

This check applies to the following samples, LCS, MS, MSD and standards:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Continuing Calibrati	WG225084-2	N8024.D	03/20/18	10:39
Method Blank Sample	WG225023-1	N8025.D	03/20/18	11:11
Laboratory Control S	WG225023-2	N8026.D	03/20/18	11:44
CHAAP-BKRD-EB-031418	SL2079-14	N8027.D	03/20/18	12:15
Method Blank Sample	WG225021-1	N8029.D	03/20/18	13:18
Laboratory Control S	WG225021-2	N8030.D	03/20/18	13:50
CHAAP-BKRD-SB08	SL2079-1	N8031.D	03/20/18	14:21
CHAAP-BKRD-SB09	SL2079-2	N8032.D	03/20/18	14:53
CHAAP-BKRD-SB10	SL2079-3	N8033.D	03/20/18	15:24
CHAAP-BKRD-SB11	SL2079-4	N8034.D	03/20/18	15:56
CHAAP-BKRD-SB12	SL2079-5	N8035.D	03/20/18	16:27
CHAAP-BKRD-SB13	SL2079-6	N8036.D	03/20/18	16:59
CHAAP-BKRD-SS08	SL2079-7	N8037.D	03/20/18	17:30
CHAAP-BKRD-SS09	SL2079-8	N8038.D	03/20/18	18:02
CHAAP-BKRD-SS10	SL2079-9	N8039.D	03/20/18	18:34
Matrix Spike	WG225021-3	N8040.D	03/20/18	19:06
Matrix Spike Duplica	WG225021-4	N8041.D	03/20/18	19:38
Continuing Calibrati	WG225084-3	N8045.D	03/20/18	21:48

Form 5
Semivolatile Organic Instrument Performance Check

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : ND496.D
Instrument ID : GCMS-N

SDG : SL2079
Date Analyzed : 21-MAR-18
Time Analyzed : 10:41

m/e	Ion Abundance Criteria	% Relative Abundance		
51	30.0 - 60.0% of mass 198	31.2		
68	Less than 2.0% of mass 69	0.6	1.70	1
69	Less than 100.0% of mass 198	37.0		
70	Less than 2.0% of mass 69	0.2	0.61	1
127	40.0 - 60.0% of mass 198	57.5		
197	Less than 1.0% of mass 198	0.0		
198	Base Peak, 100% relative abundance	100		
199	5.0 - 9.0% of mass 198	6.1		
275	10.0 - 30.0% of mass 198	22.0		
365	1.0 - 100.0% of mass 198	2.6		
441	0.0 - 100.0% of mass 443	12.1	72.78	2
442	40.0 - 100.0% of mass 198	87.2		
443	17.0 - 23.0% of mass 442	16.6	19.00	3

1-Value is % mass 69
2-Value is % mass 443
3-Value is % mass 442

This check applies to the following samples, LCS, MS, MSD and standards:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Initial Calibration	WG225136-4	N8051.D	03/21/18	10:57
Initial Calibration	WG225136-2	N8052.D	03/21/18	11:30
Initial Calibration	WG225136-3	N8053.D	03/21/18	12:02
Initial Calibration	WG225136-5	N8054.D	03/21/18	12:34
Initial Calibration	WG225136-6	N8055.D	03/21/18	13:06
Initial Calibration	WG225136-7	N8056.D	03/21/18	13:37
Independent Source	WG225136-8	N8057.D	03/21/18	14:08
CHAAP-BKRD-SS11	SL2079-10	N8060.D	03/21/18	15:52
CHAAP-BKRD-SS12	SL2079-11	N8061.D	03/21/18	16:24
CHAAP-BKRD-SS13	SL2079-12	N8062.D	03/21/18	16:55
CHAAP-BKRD-SS109	SL2079-13	N8063.D	03/21/18	17:27
Continuing Calibrati	WG225136-9	N8072.D	03/21/18	22:17

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL2079
Project : Cornhusker Army Ammunition Plant
Instrument ID: GCMS-N
Lab File IDs : N7969.D N7970.D N7968.D N7971.D N7972.D N7973.D
Column ID:
Calibration Date(s): 16-MAR-18 11:59 16-MAR-18 14:38

	0.200000(Level 1	0.500000(Level 2	2.0000 Level 3	7.0000 Level 4	10.0000 Level 5	15.0000 Level 6	New Crv	b	m1	m2	%RSD	Max %RSD	
Naphthalene	0.97504	1.03233	1.03846	1.03803	1.02911	0.95367	AVG		1.01111		3.66004	15.00000	O
2-Methylnaphthalene	31023	95581	279076	1007066	1329374	1921570	QUA	0.02192	1.17017	0.04682	0.99957	0.99000	O
Acenaphthylene	2.14477	2.14249	2.17292	2.13421	2.10974	2.02953	AVG		2.12228		2.34472	15.00000	O
Acenaphthene	1.44416	1.39166	1.38360	1.41070	1.36407	1.32137	AVG		1.38593		3.00786	15.00000	O
Fluorene	1.39196	1.44565	1.45553	1.46294	1.41754	1.36236	AVG		1.42266		2.78271	15.00000	O
Phenanthrene	1.29271	1.18070	1.22471	1.30558	1.25036	1.16203	AVG		1.23601		4.70658	15.00000	O
Anthracene	1.52132	1.46329	1.35473	1.37719	1.33296	1.23689	AVG		1.38106		7.25837	15.00000	O
Fluoranthene	1.32716	1.14753	1.11558	1.18790	1.12285	1.07080	AVG		1.16197		7.71301	15.00000	O
Pyrene	2.87524	2.60439	2.42221	2.46431	2.29623	2.10394	AVG		2.46105		10.7245	15.00000	O
Benzo(a)anthracene	1.48692	1.33504	1.40172	1.43012	1.39107	1.35693	AVG		1.40030		3.86131	15.00000	O
Chrysene	19557	48948	172156	663405	905814	1488528	LNR	-0.29232	1.38021		0.99705	0.99000	O
Benzo(b)fluoranthene	1.25563	1.28568	1.24854	1.47525	1.35003	1.35597	AVG		1.32852		6.41284	15.00000	O
Benzo(k)fluoranthene	2.25189	2.02422	1.74268	1.65893	1.71797	1.62031	AVG		1.83600		13.5381	15.00000	O
Benzo(a)pyrene	1.42534	1.36882	1.27714	1.31388	1.30682	1.27236	AVG		1.32739		4.45304	15.00000	O
Indeno(1,2,3-cd)pyrene	1.04771	0.90444	1.02917	0.91849	0.94731	0.89685	AVG		0.95733		6.83281	15.00000	O
Dibenzo(a,h)anthracene	0.94345	0.86161	0.91134	0.93202	0.93797	0.92158	AVG		0.91800		3.26094	15.00000	O
Benzo(g,h,i)perylene	1.29008	1.16887	1.13206	1.13789	1.12038	1.07323	AVG		1.15375		6.38506	15.00000	O
2-Methylnaphthalene-D10	0.44559	0.48637	0.47880	0.48817	0.47912	0.44588	AVG		0.47066		4.17816	15.00000	
Fluorene-D10	0.97164	0.99020	1.00380	1.01015	0.97546	0.96127	AVG		0.98542		1.94911	15.00000	
Pyrene-D10	1.55752	1.50378	1.40995	1.45771	1.33847	1.20984	AVG		1.41288		8.83799	15.00000	

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL2079
Project : Cornhusker Army Ammunition Plant
Instrument ID: GCMS-N
Lab File IDs : N8052.D N8053.D N8051.D N8054.D N8055.D N8056.D
Column ID:
Calibration Date(s): 21-MAR-18 10:57, 21-MAR-18 13:37

	0.200000(Level 1	0.500000(Level 2	2.0000 Level 3	7.0000 Level 4	10.0000 Level 5	15.0000 Level 6	New Crv	b	m1	m2	%RSD	Max %RSD	
Naphthalene	1.07500	1.08809	1.08006	1.08046	1.02883	0.99033	AVG		1.05713		3.69084	15.00000	O
2-Methylnaphthalene	62784	127645	406993	1328962	1786939	2509398	LNR	-0.32954	0.66509		0.99754	0.99000	O
Acenaphthylene	2.14734	2.23269	2.21135	2.26887	2.20245	2.14783	AVG		2.20175		2.17084	15.00000	O
Acenaphthene	1.39097	1.45017	1.43918	1.44802	1.41120	1.39751	AVG		1.42284		1.84372	15.00000	O
Fluorene	1.43282	1.50237	1.52141	1.55025	1.49286	1.48198	AVG		1.49695		2.64226	15.00000	O
Phenanthrene	1.29909	1.34791	1.34635	1.31942	1.25634	1.23968	AVG		1.30146		3.49647	15.00000	O
Anthracene	1.38780	1.37167	1.34449	1.36824	1.29536	1.22030	AVG		1.33131		4.74736	15.00000	O
Fluoranthene	1.26884	1.12264	1.11165	1.11296	1.04463	0.98606	AVG		1.10779		8.56423	15.00000	O
Pyrene	3.57506	3.27478	2.70179	2.86930	2.59192	2.56522	AVG		2.92968		13.97471	15.00000	O
Benzo(a)anthracene	1.58480	1.45129	1.45286	1.50547	1.42271	1.43442	AVG		1.47526		4.11399	15.00000	O
Chrysene	21037	48235	209861	657070	925951	1376317	LNR	-0.21498	1.38870		0.99903	0.99000	O
Benzo(b)fluoranthene	1.72701	1.68584	1.50350	1.79097	1.59462	1.75597	AVG		1.67632		6.46305	15.00000	O
Benzo(k)fluoranthene	13260	30578	158536	426654	662441	914672	LNR	-0.19550	1.77535		0.99769	0.99000	O
Benzo(a)pyrene	1.63149	1.37503	1.19172	1.33643	1.30233	1.32662	AVG		1.36060		10.76393	15.00000	O
Indeno(1,2,3-cd)pyrene	0.45065	0.42296	0.41093	0.46231	0.48893	0.47588	AVG		0.45194		6.69049	15.00000	O
Dibenzo(a,h)anthracene	0.64512	0.52229	0.47258	0.62856	0.63949	0.64329	AVG		0.59189		12.68007	15.00000	O
Benzo(g,h,i)perylene	0.97029	0.73788	0.71442	0.86780	0.84904	0.84054	AVG		0.82999		11.22883	15.00000	O
2-Methylnaphthalene-D10	0.47358	0.48234	0.49802	0.49397	0.46813	0.45500	AVG		0.47851		3.39470	15.00000	
Fluorene-D10	0.93562	0.98822	0.97844	0.99807	0.97596	0.99308	AVG		0.97823		2.30173	15.00000	
Pyrene-D10	1.73104	1.73596	1.53113	1.63794	1.49717	1.49055	AVG		1.60397		7.06995	15.00000	

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL2079
Lab ID : WG225084-2
Analytical Date: 03/20/18 10:39
Lab File ID : N8024.D
Instrument ID: GCMS-N
Initial Calibration Date(s): 03/16/18 11:59 03/16/18 14:38
Column ID:

Compound	RRF/Amount	RF2	CCAL RRF2	Min	%D/ %Drift	Max %D/ %Drift	Curve Type	
27 Naphthalene	1.01111	1.05504	1.05504	0.010	4.34479	20.00000	Averaged	
33 2-Methylnaphthalene	2.00000	1.97382	0.77571	0.010	-1.30877	20.00000	Quadratic	
45 Acenaphthylene	2.12228	2.18126	2.18126	0.010	2.77927	20.00000	Averaged	
48 Acenaphthene	1.38593	1.43086	1.43086	0.010	3.24239	20.01000	Averaged	
56 Fluorene	1.42266	1.46328	1.46328	0.010	2.85503	20.00000	Averaged	
66 Phenanthrene	1.23601	1.26094	1.26094	0.010	2.01643	20.00000	Averaged	
67 Anthracene	1.38106	1.27576	1.27576	0.010	-7.62492	20.00000	Averaged	
70 Fluoranthene	1.16197	1.01015	1.01015	0.010	-13.06537	20.01000	Averaged	
72 Pyrene	2.46105	3.01423	3.01423	0.010	22.47727	20.00000	Averaged	*
74 Benzo(a)anthracene	1.40030	1.38082	1.38082	0.010	-1.39104	20.00000	Averaged	
77 Chrysene	2.00000	2.08563	1.60069	0.010	4.28174	20.00000	Linear	
80 Benzo(b)fluoranthene	1.32852	1.19689	1.19689	0.010	-9.90765	20.00000	Averaged	
81 Benzo(k)fluoranthene	1.83600	1.87498	1.87498	0.010	2.12335	20.00000	Averaged	
82 Benzo(a)pyrene	1.32739	1.23064	1.23064	0.010	-7.28886	20.01000	Averaged	
85 Indeno(1,2,3-cd)pyrene	0.95733	0.77153	0.77153	0.010	-19.40853	20.00000	Averaged	
86 Dibenzo(a,h)anthracene	0.91800	0.74483	0.74483	0.010	-18.86344	20.00000	Averaged	
87 Benzo(g,h,i)perylene	1.15375	1.01361	1.01361	0.010	-12.14628	20.00000	Averaged	
32 2-Methylnaphthalene-D10	0.47066	0.49864	0.49864	0.010	5.94516	20.00000	Averaged	
55 Fluorene-D10	0.98542	0.98633	0.98633	0.010	0.09207	20.00000	Averaged	
71 Pyrene-D10	1.41288	1.71770	1.71770	0.010	21.57425	20.00000	Averaged	*

*** = Compound out of QC criteria**

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG225084-3
Lab File ID : N8045.D
Initial Calibration Date(s): 03/16/18 11:59 03/16/18 14:38

SDG: SL2079
Analytical Date: 03/20/18 21:48
Instrument ID: GCMS-N
Column ID:

Compound	RRF/Amount	RF2	CCAL RRF2	Min	%D/ %Drift	Max %D/ %Drift	Curve Type	
27 Naphthalene	1.01111	1.03905	1.03905	0.010	2.76404	20.00000	Averaged	
33 2-Methylnaphthalene	2.00000	2.02083	0.79307	0.010	1.04169	20.00000	Quadratic	
45 Acenaphthylene	2.12228	2.18736	2.18736	0.010	3.06664	20.00000	Averaged	
48 Acenaphthene	1.38593	1.41466	1.41466	0.010	2.07331	20.01000	Averaged	
56 Fluorene	1.42266	1.43869	1.43869	0.010	1.12658	20.00000	Averaged	
66 Phenanthrene	1.23601	1.24024	1.24024	0.010	0.34174	20.00000	Averaged	
67 Anthracene	1.38106	1.29799	1.29799	0.010	-6.01497	20.00000	Averaged	
70 Fluoranthene	1.16197	1.11911	1.11911	0.010	-3.68900	20.01000	Averaged	
72 Pyrene	2.46105	2.26121	2.26121	0.010	-8.12019	20.00000	Averaged	
74 Benzo(a)anthracene	1.40030	1.37260	1.37260	0.010	-1.97789	20.00000	Averaged	
77 Chrysene	2.00000	1.96806	1.51955	0.010	-1.59708	20.00000	Linear	
80 Benzo(b)fluoranthene	1.32852	1.40539	1.40539	0.010	5.78610	20.00000	Averaged	
81 Benzo(k)fluoranthene	1.83600	1.81215	1.81215	0.010	-1.29924	20.00000	Averaged	
82 Benzo(a)pyrene	1.32739	1.24622	1.24622	0.010	-6.11523	20.01000	Averaged	
85 Indeno(1,2,3-cd)pyrene	0.95733	0.66387	0.66387	0.010	-30.65431	20.00000	Averaged	*
86 Dibenzo(a,h)anthracene	0.91800	0.70540	0.70540	0.010	-23.15902	20.00000	Averaged	*
87 Benzo(g,h,i)perylene	1.15375	0.90710	0.90710	0.010	-21.37798	20.00000	Averaged	*
32 2-Methylnaphthalene-D10	0.47066	0.49469	0.49469	0.010	5.10662	20.00000	Averaged	
55 Fluorene-D10	0.98542	0.97017	0.97017	0.010	-1.54739	20.00000	Averaged	
71 Pyrene-D10	1.41288	1.29109	1.29109	0.010	-8.62034	20.00000	Averaged	

*** = Compound out of QC criteria**

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG225136-9
Lab File ID : N8072.D
Initial Calibration Date(s): 03/21/18 10:57 03/21/18 13:37

SDG: SL2079
Analytical Date: 03/21/18 22:17
Instrument ID: GCMS-N
Column ID:

Compound	$\overline{RRF}$/Amount	RF2	CCAL RRF2	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
27 Naphthalene	1.05713	1.04946	1.04946	0.010	-0.72594	20.00000	Averaged
33 2-Methylnaphthalene	2.00000	2.09184	0.78330	0.010	4.59221	20.00000	Linear
45 Acenaphthylene	2.20175	2.28897	2.28897	0.010	3.96098	20.00000	Averaged
48 Acenaphthene	1.42284	1.43003	1.43003	0.010	0.50502	20.01000	Averaged
56 Fluorene	1.49695	1.55321	1.55321	0.010	3.75856	20.00000	Averaged
66 Phenanthrene	1.30146	1.27634	1.27634	0.010	-1.93004	20.00000	Averaged
67 Anthracene	1.33131	1.35260	1.35260	0.010	1.59943	20.00000	Averaged
70 Fluoranthene	1.10779	1.07148	1.07148	0.010	-3.27817	20.01000	Averaged
72 Pyrene	2.92968	3.19478	3.19478	0.010	9.04894	20.00000	Averaged
74 Benzo(a)anthracene	1.47526	1.39977	1.39977	0.010	-5.11707	20.00000	Averaged
77 Chrysene	2.00000	2.13570	1.60234	0.010	6.78503	20.00000	Linear
80 Benzo(b)fluoranthene	1.67632	1.55912	1.55912	0.010	-6.99136	20.00000	Averaged
81 Benzo(k)fluoranthene	2.00000	2.13220	2.03153	0.010	6.60989	20.00000	Linear
82 Benzo(a)pyrene	1.36060	1.25297	1.25297	0.010	-7.91104	20.01000	Averaged
85 Indeno(1,2,3-cd)pyrene	0.45194	0.38971	0.38971	0.010	-13.77030	20.00000	Averaged
86 Dibenzo(a,h)anthracene	0.59189	0.58650	0.58650	0.010	-0.91017	20.00000	Averaged
87 Benzo(g,h,i)perylene	0.82999	0.84592	0.84592	0.010	1.91875	20.00000	Averaged
32 2-Methylnaphthalene-D10	0.47851	0.48981	0.48981	0.010	2.36097	20.00000	Averaged
55 Fluorene-D10	0.97823	1.00001	1.00001	0.010	2.22602	20.00000	Averaged
71 Pyrene-D10	1.60397	1.83090	1.83090	0.010	14.14849	20.00000	Averaged

*** = Compound out of QC criteria**

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ANALYTICAL SERVICES

Form 8
Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition I
Lab ID : WG224895-4
Lab File ID : N7968.D

SDG: SL2079
Analytical Date: 03/16/18 11:59
Instrument ID: GCMS-N

		1,4-DICHLOROBENZENE-D4			NAPHTHALENE-D8			ACENAPHTHENE-D10		
		Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
	Std .	49167		6.98		153512		8.63		60609		10.95	
	Upper Limit	98334		7.14		307024		8.79		121218		11.12	
	Lower Limit	24583.5		6.81		76756		8.46		30304.5		10.79	
Client Sample ID	Lab Sample ID												
Continuing Calibrati	WG225084-2	49920		6.94		161126		8.59		67002		10.93	
Method Blank Sample	WG225023-1	51696		6.94		175691		8.61		78341		10.93	
Laboratory Control S	WG225023-2	51394		6.94		177263		8.59		77880		10.93	
CHAAP-BKRD-EB-03	SL2079-14	57514		6.94		192295		8.60		85455		10.93	
Method Blank Sample	WG225021-1	55702		6.94		188335		8.60		83863		10.93	
Laboratory Control S	WG225021-2	58278		6.94		197151		8.59		90454		10.93	
CHAAP-BKRD-SB08	SL2079-1	54825		6.94		179583		8.60		79857		10.93	
CHAAP-BKRD-SB09	SL2079-2	58091		6.94		197698		8.60		87813		10.93	
CHAAP-BKRD-SB10	SL2079-3	54635		6.94		185196		8.60		83031		10.93	
CHAAP-BKRD-SB11	SL2079-4	56723		6.94		189102		8.60		77401		10.93	
CHAAP-BKRD-SB12	SL2079-5	59161		6.94		186619		8.60		69423		10.93	
CHAAP-BKRD-SB13	SL2079-6	56273		6.94		186509		8.60		80260		10.93	
CHAAP-BKRD-SS08	SL2079-7	56897		6.94		186844		8.60		83131		10.93	
CHAAP-BKRD-SS09	SL2079-8	58589		6.94		198936		8.60		88115		10.93	
CHAAP-BKRD-SS10	SL2079-9	55286		6.94		192013		8.59		87094		10.93	
Matrix Spike	WG225021-3	53752		6.94		182165		8.59		82467		10.92	
Matrix Spike Duplica	WG225021-4	53922		6.94		184680		8.59		81822		10.92	
Continuing Calibrati	WG225084-3	53555		6.94		178719		8.59		72827		10.92	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 10 seconds of internal standard RT
RT Lower Limit = - 10 seconds of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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Form 8
Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition I
Lab ID : WG224895-4
Lab File ID : N7968.D

SDG: SL2079
Analytical Date: 03/16/18 11:59
Instrument ID: GCMS-N

		PHENANTHRENE-D10				CHRYSENE-D12				PERYLENE-D12			
		Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
	Std .	88968		12.94		42741		16.62		36674		19.51	
	Upper Limit	177936		13.11		85482		16.78		73348		19.67	
	Lower Limit	44484		12.78		21370.5		16.45		18337		19.34	
Client Sample ID	Lab Sample ID												
Continuing Calibrati	WG225084-2	93335		12.91		31368		16.55		23549		19.42	
Method Blank Sample	WG225023-1	114343		12.92		38046		16.57		23785		19.42	
Laboratory Control S	WG225023-2	119760		12.91		56639		16.55		34854		19.41	
CHAAP-BKRD-EB-03	SL2079-14	124970		12.92		54925		16.57		35094		19.41	
Method Blank Sample	WG225021-1	123576		12.91		48547		16.55		31056		19.41	
Laboratory Control S	WG225021-2	139517		12.91		74011		16.55		48980		19.40	
CHAAP-BKRD-SB08	SL2079-1	116204		12.91		46131		16.56		29989		19.41	
CHAAP-BKRD-SB09	SL2079-2	133193		12.91		62173		16.56		41720		19.41	
CHAAP-BKRD-SB10	SL2079-3	130323		12.91		59778		16.56		36345		19.41	
CHAAP-BKRD-SB11	SL2079-4	103635		12.91		48247		16.56		33066		19.41	
CHAAP-BKRD-SB12	SL2079-5	84804		12.92		32773		16.57		25603		19.41	
CHAAP-BKRD-SB13	SL2079-6	116821		12.91		52039		16.56		34129		19.41	
CHAAP-BKRD-SS08	SL2079-7	130336		12.91		56653		16.56		34709		19.40	
CHAAP-BKRD-SS09	SL2079-8	138073		12.91		64565		16.56		41299		19.40	
CHAAP-BKRD-SS10	SL2079-9	134867		12.91		65880		16.55		42838		19.40	
Matrix Spike	WG225021-3	128069		12.90		63524		16.55		42519		19.40	
Matrix Spike Duplica	WG225021-4	123931		12.90		60953		16.55		39527		19.40	
Continuing Calibrati	WG225084-3	101327		12.90		52131		16.55		36096		19.41	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 10 seconds of internal standard RT
RT Lower Limit = - 10 seconds of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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Form 8
Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition I
Lab ID : WG225136-4
Lab File ID : N8051.D

SDG: SL2079
Analytical Date: 03/21/18 10:57
Instrument ID: GCMS-N

		1,4-DICHLOROBENZENE-D4			NAPHTHALENE-D8			ACENAPHTHENE-D10		
		Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
	Std .	67704		6.94		211188		8.58		90519		10.92	
	Upper Limit	135408		7.11		422376		8.75		181038		11.08	
	Lower Limit	33852		6.77		105594		8.41		45259.5		10.75	
Client Sample ID	Lab Sample ID												
CHAAP-BKRD-SS11	SL2079-10	59048		6.94		189351		8.59		84442		10.92	
CHAAP-BKRD-SS12	SL2079-11	59426		6.94		188849		8.59		85397		10.93	
CHAAP-BKRD-SS13	SL2079-12	59115		6.94		187132		8.59		83414		10.92	
CHAAP-BKRD-SS109	SL2079-13	55890		6.94		172649		8.59		74018		10.93	
Continuing Calibrati	WG225136-9	63632		6.93		206220		8.59		86741		10.92	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 10 seconds of internal standard RT
RT Lower Limit = - 10 seconds of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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Katahdin
ANALYTICAL SERVICES

Form 8
Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition I
Lab ID : WG225136-4
Lab File ID : N8051.D

SDG: SL2079
Analytical Date: 03/21/18 10:57
Instrument ID: GCMS-N

		PHENANTHRENE-D10			CHRYSENE-D12			PERYLENE-D12		
		Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
	Std .	128283		12.90		55605		16.55		32614		19.42	
	Upper Limit	256566		13.06		111210		16.72		65228		19.59	
	Lower Limit	64141.5		12.73		27802.5		16.39		16307		19.26	
Client Sample ID	Lab Sample ID												
CHAAP-BKRD-SS11	SL2079-10	122144		12.91		39411		16.56		20544		19.41	
CHAAP-BKRD-SS12	SL2079-11	123043		12.91		40047		16.56		20577		19.41	
CHAAP-BKRD-SS13	SL2079-12	122241		12.91		38167		16.56		19393		19.41	
CHAAP-BKRD-SS109	SL2079-13	104844		12.91		35677		16.56		19023		19.41	
Continuing Calibrati	WG225136-9	129377		12.90		44618		16.55		20549		19.42	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 10 seconds of internal standard RT
RT Lower Limit = - 10 seconds of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-1
Client ID: CHAAP-BKRD-SB08
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: HLC10085.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: JMS
Extraction Method: SW846 8330B MOD
Lab Prep Batch: WG225027

Analysis Date: 21-MAR-18
Analyst: AC
Analysis Method: SW846 8330B
Matrix: SL
% Solids: 81.
Report Date: 27-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	60	ug/Kgdrywt	1	100	120	10.	60.
RDX	U	60	ug/Kgdrywt	1	100	120	8.1	60.
1,3,5-Trinitrobenzene	U	60	ug/Kgdrywt	1	100	120	8.0	60.
1,3-Dinitrobenzene	U	60	ug/Kgdrywt	1	100	120	7.4	60.
Tetryl	U	60	ug/Kgdrywt	1	100	120	6.5	60.
Nitrobenzene	U	60	ug/Kgdrywt	1	100	120	26.	60.
2,4,6-Trinitrotoluene	U	60	ug/Kgdrywt	1	100	120	8.0	60.
2-Am-DNT	U	60	ug/Kgdrywt	1	100	120	25.	60.
4-Am-DNT	U	60	ug/Kgdrywt	1	100	120	20.	60.
2,6-Dinitrotoluene	U	60	ug/Kgdrywt	1	100	120	32.	60.
2,4-Dinitrotoluene	U	60	ug/Kgdrywt	1	100	120	18.	60.
2-Nitrotoluene	U	60	ug/Kgdrywt	1	100	120	14.	60.
3-Nitrotoluene	U	60	ug/Kgdrywt	1	100	120	9.5	60.
4-Nitrotoluene	U	60	ug/Kgdrywt	1	100	120	32.	60.
Nitroglycerin	U	480	ug/Kgdrywt	1	800	960	150	480
PETN	U	480	ug/Kgdrywt	1	800	960	130	480
1,2-Dinitrobenzene		93.5	%					

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-2
Client ID: CHAAP-BKRD-SB09
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: HLC10086.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: JMS
Extraction Method: SW846 8330B MOD
Lab Prep Batch: WG225027

Analysis Date: 21-MAR-18
Analyst: AC
Analysis Method: SW846 8330B
Matrix: SL
% Solids: 86.
Report Date: 27-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	46	ug/Kgdrywt	1	100	92.	7.9	46.
RDX	U	46	ug/Kgdrywt	1	100	92.	6.3	46.
1,3,5-Trinitrobenzene	U	46	ug/Kgdrywt	1	100	92.	6.2	46.
1,3-Dinitrobenzene	U	46	ug/Kgdrywt	1	100	92.	5.7	46.
Tetryl	U	46	ug/Kgdrywt	1	100	92.	5.0	46.
Nitrobenzene	U	46	ug/Kgdrywt	1	100	92.	20.	46.
2,4,6-Trinitrotoluene	U	46	ug/Kgdrywt	1	100	92.	6.2	46.
2-Am-DNT	U	46	ug/Kgdrywt	1	100	92.	19.	46.
4-Am-DNT	U	46	ug/Kgdrywt	1	100	92.	16.	46.
2,6-Dinitrotoluene	U	46	ug/Kgdrywt	1	100	92.	25.	46.
2,4-Dinitrotoluene	U	46	ug/Kgdrywt	1	100	92.	14.	46.
2-Nitrotoluene	U	46	ug/Kgdrywt	1	100	92.	11.	46.
3-Nitrotoluene	U	46	ug/Kgdrywt	1	100	92.	7.3	46.
4-Nitrotoluene	U	46	ug/Kgdrywt	1	100	92.	25.	46.
Nitroglycerin	U	370	ug/Kgdrywt	1	800	740	110	370
PETN	U	370	ug/Kgdrywt	1	800	740	100	370
1,2-Dinitrobenzene		94.1	%					

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-3
Client ID: CHAAP-BKRD-SB10
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: HLC10087.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: JMS
Extraction Method: SW846 8330B MOD
Lab Prep Batch: WG225027

Analysis Date: 21-MAR-18
Analyst: AC
Analysis Method: SW846 8330B
Matrix: SL
% Solids: 84.
Report Date: 27-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	57	ug/Kgdrywt	1	100	110	9.8	57.
RDX	U	57	ug/Kgdrywt	1	100	110	7.7	57.
1,3,5-Trinitrobenzene	U	57	ug/Kgdrywt	1	100	110	7.6	57.
1,3-Dinitrobenzene	U	57	ug/Kgdrywt	1	100	110	7.0	57.
Tetryl	U	57	ug/Kgdrywt	1	100	110	6.1	57.
Nitrobenzene	U	57	ug/Kgdrywt	1	100	110	25.	57.
2,4,6-Trinitrotoluene	U	57	ug/Kgdrywt	1	100	110	7.6	57.
2-Am-DNT	U	57	ug/Kgdrywt	1	100	110	24.	57.
4-Am-DNT	U	57	ug/Kgdrywt	1	100	110	19.	57.
2,6-Dinitrotoluene	U	57	ug/Kgdrywt	1	100	110	31.	57.
2,4-Dinitrotoluene	U	57	ug/Kgdrywt	1	100	110	17.	57.
2-Nitrotoluene	U	57	ug/Kgdrywt	1	100	110	14.	57.
3-Nitrotoluene	U	57	ug/Kgdrywt	1	100	110	9.0	57.
4-Nitrotoluene	U	57	ug/Kgdrywt	1	100	110	31.	57.
Nitroglycerin	U	460	ug/Kgdrywt	1	800	910	140	460
PETN	U	460	ug/Kgdrywt	1	800	910	120	460
1,2-Dinitrobenzene		95.8	%					

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-4
Client ID: CHAAP-BKRD-SB11
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: HLC10088.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: JMS
Extraction Method: SW846 8330B MOD
Lab Prep Batch: WG225027

Analysis Date: 21-MAR-18
Analyst: AC
Analysis Method: SW846 8330B
Matrix: SL
% Solids: 80.
Report Date: 27-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	62	ug/Kgdrywt	1	100	120	10.	62.
RDX	U	62	ug/Kgdrywt	1	100	120	8.4	62.
1,3,5-Trinitrobenzene	U	62	ug/Kgdrywt	1	100	120	8.2	62.
1,3-Dinitrobenzene	U	62	ug/Kgdrywt	1	100	120	7.6	62.
Tetryl	U	62	ug/Kgdrywt	1	100	120	6.6	62.
Nitrobenzene	U	62	ug/Kgdrywt	1	100	120	27.	62.
2,4,6-Trinitrotoluene	U	62	ug/Kgdrywt	1	100	120	8.2	62.
2-Am-DNT	U	62	ug/Kgdrywt	1	100	120	26.	62.
4-Am-DNT	U	62	ug/Kgdrywt	1	100	120	21.	62.
2,6-Dinitrotoluene	U	62	ug/Kgdrywt	1	100	120	33.	62.
2,4-Dinitrotoluene	U	62	ug/Kgdrywt	1	100	120	18.	62.
2-Nitrotoluene	U	62	ug/Kgdrywt	1	100	120	15.	62.
3-Nitrotoluene	U	62	ug/Kgdrywt	1	100	120	9.7	62.
4-Nitrotoluene	U	62	ug/Kgdrywt	1	100	120	33.	62.
Nitroglycerin	U	490	ug/Kgdrywt	1	800	980	150	490
PETN	U	490	ug/Kgdrywt	1	800	980	130	490
1,2-Dinitrobenzene		93.3	%					

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-5
Client ID: CHAAP-BKRD-SB12
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: HLC10089.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: JMS
Extraction Method: SW846 8330B MOD
Lab Prep Batch: WG225027

Analysis Date: 21-MAR-18
Analyst: AC
Analysis Method: SW846 8330B
Matrix: SL
% Solids: 83.
Report Date: 27-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	58	ug/Kgdrywt	1	100	120	10.	58.
RDX	U	58	ug/Kgdrywt	1	100	120	8.0	58.
1,3,5-Trinitrobenzene	U	58	ug/Kgdrywt	1	100	120	7.8	58.
1,3-Dinitrobenzene	U	58	ug/Kgdrywt	1	100	120	7.2	58.
Tetryl	U	58	ug/Kgdrywt	1	100	120	6.3	58.
Nitrobenzene	U	58	ug/Kgdrywt	1	100	120	26.	58.
2,4,6-Trinitrotoluene	U	58	ug/Kgdrywt	1	100	120	7.8	58.
2-Am-DNT	U	58	ug/Kgdrywt	1	100	120	24.	58.
4-Am-DNT	U	58	ug/Kgdrywt	1	100	120	20.	58.
2,6-Dinitrotoluene	U	58	ug/Kgdrywt	1	100	120	32.	58.
2,4-Dinitrotoluene	U	58	ug/Kgdrywt	1	100	120	18.	58.
2-Nitrotoluene	U	58	ug/Kgdrywt	1	100	120	14.	58.
3-Nitrotoluene	U	58	ug/Kgdrywt	1	100	120	9.2	58.
4-Nitrotoluene	U	58	ug/Kgdrywt	1	100	120	32.	58.
Nitroglycerin	U	470	ug/Kgdrywt	1	800	940	140	470
PETN	U	470	ug/Kgdrywt	1	800	940	130	470
1,2-Dinitrobenzene		92.6	%					

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-6
Client ID: CHAAP-BKRD-SB13
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: HLC10090.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: JMS
Extraction Method: SW846 8330B MOD
Lab Prep Batch: WG225027

Analysis Date: 21-MAR-18
Analyst: AC
Analysis Method: SW846 8330B
Matrix: SL
% Solids: 80.
Report Date: 27-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	62	ug/Kgdrywt	1	100	120	11.	62.
RDX	U	62	ug/Kgdrywt	1	100	120	8.4	62.
1,3,5-Trinitrobenzene	U	62	ug/Kgdrywt	1	100	120	8.3	62.
1,3-Dinitrobenzene	U	62	ug/Kgdrywt	1	100	120	7.7	62.
Tetryl	U	62	ug/Kgdrywt	1	100	120	6.7	62.
Nitrobenzene	U	62	ug/Kgdrywt	1	100	120	27.	62.
2,4,6-Trinitrotoluene	U	62	ug/Kgdrywt	1	100	120	8.3	62.
2-Am-DNT	U	62	ug/Kgdrywt	1	100	120	26.	62.
4-Am-DNT	U	62	ug/Kgdrywt	1	100	120	21.	62.
2,6-Dinitrotoluene	U	62	ug/Kgdrywt	1	100	120	33.	62.
2,4-Dinitrotoluene	U	62	ug/Kgdrywt	1	100	120	19.	62.
2-Nitrotoluene	U	62	ug/Kgdrywt	1	100	120	15.	62.
3-Nitrotoluene	U	62	ug/Kgdrywt	1	100	120	9.8	62.
4-Nitrotoluene	U	62	ug/Kgdrywt	1	100	120	33.	62.
Nitroglycerin	U	500	ug/Kgdrywt	1	800	990	150	500
PETN	U	500	ug/Kgdrywt	1	800	990	130	500
1,2-Dinitrobenzene		92.2	%					

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-7
Client ID: CHAAP-BKRD-SS08
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: HLC10091.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: JMS
Extraction Method: SW846 8330B MOD
Lab Prep Batch: WG225027

Analysis Date: 21-MAR-18
Analyst: AC
Analysis Method: SW846 8330B
Matrix: SL
% Solids: 79.
Report Date: 27-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	60	ug/Kgdrywt	1	100	120	10.	60.
RDX	U	60	ug/Kgdrywt	1	100	120	8.1	60.
1,3,5-Trinitrobenzene	U	60	ug/Kgdrywt	1	100	120	8.0	60.
1,3-Dinitrobenzene	U	60	ug/Kgdrywt	1	100	120	7.4	60.
Tetryl	U	60	ug/Kgdrywt	1	100	120	6.5	60.
Nitrobenzene	U	60	ug/Kgdrywt	1	100	120	26.	60.
2,4,6-Trinitrotoluene	U	60	ug/Kgdrywt	1	100	120	8.0	60.
2-Am-DNT	U	60	ug/Kgdrywt	1	100	120	25.	60.
4-Am-DNT	U	60	ug/Kgdrywt	1	100	120	20.	60.
2,6-Dinitrotoluene	U	60	ug/Kgdrywt	1	100	120	32.	60.
2,4-Dinitrotoluene	U	60	ug/Kgdrywt	1	100	120	18.	60.
2-Nitrotoluene	U	60	ug/Kgdrywt	1	100	120	14.	60.
3-Nitrotoluene	U	60	ug/Kgdrywt	1	100	120	9.4	60.
4-Nitrotoluene	U	60	ug/Kgdrywt	1	100	120	32.	60.
Nitroglycerin	U	480	ug/Kgdrywt	1	800	960	150	480
PETN	U	480	ug/Kgdrywt	1	800	960	130	480
1,2-Dinitrobenzene		88.6	%					

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-8
Client ID: CHAAP-BKRD-SS09
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: HLC10093.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: JMS
Extraction Method: SW846 8330B MOD
Lab Prep Batch: WG225027

Analysis Date: 22-MAR-18
Analyst: AC
Analysis Method: SW846 8330B
Matrix: SL
% Solids: 83.
Report Date: 19-APR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	60	ug/Kgdrywt	1	100	120	10.	60.
RDX	U	60	ug/Kgdrywt	1	100	120	8.1	60.
1,3,5-Trinitrobenzene	U	60	ug/Kgdrywt	1	100	120	8.0	60.
1,3-Dinitrobenzene	U	60	ug/Kgdrywt	1	100	120	7.4	60.
Tetryl	U	60	ug/Kgdrywt	1	100	120	6.4	60.
Nitrobenzene	U	60	ug/Kgdrywt	1	100	120	26.	60.
2,4,6-Trinitrotoluene	U	60	ug/Kgdrywt	1	100	120	8.0	60.
2-Am-DNT	U	60	ug/Kgdrywt	1	100	120	25.	60.
4-Am-DNT	U	60	ug/Kgdrywt	1	100	120	20.	60.
2,6-Dinitrotoluene	U	60	ug/Kgdrywt	1	100	120	32.	60.
2,4-Dinitrotoluene	U	60	ug/Kgdrywt	1	100	120	18.	60.
2-Nitrotoluene	U	60	ug/Kgdrywt	1	100	120	14.	60.
3-Nitrotoluene	U	60	ug/Kgdrywt	1	100	120	9.4	60.
4-Nitrotoluene	U	60	ug/Kgdrywt	1	100	120	32.	60.
Nitroglycerin	U	480	ug/Kgdrywt	1	800	960	150	480
PETN	U	480	ug/Kgdrywt	1	800	960	130	480
1,2-Dinitrobenzene		88.3	%					

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-9
Client ID: CHAAP-BKRD-SS10
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: HLC10094.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: JMS
Extraction Method: SW846 8330B MOD
Lab Prep Batch: WG225027

Analysis Date: 22-MAR-18
Analyst: AC
Analysis Method: SW846 8330B
Matrix: SL
% Solids: 75.
Report Date: 27-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	65	ug/Kgdrywt	1	100	130	11.	65.
RDX	U	65	ug/Kgdrywt	1	100	130	8.8	65.
1,3,5-Trinitrobenzene	U	65	ug/Kgdrywt	1	100	130	8.7	65.
1,3-Dinitrobenzene	U	65	ug/Kgdrywt	1	100	130	8.1	65.
Tetryl	U	65	ug/Kgdrywt	1	100	130	7.0	65.
Nitrobenzene	U	65	ug/Kgdrywt	1	100	130	29.	65.
2,4,6-Trinitrotoluene	U	65	ug/Kgdrywt	1	100	130	8.7	65.
2-Am-DNT	U	65	ug/Kgdrywt	1	100	130	27.	65.
4-Am-DNT	U	65	ug/Kgdrywt	1	100	130	22.	65.
2,6-Dinitrotoluene	U	65	ug/Kgdrywt	1	100	130	35.	65.
2,4-Dinitrotoluene	U	65	ug/Kgdrywt	1	100	130	20.	65.
2-Nitrotoluene	U	65	ug/Kgdrywt	1	100	130	16.	65.
3-Nitrotoluene	U	65	ug/Kgdrywt	1	100	130	10.	65.
4-Nitrotoluene	U	65	ug/Kgdrywt	1	100	130	35.	65.
Nitroglycerin	U	520	ug/Kgdrywt	1	800	1000	160	520
PETN	U	520	ug/Kgdrywt	1	800	1000	140	520
1,2-Dinitrobenzene		88.9	%					

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-10
Client ID: CHAAP-BKRD-SS11
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: HLC10095.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: JMS
Extraction Method: SW846 8330B MOD
Lab Prep Batch: WG225027

Analysis Date: 22-MAR-18
Analyst: AC
Analysis Method: SW846 8330B
Matrix: SL
% Solids: 81.
Report Date: 19-APR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	59	ug/Kgdrywt	1	100	120	10.	59.
RDX	U	59	ug/Kgdrywt	1	100	120	8.0	59.
1,3,5-Trinitrobenzene	U	59	ug/Kgdrywt	1	100	120	7.9	59.
1,3-Dinitrobenzene	U	59	ug/Kgdrywt	1	100	120	7.3	59.
Tetryl	U	59	ug/Kgdrywt	1	100	120	6.4	59.
Nitrobenzene	U	59	ug/Kgdrywt	1	100	120	26.	59.
2,4,6-Trinitrotoluene	U	59	ug/Kgdrywt	1	100	120	7.9	59.
2-Am-DNT	U	59	ug/Kgdrywt	1	100	120	25.	59.
4-Am-DNT	U	59	ug/Kgdrywt	1	100	120	20.	59.
2,6-Dinitrotoluene	U	59	ug/Kgdrywt	1	100	120	32.	59.
2,4-Dinitrotoluene	U	59	ug/Kgdrywt	1	100	120	18.	59.
2-Nitrotoluene	U	59	ug/Kgdrywt	1	100	120	14.	59.
3-Nitrotoluene	U	59	ug/Kgdrywt	1	100	120	9.3	59.
4-Nitrotoluene	U	59	ug/Kgdrywt	1	100	120	32.	59.
Nitroglycerin	U	470	ug/Kgdrywt	1	800	940	150	470
PETN	U	470	ug/Kgdrywt	1	800	940	130	470
1,2-Dinitrobenzene		88.0	%					

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Cert No E87604

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-11
Client ID: CHAAP-BKRD-SS12
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: HLC10096.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: JMS
Extraction Method: SW846 8330B MOD
Lab Prep Batch: WG225027

Analysis Date: 22-MAR-18
Analyst: AC
Analysis Method: SW846 8330B
Matrix: SL
% Solids: 78.
Report Date: 27-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	63	ug/Kgdrywt	1	100	130	11.	63.
RDX	U	63	ug/Kgdrywt	1	100	130	8.6	63.
1,3,5-Trinitrobenzene	U	63	ug/Kgdrywt	1	100	130	8.4	63.
1,3-Dinitrobenzene	U	63	ug/Kgdrywt	1	100	130	7.8	63.
Tetryl	U	63	ug/Kgdrywt	1	100	130	6.8	63.
Nitrobenzene	U	63	ug/Kgdrywt	1	100	130	28.	63.
2,4,6-Trinitrotoluene	U	63	ug/Kgdrywt	1	100	130	8.4	63.
2-Am-DNT	U	63	ug/Kgdrywt	1	100	130	26.	63.
4-Am-DNT	U	63	ug/Kgdrywt	1	100	130	21.	63.
2,6-Dinitrotoluene	U	63	ug/Kgdrywt	1	100	130	34.	63.
2,4-Dinitrotoluene	U	63	ug/Kgdrywt	1	100	130	19.	63.
2-Nitrotoluene	U	63	ug/Kgdrywt	1	100	130	15.	63.
3-Nitrotoluene	U	63	ug/Kgdrywt	1	100	130	10.	63.
4-Nitrotoluene	U	63	ug/Kgdrywt	1	100	130	34.	63.
Nitroglycerin	U	500	ug/Kgdrywt	1	800	1000	160	500
PETN	U	500	ug/Kgdrywt	1	800	1000	140	500
1,2-Dinitrobenzene		89.4	%					

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Cert No E87604

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-12
Client ID: CHAAP-BKRD-SS13
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: HLC10097.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: JMS
Extraction Method: SW846 8330B MOD
Lab Prep Batch: WG225027

Analysis Date: 22-MAR-18
Analyst: AC
Analysis Method: SW846 8330B
Matrix: SL
% Solids: 78.
Report Date: 27-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	62	ug/Kgdrywt	1	100	120	11.	62.
RDX	U	62	ug/Kgdrywt	1	100	120	8.4	62.
1,3,5-Trinitrobenzene	U	62	ug/Kgdrywt	1	100	120	8.3	62.
1,3-Dinitrobenzene	U	62	ug/Kgdrywt	1	100	120	7.6	62.
Tetryl	U	62	ug/Kgdrywt	1	100	120	6.6	62.
Nitrobenzene	U	62	ug/Kgdrywt	1	100	120	27.	62.
2,4,6-Trinitrotoluene	U	62	ug/Kgdrywt	1	100	120	8.3	62.
2-Am-DNT	U	62	ug/Kgdrywt	1	100	120	26.	62.
4-Am-DNT	U	62	ug/Kgdrywt	1	100	120	21.	62.
2,6-Dinitrotoluene	U	62	ug/Kgdrywt	1	100	120	33.	62.
2,4-Dinitrotoluene	U	62	ug/Kgdrywt	1	100	120	18.	62.
2-Nitrotoluene	U	62	ug/Kgdrywt	1	100	120	15.	62.
3-Nitrotoluene	U	62	ug/Kgdrywt	1	100	120	9.7	62.
4-Nitrotoluene	U	62	ug/Kgdrywt	1	100	120	33.	62.
Nitroglycerin	U	490	ug/Kgdrywt	1	800	990	150	490
PETN	U	490	ug/Kgdrywt	1	800	990	130	490
1,2-Dinitrobenzene		89.8	%					

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-13
Client ID: CHAAP-BKRD-SS109
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: HLC10098.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: JMS
Extraction Method: SW846 8330B MOD
Lab Prep Batch: WG225027

Analysis Date: 22-MAR-18
Analyst: AC
Analysis Method: SW846 8330B
Matrix: SL
% Solids: 83.
Report Date: 27-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	60	ug/Kgdrywt	1	100	120	10.	60.
RDX	U	60	ug/Kgdrywt	1	100	120	8.1	60.
1,3,5-Trinitrobenzene	U	60	ug/Kgdrywt	1	100	120	8.0	60.
1,3-Dinitrobenzene	U	60	ug/Kgdrywt	1	100	120	7.4	60.
Tetryl	U	60	ug/Kgdrywt	1	100	120	6.4	60.
Nitrobenzene	U	60	ug/Kgdrywt	1	100	120	26.	60.
2,4,6-Trinitrotoluene	U	60	ug/Kgdrywt	1	100	120	8.0	60.
2-Am-DNT	U	60	ug/Kgdrywt	1	100	120	25.	60.
4-Am-DNT	U	60	ug/Kgdrywt	1	100	120	20.	60.
2,6-Dinitrotoluene	U	60	ug/Kgdrywt	1	100	120	32.	60.
2,4-Dinitrotoluene	U	60	ug/Kgdrywt	1	100	120	18.	60.
2-Nitrotoluene	U	60	ug/Kgdrywt	1	100	120	14.	60.
3-Nitrotoluene	U	60	ug/Kgdrywt	1	100	120	9.4	60.
4-Nitrotoluene	U	60	ug/Kgdrywt	1	100	120	32.	60.
Nitroglycerin	U	480	ug/Kgdrywt	1	800	960	150	480
PETN	U	480	ug/Kgdrywt	1	800	960	130	480
1,2-Dinitrobenzene		89.9	%					

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-14
Client ID: CHAAP-BKRD-EB-031418
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: HLC10046.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: JMS
Extraction Method: SW846 8330
Lab Prep Batch: WG225094

Analysis Date: 20-MAR-18
Analyst: AC
Analysis Method: SW846 8330B
Matrix: AQ
% Solids: NA
Report Date: 27-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	0.12	ug/L	1	.25	0.25	0.043	0.12
RDX	U	0.12	ug/L	1	.25	0.25	0.046	0.12
1,3,5-Trinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.040	0.12
1,3-Dinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.045	0.12
Tetryl	U	0.12	ug/L	1	.25	0.25	0.060	0.12
Nitrobenzene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
2,4,6-Trinitrotoluene	U	0.12	ug/L	1	.25	0.25	0.064	0.12
4-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.053	0.12
2-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.038	0.12
2,6-Dinitrotoluene	U	0.12	ug/L	1	.25	0.25	0.056	0.12
2,4-Dinitrotoluene	U	0.12	ug/L	1	.25	0.25	0.052	0.12
2-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
4-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.060	0.12
3-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.063	0.12
Nitroglycerin	U	2.0	ug/L	1	4	4.0	0.67	2.0
PETN	U	2.0	ug/L	1	4	4.0	0.58	2.0
1,2-Dinitrobenzene		98.5	%					

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Report of Analytical Results

Client:
Lab ID: WG225027-1
Client ID: Method Blank Sample
Project:
SDG: SL2079
Lab File ID: HLC10039.D

Sample Date:
Received Date:
Extract Date: 19-MAR-18
Extracted By: JMS
Extraction Method: SW846 8330B MOD
Lab Prep Batch: WG225027

Analysis Date: 20-MAR-18
Analyst: AC
Analysis Method: SW846 8330B
Matrix: SL
% Solids: NA
Report Date: 27-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	50	ug/Kgdrywt	1	100	100	8.6	50.
RDX	U	50	ug/Kgdrywt	1	100	100	6.8	50.
1,3,5-Trinitrobenzene	U	50	ug/Kgdrywt	1	100	100	6.7	50.
1,3-Dinitrobenzene	U	50	ug/Kgdrywt	1	100	100	6.2	50.
Tetryl	U	50	ug/Kgdrywt	1	100	100	5.4	50.
Nitrobenzene	U	50	ug/Kgdrywt	1	100	100	22.	50.
2,4,6-Trinitrotoluene	U	50	ug/Kgdrywt	1	100	100	6.7	50.
2-Am-DNT	U	50	ug/Kgdrywt	1	100	100	21.	50.
4-Am-DNT	U	50	ug/Kgdrywt	1	100	100	17.	50.
2,6-Dinitrotoluene	U	50	ug/Kgdrywt	1	100	100	27.	50.
2,4-Dinitrotoluene	U	50	ug/Kgdrywt	1	100	100	15.	50.
2-Nitrotoluene	U	50	ug/Kgdrywt	1	100	100	12.	50.
3-Nitrotoluene	U	50	ug/Kgdrywt	1	100	100	7.9	50.
4-Nitrotoluene	U	50	ug/Kgdrywt	1	100	100	27.	50.
Nitroglycerin	U	400	ug/Kgdrywt	1	800	800	120	400
PETN	U	400	ug/Kgdrywt	1	800	800	110	400
1,2-Dinitrobenzene		90.4	%					

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Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG225094-1
Client ID: Method Blank Sample
Project:
SDG: SL2079
Lab File ID: HLC10044.D

Sample Date:
Received Date:
Extract Date: 19-MAR-18
Extracted By: JMS
Extraction Method: SW846 8330
Lab Prep Batch: WG225094

Analysis Date: 20-MAR-18
Analyst: AC
Analysis Method: SW846 8330B
Matrix: AQ
% Solids: NA
Report Date: 27-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	0.12	ug/L	1	.25	0.25	0.043	0.12
RDX	U	0.12	ug/L	1	.25	0.25	0.046	0.12
1,3,5-Trinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.040	0.12
1,3-Dinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.045	0.12
Tetryl	U	0.12	ug/L	1	.25	0.25	0.060	0.12
Nitrobenzene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
2,4,6-Trinitrotoluene	U	0.12	ug/L	1	.25	0.25	0.064	0.12
4-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.053	0.12
2-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.038	0.12
2,6-Dinitrotoluene	U	0.12	ug/L	1	.25	0.25	0.056	0.12
2,4-Dinitrotoluene	U	0.12	ug/L	1	.25	0.25	0.052	0.12
2-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
4-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.060	0.12
3-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.063	0.12
Nitroglycerin	U	2.0	ug/L	1	4	4.0	0.67	2.0
PETN	U	2.0	ug/L	1	4	4.0	0.58	2.0
1,2-Dinitrobenzene		96.3	%					

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Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** Cornhusker Army Ammunition Plant **Matrix:** AQ
Lab Code: KAS **SDG:** SL2079

Client Sample ID	Lab Sample ID	Col. ID	DNB	#
CHAAP-BKRD-EB-031418	SL2079-14	B	98.5	
Method Blank Sample	WG225094-1	B	96.3	
Laboratory Control S	WG225094-2	B	101.	

		QC Limits
DNB	1,2-DINITROBENZENE	83-120

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

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Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** Cornhusker Army Ammunition Plant **Matrix:** SL
Lab Code: KAS **SDG:** SL2079

Client Sample ID	Lab Sample ID	Col. ID	DNB	#
CHAAP-BKRD-SB08	SL2079-1	B	93.5	
CHAAP-BKRD-SS11	SL2079-10	B	88.0	
CHAAP-BKRD-SS12	SL2079-11	B	89.4	
CHAAP-BKRD-SS13	SL2079-12	B	89.8	
CHAAP-BKRD-SS109	SL2079-13	B	89.9	
CHAAP-BKRD-SB09	SL2079-2	B	94.1	
CHAAP-BKRD-SB10	SL2079-3	B	95.8	
CHAAP-BKRD-SB11	SL2079-4	B	93.3	
CHAAP-BKRD-SB12	SL2079-5	B	92.6	
CHAAP-BKRD-SB13	SL2079-6	B	92.2	
CHAAP-BKRD-SS08	SL2079-7	B	88.6	
CHAAP-BKRD-SS09	SL2079-8	B	88.3	
CHAAP-BKRD-SS10	SL2079-9	B	88.9	
Method Blank Sample	WG225027-1	B	90.4	
Laboratory Control S	WG225027-2	B	99.4	
Matrix Spike	WG225027-3	B	98.2	
Matrix Spike Duplica	WG225027-4	B	185.	*
Laboratory Control S	WG225027-5	B	101.	

		QC Limits
DNB	1,2-DINITROBENZENE	78-125

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

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LCS Recovery Report

Client:
Lab ID: WG225094-2
Client ID: LCS
Project:
SDG: SL2079
LCS File ID: HLC10045.D

Sample Date:
Received Date:
Extract Date: 19-MAR-18
Extracted By: JMS
Extraction Method: SW846 8330
Lab Prep Batch: WG225094

Analysis Date: 20-MAR-18
Analyst: AC
Analysis Method: SW846 8330B
Matrix: AQ
% Solids: NA
Report Date: 27-MAR-18

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
HMX	113.	5.00	5.66	ug/L	65-135
RDX	114.	5.00	5.71	ug/L	68-130
1,3,5-Trinitrobenzene	110.	5.00	5.51	ug/L	73-125
1,3-Dinitrobenzene	115.	5.00	5.74	ug/L	78-120
Tetryl	103.	5.00	5.16	ug/L	64-128
Nitrobenzene	115.	5.00	5.74	ug/L	65-134
2,4,6-Trinitrotoluene	109.	5.00	5.44	ug/L	71-123
4-Am-DNT	121.	5.00	6.03	ug/L	76-125
2-Am-DNT	114.	5.00	5.70	ug/L	79-120
2,6-Dinitrotoluene	111.	5.00	5.54	ug/L	77-127
2,4-Dinitrotoluene	116.	5.00	5.79	ug/L	78-120
2-Nitrotoluene	117.	5.00	5.85	ug/L	70-127
4-Nitrotoluene	120.	5.00	6.01	ug/L	71-127
3-Nitrotoluene	111.	5.00	5.53	ug/L	73-125
Nitroglycerin	111.	20.0	22.2	ug/L	74-127
PETN	103.	20.0	20.6	ug/L	73-127
1,2-Dinitrobenzene	101.				83-120

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ANALYTICAL SERVICES

LCS/LCSD Recovery Report

LCS ID: WG225027-2
LCSD ID: WG225027-5
Project:
SDG: SL2079
Report Date: 19-APR-18
LCS File ID: HLC10040.D

Received Date:
Extract Date: 19-MAR-18
Extracted By: JMS
Extraction Method: SW846 8330B MOD
Lab Prep Batch: WG225027
LCSD File ID: HLC10041.D

Analysis Date: 20-MAR-18
Analyst: AC
Analysis Method: SW846 8330B
Matrix: SL
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
HMX	1000	1030	103.	1030	103.	ug/Kgdrywt	0	20	74-125
RDX	1000	993.	99.3	984.	98.4	ug/Kgdrywt	1	20	67-129
1,3,5-Trinitrobenzene	1000	1040	104.	1050	105.	ug/Kgdrywt	1	20	80-125
1,3-Dinitrobenzene	1000	1030	103.	1030	103.	ug/Kgdrywt	0	20	73-125
Tetryl	1000	1090	109.	1120	112.	ug/Kgdrywt	3	20	68-135
Nitrobenzene	1000	1000	100.	1000	100.	ug/Kgdrywt	0	20	67-129
2,4,6-Trinitrotoluene	1000	1020	102.	1020	102.	ug/Kgdrywt	0	20	71-125
2-Am-DNT	1000	1010	101.	1010	101.	ug/Kgdrywt	0	20	71-125
4-Am-DNT	1000	1060	106.	1070	107.	ug/Kgdrywt	1	20	64-127
2,6-Dinitrotoluene	1000	1030	103.	1010	101.	ug/Kgdrywt	2	20	79-125
2,4-Dinitrotoluene	1000	1040	104.	1030	103.	ug/Kgdrywt	1	20	75-125
2-Nitrotoluene	1000	1060	106.	1050	105.	ug/Kgdrywt	1	20	70-125
3-Nitrotoluene	1000	1040	104.	1040	104.	ug/Kgdrywt	0	20	67-129
4-Nitrotoluene	1000	1090	109.	1080	108.	ug/Kgdrywt	1	20	71-125
Nitroglycerin	1000	880.	88.0	822.	82.2	ug/Kgdrywt	7	20	73-125
PETN	1000	1030	103.	1130	113.	ug/Kgdrywt	9	20	72-128
1,2-Dinitrobenzene			99.4		101.				78-125

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REISSUE

Katahdin Analytical Services A0000164

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MS/MSD Recovery Report

MS ID: WG225027-3
MSD ID: WG225027-4
Sample ID: SL2079-9
Client ID: CHAAP-BKRD-SS10
Project:
SDG: SL2079
MS File ID: HLC10042.D

Received Date:
Extract Date: 19-MAR-18
Extracted By: JMS
Extraction Method: SW846 8330B MOD
Lab Prep Batch: WG225027
Report Date: 19-APR-18
MSD File ID: HLC10043.D

Analysis Date: 20-MAR-18
Analyst: AC
Analysis Method: SW846 8330B
Matrix: SL
% Solids: 75.

Compound	MS Spike	MSD Spike	Conc Units	Samp Conc	MS Conc	MSD Conc	MS Rec (%)	MSD Rec (%)	RPD (%)	RPD Limit	Limits
HMX	1330	1280	ug/Kgdrywt	U65	1400	1200	102.	97.9	8	20	74-125
RDX	1330	1280	ug/Kgdrywt	U65	1300	1200	97.2	93.2	8	20	67-129
1,3,5-Trinitrobenzene	1330	1280	ug/Kgdrywt	U65	1300	1300	100.	98.7	5	20	80-125
1,3-Dinitrobenzene	1330	1280	ug/Kgdrywt	U65	1400	1300	102.	98.7	7	20	73-125
Tetryl	1330	1280	ug/Kgdrywt	U65	1400	1300	107.	104.	6	20	68-135
Nitrobenzene	1330	1280	ug/Kgdrywt	U65	1300	1200	99.5	96.4	7	20	67-129
2,4,6-Trinitrotoluene	1330	1280	ug/Kgdrywt	U65	1300	1200	98.7	94.8	8	20	71-125
2-Am-DNT	1330	1280	ug/Kgdrywt	U65	1300	1200	101.	97.9	7	20	71-125
4-Am-DNT	1330	1280	ug/Kgdrywt	U65	1400	1300	106.	103.	6	20	64-127
2,6-Dinitrotoluene	1330	1280	ug/Kgdrywt	U65	1300	1200	100.	97.1	7	20	79-125
2,4-Dinitrotoluene	1330	1280	ug/Kgdrywt	U65	1300	1300	101.	98.7	6	20	75-125
2-Nitrotoluene	1330	1280	ug/Kgdrywt	U65	1400	1300	105.	101.	7	20	70-125
3-Nitrotoluene	1330	1280	ug/Kgdrywt	U65	1400	1200	102.	97.1	8	20	67-129
4-Nitrotoluene	1330	1280	ug/Kgdrywt	U65	1400	1300	107.	103.	8	20	71-125
Nitroglycerin	1330	1280	ug/Kgdrywt	U520	1200	1100	90.4	85.4	10	20	73-125
PETN	1330	1280	ug/Kgdrywt	U520	1200	1300	89.7	102.	9	20	72-128
1,2-Dinitrobenzene							98.2	185.*			78-125

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REISSUE

Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : HLC10039.D
Instrument ID : HPLC02
Matrix : SL

SDG : SL2079
Lab Sample ID : WG225027-1
Date Extracted : 19-MAR-18
Date Analyzed : 20-MAR-18
Time Analyzed : 19:09

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG225027-2	HLC10040.	03/20/18	19:40
Laboratory Control S	WG225027-5	HLC10041.	03/20/18	20:12
Matrix Spike	WG225027-3	HLC10042.	03/20/18	20:44
Matrix Spike Duplica	WG225027-4	HLC10043.	03/20/18	21:16
CHAAP-BKRD-SB08	SL2079-1	HLC10085.	03/21/18	20:45
CHAAP-BKRD-SB09	SL2079-2	HLC10086.	03/21/18	21:17
CHAAP-BKRD-SB10	SL2079-3	HLC10087.	03/21/18	21:49
CHAAP-BKRD-SB11	SL2079-4	HLC10088.	03/21/18	22:20
CHAAP-BKRD-SB12	SL2079-5	HLC10089.	03/21/18	22:52
CHAAP-BKRD-SB13	SL2079-6	HLC10090.	03/21/18	23:24
CHAAP-BKRD-SS08	SL2079-7	HLC10091.	03/21/18	23:56
CHAAP-BKRD-SS09	SL2079-8	HLC10093.	03/22/18	00:59
CHAAP-BKRD-SS10	SL2079-9	HLC10094.	03/22/18	04:27
CHAAP-BKRD-SS11	SL2079-10	HLC10095.	03/22/18	04:59
CHAAP-BKRD-SS12	SL2079-11	HLC10096.	03/22/18	05:31
CHAAP-BKRD-SS13	SL2079-12	HLC10097.	03/22/18	06:02
CHAAP-BKRD-SS109	SL2079-13	HLC10098.	03/22/18	06:34

Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : HLC10044.D
Instrument ID : HPLC02
Matrix : AQ

SDG : SL2079
Lab Sample ID : WG225094-1
Date Extracted : 19-MAR-18
Date Analyzed : 20-MAR-18
Time Analyzed : 21:47

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG225094-2	HLC10045.	03/20/18	22:19
CHAAP-BKRD-EB-031418	SL2079-14	HLC10046.	03/20/18	22:51

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Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL2079
Project : Cornhusker Army Ammunition Plant
Instrument ID: HPLC02
Lab File IDs : HLC10037.D HLC10036.D HLC10035.D HLC10034.D HLC10033.D HLC10032.D HLC10031.D
Calibration Date(s): 20-MAR-18 14:54 20-MAR-18 18:05

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7		Crv				Max	
	0.025000(	0.050000(	0.100000(	0.250000(	0.500000(	1.0000	2.0000		New	b	m1	%RSD	%RSD	
NITROGLYCERIN	5440	5685	5280	5392	5454	5917	5425		AVG		5513	3.90686	20.00000	O
PETN	3020	2970	2465	3064	2834	3010	2768		AVG		2876	7.31282	15.00000	O

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL2079
Project : Cornhusker Army Ammunition Plant
Instrument ID: HPLC02
Lab File IDs : HLC10037.D HLC10036.D HLC10035.D HLC10034.D HLC10033.D HLC10032.D HLC10031.D
Calibration Date(s): 20-MAR-18 14:54 20-MAR-18 18:05

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7		Crv				Max	
	0.025000(	0.050000(	0.100000(	0.250000(	0.500000(	1.0000	2.0000		New	b	m1	%RSD	%RSD	
HMX	5320	5440	5140	5296	5378	5810	5351		AVG		5391	3.83807	20.00000	O
RDX	75.00000	225	466	1287	2694	5888	10895		LNR	0.00587	5552	0.99828	0.99000	O
1,3,5-trinitrobenzene	3240	3680	3770	3628	3744	4074	3686		AVG		3689	6.66990	20.00000	O
1,3-dinitrobenzene	6680	7280	7410	7508	7512	8198	7518		AVG		7444	5.99405	20.00000	O
TETRYL	2240	2660	2530	2424	2550	2797	2541		AVG		2535	6.90733	20.00000	O
nitrobenzene	6760	6820	6610	6736	6892	7418	6831		AVG		6867	3.77157	20.00000	O
2,4,6-trinitrotoluene	2600	2520	2510	2460	2478	2672	2445		AVG		2526	3.24744	20.00000	O
4-AM-DNT	4200	4040	4240	4260	4366	4695	4318		AVG		4303	4.68155	20.00000	O
2-AM-DNT	5360	5700	5640	5720	5838	6280	5787		AVG		5761	4.78978	20.00000	O
2,6-dinitrotoluene	101	175	345	733	1390	3147	5661		LNR	-0.01275	2869	0.99714	0.99000	O
2,4-dinitrotoluene	4280	4700	4560	4552	4620	5008	4610		AVG		4619	4.68458	20.00000	O
2-nitrotoluene	2520	2760	2900	2944	2952	3214	2937		AVG		2890	7.31192	20.00000	O
4-nitrotoluene	2280	1980	2350	2484	2298	2635	2370		AVG		2342	8.60342	20.00000	O
3-nitrotoluene	3360	3180	3390	3404	3136	3585	3225		AVG		3326	4.69272	20.00000	O
1,2-dinitrobenzene	4680	4500	4480	4532	4640	4978	4582		AVG		4627	3.69030	20.00000	

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

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Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition F
Lab ID : WG225143-9
Lab File ID : HLC10049.D
Initial Calibration Date(s): 03/20/18 14:54 03/20/18 18:05

SDG: SL2079
Analytical Date: 03/21/18 00:26
Instrument ID: HPLC02
Column ID: A

Compound	$\overline{RRF}$/Amount	RF0.500	Min RRF	%D/ %Drift	Max %D/ %Drift	Curve Type
130 NITROGLYCERIN	5513	5412	0.010	-1.83553	20.00000	Averaged
140 PETN	2876	2882	0.010	0.19684	20.00000	Averaged

*** = Compound out of QC criteria**

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG225143-9
Lab File ID : HLC10049.D
Initial Calibration Date(s): 03/20/18 14:54 03/20/18 18:05

SDG: SL2079
Analytical Date: 03/21/18 00:26
Instrument ID: HPLC02
Column ID: B

	Compound	RRF/Amount	RF0.500	CCAL RRF0.500	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
1	HMX	5391	5336	5336	0.010	-1.01366	20.00000	Averaged
4	RDX	0.50000	0.48680	5340	0.010	-2.64053	20.00000	Linear
5	1,3,5-trinitrobenzene	3689	3670	3670	0.010	-0.51119	20.00000	Averaged
6	1,3-dinitrobenzene	7444	7568	7568	0.010	1.66967	20.00000	Averaged
7	nitrobenzene	6867	6846	6846	0.010	-0.30063	20.00000	Averaged
9	TETRYL	2535	2450	2450	0.010	-3.33672	20.00000	Averaged
10	2,4,6-trinitrotoluene	2526	2460	2460	0.010	-2.62659	20.00000	Averaged
11	4-AM-DNT	4303	4346	4346	0.010	1.00601	20.00000	Averaged
12	2-AM-DNT	5761	5818	5818	0.010	0.99442	20.00000	Averaged
13	2,6-dinitrotoluene	0.50000	0.48644	2864	0.010	-2.71162	20.00000	Linear
14	2,4-dinitrotoluene	4619	4600	4600	0.010	-0.40056	20.00000	Averaged
15	2-nitrotoluene	2890	2980	2980	0.010	3.12948	20.00000	Averaged
16	4-nitrotoluene	2342	2480	2480	0.010	5.87303	20.00000	Averaged
17	3-nitrotoluene	3326	3392	3392	0.010	1.99532	20.00000	Averaged
2	1,2-dinitrobenzene	4627	4632	4632	0.010	0.09879	20.00000	Averaged

*** = Compound out of QC criteria**

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition F
Lab ID : WG225143-13
Lab File ID : HLC10081.D
Initial Calibration Date(s): 03/20/18 14:54 03/20/18 18:05

SDG: SL2079
Analytical Date: 03/21/18 18:38
Instrument ID: HPLC02
Column ID: A

Compound	RRF/Amount	RF0.250	Min RRF	%D/ %Drift	Max %D/ %Drift	Curve Type
130 NITROGLYCERIN	5513	5380	0.010	-2.41596	20.00000	Averaged
140 PETN	2876	2806	0.010	-2.42848	20.00000	Averaged

*** = Compound out of QC criteria**

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG225143-13
Lab File ID : HLC10081.D
Initial Calibration Date(s): 03/20/18 14:54 03/20/18 18:05

SDG: SL2079
Analytical Date: 03/21/18 18:38
Instrument ID: HPLC02
Column ID: B

	Compound	$\overline{RRF}$/Amount	RF0.250	CCAL RRF0.250	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
1	HMX	5391	5288	5288	0.010	-1.90409	20.00000	Averaged
4	RDX	0.25000	0.23859	5168	0.010	-4.56414	20.00000	Linear
5	1,3,5-trinitrobenzene	3689	3736	3736	0.010	1.27798	20.00000	Averaged
6	1,3-dinitrobenzene	7444	7752	7752	0.010	4.14156	20.00000	Averaged
7	nitrobenzene	6867	6748	6748	0.010	-1.72781	20.00000	Averaged
9	TETRYL	2535	2624	2624	0.010	3.52835	20.00000	Averaged
10	2,4,6-trinitrotoluene	2526	2464	2464	0.010	-2.46826	20.00000	Averaged
11	4-AM-DNT	4303	4320	4320	0.010	0.40174	20.00000	Averaged
12	2-AM-DNT	5761	5732	5732	0.010	-0.49845	20.00000	Averaged
13	2,6-dinitrotoluene	0.25000	0.23859	2884	0.010	-4.56349	20.00000	Linear
14	2,4-dinitrotoluene	4619	4584	4584	0.010	-0.74700	20.00000	Averaged
15	2-nitrotoluene	2890	3120	3120	0.010	7.97449	20.00000	Averaged
16	4-nitrotoluene	2342	2740	2740	0.010	16.97262	20.00000	Averaged
17	3-nitrotoluene	3326	3476	3476	0.010	4.52115	20.00000	Averaged
2	1,2-dinitrobenzene	4627	4576	4576	0.010	-1.11139	20.00000	Averaged

*** = Compound out of QC criteria**

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition F
Lab ID : WG225143-14
Lab File ID : HLC10092.D
Initial Calibration Date(s): 03/20/18 14:54 03/20/18 18:05

SDG: SL2079
Analytical Date: 03/22/18 00:27
Instrument ID: HPLC02
Column ID: A

Compound	RRF/Amount	RF0.500	Min RRF	%D/ %Drift	Max %D/ %Drift	Curve Type
130 NITROGLYCERIN	5513	5396	0.010	-2.12574	20.00000	Averaged
140 PETN	2876	2806	0.010	-2.44587	20.00000	Averaged

*** = Compound out of QC criteria**

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Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG225143-14
Lab File ID : HLC10092.D
Initial Calibration Date(s): 03/20/18 14:54 03/20/18 18:05

SDG: SL2079
Analytical Date: 03/22/18 00:27
Instrument ID: HPLC02
Column ID: B

	Compound	RRF/Amount	RF0.500	CCAL RRF0.500	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
1	HMX	5391	5370	5370	0.010	-0.38294	20.00000	Averaged
4	RDX	0.50000	0.48842	5358	0.010	-2.31631	20.00000	Linear
5	1,3,5-trinitrobenzene	3689	3718	3718	0.010	0.79002	20.00000	Averaged
6	1,3-dinitrobenzene	7444	7578	7578	0.010	1.80401	20.00000	Averaged
7	nitrobenzene	6867	6804	6804	0.010	-0.91228	20.00000	Averaged
9	TETRYL	2535	2586	2586	0.010	2.02908	20.00000	Averaged
10	2,4,6-trinitrotoluene	2526	2450	2450	0.010	-3.02242	20.00000	Averaged
11	4-AM-DNT	4303	4318	4318	0.010	0.35526	20.00000	Averaged
12	2-AM-DNT	5761	5754	5754	0.010	-0.11655	20.00000	Averaged
13	2,6-dinitrotoluene	0.50000	0.48261	2842	0.010	-3.47852	20.00000	Linear
14	2,4-dinitrotoluene	4619	4604	4604	0.010	-0.31395	20.00000	Averaged
15	2-nitrotoluene	2890	2986	2986	0.010	3.33712	20.00000	Averaged
16	4-nitrotoluene	2342	2452	2452	0.010	4.67768	20.00000	Averaged
17	3-nitrotoluene	3326	3306	3306	0.010	-0.59065	20.00000	Averaged
2	1,2-dinitrobenzene	4627	4566	4566	0.010	-1.32749	20.00000	Averaged

*** = Compound out of QC criteria**

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition F
Lab ID : WG225143-15
Lab File ID : HLC10103.D
Initial Calibration Date(s): 03/20/18 14:54 03/20/18 18:05

SDG: SL2079
Analytical Date: 03/22/18 09:13
Instrument ID: HPLC02
Column ID: A

Compound	RRF/Amount	RF0.250	Min RRF	%D/ %Drift	Max %D/ %Drift	Curve Type
130 NITROGLYCERIN	5513	5384	0.010	-2.34340	20.00000	Averaged
140 PETN	2876	2764	0.010	-3.88893	20.00000	Averaged

*** = Compound out of QC criteria**

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Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG225143-15
Lab File ID : HLC10103.D
Initial Calibration Date(s): 03/20/18 14:54 03/20/18 18:05

SDG: SL2079
Analytical Date: 03/22/18 09:13
Instrument ID: HPLC02
Column ID: B

	Compound	RRF/Amount	RF0.250	CCAL RRF0.250	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
1	HMX	5391	5312	5312	0.010	-1.45888	20.00000	Averaged
4	RDX	0.25000	0.24633	5340	0.010	-1.46605	20.00000	Linear
5	1,3,5-trinitrobenzene	3689	3384	3384	0.010	-8.26427	20.00000	Averaged
6	1,3-dinitrobenzene	7444	7072	7072	0.010	-4.99367	20.00000	Averaged
7	nitrobenzene	6867	6608	6608	0.010	-3.76666	20.00000	Averaged
9	TETRYL	2535	2344	2344	0.010	-7.51888	20.00000	Averaged
10	2,4,6-trinitrotoluene	2526	2276	2276	0.010	-9.90981	20.00000	Averaged
11	4-AM-DNT	4303	4096	4096	0.010	-4.80428	20.00000	Averaged
12	2-AM-DNT	5761	5412	5412	0.010	-6.05332	20.00000	Averaged
13	2,6-dinitrotoluene	0.25000	0.22883	2772	0.010	-8.46775	20.00000	Linear
14	2,4-dinitrotoluene	4619	4236	4236	0.010	-8.28191	20.00000	Averaged
15	2-nitrotoluene	2890	2876	2876	0.010	-0.46967	20.00000	Averaged
16	4-nitrotoluene	2342	2248	2248	0.010	-4.03123	20.00000	Averaged
17	3-nitrotoluene	3326	3072	3072	0.010	-7.62688	20.00000	Averaged
2	1,2-dinitrobenzene	4627	4552	4552	0.010	-1.63003	20.00000	Averaged

*** = Compound out of QC criteria**

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Form 8
GC Analytical Sequence

Lab Name : Katahdin Analytical Services
SDG : SL2079
Project : Cornhusker Army Ammunition Plant
Column ID : B
Instrument ID : HPLC02

Client Sample ID	Lab Sample ID	Date Analyzed	Time Analyzed	DNB	DNB
Initial Calibration	WG225143-7	03/20/18	14:54	8.575	
Initial Calibration	WG225143-6	03/20/18	15:26	8.57	
Initial Calibration	WG225143-5	03/20/18	15:58	8.57	
Initial Calibration	WG225143-4	03/20/18	16:30	8.57	
Initial Calibration	WG225143-3	03/20/18	17:01	8.57	
Initial Calibration	WG225143-2	03/20/18	17:33	8.574	
Initial Calibration	WG225143-1	03/20/18	18:05	8.587	
Independent Source	WG225143-8	03/20/18	18:37		
Method Blank Sample	WG225027-1	03/20/18	19:09	8.572	
Laboratory Control S	WG225027-2	03/20/18	19:40	8.562	
Laboratory Control S	WG225027-5	03/20/18	20:12	8.559	
Matrix Spike	WG225027-3	03/20/18	20:44	8.58	
Matrix Spike Duplica	WG225027-4	03/20/18	21:16	8.581	
Method Blank Sample	WG225094-1	03/20/18	21:47	8.593	
Laboratory Control S	WG225094-2	03/20/18	22:19	8.594	
CHAAP-BKRD-EB-031418	SL2079-14	03/20/18	22:51	8.592	
Continuing Calibrati	WG225143-9	03/21/18	00:26	8.567	
Continuing Calibrati	WG225143-13	03/21/18	18:38	8.541	
CHAAP-BKRD-SB08	SL2079-1	03/21/18	20:45	8.554	
CHAAP-BKRD-SB09	SL2079-2	03/21/18	21:17	8.558	
CHAAP-BKRD-SB10	SL2079-3	03/21/18	21:49	8.557	
CHAAP-BKRD-SB11	SL2079-4	03/21/18	22:20	8.563	
CHAAP-BKRD-SB12	SL2079-5	03/21/18	22:52	8.55	
CHAAP-BKRD-SB13	SL2079-6	03/21/18	23:24	8.557	
CHAAP-BKRD-SS08	SL2079-7	03/21/18	23:56	8.564	
Continuing Calibrati	WG225143-14	03/22/18	00:27	8.553	
CHAAP-BKRD-SS09	SL2079-8	03/22/18	00:59	8.557	
CHAAP-BKRD-SS10	SL2079-9	03/22/18	04:27	8.557	
CHAAP-BKRD-SS11	SL2079-10	03/22/18	04:59	8.558	
CHAAP-BKRD-SS12	SL2079-11	03/22/18	05:31	8.558	
CHAAP-BKRD-SS13	SL2079-12	03/22/18	06:02	8.555	
CHAAP-BKRD-SS109	SL2079-13	03/22/18	06:34	8.562	
Continuing Calibrati	WG225143-15	03/22/18	09:13	8.547	

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INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-BKRD-SB08

Matrix: SOIL **SDG Name:** SL2079

Percent Solids: 81.1 **Lab Sample ID:** SL2079-001

Concentration Units : mg/Kg drywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	15200			MS	5	6.5	0.32	2.6
7440-36-0	ANTIMONY, TOTAL	0.132			MS	5	0.065	0.013	0.032
7440-38-2	ARSENIC, TOTAL	7.20			MS	5	0.32	0.097	0.26
7440-39-3	BARIUM, TOTAL	207			MS	5	0.13	0.024	0.065
7440-41-7	BERYLLIUM, TOTAL	0.899			MS	5	0.065	0.0026	0.013
7440-43-9	CADMIUM, TOTAL	0.013	U		MS	5	0.065	0.0049	0.013
7440-70-2	CALCIUM, TOTAL	13800			MS	5	6.5	2.5	5.2
7440-47-3	CHROMIUM, TOTAL	13.8			MS	5	0.32	0.032	0.26
7440-48-4	COBALT, TOTAL	5.90			MS	5	0.065	0.0036	0.019
7440-50-8	COPPER, TOTAL	13.2			MS	5	0.19	0.045	0.13
7439-89-6	IRON, TOTAL	13800			MS	5	6.5	1.6	3.9
7439-92-1	LEAD, TOTAL	12.1			MS	5	0.065	0.0045	0.032
7439-95-4	MAGNESIUM, TOTAL	6640			MS	5	6.5	0.88	5.2
7439-96-5	MANGANESE, TOTAL	113			MS	5	0.13	0.027	0.065
7439-97-6	MERCURY, TOTAL	0.018	J		CV	1	0.039	0.0061	0.020
7440-02-0	NICKEL, TOTAL	15.6			MS	5	0.13	0.017	0.078
7440-09-7	POTASSIUM, TOTAL	4040			MS	5	65	3.0	26
7782-49-2	SELENIUM, TOTAL	0.335			MS	5	0.32	0.025	0.19
7440-22-4	SILVER, TOTAL	0.0914			MS	5	0.065	0.0042	0.026
7440-23-5	SODIUM, TOTAL	2290			MS	5	65	1.7	26
7440-28-0	THALLIUM, TOTAL	0.302			MS	5	0.065	0.0062	0.026
7440-62-2	VANADIUM, TOTAL	27.0			MS	5	0.32	0.071	0.26
7440-66-6	ZINC, TOTAL	45.7			MS	5	0.65	0.084	0.52

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-BKRD-SB09

Matrix: SOIL **SDG Name:** SL2079

Percent Solids: 86.1 **Lab Sample ID:** SL2079-002

Concentration Units : mg/Kg drywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	15000			MS	5	6.5	0.32	2.6
7440-36-0	ANTIMONY, TOTAL	0.189			MS	5	0.065	0.013	0.032
7440-38-2	ARSENIC, TOTAL	13.6			MS	5	0.32	0.097	0.26
7440-39-3	BARIUM, TOTAL	135			MS	5	0.13	0.024	0.065
7440-41-7	BERYLLIUM, TOTAL	0.872			MS	5	0.065	0.0026	0.013
7440-43-9	CADMIUM, TOTAL	0.013	U		MS	5	0.065	0.0049	0.013
7440-70-2	CALCIUM, TOTAL	10600			MS	5	6.5	2.5	5.2
7440-47-3	CHROMIUM, TOTAL	14.5			MS	5	0.32	0.032	0.26
7440-48-4	COBALT, TOTAL	7.10			MS	5	0.065	0.0036	0.019
7440-50-8	COPPER, TOTAL	13.7			MS	5	0.19	0.045	0.13
7439-89-6	IRON, TOTAL	15700			MS	5	6.5	1.6	3.9
7439-92-1	LEAD, TOTAL	13.0			MS	5	0.065	0.0045	0.032
7439-95-4	MAGNESIUM, TOTAL	5520			MS	5	6.5	0.88	5.2
7439-96-5	MANGANESE, TOTAL	118			MS	5	0.13	0.027	0.065
7439-97-6	MERCURY, TOTAL	0.029	J		CV	1	0.037	0.0058	0.019
7440-02-0	NICKEL, TOTAL	17.8			MS	5	0.13	0.017	0.078
7440-09-7	POTASSIUM, TOTAL	4220			MS	5	65	3.0	26
7782-49-2	SELENIUM, TOTAL	0.352			MS	5	0.32	0.025	0.19
7440-22-4	SILVER, TOTAL	0.108			MS	5	0.065	0.0042	0.026
7440-23-5	SODIUM, TOTAL	2050			MS	5	65	1.7	26
7440-28-0	THALLIUM, TOTAL	0.270			MS	5	0.065	0.0062	0.026
7440-62-2	VANADIUM, TOTAL	34.0			MS	5	0.32	0.071	0.26
7440-66-6	ZINC, TOTAL	47.9			MS	5	0.65	0.084	0.52

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-BKRD-SB10

Matrix: SOIL **SDG Name:** SL2079

Percent Solids: 83.6 **Lab Sample ID:** SL2079-003

Concentration Units : mg/Kg drywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	17300			MS	5	8.0	0.40	3.2
7440-36-0	ANTIMONY, TOTAL	0.216			MS	5	0.080	0.016	0.040
7440-38-2	ARSENIC, TOTAL	8.44			MS	5	0.40	0.12	0.32
7440-39-3	BARIUM, TOTAL	331			MS	5	0.16	0.029	0.080
7440-41-7	BERYLLIUM, TOTAL	0.844			MS	5	0.080	0.0032	0.016
7440-43-9	CADMIUM, TOTAL	0.016	U		MS	5	0.080	0.0060	0.016
7440-70-2	CALCIUM, TOTAL	46800			MS	5	8.0	3.0	6.4
7440-47-3	CHROMIUM, TOTAL	15.3			MS	5	0.40	0.039	0.32
7440-48-4	COBALT, TOTAL	6.44			MS	5	0.080	0.0044	0.024
7440-50-8	COPPER, TOTAL	10.6			MS	5	0.24	0.056	0.16
7439-89-6	IRON, TOTAL	14100			MS	5	8.0	1.9	4.8
7439-92-1	LEAD, TOTAL	11.8			MS	5	0.080	0.0056	0.040
7439-95-4	MAGNESIUM, TOTAL	6680			MS	5	8.0	1.1	6.4
7439-96-5	MANGANESE, TOTAL	134			MS	5	0.16	0.034	0.080
7439-97-6	MERCURY, TOTAL	0.018	J		CV	1	0.031	0.0048	0.016
7440-02-0	NICKEL, TOTAL	16.2			MS	5	0.16	0.021	0.096
7440-09-7	POTASSIUM, TOTAL	4460			MS	5	80	3.7	32
7782-49-2	SELENIUM, TOTAL	0.411			MS	5	0.40	0.031	0.24
7440-22-4	SILVER, TOTAL	0.0672	J		MS	5	0.080	0.0052	0.032
7440-23-5	SODIUM, TOTAL	916			MS	5	80	2.0	32
7440-28-0	THALLIUM, TOTAL	0.301			MS	5	0.080	0.0076	0.032
7440-62-2	VANADIUM, TOTAL	35.8			MS	5	0.40	0.088	0.32
7440-66-6	ZINC, TOTAL	39.7			MS	5	0.80	0.10	0.64

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-BKRD-SB11

Matrix: SOIL **SDG Name:** SL2079

Percent Solids: 79.7 **Lab Sample ID:** SL2079-004

Concentration Units : mg/Kg drywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	17500			MS	5	12	0.60	4.8
7440-36-0	ANTIMONY, TOTAL	0.22			MS	5	0.12	0.024	0.060
7440-38-2	ARSENIC, TOTAL	5.75			MS	5	0.60	0.18	0.48
7440-39-3	BARIUM, TOTAL	127			MS	5	0.24	0.044	0.12
7440-41-7	BERYLLIUM, TOTAL	0.936			MS	5	0.12	0.0048	0.024
7440-43-9	CADMIUM, TOTAL	0.024	U		MS	5	0.12	0.0090	0.024
7440-70-2	CALCIUM, TOTAL	7460			MS	5	12	4.5	9.6
7440-47-3	CHROMIUM, TOTAL	16.4			MS	5	0.60	0.059	0.48
7440-48-4	COBALT, TOTAL	4.61			MS	5	0.12	0.0066	0.036
7440-50-8	COPPER, TOTAL	13.8			MS	5	0.36	0.084	0.24
7439-89-6	IRON, TOTAL	17800			MS	5	12	2.9	7.2
7439-92-1	LEAD, TOTAL	16.8			MS	5	0.12	0.0084	0.060
7439-95-4	MAGNESIUM, TOTAL	5570			MS	5	12	1.6	9.6
7439-96-5	MANGANESE, TOTAL	97.1			MS	5	0.24	0.050	0.12
7439-97-6	MERCURY, TOTAL	0.024	J		CV	1	0.038	0.0059	0.019
7440-02-0	NICKEL, TOTAL	16.3			MS	5	0.24	0.032	0.14
7440-09-7	POTASSIUM, TOTAL	4560			MS	5	120	5.4	48
7782-49-2	SELENIUM, TOTAL	0.37	J		MS	5	0.60	0.047	0.36
7440-22-4	SILVER, TOTAL	0.0802	J		MS	5	0.12	0.0078	0.048
7440-23-5	SODIUM, TOTAL	1960			MS	5	120	3.0	48
7440-28-0	THALLIUM, TOTAL	0.349			MS	5	0.12	0.011	0.048
7440-62-2	VANADIUM, TOTAL	36.4			MS	5	0.60	0.13	0.48
7440-66-6	ZINC, TOTAL	41.8			MS	5	1.2	0.16	0.96

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-BKRD-SB12

Matrix: SOIL **SDG Name:** SL2079

Percent Solids: 83.0 **Lab Sample ID:** SL2079-005

Concentration Units : mg/Kg drywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	16100			MS	5	9.0	0.45	3.6
7440-36-0	ANTIMONY, TOTAL	0.16			MS	5	0.090	0.018	0.045
7440-38-2	ARSENIC, TOTAL	3.09			MS	5	0.45	0.13	0.36
7440-39-3	BARIUM, TOTAL	174			MS	5	0.18	0.033	0.090
7440-41-7	BERYLLIUM, TOTAL	0.873			MS	5	0.090	0.0036	0.018
7440-43-9	CADMIUM, TOTAL	0.018	U		MS	5	0.090	0.0067	0.018
7440-70-2	CALCIUM, TOTAL	17700			MS	5	9.0	3.4	7.2
7440-47-3	CHROMIUM, TOTAL	13.9			MS	5	0.45	0.044	0.36
7440-48-4	COBALT, TOTAL	4.72			MS	5	0.090	0.0049	0.027
7440-50-8	COPPER, TOTAL	10.3			MS	5	0.27	0.063	0.18
7439-89-6	IRON, TOTAL	13900			MS	5	9.0	2.2	5.4
7439-92-1	LEAD, TOTAL	12.9			MS	5	0.090	0.0063	0.045
7439-95-4	MAGNESIUM, TOTAL	8140			MS	5	9.0	1.2	7.2
7439-96-5	MANGANESE, TOTAL	198			MS	5	0.18	0.038	0.090
7439-97-6	MERCURY, TOTAL	0.017	J		CV	1	0.039	0.0060	0.020
7440-02-0	NICKEL, TOTAL	11.3			MS	5	0.18	0.024	0.11
7440-09-7	POTASSIUM, TOTAL	4490			MS	5	90	4.1	36
7782-49-2	SELENIUM, TOTAL	0.509			MS	5	0.45	0.035	0.27
7440-22-4	SILVER, TOTAL	0.0892	J		MS	5	0.090	0.0058	0.036
7440-23-5	SODIUM, TOTAL	3010			MS	5	90	2.3	36
7440-28-0	THALLIUM, TOTAL	0.285			MS	5	0.090	0.0085	0.036
7440-62-2	VANADIUM, TOTAL	26.5			MS	5	0.45	0.099	0.36
7440-66-6	ZINC, TOTAL	40.1			MS	5	0.90	0.12	0.72

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-BKRD-SB13

Matrix: SOIL **SDG Name:** SL2079

Percent Solids: 79.8 **Lab Sample ID:** SL2079-006

Concentration Units : mg/Kg drywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	17900			MS	5	10	0.51	4.0
7440-36-0	ANTIMONY, TOTAL	0.19			MS	5	0.10	0.020	0.050
7440-38-2	ARSENIC, TOTAL	8.88			MS	5	0.50	0.15	0.40
7440-39-3	BARIUM, TOTAL	143			MS	5	0.20	0.037	0.10
7440-41-7	BERYLLIUM, TOTAL	0.921			MS	5	0.10	0.0041	0.020
7440-43-9	CADMIUM, TOTAL	0.020	U		MS	5	0.10	0.0076	0.020
7440-70-2	CALCIUM, TOTAL	14200			MS	5	10	3.8	8.1
7440-47-3	CHROMIUM, TOTAL	15.3			MS	5	0.50	0.050	0.40
7440-48-4	COBALT, TOTAL	5.85			MS	5	0.10	0.0056	0.030
7440-50-8	COPPER, TOTAL	12.7			MS	5	0.30	0.071	0.20
7439-89-6	IRON, TOTAL	16700			MS	5	10	2.4	6.1
7439-92-1	LEAD, TOTAL	13.1			MS	5	0.10	0.0071	0.050
7439-95-4	MAGNESIUM, TOTAL	8140			MS	5	10	1.4	8.1
7439-96-5	MANGANESE, TOTAL	263			MS	5	0.20	0.042	0.10
7439-97-6	MERCURY, TOTAL	0.026	J		CV	1	0.034	0.0052	0.017
7440-02-0	NICKEL, TOTAL	12.8			MS	5	0.20	0.027	0.12
7440-09-7	POTASSIUM, TOTAL	4520			MS	5	100	4.6	40
7782-49-2	SELENIUM, TOTAL	0.512			MS	5	0.50	0.039	0.30
7440-22-4	SILVER, TOTAL	0.0723	J		MS	5	0.10	0.0066	0.040
7440-23-5	SODIUM, TOTAL	1860			MS	5	100	2.6	40
7440-28-0	THALLIUM, TOTAL	0.319			MS	5	0.10	0.0096	0.040
7440-62-2	VANADIUM, TOTAL	36.4			MS	5	0.50	0.11	0.40
7440-66-6	ZINC, TOTAL	43.9			MS	5	1.0	0.13	0.81

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-BKRD-SS08

Matrix: SOIL **SDG Name:** SL2079

Percent Solids: 78.8 **Lab Sample ID:** SL2079-007

Concentration Units : mg/Kg drywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	7550			MS	5	8.6	0.43	3.4
7440-36-0	ANTIMONY, TOTAL	0.10			MS	5	0.086	0.017	0.043
7440-38-2	ARSENIC, TOTAL	1.99			MS	5	0.43	0.13	0.34
7440-39-3	BARIUM, TOTAL	109			MS	5	0.17	0.031	0.086
7440-41-7	BERYLLIUM, TOTAL	0.435			MS	5	0.086	0.0035	0.017
7440-43-9	CADMIUM, TOTAL	0.150			MS	5	0.086	0.0064	0.017
7440-70-2	CALCIUM, TOTAL	1620			MS	5	8.6	3.3	6.8
7440-47-3	CHROMIUM, TOTAL	7.83			MS	5	0.43	0.042	0.34
7440-48-4	COBALT, TOTAL	4.41			MS	5	0.086	0.0047	0.026
7440-50-8	COPPER, TOTAL	6.34			MS	5	0.26	0.060	0.17
7439-89-6	IRON, TOTAL	6520			MS	5	8.6	2.1	5.1
7439-92-1	LEAD, TOTAL	10.9			MS	5	0.086	0.0060	0.043
7439-95-4	MAGNESIUM, TOTAL	1900			MS	5	8.6	1.2	6.8
7439-96-5	MANGANESE, TOTAL	241			MS	5	0.17	0.036	0.086
7439-97-6	MERCURY, TOTAL	0.018	J		CV	1	0.032	0.0050	0.016
7440-02-0	NICKEL, TOTAL	5.96			MS	5	0.17	0.023	0.10
7440-09-7	POTASSIUM, TOTAL	2510			MS	5	86	3.9	34
7782-49-2	SELENIUM, TOTAL	0.477			MS	5	0.43	0.033	0.26
7440-22-4	SILVER, TOTAL	0.045	J		MS	5	0.086	0.0056	0.034
7440-23-5	SODIUM, TOTAL	298			MS	5	86	2.2	34
7440-28-0	THALLIUM, TOTAL	0.170			MS	5	0.086	0.0081	0.034
7440-62-2	VANADIUM, TOTAL	15.8			MS	5	0.43	0.094	0.34
7440-66-6	ZINC, TOTAL	22.6			MS	5	0.86	0.11	0.68

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-BKRD-SS09

Matrix: SOIL **SDG Name:** SL2079

Percent Solids: 82.8 **Lab Sample ID:** SL2079-008

Concentration Units : mg/Kg drywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	9310			MS	5	9.4	0.47	3.8
7440-36-0	ANTIMONY, TOTAL	0.10			MS	5	0.094	0.019	0.047
7440-38-2	ARSENIC, TOTAL	2.26			MS	5	0.47	0.14	0.38
7440-39-3	BARIUM, TOTAL	138			MS	5	0.19	0.034	0.094
7440-41-7	BERYLLIUM, TOTAL	0.546			MS	5	0.094	0.0038	0.019
7440-43-9	CADMIUM, TOTAL	0.152			MS	5	0.094	0.0071	0.019
7440-70-2	CALCIUM, TOTAL	1600			MS	5	9.4	3.6	7.5
7440-47-3	CHROMIUM, TOTAL	9.44			MS	5	0.47	0.046	0.38
7440-48-4	COBALT, TOTAL	4.87			MS	5	0.094	0.0052	0.028
7440-50-8	COPPER, TOTAL	7.02			MS	5	0.28	0.066	0.19
7439-89-6	IRON, TOTAL	7770			MS	5	9.4	2.3	5.6
7439-92-1	LEAD, TOTAL	11.7			MS	5	0.094	0.0066	0.047
7439-95-4	MAGNESIUM, TOTAL	2190			MS	5	9.4	1.3	7.5
7439-96-5	MANGANESE, TOTAL	310			MS	5	0.19	0.040	0.094
7439-97-6	MERCURY, TOTAL	0.020	J		CV	1	0.036	0.0056	0.018
7440-02-0	NICKEL, TOTAL	6.99			MS	5	0.19	0.025	0.11
7440-09-7	POTASSIUM, TOTAL	2770			MS	5	94	4.3	38
7782-49-2	SELENIUM, TOTAL	0.662			MS	5	0.47	0.037	0.28
7440-22-4	SILVER, TOTAL	0.052	J		MS	5	0.094	0.0061	0.038
7440-23-5	SODIUM, TOTAL	178			MS	5	94	2.4	38
7440-28-0	THALLIUM, TOTAL	0.215			MS	5	0.094	0.0090	0.038
7440-62-2	VANADIUM, TOTAL	18.1			MS	5	0.47	0.10	0.38
7440-66-6	ZINC, TOTAL	26.4			MS	5	0.94	0.12	0.75

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-BKRD-SS10

Matrix: SOIL **SDG Name:** SL2079

Percent Solids: 74.6 **Lab Sample ID:** SL2079-009

Concentration Units : mg/Kg drywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	8370		NA	MS	5	10	0.52	4.2
7440-36-0	ANTIMONY, TOTAL	0.10	J	N	MS	5	0.10	0.021	0.052
7440-38-2	ARSENIC, TOTAL	2.22			MS	5	0.52	0.16	0.42
7440-39-3	BARIUM, TOTAL	127		A	MS	5	0.21	0.038	0.10
7440-41-7	BERYLLIUM, TOTAL	0.484			MS	5	0.10	0.0042	0.021
7440-43-9	CADMIUM, TOTAL	0.149			MS	5	0.10	0.0079	0.021
7440-70-2	CALCIUM, TOTAL	1900		NA	MS	5	10	4.0	8.4
7440-47-3	CHROMIUM, TOTAL	8.34			MS	5	0.52	0.051	0.42
7440-48-4	COBALT, TOTAL	4.48			MS	5	0.10	0.0058	0.031
7440-50-8	COPPER, TOTAL	6.51			MS	5	0.31	0.073	0.21
7439-89-6	IRON, TOTAL	7520		NEA	MS	5	10	2.5	6.3
7439-92-1	LEAD, TOTAL	11.0			MS	5	0.10	0.0073	0.052
7439-95-4	MAGNESIUM, TOTAL	2140		NA	MS	5	10	1.4	8.4
7439-96-5	MANGANESE, TOTAL	254		NEA	MS	5	0.21	0.044	0.10
7439-97-6	MERCURY, TOTAL	0.015	J	A	CV	1	0.037	0.0058	0.019
7440-02-0	NICKEL, TOTAL	6.38			MS	5	0.21	0.028	0.12
7440-09-7	POTASSIUM, TOTAL	2950		N	MS	5	100	4.8	42
7782-49-2	SELENIUM, TOTAL	0.576			MS	5	0.52	0.041	0.31
7440-22-4	SILVER, TOTAL	0.045	J		MS	5	0.10	0.0068	0.042
7440-23-5	SODIUM, TOTAL	88.2	J		MS	5	100	2.7	42
7440-28-0	THALLIUM, TOTAL	0.179			MS	5	0.10	0.0099	0.042
7440-62-2	VANADIUM, TOTAL	16.2			MS	5	0.52	0.12	0.42
7440-66-6	ZINC, TOTAL	24.6			MS	5	1.0	0.14	0.84

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-BKRD-SS11

Matrix: SOIL **SDG Name:** SL2079

Percent Solids: 81.3 **Lab Sample ID:** SL2079-010

Concentration Units : mg/Kg drywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	10400			MS	5	10	0.51	4.1
7440-36-0	ANTIMONY, TOTAL	0.11			MS	5	0.10	0.020	0.051
7440-38-2	ARSENIC, TOTAL	2.38			MS	5	0.51	0.15	0.41
7440-39-3	BARIUM, TOTAL	132			MS	5	0.20	0.037	0.10
7440-41-7	BERYLLIUM, TOTAL	0.571			MS	5	0.10	0.0041	0.020
7440-43-9	CADMIUM, TOTAL	0.138			MS	5	0.10	0.0077	0.020
7440-70-2	CALCIUM, TOTAL	1870			MS	5	10	3.9	8.2
7440-47-3	CHROMIUM, TOTAL	10.2			MS	5	0.51	0.050	0.41
7440-48-4	COBALT, TOTAL	4.69			MS	5	0.10	0.0056	0.031
7440-50-8	COPPER, TOTAL	7.65			MS	5	0.31	0.072	0.20
7439-89-6	IRON, TOTAL	9010			MS	5	10	2.5	6.1
7439-92-1	LEAD, TOTAL	12.8			MS	5	0.10	0.0072	0.051
7439-95-4	MAGNESIUM, TOTAL	2320			MS	5	10	1.4	8.2
7439-96-5	MANGANESE, TOTAL	258			MS	5	0.20	0.043	0.10
7439-97-6	MERCURY, TOTAL	0.025	J		CV	1	0.036	0.0056	0.018
7440-02-0	NICKEL, TOTAL	7.24			MS	5	0.20	0.027	0.12
7440-09-7	POTASSIUM, TOTAL	2900			MS	5	100	4.7	41
7782-49-2	SELENIUM, TOTAL	0.571			MS	5	0.51	0.040	0.31
7440-22-4	SILVER, TOTAL	0.052	J		MS	5	0.10	0.0067	0.041
7440-23-5	SODIUM, TOTAL	108			MS	5	100	2.6	41
7440-28-0	THALLIUM, TOTAL	0.216			MS	5	0.10	0.0097	0.041
7440-62-2	VANADIUM, TOTAL	18.8			MS	5	0.51	0.11	0.41
7440-66-6	ZINC, TOTAL	33.1			MS	5	1.0	0.13	0.82

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-BKRD-SS12

Matrix: SOIL **SDG Name:** SL2079

Percent Solids: 78.5 **Lab Sample ID:** SL2079-011

Concentration Units : mg/Kg drywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	8230			MS	5	11	0.55	4.4
7440-36-0	ANTIMONY, TOTAL	0.10	J		MS	5	0.11	0.022	0.055
7440-38-2	ARSENIC, TOTAL	2.32			MS	5	0.55	0.17	0.44
7440-39-3	BARIUM, TOTAL	115			MS	5	0.22	0.040	0.11
7440-41-7	BERYLLIUM, TOTAL	0.478			MS	5	0.11	0.0045	0.022
7440-43-9	CADMIUM, TOTAL	0.112			MS	5	0.11	0.0083	0.022
7440-70-2	CALCIUM, TOTAL	1860			MS	5	11	4.2	8.8
7440-47-3	CHROMIUM, TOTAL	8.73			MS	5	0.55	0.054	0.44
7440-48-4	COBALT, TOTAL	4.37			MS	5	0.11	0.0061	0.033
7440-50-8	COPPER, TOTAL	6.81			MS	5	0.33	0.077	0.22
7439-89-6	IRON, TOTAL	7420			MS	5	11	2.7	6.6
7439-92-1	LEAD, TOTAL	10.9			MS	5	0.11	0.0077	0.055
7439-95-4	MAGNESIUM, TOTAL	2180			MS	5	11	1.5	8.8
7439-96-5	MANGANESE, TOTAL	243			MS	5	0.22	0.046	0.11
7439-97-6	MERCURY, TOTAL	0.020	J		CV	1	0.034	0.0053	0.018
7440-02-0	NICKEL, TOTAL	6.42			MS	5	0.22	0.029	0.13
7440-09-7	POTASSIUM, TOTAL	3160			MS	5	110	5.0	44
7782-49-2	SELENIUM, TOTAL	0.567			MS	5	0.55	0.043	0.33
7440-22-4	SILVER, TOTAL	0.046	J		MS	5	0.11	0.0072	0.044
7440-23-5	SODIUM, TOTAL	179			MS	5	110	2.8	44
7440-28-0	THALLIUM, TOTAL	0.195			MS	5	0.11	0.011	0.044
7440-62-2	VANADIUM, TOTAL	17.6			MS	5	0.55	0.12	0.44
7440-66-6	ZINC, TOTAL	23.4			MS	5	1.1	0.14	0.88

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-BKRD-SS13

Matrix: SOIL **SDG Name:** SL2079

Percent Solids: 78.0 **Lab Sample ID:** SL2079-012

Concentration Units : mg/Kg drywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	9120			MS	5	10	0.52	4.1
7440-36-0	ANTIMONY, TOTAL	0.10			MS	5	0.10	0.021	0.052
7440-38-2	ARSENIC, TOTAL	2.35			MS	5	0.52	0.16	0.41
7440-39-3	BARIUM, TOTAL	118			MS	5	0.21	0.038	0.10
7440-41-7	BERYLLIUM, TOTAL	0.520			MS	5	0.10	0.0042	0.021
7440-43-9	CADMIUM, TOTAL	0.144			MS	5	0.10	0.0078	0.021
7440-70-2	CALCIUM, TOTAL	1800			MS	5	10	3.9	8.3
7440-47-3	CHROMIUM, TOTAL	9.69			MS	5	0.52	0.051	0.41
7440-48-4	COBALT, TOTAL	4.93			MS	5	0.10	0.0057	0.031
7440-50-8	COPPER, TOTAL	7.19			MS	5	0.31	0.072	0.21
7439-89-6	IRON, TOTAL	8120			MS	5	10	2.5	6.2
7439-92-1	LEAD, TOTAL	13.3			MS	5	0.10	0.0072	0.052
7439-95-4	MAGNESIUM, TOTAL	2260			MS	5	10	1.4	8.3
7439-96-5	MANGANESE, TOTAL	280			MS	5	0.21	0.043	0.10
7439-97-6	MERCURY, TOTAL	0.021	J		CV	1	0.035	0.0054	0.018
7440-02-0	NICKEL, TOTAL	7.02			MS	5	0.21	0.027	0.12
7440-09-7	POTASSIUM, TOTAL	3080			MS	5	100	4.7	41
7782-49-2	SELENIUM, TOTAL	0.752			MS	5	0.52	0.040	0.31
7440-22-4	SILVER, TOTAL	0.053	J		MS	5	0.10	0.0067	0.041
7440-23-5	SODIUM, TOTAL	344			MS	5	100	2.6	41
7440-28-0	THALLIUM, TOTAL	0.198			MS	5	0.10	0.0098	0.041
7440-62-2	VANADIUM, TOTAL	19.3			MS	5	0.52	0.11	0.41
7440-66-6	ZINC, TOTAL	27.0			MS	5	1.0	0.13	0.83

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-BKRD-SS109

Matrix: SOIL **SDG Name:** SL2079

Percent Solids: 82.9 **Lab Sample ID:** SL2079-013

Concentration Units : mg/Kg drywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	8660			MS	5	8.9	0.45	3.6
7440-36-0	ANTIMONY, TOTAL	0.10			MS	5	0.089	0.018	0.045
7440-38-2	ARSENIC, TOTAL	2.13			MS	5	0.45	0.13	0.36
7440-39-3	BARIUM, TOTAL	141			MS	5	0.18	0.033	0.089
7440-41-7	BERYLLIUM, TOTAL	0.533			MS	5	0.089	0.0036	0.018
7440-43-9	CADMIUM, TOTAL	0.179			MS	5	0.089	0.0067	0.018
7440-70-2	CALCIUM, TOTAL	1630			MS	5	8.9	3.4	7.1
7440-47-3	CHROMIUM, TOTAL	8.59			MS	5	0.45	0.044	0.36
7440-48-4	COBALT, TOTAL	5.02			MS	5	0.089	0.0049	0.027
7440-50-8	COPPER, TOTAL	6.70			MS	5	0.27	0.063	0.18
7439-89-6	IRON, TOTAL	7500			MS	5	8.9	2.1	5.4
7439-92-1	LEAD, TOTAL	11.9			MS	5	0.089	0.0063	0.045
7439-95-4	MAGNESIUM, TOTAL	2130			MS	5	8.9	1.2	7.1
7439-96-5	MANGANESE, TOTAL	352			MS	5	0.18	0.038	0.089
7439-97-6	MERCURY, TOTAL	0.019	J		CV	1	0.038	0.0058	0.019
7440-02-0	NICKEL, TOTAL	7.22			MS	5	0.18	0.024	0.11
7440-09-7	POTASSIUM, TOTAL	2600			MS	5	89	4.1	36
7782-49-2	SELENIUM, TOTAL	0.611			MS	5	0.45	0.035	0.27
7440-22-4	SILVER, TOTAL	0.049	J		MS	5	0.089	0.0058	0.036
7440-23-5	SODIUM, TOTAL	172			MS	5	89	2.3	36
7440-28-0	THALLIUM, TOTAL	0.196			MS	5	0.089	0.0085	0.036
7440-62-2	VANADIUM, TOTAL	16.2			MS	5	0.45	0.098	0.36
7440-66-6	ZINC, TOTAL	25.4			MS	5	0.89	0.12	0.71

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-BKRD-EB-031418

Matrix: WATER **SDG Name:** SL2079

Percent Solids: 0.00 **Lab Sample ID:** SL2079-014

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	9.2	J		MS	5	100	4.4	40
7440-36-0	ANTIMONY, TOTAL	0.11	J		MS	5	1.0	0.055	0.50
7440-38-2	ARSENIC, TOTAL	4.0	U		MS	5	5.0	2.3	4.0
7440-39-3	BARIUM, TOTAL	1.0	U		MS	5	2.0	0.27	1.0
7440-41-7	BERYLLIUM, TOTAL	0.20	U		MS	5	1.0	0.034	0.20
7440-43-9	CADMIUM, TOTAL	0.20	U		MS	5	1.0	0.029	0.20
7440-70-2	CALCIUM, TOTAL	61	J		MS	5	100	21	80
7440-47-3	CHROMIUM, TOTAL	0.75	J		MS	5	5.0	0.22	4.0
7440-48-4	COBALT, TOTAL	0.30	U		MS	5	1.0	0.060	0.30
7440-50-8	COPPER, TOTAL	0.23	J		MS	5	3.0	0.19	2.0
7439-89-6	IRON, TOTAL	60	U		MS	5	100	13	60
7439-92-1	LEAD, TOTAL	0.50	U		MS	5	1.0	0.075	0.50
7439-95-4	MAGNESIUM, TOTAL	13	J		MS	5	100	8.0	80
7439-96-5	MANGANESE, TOTAL	0.52	J		MS	5	2.0	0.35	1.0
7439-97-6	MERCURY, TOTAL	0.033	J		CV	1	0.20	0.013	0.10
7440-02-0	NICKEL, TOTAL	1.2	U		MS	5	2.0	0.15	1.2
7440-09-7	POTASSIUM, TOTAL	400	U		MS	5	1000	31	400
7782-49-2	SELENIUM, TOTAL	0.26	J		MS	5	5.0	0.19	3.0
7440-22-4	SILVER, TOTAL	0.40	U		MS	5	1.0	0.050	0.40
7440-23-5	SODIUM, TOTAL	43	J		MS	5	1000	19	400
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	1.0	0.060	0.40
7440-62-2	VANADIUM, TOTAL	4.0	U		MS	5	5.0	0.50	4.0
7440-66-6	ZINC, TOTAL	8.0	U		MS	5	10	3.9	8.0

Comments:

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICV

File: HLC16A Mar 16, 2018 12:21

Analyte	True	Found	%R (1)
MERCURY	6.0	6.09	101.5

SAMPLE: CCV

File: HLC16A Mar 16, 2018 12:27

Analyte	True	Found	%R (1)
MERCURY	5.0	4.81	96.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: CCV

File: HLC16A Mar 16, 2018 12:50

Analyte	True	Found	%R (1)
MERCURY	5.0	4.99	99.8

SAMPLE: CCV

File: HLC16A Mar 16, 2018 13:18

Analyte	True	Found	%R (1)
MERCURY	5.0	4.58	91.6

(1) Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (Part 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: CCV

File: HLC16A Mar 16, 2018 13:28

Analyte	True	Found	%R (1)
MERCURY	5.0	4.57	91.4

SAMPLE: CCV

File: HLC16A Mar 16, 2018 13:41

Analyte	True	Found	%R (1)
MERCURY	5.0	4.81	96.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICV

File: HLC19A Mar 19, 2018 12:05

Analyte	True	Found	%R (1)
MERCURY	6.0	6.36	106.0

SAMPLE: CCV

File: HLC19A Mar 19, 2018 12:13

Analyte	True	Found	%R (1)
MERCURY	5.0	4.70	94.0

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: CCV

File: HLC19A Mar 19, 2018 12:37

Analyte	True	Found	%R (1)
MERCURY	5.0	4.55	91.0

SAMPLE: CCV

File: HLC19A Mar 19, 2018 13:02

Analyte	True	Found	%R (1)
MERCURY	5.0	4.86	97.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICV

File: JLC16A Mar 16, 2018 15:07

Analyte	True	Found	%R (1)
ALUMINUM	400.0	397.60	99.4
ARSENIC	20.0	19.97	99.8
BARIUM	20.0	20.06	100.3
BERYLLIUM	20.0	19.49	97.4
CADMIUM	20.0	20.23	101.2
CALCIUM	4000.0	4101.00	102.5
CHROMIUM	20.0	19.56	97.8
COBALT	20.0	19.54	97.7
COPPER	20.0	19.94	99.7
IRON	4000.0	4059.00	101.5
LEAD	20.0	19.62	98.1
MAGNESIUM	4000.0	3929.00	98.2
MANGANESE	20.0	19.88	99.4
MOLYBDENUM	40.0	38.73	96.8
NICKEL	20.0	19.93	99.6
POTASSIUM	4000.0	3951.00	98.8
SELENIUM	20.0	20.08	100.4
SILVER	20.0	19.84	99.2
SODIUM	4000.0	3989.00	99.7
THALLIUM	20.0	20.02	100.1
VANADIUM	20.0	19.99	99.9
ZINC	20.0	20.19	101.0

SAMPLE: CCV

File: JLC16A Mar 16, 2018 15:47

Analyte	True	Found	%R (1)
ALUMINUM	500.0	496.20	99.2
ARSENIC	25.0	25.17	100.7
BARIUM	25.0	24.95	99.8
BERYLLIUM	25.0	24.97	99.9
CADMIUM	25.0	25.19	100.8
CALCIUM	5000.0	5183.00	103.7
CHROMIUM	25.0	24.84	99.4
COBALT	25.0	24.98	99.9
COPPER	25.0	25.23	100.9
IRON	5000.0	5126.00	102.5
LEAD	25.0	24.65	98.6
MAGNESIUM	5000.0	4944.00	98.9
MANGANESE	25.0	24.90	99.6
MOLYBDENUM	25.0	24.93	99.7
NICKEL	25.0	25.29	101.2
POTASSIUM	5000.0	4996.00	99.9
SELENIUM	25.0	25.19	100.8
SILVER	25.0	25.15	100.6
SODIUM	5000.0	5005.00	100.1
THALLIUM	25.0	24.47	97.9
VANADIUM	25.0	24.83	99.3
ZINC	25.0	25.05	100.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: CCV

File: JLC16A Mar 16, 2018 16:33

Analyte	True	Found	%R (1)
ALUMINUM	500.0	501.70	100.3
ARSENIC	25.0	24.37	97.5
BARIUM	25.0	24.71	98.8
BERYLLIUM	25.0	24.47	97.9
CADMIUM	25.0	24.78	99.1
CALCIUM	5000.0	5140.00	102.8
CHROMIUM	25.0	24.08	96.3
COBALT	25.0	24.14	96.6
COPPER	25.0	24.20	96.8
IRON	5000.0	4954.00	99.1
LEAD	25.0	24.63	98.5
MAGNESIUM	5000.0	5028.00	100.6
MANGANESE	25.0	24.31	97.2
MOLYBDENUM	25.0	24.21	96.8
NICKEL	25.0	24.40	97.6
POTASSIUM	5000.0	4987.00	99.7
SELENIUM	25.0	25.18	100.7
SILVER	25.0	24.34	97.4
SODIUM	5000.0	4939.00	98.8
THALLIUM	25.0	24.62	98.5
VANADIUM	25.0	24.18	96.7
ZINC	25.0	24.35	97.4

SAMPLE: CCV

File: JLC16A Mar 16, 2018 17:19

Analyte	True	Found	%R (1)
ALUMINUM	500.0	510.70	102.1
ARSENIC	25.0	24.89	99.6
BARIUM	25.0	24.69	98.8
BERYLLIUM	25.0	24.74	99.0
CADMIUM	25.0	24.44	97.8
CALCIUM	5000.0	5179.00	103.6
CHROMIUM	25.0	24.91	99.6
COBALT	25.0	24.70	98.8
COPPER	25.0	25.07	100.3
IRON	5000.0	5085.00	101.7
LEAD	25.0	24.47	97.9
MAGNESIUM	5000.0	5091.00	101.8
MANGANESE	25.0	24.79	99.2
MOLYBDENUM	25.0	24.18	96.7
NICKEL	25.0	24.93	99.7
POTASSIUM	5000.0	5005.00	100.1
SELENIUM	25.0	24.65	98.6
SILVER	25.0	24.31	97.2
SODIUM	5000.0	5055.00	101.1
THALLIUM	25.0	24.55	98.2
VANADIUM	25.0	24.91	99.6
ZINC	25.0	25.01	100.0

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICV

File: JLC20C Mar 20, 2018 17:33

Analyte	True	Found	%R (1)
ALUMINUM	400.0	390.20	97.5
ANTIMONY	20.0	19.96	99.8
ARSENIC	20.0	20.09	100.4
BARIUM	20.0	20.22	101.1
BERYLLIUM	20.0	19.93	99.6
CADMIUM	20.0	20.45	102.3
CALCIUM	4000.0	4082.00	102.1
CHROMIUM	20.0	19.88	99.4
COBALT	20.0	20.16	100.8
COPPER	20.0	20.13	100.6
IRON	4000.0	4081.00	102.0
LEAD	20.0	19.80	99.0
MAGNESIUM	4000.0	3976.00	99.4
MANGANESE	20.0	19.96	99.8
MOLYBDENUM	40.0	39.30	98.3
NICKEL	20.0	20.31	101.5
POTASSIUM	4000.0	3895.00	97.4
SELENIUM	20.0	20.25	101.3
SILVER	20.0	20.10	100.5
SODIUM	4000.0	3961.00	99.0
THALLIUM	20.0	19.99	99.9
VANADIUM	20.0	20.11	100.6
ZINC	20.0	20.82	104.1

SAMPLE: CCV

File: JLC20C Mar 20, 2018 18:17

Analyte	True	Found	%R (1)
ALUMINUM	500.0	484.50	96.9
ANTIMONY	25.0	24.95	99.8
ARSENIC	25.0	25.03	100.1
BARIUM	25.0	25.45	101.8
BERYLLIUM	25.0	25.10	100.4
CADMIUM	25.0	25.59	102.4
CALCIUM	5000.0	5088.00	101.8
CHROMIUM	25.0	24.93	99.7
COBALT	25.0	24.92	99.7
COPPER	25.0	25.06	100.2
IRON	5000.0	5113.00	102.3
LEAD	25.0	24.69	98.8
MAGNESIUM	5000.0	4945.00	98.9
MANGANESE	25.0	24.82	99.3
MOLYBDENUM	25.0	25.31	101.2
NICKEL	25.0	25.08	100.3
POTASSIUM	5000.0	4901.00	98.0
SELENIUM	25.0	25.69	102.8
SILVER	25.0	25.66	102.6
SODIUM	5000.0	4913.00	98.3
THALLIUM	25.0	24.65	98.6
VANADIUM	25.0	24.69	98.8
ZINC	25.0	25.08	100.3

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: CCV

File: JLC20C Mar 20, 2018 19:06

Analyte	True	Found	%R (1)
ALUMINUM	500.0	483.90	96.8
ANTIMONY	25.0	25.19	100.8
ARSENIC	25.0	24.87	99.5
BARIUM	25.0	25.80	103.2
BERYLLIUM	25.0	24.82	99.3
CADMIUM	25.0	25.11	100.4
CALCIUM	5000.0	5097.00	101.9
CHROMIUM	25.0	24.80	99.2
COBALT	25.0	25.00	100.0
COPPER	25.0	24.76	99.0
IRON	5000.0	5095.00	101.9
LEAD	25.0	24.71	98.8
MAGNESIUM	5000.0	4897.00	97.9
MANGANESE	25.0	24.63	98.5
MOLYBDENUM	25.0	25.11	100.4
NICKEL	25.0	25.25	101.0
POTASSIUM	5000.0	4910.00	98.2
SELENIUM	25.0	25.11	100.4
SILVER	25.0	25.27	101.1
SODIUM	5000.0	4849.00	97.0
THALLIUM	25.0	24.70	98.8
VANADIUM	25.0	24.98	99.9
ZINC	25.0	24.81	99.2

SAMPLE: CCV

File: JLC20C Mar 20, 2018 19:56

Analyte	True	Found	%R (1)
ALUMINUM	500.0	486.70	97.3
ANTIMONY	25.0	24.98	99.9
ARSENIC	25.0	24.45	97.8
BARIUM	25.0	25.28	101.1
BERYLLIUM	25.0	24.80	99.2
CADMIUM	25.0	24.72	98.9
CALCIUM	5000.0	5108.00	102.2
CHROMIUM	25.0	24.78	99.1
COBALT	25.0	24.76	99.0
COPPER	25.0	24.69	98.8
IRON	5000.0	5088.00	101.8
LEAD	25.0	24.66	98.6
MAGNESIUM	5000.0	4972.00	99.4
MANGANESE	25.0	24.62	98.5
MOLYBDENUM	25.0	24.73	98.9
NICKEL	25.0	25.07	100.3
POTASSIUM	5000.0	4950.00	99.0
SELENIUM	25.0	24.34	97.4
SILVER	25.0	25.09	100.4
SODIUM	5000.0	4901.00	98.0
THALLIUM	25.0	24.47	97.9
VANADIUM	25.0	24.54	98.2
ZINC	25.0	24.77	99.1

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: CCV

File: JLC20C Mar 20, 2018 20:47

Analyte	True	Found	%R (1)
ALUMINUM	500.0	486.90	97.4
ANTIMONY	25.0	25.06	100.2
ARSENIC	25.0	24.90	99.6
BARIUM	25.0	25.02	100.1
BERYLLIUM	25.0	24.51	98.0
CADMIUM	25.0	24.86	99.4
CALCIUM	5000.0	5103.00	102.1
CHROMIUM	25.0	24.62	98.5
COBALT	25.0	24.54	98.2
COPPER	25.0	24.85	99.4
IRON	5000.0	5065.00	101.3
LEAD	25.0	24.45	97.8
MAGNESIUM	5000.0	4923.00	98.5
MANGANESE	25.0	24.48	97.9
MOLYBDENUM	25.0	24.89	99.6
NICKEL	25.0	24.59	98.4
POTASSIUM	5000.0	4927.00	98.5
SELENIUM	25.0	25.01	100.0
SILVER	25.0	25.14	100.6
SODIUM	5000.0	4858.00	97.2
THALLIUM	25.0	24.37	97.5
VANADIUM	25.0	24.81	99.2
ZINC	25.0	24.53	98.1

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICV

File: JLC21A Mar 21, 2018 14:56

Analyte	True	Found	%R (1)
ALUMINUM	400.0	396.10	99.0
ANTIMONY	20.0	19.58	97.9
BERYLLIUM	20.0	19.18	95.9
CALCIUM	4000.0	4035.00	100.9
IRON	4000.0	4101.00	102.5
MAGNESIUM	4000.0	3918.00	98.0
MOLYBDENUM	40.0	38.63	96.6
POTASSIUM	4000.0	3903.00	97.6
SODIUM	4000.0	3874.00	96.9
THALLIUM	20.0	20.31	101.5

SAMPLE: CCV

File: JLC21A Mar 21, 2018 15:37

Analyte	True	Found	%R (1)
ALUMINUM	500.0	504.10	100.8
ANTIMONY	25.0	25.67	102.7
BERYLLIUM	25.0	25.09	100.4
CALCIUM	5000.0	5204.00	104.1
IRON	5000.0	5146.00	102.9
MAGNESIUM	5000.0	5069.00	101.4
MOLYBDENUM	25.0	25.59	102.4
POTASSIUM	5000.0	5069.00	101.4
SODIUM	5000.0	4971.00	99.4
THALLIUM	25.0	25.63	102.5

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: CCV

File: JLC21A Mar 21, 2018 16:23

Analyte	True	Found	%R (1)
ALUMINUM	500.0	502.70	100.5
ANTIMONY	25.0	25.76	103.0
BERYLLIUM	25.0	24.48	97.9
CALCIUM	5000.0	5197.00	103.9
IRON	5000.0	5094.00	101.9
MAGNESIUM	5000.0	4952.00	99.0
MOLYBDENUM	25.0	25.19	100.8
POTASSIUM	5000.0	5029.00	100.6
SODIUM	5000.0	4845.00	96.9
THALLIUM	25.0	25.25	101.0

SAMPLE: CCV

File: JLC21A Mar 21, 2018 17:11

Analyte	True	Found	%R (1)
ALUMINUM	500.0	502.80	100.6
ANTIMONY	25.0	25.78	103.1
BERYLLIUM	25.0	24.88	99.5
CALCIUM	5000.0	5148.00	103.0
IRON	5000.0	5095.00	101.9
MAGNESIUM	5000.0	4935.00	98.7
MOLYBDENUM	25.0	24.97	99.9
POTASSIUM	5000.0	5032.00	100.6
SODIUM	5000.0	4840.00	96.8
THALLIUM	25.0	25.26	101.0

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: CCV

File: JLC21A Mar 21, 2018 18:00

Analyte	True	Found	%R (1)
ALUMINUM	500.0	516.40	103.3
ANTIMONY	25.0	25.69	102.8
BERYLLIUM	25.0	24.45	97.8
CALCIUM	5000.0	5113.00	102.3
IRON	5000.0	5130.00	102.6
MAGNESIUM	5000.0	5018.00	100.4
MOLYBDENUM	25.0	24.95	99.8
POTASSIUM	5000.0	4985.00	99.7
SODIUM	5000.0	4872.00	97.4
THALLIUM	25.0	25.24	101.0

SAMPLE: CCV

File: JLC21A Mar 21, 2018 18:49

Analyte	True	Found	%R (1)
ALUMINUM	500.0	498.00	99.6
ANTIMONY	25.0	25.35	101.4
BERYLLIUM	25.0	24.77	99.1
CALCIUM	5000.0	5149.00	103.0
IRON	5000.0	5091.00	101.8
MAGNESIUM	5000.0	4973.00	99.5
MOLYBDENUM	25.0	24.79	99.2
POTASSIUM	5000.0	4973.00	99.5
SODIUM	5000.0	4915.00	98.3
THALLIUM	25.0	25.01	100.0

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: CCV

File: JLC21A Mar 21, 2018 19:39

Analyte	True	Found	%R (1)
ALUMINUM	500.0	507.80	101.6
ANTIMONY	25.0	25.70	102.8
BERYLLIUM	25.0	24.62	98.5
CALCIUM	5000.0	5141.00	102.8
IRON	5000.0	5247.00	104.9
MAGNESIUM	5000.0	5106.00	102.1
MOLYBDENUM	25.0	25.13	100.5
POTASSIUM	5000.0	4994.00	99.9
SODIUM	5000.0	4993.00	99.9
THALLIUM	25.0	25.28	101.1

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICV

File: JLC22E Mar 22, 2018 17:17

Analyte	True	Found	%R (1)
ALUMINUM	400.0	397.80	99.5
ARSENIC	20.0	19.34	96.7
BARIUM	20.0	19.59	98.0
BERYLLIUM	20.0	19.45	97.2
CADMIUM	20.0	19.99	99.9
CALCIUM	4000.0	4012.00	100.3
CHROMIUM	20.0	19.33	96.6
COBALT	20.0	19.42	97.1
COPPER	20.0	19.63	98.1
IRON	4000.0	4018.00	100.4
LEAD	20.0	19.61	98.0
MAGNESIUM	4000.0	3890.00	97.3
MANGANESE	20.0	19.49	97.4
MOLYBDENUM	40.0	38.27	95.7
NICKEL	20.0	19.62	98.1
POTASSIUM	4000.0	3845.00	96.1
SELENIUM	20.0	19.90	99.5
SILVER	20.0	19.82	99.1
SODIUM	4000.0	3813.00	95.3
VANADIUM	20.0	19.51	97.5
ZINC	20.0	20.06	100.3

SAMPLE: CCV

File: JLC22E Mar 22, 2018 18:01

Analyte	True	Found	%R (1)
ALUMINUM	500.0	493.40	98.7
ARSENIC	25.0	24.82	99.3
BARIUM	25.0	25.14	100.6
BERYLLIUM	25.0	25.86	103.4
CADMIUM	25.0	25.02	100.1
CALCIUM	5000.0	5013.00	100.3
CHROMIUM	25.0	24.86	99.4
COBALT	25.0	25.02	100.1
COPPER	25.0	25.20	100.8
IRON	5000.0	5019.00	100.4
LEAD	25.0	24.74	99.0
MAGNESIUM	5000.0	4873.00	97.5
MANGANESE	25.0	24.98	99.9
MOLYBDENUM	25.0	24.60	98.4
NICKEL	25.0	24.92	99.7
POTASSIUM	5000.0	4939.00	98.8
SELENIUM	25.0	24.82	99.3
SILVER	25.0	24.98	99.9
SODIUM	5000.0	4836.00	96.7
VANADIUM	25.0	24.81	99.2
ZINC	25.0	25.09	100.4

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: CCV

File: JLC22E Mar 22, 2018 18:50

Analyte	True	Found	%R (1)
ALUMINUM	500.0	495.80	99.2
ARSENIC	25.0	25.05	100.2
BARIUM	25.0	25.20	100.8
BERYLLIUM	25.0	24.79	99.2
CADMIUM	25.0	25.49	102.0
CALCIUM	5000.0	5038.00	100.8
CHROMIUM	25.0	25.06	100.2
COBALT	25.0	24.97	99.9
COPPER	25.0	25.31	101.2
IRON	5000.0	5076.00	101.5
LEAD	25.0	24.87	99.5
MAGNESIUM	5000.0	4847.00	96.9
MANGANESE	25.0	25.13	100.5
MOLYBDENUM	25.0	25.46	101.8
NICKEL	25.0	25.22	100.9
POTASSIUM	5000.0	5003.00	100.1
SELENIUM	25.0	25.25	101.0
SILVER	25.0	25.54	102.2
SODIUM	5000.0	4751.00	95.0
VANADIUM	25.0	25.18	100.7
ZINC	25.0	25.33	101.3

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICV

File: JLC26B Mar 26, 2018 16:22

Analyte	True	Found	%R (1)
ALUMINUM	400.0	403.00	100.8
ARSENIC	20.0	19.53	97.7
CALCIUM	4000.0	4003.00	100.1
CHROMIUM	20.0	19.40	97.0
COPPER	20.0	19.59	98.0
IRON	4000.0	3993.00	99.8
MAGNESIUM	4000.0	4012.00	100.3
MANGANESE	20.0	19.46	97.3
MOLYBDENUM	40.0	38.12	95.3
NICKEL	20.0	19.67	98.4
POTASSIUM	4000.0	3930.00	98.3
SELENIUM	20.0	19.96	99.8
SILVER	20.0	19.61	98.0
SODIUM	4000.0	3930.00	98.3
VANADIUM	20.0	19.40	97.0
ZINC	20.0	20.16	100.8

SAMPLE: CCV

File: JLC26B Mar 26, 2018 17:05

Analyte	True	Found	%R (1)
ALUMINUM	500.0	510.10	102.0
ARSENIC	25.0	25.14	100.6
CALCIUM	5000.0	5134.00	102.7
CHROMIUM	25.0	25.17	100.7
COPPER	25.0	25.34	101.4
IRON	5000.0	5116.00	102.3
MAGNESIUM	5000.0	5127.00	102.5
MANGANESE	25.0	25.18	100.7
MOLYBDENUM	25.0	24.97	99.9
NICKEL	25.0	25.33	101.3
POTASSIUM	5000.0	5053.00	101.1
SELENIUM	25.0	25.50	102.0
SILVER	25.0	25.53	102.1
SODIUM	5000.0	5011.00	100.2
VANADIUM	25.0	24.80	99.2
ZINC	25.0	25.62	102.5

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: CCV

File: JLC26B Mar 26, 2018 17:53

Analyte	True	Found	%R (1)
ALUMINUM	500.0	518.10	103.6
ARSENIC	25.0	25.50	102.0
CALCIUM	5000.0	5144.00	102.9
CHROMIUM	25.0	25.14	100.6
COPPER	25.0	25.39	101.6
IRON	5000.0	5142.00	102.8
MAGNESIUM	5000.0	5057.00	101.1
MANGANESE	25.0	25.38	101.5
MOLYBDENUM	25.0	25.05	100.2
NICKEL	25.0	25.29	101.2
POTASSIUM	5000.0	5014.00	100.3
SELENIUM	25.0	25.57	102.3
SILVER	25.0	25.70	102.8
SODIUM	5000.0	4974.00	99.5
VANADIUM	25.0	24.93	99.7
ZINC	25.0	25.79	103.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICV

File: JLC27A Mar 27, 2018 14:13

Analyte	True	Found	%R (1)
ALUMINUM	400.0	404.00	101.0
CADMIUM	20.0	19.91	99.6
CALCIUM	4000.0	4023.00	100.6
COBALT	20.0	19.42	97.1
IRON	4000.0	3991.00	99.8
MAGNESIUM	4000.0	3980.00	99.5
MOLYBDENUM	40.0	38.36	95.9
POTASSIUM	4000.0	3887.00	97.2
SODIUM	4000.0	3844.00	96.1

SAMPLE: CCV

File: JLC27A Mar 27, 2018 14:54

Analyte	True	Found	%R (1)
ALUMINUM	500.0	499.00	99.8
CADMIUM	25.0	25.18	100.7
CALCIUM	5000.0	5081.00	101.6
COBALT	25.0	24.68	98.7
IRON	5000.0	5053.00	101.1
MAGNESIUM	5000.0	5019.00	100.4
MOLYBDENUM	25.0	25.37	101.5
POTASSIUM	5000.0	4964.00	99.3
SODIUM	5000.0	4919.00	98.4

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: CCV

File: JLC27A Mar 27, 2018 15:40

Analyte	True	Found	%R (1)
ALUMINUM	500.0	509.20	101.8
CADMIUM	25.0	24.86	99.4
CALCIUM	5000.0	5097.00	101.9
COBALT	25.0	24.96	99.8
IRON	5000.0	5108.00	102.2
MAGNESIUM	5000.0	5155.00	103.1
MOLYBDENUM	25.0	24.53	98.1
POTASSIUM	5000.0	5045.00	100.9
SODIUM	5000.0	5099.00	102.0

(1) Control Limits: Mercury 80-120; Other Metals 90-110

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: PQL

File: HLC16A Mar 16, 2018 12:25

Analyte	TRUE	FOUND	% R
MERCURY	0.2	0.23	115.0

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: PQL

File: HLC19A Mar 19, 2018 12:11

Analyte	TRUE	FOUND	% R
MERCURY	0.2	0.21	105.0

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: PQL

File: JLC16A Mar 16, 2018 15:14

Analyte	TRUE	FOUND	% R
ALUMINUM	20.0	20.44	102.2
ARSENIC	1.0	1.03	103.0
BARIUM	0.4	0.43	107.5
BERYLLIUM	0.2	0.20	100.0
CADMIUM	0.2	0.19	95.0
CALCIUM	20.0	17.15	85.8
CHROMIUM	1.0	0.94	94.0
COBALT	0.2	0.21	105.0
COPPER	0.6	0.64	106.7
IRON	20.0	17.78	88.9
LEAD	0.2	0.19	95.0
MAGNESIUM	20.0	20.27	101.4
MANGANESE	0.4	0.42	105.0
MOLYBDENUM	1.0	1.03	103.0
NICKEL	0.4	0.41	102.5
POTASSIUM	200.0	196.70	98.3
SELENIUM	1.0	1.16	116.0
SILVER	0.2	0.21	105.0
SODIUM	200.0	211.90	106.0
THALLIUM	0.2	0.19	95.0
VANADIUM	1.0	1.08	108.0
ZINC	2.0	2.33	116.5

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: PQL

File: JLC20C Mar 20, 2018 17:40

Analyte	TRUE	FOUND	% R
ALUMINUM	20.0	20.06	100.3
ANTIMONY	0.2	0.20	100.0
ARSENIC	1.0	1.02	102.0
BARIUM	0.4	0.41	102.5
BERYLLIUM	0.2	0.20	100.0
CADMIUM	0.2	0.19	95.0
CALCIUM	20.0	20.39	102.0
CHROMIUM	1.0	0.98	98.0
COBALT	0.2	0.21	105.0
COPPER	0.6	0.71	118.3
IRON	20.0	21.35	106.8
LEAD	0.2	0.19	95.0
MAGNESIUM	20.0	20.47	102.3
MANGANESE	0.4	0.40	100.0
MOLYBDENUM	1.0	1.05	105.0
NICKEL	0.4	0.42	105.0
POTASSIUM	200.0	198.10	99.0
SELENIUM	1.0	1.13	113.0
SILVER	0.2	0.22	110.0
SODIUM	200.0	207.40	103.7
THALLIUM	0.2	0.19	95.0
VANADIUM	1.0	1.01	101.0
ZINC	2.0	2.43	121.5•

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: PQL

File: JLC21A Mar 21, 2018 15:03

Analyte	TRUE	FOUND	% R
ALUMINUM	20.0	20.23	101.2
ANTIMONY	0.2	0.18	90.0
BERYLLIUM	0.2	0.21	105.0
CALCIUM	20.0	18.96	94.8
IRON	20.0	18.68	93.4
MAGNESIUM	20.0	19.76	98.8
MOLYBDENUM	1.0	0.99	99.0
POTASSIUM	200.0	199.40	99.7
SODIUM	200.0	208.70	104.3
THALLIUM	0.2	0.20	100.0

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: PQL

File: JLC22E Mar 22, 2018 17:25

Analyte	TRUE	FOUND	% R
ALUMINUM	20.0	20.04	100.2
ARSENIC	1.0	1.15	115.0
BARIUM	0.4	0.39	97.5
BERYLLIUM	0.2	0.19	95.0
CADMIUM	0.2	0.20	100.0
CALCIUM	20.0	21.81	109.1
CHROMIUM	1.0	0.94	94.0
COBALT	0.2	0.21	105.0
COPPER	0.6	0.61	101.7
IRON	20.0	22.97	114.8
LEAD	0.2	0.19	95.0
MAGNESIUM	20.0	19.83	99.1
MANGANESE	0.4	0.38	95.0
MOLYBDENUM	1.0	0.98	98.0
NICKEL	0.4	0.43	107.5
POTASSIUM	200.0	192.60	96.3
SELENIUM	1.0	1.20	120.0
SILVER	0.2	0.20	100.0
SODIUM	200.0	198.30	99.2
VANADIUM	1.0	0.98	98.0
ZINC	2.0	2.09	104.5

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: PQL

File: JLC26B Mar 26, 2018 16:29

Analyte	TRUE	FOUND	% R
ALUMINUM	20.0	19.04	95.2
ARSENIC	1.0	1.04	104.0
CALCIUM	20.0	19.97	99.8
CHROMIUM	1.0	1.02	102.0
COPPER	0.6	0.64	106.7
IRON	20.0	17.40	87.0
MAGNESIUM	20.0	20.22	101.1
MANGANESE	0.4	0.40	100.0
MOLYBDENUM	1.0	0.95	95.0
NICKEL	0.4	0.39	97.5
POTASSIUM	200.0	201.30	100.6
SELENIUM	1.0	1.19	119.0
SILVER	0.2	0.20	100.0
SODIUM	200.0	210.10	105.1
VANADIUM	1.0	0.97	97.0
ZINC	2.0	2.06	103.0

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: PQL

File: JLC27A Mar 27, 2018 14:21

Analyte	TRUE	FOUND	% R
ALUMINUM	20.0	19.44	97.2
CADMIUM	0.2	0.19	95.0
CALCIUM	20.0	18.99	94.9
COBALT	0.2	0.20	100.0
IRON	20.0	19.97	99.8
MAGNESIUM	20.0	20.14	100.7
MOLYBDENUM	1.0	0.98	98.0
POTASSIUM	200.0	194.40	97.2
SODIUM	200.0	203.70	101.8

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICB

File: HLC16A Mar 16, 2018 12:23

Analyte	Result	C
MERCURY	0.035	J

SAMPLE: CCB

File: HLC16A Mar 16, 2018 12:29

Analyte	Result	C
MERCURY	0.025	J

SAMPLE: CCB

File: HLC16A Mar 16, 2018 12:53

Analyte	Result	C
MERCURY	0.040	J

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: CCB

File: HLC16A Mar 16, 2018 13:16

Analyte	Result	C
MERCURY	0.035	J

SAMPLE: CCB

File: HLC16A Mar 16, 2018 13:30

Analyte	Result	C
MERCURY	0.044	J

SAMPLE: CCB

File: HLC16A Mar 16, 2018 13:43

Analyte	Result	C
MERCURY	0.034	J

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICB

File: HLC19A Mar 19, 2018 12:09

Analyte	Result	C
MERCURY	0.024	U

SAMPLE: CCB

File: HLC19A Mar 19, 2018 12:15

Analyte	Result	C
MERCURY	0.024	U

SAMPLE: CCB

File: HLC19A Mar 19, 2018 12:39

Analyte	Result	C
MERCURY	0.024	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: CCB

File: HLC19A Mar 19, 2018 13:04

Analyte	Result	C
MERCURY	0.024	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICB

File: JLC16A Mar 16, 2018 15:11

Analyte	Result	C
ALUMINUM	1.900	U
ARSENIC	0.180	U
BARIUM	0.075	U
BERYLLIUM	0.004	U
CADMIUM	0.007	U
CALCIUM	5.300	U
CHROMIUM	-0.119	U
COBALT	0.006	U
COPPER	0.030	U
IRON	4.300	U
LEAD	0.010	U
MAGNESIUM	1.300	U
MANGANESE	0.021	U
MOLYBDENUM	0.034	U
NICKEL	0.018	U
POTASSIUM	7.900	U
SELENIUM	0.470	U
SILVER	0.003	U
SODIUM	4.400	U
THALLIUM	0.009	J
VANADIUM	0.063	U
ZINC	0.270	U

SAMPLE: CCB

File: JLC16A Mar 16, 2018 15:51

Analyte	Result	C
ALUMINUM	1.900	U
ARSENIC	0.180	U
BARIUM	0.075	U
BERYLLIUM	0.004	U
CADMIUM	0.007	U
CALCIUM	5.300	U
CHROMIUM	0.062	U
COBALT	0.006	U
COPPER	0.040	J
IRON	4.300	U
LEAD	0.011	J
MAGNESIUM	1.300	U
MANGANESE	0.029	J
MOLYBDENUM	0.046	J
NICKEL	0.018	U
POTASSIUM	7.900	U
SELENIUM	0.470	U
SILVER	0.005	J
SODIUM	4.400	U
THALLIUM	0.008	U
VANADIUM	0.063	U
ZINC	0.270	U

SAMPLE: CCB

File: JLC16A Mar 16, 2018 16:36

Analyte	Result	C
ALUMINUM	1.900	U
ARSENIC	0.180	U
BARIUM	0.075	U
BERYLLIUM	0.004	U
CADMIUM	0.007	U
CALCIUM	5.300	U
CHROMIUM	-0.078	U
COBALT	0.006	U
COPPER	0.043	J
IRON	4.300	U
LEAD	0.010	U
MAGNESIUM	1.300	U
MANGANESE	0.031	J
MOLYBDENUM	0.034	U
NICKEL	0.018	U
POTASSIUM	7.900	U
SELENIUM	0.470	U
SILVER	0.007	J
SODIUM	4.400	U
THALLIUM	0.008	U
VANADIUM	0.063	U
ZINC	0.270	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: CCB

File: JLC16A Mar 16, 2018 17:23

Analyte	Result	C
ALUMINUM	1.900	U
ARSENIC	0.180	U
BARIUM	0.075	U
BERYLLIUM	0.004	U
CADMIUM	0.007	U
CALCIUM	5.300	U
CHROMIUM	-0.069	U
COBALT	0.006	U
COPPER	0.031	J
IRON	4.300	U
LEAD	0.010	U
MAGNESIUM	1.300	U
MANGANESE	0.041	J
MOLYBDENUM	0.034	U
NICKEL	0.018	U
POTASSIUM	7.900	U
SELENIUM	0.470	U
SILVER	0.005	J
SODIUM	8.643	J
THALLIUM	0.008	U
VANADIUM	0.063	U
ZINC	0.270	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICB
File: JLC20C Mar 20, 2018 17:37

Analyte	Result	C
ALUMINUM	1.900	U
ANTIMONY	0.011	J
ARSENIC	0.180	U
BARIUM	0.075	U
BERYLLIUM	0.004	U
CADMIUM	0.007	U
CALCIUM	5.300	U
CHROMIUM	0.062	U
COBALT	0.006	J
COPPER	0.030	U
IRON	4.300	U
LEAD	0.010	U
MAGNESIUM	1.300	U
MANGANESE	0.021	U
MOLYBDENUM	0.034	U
NICKEL	0.018	U
POTASSIUM	7.900	U
SELENIUM	0.470	U
SILVER	0.003	U
SODIUM	4.400	U
THALLIUM	0.008	U
VANADIUM	0.063	U
ZINC	0.270	U

SAMPLE: CCB
File: JLC20C Mar 20, 2018 18:21

Analyte	Result	C
ALUMINUM	1.900	U
ANTIMONY	0.006	U
ARSENIC	0.180	U
BARIUM	0.075	U
BERYLLIUM	0.004	U
CADMIUM	0.007	U
CALCIUM	5.300	U
CHROMIUM	0.062	U
COBALT	0.010	J
COPPER	0.030	U
IRON	4.300	U
LEAD	0.010	U
MAGNESIUM	1.300	U
MANGANESE	0.021	U
MOLYBDENUM	0.037	J
NICKEL	0.018	U
POTASSIUM	7.900	U
SELENIUM	0.470	U
SILVER	0.003	U
SODIUM	4.400	U
THALLIUM	0.008	U
VANADIUM	0.063	U
ZINC	0.270	U

SAMPLE: CCB
File: JLC20C Mar 20, 2018 19:10

Analyte	Result	C
ALUMINUM	1.900	U
ANTIMONY	0.006	U
ARSENIC	0.180	U
BARIUM	0.075	U
BERYLLIUM	0.004	U
CADMIUM	0.007	U
CALCIUM	5.300	U
CHROMIUM	0.062	U
COBALT	0.006	J
COPPER	0.030	U
IRON	4.300	U
LEAD	0.010	U
MAGNESIUM	1.300	U
MANGANESE	0.021	U
MOLYBDENUM	0.034	U
NICKEL	0.018	U
POTASSIUM	7.900	U
SELENIUM	0.470	U
SILVER	0.003	U
SODIUM	4.400	U
THALLIUM	0.008	U
VANADIUM	0.063	U
ZINC	0.270	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: CCB

File: JLC20C Mar 20, 2018 20:00

Analyte	Result	C
ALUMINUM	1.900	U
ANTIMONY	0.006	U
ARSENIC	0.180	U
BARIUM	0.075	U
BERYLLIUM	0.004	U
CADMIUM	0.007	U
CALCIUM	5.300	U
CHROMIUM	0.062	U
COBALT	0.006	U
COPPER	0.030	U
IRON	4.300	U
LEAD	0.010	U
MAGNESIUM	1.300	U
MANGANESE	0.024	J
MOLYBDENUM	0.034	U
NICKEL	0.018	U
POTASSIUM	7.900	U
SELENIUM	0.470	U
SILVER	0.003	U
SODIUM	4.400	U
THALLIUM	0.008	U
VANADIUM	0.063	U
ZINC	0.270	U

SAMPLE: CCB

File: JLC20C Mar 20, 2018 20:51

Analyte	Result	C
ALUMINUM	1.900	U
ANTIMONY	0.006	U
ARSENIC	0.180	U
BARIUM	0.075	U
BERYLLIUM	0.004	U
CADMIUM	0.007	U
CALCIUM	5.300	U
CHROMIUM	0.062	U
COBALT	0.007	J
COPPER	0.030	U
IRON	4.300	U
LEAD	0.010	U
MAGNESIUM	1.300	U
MANGANESE	0.021	U
MOLYBDENUM	0.034	U
NICKEL	0.018	U
POTASSIUM	7.900	U
SELENIUM	0.470	U
SILVER	0.003	U
SODIUM	4.400	U
THALLIUM	0.008	U
VANADIUM	0.063	U
ZINC	0.270	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICB

File: JLC21A Mar 21, 2018 15:00

Analyte	Result	C
ALUMINUM	1.900	U
ANTIMONY	0.006	J
BERYLLIUM	0.004	U
CALCIUM	5.300	U
IRON	4.300	U
MAGNESIUM	1.300	U
MOLYBDENUM	0.036	J
POTASSIUM	7.900	U
SODIUM	4.400	U
THALLIUM	0.008	U

SAMPLE: CCB

File: JLC21A Mar 21, 2018 15:40

Analyte	Result	C
ALUMINUM	1.900	U
ANTIMONY	0.008	J
BERYLLIUM	0.004	U
CALCIUM	5.300	U
IRON	-5.579	U
MAGNESIUM	1.300	U
MOLYBDENUM	0.045	J
POTASSIUM	7.900	U
SODIUM	4.400	U
THALLIUM	0.008	U

SAMPLE: CCB

File: JLC21A Mar 21, 2018 16:27

Analyte	Result	C
ALUMINUM	1.900	U
ANTIMONY	0.006	U
BERYLLIUM	0.004	U
CALCIUM	5.300	U
IRON	-4.412	U
MAGNESIUM	1.300	U
MOLYBDENUM	0.034	U
POTASSIUM	7.900	U
SODIUM	4.400	U
THALLIUM	0.008	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: CCB
File: JLC21A Mar 21, 2018 17:15

Analyte	Result	C
ALUMINUM	1.900	U
ANTIMONY	0.006	U
BERYLLIUM	0.004	U
CALCIUM	5.300	U
IRON	4.300	U
MAGNESIUM	1.300	U
MOLYBDENUM	0.034	U
POTASSIUM	7.900	U
SODIUM	4.400	U
THALLIUM	0.008	U

SAMPLE: CCB
File: JLC21A Mar 21, 2018 18:04

Analyte	Result	C
ALUMINUM	14.670	B
ANTIMONY	0.013	J
BERYLLIUM	0.004	U
CALCIUM	9.193	J
IRON	6.456	J
MAGNESIUM	8.290	J
MOLYBDENUM	0.058	J
POTASSIUM	7.900	U
SODIUM	5.128	J
THALLIUM	0.016	J

SAMPLE: CCB
File: JLC21A Mar 21, 2018 18:53

Analyte	Result	C
ALUMINUM	1.900	U
ANTIMONY	0.006	U
BERYLLIUM	0.004	U
CALCIUM	5.300	U
IRON	4.300	U
MAGNESIUM	1.300	U
MOLYBDENUM	0.034	U
POTASSIUM	7.900	U
SODIUM	4.400	U
THALLIUM	0.008	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: CCB

File: JLC21A Mar 21, 2018 19:43

Analyte	Result	C
ALUMINUM	1.900	U
ANTIMONY	0.007	J
BERYLLIUM	0.004	U
CALCIUM	5.300	U
IRON	4.300	U
MAGNESIUM	1.300	U
MOLYBDENUM	0.034	U
POTASSIUM	-8.891	U
SODIUM	11.440	J
THALLIUM	0.008	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICB

File: JLC22E Mar 22, 2018 17:21

Analyte	Result	C
ALUMINUM	1.900	U
ARSENIC	0.180	U
BARIUM	0.075	U
BERYLLIUM	0.004	U
CADMIUM	0.007	U
CALCIUM	5.300	U
CHROMIUM	0.062	U
COBALT	0.006	U
COPPER	0.030	U
IRON	4.300	U
LEAD	0.010	U
MAGNESIUM	1.300	U
MANGANESE	0.021	U
MOLYBDENUM	0.034	U
NICKEL	0.018	U
POTASSIUM	7.900	U
SELENIUM	0.470	U
SILVER	0.003	U
SODIUM	4.400	U
VANADIUM	0.063	U
ZINC	0.270	U

SAMPLE: CCB

File: JLC22E Mar 22, 2018 18:05

Analyte	Result	C
ALUMINUM	1.900	U
ARSENIC	0.180	U
BARIUM	0.075	U
BERYLLIUM	0.004	U
CADMIUM	0.007	U
CALCIUM	5.300	U
CHROMIUM	0.062	U
COBALT	0.006	U
COPPER	0.030	U
IRON	4.300	U
LEAD	0.010	U
MAGNESIUM	1.300	U
MANGANESE	0.021	U
MOLYBDENUM	0.035	J
NICKEL	0.018	U
POTASSIUM	-10.590	U
SELENIUM	0.470	U
SILVER	0.003	U
SODIUM	4.400	U
VANADIUM	0.063	U
ZINC	0.270	U

SAMPLE: CCB

File: JLC22E Mar 22, 2018 18:54

Analyte	Result	C
ALUMINUM	1.900	U
ARSENIC	0.180	U
BARIUM	0.075	U
BERYLLIUM	0.004	U
CADMIUM	0.007	U
CALCIUM	5.300	U
CHROMIUM	0.062	U
COBALT	0.006	U
COPPER	0.030	U
IRON	4.300	U
LEAD	0.010	U
MAGNESIUM	1.300	U
MANGANESE	0.021	U
MOLYBDENUM	0.034	U
NICKEL	0.018	U
POTASSIUM	7.900	U
SELENIUM	0.470	U
SILVER	0.003	U
SODIUM	4.400	U
VANADIUM	0.063	U
ZINC	0.270	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICB

File: JLC26B Mar 26, 2018 16:26

Analyte	Result	C
ALUMINUM	1.900	U
ARSENIC	0.180	U
CALCIUM	5.300	U
CHROMIUM	0.062	U
COPPER	0.030	U
IRON	4.300	U
MAGNESIUM	1.300	U
MANGANESE	0.021	U
MOLYBDENUM	0.034	U
NICKEL	0.018	U
POTASSIUM	7.900	U
SELENIUM	0.470	U
SILVER	0.003	U
SODIUM	4.400	U
VANADIUM	0.063	U
ZINC	0.270	U

SAMPLE: CCB

File: JLC26B Mar 26, 2018 17:09

Analyte	Result	C
ALUMINUM	49.710	B
ARSENIC	0.350	J
CALCIUM	44.900	B
CHROMIUM	0.201	J
COPPER	0.188	J
IRON	27.730	B
MAGNESIUM	67.070	B
MANGANESE	0.200	J
MOLYBDENUM	0.360	J
NICKEL	0.122	J
POTASSIUM	48.810	J
SELENIUM	0.470	U
SILVER	0.015	J
SODIUM	55.320	J
VANADIUM	0.098	J
ZINC	0.430	J

SAMPLE: CCB

File: JLC26B Mar 26, 2018 17:57

Analyte	Result	C
ALUMINUM	1.900	U
ARSENIC	0.180	U
CALCIUM	5.300	U
CHROMIUM	0.062	U
COPPER	0.030	U
IRON	4.300	U
MAGNESIUM	1.300	U
MANGANESE	0.021	U
MOLYBDENUM	0.034	U
NICKEL	0.018	U
POTASSIUM	7.900	U
SELENIUM	0.470	U
SILVER	0.003	U
SODIUM	4.400	U
VANADIUM	0.063	U
ZINC	0.270	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICB

File: JLC27A Mar 27, 2018 14:17

Analyte	Result	C
ALUMINUM	1.900	U
CADMIUM	0.007	U
CALCIUM	5.300	U
COBALT	-0.011	U
IRON	4.300	U
MAGNESIUM	-1.312	U
MOLYBDENUM	0.034	U
POTASSIUM	7.900	U
SODIUM	-9.854	U

SAMPLE: CCB

File: JLC27A Mar 27, 2018 14:58

Analyte	Result	C
ALUMINUM	1.900	U
CADMIUM	0.007	U
CALCIUM	5.300	U
COBALT	0.006	U
IRON	4.300	U
MAGNESIUM	1.300	U
MOLYBDENUM	0.037	J
POTASSIUM	7.900	U
SODIUM	-7.426	U

SAMPLE: CCB

File: JLC27A Mar 27, 2018 15:43

Analyte	Result	C
ALUMINUM	1.900	U
CADMIUM	-0.008	U
CALCIUM	5.300	U
COBALT	-0.009	U
IRON	-5.942	U
MAGNESIUM	1.300	U
MOLYBDENUM	0.034	U
POTASSIUM	-9.445	U
SODIUM	-9.172	U

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBSLC16HGS1

Matrix: SOIL **SDG Name:** SL2079

QC Batch ID: LC16HGS1

Concentration Units : mg/Kg drywt

Analyte	RESULT	C
MERCURY	0.017	U

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBSLC19IMS1

Matrix: SOIL **SDG Name:** SL2079

QC Batch ID: LC19IMS1

Concentration Units : mg/Kg drywt

Analyte	RESULT	C
ALUMINUM	1.4	J
ANTIMONY	0.050	U
ARSENIC	0.40	U
BARIUM	0.10	U
BERYLLIUM	0.020	U
CADMIUM	0.020	U
CALCIUM	8.0	U
CHROMIUM	0.12	J
COBALT	0.030	U
COPPER	0.075	J
IRON	6.0	U
LEAD	0.031	J
MAGNESIUM	1.7	J
MANGANESE	0.10	U
NICKEL	0.052	J
POTASSIUM	40	U
SELENIUM	0.30	U
SILVER	0.040	U
SODIUM	4.0	J
THALLIUM	0.040	U
VANADIUM	0.40	U
ZINC	0.80	U

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBWLC16HGW2

Matrix: WATER **SDG Name:** SL2079

QC Batch ID: LC16HGW2

Concentration Units : ug/L

Analyte	RESULT	C
MERCURY	0.045	J

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBWLC16IMW1

Matrix: WATER **SDG Name:** SL2079

QC Batch ID: LC16IMW1

Concentration Units : ug/L

Analyte	RESULT	C
ALUMINUM	5.2	J
ANTIMONY	0.11	J
ARSENIC	4.0	U
BARIUM	1.0	U
BERYLLIUM	0.20	U
CADMIUM	0.20	U
CALCIUM	80	U
CHROMIUM	0.74	J
COBALT	0.30	U
COPPER	2.0	U
IRON	60	U
LEAD	0.50	U
MAGNESIUM	80	U
MANGANESE	1.0	U
NICKEL	1.2	U
POTASSIUM	400	U
SELENIUM	1.5	J
SILVER	0.40	U
SODIUM	24	J
THALLIUM	0.40	U
VANADIUM	4.0	U
ZINC	8.0	U

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICSA

File: JLC16A Mar 16, 2018 15:22

Analyte	TRUE	FOUND	% R
ALUMINUM	100000.00	96580.00	96.6
ARSENIC	0	0.06	
BARIUM	0	0.11	
BERYLLIUM	0	0.00	
CADMIUM	0	0.07	
CALCIUM	100000.00	98280.00	98.3
CHROMIUM	0	0.82	
COBALT	0	0.09	
COPPER	0	0.92	
IRON	100000.00	94480.00	94.5
LEAD	0	0.09	
MAGNESIUM	100000.00	95380.00	95.4
MANGANESE	0	0.39	
MOLYBDENUM	2000.00	1895.00	94.8
NICKEL	0	-0.13	
POTASSIUM	100000.00	98070.00	98.1
SELENIUM	0	0.04	
SILVER	0	0.02	
SODIUM	100000.00	98320.00	98.3
THALLIUM	0	0.00	
VANADIUM	0	0.22	
ZINC	0	2.18	

SAMPLE: ICSAB

File: JLC16A Mar 16, 2018 15:25

Analyte	TRUE	FOUND	% R
ALUMINUM	100000.00	97480.00	97.5
ARSENIC	20.00	20.56	105.0
BARIUM	21.00	20.94	100.0
BERYLLIUM	20.00	20.88	105.0
CADMIUM	20.00	18.81	95.0
CALCIUM	100000.00	100100.00	100.1
CHROMIUM	20.00	21.07	105.0
COBALT	20.00	19.98	100.0
COPPER	20.00	20.14	100.0
IRON	100000.00	95630.00	95.6
LEAD	20.00	21.48	105.0
MAGNESIUM	100000.00	96570.00	96.6
MANGANESE	20.00	20.43	100.0
MOLYBDENUM	2000.00	1934.00	96.7
NICKEL	20.00	19.36	95.0
POTASSIUM	100000.00	100500.00	100.5
SELENIUM	20.00	19.99	100.0
SILVER	20.00	18.44	90.0
SODIUM	100000.00	100100.00	100.1
THALLIUM	20.00	21.52	110.0
VANADIUM	20.00	20.86	105.0
ZINC	20.00	20.94	105.0

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICSA

File: JLC20C Mar 20, 2018 17:48

Analyte	TRUE	FOUND	% R
ALUMINUM	100000.00	95700.00	95.7
ANTIMONY	0	0.07	
ARSENIC	0	0.34	
BARIUM	0	0.09	
BERYLLIUM	0	0.00	
CADMIUM	0	0.02	
CALCIUM	100000.00	98950.00	99.0
CHROMIUM	0	0.88	
COBALT	0	0.10	
COPPER	0	0.97	
IRON	100000.00	95490.00	95.5
LEAD	0	0.09	
MAGNESIUM	100000.00	96440.00	96.4
MANGANESE	0	0.33	
MOLYBDENUM	2000.00	1966.00	98.3
NICKEL	0	-0.09	
POTASSIUM	100000.00	98660.00	98.7
SELENIUM	0	0.20	
SILVER	0	0.03	
SODIUM	100000.00	97650.00	97.7
THALLIUM	0	0.00	
VANADIUM	0	0.20	
ZINC	0	2.28	

SAMPLE: ICSAB

File: JLC20C Mar 20, 2018 17:53

Analyte	TRUE	FOUND	% R
ALUMINUM	100000.00	96200.00	96.2
ANTIMONY	20.00	20.65	105.0
ARSENIC	20.00	21.27	105.0
BARIUM	21.00	21.34	100.0
BERYLLIUM	20.00	20.99	105.0
CADMIUM	20.00	19.62	100.0
CALCIUM	100000.00	100000.00	100.0
CHROMIUM	20.00	21.50	110.0
COBALT	20.00	20.49	100.0
COPPER	20.00	20.60	105.0
IRON	100000.00	97530.00	97.5
LEAD	20.00	21.68	110.0
MAGNESIUM	100000.00	97350.00	97.4
MANGANESE	20.00	20.70	105.0
MOLYBDENUM	2000.00	1998.00	99.9
NICKEL	20.00	19.86	100.0
POTASSIUM	100000.00	99710.00	99.7
SELENIUM	20.00	20.57	105.0
SILVER	20.00	19.27	95.0
SODIUM	100000.00	98390.00	98.4
THALLIUM	20.00	21.78	110.0
VANADIUM	20.00	21.28	105.0
ZINC	20.00	21.47	105.0

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICSA

File: JLC21A Mar 21, 2018 15:11

Analyte	TRUE	FOUND	% R
ALUMINUM	100000.00	94680.00	94.7
ANTIMONY	0	0.06	
BERYLLIUM	0	0.00	
CALCIUM	100000.00	95910.00	95.9
IRON	100000.00	93650.00	93.7
MAGNESIUM	100000.00	94340.00	94.3
MOLYBDENUM	2000.00	1885.00	94.3
POTASSIUM	100000.00	96960.00	97.0
SODIUM	100000.00	94290.00	94.3
THALLIUM	0	0.00	

SAMPLE: ICSAB

File: JLC21A Mar 21, 2018 15:15

Analyte	TRUE	FOUND	% R
ALUMINUM	100000.00	93340.00	93.3
ANTIMONY	20.00	19.87	100.0
BERYLLIUM	20.00	20.00	100.0
CALCIUM	100000.00	95000.00	95.0
IRON	100000.00	92240.00	92.2
MAGNESIUM	100000.00	92740.00	92.7
MOLYBDENUM	2000.00	1887.00	94.3
POTASSIUM	100000.00	95980.00	96.0
SODIUM	100000.00	92720.00	92.7
THALLIUM	20.00	21.05	105.0

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICSA

File: JLC22E Mar 22, 2018 17:33

Analyte	TRUE	FOUND	% R
ALUMINUM	100000.00	95920.00	95.9
ARSENIC	0	0.33	
BARIUM	0	0.07	
BERYLLIUM	0	0.00	
CADMIUM	0	0.09	
CALCIUM	100000.00	97010.00	97.0
CHROMIUM	0	0.85	
COBALT	0	0.10	
COPPER	0	0.99	
IRON	100000.00	90580.00	90.6
LEAD	0	0.09	
MAGNESIUM	100000.00	94160.00	94.2
MANGANESE	0	0.33	
MOLYBDENUM	2000.00	1841.00	92.0
NICKEL	0	-0.07	
POTASSIUM	100000.00	97790.00	97.8
SELENIUM	0	0.34	
SILVER	0	0.02	
SODIUM	100000.00	95480.00	95.5
VANADIUM	0	0.19	
ZINC	0	2.38	

SAMPLE: ICSAB

File: JLC22E Mar 22, 2018 17:37

Analyte	TRUE	FOUND	% R
ALUMINUM	100000.00	95880.00	95.9
ARSENIC	20.00	20.07	100.0
BARIUM	21.00	20.27	95.2
BERYLLIUM	20.00	20.91	105.0
CADMIUM	20.00	18.83	95.0
CALCIUM	100000.00	97010.00	97.0
CHROMIUM	20.00	20.45	100.0
COBALT	20.00	19.40	95.0
COPPER	20.00	19.57	100.0
IRON	100000.00	91780.00	91.8
LEAD	20.00	21.30	105.0
MAGNESIUM	100000.00	93700.00	93.7
MANGANESE	20.00	19.91	100.0
MOLYBDENUM	2000.00	1880.00	94.0
NICKEL	20.00	18.72	95.0
POTASSIUM	100000.00	97430.00	97.4
SELENIUM	20.00	19.53	100.0
SILVER	20.00	18.51	95.0
SODIUM	100000.00	94740.00	94.7
VANADIUM	20.00	20.28	100.0
ZINC	20.00	20.67	105.0

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICSA

File: JLC26B Mar 26, 2018 16:37

Analyte	TRUE	FOUND	% R
ALUMINUM	100000.00	95400.00	95.4
ARSENIC	0	0.38	
CALCIUM	100000.00	94520.00	94.5
CHROMIUM	0	0.74	
COPPER	0	0.88	
IRON	100000.00	89940.00	89.9
MAGNESIUM	100000.00	95140.00	95.1
MANGANESE	0	0.29	
MOLYBDENUM	2000.00	1802.00	90.1
NICKEL	0	-0.11	
POTASSIUM	100000.00	96960.00	97.0
SELENIUM	0	0.18	
SILVER	0	0.02	
SODIUM	100000.00	96140.00	96.1
VANADIUM	0	0.20	
ZINC	0	2.26	

SAMPLE: ICSAB

File: JLC26B Mar 26, 2018 16:41

Analyte	TRUE	FOUND	% R
ALUMINUM	100000.00	96870.00	96.9
ARSENIC	20.00	19.72	100.0
CALCIUM	100000.00	96200.00	96.2
CHROMIUM	20.00	20.08	100.0
COPPER	20.00	19.10	95.0
IRON	100000.00	89700.00	89.7
MAGNESIUM	100000.00	95310.00	95.3
MANGANESE	20.00	19.49	95.0
MOLYBDENUM	2000.00	1839.00	92.0
NICKEL	20.00	18.54	95.0
POTASSIUM	100000.00	98350.00	98.4
SELENIUM	20.00	19.21	95.0
SILVER	20.00	18.49	90.0
SODIUM	100000.00	96010.00	96.0
VANADIUM	20.00	19.84	100.0
ZINC	20.00	20.51	105.0

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICSA

File: JLC27A Mar 27, 2018 14:28

Analyte	TRUE	FOUND	% R
ALUMINUM	100000.00	96500.00	96.5
CADMIUM	0	0.06	
CALCIUM	100000.00	96750.00	96.8
COBALT	0	0.08	
IRON	100000.00	90520.00	90.5
MAGNESIUM	100000.00	94440.00	94.4
MOLYBDENUM	2000.00	1863.00	93.2
POTASSIUM	100000.00	98410.00	98.4
SODIUM	100000.00	95720.00	95.7

SAMPLE: ICSAB

File: JLC27A Mar 27, 2018 14:32

Analyte	TRUE	FOUND	% R
ALUMINUM	100000.00	100500.00	100.5
CADMIUM	20.00	19.56	100.0
CALCIUM	100000.00	99630.00	99.6
COBALT	20.00	19.92	100.0
IRON	100000.00	95340.00	95.3
MAGNESIUM	100000.00	99060.00	99.1
MOLYBDENUM	2000.00	1964.00	98.2
POTASSIUM	100000.00	101500.00	101.5
SODIUM	100000.00	100000.00	100.0

5A

SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-BKRD-SS10S

Matrix: SOIL **SDG Name:** SL2079

Percent Solids: 74.6 **Lab Sample ID:** SL2079-009P

Concentration Units : mg/Kg drywt

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
ALUMINUM, TOTAL	11200		8370		206.2	1390.8	N	78	124	MS
ANTIMONY, TOTAL	2.70		0.10	J	10.31	25.2	N	72	124	MS
ARSENIC, TOTAL	11.3		2.22		10.31	87.9		82	118	MS
BARIUM, TOTAL	351		127		206.2	108.7		86	116	MS
BERYLLIUM, TOTAL	5.47		0.484		5.16	96.7		80	120	MS
CADMIUM, TOTAL	23.3		0.149		25.78	89.9		84	116	MS
CALCIUM, TOTAL	2410		1900		257.75	198.5	N	86	118	MS
CHROMIUM, TOTAL	28.3		8.34		20.62	97.0		83	119	MS
COBALT, TOTAL	51.6		4.48		51.55	91.5		84	115	MS
COPPER, TOTAL	29.7		6.51		25.78	90.1		84	119	MS
IRON, TOTAL	8680		7520		103.1	1126.1	N	81	124	MS
LEAD, TOTAL	22.2		11.0		10.31	108.9		84	118	MS
MAGNESIUM, TOTAL	2970		2140		515.5	161.4	N	80	123	MS
MANGANESE, TOTAL	317		254		51.55	122.7	N	85	116	MS
MERCURY, TOTAL	0.198		0.015	J	0.18	101.9		80	124	CV
NICKEL, TOTAL	52.7		6.38		51.55	89.9		84	119	MS
POTASSIUM, TOTAL	4440		2950		1031	144.2	N	85	119	MS
SELENIUM, TOTAL	9.09		0.576		10.31	82.6		80	119	MS
SILVER, TOTAL	4.75		0.045	J	5.16	91.3		83	118	MS
SODIUM, TOTAL	864		88.2	J	773.25	100.3		79	125	MS
THALLIUM, TOTAL	10.4		0.179		10.31	99.4		83	118	MS
VANADIUM, TOTAL	66.3		16.2		51.55	97.2		82	116	MS
ZINC, TOTAL	71.5		24.6		51.55	91.0		82	119	MS

Comments:

5A

SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-BKRD-SS10S

Matrix: SOIL **SDG Name:** SL2079

Percent Solids: 74.6 **Lab Sample ID:** SL2079-009S

Concentration Units : mg/Kg drywt

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
ALUMINUM, TOTAL	11000		8370		206.2	1295.8	N	78	124	MS
ANTIMONY, TOTAL	2.49		0.10	J	10.31	23.2	N	72	124	MS
ARSENIC, TOTAL	11.3		2.22		10.31	88.0		82	118	MS
BARIUM, TOTAL	349		127		206.2	107.5		86	116	MS
BERYLLIUM, TOTAL	5.53		0.484		5.16	97.8		80	120	MS
CADMIUM, TOTAL	23.4		0.149		25.78	90.3		84	116	MS
CALCIUM, TOTAL	2430		1900		257.75	206.5	N	86	118	MS
CHROMIUM, TOTAL	28.0		8.34		20.62	95.5		83	119	MS
COBALT, TOTAL	51.2		4.48		51.55	90.6		84	115	MS
COPPER, TOTAL	31.5		6.51		25.78	97.1		84	119	MS
IRON, TOTAL	8470		7520		103.1	926.1	N	81	124	MS
LEAD, TOTAL	21.8		11.0		10.31	105.2		84	118	MS
MAGNESIUM, TOTAL	2900		2140		515.5	148.1	N	80	123	MS
MANGANESE, TOTAL	313		254		51.55	114.8		85	116	MS
MERCURY, TOTAL	0.182		0.015	J	0.18	92.6		80	124	CV
NICKEL, TOTAL	53.3		6.38		51.55	91.0		84	119	MS
POTASSIUM, TOTAL	4370		2950		1031	137.8	N	85	119	MS
SELENIUM, TOTAL	9.10		0.576		10.31	82.7		80	119	MS
SILVER, TOTAL	4.70		0.045	J	5.16	90.3		83	118	MS
SODIUM, TOTAL	847		88.2	J	773.25	98.1		79	125	MS
THALLIUM, TOTAL	10.3		0.179		10.31	98.6		83	118	MS
VANADIUM, TOTAL	64.9		16.2		51.55	94.5		82	116	MS
ZINC, TOTAL	71.0		24.6		51.55	90.1		82	119	MS

Comments:

5B

POST DIGEST SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-BKRD-SS10S

Matrix: SOIL **SDG Name:** SL2079

Percent Solids: 74.6 **Lab Sample ID:** SL2079-009A

Concentration Units : ug/L

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
ALUMINUM, TOTAL	15600		16000		200	-190.0	A	80	120	MS
ANTIMONY, TOTAL	2.34		0.19	J	2	107.6		80	120	MS
ARSENIC, TOTAL	14.9		4.25		10	106.1		80	120	MS
BARIUM, TOTAL	239		242		4	-80.0	A	80	120	MS
BERYLLIUM, TOTAL	3.19		0.924		2	113.4		80	120	MS
CADMIUM, TOTAL	2.30		0.285		2	100.7		80	120	MS
CALCIUM, TOTAL	3700		3620		200	40.0	A	80	120	MS
CHROMIUM, TOTAL	25.9		15.9		10	100.2		80	120	MS
COBALT, TOTAL	10.3		8.55		2	89.0		80	120	MS
COPPER, TOTAL	18.4		12.4		6	100.5		80	120	MS
IRON, TOTAL	14100		14400		200	-130.0	A	80	120	MS
LEAD, TOTAL	22.6		20.9		2	83.5		80	120	MS
MAGNESIUM, TOTAL	4120		4080		200	22.0	A	80	120	MS
MANGANESE, TOTAL	471		484		4	-325.0	A	80	120	MS
MERCURY, TOTAL	0.800		0.083	J	1	71.7	A	80	120	CV
NICKEL, TOTAL	16.2		12.2		4	99.8		80	120	MS
POTASSIUM, TOTAL	7760		5630		2000	106.7		80	120	MS
SELENIUM, TOTAL	11.6		1.10		10	105.5		80	120	MS
SILVER, TOTAL	2.27		0.085	J	2	109.3		80	120	MS
SODIUM, TOTAL	2440		168	J	2000	113.5		80	120	MS
THALLIUM, TOTAL	2.59		0.342		2	112.6		80	120	MS
VANADIUM, TOTAL	40.4		31.0		10	94.3		80	120	MS
ZINC, TOTAL	66.5		46.9		20	97.9		80	120	MS

Comments:

5D

SPIKE DUPLICATES

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-BKRD-SS10

Matrix: SOIL **SDG Name:** SL2079

Percent Solids: 74.6 **Lab Sample ID:** SL2079-009

Concentration Units : mg/Kg drywt

Analyte	Control Limits	Spike Result	C	Spike Dup. Result	C	RPD	Q	M
ALUMINUM, TOTAL		11000		11200		1.8		MS
ANTIMONY, TOTAL		2.49		2.70		8.2		MS
ARSENIC, TOTAL		11.3		11.3		0.1		MS
BARIUM, TOTAL		349		351		0.7		MS
BERYLLIUM, TOTAL		5.53		5.47		1.0		MS
CADMIUM, TOTAL		23.4		23.3		0.4		MS
CALCIUM, TOTAL		2430		2410		0.9		MS
CHROMIUM, TOTAL		28.0		28.3		1.1		MS
COBALT, TOTAL		51.2		51.6		0.9		MS
COPPER, TOTAL		31.5		29.7		5.9		MS
IRON, TOTAL		8470		8680		2.4		MS
LEAD, TOTAL		21.8		22.2		1.7		MS
MAGNESIUM, TOTAL		2900		2970		2.3		MS
MANGANESE, TOTAL		313		317		1.3		MS
MERCURY, TOTAL		0.182		0.198		8.8		CV
NICKEL, TOTAL		53.3		52.7		1.1		MS
POTASSIUM, TOTAL		4370		4440		1.5		MS
SELENIUM, TOTAL		9.10		9.09		0.1		MS
SILVER, TOTAL		4.70		4.75		1.0		MS
SODIUM, TOTAL		847		864		2.0		MS
THALLIUM, TOTAL		10.3		10.4		0.7		MS
VANADIUM, TOTAL		64.9		66.3		2.1		MS
ZINC, TOTAL		71.0		71.5		0.7		MS

Comments:

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSOLC16HGS1

Matrix: SOIL **SDG Name:** SL2079

QC Batch ID: LC16HGS1

Concentration Units : mg/Kg drywt

Analyte	TRUE	FOUND	% R	LIMITS (%)	
MERCURY	0.833	0.778	94.0	80	124

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSOLC19IMS1

Matrix: SOIL **SDG Name:** SL2079

QC Batch ID: LC19IMS1

Concentration Units : mg/Kg drywt

Analyte	TRUE	FOUND	% R	LIMITS (%)	
ALUMINUM	200	198	99.0	78	124
ANTIMONY	10.0	10.2	102.5	72	124
ARSENIC	10.0	10.0	100.0	82	118
BARIUM	200	205	102.6	86	116
BERYLLIUM	5.00	4.93	98.6	80	120
CADMIUM	25.0	25.5	102.0	84	116
CALCIUM	250	253	101.0	86	118
CHROMIUM	20.0	19.4	97.0	83	119
COBALT	50.0	50.2	100.3	84	115
COPPER	25.0	24.7	98.7	84	119
IRON	100	97.3	97.3	81	124
LEAD	10.0	10.2	102.3	84	118
MAGNESIUM	500	508	101.5	80	123
MANGANESE	50.0	48.8	97.7	85	116
NICKEL	50.0	50.5	101.0	84	119
POTASSIUM	1000	976	97.5	85	119
SELENIUM	10.0	9.78	97.8	80	119
SILVER	5.00	5.11	102.2	83	118
SODIUM	750	731	97.5	79	125
THALLIUM	10.0	10.0	100.6	83	118
VANADIUM	50.0	49.0	98.1	82	116
ZINC	50.0	47.9	95.8	82	119

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSWLC16HGW2

Matrix: WATER **SDG Name:** SL2079

QC Batch ID: LC16HGW2

Concentration Units : ug/L

Analyte	TRUE	FOUND	% R	LIMITS (%)	
MERCURY	5.00	4.60	92.0	82	119

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSWLC16IMW1

Matrix: WATER **SDG Name:** SL2079

QC Batch ID: LC16IMW1

Concentration Units : ug/L

Analyte	TRUE	FOUND	% R	LIMITS (%)	
ALUMINUM	2000	2070	103.7	84	117
ANTIMONY	100	106	106.5	85	117
ARSENIC	100	99.0	99.0	84	116
BARIUM	2000	2060	102.9	86	114
BERYLLIUM	50.0	47.7	95.4	83	121
CADMIUM	250	249	99.5	87	115
CALCIUM	2500	2520	101.0	87	118
CHROMIUM	200	193	96.5	85	116
COBALT	500	495	99.1	86	115
COPPER	250	245	98.0	85	118
IRON	1000	943	94.3	87	118
LEAD	100	101	101.5	88	115
MAGNESIUM	5000	5220	104.5	83	118
MANGANESE	500	488	97.7	87	115
NICKEL	500	489	97.8	85	117
POTASSIUM	10000	9840	98.4	87	115
SELENIUM	100	98.0	98.0	80	120
SILVER	50.0	49.2	98.4	85	116
SODIUM	7500	7460	99.4	85	117
THALLIUM	100	99.6	99.7	82	116
VANADIUM	500	498	99.7	86	115
ZINC	500	480	96.0	83	119

ICP SERIAL DILUTION

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-BKRD-SS10L

Matrix: SOIL **SDG Name:** SL2079

Lab Sample ID: SL2079-009L

Concentration Units: ug/L

Analyte	Sample Result	C	Dilution Result	C	% Difference	Q	M
ALUMINUM, TOTAL	16000		16400		2.5		MS
ANTIMONY, TOTAL	0.19	J	0.21	J	10.5		MS
ARSENIC, TOTAL	4.25		4.4	J	3.5		MS
BARIUM, TOTAL	242		242		0.0		MS
BERYLLIUM, TOTAL	0.924		0.911	J	1.4		MS
CADMIUM, TOTAL	0.285		0.36	J	26.3		MS
CALCIUM, TOTAL	3620		3650		0.8		MS
CHROMIUM, TOTAL	15.9		17.0		6.9		MS
COBALT, TOTAL	8.55		9.17		7.3		MS
COPPER, TOTAL	12.4		13.9		12.1		MS
IRON, TOTAL	14400		16300		13.2	E	MS
LEAD, TOTAL	20.9		21.3		1.9		MS
MAGNESIUM, TOTAL	4080		4090		0.2		MS
MANGANESE, TOTAL	484		548		13.2	E	MS
MERCURY, TOTAL	0.083	J	0.16	U	100.0		CV
NICKEL, TOTAL	12.2		13.1		7.4		MS
POTASSIUM, TOTAL	5630		5700		1.2		MS
SELENIUM, TOTAL	1.10		2.5	J	127.3		MS
SILVER, TOTAL	0.085	J	0.083	J	2.4		MS
SODIUM, TOTAL	168	J	160	J	4.8		MS
THALLIUM, TOTAL	0.342		0.39	J	14.0		MS
VANADIUM, TOTAL	31.0		33.4		7.7		MS
ZINC, TOTAL	46.9		53.2		13.4		MS

INSTRUMENT DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** H

Instrument Name: CETAC M6100 **Date:** 1/11/2018

Concentration Units: ug/L

Analyte	PQL/LOQ	IDL	M
MERCURY	0.20	0.024	CV

INSTRUMENT DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** J

Instrument Name: AGILENT 7500 ICP-MS **Date:** 1/15/2018

Concentration Units: ug/L

Analyte	PQL/LOQ	IDL	M
ALUMINUM	20	1.9	MS
ANTIMONY	0.20	0.0056	MS
ARSENIC	1.0	0.18	MS
BARIUM	0.40	0.075	MS
BERYLLIUM	0.20	0.0037	MS
CADMIUM	0.20	0.0069	MS
CALCIUM	20	5.3	MS
CHROMIUM	1.0	0.062	MS
COBALT	0.20	0.0062	MS
COPPER	0.60	0.030	MS
IRON	20	4.3	MS
LEAD	0.20	0.010	MS
MAGNESIUM	20	1.3	MS
MANGANESE	0.40	0.021	MS
MOLYBDENUM	1.0	0.034	MS
NICKEL	0.40	0.018	MS
POTASSIUM	200	7.9	MS
SELENIUM	1.0	0.47	MS
SILVER	0.20	0.0030	MS
SODIUM	200	4.4	MS
THALLIUM	0.20	0.0084	MS
VANADIUM	1.0	0.063	MS
ZINC	2.0	0.27	MS

LIMITS of DETECTION

Lab Name: Katahdin Analytical Services **Instrument Code:** H

Instrument Name: CETAC M6100 **Date:** 1/7/2011

Analyte	LOD	Units	M	EPA Prep./Anal. Method
MERCURY	0.017	mg/Kg	CV	SW846 7471B / SW846 7471B

LIMITS of DETECTION

Lab Name: Katahdin Analytical Services **Instrument Code:** H

Instrument Name: CETAC M6100 **Date:** 2/9/2011

Analyte	LOD	Units	M	EPA Prep./Anal. Method
MERCURY	0.10	ug/L	CV	SW846 7470A / SW846 7470A

LIMITS of DETECTION

Lab Name: Katahdin Analytical Services **Instrument Code:** J

Instrument Name: AGILENT 7500 ICP-MS **Date:** 1/25/2011

Analyte	LOD	Units	M	EPA Prep./Anal. Method
ALUMINUM	8.0	ug/L	MS	SW846 3010A / SW846 6020A
ANTIMONY	0.10	ug/L	MS	SW846 3010A / SW846 6020A
ARSENIC	0.80	ug/L	MS	SW846 3010A / SW846 6020A
BARIUM	0.20	ug/L	MS	SW846 3010A / SW846 6020A
BERYLLIUM	0.040	ug/L	MS	SW846 3010A / SW846 6020A
CADMIUM	0.040	ug/L	MS	SW846 3010A / SW846 6020A
CALCIUM	16	ug/L	MS	SW846 3010A / SW846 6020A
CHROMIUM	0.80	ug/L	MS	SW846 3010A / SW846 6020A
COBALT	0.060	ug/L	MS	SW846 3010A / SW846 6020A
COPPER	0.40	ug/L	MS	SW846 3010A / SW846 6020A
IRON	12	ug/L	MS	SW846 3010A / SW846 6020A
LEAD	0.10	ug/L	MS	SW846 3010A / SW846 6020A
MAGNESIUM	16	ug/L	MS	SW846 3010A / SW846 6020A
MANGANESE	0.20	ug/L	MS	SW846 3010A / SW846 6020A
NICKEL	0.24	ug/L	MS	SW846 3010A / SW846 6020A
POTASSIUM	80	ug/L	MS	SW846 3010A / SW846 6020A
SELENIUM	0.60	ug/L	MS	SW846 3010A / SW846 6020A
SILVER	0.080	ug/L	MS	SW846 3010A / SW846 6020A
SODIUM	80	ug/L	MS	SW846 3010A / SW846 6020A
THALLIUM	0.080	ug/L	MS	SW846 3010A / SW846 6020A
VANADIUM	0.80	ug/L	MS	SW846 3010A / SW846 6020A
ZINC	1.6	ug/L	MS	SW846 3010A / SW846 6020A

LIMITS of DETECTION

Lab Name: Katahdin Analytical Services **Instrument Code:** J

Instrument Name: AGILENT 7500 ICP-MS **Date:** 1/26/2011

Analyte	LOD	Units	M	EPA Prep./Anal. Method
ALUMINUM	0.80	mg/kg	MS	SW846 3050B / SW846 6020A
ANTIMONY	0.010	mg/kg	MS	SW846 3050B / SW846 6020A
ARSENIC	0.080	mg/kg	MS	SW846 3050B / SW846 6020A
BARIUM	0.020	mg/kg	MS	SW846 3050B / SW846 6020A
BERYLLIUM	0.0040	mg/Kg	MS	SW846 3050B / SW846 6020A
CADMIUM	0.0040	mg/kg	MS	SW846 3050B / SW846 6020A
CALCIUM	1.6	mg/kg	MS	SW846 3050B / SW846 6020A
CHROMIUM	0.080	mg/kg	MS	SW846 3050B / SW846 6020A
COBALT	0.0060	mg/kg	MS	SW846 3050B / SW846 6020A
COPPER	0.040	mg/kg	MS	SW846 3050B / SW846 6020A
IRON	1.2	mg/kg	MS	SW846 3050B / SW846 6020A
LEAD	0.010	mg/Kg	MS	SW846 3050B / SW846 6020A
MAGNESIUM	1.6	mg/kg	MS	SW846 3050B / SW846 6020A
MANGANESE	0.020	mg/kg	MS	SW846 3050B / SW846 6020A
NICKEL	0.024	mg/kg	MS	SW846 3050B / SW846 6020A
POTASSIUM	8.0	mg/Kg	MS	SW846 3050B / SW846 6020A
SELENIUM	0.060	mg/kg	MS	SW846 3050B / SW846 6020A
SILVER	0.0080	mg/kg	MS	SW846 3050B / SW846 6020A
SODIUM	8.0	mg/kg	MS	SW846 3050B / SW846 6020A
THALLIUM	0.0080	mg/kg	MS	SW846 3050B / SW846 6020A
VANADIUM	0.080	mg/Kg	MS	SW846 3050B / SW846 6020A
ZINC	0.16	mg/kg	MS	SW846 3050B / SW846 6020A

METHOD DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** H

Instrument Name: CETAC M6100 **Date:** 1/7/2011

Analyte	MDL	Units	M	EPA Prep./Anal. Method
MERCURY	0.0052	mg/Kg	CV	SW846 7471B / SW846 7471B

METHOD DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** H

Instrument Name: CETAC M6100 **Date:** 2/9/2011

Analyte	MDL	Units	M	EPA Prep./Anal. Method
MERCURY	0.013	ug/L	CV	SW846 7470A / SW846 7470A

METHOD DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** J

Instrument Name: AGILENT 7500 ICP-MS **Date:** 1/25/2011

Analyte	MDL	Units	M	EPA Prep./Anal. Method
ALUMINUM	0.88	ug/L	MS	SW846 3010A / SW846 6020A
ANTIMONY	0.011	ug/L	MS	SW846 3010A / SW846 6020A
ARSENIC	0.45	ug/L	MS	SW846 3010A / SW846 6020A
BARIUM	0.054	ug/L	MS	SW846 3010A / SW846 6020A
BERYLLIUM	0.0067	ug/L	MS	SW846 3010A / SW846 6020A
CADMIUM	0.0059	ug/L	MS	SW846 3010A / SW846 6020A
CALCIUM	4.1	ug/L	MS	SW846 3010A / SW846 6020A
CHROMIUM	0.044	ug/L	MS	SW846 3010A / SW846 6020A
COBALT	0.012	ug/L	MS	SW846 3010A / SW846 6020A
COPPER	0.037	ug/L	MS	SW846 3010A / SW846 6020A
IRON	2.6	ug/L	MS	SW846 3010A / SW846 6020A
LEAD	0.015	ug/L	MS	SW846 3010A / SW846 6020A
MAGNESIUM	1.6	ug/L	MS	SW846 3010A / SW846 6020A
MANGANESE	0.070	ug/L	MS	SW846 3010A / SW846 6020A
NICKEL	0.030	ug/L	MS	SW846 3010A / SW846 6020A
POTASSIUM	6.1	ug/L	MS	SW846 3010A / SW846 6020A
SELENIUM	0.037	ug/L	MS	SW846 3010A / SW846 6020A
SILVER	0.010	ug/L	MS	SW846 3010A / SW846 6020A
SODIUM	3.7	ug/L	MS	SW846 3010A / SW846 6020A
THALLIUM	0.012	ug/L	MS	SW846 3010A / SW846 6020A
VANADIUM	0.10	ug/L	MS	SW846 3010A / SW846 6020A
ZINC	0.78	ug/L	MS	SW846 3010A / SW846 6020A

METHOD DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** J

Instrument Name: AGILENT 7500 ICP-MS **Date:** 1/26/2011

Analyte	MDL	Units	M	EPA Prep./Anal. Method
ALUMINUM	0.10	mg/kg	MS	SW846 3050B / SW846 6020A
ANTIMONY	0.0040	mg/kg	MS	SW846 3050B / SW846 6020A
ARSENIC	0.029	mg/kg	MS	SW846 3050B / SW846 6020A
BARIUM	0.0073	mg/kg	MS	SW846 3050B / SW846 6020A
BERYLLIUM	0.00081	mg/kg	MS	SW846 3050B / SW846 6020A
CADMIUM	0.0015	mg/kg	MS	SW846 3050B / SW846 6020A
CALCIUM	0.77	mg/kg	MS	SW846 3050B / SW846 6020A
CHROMIUM	0.0098	mg/kg	MS	SW846 3050B / SW846 6020A
COBALT	0.0011	mg/kg	MS	SW846 3050B / SW846 6020A
COPPER	0.014	mg/kg	MS	SW846 3050B / SW846 6020A
IRON	0.48	mg/kg	MS	SW846 3050B / SW846 6020A
LEAD	0.0014	mg/kg	MS	SW846 3050B / SW846 6020A
MAGNESIUM	0.27	mg/kg	MS	SW846 3050B / SW846 6020A
MANGANESE	0.0084	mg/kg	MS	SW846 3050B / SW846 6020A
NICKEL	0.0053	mg/kg	MS	SW846 3050B / SW846 6020A
POTASSIUM	0.91	mg/kg	MS	SW846 3050B / SW846 6020A
SELENIUM	0.0078	mg/kg	MS	SW846 3050B / SW846 6020A
SILVER	0.0013	mg/kg	MS	SW846 3050B / SW846 6020A
SODIUM	0.51	mg/kg	MS	SW846 3050B / SW846 6020A
THALLIUM	0.0019	mg/kg	MS	SW846 3050B / SW846 6020A
VANADIUM	0.022	mg/kg	MS	SW846 3050B / SW846 6020A
ZINC	0.026	mg/kg	MS	SW846 3050B / SW846 6020A

ICP LINEAR RANGES

Lab Name: Katahdin Analytical Services **Instrument Code:** J

Instrument Name: AGILENT 7500 ICP-MS **Date:** 1/31/2018

Concentration Units: ug/L

Analyte	Integration Time (sec)	Linear Range	M
ALUMINUM	0.01	200000	MS
ANTIMONY	0.10	1000	MS
ARSENIC	0.30	1000	MS
BARIUM	0.10	2000	MS
BERYLLIUM	0.30	100	MS
CADMIUM	0.10	1000	MS
CALCIUM	0.03	200000	MS
CHROMIUM	0.10	2000	MS
COBALT	0.10	1000	MS
COPPER	0.10	2000	MS
IRON	0.03	100000	MS
LEAD	0.10	2000	MS
MAGNESIUM	0.05	200000	MS
MANGANESE	0.10	2000	MS
MOLYBDENUM	0.10	1000	MS
NICKEL	0.10	1000	MS
POTASSIUM	0.01	200000	MS
SELENIUM	0.30	1000	MS
SILVER	0.10	100	MS
SODIUM	0.01	200000	MS
THALLIUM	0.10	1000	MS
VANADIUM	0.10	1000	MS
ZINC	0.10	2000	MS

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** LC16HGS1

Matrix: SOIL **SDG Name:** SL2079

Method: CV **Prep Date:** 03/16/2018

Client ID	Lab Sample ID	Initial (g)	Final (L)	Bottle ID
LCSOLC16HGS1	LCSOLC16HGS1	0.6	0.1	
PBSLC16HGS1	PBSLC16HGS1	0.6	0.1	
CHAAP-BKRD-SB08	SL2079-001	0.63	0.1	E
CHAAP-BKRD-SB09	SL2079-002	0.62	0.1	E
CHAAP-BKRD-SB10	SL2079-003	0.77	0.1	E
CHAAP-BKRD-SB11	SL2079-004	0.66	0.1	E
CHAAP-BKRD-SB12	SL2079-005	0.62	0.1	E
CHAAP-BKRD-SB13	SL2079-006	0.74	0.1	E
CHAAP-BKRD-SS08	SL2079-007	0.78	0.1	E
CHAAP-BKRD-SS09	SL2079-008	0.67	0.1	E
CHAAP-BKRD-SS10	SL2079-009	0.72	0.1	N
CHAAP-BKRD-SS10P	SL2079-009P	0.73	0.1	N
CHAAP-BKRD-SS10S	SL2079-009S	0.75	0.1	N
CHAAP-BKRD-SS11	SL2079-010	0.68	0.1	E
CHAAP-BKRD-SS12	SL2079-011	0.74	0.1	E
CHAAP-BKRD-SS13	SL2079-012	0.73	0.1	E
CHAAP-BKRD-SS109	SL2079-013	0.64	0.1	E

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** LC16HGW2

Matrix: WATER **SDG Name:** SL2079

Method: CV **Prep Date:** 03/16/2018

Client ID	Lab Sample ID	Initial (L)	Final (L)	Bottle ID
LCSWLC16HGW2	LCSWLC16HGW2	0.025	0.025	
PBWLC16HGW2	PBWLC16HGW2	0.025	0.025	
CHAAP-BKRD-EB-031418	SL2079-014	0.025	0.025	D

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** LC16IMW1

Matrix: WATER **SDG Name:** SL2079

Method: MS **Prep Date:** 03/16/2018

Client ID	Lab Sample ID	Initial (L)	Final (L)	Bottle ID
LCSWLC16IMW1	LCSWLC16IMW1	0.05	0.05	
PBWLC16IMW1	PBWLC16IMW1	0.05	0.05	
CHAAP-BKRD-EB-031418	SL2079-014	0.05	0.05	D

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** LC19IMS1

Matrix: SOIL **SDG Name:** SL2079

Method: MS **Prep Date:** 03/19/2018

Client ID	Lab Sample ID	Initial (g)	Final (L)	Bottle ID
LCSOLC19IMS1	LCSOLC19IMS1	1	0.1	
PBSLC19IMS1	PBSLC19IMS1	1	0.1	
CHAAP-BKRD-SB08	SL2079-001	1.9	0.1	E
CHAAP-BKRD-SB09	SL2079-002	1.79	0.1	E
CHAAP-BKRD-SB10	SL2079-003	1.49	0.1	E
CHAAP-BKRD-SB11	SL2079-004	1.05	0.1	E
CHAAP-BKRD-SB12	SL2079-005	1.34	0.1	E
CHAAP-BKRD-SB13	SL2079-006	1.24	0.1	E
CHAAP-BKRD-SS08	SL2079-007	1.48	0.1	E
CHAAP-BKRD-SS09	SL2079-008	1.28	0.1	E
CHAAP-BKRD-SS10	SL2079-009	1.28	0.1	N
CHAAP-BKRD-SS10P	SL2079-009P	1.3	0.1	N
CHAAP-BKRD-SS10S	SL2079-009S	1.3	0.1	N
CHAAP-BKRD-SS11	SL2079-010	1.2	0.1	E
CHAAP-BKRD-SS12	SL2079-011	1.15	0.1	E
CHAAP-BKRD-SS13	SL2079-012	1.24	0.1	E
CHAAP-BKRD-SS109	SL2079-013	1.35	0.1	E

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Instrument ID: CETAC M6100 **File Name:** HLC16A

Date: 3/16/2018 **Method:** CV

Lab Sample ID	Client ID	D.F.	Time	Elements
Calibration Blank		1	12:08	Hg
Standard #1 (0.2 ppb		1	12:10	Hg
Standard #2 (0.5 ppb		1	12:12	Hg
Standard #3 (1.0 ppb		1	12:14	Hg
Standard #4 (5.0 ppb		1	12:16	Hg
Standard #5 (10.0 pp		1	12:19	Hg
ICV		1	12:21	HG
ICB		1	12:23	HG
PQL		1	12:25	HG
CCV		1	12:27	HG
CCB		1	12:29	HG
ZZZZZZ		1	12:31	
ZZZZZZ		1	12:33	
ZZZZZZ		1	12:36	
ZZZZZZ		1	12:38	
PBWLC16HGW2		1	12:40	HG
LCSWLC16HGW2		1	12:42	HG
ZZZZZZ		1	12:44	
ZZZZZZ		1	12:46	
ZZZZZZ		1	12:48	
CCV		1	12:50	HG
CCB		1	12:53	HG
ZZZZZZ		1	12:55	
ZZZZZZ		1	12:57	
ZZZZZZ		1	12:59	
ZZZZZZ		1	13:01	
ZZZZZZ		1	13:03	

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Instrument ID: CETAC M6100 **File Name:** HLC16A

Date: 3/16/2018 **Method:** CV

Lab Sample ID	Client ID	D.F.	Time	Elements
ZZZZZZ		1	13:05	
ZZZZZZ		1	13:08	
ZZZZZZ		1	13:10	
ZZZZZZ		1	13:12	
ZZZZZZ		1	13:14	
CCB		1	13:16	HG
CCV		1	13:18	HG
ZZZZZZ		5	13:20	
ZZZZZZ		1	13:23	
CCV		1	13:28	HG
CCB		1	13:30	HG
ZZZZZZ		1	13:32	
ZZZZZZ		1	13:34	
ZZZZZZ		1	13:36	
SL2079-014	CHAAP-BKRD-EB-031418	1	13:39	HG
CCV		1	13:41	HG
CCB		1	13:43	HG

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Instrument ID: CETAC M6100 **File Name:** HLC19A

Date: 3/19/2018 **Method:** CV

Lab Sample ID	Client ID	D.F.	Time	Elements
Calibration Blank		1	11:44	Hg
Standard #1 (0.2 ppb		1	11:46	Hg
Standard #2 (0.5 ppb		1	11:48	Hg
Standard #3 (1.0 ppb		1	11:50	Hg
Standard #4 (5.0 ppb		1	11:59	Hg
Standard #5 (10.0 pp		1	12:01	Hg
ICV		1	12:05	HG
ICB		1	12:09	HG
PQL		1	12:11	HG
CCV		1	12:13	HG
CCB		1	12:15	HG
PBSLC16HGS1		1	12:17	HG
LCSOLC16HGS1		1	12:20	HG
SL2079-001	CHAAP-BKRD-SB08	1	12:22	HG
SL2079-002	CHAAP-BKRD-SB09	1	12:24	HG
SL2079-003	CHAAP-BKRD-SB10	1	12:26	HG
SL2079-004	CHAAP-BKRD-SB11	1	12:28	HG
SL2079-005	CHAAP-BKRD-SB12	1	12:30	HG
SL2079-006	CHAAP-BKRD-SB13	1	12:32	HG
SL2079-007	CHAAP-BKRD-SS08	1	12:35	HG
CCV		1	12:37	HG
CCB		1	12:39	HG
SL2079-008	CHAAP-BKRD-SS09	1	12:41	HG
SL2079-009	CHAAP-BKRD-SS10	1	12:43	HG
SL2079-009L	CHAAP-BKRD-SS10L	5	12:45	HG
SL2079-009A	CHAAP-BKRD-SS10A	1	12:47	HG
SL2079-009S	CHAAP-BKRD-SS10S	1	12:49	HG

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Instrument ID: CETAC M6100 **File Name:** HLC19A

Date: 3/19/2018 **Method:** CV

Lab Sample ID	Client ID	D.F.	Time	Elements
SL2079-009P	CHAAP-BKRD-SS10P	1	12:52	HG
SL2079-010	CHAAP-BKRD-SS11	1	12:54	HG
SL2079-011	CHAAP-BKRD-SS12	1	12:56	HG
SL2079-012	CHAAP-BKRD-SS13	1	12:58	HG
SL2079-013	CHAAP-BKRD-SS109	1	13:00	HG
CCV		1	13:02	HG
CCB		1	13:04	HG

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Instrument ID: AGILENT 7500 ICP-MS **File Name:** JLC16A

Date: 3/16/2018 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements
6020 TUNE		1	14:11	
200.8 TUNE		1	14:14	
Cal Blank		1	15:00	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
Cal Std 6		1	15:03	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
ICV		1	15:07	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
ICB		1	15:11	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
PQL		1	15:14	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
ZZZZZZ		1	15:18	
ICSA		1	15:22	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
ICSAB		1	15:25	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
ZZZZZZ		1	15:29	
ZZZZZZ		1	15:33	
ZZZZZZ		1	15:36	
ZZZZZZ		1	15:40	
ZZZZZZ		1	15:44	
CCV		1	15:47	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
CCB		1	15:51	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
ZZZZZZ		1	15:55	
ZZZZZZ		1	15:59	
ZZZZZZ		5	16:02	
ZZZZZZ		1	16:06	
ZZZZZZ		1	16:10	
ZZZZZZ		5	16:14	
ZZZZZZ		5	16:17	
ZZZZZZ		5	16:21	
ZZZZZZ		5	16:25	
ZZZZZZ		1	16:29	

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Instrument ID: AGILENT 7500 ICP-MS **File Name:** JLC16A

Date: 3/16/2018 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements
CCV		1	16:33	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
CCB		1	16:36	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
ZZZZZZ		5	16:40	
ZZZZZZ		5	16:44	
ZZZZZZ		1	16:48	
PBWLC16IMW1		5	16:52	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
LCSWLC16IMW1		5	16:56	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
SL2079-014	CHAAP-BKRD-EB-031418	5	17:00	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
ZZZZZZ		5	17:04	
ZZZZZZ		5	17:07	
ZZZZZZ		5	17:11	
ZZZZZZ		5	17:15	
CCV		1	17:19	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
CCB		1	17:23	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Instrument ID: AGILENT 7500 ICP-MS **File Name:** JLC20C

Date: 3/20/2018 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements
6020 TUNE		1	14:01	
200.8 TUNE		1	14:04	
Cal Blank		1	17:25	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
Cal Std 6		1	17:29	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
ICV		1	17:33	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
ICB		1	17:37	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
PQL		1	17:40	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
ZZZZZZ		1	17:44	
ICSA		1	17:48	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
ICSAB		1	17:53	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
ZZZZZZ		1	17:57	
ZZZZZZ		1	18:01	
ZZZZZZ		1	18:04	
ZZZZZZ		1	18:09	
ZZZZZZ		1	18:13	
CCV		1	18:17	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
CCB		1	18:21	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
PBSLC19IMS1		5	18:25	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
LCSOLC19IMS1		5	18:29	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
SL2079-001	CHAAP-BKRD-SB08	5	18:33	Al Sb Ca Mg K Na Tl
SL2079-002	CHAAP-BKRD-SB09	5	18:37	Ba Pb
SL2079-003	CHAAP-BKRD-SB10	5	18:41	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
SL2079-004	CHAAP-BKRD-SB11	5	18:45	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
SL2079-005	CHAAP-BKRD-SB12	5	18:50	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
SL2079-006	CHAAP-BKRD-SB13	5	18:54	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
SL2079-007	CHAAP-BKRD-SS08	5	18:58	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
ZZZZZZ		1	19:02	

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Instrument ID: AGILENT 7500 ICP-MS **File Name:** JLC20C

Date: 3/20/2018 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements
CCV		1	19:06	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
CCB		1	19:10	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
SL2079-008	CHAAP-BKRD-SS09	5	19:14	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
SL2079-009	CHAAP-BKRD-SS10	5	19:19	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
SL2079-009L	CHAAP-BKRD-SS10L	25	19:23	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
SL2079-009A	CHAAP-BKRD-SS10A	5	19:27	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
SL2079-009S	CHAAP-BKRD-SS10S	5	19:31	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
SL2079-009P	CHAAP-BKRD-SS10P	5	19:35	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
SL2079-010	CHAAP-BKRD-SS11	5	19:40	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
SL2079-011	CHAAP-BKRD-SS12	5	19:44	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
SL2079-012	CHAAP-BKRD-SS13	5	19:48	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
ZZZZZZ		1	19:52	
CCV		1	19:56	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
CCB		1	20:00	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
SL2079-013	CHAAP-BKRD-SS109	5	20:04	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
ZZZZZZ		5	20:09	
ZZZZZZ		5	20:13	
ZZZZZZ		5	20:17	
ZZZZZZ		5	20:21	
ZZZZZZ		5	20:25	
ZZZZZZ		5	20:30	
ZZZZZZ		5	20:34	
ZZZZZZ		5	20:38	
ZZZZZZ		5	20:42	
CCV		1	20:47	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
CCB		1	20:51	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Instrument ID: AGILENT 7500 ICP-MS **File Name:** JLC21A

Date: 3/21/2018 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements									
6020 TUNE		1	14:00										
200.8 TUNE		1	14:03										
Cal Blank		1	14:49	Al	Sb	Be	Ca	Fe	Mg	Mo	K	Na	Tl
Cal Std 6		1	14:53	Al	Sb	Be	Ca	Fe	Mg	Mo	K	Na	Tl
ICV		1	14:56	Al	Sb	Be	Ca	Fe	Mg	Mo	K	Na	Tl
ICB		1	15:00	Al	Sb	Be	Ca	Fe	Mg	Mo	K	Na	Tl
PQL		1	15:03	Al	Sb	Be	Ca	Fe	Mg	Mo	K	Na	Tl
ZZZZZZ		1	15:07										
ICSA		1	15:11	Al	Sb	Be	Ca	Fe	Mg	Mo	K	Na	Tl
ICSAB		1	15:15	Al	Sb	Be	Ca	Fe	Mg	Mo	K	Na	Tl
ZZZZZZ		1	15:18										
ZZZZZZ		1	15:22										
ZZZZZZ		1	15:25										
ZZZZZZ		1	15:29										
ZZZZZZ		1	15:33										
CCV		1	15:37	Al	Sb	Be	Ca	Fe	Mg	Mo	K	Na	Tl
CCB		1	15:40	Al	Sb	Be	Ca	Fe	Mg	Mo	K	Na	Tl
ZZZZZZ		5	15:44										
ZZZZZZ		10	15:48										
SL2079-002	CHAAP-BKRD-SB09	5	15:52	Al	Sb	Be	Ca		Mg		K	Na	Tl
ZZZZZZ		10	15:56										
ZZZZZZ		5	16:00										
ZZZZZZ		10	16:04										
ZZZZZZ		10	16:08										
ZZZZZZ		5	16:11										
ZZZZZZ		10	16:15										
ZZZZZZ		1	16:19										

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Instrument ID: AGILENT 7500 ICP-MS **File Name:** JLC21A

Date: 3/21/2018 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements									
CCV		1	16:23	Al	Sb	Be	Ca	Fe	Mg	Mo	K	Na	Tl
CCB		1	16:27	Al	Sb	Be	Ca	Fe	Mg	Mo	K	Na	Tl
ZZZZZZ		5	16:31										
ZZZZZZ		5	16:35										
ZZZZZZ		5	16:39										
ZZZZZZ		10	16:43										
ZZZZZZ		5	16:47										
ZZZZZZ		10	16:51										
ZZZZZZ		5	16:55										
ZZZZZZ		5	16:59										
ZZZZZZ		5	17:03										
ZZZZZZ		1	17:07										
CCV		1	17:11	Al	Sb	Be	Ca	Fe	Mg	Mo	K	Na	Tl
CCB		1	17:15	Al	Sb	Be	Ca	Fe	Mg	Mo	K	Na	Tl
ZZZZZZ		10	17:19										
ZZZZZZ		5	17:23										
ZZZZZZ		10	17:27										
ZZZZZZ		5	17:31										
ZZZZZZ		5	17:36										
ZZZZZZ		5	17:40										
ZZZZZZ		5	17:44										
ZZZZZZ		5	17:48										
ZZZZZZ		5	17:52										
ZZZZZZ		1	17:56										
CCV		1	18:00	Al	Sb	Be	Ca	Fe	Mg	Mo	K	Na	Tl
CCB		1	18:04	Al	Sb	Be	Ca	Fe	Mg	Mo	K	Na	Tl
ZZZZZZ		25	18:08										

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Instrument ID: AGILENT 7500 ICP-MS **File Name:** JLC21A

Date: 3/21/2018 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements									
ZZZZZZ		5	18:12										
ZZZZZZ		5	18:16										
ZZZZZZ		5	18:20										
ZZZZZZ		5	18:25										
ZZZZZZ		5	18:29										
ZZZZZZ		1	18:33										
ZZZZZZ		1	18:37										
PBWLC16IMW1		5	18:41		Sb								
LCSWLC16IMW1		5	18:45		Sb								
CCV		1	18:49	Al	Sb	Be	Ca	Fe	Mg	Mo	K	Na	Tl
CCB		1	18:53	Al	Sb	Be	Ca	Fe	Mg	Mo	K	Na	Tl
SL2079-014	CHAAP-BKRD-EB-031418	5	18:58		Sb								
ZZZZZZ		5	19:02										
ZZZZZZ		5	19:06										
ZZZZZZ		5	19:10										
ZZZZZZ		1	19:14										
ZZZZZZ		5	19:18										
ZZZZZZ		5	19:22										
ZZZZZZ		5	19:26										
ZZZZZZ		1	19:31										
ZZZZZZ		1	19:35										
CCV		1	19:39	Al	Sb	Be	Ca	Fe	Mg	Mo	K	Na	Tl
CCB		1	19:43	Al	Sb	Be	Ca	Fe	Mg	Mo	K	Na	Tl

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Instrument ID: AGILENT 7500 ICP-MS **File Name:** JLC22E

Date: 3/22/2018 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements
6020 TUNE		1	13:55	
200.8 TUNE		1	13:57	
Cal Blank		1	17:09	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na V Zn
Cal Std 6		1	17:13	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na V Zn
ICV		1	17:17	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na V Zn
ICB		1	17:21	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na V Zn
PQL		1	17:25	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na V Zn
ZZZZZZ		1	17:29	
ICSA		1	17:33	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na V Zn
ICSAB		1	17:37	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na V Zn
ZZZZZZ		1	17:41	
ZZZZZZ		1	17:45	
ZZZZZZ		1	17:49	
ZZZZZZ		1	17:53	
ZZZZZZ		1	17:57	
CCV		1	18:01	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na V Zn
CCB		1	18:05	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na V Zn
SL2079-001	CHAAP-BKRD-SB08	5	18:09	As Ba Be Cd Cr Co Cu Fe Pb Mn Ni Se Ag V Zn
ZZZZZZ		5	18:13	
ZZZZZZ		5	18:18	
ZZZZZZ		5	18:22	
ZZZZZZ		5	18:26	
ZZZZZZ		5	18:30	
ZZZZZZ		5	18:34	
ZZZZZZ		5	18:38	
ZZZZZZ		1	18:42	
ZZZZZZ		1	18:46	

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Instrument ID: AGILENT 7500 ICP-MS **File Name:** JLC22E

Date: 3/22/2018 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements
CCV		1	18:50	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na V Zn
CCB		1	18:54	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na V Zn

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Instrument ID: AGILENT 7500 ICP-MS **File Name:** JLC26B

Date: 3/26/2018 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements																			
6020 TUNE		1	13:56																				
200.8 TUNE		1	13:59																				
Cal Blank		1	16:14	Al	As		Ca	Cr		Cu	Fe		Mg	Mn	Mo	Ni	K	Se	Ag	Na		V	Zn
Cal Std 6		1	16:18	Al	As		Ca	Cr		Cu	Fe		Mg	Mn	Mo	Ni	K	Se	Ag	Na		V	Zn
ICV		1	16:22	Al	As		Ca	Cr		Cu	Fe		Mg	Mn	Mo	Ni	K	Se	Ag	Na		V	Zn
ICB		1	16:26	Al	As		Ca	Cr		Cu	Fe		Mg	Mn	Mo	Ni	K	Se	Ag	Na		V	Zn
PQL		1	16:29	Al	As		Ca	Cr		Cu	Fe		Mg	Mn	Mo	Ni	K	Se	Ag	Na		V	Zn
ZZZZZZ		1	16:33																				
ICSA		1	16:37	Al	As		Ca	Cr		Cu	Fe		Mg	Mn	Mo	Ni	K	Se	Ag	Na		V	Zn
ICSAB		1	16:41	Al	As		Ca	Cr		Cu	Fe		Mg	Mn	Mo	Ni	K	Se	Ag	Na		V	Zn
ZZZZZZ		1	16:46																				
ZZZZZZ		1	16:49																				
ZZZZZZ		1	16:53																				
ZZZZZZ		1	16:57																				
ZZZZZZ		1	17:01																				
CCV		1	17:05	Al	As		Ca	Cr		Cu	Fe		Mg	Mn	Mo	Ni	K	Se	Ag	Na		V	Zn
CCB		1	17:09	Al	As		Ca	Cr		Cu	Fe		Mg	Mn	Mo	Ni	K	Se	Ag	Na		V	Zn
ZZZZZZ		1	17:13																				
ZZZZZZ		1	17:17																				
ZZZZZZ		1	17:21																				
ZZZZZZ		1	17:25																				
ZZZZZZ		1	17:29																				
ZZZZZZ		1	17:33																				
ZZZZZZ		1	17:37																				
ZZZZZZ		1	17:41																				
SL2079-002	CHAAP-BKRD-SB09	5	17:45		As			Cr		Cu				Mn			Ni		Se	Ag		V	Zn
ZZZZZZ		10	17:49																				

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Instrument ID: AGILENT 7500 ICP-MS **File Name:** JLC26B

Date: 3/26/2018 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements																	
CCV		1	17:53	Al	As	Ca	Cr	Cu	Fe	Mg	Mn	Mo	Ni	K	Se	Ag	Na	V	Zn		
CCB		1	17:57	Al	As	Ca	Cr	Cu	Fe	Mg	Mn	Mo	Ni	K	Se	Ag	Na	V	Zn		

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Instrument ID: AGILENT 7500 ICP-MS **File Name:** JLC27A

Date: 3/27/2018 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements							
6020 TUNE		1	13:17								
200.8 TUNE		1	13:20								
Cal Blank		1	14:06	Al	Cd	Ca	Co	Fe	Mg	Mo	K	Na
Cal Std 6		1	14:10	Al	Cd	Ca	Co	Fe	Mg	Mo	K	Na
ICV		1	14:13	Al	Cd	Ca	Co	Fe	Mg	Mo	K	Na
ICB		1	14:17	Al	Cd	Ca	Co	Fe	Mg	Mo	K	Na
PQL		1	14:21	Al	Cd	Ca	Co	Fe	Mg	Mo	K	Na
ZZZZZZ		1	14:24								
ICSA		1	14:28	Al	Cd	Ca	Co	Fe	Mg	Mo	K	Na
ICSAB		1	14:32	Al	Cd	Ca	Co	Fe	Mg	Mo	K	Na
ZZZZZZ		1	14:36								
ZZZZZZ		1	14:39								
ZZZZZZ		1	14:43								
ZZZZZZ		1	14:46								
ZZZZZZ		1	14:50								
CCV		1	14:54	Al	Cd	Ca	Co	Fe	Mg	Mo	K	Na
CCB		1	14:58	Al	Cd	Ca	Co	Fe	Mg	Mo	K	Na
ZZZZZZ		1	15:01								
ZZZZZZ		1	15:05								
ZZZZZZ		1	15:09								
ZZZZZZ		1	15:13								
ZZZZZZ		1	15:16								
ZZZZZZ		1	15:20								
ZZZZZZ		1	15:24								
ZZZZZZ		1	15:28								
SL2079-002	CHAAP-BKRD-SB09	5	15:32		Cd		Co	Fe			
ZZZZZZ		10	15:36								

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Instrument ID: AGILENT 7500 ICP-MS **File Name:** JLC27A

Date: 3/27/2018 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements								
CCV		1	15:40	Al	Cd	Ca	Co	Fe	Mg	Mo	K	Na
CCB		1	15:43	Al	Cd	Ca	Co	Fe	Mg	Mo	K	Na

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: David Nelson
ATI, Inc.
9220 Rumsey Road
Columbia,MD 21045

Lab Sample ID: SL2079-1
Report Date: 02-APR-18
Client PO: PN:16-027
Project: Cornhusker Army Ammu
SDG: SL2079

Sample Description	Matrix	Date Sampled	Date Received
CHAAP-BKRD-SB08	SL	14-MAR-18 13:40:00	15-MAR-18

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Chromium, Hexavalent	U0.36 mg/Kgdrywt	0.60	0.18	0.36	SW846 7196A	WG225318	22-MAR-18 15:28:00	SW846 3060A	21-MAR-18	
Total Solids	81. %	1		N/A	SW3540C	WG225260	23-MAR-18 11:01:08	SW3540C	22-MAR-18	

Katahdin Analytical Services A0000286

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: David Nelson
ATI, Inc.
9220 Rumsey Road
Columbia,MD 21045

Lab Sample ID: SL2079-2
Report Date: 02-APR-18
Client PO: PN:16-027
Project: Cornhusker Army Ammu
SDG: SL2079

Sample Description	Matrix	Date Sampled	Date Received
CHAAP-BKRD-SB09	SL	14-MAR-18 15:30:00	15-MAR-18

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Chromium, Hexavalent	J0.32 mg/Kgdrywt	0.58	0.17	0.34	SW846 7196A	WG225318	22-MAR-18 15:28:00	SW846 3060A	21-MAR-18	
Total Solids	86. %	1		N/A	SW3540C	WG225260	23-MAR-18 11:01:16	SW3540C	22-MAR-18	

Katahdin Analytical Services A0000287

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: David Nelson
ATI, Inc.
9220 Rumsey Road
Columbia,MD 21045

Lab Sample ID: SL2079-3
Report Date: 02-APR-18
Client PO: PN:16-027
Project: Cornhusker Army Ammu
SDG: SL2079

Sample Description	Matrix	Date Sampled	Date Received
CHAAP-BKRD-SB10	SL	14-MAR-18 15:10:00	15-MAR-18

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Chromium, Hexavalent	J0.17 mg/Kgdrywt	0.58	0.17	0.35	SW846 7196A	WG225318	22-MAR-18 15:28:00	SW846 3060A	21-MAR-18	
Total Solids	84. %	1		N/A	SW3540C	WG225260	23-MAR-18 11:01:26	SW3540C	22-MAR-18	

Katahdin Analytical Services A0000288

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: David Nelson
ATI, Inc.
9220 Rumsey Road
Columbia,MD 21045

Lab Sample ID: SL2079-4
Report Date: 02-APR-18
Client PO: PN:16-027
Project: Cornhusker Army Ammu
SDG: SL2079

Sample Description	Matrix	Date Sampled	Date Received
CHAAP-BKRD-SB11	SL	14-MAR-18 14:10:00	15-MAR-18

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Chromium, Hexavalent	U0.36 mg/Kgdrywt	0.60	0.18	0.36	SW846 7196A	WG225318	22-MAR-18 15:28:00	SW846 3060A	21-MAR-18	
Total Solids	80. %	1		N/A	SW3540C	WG225260	23-MAR-18 11:01:37	SW3540C	22-MAR-18	

Katahdin Analytical Services A0000289

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: David Nelson
ATI, Inc.
9220 Rumsey Road
Columbia,MD 21045

Lab Sample ID: SL2079-5
Report Date: 02-APR-18
Client PO: PN:16-027
Project: Cornhusker Army Ammu
SDG: SL2079

Sample Description	Matrix	Date Sampled	Date Received
CHAAP-BKRD-SB12	SL	14-MAR-18 15:00:00	15-MAR-18

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Chromium, Hexavalent	U0.33 mg/Kgdrywt	0.56	0.17	0.33	SW846 7196A	WG225318	22-MAR-18 15:28:00	SW846 3060A	21-MAR-18	
Total Solids	83. %	1		N/A	SW3540C	WG225260	23-MAR-18 11:01:48	SW3540C	22-MAR-18	

Katahdin Analytical Services A0000290

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: David Nelson
ATI, Inc.
9220 Rumsey Road
Columbia,MD 21045

Lab Sample ID: SL2079-6
Report Date: 02-APR-18
Client PO: PN:16-027
Project: Cornhusker Army Ammu
SDG: SL2079

Sample Description	Matrix	Date Sampled	Date Received
CHAAP-BKRD-SB13	SL	14-MAR-18 14:35:00	15-MAR-18

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Chromium, Hexavalent	U0.36 mg/Kgdrywt	0.61	0.18	0.36	SW846 7196A	WG225318	22-MAR-18 15:28:00	SW846 3060A	21-MAR-18	
Total Solids	80. %	1		N/A	SW3540C	WG225260	23-MAR-18 11:02:00	SW3540C	22-MAR-18	

Katahdin Analytical Services A0000291

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: David Nelson
ATI, Inc.
9220 Rumsey Road
Columbia,MD 21045

Lab Sample ID: SL2079-7
Report Date: 02-APR-18
Client PO: PN:16-027
Project: Cornhusker Army Ammu
SDG: SL2079

Sample Description	Matrix	Date Sampled	Date Received
CHAAP-BKRD-SS08	SL	14-MAR-18 14:10:00	15-MAR-18

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Chromium, Hexavalent	U0.36 mg/Kgdrywt	0.60	0.18	0.36	SW846 7196A	WG225318	22-MAR-18 15:28:00	SW846 3060A	21-MAR-18	
Total Solids	79. %	1		N/A	SW3540C	WG225260	23-MAR-18 11:02:13	SW3540C	22-MAR-18	

Katahdin Analytical Services A0000292

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: David Nelson
ATI, Inc.
9220 Rumsey Road
Columbia,MD 21045

Lab Sample ID: SL2079-8
Report Date: 02-APR-18
Client PO: PN:16-027
Project: Cornhusker Army Ammu
SDG: SL2079

Sample Description	Matrix	Date Sampled	Date Received
CHAAP-BKRD-SS09	SL	14-MAR-18 15:50:00	15-MAR-18

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Chromium, Hexavalent	U0.34 mg/Kgdrywt	0.56	0.17	0.34	SW846 7196A	WG225318	22-MAR-18 15:28:00	SW846 3060A	21-MAR-18	
Total Solids	83. %	1		N/A	SW3540C	WG225260	23-MAR-18 11:02:26	SW3540C	22-MAR-18	

Katahdin Analytical Services A0000293

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: David Nelson
ATI, Inc.
9220 Rumsey Road
Columbia,MD 21045

Lab Sample ID: SL2079-9
Report Date: 02-APR-18
Client PO: PN:16-027
Project: Cornhusker Army Ammu
SDG: SL2079

Sample Description	Matrix	Date Sampled	Date Received
CHAAP-BKRD-SS10	SL	14-MAR-18 16:00:00	15-MAR-18

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Chromium, Hexavalent	U0.38 mg/Kgdrywt	0.64	0.19	0.38	SW846 7196A	WG225318	22-MAR-18 15:28:00	SW846 3060A	21-MAR-18	
Total Solids	75. %	1		N/A	SW3540C	WG225260	23-MAR-18 11:02:46	SW3540C	22-MAR-18	

Katahdin Analytical Services A0000294

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: David Nelson
ATI, Inc.
9220 Rumsey Road
Columbia,MD 21045

Lab Sample ID: SL2079-10
Report Date: 02-APR-18
Client PO: PN:16-027
Project: Cornhusker Army Ammu
SDG: SL2079

Sample Description	Matrix	Date Sampled	Date Received
CHAAP-BKRD-SS11	SL	14-MAR-18 14:25:00	15-MAR-18

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Chromium, Hexavalent	2.6 mg/Kgdrywt	0.58	0.17	0.35	SW846 7196A	WG225318	22-MAR-18 15:28:00	SW846 3060A	21-MAR-18	
Total Solids	81. %	1		N/A	SW3540C	WG225260	23-MAR-18 11:03:14	SW3540C	22-MAR-18	

Katahdin Analytical Services A0000295

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: David Nelson
ATI, Inc.
9220 Rumsey Road
Columbia,MD 21045

Lab Sample ID: SL2079-11
Report Date: 02-APR-18
Client PO: PN:16-027
Project: Cornhusker Army Ammu
SDG: SL2079

Sample Description	Matrix	Date Sampled	Date Received
CHAAP-BKRD-SS12	SL	14-MAR-18 14:40:00	15-MAR-18

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Chromium, Hexavalent	U0.36 mg/Kgdrywt	0.60	0.18	0.36	SW846 7196A	WG225318	22-MAR-18 15:28:00	SW846 3060A	21-MAR-18	
Total Solids	78. %	1		N/A	SW3540C	WG225260	23-MAR-18 11:03:27	SW3540C	22-MAR-18	

Katahdin Analytical Services A0000296

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: David Nelson
ATI, Inc.
9220 Rumsey Road
Columbia,MD 21045

Lab Sample ID: SL2079-12
Report Date: 02-APR-18
Client PO: PN:16-027
Project: Cornhusker Army Ammu
SDG: SL2079

Sample Description	Matrix	Date Sampled	Date Received
CHAAP-BKRD-SS13	SL	14-MAR-18 14:35:00	15-MAR-18

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Chromium, Hexavalent	U0.36 mg/Kgdrywt	0.60	0.18	0.36	SW846 7196A	WG225318	22-MAR-18 15:28:00	SW846 3060A	21-MAR-18	
Total Solids	78. %	1		N/A	SW3540C	WG225260	23-MAR-18 11:03:37	SW3540C	22-MAR-18	

Katahdin Analytical Services A0000297

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: David Nelson
ATI, Inc.
9220 Rumsey Road
Columbia,MD 21045

Lab Sample ID: SL2079-13
Report Date: 02-APR-18
Client PO: PN:16-027
Project: Cornhusker Army Ammu
SDG: SL2079

Sample Description	Matrix	Date Sampled	Date Received
CHAAP-BKRD-SS109	SL	14-MAR-18 12:00:00	15-MAR-18

Parameter	Result	Adj LOQ	Adj MDL	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Chromium, Hexavalent	J0.40 mg/Kgdrywt	0.59	0.18	0.35	SW846 7196A	WG225555	27-MAR-18 16:36:00	SW846 3060A	26-MAR-18	
Total Solids	83. %	1		N/A	SW3540C	WG225260	23-MAR-18 11:04:05	SW3540C	22-MAR-18	

Katahdin Analytical Services A0000298

Quality Control Report

Blank Sample Summary Report

Chromium, Hexavalent

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL	LOD
MBLANK	WG225318	SW846 7196A	22-MAR-18	21-MAR-18	U 0.29 mg/Kgdrywt	0.48 mg/Kgdrywt	0.29
MBLANK	WG225555	SW846 7196A	27-MAR-18	26-MAR-18	J 0.26 mg/Kgdrywt	0.48 mg/Kgdrywt	0.29

Total Solids

Samp Type	QC Batch	Anal. Method	Anal. Date	Prep. Date	Result	PQL	LOD
MBLANK	WG225260	SW3540C	23-MAR-18	22-MAR-18	100 %	1 %	N/A

Quality Control Report

Laboratory Control Sample Summary Report

Chromium, Hexavalent

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG225318-2	LCS	WG225318	22-MAR-18	21-MAR-18	mg/Kgdrywt	40	38.	94	80-120	
WG225555-2	LCS	WG225555	27-MAR-18	26-MAR-18	mg/Kgdrywt	40	38.	95	80-120	

Total Solids

Lab Sample Id	Samp Type	QC Batch	Analysis Date	Prep Date	Units	Spike Amt.	Result	Recovery	Acceptance Range	RPD
WG225260-2	LCS	WG225260	23-MAR-18	22-MAR-18	%	90	90.	100	90-110	

Quality Control Report

Duplicate Sample Summary Report

Total Solids

Duplicate Sample ID	Original Sample ID	QC Batch	Analysis Date	Result Units	Sample Result	Duplicate Result	RPD(%)	RPD Limit
WG225260-4	SL2079-9	WG225260	23-MAR-18	%	75.	75.	0	20
WG225260-3	SL2079-8	WG225260	23-MAR-18	%	83.	83.	0	20

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Quality Control Report

Matrix Spike Sample Summary Report

Chromium, Hexavalent

Matrix Spike Sample ID	Sample Type	Original Sample ID	QC Batch	Analysis Date	Result Units	Spike Amount	Sample Result	MS Result	Recovery (%)	Recovery Limit
WG225318-3	MS	SL2079-9	WG225318	22-MAR-18	mg/Kgdrywt	54.86	U 0.38	37.	68*	75 - 125
WG225318-4	MS	SL2079-9	WG225318	22-MAR-18	mg/Kgdrywt	1441.37	U 0.38	1000	71*	75 - 125

VOLATILES DATA

QC Summary Section

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** Cornhusker Army Ammunition Plant **Matrix:** SL
Lab Code: KAS **SDG:** SL2079

Client Sample ID	Lab Sample ID	Col. ID	BFB	#	DBF	#	DCA	#	TOL	#
CHAAP-BKRD-SS11	SL2079-10		83.5		105.		105.		100.	
CHAAP-BKRD-SS12	SL2079-11		83.2		115.		120.		101.	
CHAAP-BKRD-SS13	SL2079-12		85.0		116.		120.		98.7	
CHAAP-BKRD-SS109	SL2079-13		98.2		117.		125.		102.	
CHAAP-BKRD-SB08	SL2079-1RA		100.		114.		119.		99.6	
CHAAP-BKRD-SB09	SL2079-2RA		103.		117.		125.		100.	
CHAAP-BKRD-SB10	SL2079-3RA		103.		117.		129.		102.	
CHAAP-BKRD-SB11	SL2079-4RA		106.		122.		134.		102.	
CHAAP-BKRD-SB12	SL2079-5RA2		99.7		113.		111.		100.	
CHAAP-BKRD-SB13	SL2079-6RA2		97.7		114.		117.		102.	
CHAAP-BKRD-SS08	SL2079-7		83.6		110.		105.		101.	
CHAAP-BKRD-SS09	SL2079-8		88.9		110.		108.		101.	
CHAAP-BKRD-SS10	SL2079-9		85.2		123.		131.		102.	
Laboratory Control S	WG225350-1		104.		103.		104.		100.	
Method Blank Sample	WG225350-2		102.		110.		117.		100.	
Matrix Spike	WG225400-12		99.2		105.		112.		102.	
Matrix Spike Duplica	WG225400-13		96.8		107.		108.		100.	
Laboratory Control S	WG225400-8		95.2		95.5		87.0		98.6	
Method Blank Sample	WG225400-9		94.6		103.		99.7		99.6	
Laboratory Control S	WG225463-1		98.0		96.3		93.0		99.8	
Method Blank Sample	WG225463-2		99.8		107.		107.		100.	

		QC Limits
TOL	TOLUENE-D8	85-125
DCA	1,2-DICHLOROETHANE-D4	71-136
DBF	DIBROMOFLUOROMETHANE	78-125
BFB	P-BROMOFLUOROBENZENE	79-125

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

600 Technology Way
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Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** Cornhusker Army Ammunition Plant **Matrix:** AQ
Lab Code: KAS **SDG:** SL2079

Client Sample ID	Lab Sample ID	Col. ID	BFB	#	DBF	#	DCA	#	TOL	#
CHAAP-BKRD-EB-031418	SL2079-14		79.9	*	106.		107.		95.7	
CHAAP-BKRD-TB-031418	SL2079-15		82.7	*	107.		109.		97.3	
Laboratory Control S	WG225300-1		88.3		98.6		97.9		98.1	
Method Blank Sample	WG225300-2		80.0	*	106.		108.		95.1	

		QC Limits
TOL	TOLUENE-D8	89-120
DCA	1,2-DICHLOROETHANE-D4	81-120
DBF	DIBROMOFLUOROMETHANE	80-120
BFB	P-BROMOFLUOROBENZENE	85-120

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

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Tel:(207) 874-2400 Fax:(207) 775-4029

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Form 4
Method Blank Summary - VOA

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : P4882.D
Instrument ID : GCMS-P
Heated Purge : No

SDG : SL2079
Lab Sample ID : WG225300-2
Date Analyzed : 23-MAR-18
Time Analyzed : 09:49

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG225300-1	P4880.D	03/23/18	08:35
CHAAP-BKRD-EB-031418	SL2079-14	P4883.D	03/23/18	10:25
CHAAP-BKRD-TB-031418	SL2079-15	P4884.D	03/23/18	11:00

Form 4
Method Blank Summary - VOA

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : W3324.D
Instrument ID : GCMS-W
Heated Purge : Yes

SDG : SL2079
Lab Sample ID : WG225350-2
Date Analyzed : 24-MAR-18
Time Analyzed : 11:32

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG225350-1	W3322.D	03/24/18	10:10
CHAAP-BKRD-SB08	SL2079-1RA	W3325.D	03/24/18	12:09
CHAAP-BKRD-SB09	SL2079-2RA	W3326.D	03/24/18	12:46
CHAAP-BKRD-SB10	SL2079-3RA	W3327.D	03/24/18	13:23
CHAAP-BKRD-SB11	SL2079-4RA	W3328.D	03/24/18	14:01

Form 4
Method Blank Summary - VOA

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : W3350.D
Instrument ID : GCMS-W
Heated Purge : Yes

SDG : SL2079
Lab Sample ID : WG225400-9
Date Analyzed : 26-MAR-18
Time Analyzed : 15:10

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG225400-8	W3348.D	03/26/18	13:56
CHAAP-BKRD-SS08	SL2079-7	W3351.D	03/26/18	15:47
CHAAP-BKRD-SS09	SL2079-8	W3352.D	03/26/18	16:24
CHAAP-BKRD-SS11	SL2079-10	W3353.D	03/26/18	17:01
CHAAP-BKRD-SS12	SL2079-11	W3354.D	03/26/18	17:38
CHAAP-BKRD-SS13	SL2079-12	W3355.D	03/26/18	18:15
CHAAP-BKRD-SS109	SL2079-13	W3356.D	03/26/18	18:52
CHAAP-BKRD-SS10	SL2079-9	W3357.D	03/26/18	19:29
Matrix Spike	WG225400-12	W3358.D	03/26/18	20:06
Matrix Spike Duplica	WG225400-13	W3359.D	03/26/18	20:43

Form 4
Method Blank Summary - VOA

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : W3368.D
Instrument ID : GCMS-W
Heated Purge : Yes

SDG : SL2079
Lab Sample ID : WG225463-2
Date Analyzed : 27-MAR-18
Time Analyzed : 11:06

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG225463-1	W3366.D	03/27/18	09:36
CHAAP-BKRD-SB12	SL2079-5RA2	W3369.D	03/27/18	11:43
CHAAP-BKRD-SB13	SL2079-6RA2	W3370.D	03/27/18	12:20

Form 5
Volatile Organic Instrument Performance Check

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : PB983A.D
Instrument ID : GCMS-P

SDG : SL2079
Date Analyzed : 19-MAR-18
Time Analyzed : 14:29
Heated Purge : No

m/e	Ion Abundance Criteria	% Relative Abundance		
50	15.0 - 40.0% of mass 95	19.5		
75	30.0 - 60.0% of mass 95	50.1		
95	Base Peak, 100% relative abundance	100		
96	5.0 - 9.0% of mass 95	6.5		
173	Less than 2.0% of mass 174	0.5	0.69	1
174	Greater than 50.0% of mass 95	75.3		
175	5.0 - 9.0% of mass 174	4.8	6.43	1
176	95.0 - 101.0% of mass 174	76.0	100.84	1
177	5.0 - 9.0% of mass 176	4.6	6.10	2

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following samples, LCS, MS, MSD and standards:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Initial Calibration	WG225041-4	P4806.D	03/19/18	16:00
Initial Calibration	WG225041-3	P4807.D	03/19/18	16:34
Initial Calibration	WG225041-2	P4808.D	03/19/18	17:08
Initial Calibration	WG225041-1	P4809.D	03/19/18	17:42
Initial Calibration	WG225041-6	P4810.D	03/19/18	18:17
Initial Calibration	WG225041-5	P4811.D	03/19/18	18:51
Independent Source	WG225041-7	P4812.D	03/19/18	19:25

Form 5
Volatile Organic Instrument Performance Check

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : PB987A.D
Instrument ID : GCMS-P

SDG : SL2079
Date Analyzed : 23-MAR-18
Time Analyzed : 07:30
Heated Purge : No

m/e	Ion Abundance Criteria	% Relative Abundance		
50	15.0 - 40.0% of mass 95	20.5		
75	30.0 - 60.0% of mass 95	53.6		
95	Base Peak, 100% relative abundance	100		
96	5.0 - 9.0% of mass 95	7.4		
173	Less than 2.0% of mass 174	0.6	0.68	1
174	Greater than 50.0% of mass 95	81.4		
175	5.0 - 9.0% of mass 174	5.9	7.26	1
176	95.0 - 101.0% of mass 174	81.3	99.88	1
177	5.0 - 9.0% of mass 176	7.0	8.63	2

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following samples, LCS, MS, MSD and standards:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Continuing Calibrati	WG225300-4	P4879.D	03/23/18	07:53
Laboratory Control S	WG225300-1	P4880.D	03/23/18	08:35
Method Blank Sample	WG225300-2	P4882.D	03/23/18	09:49
CHAAP-BKRD-EB-031418	SL2079-14	P4883.D	03/23/18	10:25
CHAAP-BKRD-TB-031418	SL2079-15	P4884.D	03/23/18	11:00
Continuing Calibrati	WG225300-5	P4898.D	03/23/18	18:58

Form 5
Volatile Organic Instrument Performance Check

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : WB800A.D
Instrument ID : GCMS-W

SDG : SL2079
Date Analyzed : 23-MAR-18
Time Analyzed : 08:34
Heated Purge : Yes

m/e	Ion Abundance Criteria	% Relative Abundance		
50	15.0 - 40.0% of mass 95	20.9		
75	30.0 - 60.0% of mass 95	55.0		
95	Base Peak, 100% relative abundance	100		
96	5.0 - 9.0% of mass 95	7.2		
173	Less than 2.0% of mass 174	0.0	0.0	1
174	Greater than 50.0% of mass 95	67.0		
175	5.0 - 9.0% of mass 174	5.1	7.57	1
176	95.0 - 101.0% of mass 174	66.9	99.88	1
177	5.0 - 9.0% of mass 176	4.4	6.59	2

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following samples, LCS, MS, MSD and standards:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Initial Calibration	WG225302-4	W3295.D	03/23/18	09:41
Initial Calibration	WG225302-3	W3296.D	03/23/18	10:19
Initial Calibration	WG225302-2	W3297.D	03/23/18	10:57
Initial Calibration	WG225302-1	W3298.D	03/23/18	11:34
Initial Calibration	WG225302-6	W3299.D	03/23/18	12:37
Initial Calibration	WG225302-5	W3300.D	03/23/18	13:16
Independent Source	WG225302-7	W3301.D	03/23/18	13:53

Form 5
Volatile Organic Instrument Performance Check

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : WB801A.D
Instrument ID : GCMS-W

SDG : SL2079
Date Analyzed : 24-MAR-18
Time Analyzed : 07:19
Heated Purge : Yes

m/e	Ion Abundance Criteria	% Relative Abundance		
50	15.0 - 40.0% of mass 95	18.9		
75	30.0 - 60.0% of mass 95	54.5		
95	Base Peak, 100% relative abundance	100		
96	5.0 - 9.0% of mass 95	6.2		
173	Less than 2.0% of mass 174	0.0	0.0	1
174	Greater than 50.0% of mass 95	64.8		
175	5.0 - 9.0% of mass 174	5.2	8.05	1
176	95.0 - 101.0% of mass 174	61.9	95.52	1
177	5.0 - 9.0% of mass 176	3.8	6.16	2

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following samples, LCS, MS, MSD and standards:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Continuing Calibrati	WG225350-4	W3321.D	03/24/18	09:25
Laboratory Control S	WG225350-1	W3322.D	03/24/18	10:10
Method Blank Sample	WG225350-2	W3324.D	03/24/18	11:32
CHAAP-BKRD-SB08	SL2079-1RA	W3325.D	03/24/18	12:09
CHAAP-BKRD-SB09	SL2079-2RA	W3326.D	03/24/18	12:46
CHAAP-BKRD-SB10	SL2079-3RA	W3327.D	03/24/18	13:23
CHAAP-BKRD-SB11	SL2079-4RA	W3328.D	03/24/18	14:01
Continuing Calibrati	WG225350-5	W3336.D	03/24/18	18:58
Continuing Calibrati	WG225350-6	W3337.D	03/24/18	19:35
Continuing Calibrati	WG225350-7	W3338.D	03/24/18	20:12

Form 5
Volatile Organic Instrument Performance Check

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : WB802A.D
Instrument ID : GCMS-W

SDG : SL2079
Date Analyzed : 26-MAR-18
Time Analyzed : 09:46
Heated Purge : Yes

m/e	Ion Abundance Criteria	% Relative Abundance		
50	15.0 - 40.0% of mass 95	20.6		
75	30.0 - 60.0% of mass 95	57.8		
95	Base Peak, 100% relative abundance	100		
96	5.0 - 9.0% of mass 95	6.7		
173	Less than 2.0% of mass 174	0.0	0.0	1
174	Greater than 50.0% of mass 95	60.7		
175	5.0 - 9.0% of mass 174	4.6	7.61	1
176	95.0 - 101.0% of mass 174	57.7	95.00	1
177	5.0 - 9.0% of mass 176	3.9	6.82	2

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following samples, LCS, MS, MSD and standards:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Initial Calibration	WG225400-4	W3342.D	03/26/18	10:13
Initial Calibration	WG225400-3	W3343.D	03/26/18	10:50
Initial Calibration	WG225400-2	W3344.D	03/26/18	11:27
Initial Calibration	WG225400-1	W3345.D	03/26/18	12:04
Initial Calibration	WG225400-6	W3346.D	03/26/18	12:41
Initial Calibration	WG225400-5	W3347.D	03/26/18	13:19
Laboratory Control S	WG225400-8	W3348.D	03/26/18	13:56
Independent Source	WG225400-7	W3348A.D	03/26/18	13:56
Method Blank Sample	WG225400-9	W3350.D	03/26/18	15:10
CHAAP-BKRD-SS08	SL2079-7	W3351.D	03/26/18	15:47
CHAAP-BKRD-SS09	SL2079-8	W3352.D	03/26/18	16:24
CHAAP-BKRD-SS11	SL2079-10	W3353.D	03/26/18	17:01
CHAAP-BKRD-SS12	SL2079-11	W3354.D	03/26/18	17:38
CHAAP-BKRD-SS13	SL2079-12	W3355.D	03/26/18	18:15
CHAAP-BKRD-SS109	SL2079-13	W3356.D	03/26/18	18:52
CHAAP-BKRD-SS10	SL2079-9	W3357.D	03/26/18	19:29
Matrix Spike	WG225400-12	W3358.D	03/26/18	20:06
Matrix Spike Duplica	WG225400-13	W3359.D	03/26/18	20:43
Continuing Calibrati	WG225400-11	W3360.D	03/26/18	21:20

Form 5
Volatile Organic Instrument Performance Check

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : WB803A.D
Instrument ID : GCMS-W

SDG : SL2079
Date Analyzed : 27-MAR-18
Time Analyzed : 07:33
Heated Purge : Yes

m/e	Ion Abundance Criteria	% Relative Abundance		
50	15.0 - 40.0% of mass 95	19.7		
75	30.0 - 60.0% of mass 95	59.8		
95	Base Peak, 100% relative abundance	100		
96	5.0 - 9.0% of mass 95	6.5		
173	Less than 2.0% of mass 174	0.0	0.0	1
174	Greater than 50.0% of mass 95	61.4		
175	5.0 - 9.0% of mass 174	5.1	8.28	1
176	95.0 - 101.0% of mass 174	59.1	96.29	1
177	5.0 - 9.0% of mass 176	4.2	7.19	2

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following samples, LCS, MS, MSD and standards:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Continuing Calibrati	WG225463-4	W3365.D	03/27/18	08:47
Laboratory Control S	WG225463-1	W3366.D	03/27/18	09:36
Method Blank Sample	WG225463-2	W3368.D	03/27/18	11:06
CHAAP-BKRD-SB12	SL2079-5RA2	W3369.D	03/27/18	11:43
CHAAP-BKRD-SB13	SL2079-6RA2	W3370.D	03/27/18	12:20
Continuing Calibrati	WG225463-5	W3381.D	03/27/18	19:08

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ANALYTICAL SERVICES

Form 8
Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition I
Lab ID : WG225400-4
Lab File ID : W3342.D

SDG: SL2079
Analytical Date: 03/26/18 10:13
Instrument ID: GCMS-W

		1,4-DICHLOROBENZENE-D4			
		Area	#	RT	#
	Std .	187501		16.42	
	Upper Limit	375002		16.59	
	Lower Limit	93750.5		16.25	
Client Sample ID	Lab Sample ID				
Laboratory Control S	WG225400-8	237835		16.42	
Method Blank Sample	WG225400-9	190927		16.42	
CHAAP-BKRD-SS08	SL2079-7	129275		16.42	
CHAAP-BKRD-SS09	SL2079-8	145372		16.43	
CHAAP-BKRD-SS11	SL2079-10	126120		16.42	
CHAAP-BKRD-SS12	SL2079-11	95988		16.42	
CHAAP-BKRD-SS13	SL2079-12	100514		16.42	
CHAAP-BKRD-SS109	SL2079-13	135409		16.42	
CHAAP-BKRD-SS10	SL2079-9	99294		16.42	
Matrix Spike	WG225400-12	145422		16.42	
Matrix Spike Duplica	WG225400-13	156584		16.42	
Continuing Calibrati	WG225400-11	188941		16.42	
Continuing Calibrati	WG225463-4	213587		16.43	
Laboratory Control S	WG225463-1	218351		16.43	
Method Blank Sample	WG225463-2	177808		16.43	
CHAAP-BKRD-SB12	SL2079-5RA2	154517		16.43	
CHAAP-BKRD-SB13	SL2079-6RA2	139179		16.43	
Continuing Calibrati	WG225463-5	166458		16.43	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 10 seconds of internal standard RT
RT Lower Limit = - 10 seconds of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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Form 8
Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition I
Lab ID : WG225041-4
Lab File ID : P4806.D

SDG: SL2079
Analytical Date: 03/19/18 16:00
Instrument ID: GCMS-P

		PENTAFLUOROBENZENE				1,4-DIFLUOROBENZENE				CHLOROBENZENE-D5			
		Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
	Std .	586253		6.53		1018640		7.46		1086918		11.87	
	Upper Limit	1172506		6.70		2037280		7.63		2173836		12.04	
	Lower Limit	293126.5		6.37		509320		7.30		543459		11.71	
Client Sample ID	Lab Sample ID												
Continuing Calibrati	WG225300-4	462745		6.53		753459		7.46		754620		11.87	
Laboratory Control S	WG225300-1	480356		6.53		791836		7.46		786218		11.87	
Method Blank Sample	WG225300-2	392542		6.54		700536		7.47		661139		11.87	
CHAAP-BKRD-EB-03	SL2079-14	375772		6.54		659855		7.46		630798		11.87	
CHAAP-BKRD-TB-03	SL2079-15	364851		6.53		645313		7.46		609305		11.87	
Continuing Calibrati	WG225300-5	419927		6.53		691512		7.46		705055		11.87	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 10 seconds of internal standard RT
RT Lower Limit = - 10 seconds of internal standard RT

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Form 8
Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition I
Lab ID : WG225041-4
Lab File ID : P4806.D

SDG: SL2079
Analytical Date: 03/19/18 16:00
Instrument ID: GCMS-P

		1,4-DICHLOROBENZENE-D4			
		Area	#	RT	#
	Std .	590652		14.83	
	Upper Limit	1181304		14.99	
	Lower Limit	295326		14.66	
Client Sample ID	Lab Sample ID				
Continuing Calibrati	WG225300-4	399864		14.82	
Laboratory Control S	WG225300-1	422216		14.83	
Method Blank Sample	WG225300-2	331920		14.83	
CHAAP-BKRD-EB-03	SL2079-14	321309		14.83	
CHAAP-BKRD-TB-03	SL2079-15	314551		14.83	
Continuing Calibrati	WG225300-5	379256		14.83	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 10 seconds of internal standard RT
RT Lower Limit = - 10 seconds of internal standard RT

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Form 8
Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition I
Lab ID : WG225302-4
Lab File ID : W3295.D

SDG: SL2079
Analytical Date: 03/23/18 09:41
Instrument ID: GCMS-W

		PENTAFLUOROBENZENE		1,4-DIFLUOROBENZENE		CHLOROBENZENE-D5	
		Area #	RT #	Area #	RT #	Area #	RT #
	Std .	309236	8.08	534601	8.95	527322	13.39
	Upper Limit	618472	8.24	1069202	9.11	1054644	13.55
	Lower Limit	154618	7.91	267300.5	8.78	263661	13.22
Client Sample ID	Lab Sample ID						
Continuing Calibrati	WG225350-4	248991	8.09	446332	8.96	437949	13.40
Laboratory Control S	WG225350-1	268733	8.09	474956	8.96	458495	13.40
Method Blank Sample	WG225350-2	210205	8.10	388627	8.96	377122	13.40
CHAAP-BKRD-SB08	SL2079-1RA	208958	8.09	394862	8.96	381800	13.40
CHAAP-BKRD-SB09	SL2079-2RA	190389	8.09	366739	8.96	352639	13.40
CHAAP-BKRD-SB10	SL2079-3RA	180427	8.09	347622	8.96	337191	13.40
CHAAP-BKRD-SB11	SL2079-4RA	162907	8.09	319523	8.97	308664	13.40
Continuing Calibrati	WG225350-5	162127	8.09	293094	8.96	294995	13.40
Continuing Calibrati	WG225350-6	192935	8.08	340416	8.95	334581	13.40
Continuing Calibrati	WG225350-7	201532	8.09	363859	8.96	359046	13.40

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 10 seconds of internal standard RT
RT Lower Limit = - 10 seconds of internal standard RT

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Form 8
Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition I
Lab ID : WG225302-4
Lab File ID : W3295.D

SDG: SL2079
Analytical Date: 03/23/18 09:41
Instrument ID: GCMS-W

		1,4-DICHLOROBENZENE-D4			
		Area	#	RT	#
	Std .	324387		16.44	
	Upper Limit	648774		16.61	
	Lower Limit	162193.5		16.27	
Client Sample ID	Lab Sample ID				
Continuing Calibrati	WG225350-4	271993		16.46	
Laboratory Control S	WG225350-1	285275		16.46	
Method Blank Sample	WG225350-2	224500		16.46	
CHAAP-BKRD-SB08	SL2079-1RA	220446		16.45	
CHAAP-BKRD-SB09	SL2079-2RA	208751		16.45	
CHAAP-BKRD-SB10	SL2079-3RA	195422		16.45	
CHAAP-BKRD-SB11	SL2079-4RA	182755		16.45	
Continuing Calibrati	WG225350-5	185331		16.45	
Continuing Calibrati	WG225350-6	213852		16.45	
Continuing Calibrati	WG225350-7	228816		16.45	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 10 seconds of internal standard RT
RT Lower Limit = - 10 seconds of internal standard RT

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* Values outside of QC limits.

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Form 8
Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition I
Lab ID : WG225400-4
Lab File ID : W3342.D

SDG: SL2079
Analytical Date: 03/26/18 10:13
Instrument ID: GCMS-W

		PENTAFLUOROBENZENE			1,4-DIFLUOROBENZENE			CHLOROBENZENE-D5		
		Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
	Std .	181807		8.03		319414		8.91		304550		13.36	
	Upper Limit	363614		8.20		638828		9.07		609100		13.53	
	Lower Limit	90903.5		7.87		159707		8.74		152275		13.19	
Client Sample ID	Lab Sample ID												
Laboratory Control S	WG225400-8	248041		8.04		430697		8.91		394760		13.36	
Method Blank Sample	WG225400-9	203581		8.04		366514		8.91		338466		13.36	
CHAAP-BKRD-SS08	SL2079-7	178658		8.04		332514		8.91		292125		13.36	
CHAAP-BKRD-SS09	SL2079-8	169330		8.04		311053		8.91		279078		13.36	
CHAAP-BKRD-SS11	SL2079-10	171549		8.04		305314		8.91		260135		13.36	
CHAAP-BKRD-SS12	SL2079-11	135975		8.04		256852		8.91		224973		13.36	
CHAAP-BKRD-SS13	SL2079-12	145604		8.04		277901		8.91		238062		13.36	
CHAAP-BKRD-SS109	SL2079-13	138497		8.04		261630		8.91		245321		13.36	
CHAAP-BKRD-SS10	SL2079-9	123466		8.04		240758		8.91		209457		13.36	
Matrix Spike	WG225400-12	148042		8.04		266415		8.92		245713		13.36	
Matrix Spike Duplica	WG225400-13	166049		8.04		299168		8.91		270452		13.37	
Continuing Calibrati	WG225400-11	186663		8.04		335641		8.91		312752		13.36	
Continuing Calibrati	WG225463-4	216568		8.05		382180		8.92		350719		13.37	
Laboratory Control S	WG225463-1	227925		8.05		398418		8.92		365235		13.37	
Method Blank Sample	WG225463-2	187638		8.05		344800		8.92		315582		13.37	
CHAAP-BKRD-SB12	SL2079-5RA2	158763		8.06		302805		8.93		274714		13.38	
CHAAP-BKRD-SB13	SL2079-6RA2	143766		8.05		269757		8.93		253110		13.37	
Continuing Calibrati	WG225463-5	163116		8.06		292732		8.93		278583		13.38	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 10 seconds of internal standard RT
RT Lower Limit = - 10 seconds of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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Sample Data Section

KATAHDIN ANALYTICAL SERVICES - ORGANIC DATA QUALIFIERS

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.

* Compound recovery or percent RPD (relative percent difference) was outside of quality control limits.

D Indicates the result was obtained from analysis of a diluted sample. Surrogate recoveries may not be calculable.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

or

J Used for Pesticides, PCBs, Herbicides, Formaldehyde, Explosives and Method 504.1 analytes when there is a greater than 40% difference for detected concentrations between the two GC columns.

B Indicates the analyte was detected in the laboratory method blank analyzed concurrently with the sample.

C Indicates that the flagged compound did not meet DoD criteria in the corresponding daily calibration verification (CV).

L Indicates that the flagged compound did not meet DoD criteria in the corresponding Laboratory Control Sample (LCS) and/or Laboratory Control Sample Duplicate (LCSD) prepared and/or analyzed concurrently with the sample.

M Indicates that the flagged compound did not meet DoD criteria in the Matrix Spike and/or Matrix Spike Duplicate prepared and/or analyzed concurrently with the native sample.

N Presumptive evidence of a compound based on a mass spectral library search.

A Indicates that a tentatively identified compound is a suspected aldol-condensation product.

P Used for Pesticide/Aroclor analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. (for CLP methods only).

Katahdin Analytical Services, Inc.

Manual Integration Codes For GC/MS, GC, HPLC and/or IC

M1	Peak splitting.
M2	Well defined peaks on the shoulders of the other peaks.
M3	There is additional area due to a coeluting interferant.
M4	There are negative spikes in the baseline.
M5	There are rising or falling baselines.
M6	The software has failed to detect a peak or misidentified a peak.
M7	Excessive peak tailing.
M8	Analysis such as GRO, DRO and TPH require a baseline hold.
M9	Peak was not completely integrated as in GC/MS.
M10	Primary ion was correctly integrated, but secondary or tertiary ion needed manual integration as in GC/MS.
M11	For GC analysis, when a sample is diluted by 1:10 or more, the surrogate is set to undetected and then the area under the surrogate is manually integrated.
M12	Manual integration saved in method due to TurboChrom floating point error.

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-1RA
Client ID: CHAAP-BKRD-SB08
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3325.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 24-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225350

Analysis Date: 24-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 81.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,1,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
1,1,1-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.42	2.5
1,1,2,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.84	2.5
Freon-113	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
1,1,2-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.97	2.5
1,1-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.7	2.5
1,1-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.93	2.5
1,1-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
1,2,3-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.76	2.5
1,2,3-Trichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
1,2,4-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.79	2.5
1,2,4-Trimethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.87	2.5
1,2-Dibromo-3-Chloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.5	2.5
1,2-Dibromoethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
1,2-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
1,2-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
1,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
1,3,5-Trimethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.67	2.5
1,3-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.62	2.5
1,3-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	0.94	2.5
1,4-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.44	2.5
2,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	0.50	2.5
2-Butanone	U	12	ug/Kgdrywt	1	25	25.	5.9	12.
2-Chlorotoluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
2-Hexanone	U	12	ug/Kgdrywt	1	25	25.	4.8	12.
4-Chlorotoluene	U	2.5	ug/Kgdrywt	1	5	5.0	0.49	2.5
P-Isopropyltoluene	U	2.5	ug/Kgdrywt	1	5	5.0	0.76	2.5
4-Methyl-2-Pentanone	U	12	ug/Kgdrywt	1	25	25.	5.9	12.
Acetone	U	12	ug/Kgdrywt	1	25	25.	5.1	12.
Benzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
Bromobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.74	2.5
Bromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Bromodichloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.60	2.5
Bromoform	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
Bromomethane	U	5.0	ug/Kgdrywt	1	10	10.	1.1	5.0

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P.O. Box 540, Scarborough, ME 04070
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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-1RA
Client ID: CHAAP-BKRD-SB08
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3325.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 24-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225350

Analysis Date: 24-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 81.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Carbon Disulfide	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
Carbon Tetrachloride	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
Chlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Dibromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	7.0	2.5
Chloroethane	U	5.0	ug/Kgdrywt	1	10	10.	1.3	5.0
Chloroform	U	2.5	ug/Kgdrywt	1	5	5.0	0.35	2.5
Chloromethane	U	5.0	ug/Kgdrywt	1	10	10.	1.4	5.0
cis-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
cis-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.72	2.5
Dibromomethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Dichlorodifluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.92	5.0
Ethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.65	2.5
Hexachlorobutadiene	U	2.5	ug/Kgdrywt	1	5	5.0	0.74	2.5
Isopropylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
m+p-Xylenes	U	5.0	ug/Kgdrywt	1	10	10.	1.7	5.0
Methyl tert-butyl Ether	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
Methylene Chloride	U	12	ug/Kgdrywt	1	25	25.	7.9	12.
N-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
N-Propylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.83	2.5
Naphthalene	U	2.5	ug/Kgdrywt	1	5	5.0	0.88	2.5
o-Xylene	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
sec-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Styrene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
tert-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Tetrachloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
Toluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
trans-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.71	2.5
trans-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.86	2.5
Trichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.59	2.5
Trichlorofluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.91	5.0
Vinyl Chloride	U	5.0	ug/Kgdrywt	1	10	10.	0.87	5.0
1,2-Dichloroethane-D4		119.	%					
p-Bromofluorobenzene		100.	%					
Dibromofluoromethane		114.	%					
Toluene-D8		99.6	%					

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Data File: \\target_server\gg\chem\gcms-w.i\W032418.b\W3325.D
Report Date: 28-Mar-2018 13:05

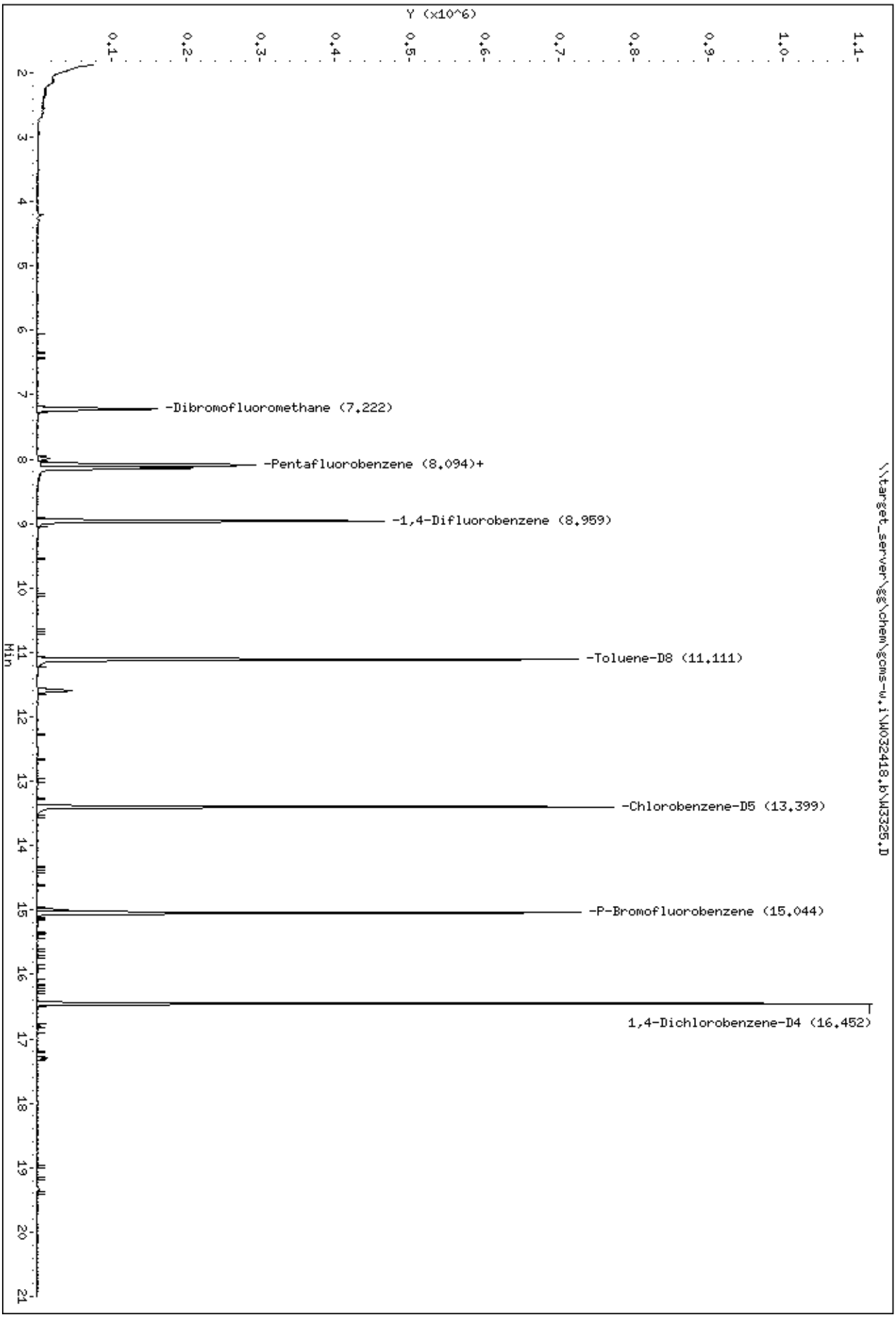
Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W032418.b\W3325.D
Lab Smp Id: SL2079-1RA Client Smp ID: CHAAP-BKRD-SB08
Inj Date : 24-MAR-2018 12:09 MS Autotune Date: 10-APR-2016 11:00
Operator : HG/JSS Inst ID: gcms-w.i
Smp Info : SL2079-1RA
Misc Info : WG225350,WG225302-4
Comment   : SW846 5035
Method   : \\target_server\gg\chem\gcms-w.i\W032418.b\W8SDI(07)D.m
Meth Date : 28-Mar-2018 13:00 gcms-w.i Quant Type: ISTD
Cal Date : 23-MAR-2018 13:16 Cal File: W3300.D
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: MIS_GUEST

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	18.939	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	5.970	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/kg)	FINAL (ug/Kgdrywt)	REVIEW COD
$ 37 Dibromofluoromethane	113	7.221	7.204	(0.892)	124431	56.8156	58.7	
* 42 Pentafluorobenzene	168	8.093	8.076	(1.000)	208958	50.0000		
$ 45 1,2-Dichloroethane-D4	65	8.136	8.126	(1.005)	184284	59.6759	61.6	
* 49 1,4-Difluorobenzene	114	8.958	8.948	(1.000)	394862	50.0000		
$ 55 Toluene-D8	98	11.111	11.093	(1.240)	497179	49.8077	51.5	
* 66 Chlorobenzene-D5	117	13.399	13.389	(1.000)	381800	50.0000		
$ 76 P-Bromofluorobenzene	95	15.043	15.033	(1.679)	228782	49.9813	51.6	
* 91 1,4-Dichlorobenzene-D4	152	16.452	16.442	(1.000)	220446	50.0000		


Data File: \\target_server\gg\chem\gcms-w.i\W032418.b\W3325.D
Date : 24-MAR-2018 12:09
Client ID: CHAAP-BKRD-SB08
Sample Info: SL2079-1RA
Instrument: gcms-w.i
\\target_server\gg\chem\gcms-w.i\W032418.b\W3325.D
Y (x10^6)
Min
-Dibromofluoromethane (7.222)
-Pentafluorobenzene (8.094)+
-1,4-Difluorobenzene (8.959)
-Toluene-D8 (11.111)
-Chlorobenzene-D5 (13.399)
-P-Bromofluorobenzene (15.044)
1,4-Dichlorobenzene-D4 (16.452)

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-2RA
Client ID: CHAAP-BKRD-SB09
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3326.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 24-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225350

Analysis Date: 24-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 86.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,1,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.69	2.5
1,1,1-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.42	2.5
1,1,2,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.83	2.5
Freon-113	U	2.5	ug/Kgdrywt	1	5	5.0	0.89	2.5
1,1,2-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.96	2.5
1,1-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.7	2.5
1,1-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
1,1-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
1,2,3-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.75	2.5
1,2,3-Trichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
1,2,4-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
1,2,4-Trimethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.86	2.5
1,2-Dibromo-3-Chloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.5	2.5
1,2-Dibromoethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
1,2-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.77	2.5
1,2-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.99	2.5
1,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
1,3,5-Trimethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.66	2.5
1,3-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.61	2.5
1,3-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	0.93	2.5
1,4-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.44	2.5
2,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	0.50	2.5
2-Butanone	U	12	ug/Kgdrywt	1	25	25.	5.8	12.
2-Chlorotoluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
2-Hexanone	U	12	ug/Kgdrywt	1	25	25.	4.8	12.
4-Chlorotoluene	U	2.5	ug/Kgdrywt	1	5	5.0	0.48	2.5
P-Isopropyltoluene	U	2.5	ug/Kgdrywt	1	5	5.0	0.75	2.5
4-Methyl-2-Pentanone	U	12	ug/Kgdrywt	1	25	25.	5.8	12.
Acetone	U	12	ug/Kgdrywt	1	25	25.	5.0	12.
Benzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Bromobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.73	2.5
Bromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Bromodichloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.59	2.5
Bromoform	U	2.5	ug/Kgdrywt	1	5	5.0	0.69	2.5
Bromomethane	U	5.0	ug/Kgdrywt	1	10	9.9	1.1	5.0

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-2RA
Client ID: CHAAP-BKRD-SB09
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3326.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 24-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225350

Analysis Date: 24-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 86.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Carbon Disulfide	U	2.5	ug/Kgdrywt	1	5	5.0	0.77	2.5
Carbon Tetrachloride	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
Chlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.50	2.5
Dibromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	6.9	2.5
Chloroethane	U	5.0	ug/Kgdrywt	1	10	9.9	1.3	5.0
Chloroform	U	2.5	ug/Kgdrywt	1	5	5.0	0.35	2.5
Chloromethane	U	5.0	ug/Kgdrywt	1	10	9.9	1.4	5.0
cis-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
cis-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.71	2.5
Dibromomethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.50	2.5
Dichlorodifluoromethane	U	5.0	ug/Kgdrywt	1	10	9.9	0.91	5.0
Ethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.64	2.5
Hexachlorobutadiene	U	2.5	ug/Kgdrywt	1	5	5.0	0.73	2.5
Isopropylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
m+p-Xylenes	U	5.0	ug/Kgdrywt	1	10	9.9	1.7	5.0
Methyl tert-butyl Ether	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
Methylene Chloride	U	12	ug/Kgdrywt	1	25	25.	7.8	12.
N-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
N-Propylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.82	2.5
Naphthalene	U	2.5	ug/Kgdrywt	1	5	5.0	0.87	2.5
o-Xylene	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
sec-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Styrene	U	2.5	ug/Kgdrywt	1	5	5.0	0.50	2.5
tert-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.89	2.5
Tetrachloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
Toluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
trans-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
trans-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.85	2.5
Trichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.58	2.5
Trichlorofluoromethane	U	5.0	ug/Kgdrywt	1	10	9.9	0.90	5.0
Vinyl Chloride	U	5.0	ug/Kgdrywt	1	10	9.9	0.86	5.0
1,2-Dichloroethane-D4		125.	%					
p-Bromofluorobenzene		103.	%					
Dibromofluoromethane		117.	%					
Toluene-D8		100.	%					

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Data File: \\target_server\gg\chem\gcms-w.i\W032418.b\W3326.D
Report Date: 28-Mar-2018 13:05

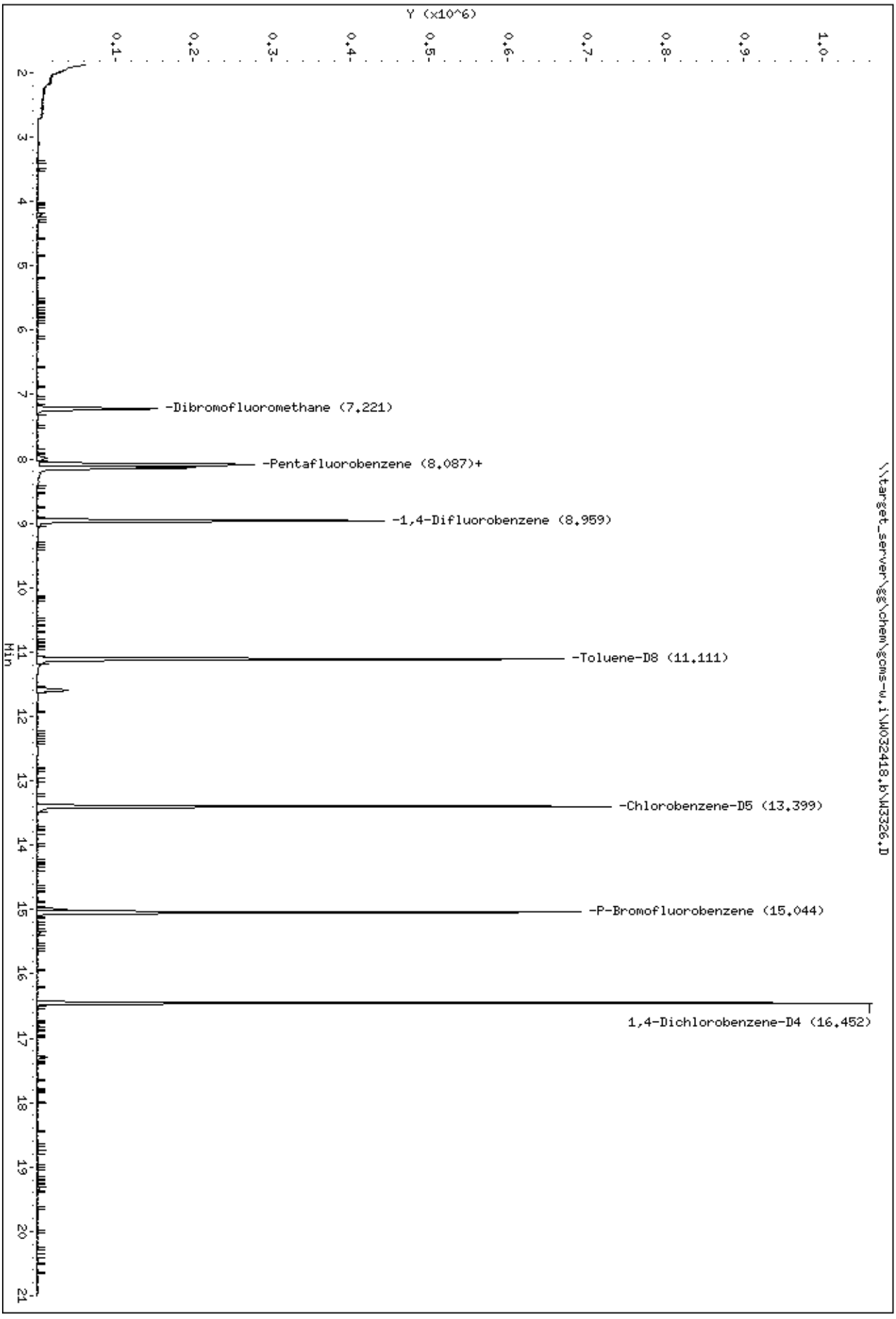
Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W032418.b\W3326.D
Lab Smp Id: SL2079-2RA Client Smp ID: CHAAP-BKRD-SB09
Inj Date : 24-MAR-2018 12:46 MS Autotune Date: 10-APR-2016 11:00
Operator : HG/JSS Inst ID: gcms-w.i
Smp Info : SL2079-2RA
Misc Info : WG225350,WG225302-4
Comment   : SW846 5035
Method   : \\target_server\gg\chem\gcms-w.i\W032418.b\W8SDI(07)D.m
Meth Date : 28-Mar-2018 13:00 gcms-w.i Quant Type: ISTD
Cal Date : 23-MAR-2018 13:16 Cal File: W3300.D
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: MIS_GUEST

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	13.906	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	5.880	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/kg)	FINAL (ug/Kgdrywt)	REVIEW COD
$ 37 Dibromofluoromethane	113	7.221	7.204	(0.892)	116433	58.3489	57.6	
* 42 Pentafluorobenzene	168	8.093	8.076	(1.000)	190389	50.0000		
$ 45 1,2-Dichloroethane-D4	65	8.136	8.126	(1.005)	176194	62.6209	61.8	
* 49 1,4-Difluorobenzene	114	8.958	8.948	(1.000)	366739	50.0000		
$ 55 Toluene-D8	98	11.111	11.093	(1.240)	465570	50.2177	49.6	
* 66 Chlorobenzene-D5	117	13.399	13.389	(1.000)	352639	50.0000		
$ 76 P-Bromofluorobenzene	95	15.043	15.033	(1.679)	218187	51.3219	50.7	
* 91 1,4-Dichlorobenzene-D4	152	16.452	16.442	(1.000)	208751	50.0000		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Sample Info: SL2079-2RA
Instrument: gcms-w.i
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Y (x10^6)
Min
-Dibromofluoromethane (7.221)
-Pentafluorobenzene (8.087)+
-1,4-Difluorobenzene (8.959)
-Toluene-D8 (11.111)
-Chlorobenzene-D5 (13.399)
-P-Bromofluorobenzene (15.044)
1,4-Dichlorobenzene-D4 (16.452)

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-3RA
Client ID: CHAAP-BKRD-SB10
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3327.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 24-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225350

Analysis Date: 24-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 84.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,1,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
1,1,1-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.42	2.5
1,1,2,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.84	2.5
Freon-113	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
1,1,2-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.97	2.5
1,1-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.7	2.5
1,1-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.93	2.5
1,1-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
1,2,3-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.76	2.5
1,2,3-Trichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
1,2,4-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.79	2.5
1,2,4-Trimethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.87	2.5
1,2-Dibromo-3-Chloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.5	2.5
1,2-Dibromoethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
1,2-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
1,2-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
1,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
1,3,5-Trimethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.67	2.5
1,3-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.62	2.5
1,3-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	0.94	2.5
1,4-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.44	2.5
2,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	0.50	2.5
2-Butanone	U	12	ug/Kgdrywt	1	25	25.	5.9	12.
2-Chlorotoluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
2-Hexanone	U	12	ug/Kgdrywt	1	25	25.	4.8	12.
4-Chlorotoluene	U	2.5	ug/Kgdrywt	1	5	5.0	0.49	2.5
P-Isopropyltoluene	U	2.5	ug/Kgdrywt	1	5	5.0	0.76	2.5
4-Methyl-2-Pentanone	U	12	ug/Kgdrywt	1	25	25.	5.9	12.
Acetone	U	12	ug/Kgdrywt	1	25	25.	5.1	12.
Benzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
Bromobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.74	2.5
Bromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Bromodichloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.60	2.5
Bromoform	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
Bromomethane	U	5.0	ug/Kgdrywt	1	10	10.	1.1	5.0

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-3RA
Client ID: CHAAP-BKRD-SB10
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3327.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 24-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225350

Analysis Date: 24-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 84.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Carbon Disulfide	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
Carbon Tetrachloride	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
Chlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Dibromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	7.0	2.5
Chloroethane	U	5.0	ug/Kgdrywt	1	10	10.	1.3	5.0
Chloroform	U	2.5	ug/Kgdrywt	1	5	5.0	0.35	2.5
Chloromethane	U	5.0	ug/Kgdrywt	1	10	10.	1.4	5.0
cis-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
cis-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.72	2.5
Dibromomethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Dichlorodifluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.92	5.0
Ethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.65	2.5
Hexachlorobutadiene	U	2.5	ug/Kgdrywt	1	5	5.0	0.74	2.5
Isopropylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
m+p-Xylenes	U	5.0	ug/Kgdrywt	1	10	10.	1.7	5.0
Methyl tert-butyl Ether	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
Methylene Chloride	U	12	ug/Kgdrywt	1	25	25.	7.9	12.
N-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
N-Propylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.83	2.5
Naphthalene	U	2.5	ug/Kgdrywt	1	5	5.0	0.88	2.5
o-Xylene	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
sec-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Styrene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
tert-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Tetrachloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
Toluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
trans-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.71	2.5
trans-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.86	2.5
Trichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.59	2.5
Trichlorofluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.91	5.0
Vinyl Chloride	U	5.0	ug/Kgdrywt	1	10	10.	0.87	5.0
1,2-Dichloroethane-D4		129.	%					
p-Bromofluorobenzene		103.	%					
Dibromofluoromethane		117.	%					
Toluene-D8		102.	%					

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Data File: \\target_server\gg\chem\gcms-w.i\W032418.b\W3327.D
Report Date: 28-Mar-2018 13:05

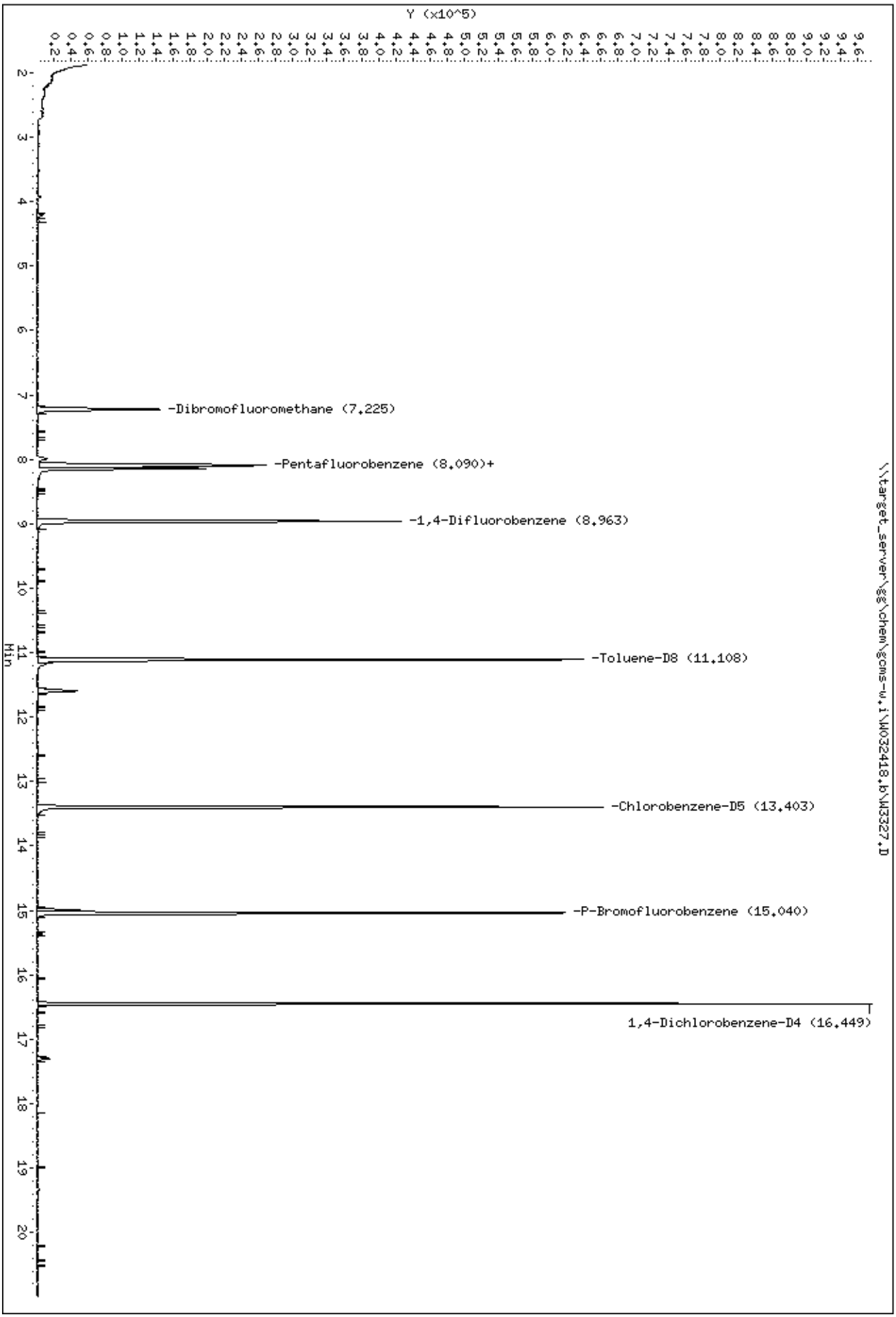
Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W032418.b\W3327.D
Lab Smp Id: SL2079-3RA Client Smp ID: CHAAP-BKRD-SB10
Inj Date : 24-MAR-2018 13:23 MS Autotune Date: 10-APR-2016 11:00
Operator : HG/JSS Inst ID: gcms-w.i
Smp Info : SL2079-3RA
Misc Info : WG225350,WG225302-4
Comment   : SW846 5035
Method   : \\target_server\gg\chem\gcms-w.i\W032418.b\W8SDI(07)D.m
Meth Date : 28-Mar-2018 13:00 gcms-w.i Quant Type: ISTD
Cal Date : 23-MAR-2018 13:16 Cal File: W3300.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: MIS_GUEST

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	16.356	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	5.940	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/kg)	FINAL (ug/Kgdrywt)	REVIEW COD
$ 37 Dibromofluoromethane	113	7.225	7.204	(0.893)	110310	58.3326	58.7	
* 42 Pentafluorobenzene	168	8.090	8.076	(1.000)	180427	50.0000		
$ 45 1,2-Dichloroethane-D4	65	8.140	8.126	(1.006)	172348	64.6361	65.0	
* 49 1,4-Difluorobenzene	114	8.962	8.948	(1.000)	347622	50.0000		
$ 55 Toluene-D8	98	11.107	11.093	(1.239)	447860	50.9641	51.3	
* 66 Chlorobenzene-D5	117	13.403	13.389	(1.000)	337191	50.0000		
$ 76 P-Bromofluorobenzene	95	15.040	15.033	(1.678)	208132	51.6490	52.0	
* 91 1,4-Dichlorobenzene-D4	152	16.448	16.442	(1.000)	195422	50.0000		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Date : 24-MAR-2018 13:23
Client ID: CHAAP-BKRD-SB10
Sample Info: SL2079-3RA
Instrument: gcms-w.i
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Y (x10^5)
Min
-Dibromofluoromethane (7.225)
-Pentafluorobenzene (8.090)+
-1,4-Difluorobenzene (8.963)
-Toluene-D8 (11.108)
-Chlorobenzene-D5 (13.403)
-P-Bromofluorobenzene (15.040)
1,4-Dichlorobenzene-D4 (16.449)

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-4RA
Client ID: CHAAP-BKRD-SB11
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3328.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 24-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225350

Analysis Date: 24-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 80.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,1,2-Tetrachloroethane	U	2.4	ug/Kgdrywt	1	5	4.9	0.69	2.4
1,1,1-Trichloroethane	U	2.4	ug/Kgdrywt	1	5	4.9	0.41	2.4
1,1,2,2-Tetrachloroethane	U	2.4	ug/Kgdrywt	1	5	4.9	0.82	2.4
Freon-113	U	2.4	ug/Kgdrywt	1	5	4.9	0.88	2.4
1,1,2-Trichloroethane	U	2.4	ug/Kgdrywt	1	5	4.9	0.95	2.4
1,1-Dichloroethane	U	2.4	ug/Kgdrywt	1	5	4.9	1.7	2.4
1,1-Dichloroethene	U	2.4	ug/Kgdrywt	1	5	4.9	0.91	2.4
1,1-Dichloropropene	U	2.4	ug/Kgdrywt	1	5	4.9	0.89	2.4
1,2,3-Trichlorobenzene	U	2.4	ug/Kgdrywt	1	5	4.9	0.74	2.4
1,2,3-Trichloropropane	U	2.4	ug/Kgdrywt	1	5	4.9	1.2	2.4
1,2,4-Trichlorobenzene	U	2.4	ug/Kgdrywt	1	5	4.9	0.77	2.4
1,2,4-Trimethylbenzene	U	2.4	ug/Kgdrywt	1	5	4.9	0.85	2.4
1,2-Dibromo-3-Chloropropane	U	2.4	ug/Kgdrywt	1	5	4.9	1.5	2.4
1,2-Dibromoethane	U	2.4	ug/Kgdrywt	1	5	4.9	1.2	2.4
1,2-Dichlorobenzene	U	2.4	ug/Kgdrywt	1	5	4.9	0.76	2.4
1,2-Dichloroethane	U	2.4	ug/Kgdrywt	1	5	4.9	0.98	2.4
1,2-Dichloropropane	U	2.4	ug/Kgdrywt	1	5	4.9	1.4	2.4
1,3,5-Trimethylbenzene	U	2.4	ug/Kgdrywt	1	5	4.9	0.66	2.4
1,3-Dichlorobenzene	U	2.4	ug/Kgdrywt	1	5	4.9	0.61	2.4
1,3-Dichloropropane	U	2.4	ug/Kgdrywt	1	5	4.9	0.92	2.4
1,4-Dichlorobenzene	U	2.4	ug/Kgdrywt	1	5	4.9	0.43	2.4
2,2-Dichloropropane	U	2.4	ug/Kgdrywt	1	5	4.9	0.49	2.4
2-Butanone	U	12	ug/Kgdrywt	1	25	24.	5.8	12.
2-Chlorotoluene	U	2.4	ug/Kgdrywt	1	5	4.9	1.1	2.4
2-Hexanone	U	12	ug/Kgdrywt	1	25	24.	4.7	12.
4-Chlorotoluene	U	2.4	ug/Kgdrywt	1	5	4.9	0.48	2.4
P-Isopropyltoluene	U	2.4	ug/Kgdrywt	1	5	4.9	0.74	2.4
4-Methyl-2-Pentanone	U	12	ug/Kgdrywt	1	25	24.	5.8	12.
Acetone	U	12	ug/Kgdrywt	1	25	24.	5.0	12.
Benzene	U	2.4	ug/Kgdrywt	1	5	4.9	0.90	2.4
Bromobenzene	U	2.4	ug/Kgdrywt	1	5	4.9	0.72	2.4
Bromochloromethane	U	2.4	ug/Kgdrywt	1	5	4.9	0.89	2.4
Bromodichloromethane	U	2.4	ug/Kgdrywt	1	5	4.9	0.59	2.4
Bromoform	U	2.4	ug/Kgdrywt	1	5	4.9	0.69	2.4
Bromomethane	U	4.9	ug/Kgdrywt	1	10	9.8	1.1	4.9

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-4RA
Client ID: CHAAP-BKRD-SB11
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3328.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 24-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225350

Analysis Date: 24-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 80.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Carbon Disulfide	U	2.4	ug/Kgdrywt	1	5	4.9	0.76	2.4
Carbon Tetrachloride	U	2.4	ug/Kgdrywt	1	5	4.9	1.3	2.4
Chlorobenzene	U	2.4	ug/Kgdrywt	1	5	4.9	0.50	2.4
Dibromochloromethane	U	2.4	ug/Kgdrywt	1	5	4.9	6.9	2.4
Chloroethane	U	4.9	ug/Kgdrywt	1	10	9.8	1.3	4.9
Chloroform	U	2.4	ug/Kgdrywt	1	5	4.9	0.34	2.4
Chloromethane	U	4.9	ug/Kgdrywt	1	10	9.8	1.4	4.9
cis-1,2-Dichloroethene	U	2.4	ug/Kgdrywt	1	5	4.9	0.89	2.4
cis-1,3-Dichloropropene	U	2.4	ug/Kgdrywt	1	5	4.9	0.70	2.4
Dibromomethane	U	2.4	ug/Kgdrywt	1	5	4.9	0.50	2.4
Dichlorodifluoromethane	U	4.9	ug/Kgdrywt	1	10	9.8	0.90	4.9
Ethylbenzene	U	2.4	ug/Kgdrywt	1	5	4.9	0.64	2.4
Hexachlorobutadiene	U	2.4	ug/Kgdrywt	1	5	4.9	0.72	2.4
Isopropylbenzene	U	2.4	ug/Kgdrywt	1	5	4.9	0.90	2.4
m+p-Xylenes	U	4.9	ug/Kgdrywt	1	10	9.8	1.7	4.9
Methyl tert-butyl Ether	U	2.4	ug/Kgdrywt	1	5	4.9	1.1	2.4
Methylene Chloride	U	12	ug/Kgdrywt	1	25	24.	7.7	12.
N-Butylbenzene	U	2.4	ug/Kgdrywt	1	5	4.9	0.90	2.4
N-Propylbenzene	U	2.4	ug/Kgdrywt	1	5	4.9	0.81	2.4
Naphthalene	U	2.4	ug/Kgdrywt	1	5	4.9	0.86	2.4
o-Xylene	U	2.4	ug/Kgdrywt	1	5	4.9	1.3	2.4
sec-Butylbenzene	U	2.4	ug/Kgdrywt	1	5	4.9	0.89	2.4
Styrene	U	2.4	ug/Kgdrywt	1	5	4.9	0.50	2.4
tert-Butylbenzene	U	2.4	ug/Kgdrywt	1	5	4.9	0.88	2.4
Tetrachloroethene	U	2.4	ug/Kgdrywt	1	5	4.9	1.2	2.4
Toluene	U	2.4	ug/Kgdrywt	1	5	4.9	1.4	2.4
trans-1,2-Dichloroethene	U	2.4	ug/Kgdrywt	1	5	4.9	0.70	2.4
trans-1,3-Dichloropropene	U	2.4	ug/Kgdrywt	1	5	4.9	0.84	2.4
Trichloroethene	U	2.4	ug/Kgdrywt	1	5	4.9	0.58	2.4
Trichlorofluoromethane	U	4.9	ug/Kgdrywt	1	10	9.8	0.89	4.9
Vinyl Chloride	U	4.9	ug/Kgdrywt	1	10	9.8	0.85	4.9
1,2-Dichloroethane-D4		134.	%					
p-Bromofluorobenzene		106.	%					
Dibromofluoromethane		122.	%					
Toluene-D8		102.	%					

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Data File: \\target_server\gg\chem\gcms-w.i\W032418.b\W3328.D
Report Date: 28-Mar-2018 13:05

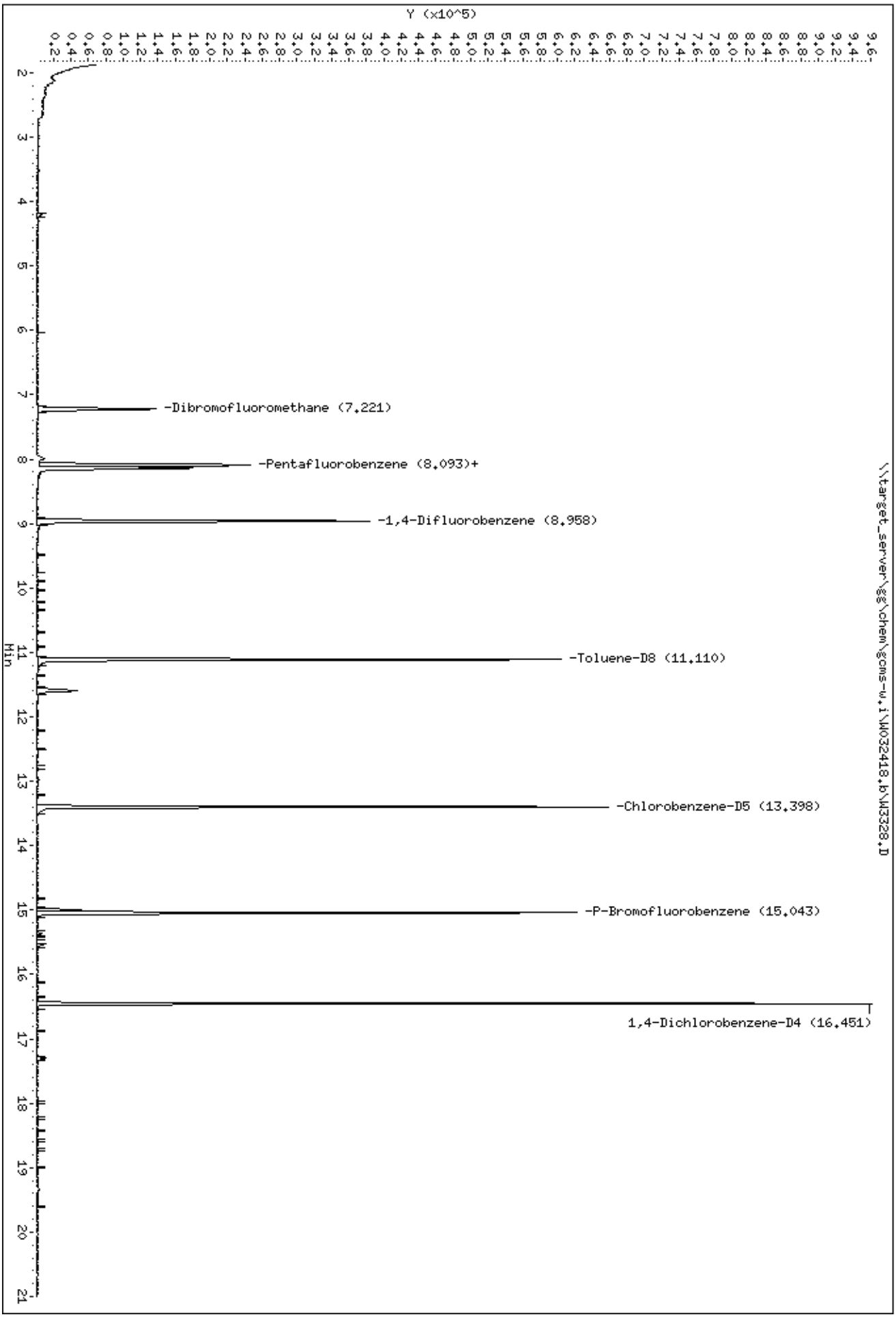
Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W032418.b\W3328.D
Lab Smp Id: SL2079-4RA Client Smp ID: CHAAP-BKRD-SB11
Inj Date : 24-MAR-2018 14:01 MS Autotune Date: 10-APR-2016 11:00
Operator : HG/JSS Inst ID: gcms-w.i
Smp Info : SL2079-4RA
Misc Info : WG225350,WG225302-4
Comment   : SW846 5035
Method   : \\target_server\gg\chem\gcms-w.i\W032418.b\W8SDI(07)D.m
Meth Date : 28-Mar-2018 13:00 gcms-w.i Quant Type: ISTD
Cal Date : 23-MAR-2018 13:16 Cal File: W3300.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: MIS_GUEST

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	20.323	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	6.370	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/kg)	FINAL (ug/Kgdrywt)	REVIEW COD
$ 37 Dibromofluoromethane	113	7.220	7.204	(0.892)	104126	60.9843	60.1	
* 42 Pentafluorobenzene	168	8.092	8.076	(1.000)	162907	50.0000		
$ 45 1,2-Dichloroethane-D4	65	8.135	8.126	(1.005)	161061	66.8992	65.9	
* 49 1,4-Difluorobenzene	114	8.965	8.948	(1.000)	319523	50.0000		
$ 55 Toluene-D8	98	11.110	11.093	(1.239)	412645	51.0862	50.3	
* 66 Chlorobenzene-D5	117	13.398	13.389	(1.000)	308664	50.0000		
$ 76 P-Bromofluorobenzene	95	15.042	15.033	(1.678)	197040	53.1965	52.4	
* 91 1,4-Dichlorobenzene-D4	152	16.451	16.442	(1.000)	182755	50.0000		



Data File: \\target_server\gg\chem\gcms-w.i\W032418.b\W3328.D
Date : 24-MAR-2018 14:01
Client ID: CHAAP-BKRD-SB11
Sample Info: SL2079-4RA

Instrument: gcms-w.i

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-5RA2
Client ID: CHAAP-BKRD-SB12
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3369.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 27-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225463

Analysis Date: 27-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 83.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,1,2-Tetrachloroethane	U	2.4	ug/Kgdrywt	1	5	4.8	0.67	2.4
1,1,1-Trichloroethane	U	2.4	ug/Kgdrywt	1	5	4.8	0.40	2.4
1,1,2,2-Tetrachloroethane	U	2.4	ug/Kgdrywt	1	5	4.8	0.81	2.4
Freon-113	U	2.4	ug/Kgdrywt	1	5	4.8	0.86	2.4
1,1,2-Trichloroethane	U	2.4	ug/Kgdrywt	1	5	4.8	0.93	2.4
1,1-Dichloroethane	U	2.4	ug/Kgdrywt	1	5	4.8	1.6	2.4
1,1-Dichloroethene	U	2.4	ug/Kgdrywt	1	5	4.8	0.89	2.4
1,1-Dichloropropene	U	2.4	ug/Kgdrywt	1	5	4.8	0.87	2.4
1,2,3-Trichlorobenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.73	2.4
1,2,3-Trichloropropane	U	2.4	ug/Kgdrywt	1	5	4.8	1.2	2.4
1,2,4-Trichlorobenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.76	2.4
1,2,4-Trimethylbenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.84	2.4
1,2-Dibromo-3-Chloropropane	U	2.4	ug/Kgdrywt	1	5	4.8	1.4	2.4
1,2-Dibromoethane	U	2.4	ug/Kgdrywt	1	5	4.8	1.2	2.4
1,2-Dichlorobenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.75	2.4
1,2-Dichloroethane	U	2.4	ug/Kgdrywt	1	5	4.8	0.96	2.4
1,2-Dichloropropane	U	2.4	ug/Kgdrywt	1	5	4.8	1.3	2.4
1,3,5-Trimethylbenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.64	2.4
1,3-Dichlorobenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.60	2.4
1,3-Dichloropropane	U	2.4	ug/Kgdrywt	1	5	4.8	0.90	2.4
1,4-Dichlorobenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.42	2.4
2,2-Dichloropropane	U	2.4	ug/Kgdrywt	1	5	4.8	0.48	2.4
2-Butanone	U	12	ug/Kgdrywt	1	25	24.	5.7	12.
2-Chlorotoluene	U	2.4	ug/Kgdrywt	1	5	4.8	1.0	2.4
2-Hexanone	U	12	ug/Kgdrywt	1	25	24.	4.6	12.
4-Chlorotoluene	U	2.4	ug/Kgdrywt	1	5	4.8	0.47	2.4
P-Isopropyltoluene	U	2.4	ug/Kgdrywt	1	5	4.8	0.73	2.4
4-Methyl-2-Pentanone	U	12	ug/Kgdrywt	1	25	24.	5.7	12.
Acetone	U	12	ug/Kgdrywt	1	25	24.	4.9	12.
Benzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.88	2.4
Bromobenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.71	2.4
Bromochloromethane	U	2.4	ug/Kgdrywt	1	5	4.8	0.87	2.4
Bromodichloromethane	U	2.4	ug/Kgdrywt	1	5	4.8	0.58	2.4
Bromoform	U	2.4	ug/Kgdrywt	1	5	4.8	0.67	2.4
Bromomethane	U	4.8	ug/Kgdrywt	1	10	9.6	1.0	4.8

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-5RA2
Client ID: CHAAP-BKRD-SB12
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3369.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 27-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225463

Analysis Date: 27-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 83.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Carbon Disulfide	U	2.4	ug/Kgdrywt	1	5	4.8	0.75	2.4
Carbon Tetrachloride	U	2.4	ug/Kgdrywt	1	5	4.8	1.2	2.4
Chlorobenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.49	2.4
Dibromochloromethane	U	2.4	ug/Kgdrywt	1	5	4.8	6.7	2.4
Chloroethane	U	4.8	ug/Kgdrywt	1	10	9.6	1.2	4.8
Chloroform	U	2.4	ug/Kgdrywt	1	5	4.8	0.34	2.4
Chloromethane	U	4.8	ug/Kgdrywt	1	10	9.6	1.3	4.8
cis-1,2-Dichloroethene	U	2.4	ug/Kgdrywt	1	5	4.8	0.87	2.4
cis-1,3-Dichloropropene	U	2.4	ug/Kgdrywt	1	5	4.8	0.69	2.4
Dibromomethane	U	2.4	ug/Kgdrywt	1	5	4.8	0.49	2.4
Dichlorodifluoromethane	U	4.8	ug/Kgdrywt	1	10	9.6	0.88	4.8
Ethylbenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.62	2.4
Hexachlorobutadiene	U	2.4	ug/Kgdrywt	1	5	4.8	0.71	2.4
Isopropylbenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.88	2.4
m+p-Xylenes	U	4.8	ug/Kgdrywt	1	10	9.6	1.6	4.8
Methyl tert-butyl Ether	U	2.4	ug/Kgdrywt	1	5	4.8	1.0	2.4
Methylene Chloride	U	12	ug/Kgdrywt	1	25	24.	7.6	12.
N-Butylbenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.88	2.4
N-Propylbenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.80	2.4
Naphthalene	U	2.4	ug/Kgdrywt	1	5	4.8	0.84	2.4
o-Xylene	U	2.4	ug/Kgdrywt	1	5	4.8	1.2	2.4
sec-Butylbenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.87	2.4
Styrene	U	2.4	ug/Kgdrywt	1	5	4.8	0.49	2.4
tert-Butylbenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.86	2.4
Tetrachloroethene	U	2.4	ug/Kgdrywt	1	5	4.8	1.2	2.4
Toluene	U	2.4	ug/Kgdrywt	1	5	4.8	1.3	2.4
trans-1,2-Dichloroethene	U	2.4	ug/Kgdrywt	1	5	4.8	0.68	2.4
trans-1,3-Dichloropropene	U	2.4	ug/Kgdrywt	1	5	4.8	0.82	2.4
Trichloroethene	U	2.4	ug/Kgdrywt	1	5	4.8	0.57	2.4
Trichlorofluoromethane	U	4.8	ug/Kgdrywt	1	10	9.6	0.87	4.8
Vinyl Chloride	U	4.8	ug/Kgdrywt	1	10	9.6	0.84	4.8
1,2-Dichloroethane-D4		111.	%					
p-Bromofluorobenzene		99.7	%					
Dibromofluoromethane		113.	%					
Toluene-D8		100.	%					

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Data File: \\target_server\gg\chem\gcms-w.i\W032718.b\W3369.D
Report Date: 28-Mar-2018 13:53

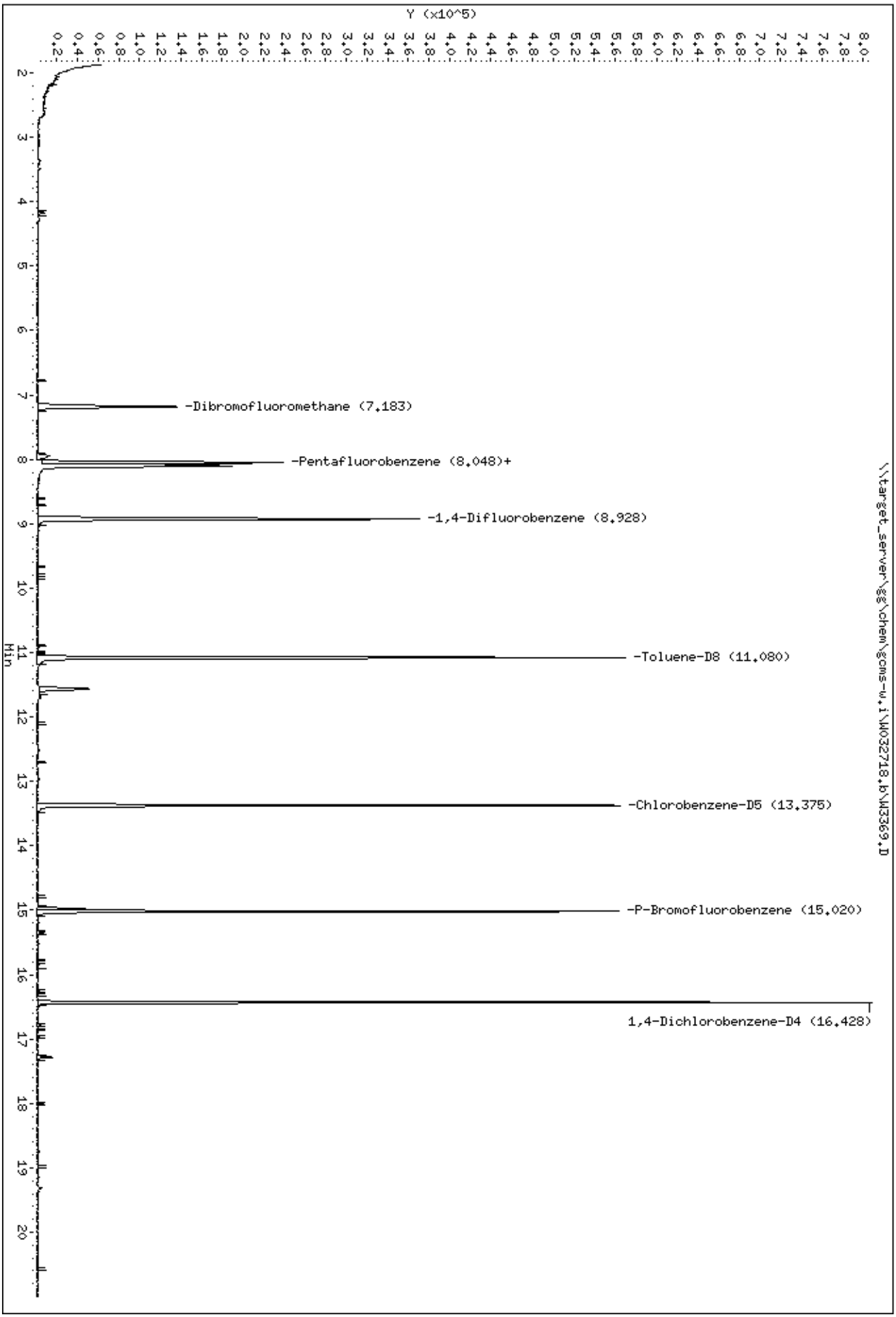
Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W032718.b\W3369.D
Lab Smp Id: SL2079-5RA2 Client Smp ID: CHAAP-BKRD-SB12
Inj Date : 27-MAR-2018 11:43 MS Autotune Date: 10-APR-2016 11:00
Operator : HG/JSS Inst ID: gcms-w.i
Smp Info : SL2079-5RA2
Misc Info : WG225463,WG225400-4
Comment : SW846 5035
Method : \\target_server\gg\chem\gcms-w.i\W032718.b\W8SDI(08)D.m
Meth Date : 28-Mar-2018 13:49 gcms-w.i Quant Type: ISTD
Cal Date : 26-MAR-2018 13:19 Cal File: W3347.D
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: MIS_GUEST

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	16.970	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	6.240	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/kg)	FINAL (ug/Kgdrywt)	REVIEW COD
$ 37 Dibromofluoromethane	113	7.183	7.167	(0.892)	103878	56.5550	54.6	
* 42 Pentafluorobenzene	168	8.055	8.039	(1.000)	158763	50.0000		
$ 45 1,2-Dichloroethane-D4	65	8.098	8.089	(1.005)	164924	55.4667	53.5	
* 49 1,4-Difluorobenzene	114	8.927	8.912	(1.000)	302805	50.0000		
$ 55 Toluene-D8	98	11.079	11.064	(1.241)	390566	50.2640	48.5	
* 66 Chlorobenzene-D5	117	13.375	13.366	(1.000)	274714	50.0000		
$ 76 P-Bromofluorobenzene	95	15.019	15.011	(1.682)	178569	49.8736	48.1	
* 91 1,4-Dichlorobenzene-D4	152	16.428	16.425	(1.000)	154517	50.0000		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Date : 27-MAR-2018 11:43
Client ID: CHAAP-BKRD-SB12
Sample Info: SL2079-5RA2
Instrument: gcms-w.i
\\target_server\gg\chem\gcms-w.i\W032718.b\W3369.D
Y (x10^5)
Min
-Dibromofluoromethane (7.183)
-Pentafluorobenzene (8.048)+
-1,4-Difluorobenzene (8.928)
-Toluene-D8 (11.080)
-Chlorobenzene-D5 (13.375)
-P-Bromofluorobenzene (15.020)
1,4-Dichlorobenzene-D4 (16.428)

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-6RA2
Client ID: CHAAP-BKRD-SB13
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3370.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 27-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225463

Analysis Date: 27-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 80.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,1,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.69	2.5
1,1,1-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.42	2.5
1,1,2,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.83	2.5
Freon-113	U	2.5	ug/Kgdrywt	1	5	5.0	0.89	2.5
1,1,2-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.96	2.5
1,1-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.7	2.5
1,1-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
1,1-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
1,2,3-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.75	2.5
1,2,3-Trichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
1,2,4-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
1,2,4-Trimethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.86	2.5
1,2-Dibromo-3-Chloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.5	2.5
1,2-Dibromoethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
1,2-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.77	2.5
1,2-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.99	2.5
1,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
1,3,5-Trimethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.66	2.5
1,3-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.61	2.5
1,3-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	0.93	2.5
1,4-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.44	2.5
2,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	0.50	2.5
2-Butanone	U	12	ug/Kgdrywt	1	25	25.	5.8	12.
2-Chlorotoluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
2-Hexanone	U	12	ug/Kgdrywt	1	25	25.	4.8	12.
4-Chlorotoluene	U	2.5	ug/Kgdrywt	1	5	5.0	0.48	2.5
P-Isopropyltoluene	U	2.5	ug/Kgdrywt	1	5	5.0	0.75	2.5
4-Methyl-2-Pentanone	U	12	ug/Kgdrywt	1	25	25.	5.8	12.
Acetone	U	12	ug/Kgdrywt	1	25	25.	5.0	12.
Benzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Bromobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.73	2.5
Bromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Bromodichloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.59	2.5
Bromoform	U	2.5	ug/Kgdrywt	1	5	5.0	0.69	2.5
Bromomethane	U	5.0	ug/Kgdrywt	1	10	9.9	1.1	5.0

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-6RA2
Client ID: CHAAP-BKRD-SB13
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3370.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 27-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225463

Analysis Date: 27-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 80.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Carbon Disulfide	U	2.5	ug/Kgdrywt	1	5	5.0	0.77	2.5
Carbon Tetrachloride	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
Chlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.50	2.5
Dibromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	6.9	2.5
Chloroethane	U	5.0	ug/Kgdrywt	1	10	9.9	1.3	5.0
Chloroform	U	2.5	ug/Kgdrywt	1	5	5.0	0.35	2.5
Chloromethane	U	5.0	ug/Kgdrywt	1	10	9.9	1.4	5.0
cis-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
cis-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.71	2.5
Dibromomethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.50	2.5
Dichlorodifluoromethane	U	5.0	ug/Kgdrywt	1	10	9.9	0.91	5.0
Ethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.64	2.5
Hexachlorobutadiene	U	2.5	ug/Kgdrywt	1	5	5.0	0.73	2.5
Isopropylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
m+p-Xylenes	U	5.0	ug/Kgdrywt	1	10	9.9	1.7	5.0
Methyl tert-butyl Ether	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
Methylene Chloride	U	12	ug/Kgdrywt	1	25	25.	7.8	12.
N-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
N-Propylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.82	2.5
Naphthalene	U	2.5	ug/Kgdrywt	1	5	5.0	0.87	2.5
o-Xylene	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
sec-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Styrene	U	2.5	ug/Kgdrywt	1	5	5.0	0.50	2.5
tert-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.89	2.5
Tetrachloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
Toluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
trans-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
trans-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.85	2.5
Trichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.58	2.5
Trichlorofluoromethane	U	5.0	ug/Kgdrywt	1	10	9.9	0.90	5.0
Vinyl Chloride	U	5.0	ug/Kgdrywt	1	10	9.9	0.86	5.0
1,2-Dichloroethane-D4		117.	%					
p-Bromofluorobenzene		97.7	%					
Dibromofluoromethane		114.	%					
Toluene-D8		102.	%					

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Data File: \\target_server\gg\chem\gcms-w.i\W032718.b\W3370.D
Report Date: 28-Mar-2018 13:53

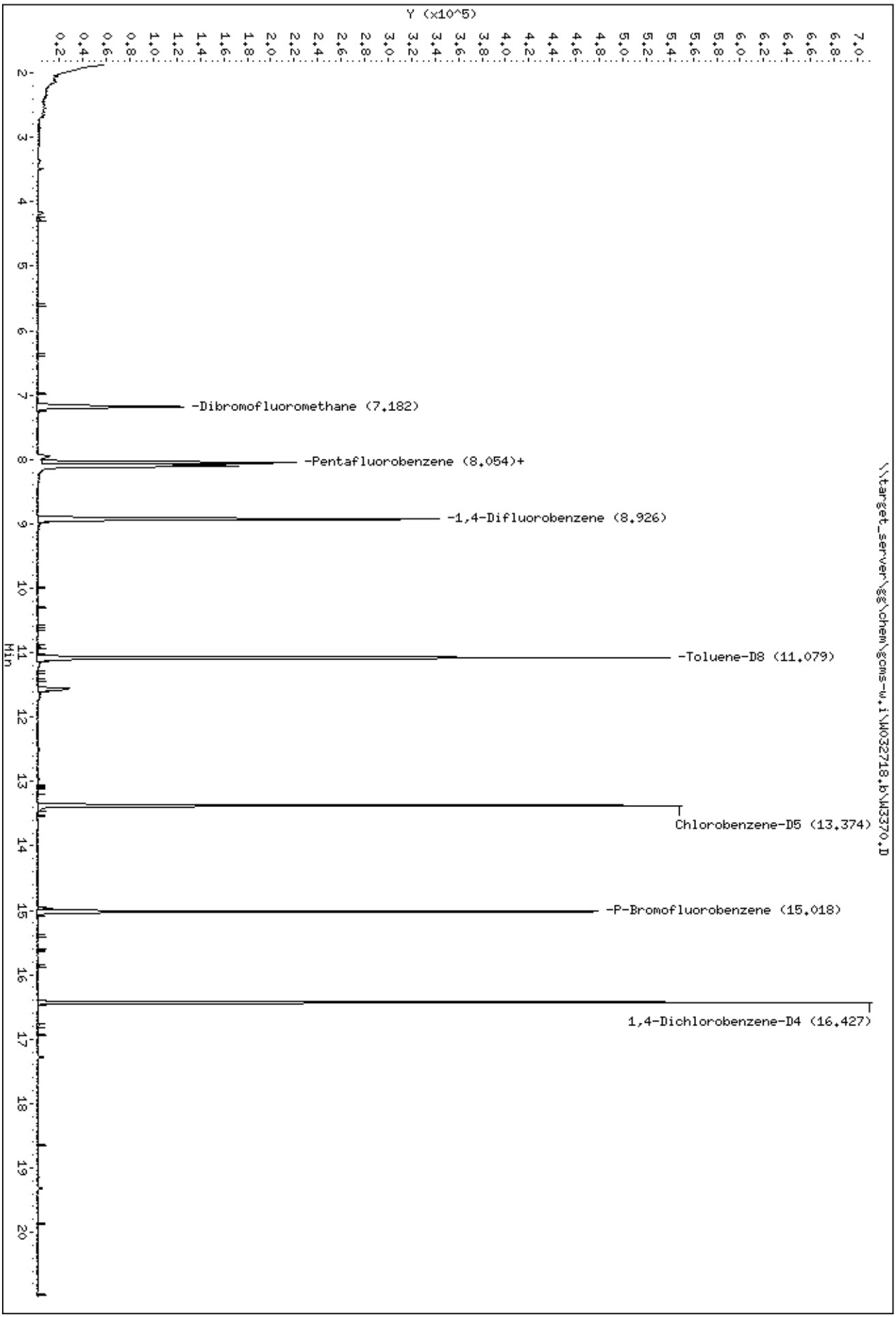
Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W032718.b\W3370.D
Lab Smp Id: SL2079-6RA2 Client Smp ID: CHAAP-BKRD-SB13
Inj Date : 27-MAR-2018 12:20 MS Autotune Date: 10-APR-2016 11:00
Operator : HG/JSS Inst ID: gcms-w.i
Smp Info : SL2079-6RA2
Misc Info : WG225463,WG225400-4
Comment : SW846 5035
Method : \\target_server\gg\chem\gcms-w.i\W032718.b\W8SDI(08)D.m
Meth Date : 28-Mar-2018 13:49 gcms-w.i Quant Type: ISTD
Cal Date : 26-MAR-2018 13:19 Cal File: W3347.D
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: MIS_GUEST

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	20.177	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	6.310	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/kg)	FINAL (ug/Kgdrywt)	REVIEW COD
$ 37 Dibromofluoromethane	113	7.181	7.167	(0.892)	95033	57.1367	56.7	
* 42 Pentafluorobenzene	168	8.054	8.039	(1.000)	143766	50.0000		
$ 45 1,2-Dichloroethane-D4	65	8.096	8.089	(1.005)	157778	58.5987	58.2	
* 49 1,4-Difluorobenzene	114	8.926	8.912	(1.000)	269757	50.0000		
$ 55 Toluene-D8	98	11.078	11.064	(1.241)	353248	51.0308	50.6	
* 66 Chlorobenzene-D5	117	13.373	13.366	(1.000)	253110	50.0000		
$ 76 P-Bromofluorobenzene	95	15.018	15.011	(1.682)	155885	48.8719	48.5	
* 91 1,4-Dichlorobenzene-D4	152	16.434	16.425	(1.000)	139179	50.0000		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Date : 27-MAR-2018 12:20
Client ID: CHAAP-BKRD-SB13
Sample Info: SL2079-6RA2
Instrument: gcms-w.i
\\target_server\gg\chem\gcms-w.i\W032718.b\W3370.D
Y (x10^5)
Min
-Dibromofluoromethane (7.182)
-Pentafluorobenzene (8.054)+
-1,4-Difluorobenzene (8.926)
-Toluene-D8 (11.079)
Chlorobenzene-D5 (13.374)
-P-Bromofluorobenzene (15.018)
1,4-Dichlorobenzene-D4 (16.427)

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-7
Client ID: CHAAP-BKRD-SS08
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3351.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 79.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,1,2-Tetrachloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.84	3.0
1,1,1-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.50	3.0
1,1,2,2-Tetrachloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
Freon-113	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,1,2-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
1,1-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	2.0	3.0
1,1-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,1-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,2,3-Trichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.91	3.0
1,2,3-Trichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
1,2,4-Trichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.95	3.0
1,2,4-Trimethylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,2-Dibromo-3-Chloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.8	3.0
1,2-Dibromoethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
1,2-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.94	3.0
1,2-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
1,2-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
1,3,5-Trimethylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.80	3.0
1,3-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.74	3.0
1,3-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,4-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.53	3.0
2,2-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	0.60	3.0
2-Butanone	U	15	ug/Kgdrywt	1	25	30.	7.1	15.
2-Chlorotoluene	U	3.0	ug/Kgdrywt	1	5	6.0	1.3	3.0
2-Hexanone	U	15	ug/Kgdrywt	1	25	30.	5.8	15.
4-Chlorotoluene	U	3.0	ug/Kgdrywt	1	5	6.0	0.59	3.0
P-Isopropyltoluene	U	3.0	ug/Kgdrywt	1	5	6.0	0.91	3.0
4-Methyl-2-Pentanone	U	15	ug/Kgdrywt	1	25	30.	7.1	15.
Acetone	U	15	ug/Kgdrywt	1	25	30.	6.1	15.
Benzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Bromobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.89	3.0
Bromochloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Bromodichloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.72	3.0
Bromoform	U	3.0	ug/Kgdrywt	1	5	6.0	0.84	3.0
Bromomethane	U	6.0	ug/Kgdrywt	1	10	12.	1.3	6.0

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-7
Client ID: CHAAP-BKRD-SS08
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3351.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 79.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Carbon Disulfide	U	3.0	ug/Kgdrywt	1	5	6.0	0.94	3.0
Carbon Tetrachloride	U	3.0	ug/Kgdrywt	1	5	6.0	1.6	3.0
Chlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
Dibromochloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	8.4	3.0
Chloroethane	U	6.0	ug/Kgdrywt	1	10	12.	1.6	6.0
Chloroform	U	3.0	ug/Kgdrywt	1	5	6.0	0.42	3.0
Chloromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.7	6.0
cis-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
cis-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	0.86	3.0
Dibromomethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
Dichlorodifluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
Ethylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.78	3.0
Hexachlorobutadiene	U	3.0	ug/Kgdrywt	1	5	6.0	0.89	3.0
Isopropylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
m+p-Xylenes	U	6.0	ug/Kgdrywt	1	10	12.	2.0	6.0
Methyl tert-butyl Ether	U	3.0	ug/Kgdrywt	1	5	6.0	1.3	3.0
Methylene Chloride	U	15	ug/Kgdrywt	1	25	30.	9.5	15.
N-Butylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
N-Propylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
Naphthalene	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
o-Xylene	U	3.0	ug/Kgdrywt	1	5	6.0	1.6	3.0
sec-Butylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Styrene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
tert-Butylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Tetrachloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
Toluene	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
trans-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.85	3.0
trans-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
Trichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.71	3.0
Trichlorofluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
Vinyl Chloride	U	6.0	ug/Kgdrywt	1	10	12.	1.0	6.0
1,2-Dichloroethane-D4		105.	%					
p-Bromofluorobenzene		83.6	%					
Dibromofluoromethane		110.	%					
Toluene-D8		101.	%					

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Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3351.D
Report Date: 28-Mar-2018 13:35

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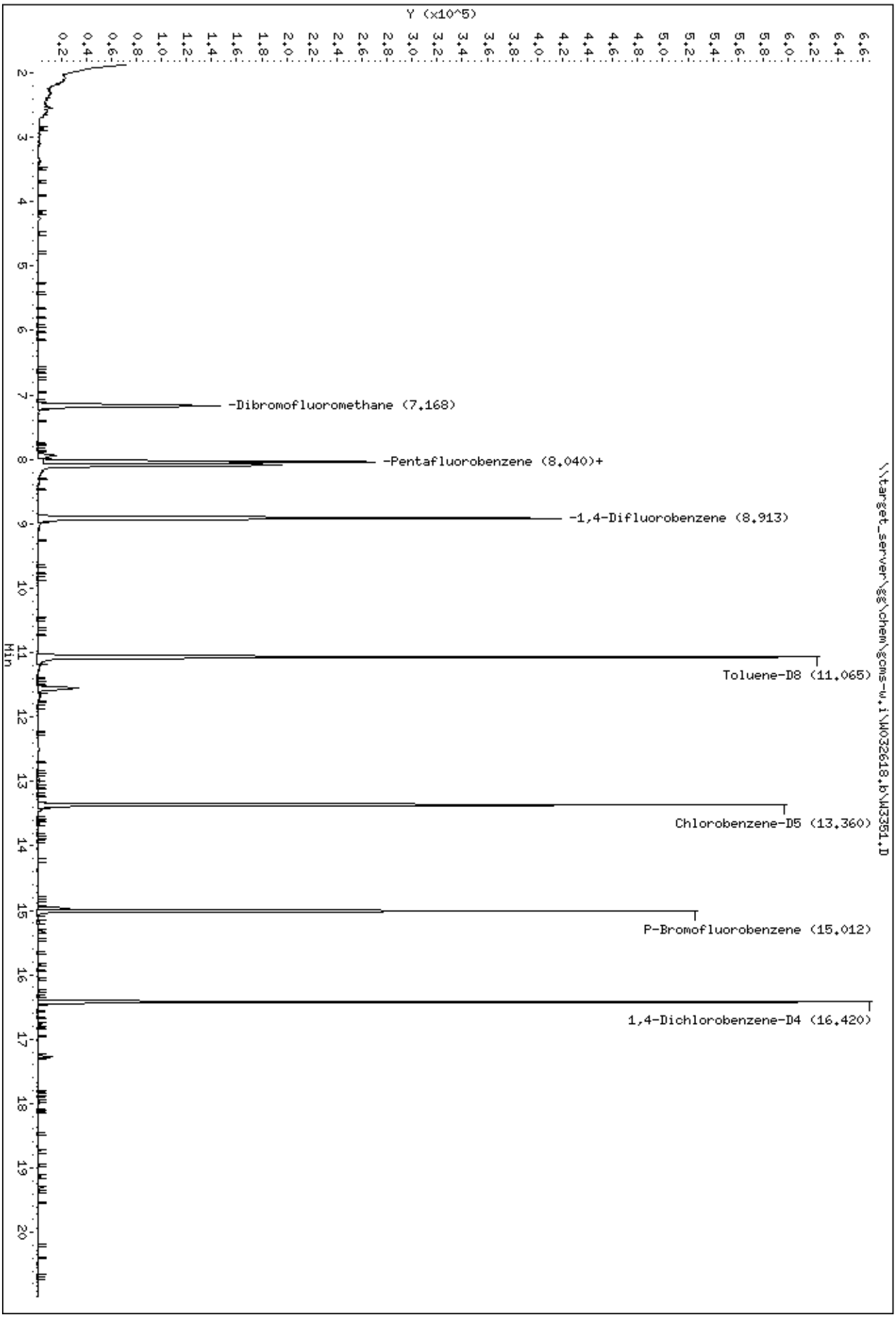
Data file : \\target_server\gg\chem\gcms-w.i\W032618.b\W3351.D
Lab Smp Id: SL2079-7 Client Smp ID: CHAAP-BKRD-SS08
Inj Date : 26-MAR-2018 15:47 MS Autotune Date: 10-APR-2016 11:00
Operator : HG/JSS Inst ID: gcms-w.i
Smp Info : SL2079-7
Misc Info : WG225400,WG225400-4
Comment : SW846 5035
Method : \\target_server\gg\chem\gcms-w.i\W032618.b\W8SDI(08)D.m
Meth Date : 28-Mar-2018 13:21 gcms-w.i Quant Type: ISTD
Cal Date : 26-MAR-2018 13:19 Cal File: W3347.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: MIS_GUEST

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	21.201	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	5.460	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/kg)	FINAL (ug/Kgdrywt)	REVIEW COD
$ 37 Dibromofluoromethane	113	7.160	7.167	(0.891)	113657	54.9884	63.9	
* 42 Pentafluorobenzene	168	8.040	8.039	(1.000)	178658	50.0000		
$ 45 1,2-Dichloroethane-D4	65	8.083	8.089	(1.005)	176270	52.6809	61.2	
* 49 1,4-Difluorobenzene	114	8.912	8.912	(1.000)	332514	50.0000		
$ 55 Toluene-D8	98	11.064	11.064	(1.241)	431911	50.6186	58.8	
* 66 Chlorobenzene-D5	117	13.360	13.366	(1.000)	292125	50.0000		
$ 76 P-Bromofluorobenzene	95	15.011	15.011	(1.684)	164424	41.8199	48.6	
* 91 1,4-Dichlorobenzene-D4	152	16.420	16.425	(1.000)	129275	50.0000		



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Date : 26-MAR-2018 15:47
Client ID: CHAAP-BKRD-SS08
Sample Info: SL2079-7

Instrument: gcms-w.i

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-8
Client ID: CHAAP-BKRD-SS09
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3352.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 83.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,1,2-Tetrachloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.77	2.8
1,1,1-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.46	2.8
1,1,2,2-Tetrachloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.92	2.8
Freon-113	U	2.8	ug/Kgdrywt	1	5	5.5	0.99	2.8
1,1,2-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
1,1-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.9	2.8
1,1-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
1,1-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
1,2,3-Trichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.84	2.8
1,2,3-Trichloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.3	2.8
1,2,4-Trichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.87	2.8
1,2,4-Trimethylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.96	2.8
1,2-Dibromo-3-Chloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.6	2.8
1,2-Dibromoethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.3	2.8
1,2-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.86	2.8
1,2-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
1,2-Dichloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
1,3,5-Trimethylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.74	2.8
1,3-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.68	2.8
1,3-Dichloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
1,4-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.48	2.8
2,2-Dichloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	0.55	2.8
2-Butanone	U	14	ug/Kgdrywt	1	25	28.	6.5	14.
2-Chlorotoluene	U	2.8	ug/Kgdrywt	1	5	5.5	1.2	2.8
2-Hexanone	U	14	ug/Kgdrywt	1	25	28.	5.3	14.
4-Chlorotoluene	U	2.8	ug/Kgdrywt	1	5	5.5	0.54	2.8
P-Isopropyltoluene	U	2.8	ug/Kgdrywt	1	5	5.5	0.84	2.8
4-Methyl-2-Pentanone	U	14	ug/Kgdrywt	1	25	28.	6.5	14.
Acetone	U	14	ug/Kgdrywt	1	25	28.	5.6	14.
Benzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Bromobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.81	2.8
Bromochloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Bromodichloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.66	2.8
Bromoform	U	2.8	ug/Kgdrywt	1	5	5.5	0.77	2.8
Bromomethane	U	5.5	ug/Kgdrywt	1	10	11.	1.2	5.5

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-8
Client ID: CHAAP-BKRD-SS09
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3352.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 83.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Carbon Disulfide	U	2.8	ug/Kgdrywt	1	5	5.5	0.86	2.8
Carbon Tetrachloride	U	2.8	ug/Kgdrywt	1	5	5.5	1.4	2.8
Chlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8
Dibromochloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	7.7	2.8
Chloroethane	U	5.5	ug/Kgdrywt	1	10	11.	1.4	5.5
Chloroform	U	2.8	ug/Kgdrywt	1	5	5.5	0.38	2.8
Chloromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.5	5.5
cis-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
cis-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.79	2.8
Dibromomethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8
Dichlorodifluoromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
Ethylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.72	2.8
Hexachlorobutadiene	U	2.8	ug/Kgdrywt	1	5	5.5	0.81	2.8
Isopropylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
m+p-Xylenes	U	5.5	ug/Kgdrywt	1	10	11.	1.9	5.5
Methyl tert-butyl Ether	U	2.8	ug/Kgdrywt	1	5	5.5	1.2	2.8
Methylene Chloride	U	14	ug/Kgdrywt	1	25	28.	8.7	14.
N-Butylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
N-Propylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.91	2.8
Naphthalene	U	2.8	ug/Kgdrywt	1	5	5.5	0.97	2.8
o-Xylene	U	2.8	ug/Kgdrywt	1	5	5.5	1.4	2.8
sec-Butylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Styrene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8
tert-Butylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.99	2.8
Tetrachloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.3	2.8
Toluene	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
trans-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.78	2.8
trans-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.95	2.8
Trichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.65	2.8
Trichlorofluoromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
Vinyl Chloride	U	5.5	ug/Kgdrywt	1	10	11.	0.96	5.5
1,2-Dichloroethane-D4		108.	%					
p-Bromofluorobenzene		88.9	%					
Dibromofluoromethane		110.	%					
Toluene-D8		101.	%					

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Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3352.D
Report Date: 28-Mar-2018 13:35

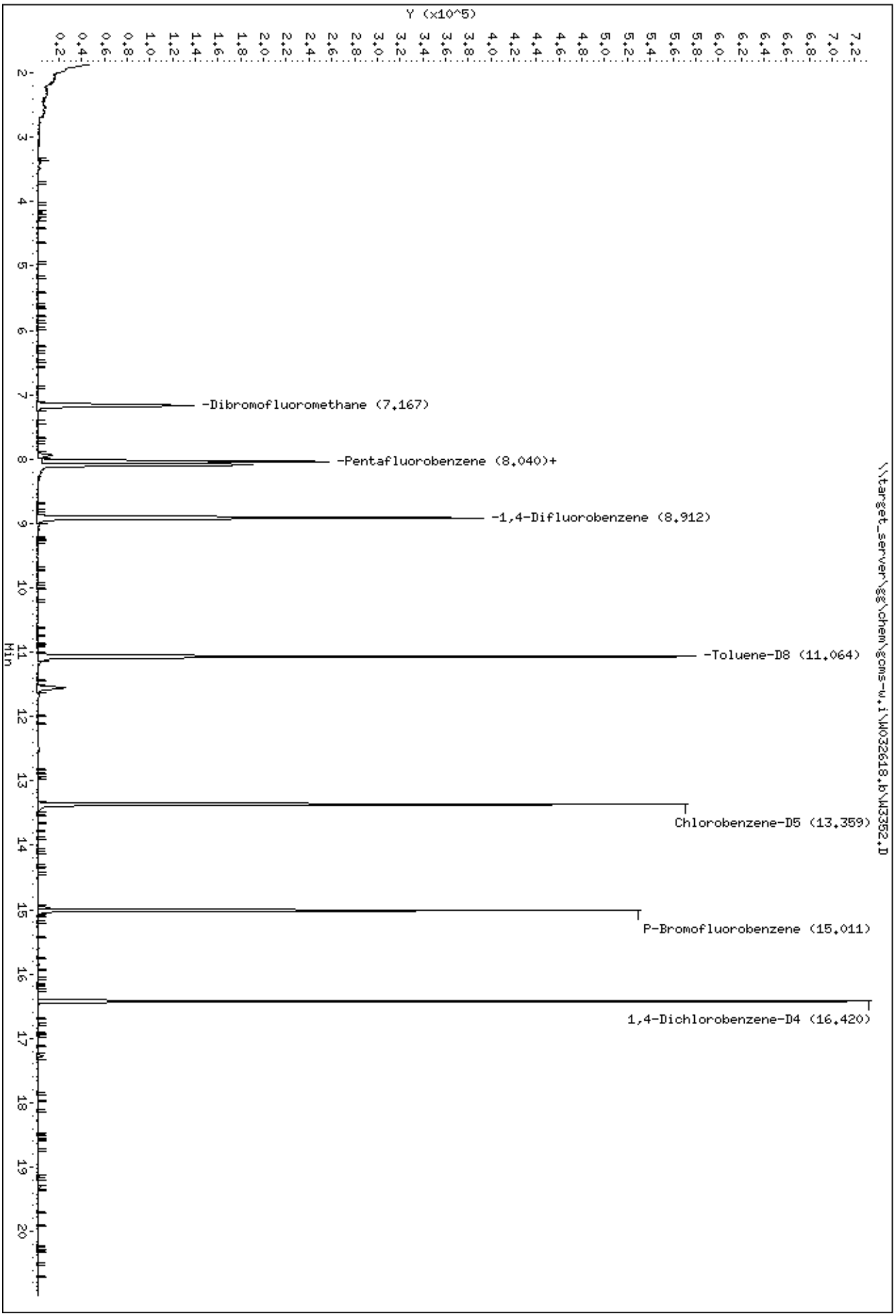
Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W032618.b\W3352.D
Lab Smp Id: SL2079-8 Client Smp ID: CHAAP-BKRD-SS09
Inj Date : 26-MAR-2018 16:24 MS Autotune Date: 10-APR-2016 11:00
Operator : HG/JSS Inst ID: gcms-w.i
Smp Info : SL2079-8
Misc Info : WG225400,WG225400-4
Comment : SW846 5035
Method : \\target_server\gg\chem\gcms-w.i\W032618.b\W8SDI(08)D.m
Meth Date : 28-Mar-2018 13:21 gcms-w.i Quant Type: ISTD
Cal Date : 26-MAR-2018 13:19 Cal File: W3347.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: MIS_GUEST

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	17.148	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	5.510	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/kg)	FINAL (ug/Kgdrywt)	REVIEW COD
$ 37 Dibromofluoromethane	113	7.160	7.167	(0.891)	107368	54.8072	60.0	
* 42 Pentafluorobenzene	168	8.039	8.039	(1.000)	169330	50.0000		
$ 45 1,2-Dichloroethane-D4	65	8.089	8.089	(1.006)	171458	54.0656	59.2	
* 49 1,4-Difluorobenzene	114	8.911	8.912	(1.000)	311053	50.0000		
$ 55 Toluene-D8	98	11.064	11.064	(1.241)	401677	50.3232	55.1	
* 66 Chlorobenzene-D5	117	13.359	13.366	(1.000)	279078	50.0000		
$ 76 P-Bromofluorobenzene	95	15.011	15.011	(1.684)	163561	44.4706	48.7	
* 91 1,4-Dichlorobenzene-D4	152	16.426	16.425	(1.000)	145372	50.0000		



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Date : 26-MAR-2018 16:24
Client ID: CHAAP-BKRD-SS09
Sample Info: SL2079-8

Instrument: gcms-w.i

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-9
Client ID: CHAAP-BKRD-SS10
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3357.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 75.
Report Date: 29-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,1,2-Tetrachloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.84	3.0
1,1,1-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.50	3.0
1,1,2,2-Tetrachloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
Freon-113	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,1,2-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
1,1-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	2.0	3.0
1,1-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,1-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,2,3-Trichlorobenzene	UMM	3.0	ug/Kgdrywt	1	5	6.0	0.91	3.0
1,2,3-Trichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
1,2,4-Trichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.95	3.0
1,2,4-Trimethylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,2-Dibromo-3-Chloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.8	3.0
1,2-Dibromoethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
1,2-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.94	3.0
1,2-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
1,2-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
1,3,5-Trimethylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.80	3.0
1,3-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.74	3.0
1,3-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,4-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.53	3.0
2,2-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	0.60	3.0
2-Butanone	U	15	ug/Kgdrywt	1	25	30.	7.1	15.
2-Chlorotoluene	U	3.0	ug/Kgdrywt	1	5	6.0	1.3	3.0
2-Hexanone	UMM	15	ug/Kgdrywt	1	25	30.	5.8	15.
4-Chlorotoluene	U	3.0	ug/Kgdrywt	1	5	6.0	0.59	3.0
P-Isopropyltoluene	U	3.0	ug/Kgdrywt	1	5	6.0	0.91	3.0
4-Methyl-2-Pentanone	UM	15	ug/Kgdrywt	1	25	30.	7.1	15.
Acetone	J	9.1	ug/Kgdrywt	1	25	30.	6.1	15.
Benzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Bromobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.89	3.0
Bromochloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Bromodichloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.72	3.0
Bromoform	U	3.0	ug/Kgdrywt	1	5	6.0	0.84	3.0
Bromomethane	U	6.0	ug/Kgdrywt	1	10	12.	1.3	6.0

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-9
Client ID: CHAAP-BKRD-SS10
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3357.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 75.
Report Date: 29-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Carbon Disulfide	U	3.0	ug/Kgdrywt	1	5	6.0	0.94	3.0
Carbon Tetrachloride	U	3.0	ug/Kgdrywt	1	5	6.0	1.6	3.0
Chlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
Dibromochloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	8.4	3.0
Chloroethane	U	6.0	ug/Kgdrywt	1	10	12.	1.6	6.0
Chloroform	U	3.0	ug/Kgdrywt	1	5	6.0	0.42	3.0
Chloromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.7	6.0
cis-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
cis-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	0.86	3.0
Dibromomethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
Dichlorodifluoromethane	UMM	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
Ethylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.78	3.0
Hexachlorobutadiene	U	3.0	ug/Kgdrywt	1	5	6.0	0.89	3.0
Isopropylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
m+p-Xylenes	U	6.0	ug/Kgdrywt	1	10	12.	2.0	6.0
Methyl tert-butyl Ether	U	3.0	ug/Kgdrywt	1	5	6.0	1.3	3.0
Methylene Chloride	U	15	ug/Kgdrywt	1	25	30.	9.5	15.
N-Butylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
N-Propylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
Naphthalene	UMM	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
o-Xylene	U	3.0	ug/Kgdrywt	1	5	6.0	1.6	3.0
sec-Butylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Styrene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
tert-Butylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Tetrachloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
Toluene	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
trans-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.85	3.0
trans-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
Trichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.71	3.0
Trichlorofluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
Vinyl Chloride	U	6.0	ug/Kgdrywt	1	10	12.	1.0	6.0
1,2-Dichloroethane-D4		131.	%					
p-Bromofluorobenzene		85.2	%					
Dibromofluoromethane		123.	%					
Toluene-D8		102.	%					

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Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3357.D
Report Date: 28-Mar-2018 13:35

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Data file : \\target_server\gg\chem\gcms-w.i\W032618.b\W3357.D
Lab Smp Id: SL2079-9 Client Smp ID: CHAAP-BKRD-SS10
Inj Date : 26-MAR-2018 19:29 MS Autotune Date: 10-APR-2016 11:00
Operator : HG/JSS Inst ID: gcms-w.i
Smp Info : SL2079-9
Misc Info : WG225400,WG225400-4
Comment : SW846 5035
Method : \\target_server\gg\chem\gcms-w.i\W032618.b\W8SDI(08)D.m
Meth Date : 28-Mar-2018 13:21 gcms-w.i Quant Type: ISTD
Cal Date : 26-MAR-2018 13:19 Cal File: W3347.D
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: MIS_GUEST

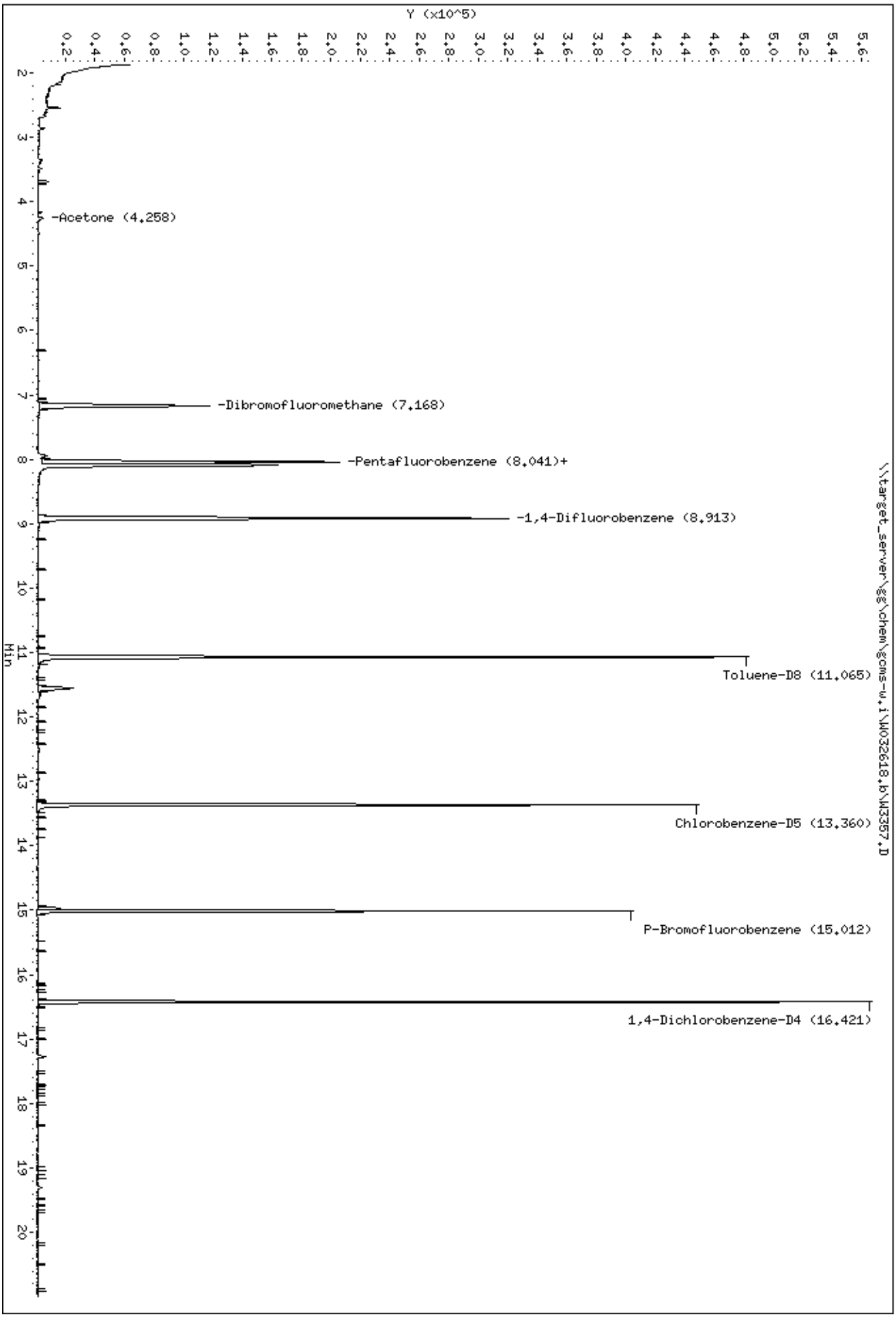
Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	25.390	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	5.460	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/kg)	FINAL (ug/Kgdrywt)	REVIEW COD
	15 Acetone	43	4.258	4.250	(0.530)	5873	7.38236	9.1(a)	
$	37 Dibromofluoromethane	113	7.168	7.167	(0.892)	87663	61.3714	75.3	
*	42 Pentafluorobenzene	168	8.040	8.039	(1.000)	123466	50.0000		
$	45 1,2-Dichloroethane-D4	65	8.090	8.089	(1.006)	151852	65.6705	80.6	
*	49 1,4-Difluorobenzene	114	8.913	8.912	(1.000)	240758	50.0000		
$	55 Toluene-D8	98	11.065	11.064	(1.241)	314112	50.8428	62.4	
*	66 Chlorobenzene-D5	117	13.360	13.366	(1.000)	209457	50.0000		
$	76 P-Bromofluorobenzene	95	15.012	15.011	(1.684)	121278	42.6019	52.3	
*	91 1,4-Dichlorobenzene-D4	152	16.420	16.425	(1.000)	99294	50.0000		

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).



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Date : 26-MAR-2018 19:29
Client ID: CHAAP-BKRD-SS10
Sample Info: SL2079-9

Instrument: gcms-w.i

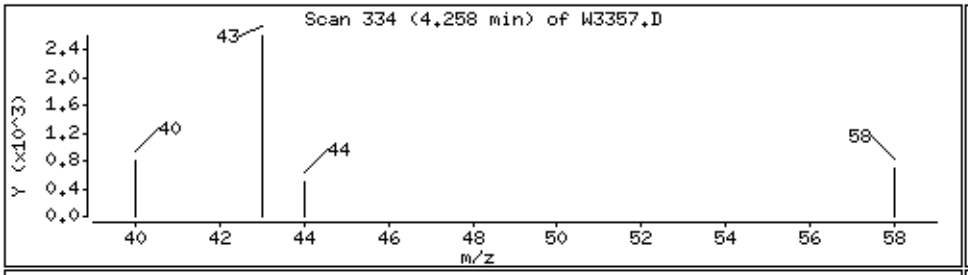
Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3357.D

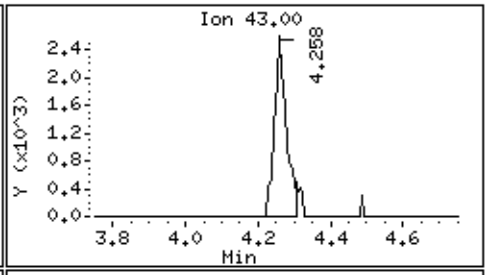
Date : 26-MAR-2018 19:29

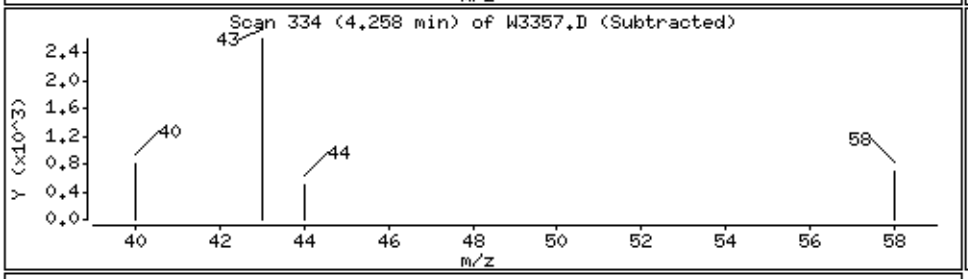
Client ID: CHAAP-BKRD-SS10 Instrument: gcms-w.i

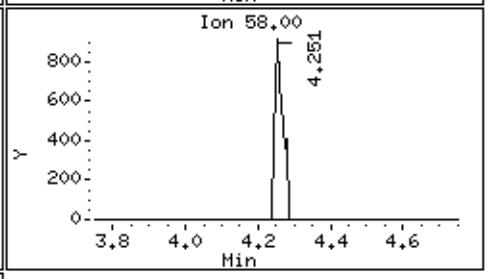
Sample Info: SL2079-9

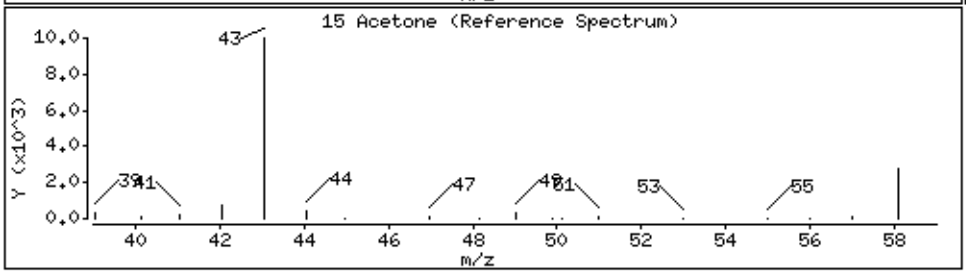
15 Acetone Concentration: 9.1 ug/Kgdrywt











Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-10
Client ID: CHAAP-BKRD-SS11
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3353.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 81.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,1,2-Tetrachloroethane	U	3.8	ug/Kgdrywt	1	5	7.5	1.0	3.8
1,1,1-Trichloroethane	U	3.8	ug/Kgdrywt	1	5	7.5	0.63	3.8
1,1,2,2-Tetrachloroethane	U	3.8	ug/Kgdrywt	1	5	7.5	1.3	3.8
Freon-113	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
1,1,2-Trichloroethane	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
1,1-Dichloroethane	U	3.8	ug/Kgdrywt	1	5	7.5	2.6	3.8
1,1-Dichloroethene	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
1,1-Dichloropropene	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
1,2,3-Trichlorobenzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.1	3.8
1,2,3-Trichloropropane	U	3.8	ug/Kgdrywt	1	5	7.5	1.8	3.8
1,2,4-Trichlorobenzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.2	3.8
1,2,4-Trimethylbenzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.3	3.8
1,2-Dibromo-3-Chloropropane	U	3.8	ug/Kgdrywt	1	5	7.5	2.2	3.8
1,2-Dibromoethane	U	3.8	ug/Kgdrywt	1	5	7.5	1.8	3.8
1,2-Dichlorobenzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.2	3.8
1,2-Dichloroethane	U	3.8	ug/Kgdrywt	1	5	7.5	1.5	3.8
1,2-Dichloropropane	U	3.8	ug/Kgdrywt	1	5	7.5	2.1	3.8
1,3,5-Trimethylbenzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.0	3.8
1,3-Dichlorobenzene	U	3.8	ug/Kgdrywt	1	5	7.5	0.93	3.8
1,3-Dichloropropane	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
1,4-Dichlorobenzene	U	3.8	ug/Kgdrywt	1	5	7.5	0.66	3.8
2,2-Dichloropropane	U	3.8	ug/Kgdrywt	1	5	7.5	0.75	3.8
2-Butanone	U	19	ug/Kgdrywt	1	25	38.	8.8	19.
2-Chlorotoluene	U	3.8	ug/Kgdrywt	1	5	7.5	1.6	3.8
2-Hexanone	U	19	ug/Kgdrywt	1	25	38.	7.2	19.
4-Chlorotoluene	U	3.8	ug/Kgdrywt	1	5	7.5	0.74	3.8
P-Isopropyltoluene	U	3.8	ug/Kgdrywt	1	5	7.5	1.1	3.8
4-Methyl-2-Pentanone	U	19	ug/Kgdrywt	1	25	38.	8.8	19.
Acetone	J	27	ug/Kgdrywt	1	25	38.	7.6	19.
Benzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
Bromobenzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.1	3.8
Bromochloromethane	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
Bromodichloromethane	U	3.8	ug/Kgdrywt	1	5	7.5	0.90	3.8
Bromoform	U	3.8	ug/Kgdrywt	1	5	7.5	1.0	3.8
Bromomethane	J	2.5	ug/Kgdrywt	1	10	15.	1.6	7.5

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://www.katahdinlab.com

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-10
Client ID: CHAAP-BKRD-SS11
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3353.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 81.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Carbon Disulfide	U	3.8	ug/Kgdrywt	1	5	7.5	1.2	3.8
Carbon Tetrachloride	U	3.8	ug/Kgdrywt	1	5	7.5	2.0	3.8
Chlorobenzene	U	3.8	ug/Kgdrywt	1	5	7.5	0.76	3.8
Dibromochloromethane	U	3.8	ug/Kgdrywt	1	5	7.5	10.	3.8
Chloroethane	U	7.5	ug/Kgdrywt	1	10	15.	2.0	7.5
Chloroform	U	3.8	ug/Kgdrywt	1	5	7.5	0.52	3.8
Chloromethane	U	7.5	ug/Kgdrywt	1	10	15.	2.1	7.5
cis-1,2-Dichloroethene	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
cis-1,3-Dichloropropene	U	3.8	ug/Kgdrywt	1	5	7.5	1.1	3.8
Dibromomethane	U	3.8	ug/Kgdrywt	1	5	7.5	0.76	3.8
Dichlorodifluoromethane	U	7.5	ug/Kgdrywt	1	10	15.	1.4	7.5
Ethylbenzene	U	3.8	ug/Kgdrywt	1	5	7.5	0.98	3.8
Hexachlorobutadiene	U	3.8	ug/Kgdrywt	1	5	7.5	1.1	3.8
Isopropylbenzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
m+p-Xylenes	U	7.5	ug/Kgdrywt	1	10	15.	2.6	7.5
Methyl tert-butyl Ether	U	3.8	ug/Kgdrywt	1	5	7.5	1.6	3.8
Methylene Chloride	U	19	ug/Kgdrywt	1	25	38.	12.	19.
N-Butylbenzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
N-Propylbenzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.2	3.8
Naphthalene	U	3.8	ug/Kgdrywt	1	5	7.5	1.3	3.8
o-Xylene	U	3.8	ug/Kgdrywt	1	5	7.5	2.0	3.8
sec-Butylbenzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
Styrene	U	3.8	ug/Kgdrywt	1	5	7.5	0.76	3.8
tert-Butylbenzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
Tetrachloroethene	U	3.8	ug/Kgdrywt	1	5	7.5	1.8	3.8
Toluene	U	3.8	ug/Kgdrywt	1	5	7.5	2.1	3.8
trans-1,2-Dichloroethene	U	3.8	ug/Kgdrywt	1	5	7.5	1.1	3.8
trans-1,3-Dichloropropene	U	3.8	ug/Kgdrywt	1	5	7.5	1.3	3.8
Trichloroethene	U	3.8	ug/Kgdrywt	1	5	7.5	0.88	3.8
Trichlorofluoromethane	U	7.5	ug/Kgdrywt	1	10	15.	1.4	7.5
Vinyl Chloride	U	7.5	ug/Kgdrywt	1	10	15.	1.3	7.5
1,2-Dichloroethane-D4		105.	%					
p-Bromofluorobenzene		83.5	%					
Dibromofluoromethane		105.	%					
Toluene-D8		100.	%					

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Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3353.D
Report Date: 28-Mar-2018 13:35

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W032618.b\W3353.D
Lab Smp Id: SL2079-10 Client Smp ID: CHAAP-BKRD-SS11
Inj Date : 26-MAR-2018 17:01 MS Autotune Date: 10-APR-2016 11:00
Operator : HG/JSS Inst ID: gcms-w.i
Smp Info : SL2079-10
Misc Info : WG225400,WG225400-4
Comment : SW846 5035
Method : \\target_server\gg\chem\gcms-w.i\W032618.b\W8SDI(08)D.m
Meth Date : 28-Mar-2018 13:21 gcms-w.i Quant Type: ISTD
Cal Date : 26-MAR-2018 13:19 Cal File: W3347.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: MIS_GUEST

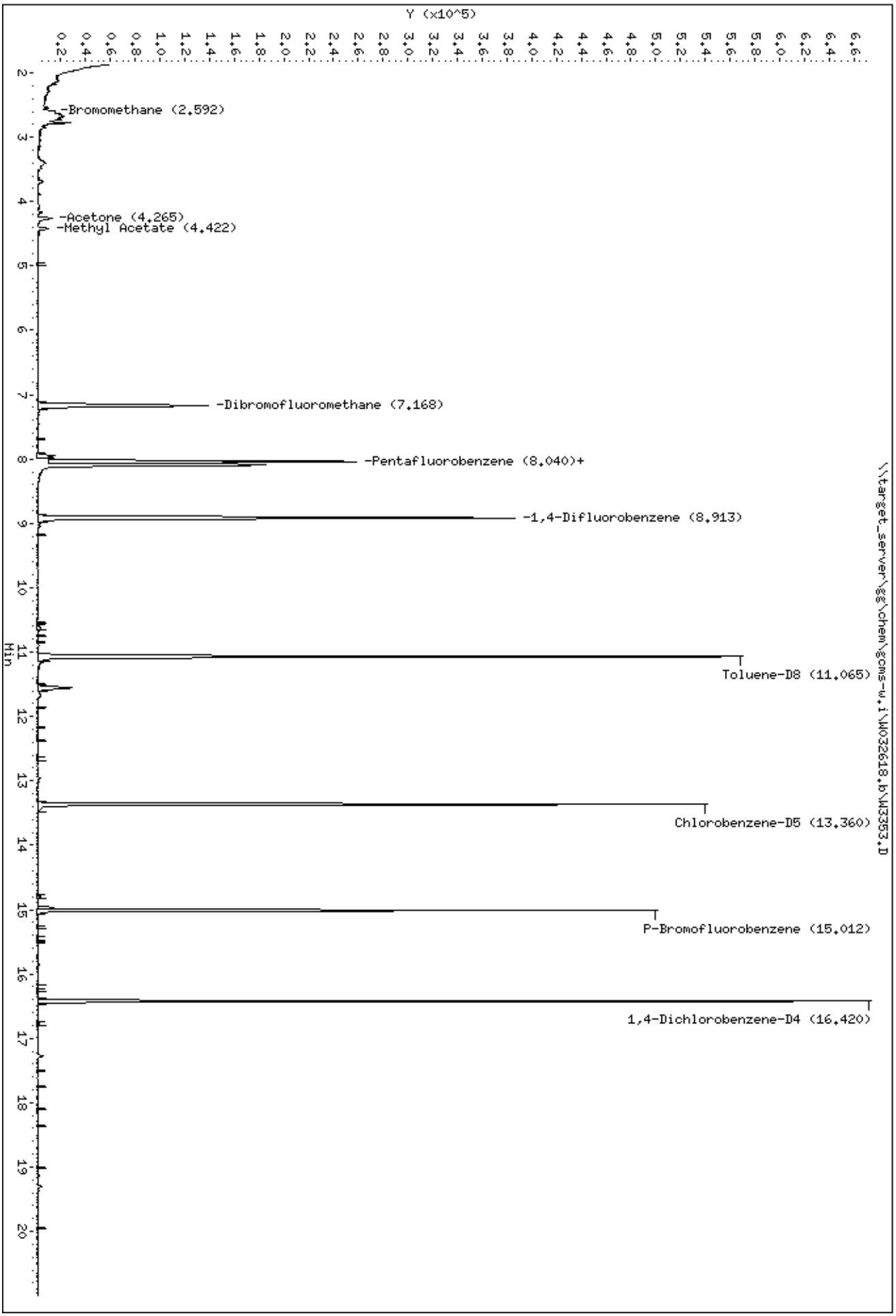
Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	18.664	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	3.990	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/kg)	FINAL (ug/Kgdrywt)	REVIEW COD
	4 Bromomethane	94	2.591	2.591	(0.322)	3107	1.63689	2.5(a)	
	15 Acetone	43	4.265	4.250	(0.530)	19681	17.8050	27.4(a)	
$	37 Dibromofluoromethane	113	7.167	7.167	(0.892)	104468	52.6371	81.1	
*	42 Pentafluorobenzene	168	8.040	8.039	(1.000)	171549	50.0000		
$	45 1,2-Dichloroethane-D4	65	8.090	8.089	(1.006)	169202	52.6641	81.1	
*	49 1,4-Difluorobenzene	114	8.912	8.912	(1.000)	305314	50.0000		
$	55 Toluene-D8	98	11.064	11.064	(1.241)	392156	50.0539	77.1	
*	66 Chlorobenzene-D5	117	13.360	13.366	(1.000)	260135	50.0000		
$	76 P-Bromofluorobenzene	95	15.011	15.011	(1.684)	150786	41.7678	64.4	
*	91 1,4-Dichlorobenzene-D4	152	16.420	16.425	(1.000)	126120	50.0000		
	103 Methyl Acetate	43	4.422	4.414	(0.550)	14392	5.93668	9.1	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).


Y (x10^5)
Min
-Bromomethane (2.592)
-Acetone (4.265)
-Methyl Acetate (4.422)
-Dibromofluoromethane (7.168)
-Pentafluorobenzene (8.040)+
-1,4-Difluorobenzene (8.913)
Toluene-D8 (11.065)
Chlorobenzene-D5 (13.360)
P-Bromofluorobenzene (15.012)
1,4-Dichlorobenzene-D4 (16.420)
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Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3353.D
Date : 26-MAR-2018 17:01
Client ID: CHAAP-BKRD-SS11
Sample Info: SL2079-10
Instrument: gcms-w.i

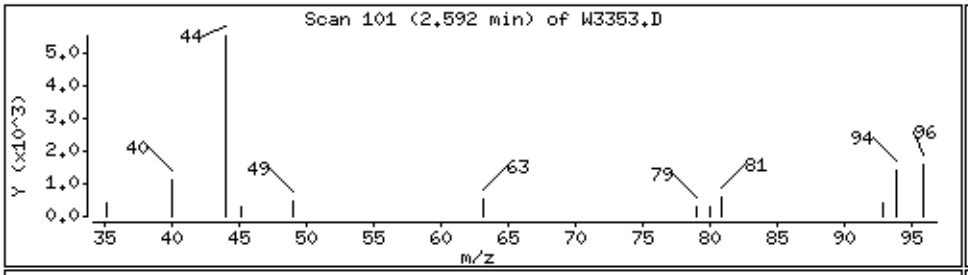
Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3353.D

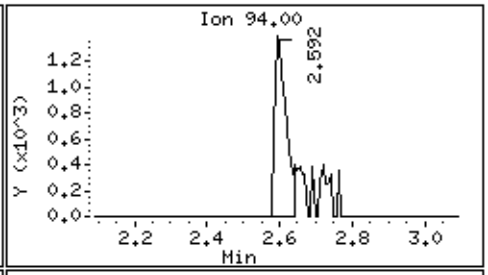
Date : 26-MAR-2018 17:01

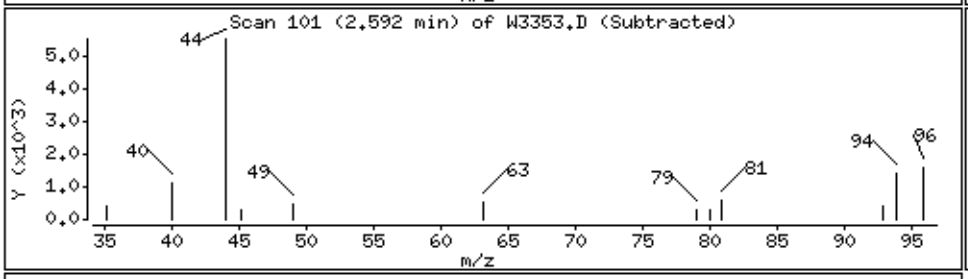
Client ID: CHAAP-BKRD-SS11 Instrument: gcms-w.i

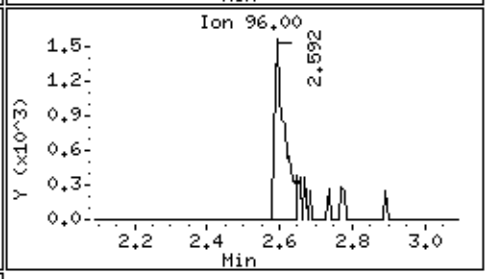
Sample Info: SL2079-10

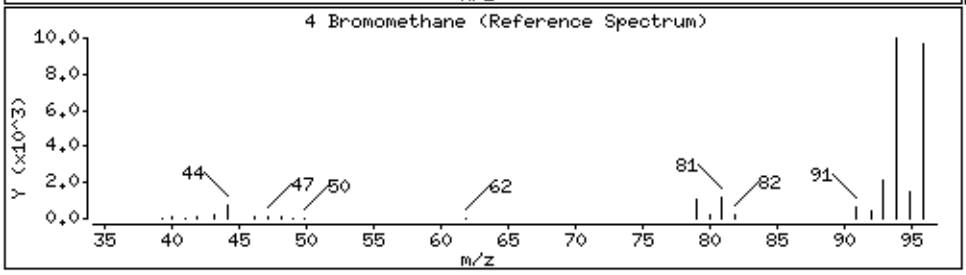
4 Bromomethane Concentration: 2.5 ug/Kgdrywt



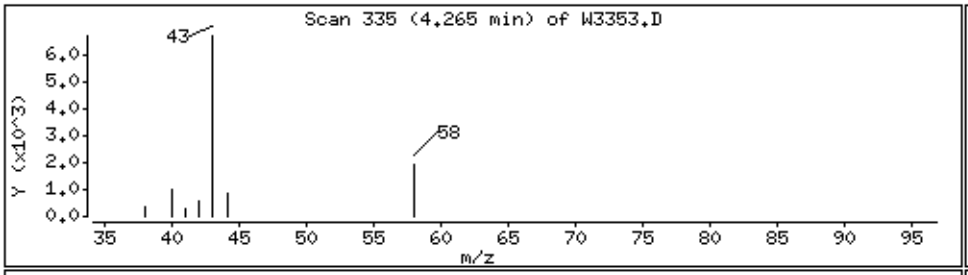


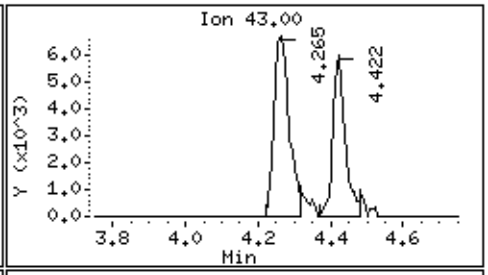


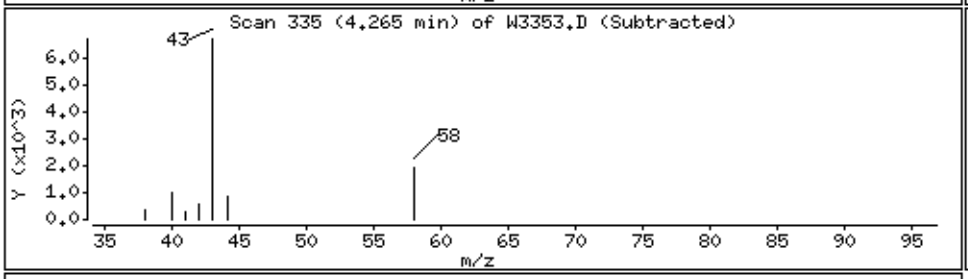


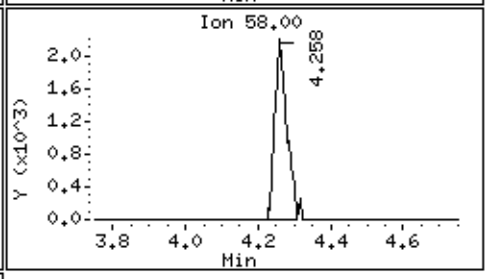


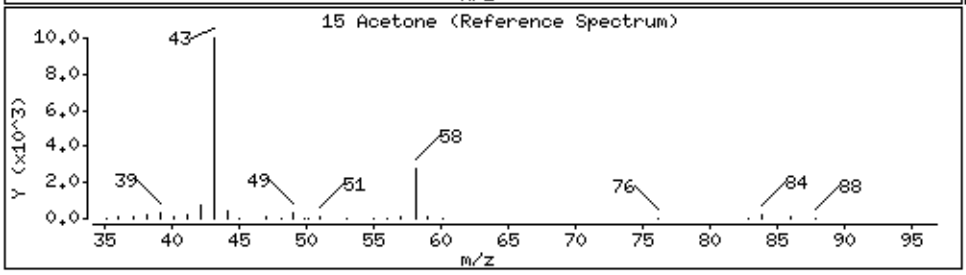
15 Acetone Concentration: 27.4 ug/Kgdrywt











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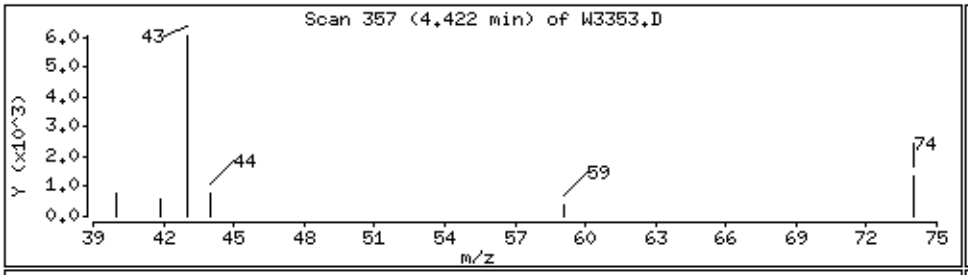
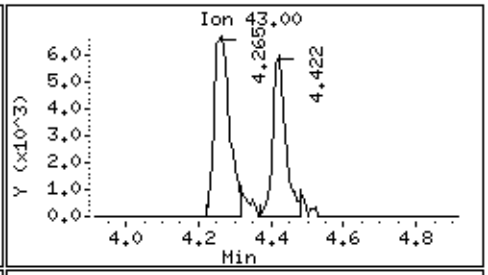
Date : 26-MAR-2018 17:01

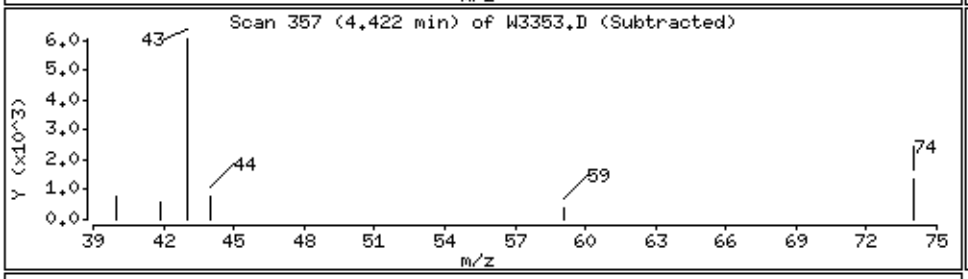
Client ID: CHAAP-BKRD-SS11 Instrument: gcms-w.i

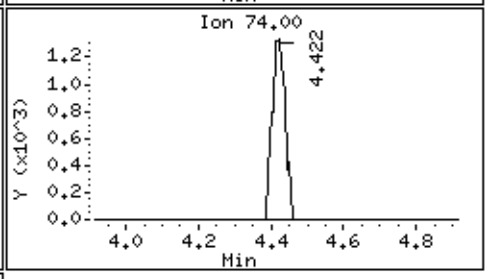
Sample Info: SL2079-10

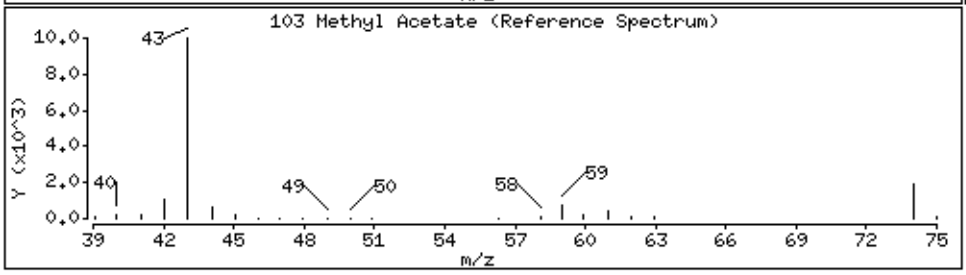
103 Methyl Acetate Concentration: 9.1 ug/Kgdrywt











Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-11
Client ID: CHAAP-BKRD-SS12
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3354.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 78.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,1,2-Tetrachloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.77	2.8
1,1,1-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.46	2.8
1,1,2,2-Tetrachloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.92	2.8
Freon-113	U	2.8	ug/Kgdrywt	1	5	5.5	0.99	2.8
1,1,2-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
1,1-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.9	2.8
1,1-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
1,1-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
1,2,3-Trichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.84	2.8
1,2,3-Trichloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.3	2.8
1,2,4-Trichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.87	2.8
1,2,4-Trimethylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.96	2.8
1,2-Dibromo-3-Chloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.6	2.8
1,2-Dibromoethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.3	2.8
1,2-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.86	2.8
1,2-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
1,2-Dichloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
1,3,5-Trimethylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.74	2.8
1,3-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.68	2.8
1,3-Dichloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
1,4-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.48	2.8
2,2-Dichloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	0.55	2.8
2-Butanone	U	14	ug/Kgdrywt	1	25	28.	6.5	14.
2-Chlorotoluene	U	2.8	ug/Kgdrywt	1	5	5.5	1.2	2.8
2-Hexanone	U	14	ug/Kgdrywt	1	25	28.	5.3	14.
4-Chlorotoluene	U	2.8	ug/Kgdrywt	1	5	5.5	0.54	2.8
P-Isopropyltoluene	U	2.8	ug/Kgdrywt	1	5	5.5	0.84	2.8
4-Methyl-2-Pentanone	U	14	ug/Kgdrywt	1	25	28.	6.5	14.
Acetone	U	14	ug/Kgdrywt	1	25	28.	5.6	14.
Benzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Bromobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.81	2.8
Bromochloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Bromodichloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.66	2.8
Bromoform	U	2.8	ug/Kgdrywt	1	5	5.5	0.77	2.8
Bromomethane	U	5.5	ug/Kgdrywt	1	10	11.	1.2	5.5

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Lab ID: SL2079-11
Client ID: CHAAP-BKRD-SS12
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3354.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 78.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Carbon Disulfide	U	2.8	ug/Kgdrywt	1	5	5.5	0.86	2.8
Carbon Tetrachloride	U	2.8	ug/Kgdrywt	1	5	5.5	1.4	2.8
Chlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8
Dibromochloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	7.7	2.8
Chloroethane	U	5.5	ug/Kgdrywt	1	10	11.	1.4	5.5
Chloroform	U	2.8	ug/Kgdrywt	1	5	5.5	0.38	2.8
Chloromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.5	5.5
cis-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
cis-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.79	2.8
Dibromomethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8
Dichlorodifluoromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
Ethylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.72	2.8
Hexachlorobutadiene	U	2.8	ug/Kgdrywt	1	5	5.5	0.81	2.8
Isopropylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
m+p-Xylenes	U	5.5	ug/Kgdrywt	1	10	11.	1.9	5.5
Methyl tert-butyl Ether	U	2.8	ug/Kgdrywt	1	5	5.5	1.2	2.8
Methylene Chloride	U	14	ug/Kgdrywt	1	25	28.	8.7	14.
N-Butylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
N-Propylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.91	2.8
Naphthalene	U	2.8	ug/Kgdrywt	1	5	5.5	0.97	2.8
o-Xylene	U	2.8	ug/Kgdrywt	1	5	5.5	1.4	2.8
sec-Butylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Styrene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8
tert-Butylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.99	2.8
Tetrachloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.3	2.8
Toluene	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
trans-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.78	2.8
trans-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.95	2.8
Trichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.65	2.8
Trichlorofluoromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
Vinyl Chloride	U	5.5	ug/Kgdrywt	1	10	11.	0.96	5.5
1,2-Dichloroethane-D4		120.	%					
p-Bromofluorobenzene		83.2	%					
Dibromofluoromethane		115.	%					
Toluene-D8		101.	%					

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Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3354.D
Report Date: 28-Mar-2018 13:35

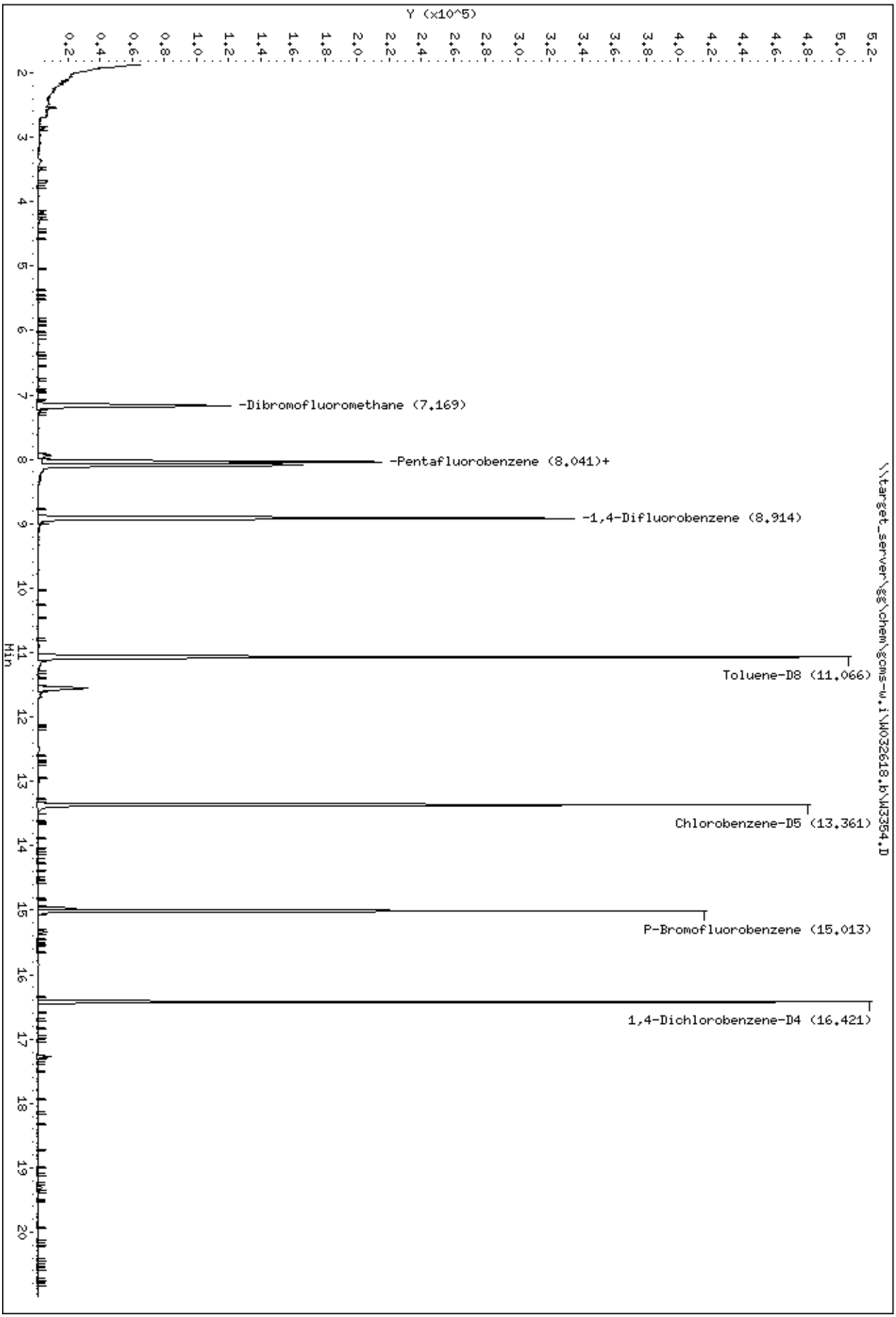
Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W032618.b\W3354.D
Lab Smp Id: SL2079-11 Client Smp ID: CHAAP-BKRD-SS12
Inj Date : 26-MAR-2018 17:38 MS Autotune Date: 10-APR-2016 11:00
Operator : HG/JSS Inst ID: gcms-w.i
Smp Info : SL2079-11
Misc Info : WG225400,WG225400-4
Comment : SW846 5035
Method : \\target_server\gg\chem\gcms-w.i\W032618.b\W8SDI(08)D.m
Meth Date : 28-Mar-2018 13:21 gcms-w.i Quant Type: ISTD
Cal Date : 26-MAR-2018 13:19 Cal File: W3347.D
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: MIS_GUEST

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	21.451	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	5.820	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/kg)	FINAL (ug/Kgdrywt)	REVIEW COD
$ 37 Dibromofluoromethane	113	7.169	7.167	(0.892)	90451	57.4978	62.9	
* 42 Pentafluorobenzene	168	8.041	8.039	(1.000)	135975	50.0000		
$ 45 1,2-Dichloroethane-D4	65	8.091	8.089	(1.006)	152363	59.8298	65.4	
* 49 1,4-Difluorobenzene	114	8.913	8.912	(1.000)	256852	50.0000		
$ 55 Toluene-D8	98	11.065	11.064	(1.241)	332166	50.3962	55.1	
* 66 Chlorobenzene-D5	117	13.361	13.366	(1.000)	224973	50.0000		
$ 76 P-Bromofluorobenzene	95	15.012	15.011	(1.684)	126268	41.5755	45.5	
* 91 1,4-Dichlorobenzene-D4	152	16.421	16.425	(1.000)	95988	50.0000		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Date : 26-MAR-2018 17:38
Client ID: CHAAP-BKRD-SS12
Sample Info: SL2079-11
Instrument: gcms-w.i
Y (x10^5)
Min
-Dibromofluoromethane (7.169)
-Pentafluorobenzene (8.041)+
-1,4-Difluorobenzene (8.914)
Toluene-D8 (11.066)
Chlorobenzene-D5 (13.361)
P-Bromofluorobenzene (15.013)
1,4-Dichlorobenzene-D4 (16.421)
\\target_server\gg\chem\gcms-w.i\W032618.b\W3354.D

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-12
Client ID: CHAAP-BKRD-SS13
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3355.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 78.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,1,2-Tetrachloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	0.91	3.2
1,1,1-Trichloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	0.55	3.2
1,1,2,2-Tetrachloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.1	3.2
Freon-113	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
1,1,2-Trichloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.3	3.2
1,1-Dichloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	2.2	3.2
1,1-Dichloroethene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
1,1-Dichloropropene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
1,2,3-Trichlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	0.99	3.2
1,2,3-Trichloropropane	U	3.2	ug/Kgdrywt	1	5	6.5	1.6	3.2
1,2,4-Trichlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.0	3.2
1,2,4-Trimethylbenzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.1	3.2
1,2-Dibromo-3-Chloropropane	U	3.2	ug/Kgdrywt	1	5	6.5	2.0	3.2
1,2-Dibromoethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.6	3.2
1,2-Dichlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.0	3.2
1,2-Dichloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.3	3.2
1,2-Dichloropropane	U	3.2	ug/Kgdrywt	1	5	6.5	1.8	3.2
1,3,5-Trimethylbenzene	U	3.2	ug/Kgdrywt	1	5	6.5	0.87	3.2
1,3-Dichlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	0.81	3.2
1,3-Dichloropropane	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
1,4-Dichlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	0.57	3.2
2,2-Dichloropropane	U	3.2	ug/Kgdrywt	1	5	6.5	0.65	3.2
2-Butanone	U	16	ug/Kgdrywt	1	25	32.	7.7	16.
2-Chlorotoluene	U	3.2	ug/Kgdrywt	1	5	6.5	1.4	3.2
2-Hexanone	U	16	ug/Kgdrywt	1	25	32.	6.2	16.
4-Chlorotoluene	U	3.2	ug/Kgdrywt	1	5	6.5	0.64	3.2
P-Isopropyltoluene	U	3.2	ug/Kgdrywt	1	5	6.5	0.99	3.2
4-Methyl-2-Pentanone	U	16	ug/Kgdrywt	1	25	32.	7.7	16.
Acetone	U	16	ug/Kgdrywt	1	25	32.	6.6	16.
Benzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
Bromobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	0.96	3.2
Bromochloromethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
Bromodichloromethane	U	3.2	ug/Kgdrywt	1	5	6.5	0.78	3.2
Bromoform	U	3.2	ug/Kgdrywt	1	5	6.5	0.91	3.2
Bromomethane	U	6.5	ug/Kgdrywt	1	10	13.	1.4	6.5

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-12
Client ID: CHAAP-BKRD-SS13
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3355.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 78.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Carbon Disulfide	U	3.2	ug/Kgdrywt	1	5	6.5	1.0	3.2
Carbon Tetrachloride	U	3.2	ug/Kgdrywt	1	5	6.5	1.7	3.2
Chlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	0.66	3.2
Dibromochloromethane	U	3.2	ug/Kgdrywt	1	5	6.5	9.1	3.2
Chloroethane	U	6.5	ug/Kgdrywt	1	10	13.	1.7	6.5
Chloroform	U	3.2	ug/Kgdrywt	1	5	6.5	0.46	3.2
Chloromethane	U	6.5	ug/Kgdrywt	1	10	13.	1.8	6.5
cis-1,2-Dichloroethene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
cis-1,3-Dichloropropene	U	3.2	ug/Kgdrywt	1	5	6.5	0.94	3.2
Dibromomethane	U	3.2	ug/Kgdrywt	1	5	6.5	0.66	3.2
Dichlorodifluoromethane	U	6.5	ug/Kgdrywt	1	10	13.	1.2	6.5
Ethylbenzene	U	3.2	ug/Kgdrywt	1	5	6.5	0.84	3.2
Hexachlorobutadiene	U	3.2	ug/Kgdrywt	1	5	6.5	0.96	3.2
Isopropylbenzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
m+p-Xylenes	U	6.5	ug/Kgdrywt	1	10	13.	2.2	6.5
Methyl tert-butyl Ether	U	3.2	ug/Kgdrywt	1	5	6.5	1.4	3.2
Methylene Chloride	U	16	ug/Kgdrywt	1	25	32.	10.	16.
N-Butylbenzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
N-Propylbenzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.1	3.2
Naphthalene	U	3.2	ug/Kgdrywt	1	5	6.5	1.1	3.2
o-Xylene	U	3.2	ug/Kgdrywt	1	5	6.5	1.7	3.2
sec-Butylbenzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
Styrene	U	3.2	ug/Kgdrywt	1	5	6.5	0.66	3.2
tert-Butylbenzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
Tetrachloroethene	U	3.2	ug/Kgdrywt	1	5	6.5	1.6	3.2
Toluene	U	3.2	ug/Kgdrywt	1	5	6.5	1.8	3.2
trans-1,2-Dichloroethene	U	3.2	ug/Kgdrywt	1	5	6.5	0.92	3.2
trans-1,3-Dichloropropene	U	3.2	ug/Kgdrywt	1	5	6.5	1.1	3.2
Trichloroethene	U	3.2	ug/Kgdrywt	1	5	6.5	0.77	3.2
Trichlorofluoromethane	U	6.5	ug/Kgdrywt	1	10	13.	1.2	6.5
Vinyl Chloride	U	6.5	ug/Kgdrywt	1	10	13.	1.1	6.5
1,2-Dichloroethane-D4		120.	%					
p-Bromofluorobenzene		85.0	%					
Dibromofluoromethane		116.	%					
Toluene-D8		98.7	%					

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Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3355.D
Report Date: 28-Mar-2018 13:35

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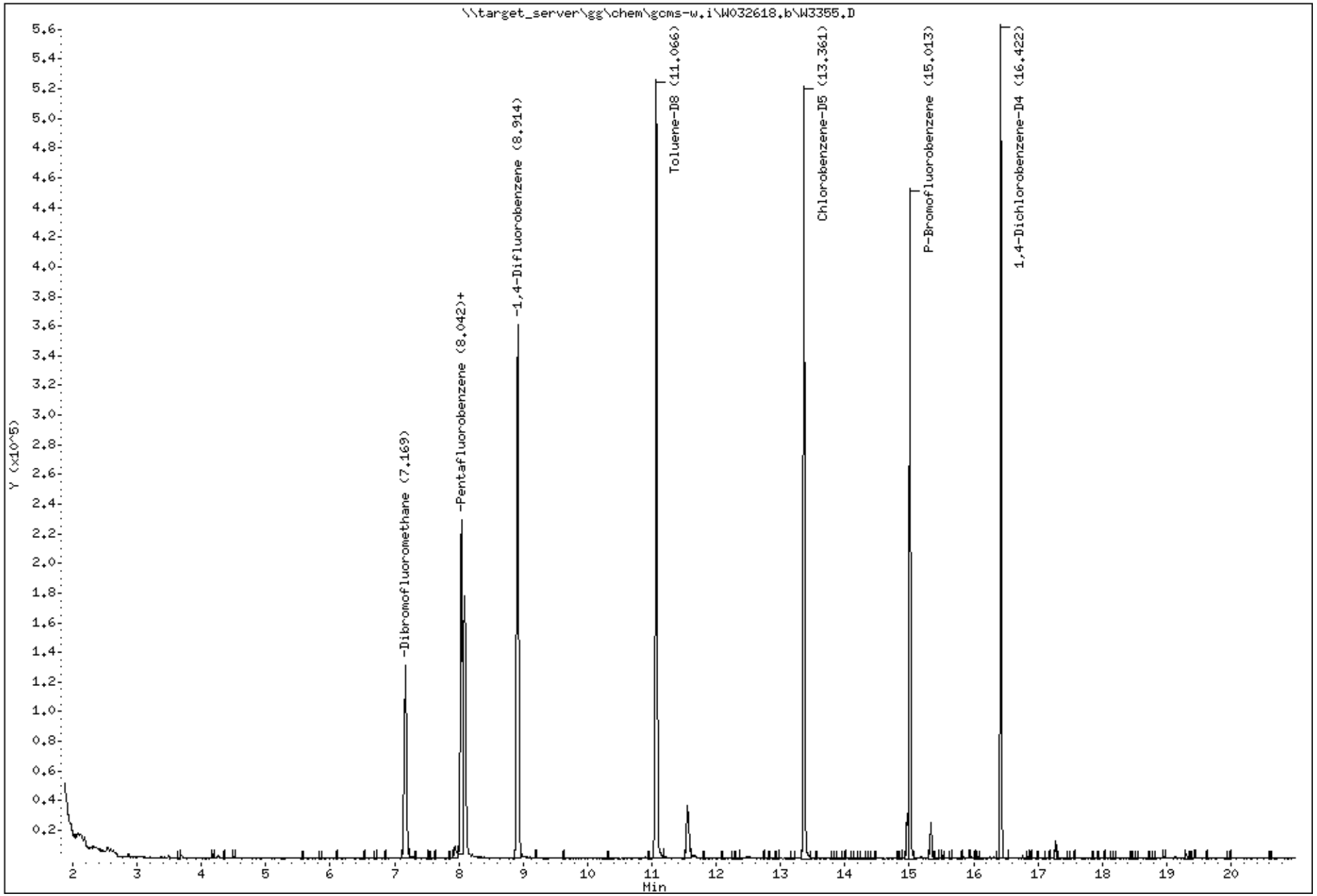
Data file : \\target_server\gg\chem\gcms-w.i\W032618.b\W3355.D
Lab Smp Id: SL2079-12 Client Smp ID: CHAAP-BKRD-SS13
Inj Date : 26-MAR-2018 18:15 MS Autotune Date: 10-APR-2016 11:00
Operator : HG/JSS Inst ID: gcms-w.i
Smp Info : SL2079-12
Misc Info : WG225400,WG225400-4
Comment : SW846 5035
Method : \\target_server\gg\chem\gcms-w.i\W032618.b\W8SDI(08)D.m
Meth Date : 28-Mar-2018 13:21 gcms-w.i Quant Type: ISTD
Cal Date : 26-MAR-2018 13:19 Cal File: W3347.D
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: MIS_GUEST

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	22.033	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	4.970	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/kg)	FINAL (ug/Kgdrywt)	REVIEW COD
$ 37 Dibromofluoromethane	113	7.169	7.167	(0.892)	97860	58.0937	75.0	
* 42 Pentafluorobenzene	168	8.041	8.039	(1.000)	145604	50.0000		
$ 45 1,2-Dichloroethane-D4	65	8.091	8.089	(1.006)	164024	60.1494	77.6	
* 49 1,4-Difluorobenzene	114	8.914	8.912	(1.000)	277901	50.0000		
$ 55 Toluene-D8	98	11.066	11.064	(1.241)	351825	49.3358	63.6	
* 66 Chlorobenzene-D5	117	13.361	13.366	(1.000)	238062	50.0000		
$ 76 P-Bromofluorobenzene	95	15.013	15.011	(1.684)	139624	42.4910	54.8	
* 91 1,4-Dichlorobenzene-D4	152	16.421	16.425	(1.000)	100514	50.0000		

Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3355.D
Date : 26-MAR-2018 18:15
Client ID: CHAAP-BKRD-SS13
Instrument: gcms-w.i
Sample Info: SL2079-12



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Cert No E87604

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-13
Client ID: CHAAP-BKRD-SS109
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3356.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 83.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,1,2-Tetrachloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.84	3.0
1,1,1-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.50	3.0
1,1,2,2-Tetrachloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
Freon-113	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,1,2-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
1,1-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	2.0	3.0
1,1-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,1-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,2,3-Trichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.91	3.0
1,2,3-Trichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
1,2,4-Trichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.95	3.0
1,2,4-Trimethylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,2-Dibromo-3-Chloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.8	3.0
1,2-Dibromoethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
1,2-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.94	3.0
1,2-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
1,2-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
1,3,5-Trimethylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.80	3.0
1,3-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.74	3.0
1,3-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,4-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.53	3.0
2,2-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	0.60	3.0
2-Butanone	U	15	ug/Kgdrywt	1	25	30.	7.1	15.
2-Chlorotoluene	U	3.0	ug/Kgdrywt	1	5	6.0	1.3	3.0
2-Hexanone	U	15	ug/Kgdrywt	1	25	30.	5.8	15.
4-Chlorotoluene	U	3.0	ug/Kgdrywt	1	5	6.0	0.59	3.0
P-Isopropyltoluene	U	3.0	ug/Kgdrywt	1	5	6.0	0.91	3.0
4-Methyl-2-Pentanone	U	15	ug/Kgdrywt	1	25	30.	7.1	15.
Acetone	U	15	ug/Kgdrywt	1	25	30.	6.1	15.
Benzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Bromobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.89	3.0
Bromochloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Bromodichloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.72	3.0
Bromoform	U	3.0	ug/Kgdrywt	1	5	6.0	0.84	3.0
Bromomethane	U	6.0	ug/Kgdrywt	1	10	12.	1.3	6.0

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-13
Client ID: CHAAP-BKRD-SS109
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: W3356.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 83.
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Carbon Disulfide	U	3.0	ug/Kgdrywt	1	5	6.0	0.94	3.0
Carbon Tetrachloride	U	3.0	ug/Kgdrywt	1	5	6.0	1.6	3.0
Chlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
Dibromochloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	8.4	3.0
Chloroethane	U	6.0	ug/Kgdrywt	1	10	12.	1.6	6.0
Chloroform	U	3.0	ug/Kgdrywt	1	5	6.0	0.42	3.0
Chloromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.7	6.0
cis-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
cis-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	0.86	3.0
Dibromomethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
Dichlorodifluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
Ethylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.78	3.0
Hexachlorobutadiene	U	3.0	ug/Kgdrywt	1	5	6.0	0.89	3.0
Isopropylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
m+p-Xylenes	U	6.0	ug/Kgdrywt	1	10	12.	2.0	6.0
Methyl tert-butyl Ether	U	3.0	ug/Kgdrywt	1	5	6.0	1.3	3.0
Methylene Chloride	U	15	ug/Kgdrywt	1	25	30.	9.5	15.
N-Butylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
N-Propylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
Naphthalene	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
o-Xylene	U	3.0	ug/Kgdrywt	1	5	6.0	1.6	3.0
sec-Butylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Styrene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
tert-Butylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Tetrachloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
Toluene	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
trans-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.85	3.0
trans-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
Trichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.71	3.0
Trichlorofluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
Vinyl Chloride	U	6.0	ug/Kgdrywt	1	10	12.	1.0	6.0
1,2-Dichloroethane-D4		125.	%					
p-Bromofluorobenzene		98.2	%					
Dibromofluoromethane		117.	%					
Toluene-D8		102.	%					

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Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3356.D
Report Date: 28-Mar-2018 13:35

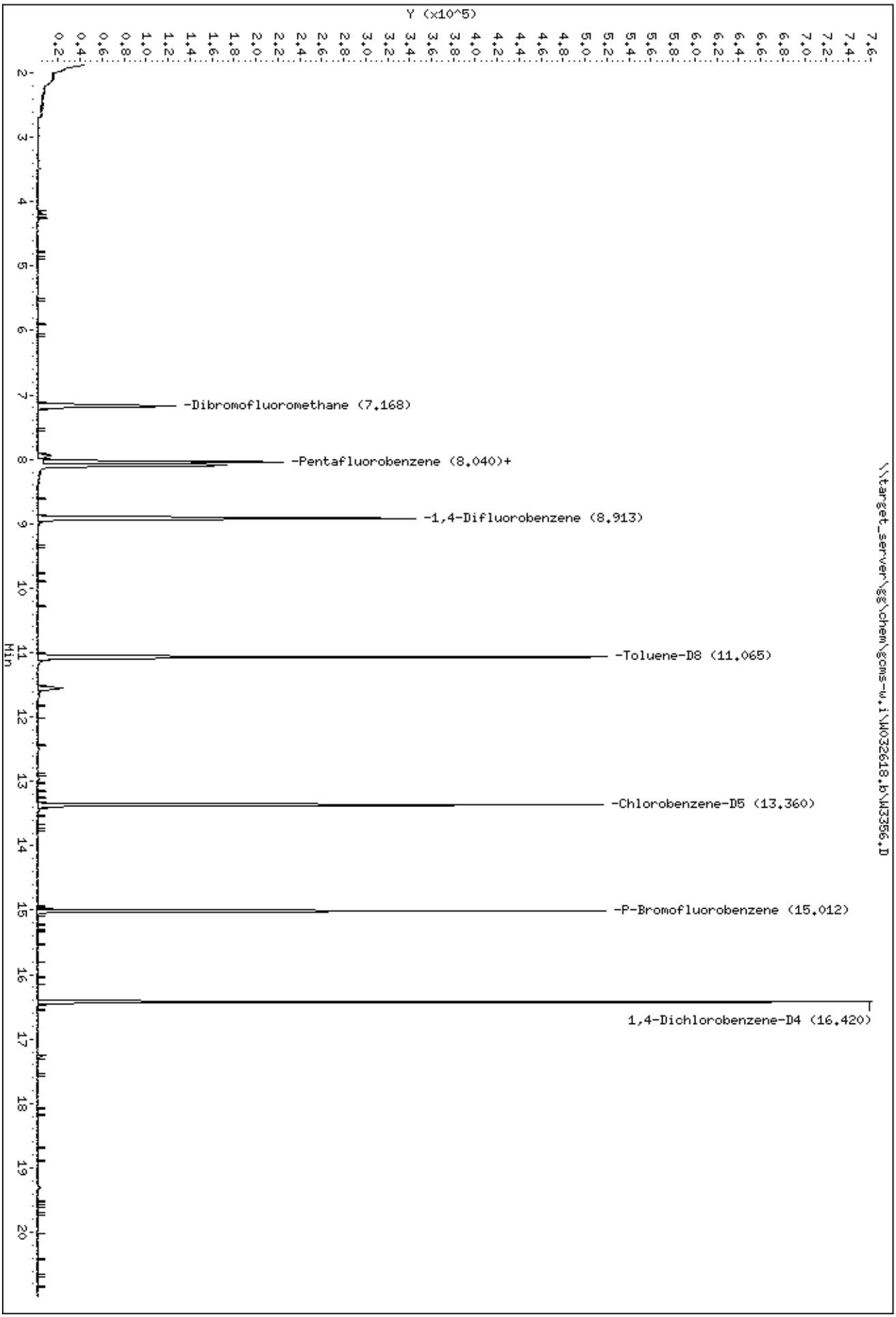
Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W032618.b\W3356.D
Lab Smp Id: SL2079-13 Client Smp ID: CHAAP-BKRD-SS109
Inj Date : 26-MAR-2018 18:52 MS Autotune Date: 10-APR-2016 11:00
Operator : HG/JSS Inst ID: gcms-w.i
Smp Info : SL2079-13
Misc Info : WG225400,WG225400-4
Comment : SW846 5035
Method : \\target_server\gg\chem\gcms-w.i\W032618.b\W8SDI(08)D.m
Meth Date : 28-Mar-2018 13:21 gcms-w.i Quant Type: ISTD
Cal Date : 26-MAR-2018 13:19 Cal File: W3347.D
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: MIS_GUEST

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	17.091	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	5.210	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/kg)	FINAL (ug/Kgdrywt)	REVIEW COD
$ 37 Dibromofluoromethane	113	7.168	7.167	(0.892)	93797	58.5390	67.8	
* 42 Pentafluorobenzene	168	8.040	8.039	(1.000)	138497	50.0000		
$ 45 1,2-Dichloroethane-D4	65	8.090	8.089	(1.006)	162533	62.6612	72.5	
* 49 1,4-Difluorobenzene	114	8.912	8.912	(1.000)	261630	50.0000		
$ 55 Toluene-D8	98	11.064	11.064	(1.241)	342975	51.0858	59.1	
* 66 Chlorobenzene-D5	117	13.360	13.366	(1.000)	245321	50.0000		
$ 76 P-Bromofluorobenzene	95	15.011	15.011	(1.684)	151845	49.0840	56.8	
* 91 1,4-Dichlorobenzene-D4	152	16.420	16.425	(1.000)	135409	50.0000		



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Date : 26-MAR-2018 18:52
Client ID: CHAAP-BKRD-SS109
Sample Info: SL2079-13

Instrument: gcms-w.i

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-14
Client ID: CHAAP-BKRD-EB-031418
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: P4883.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 23-MAR-18
Extracted By: hg
Extraction Method: SW846 5030
Lab Prep Batch: WG225300

Analysis Date: 23-MAR-18
Analyst: hg
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,1,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.19	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
1,1-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.21	0.50
1,2,3-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.27	0.50
1,2,3-Trichloropropane	U	0.50	ug/L	1	1	1.0	0.19	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
1,2,4-Trimethylbenzene	U	0.50	ug/L	1	1	1.0	0.19	0.50
1,2-Dibromo-3-Chloropropane	U	0.50	ug/L	1	1	1.0	0.50	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,3,5-Trimethylbenzene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,3-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
2,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
2-Chlorotoluene	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
4-Chlorotoluene	U	0.50	ug/L	1	1	1.0	0.26	0.50
P-Isopropyltoluene	U	0.50	ug/L	1	1	1.0	0.25	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
Bromobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-14
Client ID: CHAAP-BKRD-EB-031418
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: P4883.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 23-MAR-18
Extracted By: hg
Extraction Method: SW846 5030
Lab Prep Batch: WG225300

Analysis Date: 23-MAR-18
Analyst: hg
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Bromochloromethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Dibromomethane	U	0.50	ug/L	1	1	1.0	0.46	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
Hexachlorobutadiene	U	0.75	ug/L	1	1	1.0	0.52	0.75
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
m+p-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
Naphthalene	U	0.50	ug/L	1	1	1.0	0.30	0.50
N-Butylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
N-Propylbenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
sec-Butylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
tert-Butylbenzene	U	0.50	ug/L	1	1	1.0	0.31	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Dibromofluoromethane		106.	%					
1,2-Dichloroethane-d4		107.	%					
Toluene-d8		95.7	%					
P-Bromofluorobenzene	*	79.9	%					

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Data File: \\target_server\gg\chem\gcms-p.i\P032318.b\P4883.D
Report Date: 28-Mar-2018 12:33

Katahdin Analytical Services

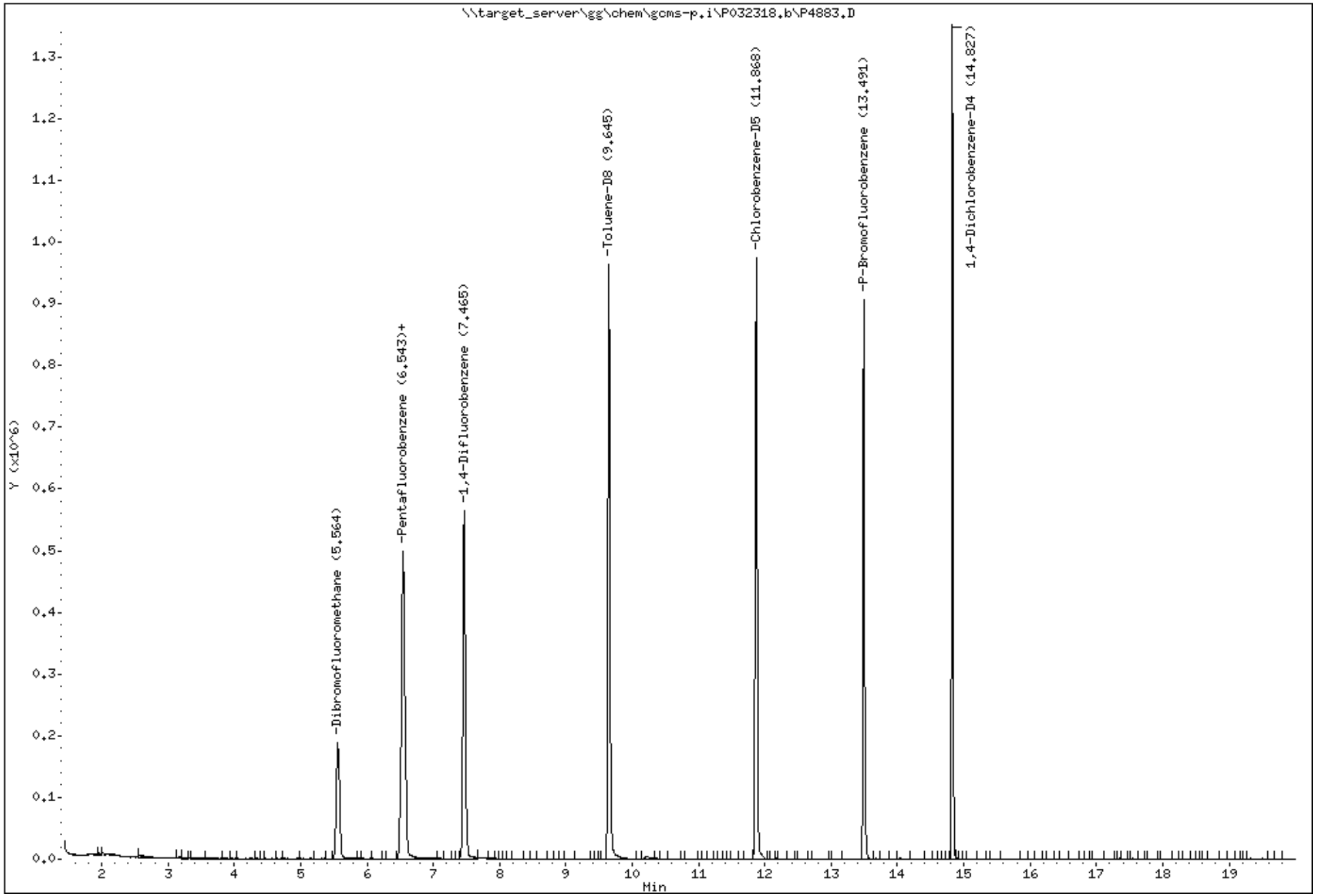
Data file : \\target_server\gg\chem\gcms-p.i\P032318.b\P4883.D
Lab Smp Id: SL2079-14 Client Smp ID: HAAP-BKRD-EB-031418
Inj Date : 23-MAR-2018 10:25 MS Autotune Date: 24-JAN-2018 13:57
Operator : hg Inst ID: gcms-p.i
Smp Info : SL2079-14
Misc Info : WG225300,WG225041-4
Comment : SW846 5030
Method : \\target_server\gg\chem\gcms-p.i\P032318.b\P8A05(62)D.m
Meth Date : 28-Mar-2018 12:29 tcote Quant Type: ISTD
Cal Date : 19-MAR-2018 18:17 Cal File: P4810.D
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: MIS_GUEST

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)	REVIEW CODE
$	34 Dibromofluoromethane	113	5.556	5.561	(0.850)	195440	52.9268	52.9	
*	41 Pentafluorobenzene	168	6.535	6.533	(1.000)	375772	50.0000		
$	42 1,2-Dichloroethane-D4	65	6.557	6.562	(1.003)	280618	53.6090	53.6	
*	48 1,4-Difluorobenzene	114	7.464	7.463	(1.000)	659855	50.0000		
$	58 Toluene-D8	98	9.645	9.650	(1.292)	800350	47.8521	47.8	
*	68 Chlorobenzene-D5	117	11.868	11.873	(1.000)	630798	50.0000		
$	78 P-Bromofluorobenzene	95	13.490	13.488	(1.807)	290670	39.9311	39.9	
*	94 1,4-Dichlorobenzene-D4	152	14.827	14.825	(1.000)	321309	50.0000		

Data File: \\target_server\gg\chem\gcms-p.i\P032318.b\P4883.D
Date : 23-MAR-2018 10:25
Client ID: HAAP-BKRD-EB-031418 Instrument: gcms-p.i
Sample Info: SL2079-14



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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-15
Client ID: CHAAP-BKRD-TB-031418
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: P4884.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 23-MAR-18
Extracted By: hg
Extraction Method: SW846 5030
Lab Prep Batch: WG225300

Analysis Date: 23-MAR-18
Analyst: hg
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,1,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.19	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
1,1-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.21	0.50
1,2,3-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.27	0.50
1,2,3-Trichloropropane	U	0.50	ug/L	1	1	1.0	0.19	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
1,2,4-Trimethylbenzene	U	0.50	ug/L	1	1	1.0	0.19	0.50
1,2-Dibromo-3-Chloropropane	U	0.50	ug/L	1	1	1.0	0.50	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,3,5-Trimethylbenzene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,3-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
2,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
2-Chlorotoluene	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
4-Chlorotoluene	U	0.50	ug/L	1	1	1.0	0.26	0.50
P-Isopropyltoluene	U	0.50	ug/L	1	1	1.0	0.25	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
Bromobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-15
Client ID: CHAAP-BKRD-TB-031418
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: P4884.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 23-MAR-18
Extracted By: hg
Extraction Method: SW846 5030
Lab Prep Batch: WG225300

Analysis Date: 23-MAR-18
Analyst: hg
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Bromochloromethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Dibromomethane	U	0.50	ug/L	1	1	1.0	0.46	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
Hexachlorobutadiene	U	0.75	ug/L	1	1	1.0	0.52	0.75
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
m+p-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
Naphthalene	U	0.50	ug/L	1	1	1.0	0.30	0.50
N-Butylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
N-Propylbenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
sec-Butylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
tert-Butylbenzene	U	0.50	ug/L	1	1	1.0	0.31	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Dibromofluoromethane		107.	%					
1,2-Dichloroethane-d4		109.	%					
Toluene-d8		97.3	%					
P-Bromofluorobenzene	*	82.7	%					

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

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Data File: \\target_server\gg\chem\gcms-p.i\P032318.b\P4884.D
Report Date: 28-Mar-2018 12:33

Katahdin Analytical Services

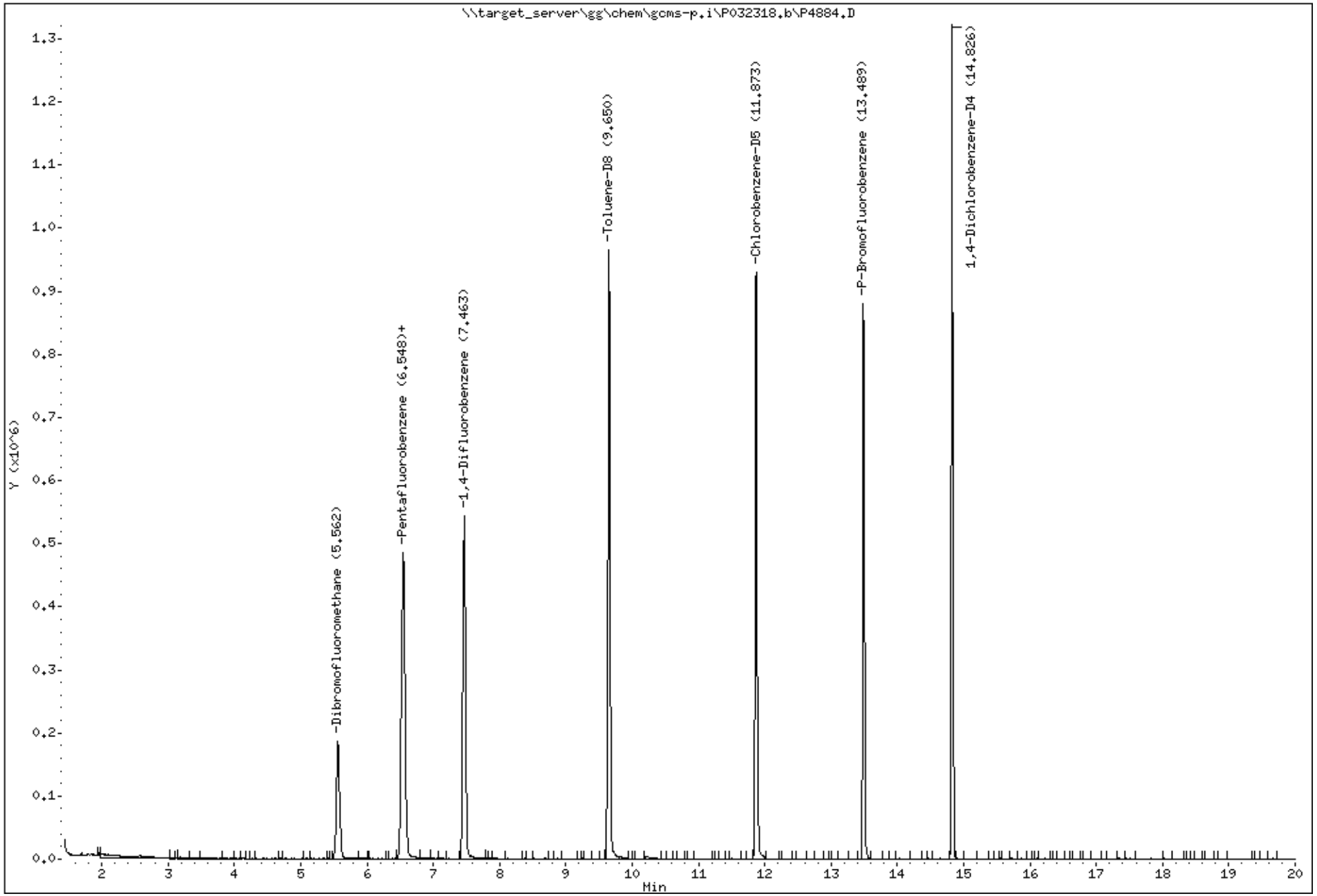
Data file : \\target_server\gg\chem\gcms-p.i\P032318.b\P4884.D
Lab Smp Id: SL2079-15 Client Smp ID: HAAP-BKRD-TB-031418
Inj Date : 23-MAR-2018 11:00 MS Autotune Date: 24-JAN-2018 13:57
Operator : hg Inst ID: gcms-p.i
Smp Info : SL2079-15
Misc Info : WG225300,WG225041-4
Comment : SW846 5030
Method : \\target_server\gg\chem\gcms-p.i\P032318.b\P8A05(62)D.m
Meth Date : 28-Mar-2018 12:29 tcote Quant Type: ISTD
Cal Date : 19-MAR-2018 18:17 Cal File: P4810.D
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: MIS_GUEST

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)	REVIEW CODE
$	34 Dibromofluoromethane	113	5.561	5.561	(0.851)	191774	53.4885	53.5	
*	41 Pentafluorobenzene	168	6.533	6.533	(1.000)	364851	50.0000		
$	42 1,2-Dichloroethane-D4	65	6.562	6.562	(1.004)	276169	54.3383	54.3	
*	48 1,4-Difluorobenzene	114	7.463	7.463	(1.000)	645313	50.0000		
$	58 Toluene-D8	98	9.650	9.650	(1.293)	795975	48.6630	48.7	
*	68 Chlorobenzene-D5	117	11.873	11.873	(1.000)	609305	50.0000		
$	78 P-Bromofluorobenzene	95	13.488	13.488	(1.807)	294274	41.3372	41.3	
*	94 1,4-Dichlorobenzene-D4	152	14.825	14.825	(1.000)	314551	50.0000		

Data File: \\target_server\gg\chem\gcms-p.i\P032318.b\P4884.D
Date : 23-MAR-2018 11:00
Client ID: HAAP-BKRD-TB-031418 Instrument: gcms-p.i
Sample Info: SL2079-15



Katahdin Analytical Services 1000086

Standards Data Section

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL2079
Project : Cornhusker Army Ammunition Plant
Instrument ID: GCMS-P
Lab File IDs : P4809.D P4808.D P4807.D P4806.D P4811.D P4810.D
Column ID:
Calibration Date(s): 19-MAR-18 16:00 19-MAR-18 18:51

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Crv					Max	
	1.0000	5.0000	20.0000	50.0000	100.0000	150.0000	New	b	m1	m2	%RSD	%RSD	
Dichlorodifluoromethane	0.39326	0.39750	0.44648	0.41815	0.40532	0.40170	AVG		0.41040		4.77953	15.00000	O
Chloromethane	0.63263	0.59022	0.59482	0.57054	0.56254	0.56069	AVG		0.58524		4.64578	15.00000	O
Vinyl chloride	0.61848	0.61810	0.62897	0.62243	0.59506	0.59924	AVG		0.61371		2.19532	15.00000	O
Bromomethane	0.31515	0.29147	0.25952	0.23756	0.26584	0.26279	AVG		0.27205		10.00749	15.00000	O
Chloroethane	0.43041	0.38739	0.40842	0.39496	0.34743	0.38482	AVG		0.39224		7.04026	15.00000	O
Trichlorofluoromethane	0.85868	0.80317	0.87209	0.85673	0.80880	0.84944	AVG		0.84149		3.38813	15.00000	O
1,1-Dichloroethene	0.29383	0.40410	0.38288	0.41217	0.38374	0.40667	AVG		0.38056		11.61673	15.00000	O
Freon-113	0.28592	0.27520	0.27511	0.29442	0.27998	0.29200	AVG		0.28377		2.94177	15.00000	O
Carbon Disulfide	1.11508	1.30874	1.27771	1.38711	1.31708	1.37408	AVG		1.29664		7.56179	15.00000	O
Methylene Chloride	7357	30384	111266	273005	568786	819335	LNR	-0.00908	0.46169		0.99998	0.99000	O
Acetone	0.13254	0.13842	0.13226	0.13239	0.12890	0.12404	AVG		0.13142		3.61240	15.00000	O
trans-1,2-Dichloroethene	0.33023	0.41605	0.41707	0.43881	0.43246	0.44349	AVG		0.41302		10.18667	15.00000	O
Methyl Acetate	0.38321	0.34653	0.36476	0.31686	0.42057	0.40932	AVG		0.37354		10.44008	15.00000	O
Methyl tert-butyl ether	0.84472	1.14369	1.23635	1.24948	1.34812	1.31904	AVG		1.19023		15.43296	15.00000	WC
1,1-Dichloroethane	0.58924	0.79728	0.76707	0.81314	0.81885	0.83086	AVG		0.76941		11.82316	15.00000	O
cis-1,2-Dichloroethene	3143	25601	106453	273456	577626	838953	LNR	0.00891	0.47440		0.99996	0.99000	O
2,2-Dichloropropane	0.39317	0.52075	0.52570	0.57521	0.54266	0.58234	AVG		0.52330		13.10109	15.00000	O
Bromochloromethane	1431	12205	49779	125915	229318	341318	LNR	-0.02192	0.19129		0.99798	0.99000	O
Cyclohexane	4762	35717	159738	442638	900807	1375358	LNR	0.02389	0.77137		0.99894	0.99000	O
Chloroform	0.58226	0.74887	0.74428	0.76783	0.77254	0.78144	AVG		0.73287		10.25180	15.00000	O
Carbon Tetrachloride	0.23320	0.30452	0.29386	0.31805	0.32669	0.33539	AVG		0.30195		12.20296	15.00000	O
1,1,1-Trichloroethane	0.45816	0.65677	0.64711	0.68790	0.67151	0.68569	AVG		0.63452		13.84613	15.00000	O
2-Butanone	0.14816	0.21130	0.21895	0.22890	0.23484	0.23359	AVG		0.21262		15.44920	15.00000	WC
1,1-Dichloropropene	0.23932	0.34012	0.34331	0.36363	0.36439	0.38317	AVG		0.33899		15.13356	15.00000	WC
Benzene	0.78992	1.04722	1.04422	1.07023	1.09292	1.08133	AVG		1.02097		11.24125	15.00000	O
1,2-Dichloroethane	0.37714	0.40069	0.37208	0.36820	0.38933	0.39489	AVG		0.38372		3.42534	15.00000	O
Methylcyclohexane	5259	32409	158250	433319	938512	1397126	LNR	0.03074	0.78913		0.99936	0.99000	O
Trichloroethene	0.18169	0.24404	0.24593	0.25340	0.25888	0.26778	AVG		0.24195		12.71974	15.00000	O
Dibromomethane	1859	14896	62638	159976	347438	519675	LNR	0.02701	0.17197		0.99908	0.99000	O
1,2-Dichloropropane	0.19085	0.25360	0.26508	0.26714	0.28271	0.28700	AVG		0.25773		13.56796	15.00000	O
Bromodichloromethane	0.23601	0.31515	0.32617	0.33968	0.36250	0.37477	AVG		0.32571		15.11162	15.00000	WC
cis-1,3-dichloropropene	4306	37640	178493	484214	1040076	1560847	LNR	0.03393	0.51765		0.99910	0.99000	O
Toluene	0.53111	0.66431	0.64959	0.69108	0.70738	0.73084	AVG		0.66239		10.66141	15.00000	O
Tetrachloroethene	0.16318	0.18027	0.17536	0.18470	0.18289	0.19003	AVG		0.17941		5.18797	15.00000	O
4-methyl-2-pentanone	12745	123446	583655	1557305	3448173	5048920	LNR	0.16264	0.33686		0.99925	0.99000	O
trans-1,3-Dichloropropene	4225	34284	158881	437791	964476	1463346	LNR	0.04349	0.48485		0.99831	0.99000	O
1,1,2-Trichloroethane	2442	19200	80731	212526	453419	680134	LNR	0.02659	0.22502		0.99920	0.99000	O

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL2079
Project : Cornhusker Army Ammunition Plant
Instrument ID: GCMS-P
Lab File IDs : P4809.D P4808.D P4807.D P4806.D P4811.D P4810.D
Column ID:
Calibration Date(s): 19-MAR-18 16:00 19-MAR-18 18:51

Dibromochloromethane	2759	21679	96816	260045	575976	873738	LNR	0.02953	0.25980		0.99931	0.99000	O
1,3-Dichloropropane	0.31081	0.43815	0.44939	0.46734	0.47620	0.47626	AVG		0.43636		14.52064	15.00000	O
1,2-Dibromoethane	2865	22370	96392	256603	557288	831807	LNR	0.03086	0.27584		0.99910	0.99000	O
2-Hexanone	7169	76868	385212	1068792	2356981	3488947	LNR	0.13889	0.20909		0.99964	0.99000	O
Chlorobenzene	0.59484	0.71409	0.70023	0.71270	0.71986	0.73963	AVG		0.69689		7.40770	15.00000	O
Ethylbenzene	4883	36679	156073	425787	903630	1396948	LNR	0.02548	0.41316		0.99921	0.99000	O
1,1,1,2-Tetrachloroethane	0.16968	0.22330	0.23344	0.24674	0.25380	0.26526	AVG		0.23203		14.62886	15.00000	O
m+p-Xylenes	10731	87426	390236	1079323	2306445	3512534	LNR	0.05060	0.52168		0.99954	0.99000	O
o-Xylene	4276	37776	183701	506796	1079294	1635274	LNR	0.02481	0.48660		0.99968	0.99000	O
Styrene	5896	61441	307786	871381	1928413	2945626	LNR	0.03883	0.87717		0.99909	0.99000	O
Bromoform	1537	13226	63004	179890	416610	630831	LNR	0.04583	0.18847		0.99851	0.99000	O
Isopropylbenzene	9742	93275	441106	1246776	2599648	3939388	LNR	0.01838	2.14066		0.99975	0.99000	O
Bromobenzene	0.40122	0.50516	0.52378	0.53158	0.53388	0.54282	AVG		0.50641		10.47934	15.00000	O
N-Propylbenzene	1.67898	2.36812	2.50666	2.66684	2.61230	2.59814	AVG		2.40517		15.41862	15.00000	WC
1,1,2,2-Tetrachloroethane	0.44697	0.59886	0.60532	0.61691	0.63716	0.64056	AVG		0.59097		12.26519	15.00000	O
2-Chlorotoluene	1.02815	1.36918	1.50646	1.56597	1.57417	1.60259	AVG		1.44109		15.18249	15.00000	WC
1,2,3-Trichloropropane	0.39434	0.54735	0.54579	0.56253	0.59356	0.60413	AVG		0.54128		14.01749	15.00000	O
1,3,5-Trimethylbenzene	8907	81328	379779	1068997	2293197	3474073	LNR	0.02402	1.88883		0.99966	0.99000	O
4-Chlorotoluene	10824	84442	365152	990332	2097332	3147615	LNR	0.01257	1.71035		0.99990	0.99000	O
tert-Butylbenzene	9422	79038	374433	1064207	2302266	3511430	LNR	0.02884	1.90761		0.99944	0.99000	O
1,2,4-Trimethylbenzene	8467	86614	402303	1113908	2381876	3569647	LNR	0.01880	1.94425		0.99986	0.99000	O
sec-Butylbenzene	11786	104273	463527	1312829	2737973	4141257	LNR	0.01655	2.24993		0.99977	0.99000	O
P-Isopropyltoluene	8320	79229	384616	1103867	2338969	3556952	LNR	0.02500	1.93364		0.99962	0.99000	O
1,3-Dichlorobenzene	0.76250	1.01545	1.01322	1.01205	1.02387	1.04976	AVG		0.97948		10.94684	15.00000	O
1,4-Dichlorobenzene	0.97699	1.13501	1.05773	1.07500	1.08051	1.09247	AVG		1.06962		4.88795	15.00000	O
N-Butylbenzene	8451	71598	344293	982785	2083483	3179931	LNR	0.02520	1.72671		0.99955	0.99000	O
1,2-Dichloroethylene (total	+++++	+++++	+++++	+++++	+++++	+++++	AVG		0.000e+00		0.000e+0	15.00000	M C
1,2-Dichlorobenzene	0.71607	0.96923	0.94707	0.97645	0.98275	1.00680	AVG		0.93306		11.58072	15.00000	O
1,2-Dibromo-3-Chloropropane	531	5039	24058	63197	141057	216989	LNR	0.03152	0.11752		0.99898	0.99000	O
Hexachlorobutadiene	0.17926	0.19547	0.19556	0.19501	0.19650	0.20505	AVG		0.19448		4.30140	15.00000	O
1,2,4-Trichlorobenzene	0.48623	0.54428	0.57223	0.59968	0.62205	0.64782	AVG		0.57871		10.03820	15.00000	O
Naphthalene	9897	70949	361473	946106	2229245	3227573	LNR	0.02761	1.77587		0.99895	0.99000	O
1,2,3-Trichlorobenzene	0.47108	0.53161	0.54912	0.52625	0.55617	0.56308	AVG		0.53288		6.27046	15.00000	O
Xylenes (total)	+++++	+++++	+++++	+++++	+++++	+++++	AVG		0.000e+00		0.000e+0	15.00000	M C
Dibromofluoromethane	0.48804	0.49075	0.48318	0.49345	0.49662	0.49601	AVG		0.49134		1.04566	15.00000	
1,2-Dichloroethane-D4	0.69619	0.68494	0.67902	0.68630	0.70887	0.72371	AVG		0.69650		2.43363	15.00000	
Toluene-D8	1.25664	1.27099	1.27362	1.25126	1.27907	1.27257	AVG		1.26736		0.85768	15.00000	
P-Bromofluorobenzene	0.52725	0.53984	0.55270	0.55513	0.56926	0.56531	AVG		0.55158		2.86050	15.00000	

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL2079
Project : Cornhusker Army Ammunition Plant
Instrument ID: GCMS-P
Lab File IDs : P4809.D P4808.D P4807.D P4806.D P4811.D P4810.D
Column ID:
Calibration Date(s): 19-MAR-18 16:00
19-MAR-18 18:51

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
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Data File: \\target_server\gg\chem\gcms-p.i\P031918B.b\P4812.D
Report Date: 21-Mar-2018 10:24

Katahdin Analytical Services

RECOVERY REPORT

Client Name: Client SDG: SDGa02236
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: WG225041-7
Level: LOW Operator: hg
Data Type: MS DATA SampleType: LCS
SpikeList File: IND_CHECK.spk Quant Type: ISTD
Sublist File: all50.sub
Method File: \\target_server\gg\chem\gcms-p.i\P031918B.b\P8A05(62)D.m
Misc Info: WG225041,WG225041-4

	SPIKE	COMPOUND	CONC ADDED ug/l	CONC RECOVERED ug/l	% RECOVERED	LIMITS
	1	Dichlorodifluorome	50.0	43.3	86.55	80-120
	2	Chloromethane	50.0	47.6	95.32	80-120
	3	Vinyl chloride	50.0	45.3	90.66	80-120
	4	Bromomethane	50.0	46.3	92.59	80-120
	5	Chloroethane	50.0	45.8	91.70	80-120
	6	Trichlorofluoromet	50.0	43.0	86.07	80-120
	7	Diethyl Ether	50.0	49.3	98.60	80-120
	19	Tertiary-butyl alc	250	286	114.29	80-120
	8	1,1-Dichloroethene	50.0	48.9	97.80	80-120
	10	Carbon Disulfide	50.0	53.3	106.59	80-120
	9	Freon-113	50.0	48.3	96.64	80-120
	11	Iodomethane	50.0	48.0	96.10	80-120
	12	Acrolein	250	274	109.78	80-120
	14	Methylene Chloride	50.0	49.2	98.40	80-120
	15	Acetone	50.0	54.3	108.58	80-120
	45	Isobutyl Alcohol	1000	1060	105.79	80-120
	16	trans-1,2-Dichloro	50.0	51.7	103.47	80-120
	13	Allyl Chloride	50.0	51.2	102.44	80-120
	18	Methyl tert-butyl	50.0	53.9	107.78	80-120
	20	Acetonitrile	500	479	95.87	80-120
	21	Di-isopropyl ether	50.0	53.6	107.26	80-120
	22	Chloroprene	50.0	53.1	106.21	80-120
	39	Propionitrile	500	525	104.98	80-120
	40	Methacrylonitrile	500	557	111.36	80-120
	23	1,1-Dichloroethane	50.0	53.8	107.68	80-120
	24	Acrylonitrile	250	270	108.17	80-120
	25	Ethyl tertiary-but	50.0	49.2	98.43	80-120
	26	Vinyl Acetate	50.0	64.9	129.88*	80-120
	27	cis-1,2-Dichloroet	50.0	50.0	100.04	80-120
M	98	1,2-Dichloroethyle	100	102	101.76	80-120
	52	Methyl Methacrylat	50.0	48.4	96.78	80-120
	28	2,2-Dichloropropan	50.0	47.2	94.44	80-120
	29	Bromochloromethane	50.0	50.1	100.21	80-120
	31	Chloroform	50.0	52.5	105.00	80-120
	32	Carbon Tetrachlori	50.0	52.7	105.33	80-120
	33	Tetrahydrofuran	50.0	50.9	101.81	80-120
	35	1,1,1-Trichloroeth	50.0	51.5	103.04	80-120
	37	1,1-Dichloropropen	50.0	53.4	106.71	80-120
	36	2-Butanone	50.0	53.5	107.03	80-120
	38	Benzene	50.0	51.4	102.81	80-120

Data File: \\target_server\gg\chem\gcms-p.i\P031918B.b\P4812.D
Report Date: 21-Mar-2018 10:24

	SPIKE	COMPOUND	CONC ADDED ug/l	CONC RECOVERED ug/l	% RECOVERED	LIMITS
	30	Cyclohexane	50.0	46.6	93.11	80-120
	53	Ethyl Methacrylate	50.0	46.8	93.56	80-120
	43	Tertiary-amyl meth	50.0	47.5	94.97	80-120
	44	1,2-Dichloroethane	50.0	50.7	101.37	80-120
	47	Trichloroethene	50.0	51.2	102.31	80-120
	49	Dibromomethane	50.0	48.8	97.55	80-120
	50	1,2-Dichloropropan	50.0	52.8	105.72	80-120
	51	Bromodichlorometha	50.0	54.7	109.47	80-120
	57	cis-1,3-dichloropr	50.0	45.2	90.37	80-120
	54	1,4-Dioxane	1000	1340	133.88*	80-120
	56	2-Chloroethylviny	50.0	0.00	*	80-120
	59	Toluene	50.0	50.3	100.61	80-120
	61	4-methyl-2-pentano	50.0	50.3	100.68	80-120
	60	Tetrachloroethene	50.0	50.6	101.30	80-120
	62	trans-1,3-Dichloro	50.0	46.1	92.19	80-120
	63	1,1,2-Trichloroeth	50.0	47.7	95.37	80-120
	64	Dibromochlorometha	50.0	48.9	97.84	80-120
	65	1,3-Dichloropropan	50.0	51.1	102.22	80-120
	66	1,2-Dibromoethane	50.0	48.4	96.86	80-120
	67	2-Hexanone	50.0	49.7	99.44	80-120
	69	Chlorobenzene	50.0	50.2	100.33	80-120
	70	1-Chlorohexane	50.0	51.1	102.16	80-120
	71	Ethylbenzene	50.0	46.8	93.51	80-120
	72	1,1,1,2-Tetrachlor	50.0	52.1	104.20	80-120
M	106	Xylenes (total)	150	140	93.05	80-120
	73	m+p-Xylenes	100	93.3	93.32	80-120
	74	o-Xylene	50.0	46.2	92.51	80-120
	75	Styrene	50.0	46.7	93.39	80-120
	76	Bromoform	50.0	48.3	96.68	80-120
	77	Isopropylbenzene	50.0	50.0	100.03	80-120
	79	cis-1,4-Dichloro-2	50.0	46.3	92.61	80-120
	86	trans-1,4-Dichloro	50.0	54.7	109.46	80-120
	80	Bromobenzene	50.0	50.8	101.69	80-120
	81	N-Propylbenzene	50.0	52.9	105.73	80-120
	82	1,1,2,2-Tetrachlor	50.0	54.6	109.27	80-120
	85	1,3,5-Trimethylben	50.0	47.6	95.18	80-120
	83	2-Chlorotoluene	50.0	52.5	105.00	80-120
	84	1,2,3-Trichloropro	50.0	52.2	104.37	80-120
	87	4-Chlorotoluene	50.0	47.9	95.89	80-120
	88	tert-Butylbenzene	50.0	46.5	93.06	80-120
	89	Pentachloroethane	50.0	50.5	101.01	80-120
	90	1,2,4-Trimethylben	50.0	47.9	95.86	80-120
	92	P-Isopropyltoluene	50.0	47.9	95.77	80-120
	93	1,3-Dichlorobenzen	50.0	51.3	102.59	80-120
	95	1,4-Dichlorobenzen	50.0	48.8	97.56	80-120
	97	N-Butylbenzene	50.0	47.9	95.84	80-120
	91	sec-Butylbenzene	50.0	48.6	97.13	80-120
	99	1,2-Dichlorobenzen	50.0	51.0	102.07	80-120
	100	1,2-Dibromo-3-Chlo	50.0	49.4	98.71	80-120
	101	1,3,5-Trichloroben	50.0	50.1	100.23	80-120
	102	Hexachlorobutadien	50.0	48.5	96.99	80-120
	103	1,2,4-Trichloroben	50.0	52.4	104.89	80-120
	96	1,2,3-Trimethylben	50.0	52.3	104.59	80-120
	104	Naphthalene	50.0	52.5	105.00	80-120

Data File: \\target_server\gg\chem\gcms-p.i\P031918B.b\P4812.D
Report Date: 21-Mar-2018 10:24

	SPIKE COMPOUND	CONC ADDED ug/l	CONC RECOVERED ug/l	% RECOVERED	LIMITS
	105 1,2,3-Trichloroben	50.0	51.9	103.88	80-120
	17 Methyl Acetate	50.0	56.3	112.65	80-120
	46 Methylcyclohexane	50.0	46.8	93.52	80-120
M	55 Total Alkylbenzene	350	339	96.94	80-120

	SURROGATE COMPOUND	AMOUNT ADDED ug/l	AMOUNT RECOVERED ug/l	% RECOVERED	LIMITS
$	34 Dibromofluorometha	50.0	49.8	99.54	80-119
$	42 1,2-Dichloroethane	50.0	49.5	98.95	81-118
$	58 Toluene-D8	50.0	49.8	99.50	89-112
$	78 P-Bromofluorobenze	50.0	50.1	100.26	85-114

Data File: \\target_server\gg\chem\gcms-p.i\P031918B.b\P4812.D
Report Date: 21-Mar-2018 10:24

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-p.i\P031918B.b\P4812.D
Lab Smp Id: WG225041-7
Inj Date : 19-MAR-2018 19:25 MS Autotune Date: 24-JAN-2018 13:57
Operator : hg Inst ID: gcms-p.i
Smp Info : WG225041-7
Misc Info : WG225041,WG225041-4
Comment : SW846 5030
Method : \\target_server\gg\chem\gcms-p.i\P031918B.b\P8A05(62)D.m
Meth Date : 21-Mar-2018 10:23 gcms-p.i Quant Type: ISTD
Cal Date : 19-MAR-2018 18:17 Cal File: P4810.D
Als bottle: 9 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all50.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.536	1.537	(0.235)	215270	43.2738	43.3	
2	Chloromethane	50	1.694	1.694	(0.259)	338077	47.6577	47.6	
3	Vinyl chloride	62	1.751	1.751	(0.268)	337192	45.3277	45.3	
4	Bromomethane	94	2.001	2.001	(0.306)	152665	46.2954	46.3	
5	Chloroethane	64	2.101	2.101	(0.322)	217994	45.8506	45.8	
6	Trichlorofluoromethane	101	2.208	2.209	(0.338)	438932	43.0330	43.0	
7	Diethyl Ether	59	2.459	2.459	(0.376)	265739	49.2999	49.3	
19	Tertiary-butyl alcohol	59	3.559	3.560	(0.545)	86666	285.724	286	
8	1,1-Dichloroethene	96	2.630	2.631	(0.403)	225581	48.9020	48.9	
10	Carbon Disulfide	76	2.666	2.666	(0.408)	837605	53.2933	53.3	
9	Freon-113	151	2.659	2.659	(0.407)	166196	48.3177	48.3	
11	Iodomethane	142	2.766	2.766	(0.423)	230017	48.0511	48.0	
12	Acrolein	56	2.945	2.945	(0.451)	293287	274.441	274	
14	Methylene Chloride	84	3.180	3.181	(0.487)	277885	49.2008	49.2	
15	Acetone	43	3.231	3.231	(0.495)	86482	54.2876	54.3	
45	Isobutyl Alcohol	43	6.876	6.869	(1.053)	161223	1057.92	1060	
16	trans-1,2-Dichloroethene	96	3.338	3.338	(0.511)	259004	51.7354	51.7	
13	Allyl Chloride	41	3.073	3.074	(0.470)	411680	51.2210	51.2	
18	Methyl tert-butyl ether	73	3.452	3.453	(0.528)	777482	53.8901	53.9	
20	Acetonitrile	41	3.752	3.753	(0.574)	375952	479.357	479	
21	Di-isopropyl ether	45	3.888	3.889	(0.595)	913192	53.6321	53.6	
22	Chloroprene	53	4.017	4.017	(0.615)	411300	53.1043	53.1	
39	Propionitrile	54	6.397	6.390	(0.979)	460531	524.914	525	
40	Methacrylonitrile	41	6.426	6.426	(0.984)	2251315	556.788	557	

Data File: \\target_server\gg\chem\gcms-p.i\P031918B.b\P4812.D
Report Date: 21-Mar-2018 10:24

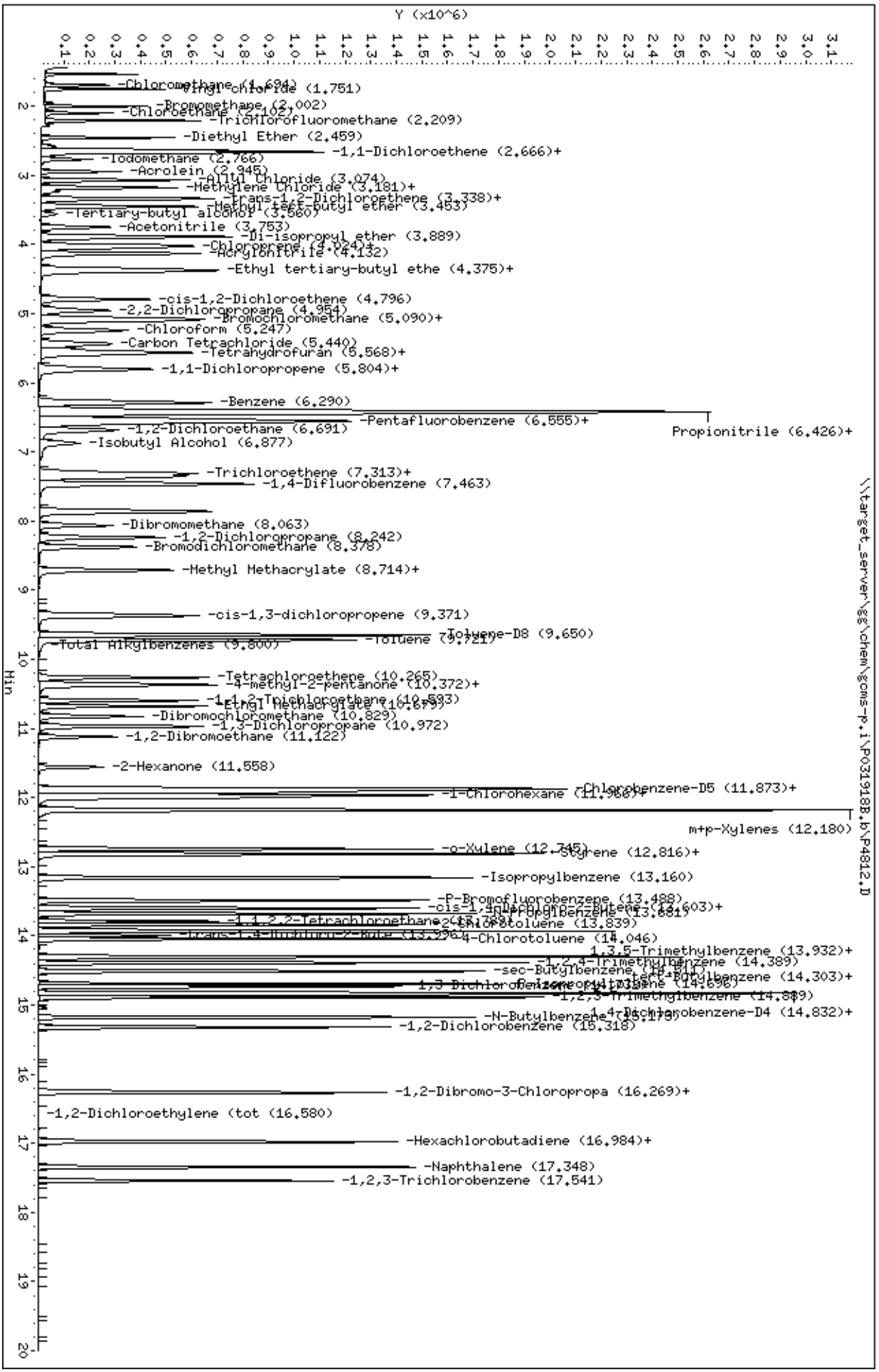
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
	23 1,1-Dichloroethane	63	4.045	4.053	(0.619)	502146	53.8423	53.8	
	24 Acrylonitrile	52	4.131	4.131	(0.632)	548020	270.418	270	
	25 Ethyl tertiary-butyl ether	59	4.367	4.368	(0.668)	823010	49.2143	49.2	
	26 Vinyl Acetate	43	4.396	4.396	(0.589)	671420	64.9421	64.9(R)	
	27 cis-1,2-Dichloroethene	96	4.796	4.796	(0.734)	285069	50.0196	50.0	
M	98 1,2-Dichloroethylene (total)	96				544073	101.755	102	
	52 Methyl Methacrylate	41	8.713	8.706	(1.167)	293269	48.3908	48.4	
	28 2,2-Dichloropropane	77	4.953	4.954	(0.758)	299519	47.2195	47.2	
	29 Bromochloromethane	128	5.103	5.104	(0.781)	118725	50.1072	50.1	
	31 Chloroform	83	5.246	5.240	(0.803)	466383	52.5009	52.5	
	32 Carbon Tetrachloride	117	5.439	5.440	(0.728)	330322	52.6648	52.7	
	33 Tetrahydrofuran	42	5.504	5.497	(0.842)	86788	50.9075	50.9	
$	34 Dibromofluoromethane	113	5.561	5.561	(0.851)	296406	49.7686	49.8	
	35 1,1,1-Trichloroethane	97	5.575	5.576	(0.853)	396247	51.5193	51.5	
	37 1,1-Dichloropropene	75	5.804	5.797	(0.777)	375685	53.3527	53.4	
	36 2-Butanone	43	5.818	5.819	(0.891)	137927	53.5166	53.5	
	38 Benzene	78	6.290	6.290	(0.842)	1090222	51.4068	51.4	
*	41 Pentafluorobenzene	168	6.533	6.533	(1.000)	606064	50.0000		
	30 Cyclohexane	56	5.075	5.075	(0.777)	424108	46.5537	46.6	
	53 Ethyl Methacrylate	69	10.679	10.679	(1.430)	427867	46.7794	46.8	
$	42 1,2-Dichloroethane-D4	65	6.561	6.562	(1.004)	417706	49.4765	49.5	
	43 Tertiary-amyl methyl ether	73	6.561	6.562	(1.004)	770060	47.4870	47.5	
	44 1,2-Dichloroethane	62	6.683	6.684	(0.895)	404015	50.6873	50.7	
	47 Trichloroethene	95	7.362	7.363	(0.986)	257100	51.1553	51.2	
*	48 1,4-Difluorobenzene	114	7.469	7.463	(1.000)	1038606	50.0000		
	49 Dibromomethane	93	8.063	8.063	(1.079)	169420	48.7766	48.8	
	50 1,2-Dichloropropane	63	8.241	8.242	(1.103)	282990	52.8599	52.8	
	51 Bromodichloromethane	83	8.377	8.378	(1.122)	370315	54.7336	54.7	
	57 cis-1,3-dichloropropene	75	9.378	9.378	(1.255)	467640	45.1872	45.2	
	54 1,4-Dioxane	88	8.713	8.721	(1.167)	77640	1338.77	1340(R)	
$	58 Toluene-D8	98	9.649	9.650	(1.292)	1309749	49.7516	49.8	
	59 Toluene	92	9.721	9.721	(1.301)	692141	50.3041	50.3	
	61 4-methyl-2-pentanone	43	10.350	10.343	(1.386)	295346	50.3405	50.3	
	60 Tetrachloroethene	164	10.264	10.265	(0.865)	201712	50.6479	50.6	
	62 trans-1,3-Dichloropropene	75	10.379	10.379	(1.389)	442326	46.0938	46.1	
	63 1,1,2-Trichloroethane	83	10.600	10.593	(1.419)	216674	47.6853	47.7	
	64 Dibromochloromethane	129	10.829	10.829	(0.912)	273635	48.9219	48.9	
	65 1,3-Dichloropropane	76	10.972	10.972	(0.924)	495107	51.1118	51.1	
	66 1,2-Dibromoethane	107	11.122	11.122	(1.489)	268642	48.4288	48.4	
	67 2-Hexanone	43	11.558	11.558	(0.974)	198537	49.7180	49.7	
*	68 Chlorobenzene-D5	117	11.872	11.873	(1.000)	1109951	50.0000		
	69 Chlorobenzene	112	11.894	11.894	(1.002)	776091	50.1664	50.2	
	70 1-Chlorohexane	91	11.922	11.923	(1.004)	378613	51.0777	51.1	
	71 Ethylbenzene	106	11.965	11.966	(1.008)	417147	46.7562	46.8	
	72 1,1,1,2-Tetrachloroethane	131	12.001	12.002	(1.011)	268367	52.1006	52.1	
M	106 Xylenes (total)	106				1537675	139.575	140	
	73 m+p-Xylenes	106	12.180	12.180	(1.026)	1051403	93.3185	93.3	
	74 o-Xylene	106	12.745	12.745	(1.073)	486272	46.2570	46.2	
	75 Styrene	104	12.816	12.817	(1.079)	871489	46.6967	46.7	
	76 Bromoform	173	12.816	12.817	(1.079)	192672	48.3423	48.3	
	77 Isopropylbenzene	105	13.159	13.160	(0.888)	1264663	50.0149	50.0	
$	78 P-Bromofluorobenzene	95	13.488	13.488	(1.806)	574380	50.1312	50.1	
	79 cis-1,4-Dichloro-2-Butene	53	13.609	13.610	(0.918)	140525	46.3039	46.3	
	86 trans-1,4-Dichloro-2-Butene	53	13.995	13.996	(0.944)	113310	54.7315	54.7	

Data File: \\target_server\gg\chem\gcms-p.i\P031918B.b\P4812.D
Report Date: 21-Mar-2018 10:24

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
	80	Bromobenzene	156	13.595	13.596	(0.917)	309829	50.8440	50.8	
	81	N-Propylbenzene	91	13.681	13.674	(0.923)	1530010	52.8647	52.9	
	82	1,1,2,2-Tetrachloroethane	83	13.788	13.789	(0.930)	388510	54.6333	54.6	
	85	1,3,5-Trimethylbenzene	105	13.938	13.932	(0.940)	1054349	47.5891	47.6	
	83	2-Chlorotoluene	91	13.838	13.839	(0.933)	910426	52.5016	52.5	
	84	1,2,3-Trichloropropane	75	13.924	13.924	(0.939)	339892	52.1835	52.2	
	87	4-Chlorotoluene	91	14.045	14.046	(0.947)	973797	47.9441	47.9	
	88	tert-Butylbenzene	119	14.303	14.303	(0.965)	1034977	46.5300	46.5	
	89	Pentachloroethane	165	14.310	14.310	(0.965)	149079	50.5042	50.5	
	90	1,2,4-Trimethylbenzene	105	14.389	14.389	(0.971)	1099393	47.9316	47.9	
	92	P-Isopropyltoluene	119	14.696	14.696	(0.991)	1085116	47.8857	47.9	
	93	1,3-Dichlorobenzene	146	14.739	14.739	(0.994)	604584	51.2956	51.3	
*	94	1,4-Dichlorobenzene-D4	152	14.825	14.825	(1.000)	601661	50.0000		
	95	1,4-Dichlorobenzene	146	14.846	14.847	(1.001)	627847	48.7801	48.8	
	97	N-Butylbenzene	91	15.175	15.175	(1.024)	969552	47.9225	47.9	
	91	sec-Butylbenzene	105	14.510	14.511	(0.979)	1292447	48.5654	48.6	
	99	1,2-Dichlorobenzene	146	15.325	15.325	(1.034)	573023	51.0365	51.0	
	100	1,2-Dibromo-3-Chloropropane	75	16.240	16.239	(1.095)	67568	49.3568	49.4	
	101	1,3,5-Trichlorobenzene	180	16.268	16.268	(1.097)	398208	50.1146	50.1	
	102	Hexachlorobutadiene	225	16.962	16.962	(1.144)	113488	48.4953	48.5	
	103	1,2,4-Trichlorobenzene	180	16.983	16.984	(1.146)	365221	52.4457	52.4	
	96	1,2,3-Trimethylbenzene	105	14.889	14.889	(1.004)	1168334	52.2957	52.3	
	104	Naphthalene	128	17.348	17.347	(1.170)	1092409	52.5008	52.5	
	105	1,2,3-Trichlorobenzene	180	17.541	17.541	(1.183)	333059	51.9406	51.9	
	17	Methyl Acetate	43	3.352	3.353	(0.513)	255032	56.3256	56.3	
	46	Methylcyclohexane	83	7.312	7.313	(1.119)	432580	46.7606	46.8	
M	55	Total Alkylbenzenes	100				8065844	339.289	339	

QC Flag Legend

R - Spike/Surrogate failed recovery limits.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Date : 19-MAR-2018 19:25
Client ID:
Sample Info: WG225041-7
Purge Volume: 5.0
Column phase: RTX-VMS
Instrument: gcms-p.i
Operator: hg
Column diameter: 0.18
\\target_server\gg\chem\gcms-p.i\P031918B.b\P4812.D
Y (x10^6)
Min
-Chloromethane (1.694)
-Vinyl Chloride (1.751)
-Bromomethane (2.002)
-Chloroethane (2.102)
-Trichlorofluoromethane (2.209)
-Diethyl Ether (2.459)
-1,1-Dichloroethene (2.666)+
-Iodomethane (2.766)
-Acrolein (2.945)
-Allyl Chloride (3.074)
-Methylene Chloride (3.181)+
-trans-1,2-Dichloroethene (3.338)+
-Methyl tert-butyl ether (3.453)
-Tertiary-butyl alcohol (3.560)
-Acetonitrile (3.753)
-Di-isopropyl ether (3.889)
-Chloroprene (4.024)+
-Acrylonitrile (4.132)
-Ethyl tertiary-butyl ethe (4.375)+
-cis-1,2-Dichloroethene (4.796)
-2,2-Dichloropropane (4.954)
-Bromochloromethane (5.090)+
-Chloroform (5.247)
-Carbon Tetrachloride (5.440)
-Tetrahydrofuran (5.568)+
-1,1-Dichloropropene (5.804)+
-Benzene (6.290)
-Pentafluorobenzene (6.555)+
-1,2-Dichloroethane (6.691)
Propionitrile (6.426)+
-Isobutyl Alcohol (6.877)
-Trichloroethene (7.313)+
-1,4-Difluorobenzene (7.463)
-Dibromomethane (8.063)
-1,2-Dichloropropane (8.242)
-Bromodichloromethane (8.378)
-Methyl Methacrylate (8.714)+
-cis-1,3-dichloropropene (9.371)
-Toluene-D8 (9.650)
-Total Alkylbenzenes (9.800)
-Toluene (9.721)
-Tetrachloroethene (10.265)
-4-methyl-2-pentanone (10.372)+
-1,1,2-Trichloroethane (10.593)
-Ethyl Methacrylate (10.679)
-Dibromochloromethane (10.829)
-1,3-Dichloropropane (10.972)
-1,2-Dibromoethane (11.122)
-2-Hexanone (11.558)
-Chlorobenzene-D5 (11.873)+
-1-Chlorohexane (11.966)+
m+p-Xylenes (12.180)
-o-Xylene (12.745)
-Styrene (12.816)+
-Isopropylbenzene (13.160)
-P-Bromofluorobenzene (13.488)
-cis-1,3-Dichloro-2-Butene (13.603)+
-1,1,2,2-Tetrachloroethane (13.781)
-n-Propylbenzene (13.681)
-2-Chlorotoluene (13.839)
-trans-1,4-Dichloro-2-Bute (13.896)+
-4-Chlorotoluene (14.046)
-1,3,5-Trimethylbenzene (13.932)+
-1,2,4-Trimethylbenzene (14.389)
-sec-Butylbenzene (14.241)+
-tert-Butylbenzene (14.303)+
-1,3-Dichlorobenzene (14.396)
-p-Isopropyltoluene (14.496)
-1,2,3-Trimethylbenzene (14.849)
-1,4-Dichlorobenzene-D4 (14.832)+
-N-Butylbenzene (15.179)+
-1,2-Dichlorobenzene (15.318)
-1,2-Dibromo-3-Chloropropa (16.269)+
-1,2-Dichloroethylene (tot (16.580)
-Hexachlorobutadiene (16.984)+
-Naphthalene (17.348)
-1,2,3-Trichlorobenzene (17.541)

Data File: \\target_server\gg\chem\gcms-p.i\P031918B.b\P4806.D
Report Date: 21-Mar-2018 10:24

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-p.i\P031918B.b\P4806.D
Lab Smp Id: WG225041-4
Inj Date : 19-MAR-2018 16:00 MS Autotune Date: 24-JAN-2018 13:57
Operator : hg Inst ID: gcms-p.i
Smp Info : WG225041-4
Misc Info :
Comment : SW846 5030
Method : \\target_server\gg\chem\gcms-p.i\P031918B.b\P8A05(62)D.m
Meth Date : 21-Mar-2018 10:23 gcms-p.i Quant Type: ISTD
Cal Date : 13-MAR-2018 12:22 Cal File: P4736.D
Als bottle: 3 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all50.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

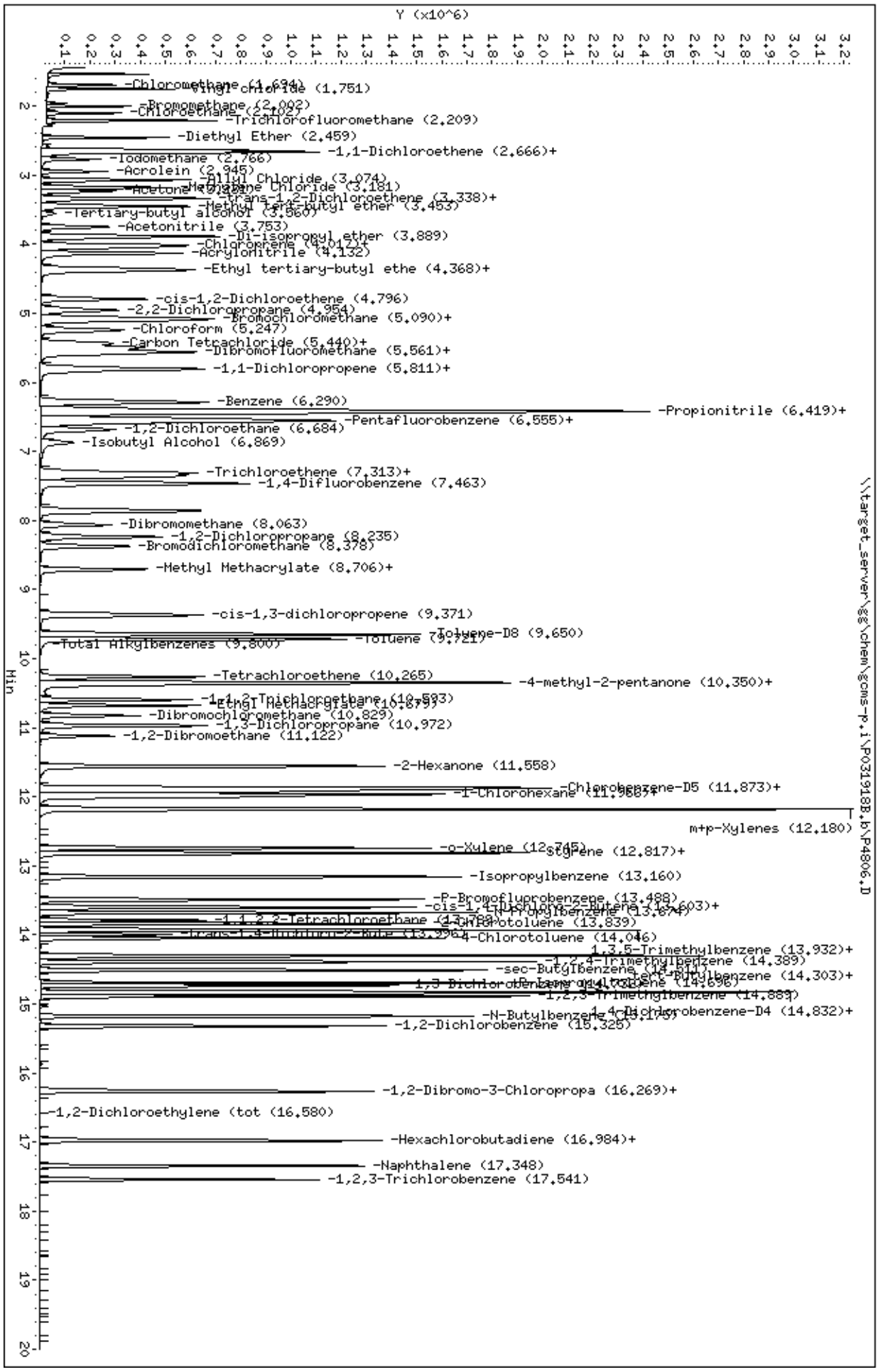
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.536	1.537	(0.235)	245142	50.0000	50.9	
2	Chloromethane	50	1.694	1.694	(0.259)	334478	50.0000	48.7	
3	Vinyl chloride	62	1.751	1.751	(0.268)	364899	50.0000	50.7	
4	Bromomethane	94	2.001	2.001	(0.306)	139268	50.0000	43.6	
5	Chloroethane	64	2.101	2.101	(0.322)	231548	50.0000	50.3	
6	Trichlorofluoromethane	101	2.208	2.209	(0.338)	502263	50.0000	50.9	
7	Diethyl Ether	59	2.459	2.459	(0.376)	258146	50.0000	49.5	
19	Tertiary-butyl alcohol	59	3.559	3.560	(0.545)	68668	250.000	230	
8	1,1-Dichloroethene	96	2.630	2.631	(0.403)	241633	50.0000	54.2	
10	Carbon Disulfide	76	2.666	2.666	(0.408)	813199	50.0000	53.5	
9	Freon-113	151	2.659	2.659	(0.407)	172603	50.0000	51.9	
11	Iodomethane	142	2.766	2.766	(0.423)	264305	50.0000	57.1	
12	Acrolein	56	2.945	2.945	(0.451)	246100	250.000	238	
14	Methylene Chloride	84	3.181	3.181	(0.487)	273005	50.0000	50.0	
15	Acetone	43	3.231	3.231	(0.495)	388058	250.000	252	
45	Isobutyl Alcohol	43	6.869	6.869	(1.051)	135785	1000.00	918	
16	trans-1,2-Dichloroethene	96	3.338	3.338	(0.511)	257255	50.0000	53.1	
13	Allyl Chloride	41	3.073	3.074	(0.470)	403122	50.0000	51.8	
18	Methyl tert-butyl ether	73	3.452	3.453	(0.528)	732513	50.0000	52.5	
20	Acetonitrile	41	3.752	3.753	(0.574)	371106	500.000	489	
21	Di-isopropyl ether	45	3.888	3.889	(0.595)	864359	50.0000	52.5	
22	Chloroprene	53	4.017	4.017	(0.615)	402127	50.0000	53.7	
39	Propionitrile	54	6.390	6.390	(0.978)	443063	500.000	522	
40	Methacrylonitrile	41	6.426	6.426	(0.984)	2042203	500.000	522	

Data File: \\target_server\gg\chem\gcms-p.i\P031918B.b\P4806.D
Report Date: 21-Mar-2018 10:24

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
	23 1,1-Dichloroethane	63	4.053	4.053	(0.620)	476707	50.0000	52.8	
	24 Acrylonitrile	52	4.131	4.131	(0.632)	508398	250.000	259	
	25 Ethyl tertiary-butyl ether	59	4.367	4.368	(0.668)	758380	50.0000	47.0	
	26 Vinyl Acetate	43	4.396	4.396	(0.589)	411046	50.0000	41.7	
	27 cis-1,2-Dichloroethene	96	4.796	4.796	(0.734)	273456	50.0000	49.6	
	52 Methyl Methacrylate	41	8.706	8.706	(1.167)	265290	50.0000	44.8	
	28 2,2-Dichloropropane	77	4.953	4.954	(0.758)	337219	50.0000	55.0	
	29 Bromochloromethane	128	5.103	5.104	(0.781)	125915	50.0000	55.0	
	31 Chloroform	83	5.239	5.240	(0.802)	450144	50.0000	52.4	
	32 Carbon Tetrachloride	117	5.439	5.440	(0.729)	323979	50.0000	52.7	
	33 Tetrahydrofuran	42	5.496	5.497	(0.841)	437900	250.000	242	
$	34 Dibromofluoromethane	113	5.561	5.561	(0.851)	289284	50.0000	50.2	
	35 1,1,1-Trichloroethane	97	5.575	5.576	(0.853)	403282	50.0000	54.2	
	37 1,1-Dichloropropene	75	5.797	5.797	(0.777)	370406	50.0000	53.6	
	36 2-Butanone	43	5.818	5.819	(0.891)	670964	250.000	269	
	38 Benzene	78	6.290	6.290	(0.843)	1090182	50.0000	52.4	
*	41 Pentafluorobenzene	168	6.533	6.533	(1.000)	586253	50.0000		
	30 Cyclohexane	56	5.075	5.075	(0.777)	442638	50.0000	50.1	
	53 Ethyl Methacrylate	69	10.679	10.679	(1.431)	406421	50.0000	45.4	
$	42 1,2-Dichloroethane-D4	65	6.562	6.562	(1.004)	402344	50.0000	49.3	
	43 Tertiary-amyl methyl ether	73	6.562	6.562	(1.004)	731354	50.0000	46.6	
	44 1,2-Dichloroethane	62	6.683	6.684	(0.896)	375063	50.0000	48.0	
	47 Trichloroethene	95	7.362	7.363	(0.987)	258120	50.0000	52.4	
*	48 1,4-Difluorobenzene	114	7.462	7.463	(1.000)	1018640	50.0000		
	49 Dibromomethane	93	8.063	8.063	(1.080)	159976	50.0000	47.0	
	50 1,2-Dichloropropane	63	8.241	8.242	(1.104)	272120	50.0000	51.8	
	51 Bromodichloromethane	83	8.377	8.378	(1.123)	346010	50.0000	52.1	
	57 cis-1,3-dichloropropene	75	9.378	9.378	(1.257)	484214	50.0000	47.6	
	54 1,4-Dioxane	88	8.720	8.721	(1.169)	27716	1000.00	487	
$	58 Toluene-D8	98	9.649	9.650	(1.293)	1274586	50.0000	49.4	
	59 Toluene	92	9.721	9.721	(1.303)	703962	50.0000	52.2	
	61 4-methyl-2-pentanone	43	10.343	10.343	(1.386)	1557305	250.000	235	
	60 Tetrachloroethene	164	10.264	10.265	(0.865)	200752	50.0000	51.5	
	62 trans-1,3-Dichloropropene	75	10.379	10.379	(1.391)	437791	50.0000	46.5	
	63 1,1,2-Trichloroethane	83	10.593	10.593	(1.420)	212526	50.0000	47.7	
	64 Dibromochloromethane	129	10.829	10.829	(0.912)	260045	50.0000	47.5	
	65 1,3-Dichloropropane	76	10.972	10.972	(0.924)	507960	50.0000	53.5	
	66 1,2-Dibromoethane	107	11.122	11.122	(1.490)	256603	50.0000	47.2	
	67 2-Hexanone	43	11.558	11.558	(0.974)	1068792	250.000	242	
*	68 Chlorobenzene-D5	117	11.872	11.873	(1.000)	1086918	50.0000		
	69 Chlorobenzene	112	11.894	11.894	(1.002)	774649	50.0000	51.1	
	70 1-Chlorohexane	91	11.923	11.923	(1.004)	398508	50.0000	54.9	
	71 Ethylbenzene	106	11.965	11.966	(1.008)	425787	50.0000	48.7	
	72 1,1,1,2-Tetrachloroethane	131	12.001	12.002	(1.011)	268181	50.0000	53.2	
	73 m+p-Xylenes	106	12.180	12.180	(1.026)	1079323	100.000	97.7	
	74 o-Xylene	106	12.745	12.745	(1.073)	506796	50.0000	49.2	
	75 Styrene	104	12.816	12.817	(1.079)	871381	50.0000	47.6	
	76 Bromoform	173	12.816	12.817	(1.079)	179890	50.0000	46.2	
	77 Isopropylbenzene	105	13.159	13.160	(0.888)	1246776	50.0000	50.2	
$	78 P-Bromofluorobenzene	95	13.488	13.488	(1.807)	565474	50.0000	50.3	
	79 cis-1,4-Dichloro-2-Butene	53	13.609	13.610	(0.918)	141166	50.0000	47.3	
	86 trans-1,4-Dichloro-2-Butene	53	13.995	13.996	(0.944)	113517	50.0000	55.8	
	80 Bromobenzene	156	13.595	13.596	(0.917)	313981	50.0000	52.5	
	81 N-Propylbenzene	91	13.674	13.674	(0.922)	1575176	50.0000	55.4	

Data File: \\target_server\gg\chem\gcms-p.i\P031918B.b\P4806.D
Report Date: 21-Mar-2018 10:24

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
82	1,1,2,2-Tetrachloroethane	83	13.788	13.789	(0.930)	364379	50.0000	52.2	
85	1,3,5-Trimethylbenzene	105	13.931	13.932	(0.940)	1068997	50.0000	49.1	
83	2-Chlorotoluene	91	13.838	13.839	(0.933)	924946	50.0000	54.3	
84	1,2,3-Trichloropropane	75	13.924	13.924	(0.939)	332260	50.0000	52.0	
87	4-Chlorotoluene	91	14.045	14.046	(0.947)	990332	50.0000	49.6	
88	tert-Butylbenzene	119	14.303	14.303	(0.965)	1064207	50.0000	48.7	
89	Pentachloroethane	165	14.310	14.310	(0.965)	153650	50.0000	53.0	
90	1,2,4-Trimethylbenzene	105	14.389	14.389	(0.971)	1113908	50.0000	49.4	
92	P-Isopropyltoluene	119	14.696	14.696	(0.991)	1103867	50.0000	49.6	
93	1,3-Dichlorobenzene	146	14.739	14.739	(0.994)	597769	50.0000	51.7	
* 94	1,4-Dichlorobenzene-D4	152	14.825	14.825	(1.000)	590652	50.0000		
95	1,4-Dichlorobenzene	146	14.846	14.847	(1.001)	634953	50.0000	50.2	
97	N-Butylbenzene	91	15.175	15.175	(1.024)	982785	50.0000	49.4	
91	sec-Butylbenzene	105	14.510	14.511	(0.979)	1312829	50.0000	50.2	
99	1,2-Dichlorobenzene	146	15.325	15.325	(1.034)	576741	50.0000	52.3	
100	1,2-Dibromo-3-Chloropropane	75	16.240	16.239	(1.095)	63197	50.0000	47.1	
101	1,3,5-Trichlorobenzene	180	16.268	16.268	(1.097)	403116	50.0000	51.7	
102	Hexachlorobutadiene	225	16.962	16.962	(1.144)	115183	50.0000	50.1	
103	1,2,4-Trichlorobenzene	180	16.983	16.984	(1.146)	354202	50.0000	51.8	
96	1,2,3-Trimethylbenzene	105	14.889	14.889	(1.004)	1158148	50.0000	52.8	
104	Naphthalene	128	17.348	17.347	(1.170)	946106	50.0000	46.5	
105	1,2,3-Trichlorobenzene	180	17.541	17.541	(1.183)	310830	50.0000	49.4	
17	Methyl Acetate	43	3.352	3.353	(0.513)	185762	50.0000	42.4	
46	Methylcyclohexane	83	7.312	7.313	(1.119)	433319	50.0000	48.4	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Data File: \\target_server\gg\chem\gcms-p.i\P031918B.b\P4806.D
Date : 19-MAR-2018 16:00
Client ID:
Sample Info: WG225041-4
Purge Volume: 5.0
Column phase: RTX-VMS
Instrument: gcms-p.i
Operator: hg
Column diameter: 0.18
\\target_server\gg\chem\gcms-p.i\P031918B.b\P4806.D
-Chloromethane (1.694)
-Vinyl chloride (1.751)
-Bromomethane (2.002)
-Chloroethane (2.107)
-Trichlorofluoromethane (2.209)
-Diethyl Ether (2.459)
-1,1-Dichloroethene (2.666)+
-Iodomethane (2.766)
-Acrolein (2.945)
-Allyl Chloride (3.074)
-Methylene Chloride (3.181)
-Acetone (3.208)
-trans-1,2-Dichloroethene (3.338)+
-Methyl tert-butyl ether (3.453)
-Tertiary-butyl alcohol (3.560)
-Acetonitrile (3.753)
-Di-isopropyl ether (3.889)
-Chloroprene (4.012)+
-Acrylonitrile (4.132)
-Ethyl tertiary-butyl ethe (4.368)+
-cis-1,2-Dichloroethene (4.796)
-2,2-Dichloropropane (4.954)
-Bromochloromethane (5.090)+
-Chloroform (5.247)
-Carbon Tetrachloride (5.440)+
-Dibromofluoromethane (5.561)+
-1,1-Dichloropropene (5.811)+
-Benzene (6.290)
-Propionitrile (6.419)+
-Pentafluorobenzene (6.555)+
-1,2-Dichloroethane (6.684)
-Isobutyl Alcohol (6.869)
-Trichloroethene (7.313)+
-1,4-Difluorobenzene (7.463)
-Dibromomethane (8.063)
-1,2-Dichloropropane (8.235)
-Bromodichloromethane (8.378)
-Methyl Methacrylate (8.706)+
-cis-1,3-dichloropropene (9.371)
-Toluene-D8 (9.650)
-Toluene (9.721)
-Total Alkylbenzenes (9.800)
-Tetrachloroethene (10.265)
-4-methyl-2-pentanone (10.350)+
-1,1,2-Trichloroethane (10.593)
-Ethyl Methacrylate (10.679)
-Dibromochloromethane (10.829)
-1,3-Dichloropropane (10.972)
-1,2-Dibromoethane (11.122)
-2-Hexanone (11.558)
-Chlorobenzene-D5 (11.873)+
-1-Chlorohexane (11.960)+
m+p-Xylenes (12.180)
-o-Xylene (12.745)
-Styrene (12.817)+
-Isopropylbenzene (13.160)
-P-Bromofluorobenzene (13.488)
-cis-1,4-Dichloro-2-Butene (13.603)+
-n-Propylbenzene (13.674)
-1,1,2,2-Tetrachloroethane (13.708)
-2-Chlorotoluene (13.839)
-trans-1,4-Dichloro-2-Bute (13.996)+
-4-Chlorotoluene (14.046)
-1,3,5-Trimethylbenzene (13.932)+
-1,2,4-Trimethylbenzene (14.389)
-sec-Butylbenzene (14.511)
-tert-Butylbenzene (14.303)+
-1,3-Dichlorobenzene (14.696)
-1,2,3-Trimethylbenzene (14.889)
-N-Butylbenzene (15.175)
-1,4-Dichlorobenzene-D4 (14.832)+
-1,2-Dichlorobenzene (15.325)
-1,2-Dibromo-3-Chloropropa (16.269)+
-1,2-Dichloroethylene (tot (16.580)
-Hexachlorobutadiene (16.984)+
-Naphthalene (17.348)
-1,2,3-Trichlorobenzene (17.541)

Data File: \\target_server\gg\chem\gcms-p.i\P031918B.b\P4807.D
Report Date: 21-Mar-2018 10:24

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-p.i\P031918B.b\P4807.D
Lab Smp Id: WG225041-3
Inj Date : 19-MAR-2018 16:34 MS Autotune Date: 24-JAN-2018 13:57
Operator : hg Inst ID: gcms-p.i
Smp Info : WG225041-3
Misc Info :
Comment : SW846 5030
Method : \\target_server\gg\chem\gcms-p.i\P031918B.b\P8A05(62)D.m
Meth Date : 21-Mar-2018 10:23 gcms-p.i Quant Type: ISTD
Cal Date : 19-MAR-2018 16:34 Cal File: P4807.D
Als bottle: 4 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all50.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.539	1.537	(0.236)	104836	20.0000	21.8	
2	Chloromethane	50	1.696	1.694	(0.260)	139666	20.0000	20.3	
3	Vinyl chloride	62	1.753	1.751	(0.268)	147683	20.0000	20.5	
4	Bromomethane	94	2.003	2.001	(0.307)	60935	20.0000	19.1	
5	Chloroethane	64	2.103	2.101	(0.322)	95899	20.0000	20.8	
6	Trichlorofluoromethane	101	2.211	2.209	(0.338)	204770	20.0000	20.7	
7	Diethyl Ether	59	2.461	2.459	(0.377)	106070	20.0000	20.3	
19	Tertiary-butyl alcohol	59	3.554	3.560	(0.544)	28969	100.000	94.8	
8	1,1-Dichloroethene	96	2.632	2.631	(0.403)	89901	20.0000	20.1	
10	Carbon Disulfide	76	2.668	2.666	(0.408)	300011	20.0000	19.7	
9	Freon-113	151	2.661	2.659	(0.407)	64596	20.0000	19.4	
11	Iodomethane	142	2.768	2.766	(0.424)	99996	20.0000	21.6	
12	Acrolein	56	2.947	2.945	(0.451)	100180	100.000	96.8	
14	Methylene Chloride	84	3.183	3.181	(0.487)	111266	20.0000	20.1	
15	Acetone	43	3.233	3.231	(0.495)	155274	100.000	101	
45	Isobutyl Alcohol	43	6.878	6.869	(1.052)	40410	400.000	300	
16	trans-1,2-Dichloroethene	96	3.340	3.338	(0.511)	97929	20.0000	20.2	
13	Allyl Chloride	41	3.068	3.074	(0.470)	156928	20.0000	20.2	
18	Methyl tert-butyl ether	73	3.454	3.453	(0.529)	290299	20.0000	20.8	
20	Acetonitrile	41	3.747	3.753	(0.573)	145090	200.000	191	
21	Di-isopropyl ether	45	3.890	3.889	(0.595)	332172	20.0000	20.1	
22	Chloroprene	53	4.012	4.017	(0.614)	147784	20.0000	19.7	
39	Propionitrile	54	6.392	6.390	(0.978)	165415	200.000	195	
40	Methacrylonitrile	41	6.428	6.426	(0.984)	786331	200.000	201	

Data File: \\target_server\gg\chem\gcms-p.i\P031918B.b\P4807.D
Report Date: 21-Mar-2018 10:24

							AMOUNTS		
		QUANT SIG					CAL-AMT	ON-COL	
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/l)	(ug/l)	REVIEW CODE
	23 1,1-Dichloroethane	63	4.048	4.053	(0.619)	180111	20.0000	19.9	
	24 Acrylonitrile	52	4.133	4.131	(0.633)	191670	100.000	97.6	
	25 Ethyl tertiary-butyl ether	59	4.369	4.368	(0.669)	289509	20.0000	18.8	
	26 Vinyl Acetate	43	4.398	4.396	(0.589)	185708	20.0000	20.2	
	27 cis-1,2-Dichloroethene	96	4.798	4.796	(0.734)	106453	20.0000	19.6	
	52 Methyl Methacrylate	41	8.715	8.706	(1.168)	95435	20.0000	18.2	
	28 2,2-Dichloropropane	77	4.963	4.954	(0.759)	123435	20.0000	20.1	
	29 Bromochloromethane	128	5.106	5.104	(0.781)	49779	20.0000	21.1	
	31 Chloroform	83	5.241	5.240	(0.802)	174759	20.0000	20.3	
	32 Carbon Tetrachloride	117	5.441	5.440	(0.729)	118060	20.0000	19.5	
	33 Tetrahydrofuran	42	5.506	5.497	(0.843)	163920	100.000	94.0	
$	34 Dibromofluoromethane	113	5.563	5.561	(0.851)	283631	50.0000	49.2	
	35 1,1,1-Trichloroethane	97	5.570	5.576	(0.852)	151944	20.0000	20.4	
	37 1,1-Dichloropropene	75	5.806	5.797	(0.778)	137927	20.0000	20.2	
	36 2-Butanone	43	5.820	5.819	(0.891)	257052	100.000	103	
	38 Benzene	78	6.292	6.290	(0.843)	419519	20.0000	20.4	
*	41 Pentafluorobenzene	168	6.535	6.533	(1.000)	587008	50.0000		
	30 Cyclohexane	56	5.077	5.075	(0.777)	159738	20.0000	18.8	
	53 Ethyl Methacrylate	69	10.681	10.679	(1.431)	138351	20.0000	17.6	
$	42 1,2-Dichloroethane-D4	65	6.564	6.562	(1.004)	398591	50.0000	48.7	
	43 Tertiary-amyl methyl ether	73	6.564	6.562	(1.004)	269602	20.0000	18.4	
	44 1,2-Dichloroethane	62	6.685	6.684	(0.896)	149486	20.0000	19.4	
	47 Trichloroethene	95	7.364	7.363	(0.987)	98803	20.0000	20.3	
*	48 1,4-Difluorobenzene	114	7.464	7.463	(1.000)	1004385	50.0000		
	49 Dibromomethane	93	8.065	8.063	(1.080)	62638	20.0000	19.5	
	50 1,2-Dichloropropane	63	8.243	8.242	(1.104)	106498	20.0000	20.6	
	51 Bromodichloromethane	83	8.379	8.378	(1.123)	131039	20.0000	20.0	
	57 cis-1,3-dichloropropene	75	9.380	9.378	(1.257)	178493	20.0000	18.9	
	54 1,4-Dioxane	88	8.715	8.721	(1.168)	26690	400.000	476	
$	58 Toluene-D8	98	9.652	9.650	(1.293)	1279205	50.0000	50.2	
	59 Toluene	92	9.723	9.721	(1.303)	260974	20.0000	19.6	
	61 4-methyl-2-pentanone	43	10.345	10.343	(1.386)	583655	100.000	94.4	
	60 Tetrachloroethene	164	10.266	10.265	(0.865)	75012	20.0000	19.5	
	62 trans-1,3-Dichloropropene	75	10.381	10.379	(1.391)	158881	20.0000	18.5	
	63 1,1,2-Trichloroethane	83	10.595	10.593	(1.419)	80731	20.0000	19.2	
	64 Dibromochloromethane	129	10.831	10.829	(0.913)	96816	20.0000	18.9	
	65 1,3-Dichloropropane	76	10.967	10.972	(0.924)	192227	20.0000	20.6	
	66 1,2-Dibromoethane	107	11.124	11.122	(1.490)	96392	20.0000	18.9	
	67 2-Hexanone	43	11.560	11.558	(0.974)	385212	100.000	93.1	
*	68 Chlorobenzene-D5	117	11.868	11.873	(1.000)	1069387	50.0000		
	69 Chlorobenzene	112	11.889	11.894	(1.002)	299528	20.0000	20.1	
	70 1-Chlorohexane	91	11.925	11.923	(1.005)	148118	20.0000	20.7	
	71 Ethylbenzene	106	11.968	11.966	(1.008)	156073	20.0000	18.9	
	72 1,1,1,2-Tetrachloroethane	131	12.003	12.002	(1.011)	99853	20.0000	20.1	
	73 m+p-Xylenes	106	12.182	12.180	(1.027)	390236	40.0000	37.5	
	74 o-Xylene	106	12.740	12.745	(1.073)	183701	20.0000	18.9	
	75 Styrene	104	12.818	12.817	(1.080)	307786	20.0000	18.3	
	76 Bromoform	173	12.818	12.817	(1.080)	63004	20.0000	17.9	
	77 Isopropylbenzene	105	13.161	13.160	(0.888)	441106	20.0000	19.0	
$	78 P-Bromofluorobenzene	95	13.490	13.488	(1.807)	555122	50.0000	50.1	
	79 cis-1,4-Dichloro-2-Butene	53	13.604	13.610	(0.918)	51049	20.0000	18.8	
	86 trans-1,4-Dichloro-2-Butene	53	13.998	13.996	(0.944)	38156	20.0000	19.5	
	80 Bromobenzene	156	13.597	13.596	(0.917)	119237	20.0000	20.7	
	81 N-Propylbenzene	91	13.676	13.674	(0.922)	570636	20.0000	20.8	

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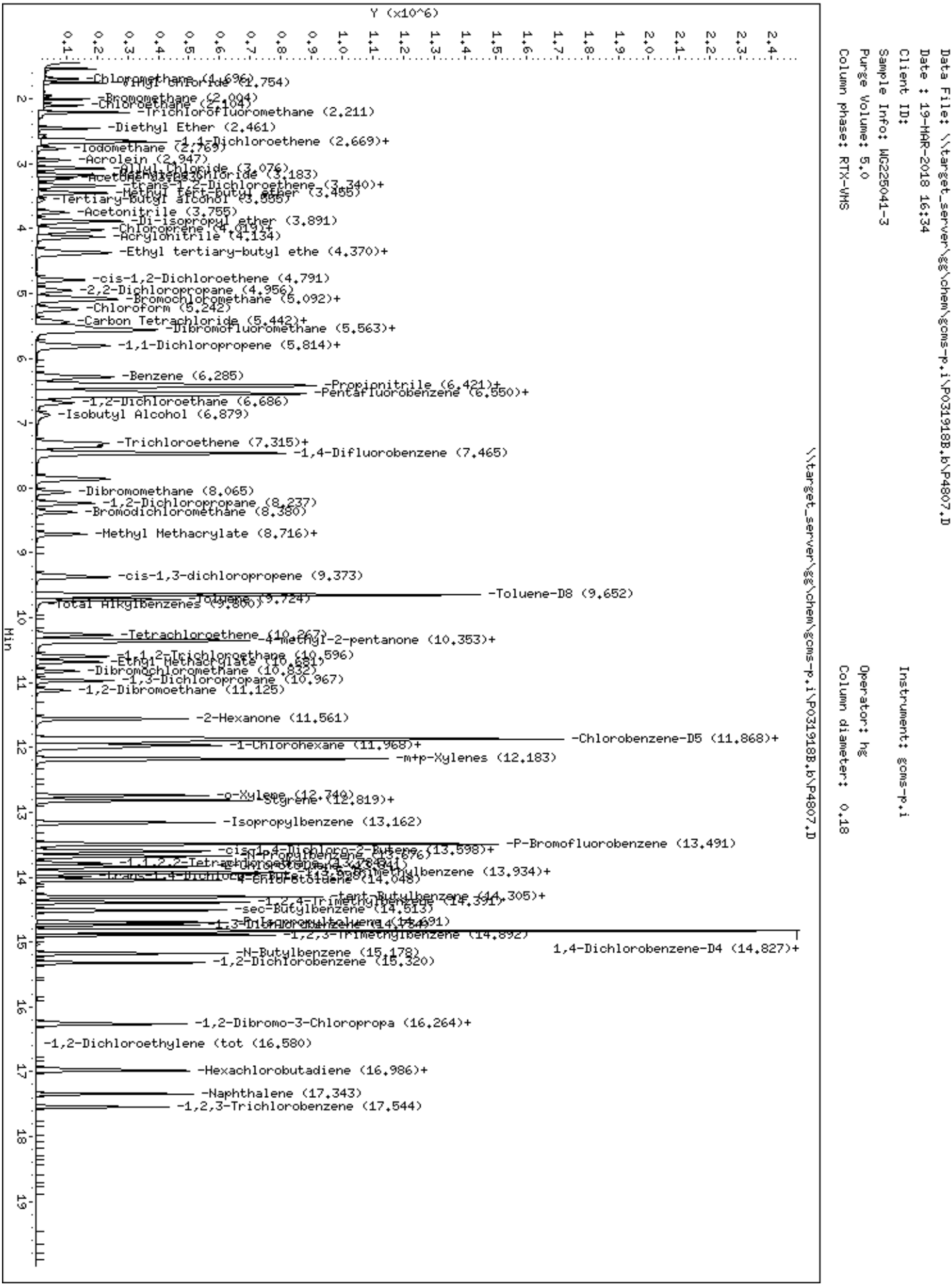
Report Date: 21-Mar-2018 10:24

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	82 1,1,2,2-Tetrachloroethane	83	13.790	13.789	(0.930)	137800	20.0000	20.5	
	85 1,3,5-Trimethylbenzene	105	13.933	13.932	(0.940)	379779	20.0000	18.9	
	83 2-Chlorotoluene	91	13.840	13.839	(0.933)	342942	20.0000	20.9	
	84 1,2,3-Trichloropropane	75	13.926	13.924	(0.939)	124248	20.0000	20.2	
	87 4-Chlorotoluene	91	14.048	14.046	(0.947)	365152	20.0000	19.4	
	88 tert-Butylbenzene	119	14.305	14.303	(0.965)	374433	20.0000	18.7	
	89 Pentachloroethane	165	14.312	14.310	(0.965)	55684	20.0000	19.9	
	90 1,2,4-Trimethylbenzene	105	14.391	14.389	(0.971)	402303	20.0000	19.1	
	92 P-Isopropyltoluene	119	14.691	14.696	(0.991)	384616	20.0000	18.7	
	93 1,3-Dichlorobenzene	146	14.734	14.739	(0.994)	230658	20.0000	20.7	
*	94 1,4-Dichlorobenzene-D4	152	14.827	14.825	(1.000)	569119	50.0000		
	95 1,4-Dichlorobenzene	146	14.841	14.847	(1.001)	240789	20.0000	19.8	
	97 N-Butylbenzene	91	15.177	15.175	(1.024)	344293	20.0000	18.8	
	91 sec-Butylbenzene	105	14.512	14.511	(0.979)	463527	20.0000	18.9	
	99 1,2-Dichlorobenzene	146	15.320	15.325	(1.033)	215598	20.0000	20.3	
	100 1,2-Dibromo-3-Chloropropane	75	16.235	16.239	(1.095)	24058	20.0000	19.6	
	101 1,3,5-Trichlorobenzene	180	16.271	16.268	(1.097)	148830	20.0000	19.8	
	102 Hexachlorobutadiene	225	16.964	16.962	(1.144)	44519	20.0000	20.1	
	103 1,2,4-Trichlorobenzene	180	16.985	16.984	(1.146)	130266	20.0000	19.8	
	96 1,2,3-Trimethylbenzene	105	14.891	14.889	(1.004)	427581	20.0000	20.2	
	104 Naphthalene	128	17.343	17.347	(1.170)	361473	20.0000	19.3	
	105 1,2,3-Trichlorobenzene	180	17.543	17.541	(1.183)	125006	20.0000	20.6	
	17 Methyl Acetate	43	3.354	3.353	(0.513)	85647	20.0000	19.5	
	46 Methylcyclohexane	83	7.314	7.313	(1.119)	158250	20.0000	18.6	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Column phase: RTX-VMS
Instrument: gcms-p.i
Operator: hg
Column diameter: 0.18
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Y (x10^6)
Min
-Chloromethane (1.696)
-Vinyl chloride (1.754)
-Bromomethane (2.004)
-Chloroethane (2.104)
-Trichlorofluoromethane (2.211)
-Diethyl Ether (2.461)
-1,1-Dichloroethene (2.669)+
-Iodomethane (2.769)
-Acrolein (2.947)
-Allyl Chloride (3.076)
-Methyl tert-butyl ether (3.455)
-Tertiary-butyl alcohol (3.555)
-Acetonitrile (3.755)
-Di-isopropyl ether (3.891)
-Chloroprene (4.019)+
-Acrylonitrile (4.134)
-Ethyl tertiary-butyl ethe (4.370)+
-cis-1,2-Dichloroethene (4.791)
-2,2-Dichloropropane (4.956)
-Bromochloromethane (5.092)+
-Chloroform (5.242)
-Carbon Tetrachloride (5.442)+
-Dibromofluoromethane (5.563)+
-1,1-Dichloropropene (5.814)+
-Benzene (6.285)
-Propionitrile (6.421)+
-Pentafluorobenzene (6.550)+
-1,2-Dichloroethane (6.686)
-Isobutyl Alcohol (6.879)
-Trichloroethene (7.315)+
-1,4-Difluorobenzene (7.465)
-Dibromomethane (8.065)
-1,2-Dichloropropane (8.237)
-Bromodichloromethane (8.380)
-Methyl Methacrylate (8.716)+
-cis-1,3-dichloropropene (9.373)
-Toluene-D8 (9.652)
-Total Alkylbenzenes (9.800)
-Tetrachloroethene (10.267)
-4-methyl-2-pentanone (10.353)+
-1,1,2-Trichloroethane (10.596)
-Ethyl Methacrylate (10.681)
-Dibromochloromethane (10.832)
-1,3-Dichloropropane (10.967)
-1,2-Dibromoethane (11.125)
-2-Hexanone (11.561)
-Chlorobenzene-D5 (11.868)+
-1-Chlorohexane (11.968)+
-m+p-Xylenes (12.183)
-o-Xylene (12.740)
-Styrene (12.819)+
-Isopropylbenzene (13.162)
-P-Bromofluorobenzene (13.491)
-N-Propylbenzene (13.676)
-1,1,2,2-Tetrachloroethane (13.741)
-4-Chlorotoluene (14.048)
-tert-Butylbenzene (14.305)+
-1,2,4-Trimethylbenzene (14.391)
-sec-Butylbenzene (14.513)
-1,3-Dichlorobenzene (14.754)
-1,2,3-Trimethylbenzene (14.892)
1,4-Dichlorobenzene-D4 (14.827)+
-N-Butylbenzene (15.178)
-1,2-Dichlorobenzene (15.320)
-1,2-Dibromo-3-Chloropropa (16.264)+
-1,2-Dichloroethylene (tot (16.580)
-Hexachlorobutadiene (16.986)+
-Naphthalene (17.343)
-1,2,3-Trichlorobenzene (17.544)

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Report Date: 21-Mar-2018 10:24

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-p.i\P031918B.b\P4808.D
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Operator : hg Inst ID: gcms-p.i
Smp Info : WG225041-2
Misc Info :
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Meth Date : 21-Mar-2018 10:23 gcms-p.i Quant Type: ISTD
Cal Date : 19-MAR-2018 17:08 Cal File: P4808.D
Als bottle: 5 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all50.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.536	1.537	(0.235)	22408	5.00000	4.8	
2	Chloromethane	50	1.694	1.694	(0.259)	33272	5.00000	5.0	
3	Vinyl chloride	62	1.751	1.751	(0.268)	34844	5.00000	5.0	
4	Bromomethane	94	2.008	2.001	(0.307)	16431	5.00000	5.4	
5	Chloroethane	64	2.108	2.101	(0.323)	21838	5.00000	4.9	
6	Trichlorofluoromethane	101	2.208	2.209	(0.338)	45277	5.00000	4.8	
7	Diethyl Ether	59	2.458	2.459	(0.376)	24777	5.00000	4.9	
19	Tertiary-butyl alcohol	59	3.566	3.560	(0.546)	6013	25.0000	24.9	
8	1,1-Dichloroethene	96	2.630	2.631	(0.403)	22780	5.00000	5.3	
10	Carbon Disulfide	76	2.666	2.666	(0.408)	73777	5.00000	5.0	
9	Freon-113	151	2.666	2.659	(0.408)	15514	5.00000	4.8	
11	Iodomethane	142	2.773	2.766	(0.425)	20552	5.00000	4.6	
12	Acrolein	56	2.945	2.945	(0.451)	22319	25.0000	22.4	
14	Methylene Chloride	84	3.180	3.181	(0.487)	30384	5.00000	5.4	
15	Acetone	43	3.230	3.231	(0.495)	39016	25.0000	26.3	
45	Isobutyl Alcohol	43	6.883	6.869	(1.054)	7893	100.000	106	
16	trans-1,2-Dichloroethene	96	3.338	3.338	(0.511)	23454	5.00000	5.0	
13	Allyl Chloride	41	3.073	3.074	(0.470)	34104	5.00000	4.6	
18	Methyl tert-butyl ether	73	3.452	3.453	(0.528)	64473	5.00000	4.8	
20	Acetonitrile	41	3.752	3.753	(0.574)	36281	50.0000	49.7	
21	Di-isopropyl ether	45	3.888	3.889	(0.595)	68660	5.00000	4.3	
22	Chloroprene	53	4.010	4.017	(0.614)	32554	5.00000	4.5	
39	Propionitrile	54	6.390	6.390	(0.978)	36801	50.0000	45.1	
40	Methacrylonitrile	41	6.426	6.426	(0.984)	169143	50.0000	45.0	

Data File: \\target_server\gg\chem\gcms-p.i\P031918B.b\P4808.D
Report Date: 21-Mar-2018 10:24

			QUANT SIG					AMOUNTS		
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	23	1,1-Dichloroethane	63	4.052	4.053	(0.620)	44945	5.00000	5.2	
	24	Acrylonitrile	52	4.131	4.131	(0.632)	44182	25.0000	23.4	
	25	Ethyl tertiary-butyl ether	59	4.374	4.368	(0.670)	57805	5.00000	5.1	
	26	Vinyl Acetate	43	4.396	4.396	(0.589)	43335	5.00000	6.1	
	27	cis-1,2-Dichloroethene	96	4.789	4.796	(0.733)	25601	5.00000	5.2	
	52	Methyl Methacrylate	41	8.713	8.706	(1.168)	16947	5.00000	5.7	
	28	2,2-Dichloropropane	77	4.953	4.954	(0.758)	29356	5.00000	5.0	
	29	Bromochloromethane	128	5.110	5.104	(0.782)	12205	5.00000	4.6	
	31	Chloroform	83	5.246	5.240	(0.803)	42216	5.00000	5.1	
	32	Carbon Tetrachloride	117	5.439	5.440	(0.729)	29450	5.00000	5.0	
	33	Tetrahydrofuran	42	5.511	5.497	(0.844)	36028	25.0000	25.8	
$	34	Dibromofluoromethane	113	5.561	5.561	(0.851)	276648	50.0000	49.9	
	35	1,1,1-Trichloroethane	97	5.568	5.576	(0.852)	37024	5.00000	5.2	
	37	1,1-Dichloropropene	75	5.804	5.797	(0.778)	32893	5.00000	5.0	
	36	2-Butanone	43	5.825	5.819	(0.892)	59557	25.0000	24.8	
	38	Benzene	78	6.283	6.290	(0.842)	101275	5.00000	5.1	
*	41	Pentafluorobenzene	168	6.533	6.533	(1.000)	563726	50.0000		
	30	Cyclohexane	56	5.075	5.075	(0.777)	35717	5.00000	5.3	
	53	Ethyl Methacrylate	69	10.679	10.679	(1.431)	22721	5.00000	5.5	
$	42	1,2-Dichloroethane-D4	65	6.554	6.562	(1.003)	386116	50.0000	49.2	
	43	Tertiary-amyl methyl ether	73	6.569	6.562	(1.005)	54300	5.00000	5.3	
	44	1,2-Dichloroethane	62	6.683	6.684	(0.896)	38750	5.00000	5.2	
	47	Trichloroethene	95	7.355	7.363	(0.986)	23601	5.00000	5.0	
*	48	1,4-Difluorobenzene	114	7.462	7.463	(1.000)	967088	50.0000		
	49	Dibromomethane	93	8.070	8.063	(1.081)	14896	5.00000	5.8	
	50	1,2-Dichloropropane	63	8.234	8.242	(1.103)	24525	5.00000	4.9	
	51	Bromodichloromethane	83	8.377	8.378	(1.123)	30478	5.00000	4.8	
	57	cis-1,3-dichloropropene	75	9.378	9.378	(1.257)	37640	5.00000	5.4	
	54	1,4-Dioxane	88	8.720	8.721	(1.169)	8427	100.000	156	
$	58	Toluene-D8	98	9.649	9.650	(1.293)	1229161	50.0000	50.1	
	59	Toluene	92	9.721	9.721	(1.303)	64245	5.00000	5.0	
	61	4-methyl-2-pentanone	43	10.350	10.343	(1.387)	123446	25.0000	27.1	
	60	Tetrachloroethene	164	10.264	10.265	(0.865)	18521	5.00000	5.0	
	62	trans-1,3-Dichloropropene	75	10.378	10.379	(1.391)	34284	5.00000	5.8	
	63	1,1,2-Trichloroethane	83	10.600	10.593	(1.420)	19200	5.00000	5.7	
	64	Dibromochloromethane	129	10.829	10.829	(0.912)	21679	5.00000	5.5	
	65	1,3-Dichloropropane	76	10.972	10.972	(0.924)	45015	5.00000	5.0	
	66	1,2-Dibromoethane	107	11.122	11.122	(1.490)	22370	5.00000	5.7	
	67	2-Hexanone	43	11.558	11.558	(0.974)	76868	25.0000	24.8	
*	68	Chlorobenzene-D5	117	11.872	11.873	(1.000)	1027379	50.0000		
	69	Chlorobenzene	112	11.894	11.894	(1.002)	73364	5.00000	5.1	
	70	1-Chlorohexane	91	11.922	11.923	(1.004)	33044	5.00000	4.8	
	71	Ethylbenzene	106	11.965	11.966	(1.008)	36679	5.00000	5.6	
	72	1,1,1,2-Tetrachloroethane	131	12.008	12.002	(1.011)	22941	5.00000	4.8	
	73	m+p-Xylenes	106	12.180	12.180	(1.026)	87426	10.0000	10.7	
	74	o-Xylene	106	12.744	12.745	(1.073)	37776	5.00000	5.0	
	75	Styrene	104	12.823	12.817	(1.080)	61441	5.00000	5.4	
	76	Bromoform	173	12.816	12.817	(1.079)	13226	5.00000	5.7	
	77	Isopropylbenzene	105	13.159	13.160	(0.888)	93275	5.00000	4.9	
$	78	P-Bromofluorobenzene	95	13.488	13.488	(1.807)	522076	50.0000	48.9	
	79	cis-1,4-Dichloro-2-Butene	53	13.609	13.610	(0.918)	10035	5.00000	5.2	
	86	trans-1,4-Dichloro-2-Butene	53	13.995	13.996	(0.944)	8110	5.00000	4.3	
	80	Bromobenzene	156	13.602	13.596	(0.918)	27440	5.00000	5.0	
	81	N-Propylbenzene	91	13.681	13.674	(0.923)	128635	5.00000	4.9	

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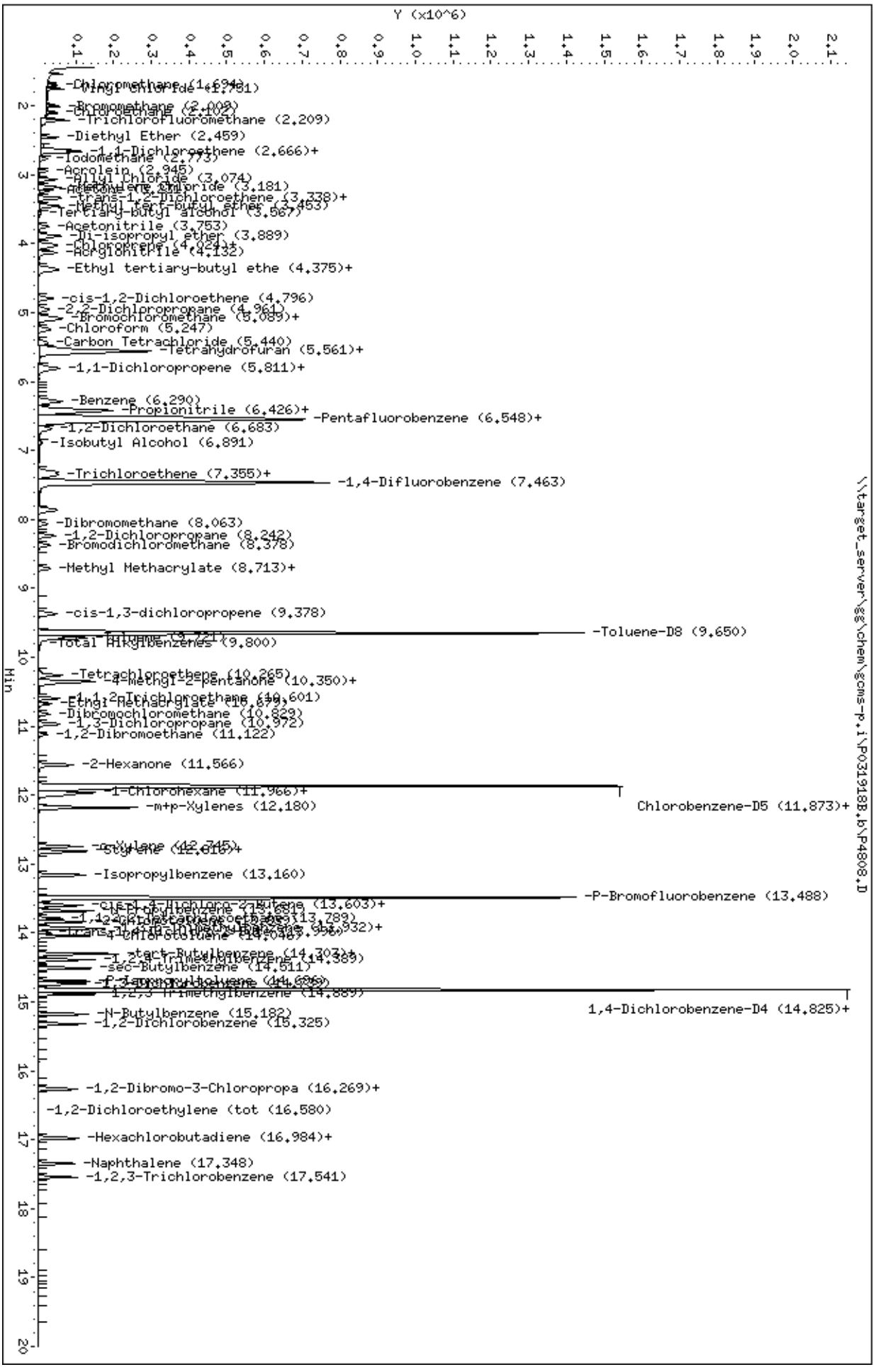
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
82	1,1,2,2-Tetrachloroethane	83	13.788	13.789	(0.930)	32530	5.00000	5.1	
85	1,3,5-Trimethylbenzene	105	13.938	13.932	(0.940)	81328	5.00000	5.2	
83	2-Chlorotoluene	91	13.838	13.839	(0.933)	74373	5.00000	4.8	
84	1,2,3-Trichloropropane	75	13.924	13.924	(0.939)	29732	5.00000	5.0	
87	4-Chlorotoluene	91	14.045	14.046	(0.947)	84442	5.00000	5.2	
88	tert-Butylbenzene	119	14.303	14.303	(0.965)	79038	5.00000	5.2	
89	Pentachloroethane	165	14.310	14.310	(0.965)	11718	5.00000	4.4	
90	1,2,4-Trimethylbenzene	105	14.388	14.389	(0.971)	86614	5.00000	5.0	
92	P-Isopropyltoluene	119	14.696	14.696	(0.991)	79229	5.00000	5.0	
93	1,3-Dichlorobenzene	146	14.739	14.739	(0.994)	55159	5.00000	5.2	
* 94	1,4-Dichlorobenzene-D4	152	14.825	14.825	(1.000)	543195	50.0000		
95	1,4-Dichlorobenzene	146	14.846	14.847	(1.001)	61653	5.00000	5.3	
97	N-Butylbenzene	91	15.182	15.175	(1.024)	71598	5.00000	5.1	
91	sec-Butylbenzene	105	14.510	14.511	(0.979)	104273	5.00000	5.1	
99	1,2-Dichlorobenzene	146	15.325	15.325	(1.034)	52648	5.00000	5.2	
100	1,2-Dibromo-3-Chloropropane	75	16.240	16.239	(1.095)	5039	5.00000	5.5	
101	1,3,5-Trichlorobenzene	180	16.268	16.268	(1.097)	32576	5.00000	4.5	
102	Hexachlorobutadiene	225	16.962	16.962	(1.144)	10618	5.00000	5.0	
103	1,2,4-Trichlorobenzene	180	16.983	16.984	(1.146)	29565	5.00000	4.7	
96	1,2,3-Trimethylbenzene	105	14.896	14.889	(1.005)	89481	5.00000	4.4	
104	Naphthalene	128	17.348	17.347	(1.170)	70949	5.00000	5.0	
105	1,2,3-Trichlorobenzene	180	17.541	17.541	(1.183)	28877	5.00000	5.0	
17	Methyl Acetate	43	3.352	3.353	(0.513)	19535	5.00000	4.6	
46	Methylcyclohexane	83	7.312	7.313	(1.119)	32409	5.00000	5.2	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Purge Volume: 5.0
Column phase: RTX-VMS
Instrument: gcms-p.i
Operator: hg
Column diameter: 0.18
\\target_server\gg\chem\gcms-p.i\P031918B.b\P4808.D
Y (x10^6)
Min
-Chloromethane (1.694)
-Vinyl Chloride (1.781)
-Bromomethane (2.009)
-Chloroethane (2.102)
-Trichlorofluoromethane (2.209)
-Diethyl Ether (2.459)
-1,1-Dichloroethene (2.666)+
-Iodomethane (2.773)
-Acrolein (2.945)
-Allyl Chloride (3.074)
-Methylene Chloride (3.181)
-trans-1,2-Dichloroethene (3.338)+
-Methyl tert-butyl ether (3.463)
-Tertiary-butyl alcohol (3.567)
-Acetonitrile (3.753)
-Di-isopropyl ether (3.889)
-Chloroprene (4.024)+
-Acrylonitrile (4.132)
-Ethyl tertiary-butyl ethe (4.375)+
-cis-1,2-Dichloroethene (4.796)
-2,2-Dichloropropane (4.961)
-Bromochloromethane (5.089)+
-Chloroform (5.247)
-Carbon Tetrachloride (5.440)
-Tetrahydrofuran (5.561)+
-1,1-Dichloropropene (5.811)+
-Benzene (6.290)
-Propionitrile (6.426)+
-Pentafluorobenzene (6.548)+
-1,2-Dichloroethane (6.683)
-Isobutyl Alcohol (6.891)
-Trichloroethene (7.355)+
-1,4-Difluorobenzene (7.463)
-Dibromomethane (8.063)
-1,2-Dichloropropane (8.242)
-Bromodichloromethane (8.378)
-Methyl Methacrylate (8.713)+
-cis-1,3-dichloropropene (9.378)
-Toluene-D8 (9.650)
-Total Alkylbenzenes (9.800)
-Tetrachloroethene (10.265)
-4-Methyl-2-pentanone (10.350)+
-1,1,2-Trichloroethane (10.601)
-Ethyl Methacrylate (10.677)
-Dibromochloromethane (10.829)
-1,3-Dichloropropane (10.972)
-1,2-Dibromoethane (11.122)
-2-Hexanone (11.566)
-1-Chlorohexane (11.966)+
-m+p-Xylenes (12.180)
Chlorobenzene-D5 (11.873)+
-o-Xylene (12.745)
-Styrene (12.816)+
-Isopropylbenzene (13.160)
-P-Bromofluorobenzene (13.488)
-cis-1,4-Dichloro-2-Butene (13.603)+
-n-Propylbenzene (13.688)
-1,1,2,2-Tetrachloroethane (13.789)
-2-Chlorotoluene (13.932)+
-trans-1,4-Dichloro-2-Butene (13.996)
-4-Chlorotoluene (14.046)
-tert-Butylbenzene (14.303)+
-1,2,4-Trimethylbenzene (14.389)
-sec-Butylbenzene (14.511)
-p-Isopropyltoluene (14.686)
-1,3-Dichlorobenzene (14.689)
-1,4-Dichlorobenzene-D4 (14.825)+
-N-Butylbenzene (15.182)
-1,2-Dichlorobenzene (15.325)
-1,2-Dibromo-3-Chloropropa (16.269)+
-1,2-Dichloroethylene (tot (16.580)
-Hexachlorobutadiene (16.984)+
-Naphthalene (17.348)
-1,2,3-Trichlorobenzene (17.541)

Data File: \\target_server\gg\chem\gcms-p.i\P031918B.b\P4809.D
Report Date: 21-Mar-2018 10:24

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-p.i\P031918B.b\P4809.D
Lab Smp Id: WG225041-1
Inj Date : 19-MAR-2018 17:42 MS Autotune Date: 24-JAN-2018 13:57
Operator : hg Inst ID: gcms-p.i
Smp Info : WG225041-1
Misc Info :
Comment : SW846 5030
Method : \\target_server\gg\chem\gcms-p.i\P031918B.b\P8A05(62)D.m
Meth Date : 21-Mar-2018 10:23 gcms-p.i Quant Type: ISTD
Cal Date : 19-MAR-2018 17:42 Cal File: P4809.D
Als bottle: 6 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all50.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

TTC

8:47 am, Mar 29, 2018

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.536	1.537	(0.235)	4224	1.00000	0.96(a)	
2	Chloromethane	50	1.693	1.694	(0.259)	6795	1.00000	1.1	
3	Vinyl chloride	62	1.750	1.751	(0.268)	6643	1.00000	1.0	
4	Bromomethane	94	2.007	2.001	(0.307)	3385	1.00000	1.2	
5	Chloroethane	64	2.107	2.101	(0.323)	4623	1.00000	1.1	
6	Trichlorofluoromethane	101	2.215	2.209	(0.339)	9223	1.00000	1.0	
7	Diethyl Ether	59	2.458	2.459	(0.376)	4560	1.00000	0.95(a)	
19	Tertiary-butyl alcohol	59	3.558	3.560	(0.545)	743	5.00000	8.8	
8	1,1-Dichloroethene	96	2.629	2.631	(0.403)	3156	1.00000	0.77(a)	
10	Carbon Disulfide	76	2.665	2.666	(0.408)	11977	1.00000	0.86(a)	
9	Freon-113	151	2.665	2.659	(0.408)	3071	1.00000	1.0	
11	Iodomethane	142	2.772	2.766	(0.424)	4149	1.00000	0.98(a)	
12	Acrolein	56	2.944	2.945	(0.451)	4566	5.00000	4.8(a)	
15	Acetone	43	3.237	3.231	(0.496)	7118	5.00000	5.0	
45	Isobutyl Alcohol	43	6.897	6.869	(1.056)	758	20.0000	63.1(M)	M6
16	trans-1,2-Dichloroethene	96	3.337	3.338	(0.511)	3547	1.00000	0.80(a)	
13	Allyl Chloride	41	3.072	3.074	(0.470)	6813	1.00000	0.96(a)	
18	Methyl tert-butyl ether	73	3.458	3.453	(0.529)	9073	1.00000	0.71(a)	
20	Acetonitrile	41	3.759	3.753	(0.575)	8448	10.0000	12.2(a)	
21	Di-isopropyl ether	45	3.887	3.889	(0.595)	12633	1.00000	0.84(a)	
22	Chloroprene	53	4.023	4.017	(0.616)	5391	1.00000	0.78(a)	
39	Propionitrile	54	6.403	6.390	(0.980)	6784	10.0000	8.7(a)	
40	Methacrylonitrile	41	6.425	6.426	(0.984)	27992	10.0000	7.8(a)	
23	1,1-Dichloroethane	63	4.059	4.053	(0.621)	6329	1.00000	0.76(a)	

Data File: \\target_server\gg\chem\gcms-p.i\P031918B.b\P4809.D
Report Date: 21-Mar-2018 10:24

TTC

8:48 am, Mar 29, 2018

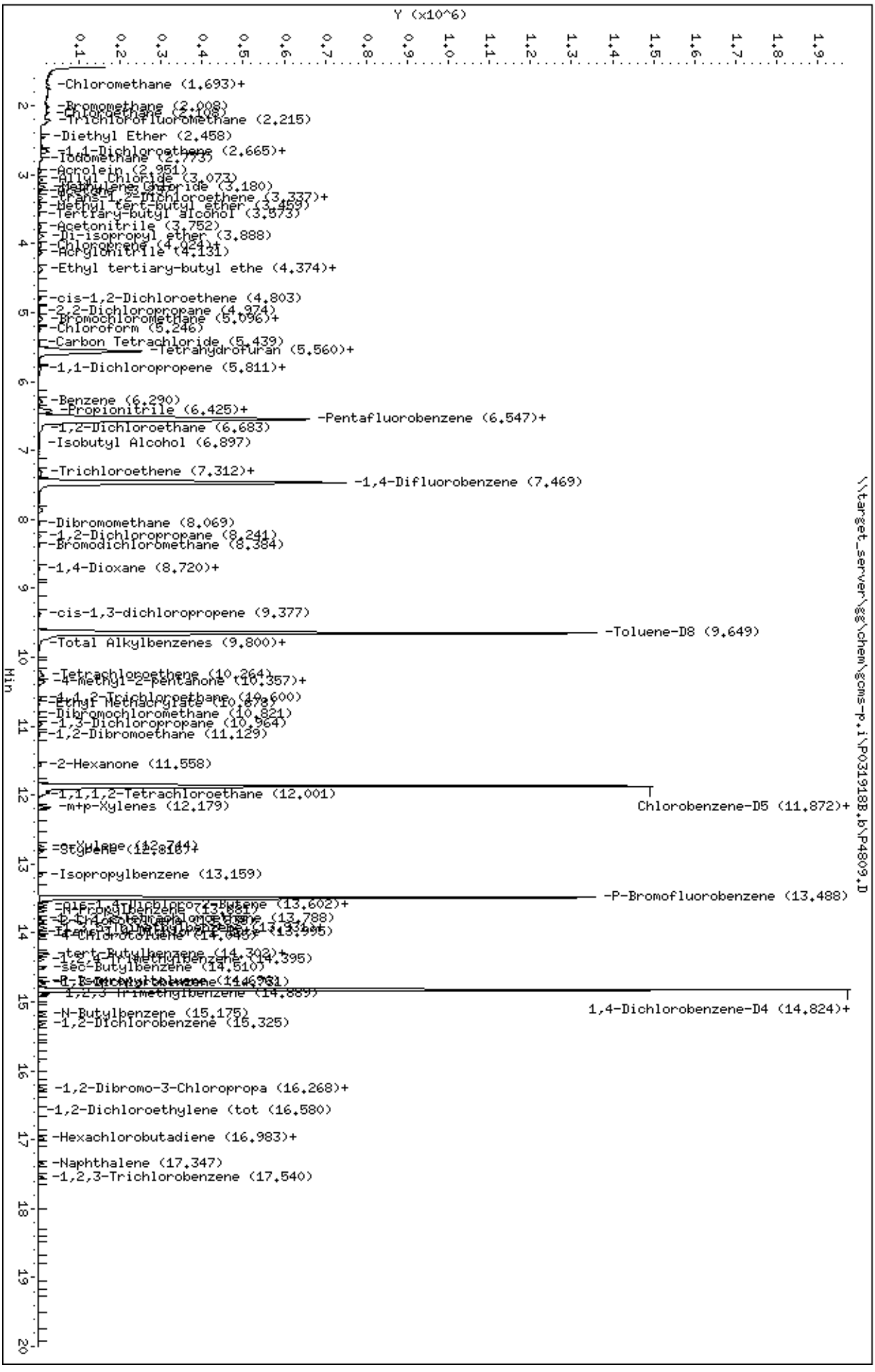
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	24 Acrylonitrile	52	4.137	4.131	(0.633)	7730	5.00000	4.3(a)	
	25 Ethyl tertiary-butyl ether	59	4.373	4.368	(0.670)	8790	1.00000	2.1	
	26 Vinyl Acetate	43	4.402	4.396	(0.589)	6180	1.00000	2.2(M)	M6
	27 cis-1,2-Dichloroethene	96	4.802	4.796	(0.735)	3143	1.00000	1.1(M)	M9
	52 Methyl Methacrylate	41	8.712	8.706	(1.167)	2499	1.00000	3.3(M)	M6
	28 2,2-Dichloropropane	77	4.952	4.954	(0.758)	4223	1.00000	0.75(TaM)	M9
	31 Chloroform	83	5.245	5.240	(0.803)	6254	1.00000	0.79(a)	
	32 Carbon Tetrachloride	117	5.446	5.440	(0.729)	4306	1.00000	0.77(a)	
	33 Tetrahydrofuran	42	5.531	5.497	(0.847)	4871	5.00000	8.4	
$	34 Dibromofluoromethane	113	5.560	5.561	(0.851)	262099	50.0000	49.7	
	35 1,1,1-Trichloroethane	97	5.560	5.576	(0.851)	4921	1.00000	0.72(a)	
	37 1,1-Dichloropropene	75	5.796	5.797	(0.776)	4419	1.00000	0.70(a)	
	36 2-Butanone	43	5.817	5.819	(0.891)	7957	5.00000	3.5(a)	
	38 Benzene	78	6.289	6.290	(0.842)	14586	1.00000	0.77(a)	
*	41 Pentafluorobenzene	168	6.532	6.533	(1.000)	537045	50.0000		
	30 Cyclohexane	56	5.067	5.075	(0.776)	4762	1.00000	1.8(M)	M9
	53 Ethyl Methacrylate	69	10.685	10.679	(1.431)	3092	1.00000	3.3	
$	42 1,2-Dichloroethane-D4	65	6.561	6.562	(1.004)	373887	50.0000	50.0	
	43 Tertiary-amyl methyl ether	73	6.561	6.562	(1.004)	9546	1.00000	2.5(M)	M6
	44 1,2-Dichloroethane	62	6.682	6.684	(0.895)	6964	1.00000	0.98(a)	
	47 Trichloroethene	95	7.354	7.363	(0.985)	3355	1.00000	0.75(a)	
*	48 1,4-Difluorobenzene	114	7.468	7.463	(1.000)	923260	50.0000		
	49 Dibromomethane	93	8.062	8.063	(1.079)	1859	1.00000	1.9	
	50 1,2-Dichloropropane	63	8.240	8.242	(1.103)	3524	1.00000	0.74(Ta)	
	51 Bromodichloromethane	83	8.391	8.378	(1.123)	4358	1.00000	0.72(Ta)	
	57 cis-1,3-dichloropropene	75	9.377	9.378	(1.256)	4306	1.00000	2.1	
	54 1,4-Dioxane	88	8.727	8.721	(1.168)	1626	20.0000	31.5	
$	58 Toluene-D8	98	9.649	9.650	(1.292)	1160208	50.0000	49.6	
	59 Toluene	92	9.727	9.721	(1.302)	9807	1.00000	0.80(a)	
	61 4-methyl-2-pentanone	43	10.349	10.343	(1.386)	12745	5.00000	10.2	
	60 Tetrachloroethene	164	10.270	10.265	(0.865)	3168	1.00000	0.91(a)	
	62 trans-1,3-Dichloropropene	75	10.378	10.379	(1.390)	4225	1.00000	2.6	
	63 1,1,2-Trichloroethane	83	10.599	10.593	(1.419)	2442	1.00000	1.9	
	64 Dibromochloromethane	129	10.821	10.829	(0.911)	2759	1.00000	2.0	
	65 1,3-Dichloropropane	76	10.971	10.972	(0.924)	6034	1.00000	0.71(a)	
	66 1,2-Dibromoethane	107	11.128	11.122	(1.490)	2865	1.00000	2.1(T)	
	67 2-Hexanone	43	11.557	11.558	(0.974)	7169	5.00000	8.7	
*	68 Chlorobenzene-D5	117	11.872	11.873	(1.000)	970678	50.0000		
	69 Chlorobenzene	112	11.893	11.894	(1.002)	11548	1.00000	0.85(a)	
	70 1-Chlorohexane	91	11.922	11.923	(1.004)	4612	1.00000	0.71(a)	
	71 Ethylbenzene	106	11.965	11.966	(1.008)	4883	1.00000	1.9	
	72 1,1,1,2-Tetrachloroethane	131	12.000	12.002	(1.011)	3294	1.00000	0.73(a)	
	73 m+p-Xylenes	106	12.186	12.180	(1.026)	10731	2.00000	3.6	
	74 o-Xylene	106	12.737	12.745	(1.073)	4276	1.00000	1.7	
	75 Styrene	104	12.822	12.817	(1.080)	5896	1.00000	2.3	
	76 Bromoform	173	12.822	12.817	(1.080)	1537	1.00000	2.7	
	77 Isopropylbenzene	105	13.158	13.160	(0.888)	9742	1.00000	1.4	
$	78 P-Bromofluorobenzene	95	13.487	13.488	(1.806)	486789	50.0000	47.8	
	79 cis-1,4-Dichloro-2-Butene	53	13.609	13.610	(0.918)	1859	1.00000	2.4	
	86 trans-1,4-Dichloro-2-Butene	53	13.995	13.996	(0.944)	1517	1.00000	0.87(a)	
	80 Bromobenzene	156	13.601	13.596	(0.918)	4078	1.00000	0.79(a)	
	81 N-Propylbenzene	91	13.680	13.674	(0.923)	17065	1.00000	0.70(a)	
	82 1,1,2,2-Tetrachloroethane	83	13.787	13.789	(0.930)	4543	1.00000	0.76(a)	
	85 1,3,5-Trimethylbenzene	105	13.930	13.932	(0.940)	8907	1.00000	1.7	

Data File: \\target_server\gg\chem\gcms-p.i\P031918B.b\P4809.D
Report Date: 21-Mar-2018 10:24

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
83	2-Chlorotoluene	91	13.837	13.839	(0.933)	10450	1.00000	0.71(a)	
84	1,2,3-Trichloropropane	75	13.923	13.924	(0.939)	4008	1.00000	0.73(a)	
87	4-Chlorotoluene	91	14.045	14.046	(0.947)	10824	1.00000	1.2	
88	tert-Butylbenzene	119	14.302	14.303	(0.965)	9422	1.00000	1.9	
90	1,2,4-Trimethylbenzene	105	14.395	14.389	(0.971)	8467	1.00000	1.4	
92	P-Isopropyltoluene	119	14.695	14.696	(0.991)	8320	1.00000	1.7	
93	1,3-Dichlorobenzene	146	14.738	14.739	(0.994)	7750	1.00000	0.78(a)	
* 94	1,4-Dichlorobenzene-D4	152	14.824	14.825	(1.000)	508194	50.0000		
95	1,4-Dichlorobenzene	146	14.845	14.847	(1.001)	9930	1.00000	0.91(a)	
97	N-Butylbenzene	91	15.181	15.175	(1.024)	8451	1.00000	1.7	
91	sec-Butylbenzene	105	14.509	14.511	(0.979)	11786	1.00000	1.3	
99	1,2-Dichlorobenzene	146	15.324	15.325	(1.034)	7278	1.00000	0.77(a)	
100	1,2-Dibromo-3-Chloropropane	75	16.232	16.239	(1.095)	531	1.00000	2.0	
101	1,3,5-Trichlorobenzene	180	16.268	16.268	(1.097)	6108	1.00000	0.91(a)	
102	Hexachlorobutadiene	225	16.968	16.962	(1.145)	1822	1.00000	0.92(a)	
103	1,2,4-Trichlorobenzene	180	16.990	16.984	(1.146)	4942	1.00000	0.84(a)	
96	1,2,3-Trimethylbenzene	105	14.888	14.889	(1.004)	15724	1.00000	0.83(a)	
104	Naphthalene	128	17.347	17.347	(1.170)	9897	1.00000	1.9	
105	1,2,3-Trichlorobenzene	180	17.540	17.541	(1.183)	4788	1.00000	0.88(a)	
17	Methyl Acetate	43	3.358	3.353	(0.514)	4116	1.00000	1.0	
46	Methylcyclohexane	83	7.304	7.313	(1.118)	5259	1.00000	2.2	

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.


Data File: \\target_server\gg\chem\gcms-p.i\P031918B.b\P4809.D
Date : 19-MAR-2018 17:42
Client ID:
Sample Info: WG225041-1
Purge Volume: 5.0
Column phase: RTX-VMS
Instrument: gcms-p.i
Operator: hg
Column diameter: 0.18
\\target_server\gg\chem\gcms-p.i\P031918B.b\P4809.D
Y (x10^6)
Min
-Chloromethane (1.693)+
-Bromomethane (2.008)
-Chloroethane (2.108)
-Trichlorofluoromethane (2.215)
-Diethyl Ether (2.458)
-1,1-Dichloroethene (2.665)+
-Iodomethane (2.773)
-Acrolein (2.951)
-Allyl Chloride (3.073)
-Methylene Chloride (3.180)
-trans-1,2-Dichloroethene (3.337)+
-Methyl tert-butyl ether (3.459)
-Tertiary-butyl alcohol (3.873)
-Acetonitrile (3.752)
-Di-isopropyl ether (3.888)
-Chloroprene (4.024)+
-Acrylonitrile (4.131)
-Ethyl tertiary-butyl ethe (4.374)+
-cis-1,2-Dichloroethene (4.803)
-2,2-Dichloropropane (4.974)
-Bromochloromethane (5.096)+
-Chloroform (5.246)
-Carbon Tetrachloride (5.439)
-Tetrahydrofuran (5.560)+
-1,1-Dichloropropene (5.811)+
-Benzene (6.290)
-Propionitrile (6.425)+
-Pentafluorobenzene (6.547)+
-1,2-Dichloroethane (6.683)
-Isobutyl Alcohol (6.897)
-Trichloroethene (7.312)+
-1,4-Difluorobenzene (7.469)
-Dibromomethane (8.069)
-1,2-Dichloropropane (8.241)
-Bromodichloromethane (8.384)
-1,4-Dioxane (8.720)+
-cis-1,3-dichloropropene (9.377)
-Toluene-D8 (9.649)
-Total Alkylbenzenes (9.800)+
-Tetrachloroethene (10.264)
-4-methyl-2-pentanone (10.357)+
-1,1,2-Trichloroethane (10.600)
-Ethyl Methacrylate (10.678)
-Dibromochloromethane (10.821)
-1,3-Dichloropropane (10.964)
-1,2-Dibromoethane (11.129)
-2-Hexanone (11.558)
-1,1,1,2-Tetrachloroethane (12.001)
-m+p-Xylenes (12.179)
Chlorobenzene-D5 (11.872)+
-o-Xylene (12.744)
-Styrene (12.816)+
-Isopropylbenzene (13.159)
-P-Bromofluorobenzene (13.488)
-cis-1,4-Dichloro-2-Butene (13.602)+
-N-Propylbenzene (13.681)
-2-Chlorotoluene (13.788)
-1,3,5-Trimethylbenzene (13.937)
-4-Chlorotoluene (14.046)
-tert-Butylbenzene (14.302)+
-1,2,4-Trimethylbenzene (14.395)
-sec-Butylbenzene (14.510)
-4-Isopropyltoluene (14.631)
-1,2,3-Trimethylbenzene (14.889)
1,4-Dichlorobenzene-D4 (14.824)+
-N-Butylbenzene (15.175)
-1,2-Dichlorobenzene (15.325)
-1,2-Dibromo-3-Chloropropa (16.268)+
-1,2-Dichloroethylene (tot (16.580)
-Hexachlorobutadiene (16.983)+
-Naphthalene (17.347)
-1,2,3-Trichlorobenzene (17.540)

Data File: \\target_server\gg\chem\gcms-p.i\P031918B.b\P4810.D
Report Date: 21-Mar-2018 10:24

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-p.i\P031918B.b\P4810.D
Lab Smp Id: WG225041-6
Inj Date : 19-MAR-2018 18:17 MS Autotune Date: 24-JAN-2018 13:57
Operator : hg Inst ID: gcms-p.i
Smp Info : WG225041-6
Misc Info :
Comment : SW846 5030
Method : \\target_server\gg\chem\gcms-p.i\P031918B.b\P8A05(62)D.m
Meth Date : 21-Mar-2018 10:23 gcms-p.i Quant Type: ISTD
Cal Date : 19-MAR-2018 18:17 Cal File: P4810.D
Als bottle: 7 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all50.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.537	1.537	(0.235)	710877	150.000	147	
2	Chloromethane	50	1.694	1.694	(0.259)	992244	150.000	144	
3	Vinyl chloride	62	1.751	1.751	(0.268)	1060469	150.000	146	
4	Bromomethane	94	2.001	2.001	(0.306)	465051	150.000	145	
5	Chloroethane	64	2.102	2.101	(0.322)	681013	150.000	147	
6	Trichlorofluoromethane	101	2.209	2.209	(0.338)	1503238	150.000	151	
7	Diethyl Ether	59	2.459	2.459	(0.376)	808704	150.000	154	
19	Tertiary-butyl alcohol	59	3.560	3.560	(0.545)	189948	750.000	736	
8	1,1-Dichloroethene	96	2.638	2.631	(0.404)	719675	150.000	160	
10	Carbon Disulfide	76	2.666	2.666	(0.408)	2431680	150.000	159	
9	Freon-113	151	2.659	2.659	(0.407)	516737	150.000	154	
11	Iodomethane	142	2.766	2.766	(0.423)	696003	150.000	149	
12	Acrolein	56	2.945	2.945	(0.451)	862790	750.000	829	
14	Methylene Chloride	84	3.174	3.181	(0.486)	819335	150.000	150	
15	Acetone	43	3.231	3.231	(0.495)	1097581	750.000	708	
45	Isobutyl Alcohol	43	6.869	6.869	(1.051)	395560	3000.00	2920	
16	trans-1,2-Dichloroethene	96	3.338	3.338	(0.511)	784829	150.000	161	
13	Allyl Chloride	41	3.074	3.074	(0.471)	1178848	150.000	151	
18	Methyl tert-butyl ether	73	3.453	3.453	(0.528)	2334279	150.000	166	
20	Acetonitrile	41	3.746	3.753	(0.573)	1047323	1500.00	1370	
21	Di-isopropyl ether	45	3.889	3.889	(0.595)	2777059	150.000	168	
22	Chloroprene	53	4.017	4.017	(0.615)	1276245	150.000	169	
39	Propionitrile	54	6.405	6.390	(0.980)	1415227	1500.00	1660	
40	Methacrylonitrile	41	6.426	6.426	(0.984)	6724905	1500.00	1710	

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8:48 am, Mar 29, 2018

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	23 1,1-Dichloroethane	63	4.046	4.053	(0.619)	1470360	150.000	162	
	24 Acrylonitrile	52	4.132	4.131	(0.632)	1626594	750.000	825	
	25 Ethyl tertiary-butyl ether	59	4.367	4.368	(0.668)	2500609	150.000	150	
	26 Vinyl Acetate	43	4.396	4.396	(0.589)	1569601	150.000	147	
	27 cis-1,2-Dichloroethene	96	4.796	4.796	(0.734)	838953	150.000	150	
	52 Methyl Methacrylate	41	8.706	8.706	(1.167)	930808	150.000	152	
	28 2,2-Dichloropropane	77	4.954	4.954	(0.758)	1030555	150.000	167	
	29 Bromochloromethane	128	5.104	5.104	(0.781)	341318	150.000	150	
	31 Chloroform	83	5.247	5.240	(0.803)	1382887	150.000	160	
	32 Carbon Tetrachloride	117	5.440	5.440	(0.729)	1009537	150.000	167	
	33 Tetrahydrofuran	42	5.497	5.497	(0.841)	1388316	750.000	751	
$	34 Dibromofluoromethane	113	5.561	5.561	(0.851)	292594	50.0000	50.5	
	35 1,1,1-Trichloroethane	97	5.575	5.576	(0.853)	1213447	150.000	162	
	37 1,1-Dichloropropene	75	5.804	5.797	(0.778)	1153371	150.000	170	
	36 2-Butanone	43	5.819	5.819	(0.891)	2066899	750.000	824	
	38 Benzene	78	6.290	6.290	(0.843)	3254874	150.000	159(M)	M6
*	41 Pentafluorobenzene	168	6.533	6.533	(1.000)	589892	50.0000		
	30 Cyclohexane	56	5.075	5.075	(0.777)	1375358	150.000	152	
	53 Ethyl Methacrylate	69	10.679	10.679	(1.431)	1406481	150.000	152	
$	42 1,2-Dichloroethane-D4	65	6.562	6.562	(1.004)	426909	50.0000	52.0	
	43 Tertiary-amyl methyl ether	73	6.562	6.562	(1.004)	2451560	150.000	151	
	44 1,2-Dichloroethane	62	6.691	6.684	(0.897)	1188662	150.000	154	
	47 Trichloroethene	95	7.362	7.363	(0.987)	806032	150.000	166	
*	48 1,4-Difluorobenzene	114	7.463	7.463	(1.000)	1003358	50.0000		
	49 Dibromomethane	93	8.063	8.063	(1.080)	519675	150.000	152	
	50 1,2-Dichloropropane	63	8.242	8.242	(1.104)	863887	150.000	167	
	51 Bromodichloromethane	83	8.377	8.378	(1.123)	1128093	150.000	172	
	57 cis-1,3-dichloropropene	75	9.378	9.378	(1.257)	1560847	150.000	152	
	54 1,4-Dioxane	88	8.713	8.721	(1.168)	45480	3000.00	812	
$	58 Toluene-D8	98	9.650	9.650	(1.293)	1276847	50.0000	50.2	
	59 Toluene	92	9.721	9.721	(1.303)	2199880	150.000	166	
	61 4-methyl-2-pentanone	43	10.350	10.343	(1.387)	5048920	750.000	755	
	60 Tetrachloroethene	164	10.265	10.265	(0.865)	639051	150.000	159	
	62 trans-1,3-Dichloropropene	75	10.379	10.379	(1.391)	1463346	150.000	152	
	63 1,1,2-Trichloroethane	83	10.593	10.593	(1.420)	680134	150.000	152	
	64 Dibromochloromethane	129	10.829	10.829	(0.912)	873738	150.000	151	
	65 1,3-Dichloropropane	76	10.972	10.972	(0.924)	1601637	150.000	164	
	66 1,2-Dibromoethane	107	11.122	11.122	(1.490)	831807	150.000	152	
	67 2-Hexanone	43	11.558	11.558	(0.974)	3488947	750.000	751	
*	68 Chlorobenzene-D5	117	11.873	11.873	(1.000)	1120989	50.0000		
	69 Chlorobenzene	112	11.894	11.894	(1.002)	2487348	150.000	159	
	70 1-Chlorohexane	91	11.923	11.923	(1.004)	1273130	150.000	170	
	71 Ethylbenzene	106	11.966	11.966	(1.008)	1396948	150.000	152	
	72 1,1,1,2-Tetrachloroethane	131	12.002	12.002	(1.011)	892063	150.000	171	
	73 m+p-Xylenes	106	12.180	12.180	(1.026)	3512534	300.000	303	
	74 o-Xylene	106	12.745	12.745	(1.073)	1635274	150.000	151	
	75 Styrene	104	12.816	12.817	(1.079)	2945626	150.000	152	
	76 Bromoform	173	12.816	12.817	(1.079)	630831	150.000	152	
	77 Isopropylbenzene	105	13.160	13.160	(0.888)	3939388	150.000	151	
$	78 P-Bromofluorobenzene	95	13.488	13.488	(1.807)	567208	50.0000	51.2	
	79 cis-1,4-Dichloro-2-Butene	53	13.610	13.610	(0.918)	482141	150.000	152	
	86 trans-1,4-Dichloro-2-Butene	53	13.996	13.996	(0.944)	344791	150.000	163	
	80 Bromobenzene	156	13.596	13.596	(0.917)	998483	150.000	161	
	81 N-Propylbenzene	91	13.681	13.674	(0.923)	4779081	150.000	162	

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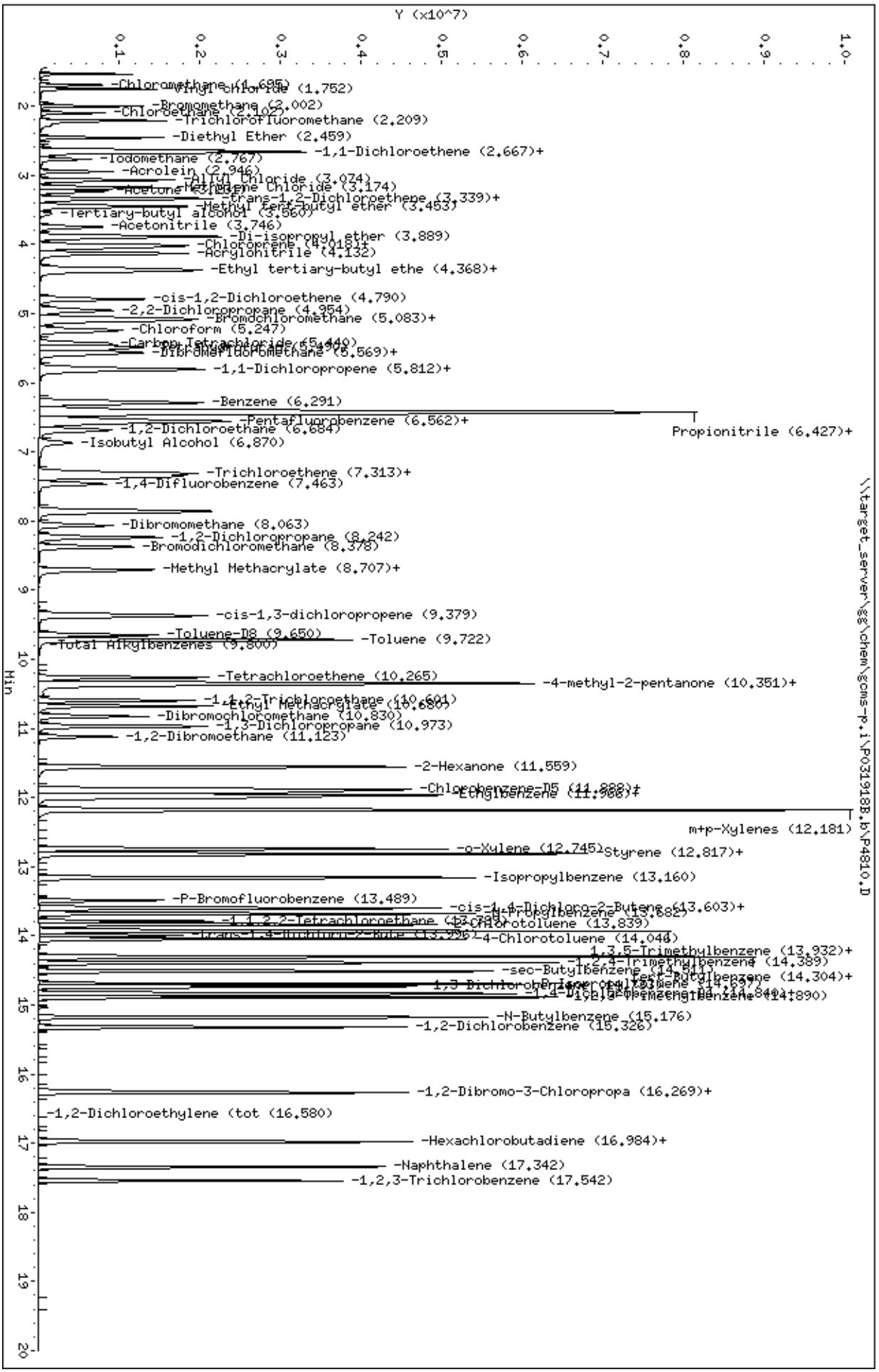
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
82	1,1,2,2-Tetrachloroethane	83	13.789	13.789	(0.930)	1178270	150.000	162	
85	1,3,5-Trimethylbenzene	105	13.931	13.932	(0.940)	3474073	150.000	151	
83	2-Chlorotoluene	91	13.839	13.839	(0.933)	2947847	150.000	167	
84	1,2,3-Trichloropropane	75	13.924	13.924	(0.939)	1111259	150.000	167	
87	4-Chlorotoluene	91	14.046	14.046	(0.947)	3147615	150.000	151	
88	tert-Butylbenzene	119	14.303	14.303	(0.965)	3511430	150.000	152	
89	Pentachloroethane	165	14.310	14.310	(0.965)	524779	150.000	174	
90	1,2,4-Trimethylbenzene	105	14.389	14.389	(0.971)	3569647	150.000	151	
92	P-Isopropyltoluene	119	14.696	14.696	(0.991)	3556952	150.000	151	
93	1,3-Dichlorobenzene	146	14.739	14.739	(0.994)	1930965	150.000	161	
* 94	1,4-Dichlorobenzene-D4	152	14.825	14.825	(1.000)	613142	50.0000		
95	1,4-Dichlorobenzene	146	14.846	14.847	(1.001)	2009524	150.000	153	
97	N-Butylbenzene	91	15.175	15.175	(1.024)	3179931	150.000	151	
91	sec-Butylbenzene	105	14.510	14.511	(0.979)	4141257	150.000	151	
99	1,2-Dichlorobenzene	146	15.325	15.325	(1.034)	1851925	150.000	162	
100	1,2-Dibromo-3-Chloropropane	75	16.240	16.239	(1.095)	216989	150.000	152	
101	1,3,5-Trichlorobenzene	180	16.269	16.268	(1.097)	1326161	150.000	164	
102	Hexachlorobutadiene	225	16.962	16.962	(1.144)	377179	150.000	158	
103	1,2,4-Trichlorobenzene	180	16.984	16.984	(1.146)	1191610	150.000	168	
96	1,2,3-Trimethylbenzene	105	14.889	14.889	(1.004)	3755446	150.000	165	
104	Naphthalene	128	17.341	17.347	(1.170)	3227573	150.000	150	
105	1,2,3-Trichlorobenzene	180	17.541	17.541	(1.183)	1035736	150.000	158	
17	Methyl Acetate	43	3.352	3.353	(0.513)	724370	150.000	164	
46	Methylcyclohexane	83	7.312	7.313	(1.119)	1397126	150.000	152	

QC Flag Legend

M - Compound response manually integrated.


Data File: \\target_server\gg\chem\gcms-p.i\P031918B.b\P4810.D
Date : 19-MAR-2018 18:17
Client ID:
Sample Info: WG225041-6
Purge Volume: 5.0
Column phase: RTX-VMS
Instrument: gcms-p.i
Operator: hg
Column diameter: 0.18
\\target_server\gg\chem\gcms-p.i\P031918B.b\P4810.D
Y (x10^7)
Min
-Chloromethane (1.685)
-Vinyl Chloride (1.752)
-Bromomethane (2.002)
-Chloroethane (2.102)
-Trichlorofluoromethane (2.209)
-Diethyl Ether (2.459)
-1,1-Dichloroethene (2.667)+
-Iodomethane (2.767)
-Acrolein (2.946)
-Allyl Chloride (3.074)
-Methylene Chloride (3.174)
-Acetone (3.196)
-trans-1,2-Dichloroethene (3.339)+
-Methyl tert-butyl ether (3.453)
-Tertiary-butyl alcohol (3.560)
-Acetonitrile (3.746)
-Di-isopropyl ether (3.889)
-Chloroprene (4.018)+
-Acrylonitrile (4.132)
-Ethyl tertiary-butyl ethe (4.368)+
-cis-1,2-Dichloroethene (4.790)
-2,2-Dichloropropane (4.954)
-Bromochloromethane (5.083)+
-Chloroform (5.247)
-Carbon Tetrachloride (5.440)
-Dibromofluoromethane (5.569)+
-1,1-Dichloropropene (5.812)+
-Benzene (6.291)
-Pentafluorobenzene (6.562)+
-1,2-Dichloroethane (6.684)
Propionitrile (6.427)+
-Isobutyl Alcohol (6.870)
-Trichloroethene (7.313)+
-1,4-Difluorobenzene (7.463)
-Dibromomethane (8.063)
-1,2-Dichloropropane (8.242)
-Bromodichloromethane (8.378)
-Methyl Methacrylate (8.707)+
-cis-1,3-dichloropropene (9.379)
-Toluene-D8 (9.650)
-Toluene (9.722)
-Total Alkylbenzenes (9.800)
-Tetrachloroethene (10.265)
-4-methyl-2-pentanone (10.351)+
-1,1,2-Trichloroethane (10.601)
-Ethyl Methacrylate (10.680)
-Dibromochloromethane (10.830)
-1,3-Dichloropropane (10.973)
-1,2-Dibromoethane (11.123)
-2-Hexanone (11.559)
-Chlorobenzene-D5 (11.888)+
-Ethylbenzene (11.966)+
m+p-Xylenes (12.181)
-o-Xylene (12.745)
Styrene (12.817)+
-Isopropylbenzene (13.160)
-P-Bromofluorobenzene (13.489)
-cis-1,4-Dichloro-2-Butene (13.603)+
-n-Propylbenzene (13.682)
-1,1,2,2-Tetrachloroethane (13.748)
-2-Chlorotoluene (13.839)
-trans-1,4-Dichloro-2-Bute (13.996)
-4-Chlorotoluene (14.044)
1,3,5-Trimethylbenzene (13.932)+
-1,2,4-Trimethylbenzene (14.389)
-sec-Butylbenzene (14.541)
-tert-Butylbenzene (14.304)+
1,3-Dichloropropylene (14.637)
-1,4-Dichlorobenzene-D4 (14.840)+
1,3,5-Trimethylbenzene (14.890)
-N-Butylbenzene (15.176)
-1,2-Dichlorobenzene (15.326)
-1,2-Dibromo-3-Chloropropa (16.269)+
-1,2-Dichloroethylene (tot (16.580)
-Hexachlorobutadiene (16.984)+
-Naphthalene (17.342)
-1,2,3-Trichlorobenzene (17.542)

Data File: \\target_server\gg\chem\gcms-p.i\P031918B.b\P4811.D
Report Date: 21-Mar-2018 10:24

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-p.i\P031918B.b\P4811.D
Lab Smp Id: WG225041-5
Inj Date : 19-MAR-2018 18:51 MS Autotune Date: 24-JAN-2018 13:57
Operator : hg Inst ID: gcms-p.i
Smp Info : WG225041-5
Misc Info :
Comment : SW846 5030
Method : \\target_server\gg\chem\gcms-p.i\P031918B.b\P8A05(62)D.m
Meth Date : 21-Mar-2018 10:23 gcms-p.i Quant Type: ISTD
Cal Date : 19-MAR-2018 18:51 Cal File: P4811.D
Als bottle: 8 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all50.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

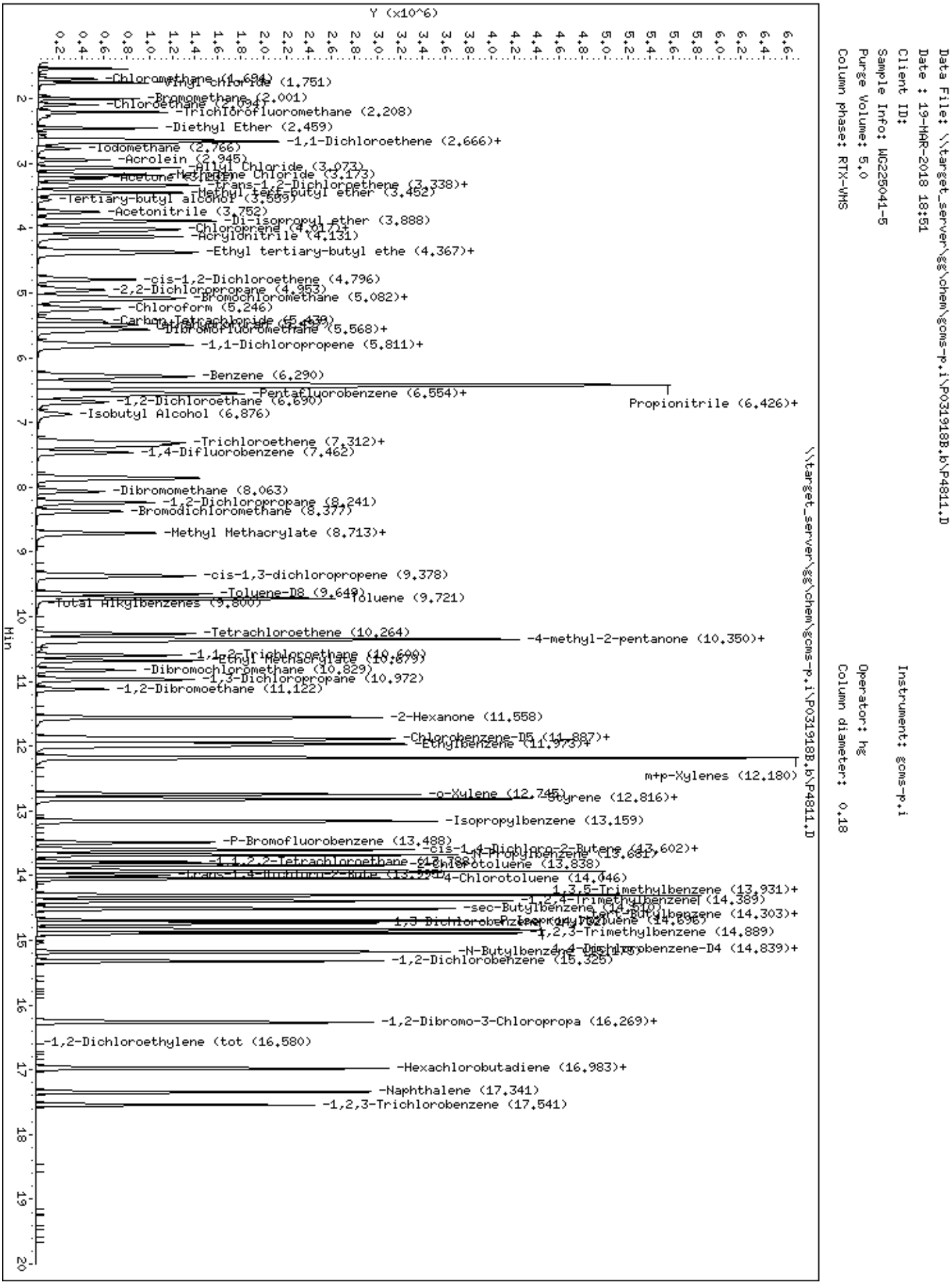
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.536	1.537	(0.235)	496954	100.000	98.8	
2	Chloromethane	50	1.693	1.694	(0.259)	689721	100.000	96.1	
3	Vinyl chloride	62	1.750	1.751	(0.268)	729594	100.000	97.0	
4	Bromomethane	94	2.001	2.001	(0.306)	325934	100.000	97.7	
5	Chloroethane	64	2.094	2.101	(0.321)	425975	100.000	88.6	
6	Trichlorofluoromethane	101	2.208	2.209	(0.338)	991652	100.000	96.1	
7	Diethyl Ether	59	2.458	2.459	(0.376)	557920	100.000	102	
19	Tertiary-butyl alcohol	59	3.559	3.560	(0.545)	150377	500.000	529	
8	1,1-Dichloroethene	96	2.630	2.631	(0.403)	470494	100.000	101	
10	Carbon Disulfide	76	2.665	2.666	(0.408)	1614843	100.000	102	
9	Freon-113	151	2.658	2.659	(0.407)	343272	100.000	98.7	
11	Iodomethane	142	2.765	2.766	(0.423)	427479	100.000	88.3	
12	Acrolein	56	2.944	2.945	(0.451)	600708	500.000	556	
14	Methylene Chloride	84	3.173	3.181	(0.486)	568786	100.000	100	
15	Acetone	43	3.230	3.231	(0.495)	790191	500.000	490	
45	Isobutyl Alcohol	43	6.876	6.869	(1.053)	315499	2000.00	2150	
16	trans-1,2-Dichloroethene	96	3.337	3.338	(0.511)	530227	100.000	105	
13	Allyl Chloride	41	3.066	3.074	(0.469)	879188	100.000	108	
18	Methyl tert-butyl ether	73	3.452	3.453	(0.528)	1652901	100.000	113	
20	Acetonitrile	41	3.752	3.753	(0.574)	747066	1000.00	942	
21	Di-isopropyl ether	45	3.888	3.889	(0.595)	1932123	100.000	112	
22	Chloroprene	53	4.016	4.017	(0.615)	880242	100.000	112	
39	Propionitrile	54	6.397	6.390	(0.979)	978981	1000.00	1100	
40	Methacrylonitrile	41	6.425	6.426	(0.984)	4629293	1000.00	1130	

Data File: \\target_server\gg\chem\gcms-p.i\P031918B.b\P4811.D
Report Date: 21-Mar-2018 10:24

		QUANT SIG					AMOUNTS		
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	23 1,1-Dichloroethane	63	4.045	4.053	(0.619)	1003977	100.000	106	
	24 Acrylonitrile	52	4.131	4.131	(0.632)	1115302	500.000	544	
	25 Ethyl tertiary-butyl ether	59	4.367	4.368	(0.668)	1737317	100.000	101	
	26 Vinyl Acetate	43	4.395	4.396	(0.589)	1154637	100.000	107	
	27 cis-1,2-Dichloroethene	96	4.796	4.796	(0.734)	577626	100.000	99.8	
	52 Methyl Methacrylate	41	8.705	8.706	(1.166)	618136	100.000	98.7	
	28 2,2-Dichloropropane	77	4.953	4.954	(0.758)	665340	100.000	104	
	29 Bromochloromethane	128	5.103	5.104	(0.781)	229318	100.000	96.7	
	31 Chloroform	83	5.239	5.240	(0.802)	947196	100.000	105	
	32 Carbon Tetrachloride	117	5.439	5.440	(0.728)	679671	100.000	108	
	33 Tetrahydrofuran	42	5.496	5.497	(0.841)	961743	500.000	503	
$	34 Dibromofluoromethane	113	5.560	5.561	(0.851)	304448	50.0000	50.5	
	35 1,1,1-Trichloroethane	97	5.567	5.576	(0.852)	823327	100.000	106	
	37 1,1-Dichloropropene	75	5.803	5.797	(0.777)	758102	100.000	107	
	36 2-Butanone	43	5.818	5.819	(0.891)	1439671	500.000	552	
	38 Benzene	78	6.289	6.290	(0.842)	2273795	100.000	107	
*	41 Pentafluorobenzene	168	6.532	6.533	(1.000)	613038	50.0000		
	30 Cyclohexane	56	5.074	5.075	(0.777)	900807	100.000	96.4	
	53 Ethyl Methacrylate	69	10.678	10.679	(1.430)	941105	100.000	99.2	
$	42 1,2-Dichloroethane-D4	65	6.561	6.562	(1.004)	434562	50.0000	50.9	
	43 Tertiary-amyl methyl ether	73	6.568	6.562	(1.005)	1678953	100.000	100	
	44 1,2-Dichloroethane	62	6.690	6.684	(0.896)	809993	100.000	101	
	47 Trichloroethene	95	7.362	7.363	(0.986)	538587	100.000	107	
*	48 1,4-Difluorobenzene	114	7.469	7.463	(1.000)	1040239	50.0000		
	49 Dibromomethane	93	8.069	8.063	(1.080)	347438	100.000	98.4	
	50 1,2-Dichloropropane	63	8.241	8.242	(1.103)	588177	100.000	110	
	51 Bromodichloromethane	83	8.377	8.378	(1.122)	754177	100.000	111	
	57 cis-1,3-dichloropropene	75	9.377	9.378	(1.256)	1040076	100.000	98.3	
	54 1,4-Dioxane	88	8.713	8.721	(1.167)	106273	2000.00	1830	
$	58 Toluene-D8	98	9.649	9.650	(1.292)	1330543	50.0000	50.5	
	59 Toluene	92	9.720	9.721	(1.301)	1471695	100.000	107	
	61 4-methyl-2-pentanone	43	10.350	10.343	(1.386)	3448173	500.000	500	
	60 Tetrachloroethene	164	10.264	10.265	(0.865)	415499	100.000	102	
	62 trans-1,3-Dichloropropene	75	10.378	10.379	(1.389)	964476	100.000	97.8	
	63 1,1,2-Trichloroethane	83	10.600	10.593	(1.419)	453419	100.000	98.2	
	64 Dibromochloromethane	129	10.828	10.829	(0.912)	575976	100.000	99.1	
	65 1,3-Dichloropropane	76	10.971	10.972	(0.924)	1081874	100.000	109	
	66 1,2-Dibromoethane	107	11.121	11.122	(1.489)	557288	100.000	98.6	
	67 2-Hexanone	43	11.558	11.558	(0.974)	2356981	500.000	503	
*	68 Chlorobenzene-D5	117	11.872	11.873	(1.000)	1135937	50.0000		
	69 Chlorobenzene	112	11.893	11.894	(1.002)	1635429	100.000	103	
	70 1-Chlorohexane	91	11.922	11.923	(1.004)	801478	100.000	106	
	71 Ethylbenzene	106	11.972	11.966	(1.008)	903630	100.000	97.5	
	72 1,1,1,2-Tetrachloroethane	131	12.001	12.002	(1.011)	576609	100.000	109	
	73 m+p-Xylenes	106	12.179	12.180	(1.026)	2306445	200.000	197	
	74 o-Xylene	106	12.744	12.745	(1.073)	1079294	100.000	98.9	
	75 Styrene	104	12.816	12.817	(1.079)	1928413	100.000	98.7	
	76 Bromoform	173	12.816	12.817	(1.079)	416610	100.000	99.6	
	77 Isopropylbenzene	105	13.159	13.160	(0.888)	2599648	100.000	98.6	
$	78 P-Bromofluorobenzene	95	13.487	13.488	(1.806)	592170	50.0000	51.6	
	79 cis-1,4-Dichloro-2-Butene	53	13.609	13.610	(0.918)	315672	100.000	98.6	
	86 trans-1,4-Dichloro-2-Butene	53	13.995	13.996	(0.944)	231964	100.000	108	
	80 Bromobenzene	156	13.595	13.596	(0.917)	664066	100.000	105	
	81 N-Propylbenzene	91	13.680	13.674	(0.923)	3249331	100.000	109	

Data File: \\target_server\gg\chem\gcms-p.i\P031918B.b\P4811.D
Report Date: 21-Mar-2018 10:24

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
82	1,1,2,2-Tetrachloroethane	83	13.788	13.789	(0.930)	792541	100.000	108	
85	1,3,5-Trimethylbenzene	105	13.938	13.932	(0.940)	2293197	100.000	98.8	
83	2-Chlorotoluene	91	13.838	13.839	(0.933)	1958042	100.000	109	
84	1,2,3-Trichloropropane	75	13.924	13.924	(0.939)	738306	100.000	110	
87	4-Chlorotoluene	91	14.045	14.046	(0.947)	2097332	100.000	99.2	
88	tert-Butylbenzene	119	14.302	14.303	(0.965)	2302266	100.000	98.5	
89	Pentachloroethane	165	14.309	14.310	(0.965)	345736	100.000	113	
90	1,2,4-Trimethylbenzene	105	14.388	14.389	(0.971)	2381876	100.000	99.4	
92	P-Isopropyltoluene	119	14.695	14.696	(0.991)	2338969	100.000	98.5	
93	1,3-Dichlorobenzene	146	14.738	14.739	(0.994)	1273552	100.000	104	
* 94	1,4-Dichlorobenzene-D4	152	14.824	14.825	(1.000)	621930	50.0000		
95	1,4-Dichlorobenzene	146	14.846	14.847	(1.001)	1344006	100.000	101	
97	N-Butylbenzene	91	15.174	15.175	(1.024)	2083483	100.000	98.3	
91	sec-Butylbenzene	105	14.510	14.511	(0.979)	2737973	100.000	98.7	
99	1,2-Dichlorobenzene	146	15.325	15.325	(1.034)	1222400	100.000	105	
100	1,2-Dibromo-3-Chloropropane	75	16.239	16.239	(1.095)	141057	100.000	98.1	
101	1,3,5-Trichlorobenzene	180	16.268	16.268	(1.097)	875820	100.000	107	
102	Hexachlorobutadiene	225	16.961	16.962	(1.144)	244422	100.000	101	
103	1,2,4-Trichlorobenzene	180	16.983	16.984	(1.146)	773746	100.000	107	
96	1,2,3-Trimethylbenzene	105	14.888	14.889	(1.004)	2568046	100.000	111	
104	Naphthalene	128	17.347	17.347	(1.170)	2229245	100.000	102	
105	1,2,3-Trichlorobenzene	180	17.540	17.541	(1.183)	691792	100.000	104	
17	Methyl Acetate	43	3.352	3.353	(0.513)	515649	100.000	112	
46	Methylcyclohexane	83	7.312	7.313	(1.119)	938512	100.000	98.5	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Date : 19-MAR-2018 18:51
Client ID:
Sample Info: WG225041-5
Purge Volume: 5.0
Column phase: RTX-VMS
Instrument: gcms-p.i
Operator: hg
Column diameter: 0.18
Y (x10^6)
Min
\\target_server\gg\chem\gcms-p.i\P031918B.b\P4811.D
-Chloromethane (1.694)
-Vinyl chloride (1.751)
-Bromomethane (2.001)
-Chloroethane (2.094)
-Trichlorofluoromethane (2.208)
-Diethyl Ether (2.459)
-1,1-Dichloroethene (2.666)+
-Iodomethane (2.766)
-Acrolein (2.945)
-Allyl Chloride (3.073)
-Methylene Chloride (3.173)
-Acetone (3.231)
-trans-1,2-Dichloroethene (3.338)+
-Methyl tert-butyl ether (3.452)
-Tertiary-butyl alcohol (3.559)
-Acetonitrile (3.752)
-Di-isopropyl ether (3.888)
-Chloroprene (4.017)+
-Acrylonitrile (4.131)
-Ethyl tertiary-butyl ethe (4.367)+
-cis-1,2-Dichloroethene (4.796)
-2,2-Dichloropropane (4.953)
-Bromochloromethane (5.082)+
-Chloroform (5.246)
-Carbon Tetrachloride (5.439)
-Dibromofluoromethane (5.568)+
-1,1-Dichloropropene (5.811)+
-Benzene (6.290)
-Pentafluorobenzene (6.554)+
Propionitrile (6.426)+
-1,2-Dichloroethane (6.690)
-Isobutyl Alcohol (6.876)
-Trichloroethene (7.312)+
-1,4-Difluorobenzene (7.462)
-Dibromomethane (8.063)
-1,2-Dichloropropane (8.241)
-Bromodichloromethane (8.377)
-Methyl Methacrylate (8.713)+
-cis-1,3-dichloropropene (9.378)
-Toluene-D8 (9.649)
-Toluene (9.721)
-Total Alkylbenzenes (9.800)
-Tetrachloroethene (10.264)
-4-methyl-2-pentanone (10.350)+
-1,1,2-Trichloroethane (10.600)
-Ethyl Methacrylate (10.679)
-Dibromochloromethane (10.829)
-1,3-Dichloropropane (10.972)
-1,2-Dibromoethane (11.122)
-2-Hexanone (11.558)
-Chlorobenzene-D5 (11.887)+
-Ethylbenzene (11.973)+
m+p-Xylenes (12.180)
-o-Xylene (12.745)
-Styrene (12.816)+
-Isopropylbenzene (13.159)
-P-Bromofluorobenzene (13.488)
-cis-1,4-Dichloro-2-Butene (13.602)+
-N-Propylbenzene (13.681)
-1,1,2,2-Tetrachloroethane (13.788)
-2-Chlorotoluene (13.838)
-trans-1,4-Dichloro-2-Bute (13.995)
-4-Chlorotoluene (14.046)
1,3,5-Trimethylbenzene (13.931)+
-1,2,4-Trimethylbenzene (14.389)
-sec-Butylbenzene (14.510)
-tert-Butylbenzene (14.303)+
-P-Isopropyltoluene (14.696)
-1,3-Dichlorobenzene (14.702)
-1,2,3-Trimethylbenzene (14.889)
-N-Butylbenzene (15.175)
-1,4-Dichlorobenzene-D4 (14.839)+
-1,2-Dichlorobenzene (15.325)
-1,2-Dibromo-3-Chloropropa (16.269)+
-1,2-Dichloroethylene (tot (16.580)
-Hexachlorobutadiene (16.983)+
-Naphthalene (17.341)
-1,2,3-Trichlorobenzene (17.541)

Data File: \\target_server\gg\chem\gcms-p.i\P031918B.b\P4809.D
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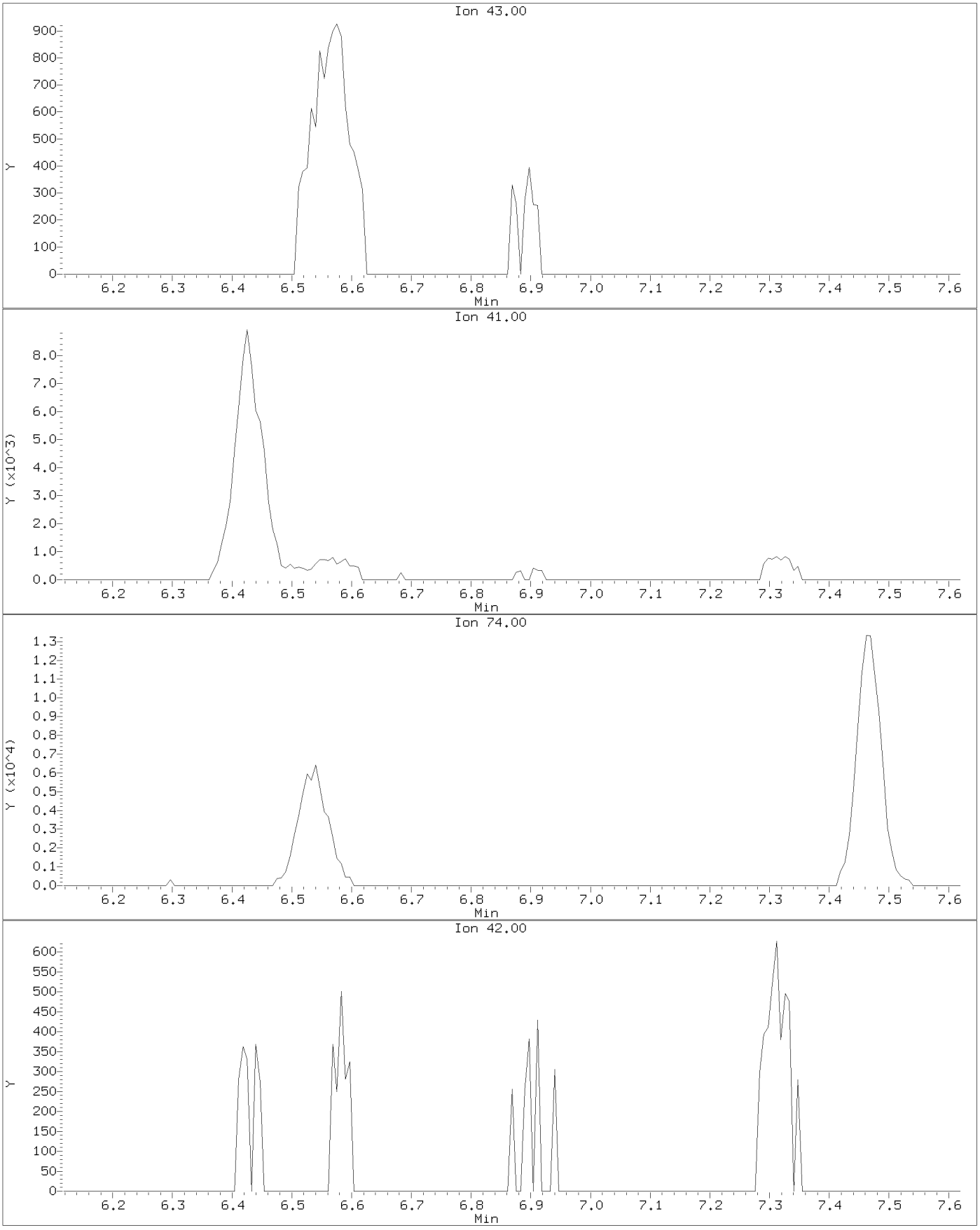
Instrument: gcms-p.i
Client Sample ID:

Compound: Isobutyl Alcohol
CAS Number: 78-83-1

BEFORE MANUAL INTEGRATION



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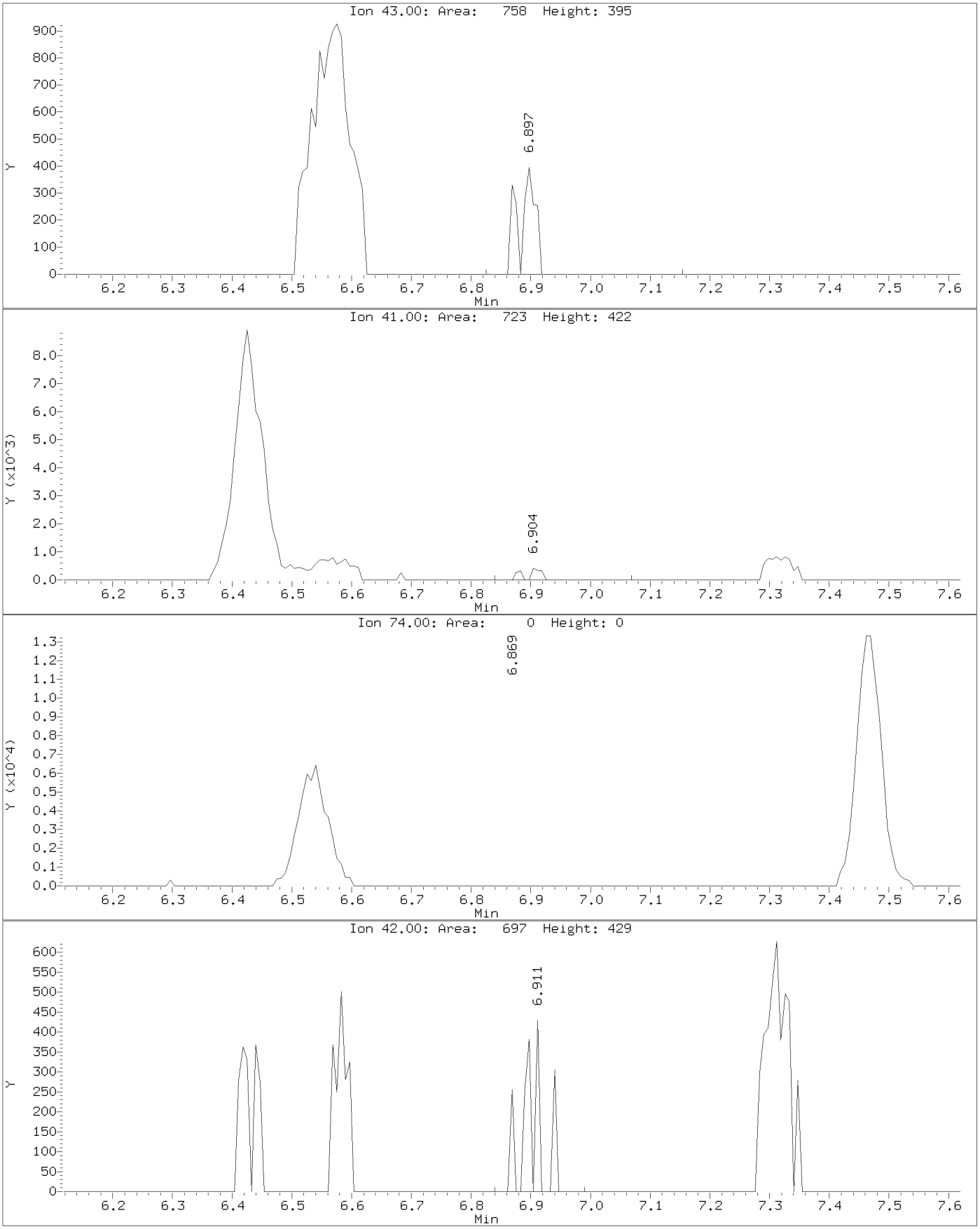
Instrument: gcms-p.i
Client Sample ID:

Compound: Isobutyl Alcohol
CAS Number: 78-83-1

AFTER MANUAL INTEGRATION



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Instrument: gcms-p.i
Client Sample ID:

Compound: Vinyl Acetate
CAS Number: 108-05-4

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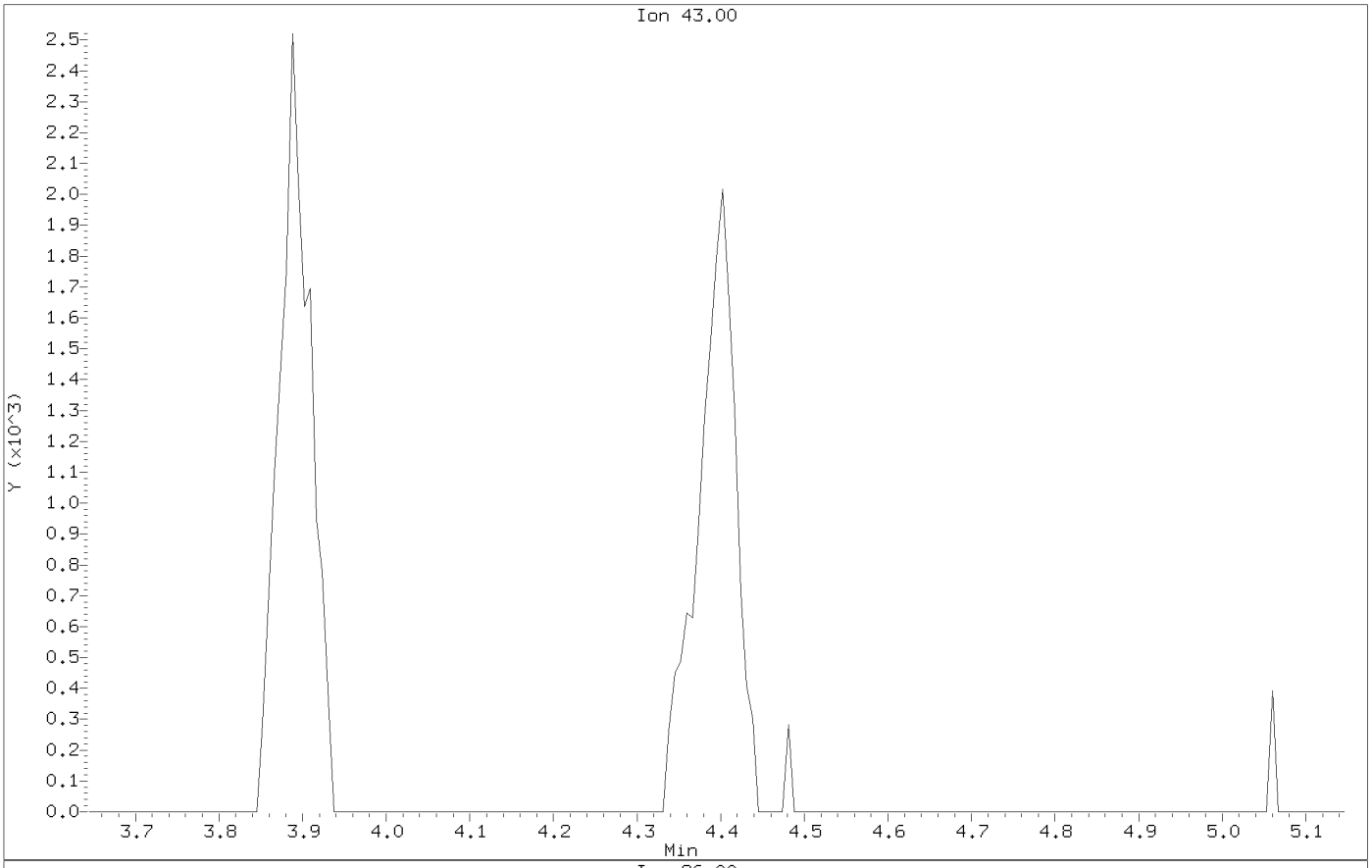

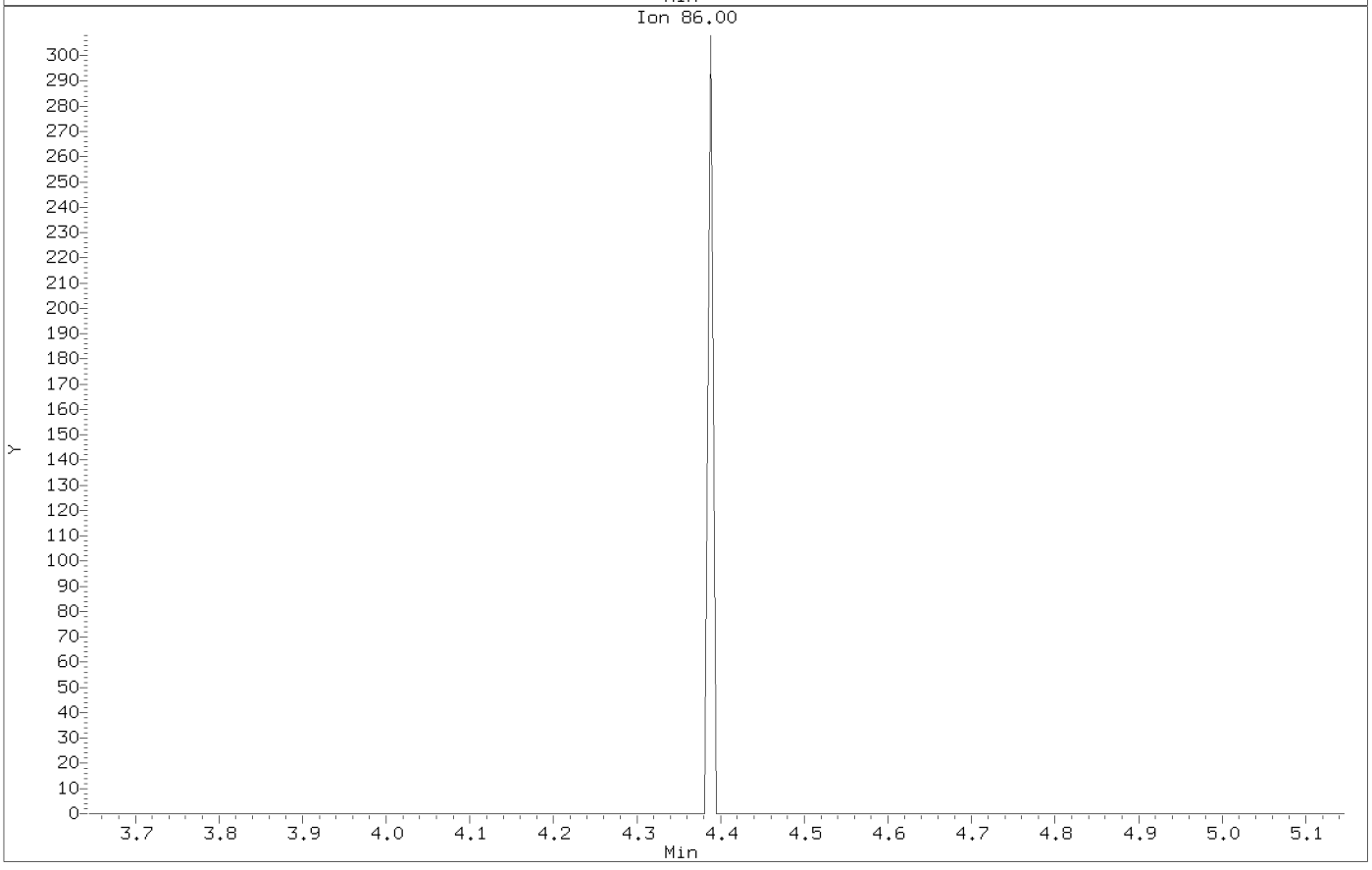

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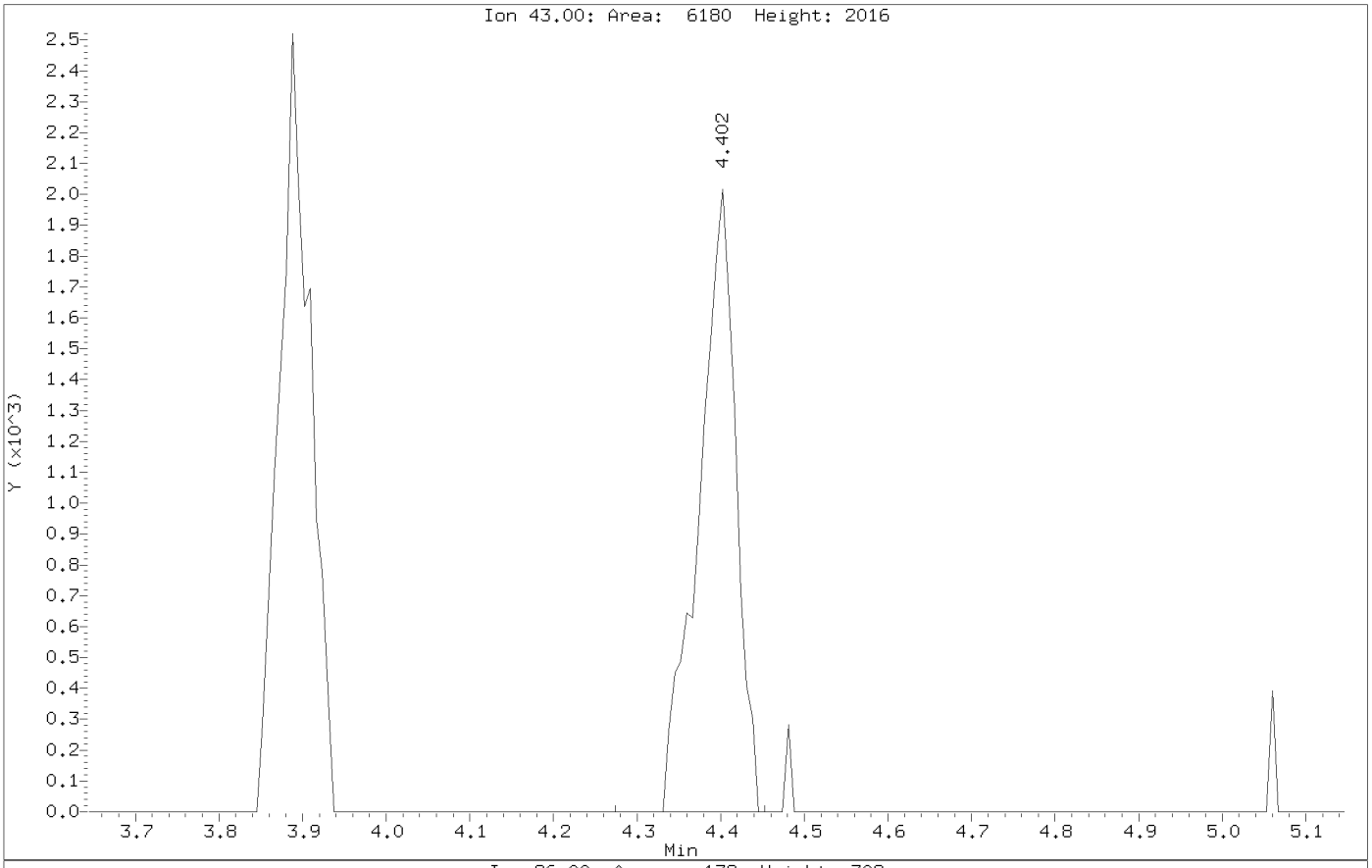
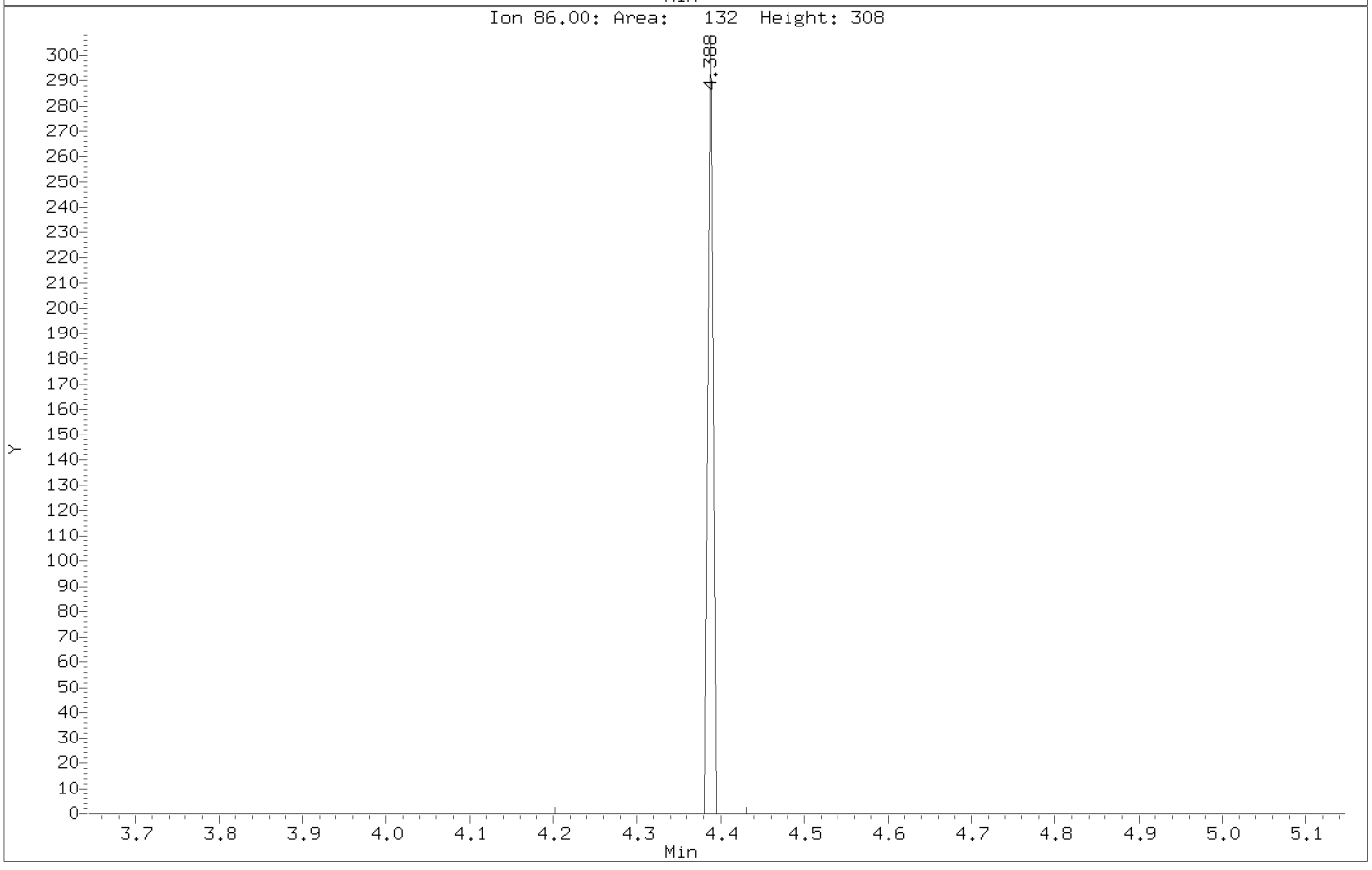
Instrument: gcms-p.i
Client Sample ID:

Compound: Vinyl Acetate
CAS Number: 108-05-4

AFTER MANUAL INTEGRATION





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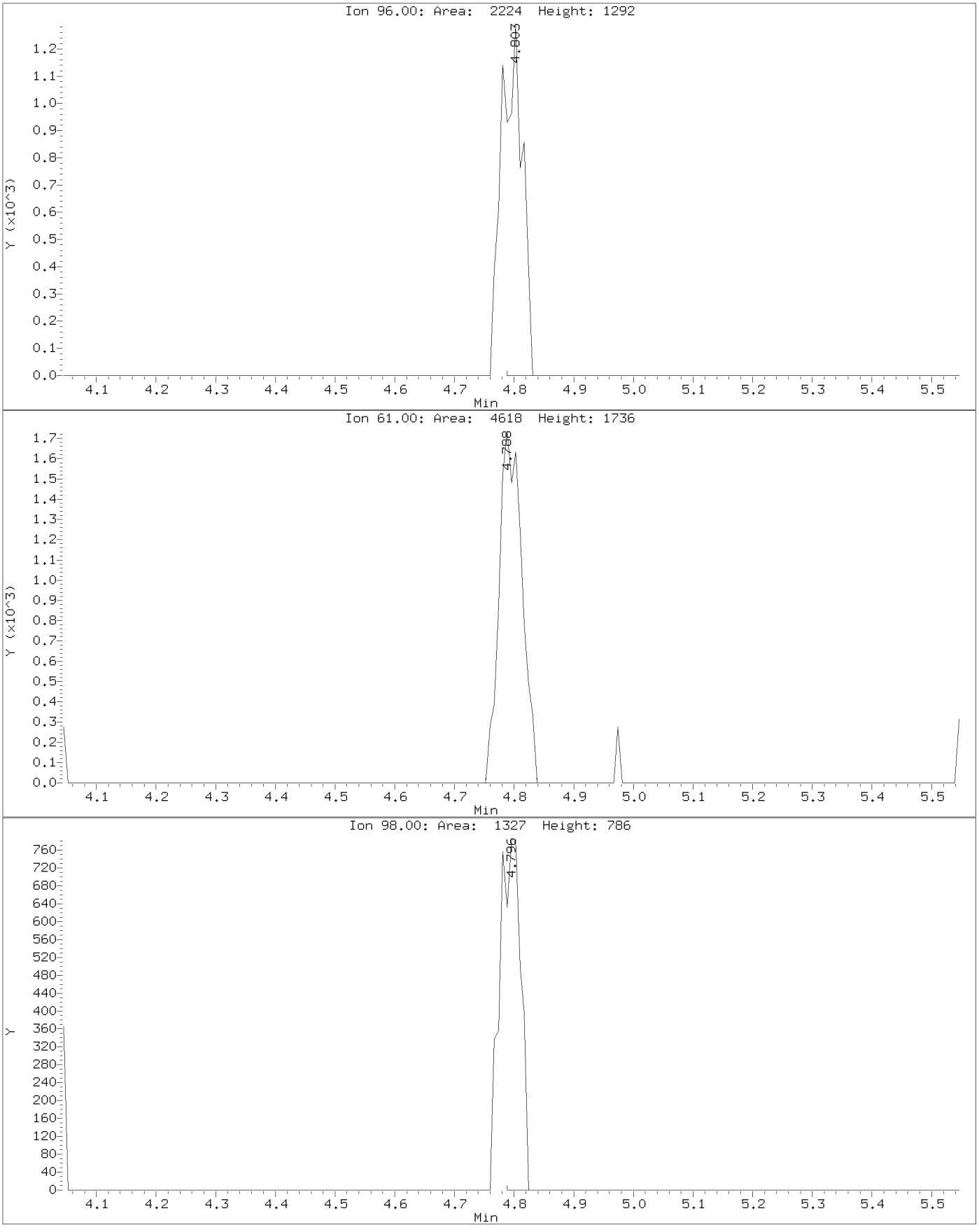
Injection Date: 19-MAR-2018 17:42
Instrument: gcms-p.i
Client Sample ID:

Compound: cis-1,2-Dichloroethene
CAS Number: 156-59-2

BEFORE MANUAL INTEGRATION



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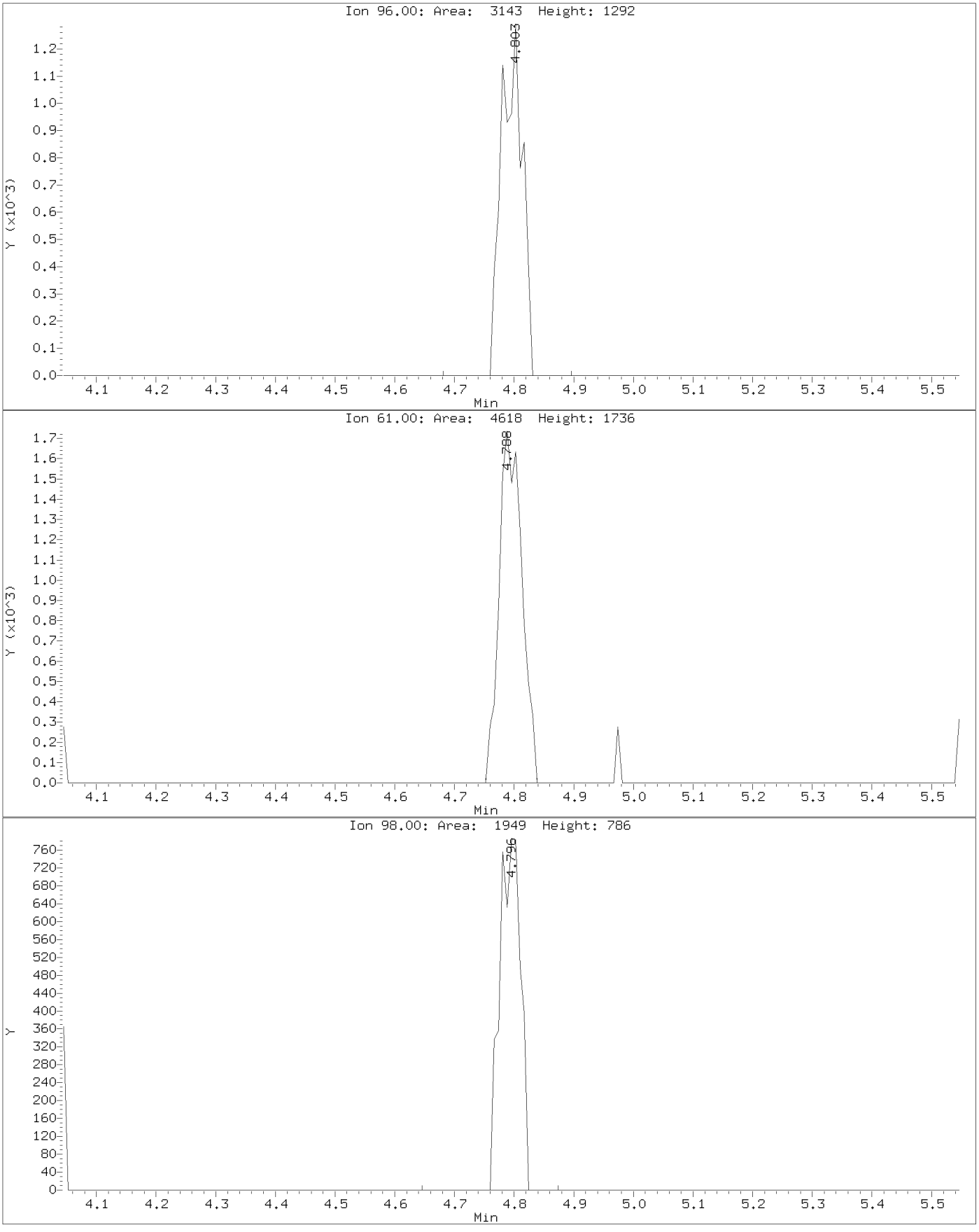
Client Sample ID:

Compound: cis-1,2-Dichloroethene
CAS Number: 156-59-2

AFTER MANUAL INTEGRATION



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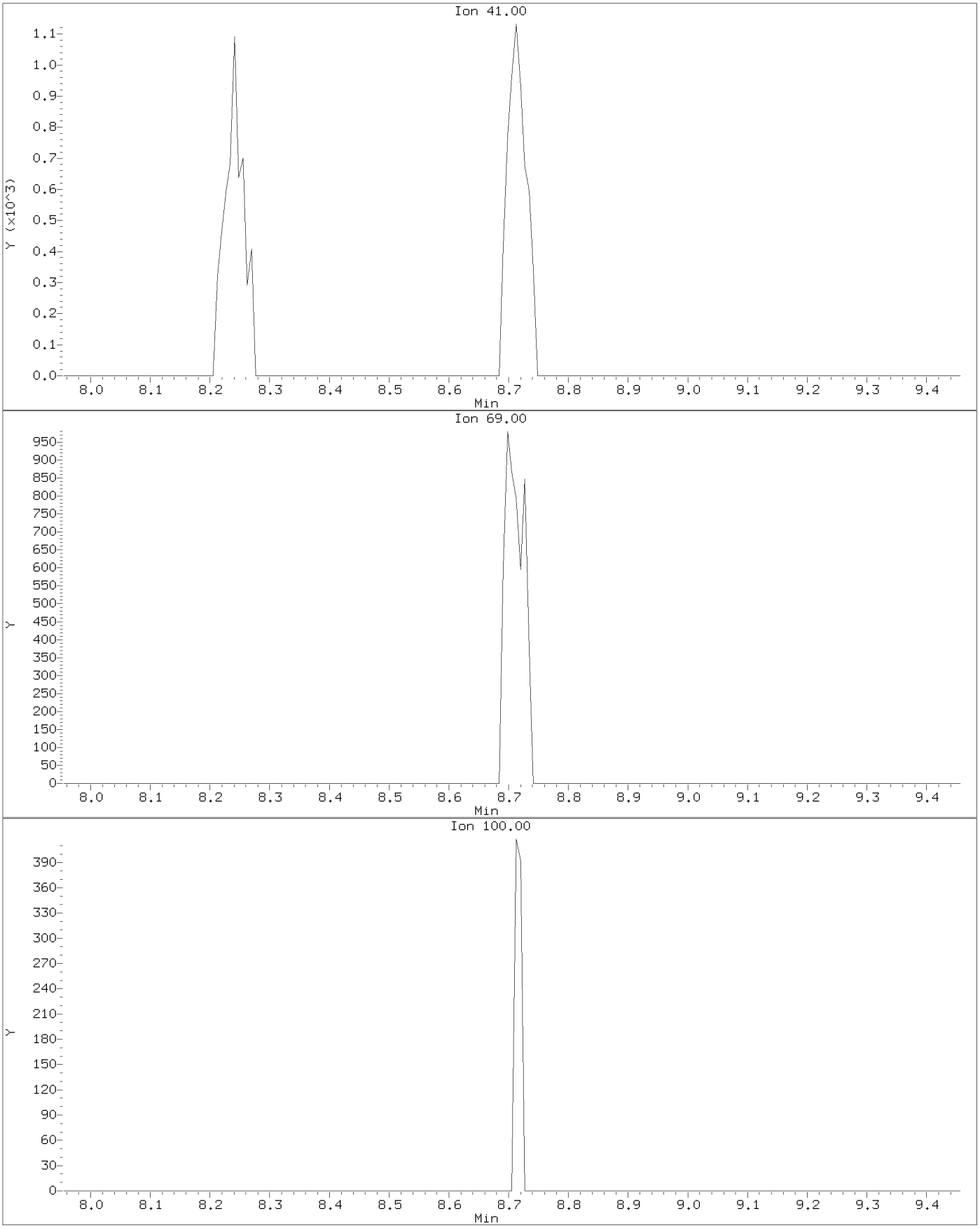
Injection Date: 19-MAR-2018 17:42
Instrument: gcms-p.i
Client Sample ID:

Compound: Methyl Methacrylate
CAS Number: 80-62-6

BEFORE MANUAL INTEGRATION



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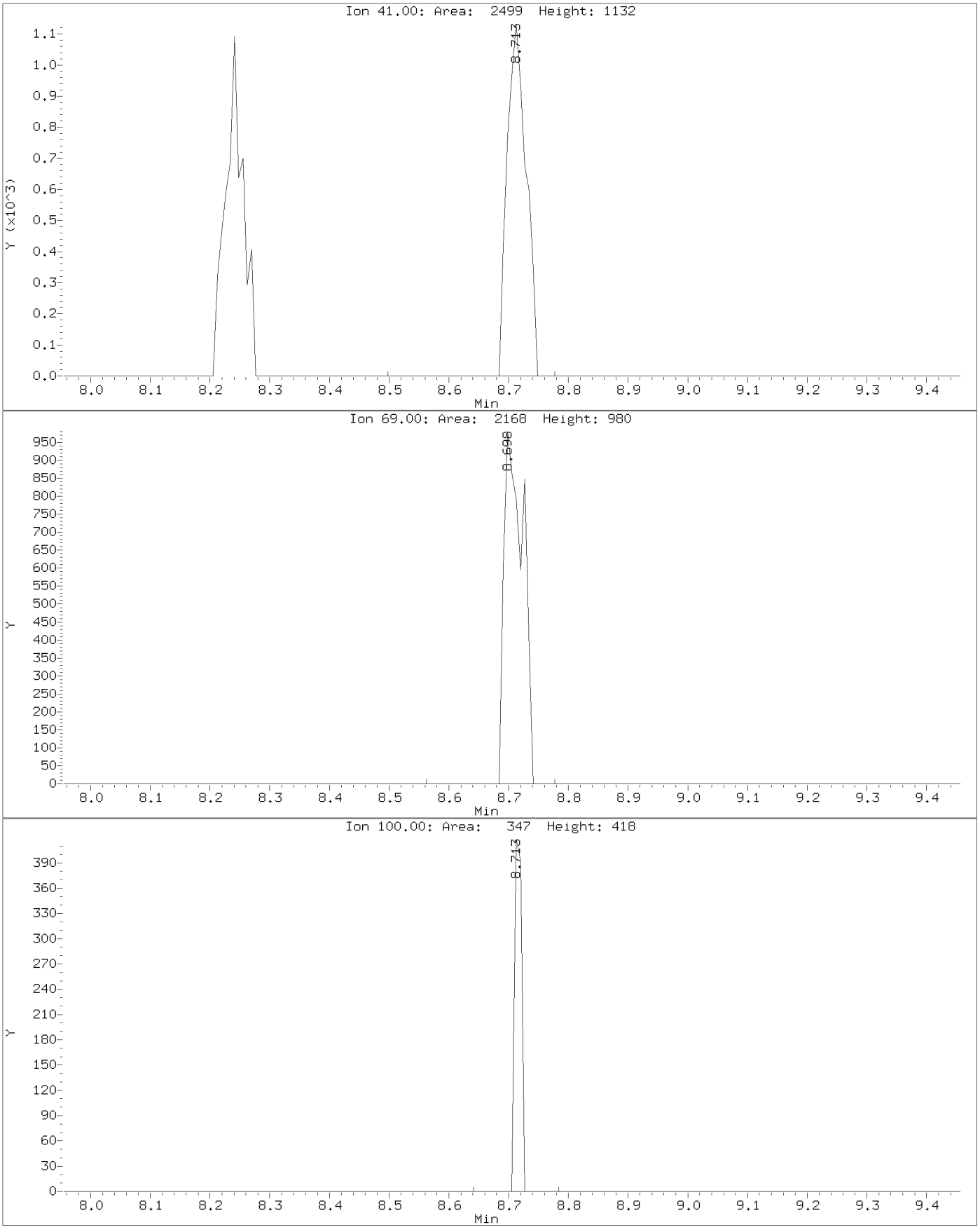
Injection Date: 19-MAR-2018 17:42
Instrument: gcms-p.i
Client Sample ID:

Compound: Methyl Methacrylate
CAS Number: 80-62-6

AFTER MANUAL INTEGRATION



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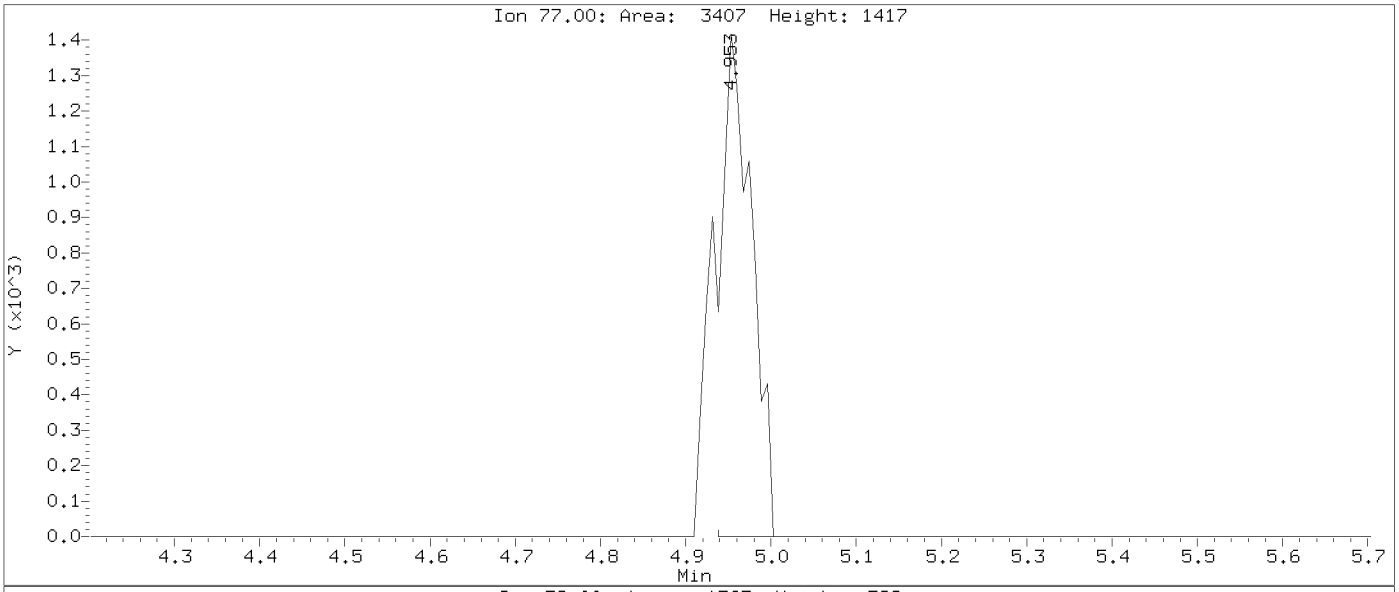
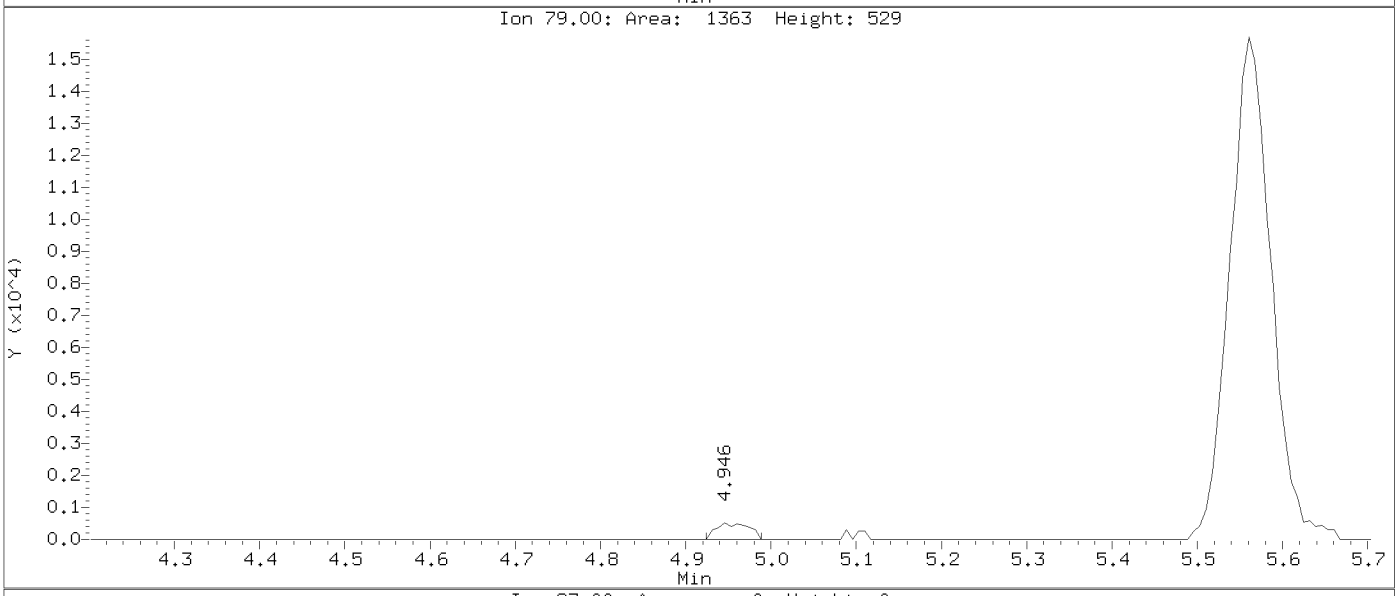
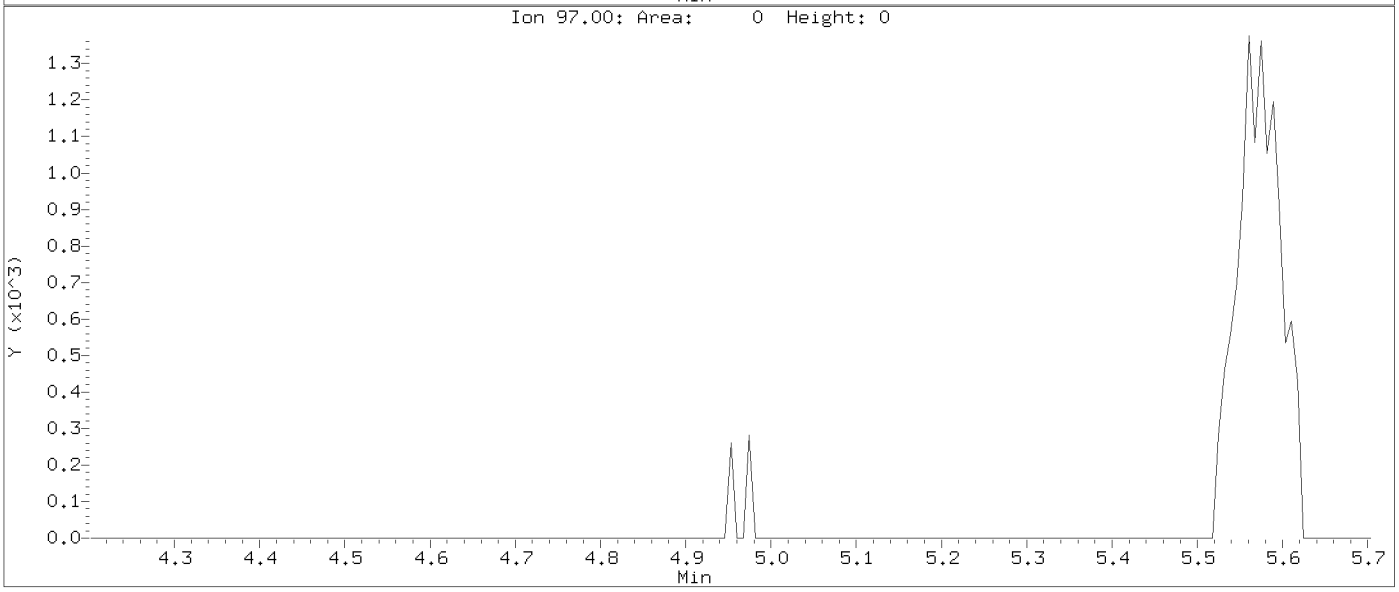
Injection Date: 19-MAR-2018 17:42
Instrument: gcms-p.i
Client Sample ID:

Compound: 2,2-Dichloropropane
CAS Number: 594-20-7

BEFORE MANUAL INTEGRATION







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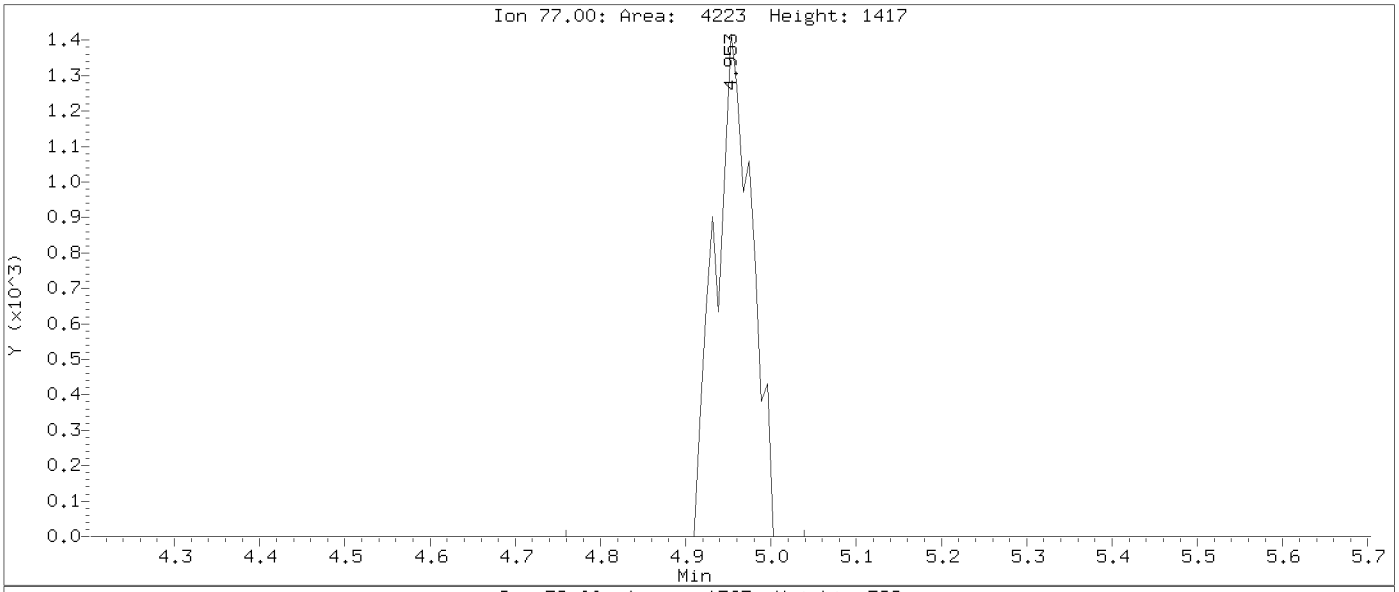
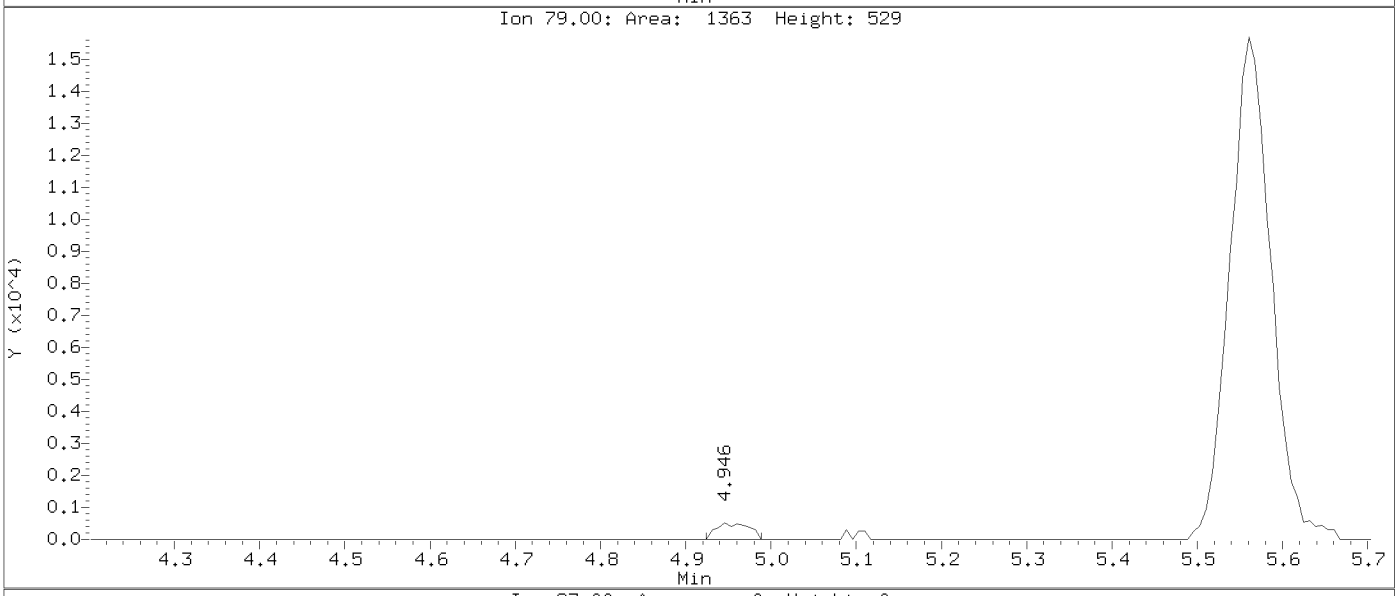
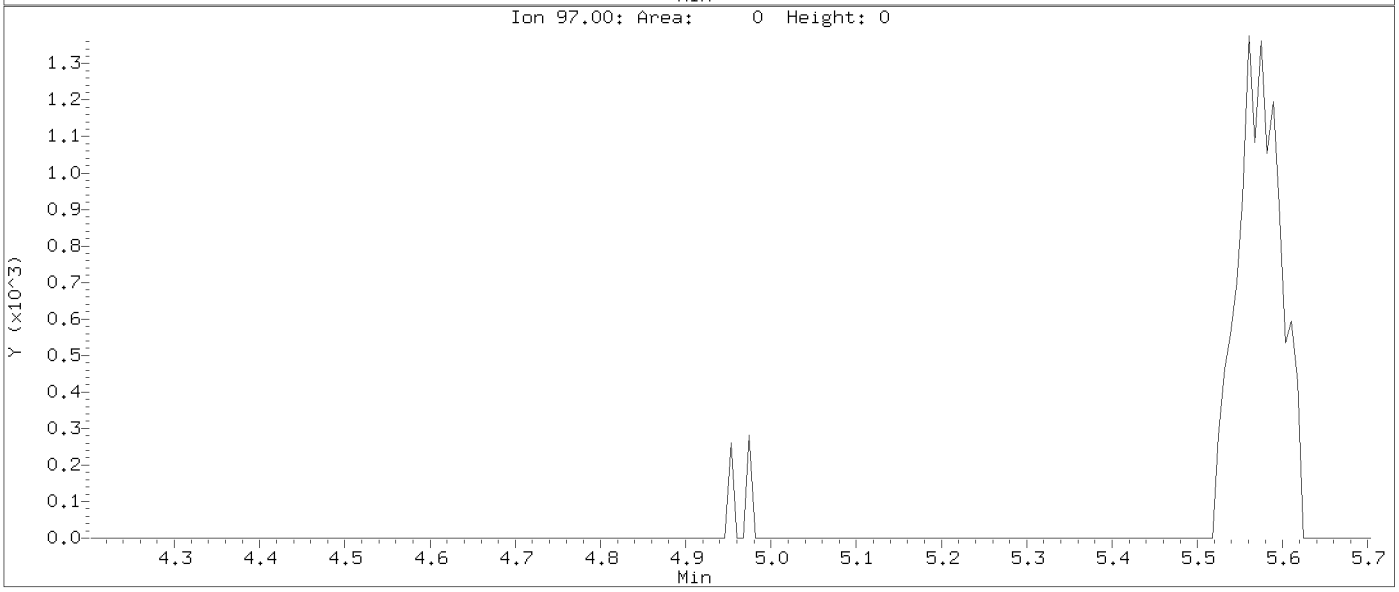
Injection Date: 19-MAR-2018 17:42
Instrument: gcms-p.i
Client Sample ID:

Compound: 2,2-Dichloropropane
CAS Number: 594-20-7

AFTER MANUAL INTEGRATION







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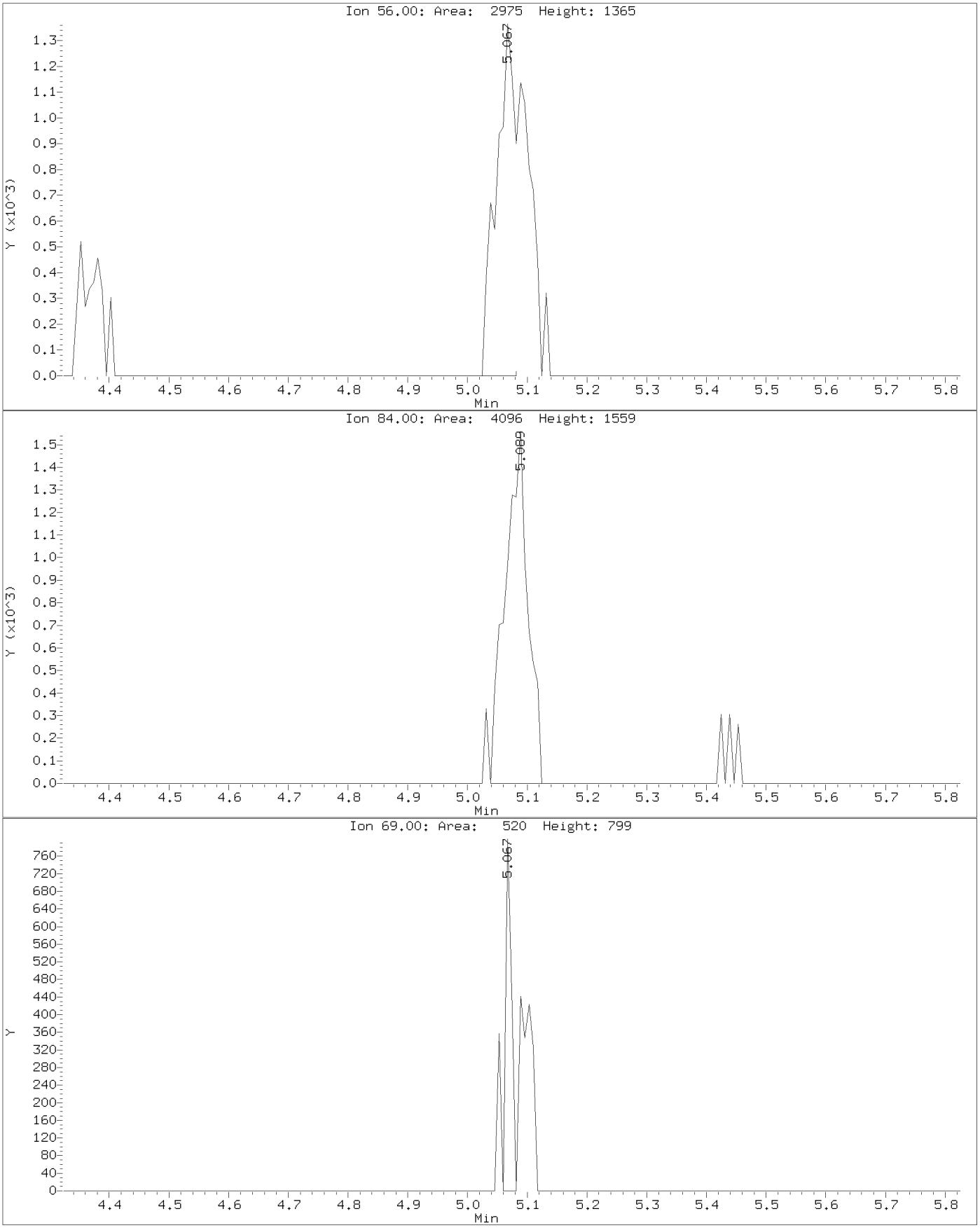
Injection Date: 19-MAR-2018 17:42
Instrument: gcms-p.i
Client Sample ID:

Compound: Cyclohexane
CAS Number: 1735-17-7

BEFORE MANUAL INTEGRATION



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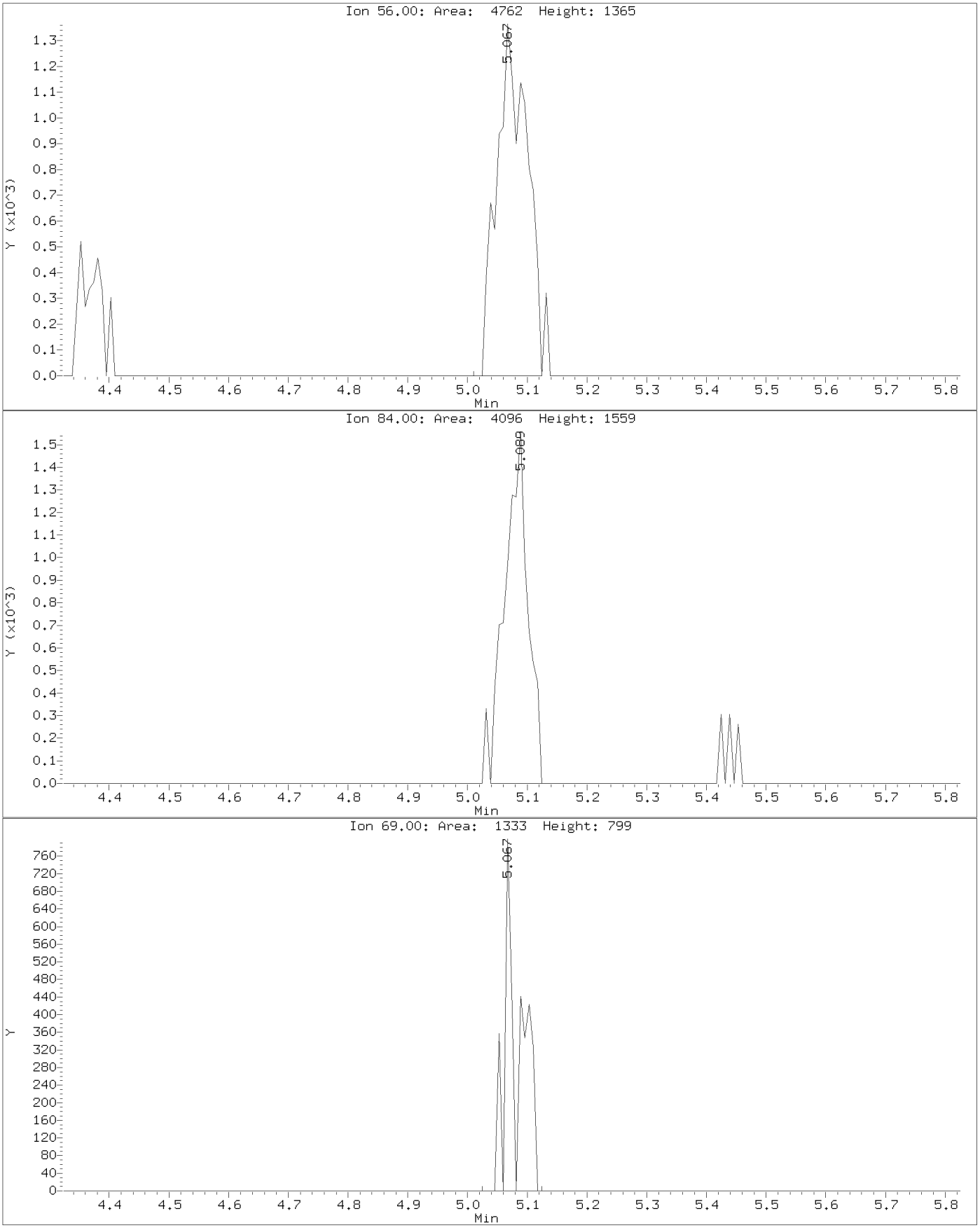
Instrument: gcms-p.i
Client Sample ID:

Compound: Cyclohexane
CAS Number: 1735-17-7

AFTER MANUAL INTEGRATION



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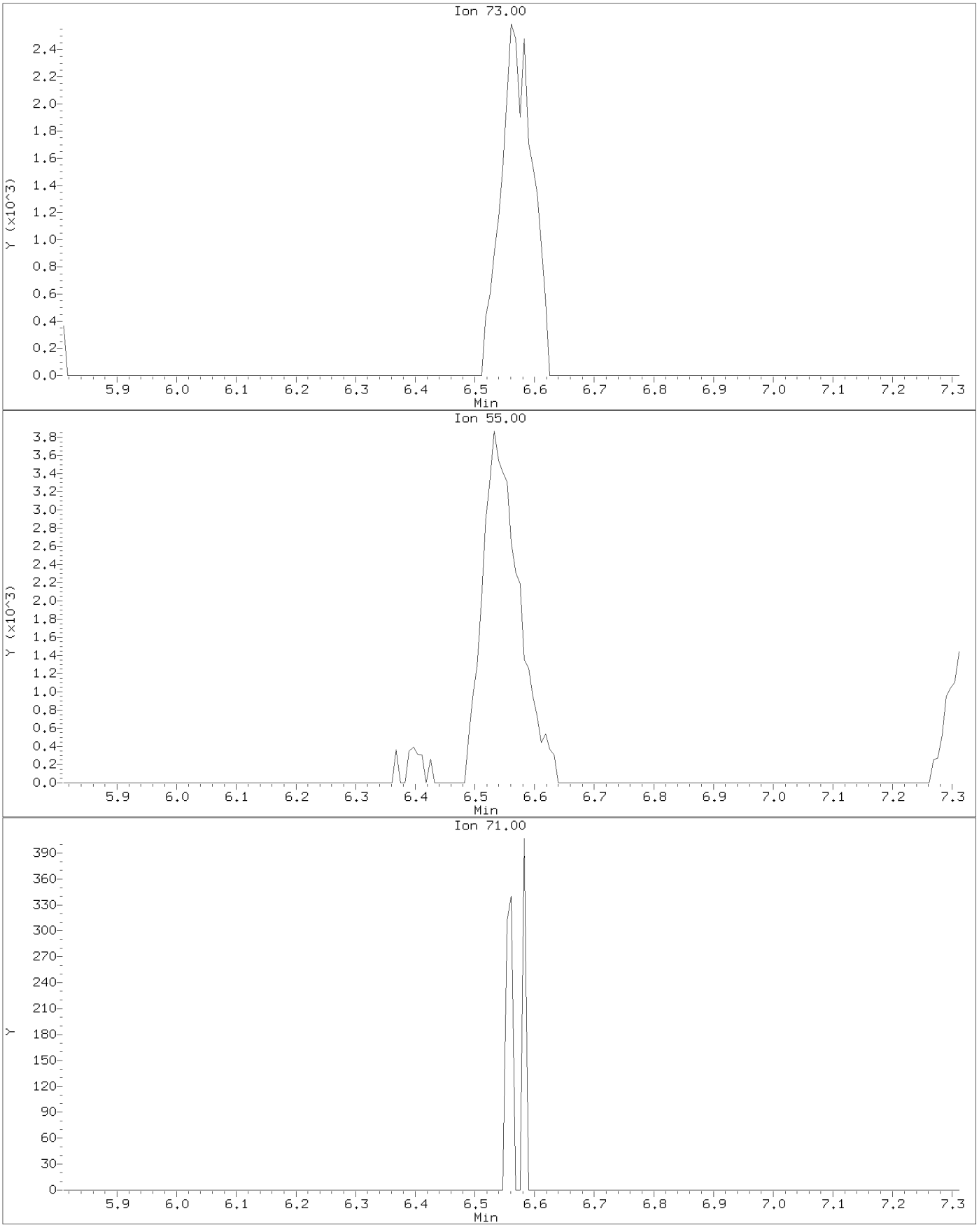
Injection Date: 19-MAR-2018 17:42
Instrument: gcms-p.i
Client Sample ID:

Compound: Tertiary-amyl methyl ether
CAS Number: 994-05-8

BEFORE MANUAL INTEGRATION



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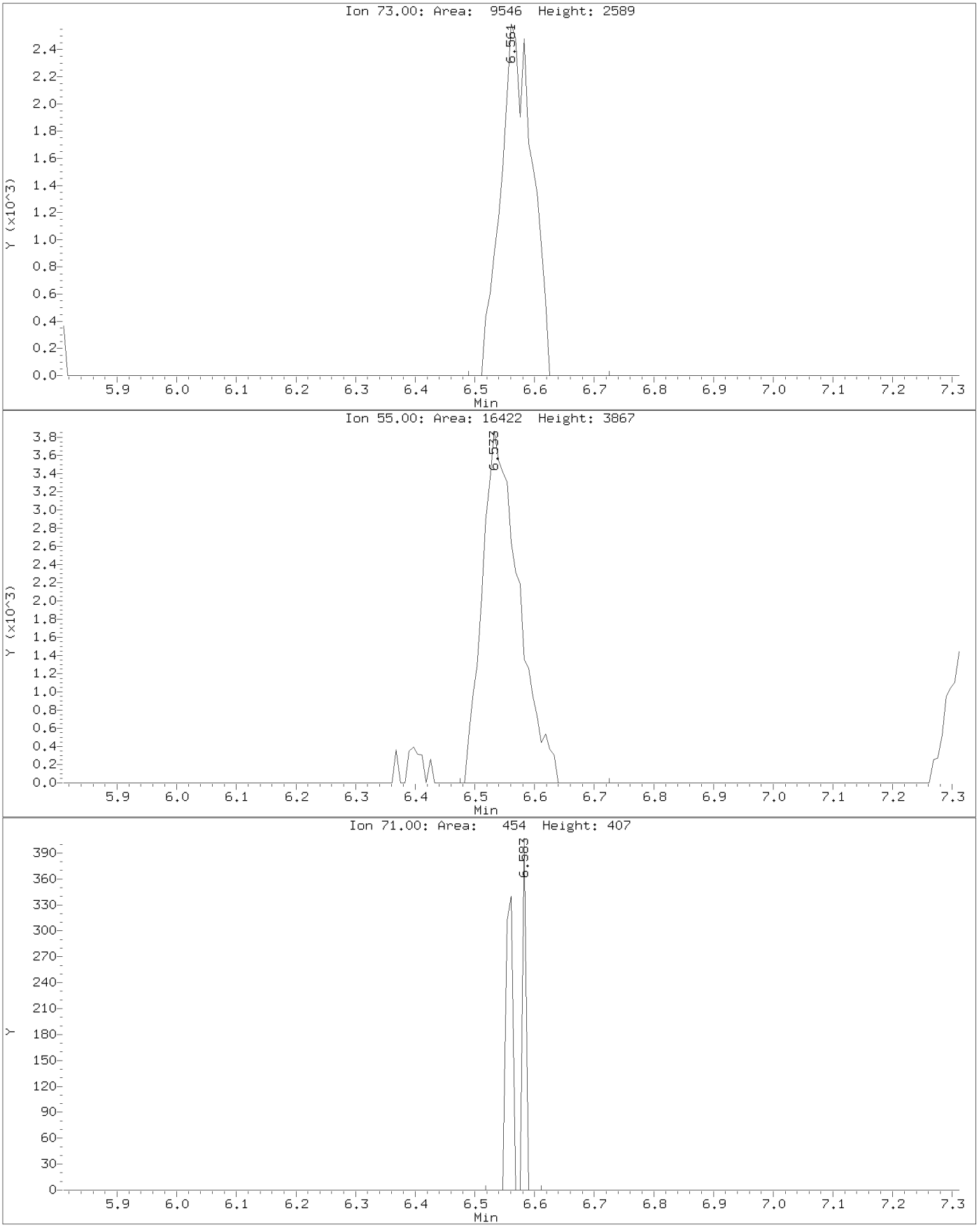
Injection Date: 19-MAR-2018 17:42
Instrument: gcms-p.i
Client Sample ID:

Compound: Tertiary-amyl methyl ether
CAS Number: 994-05-8

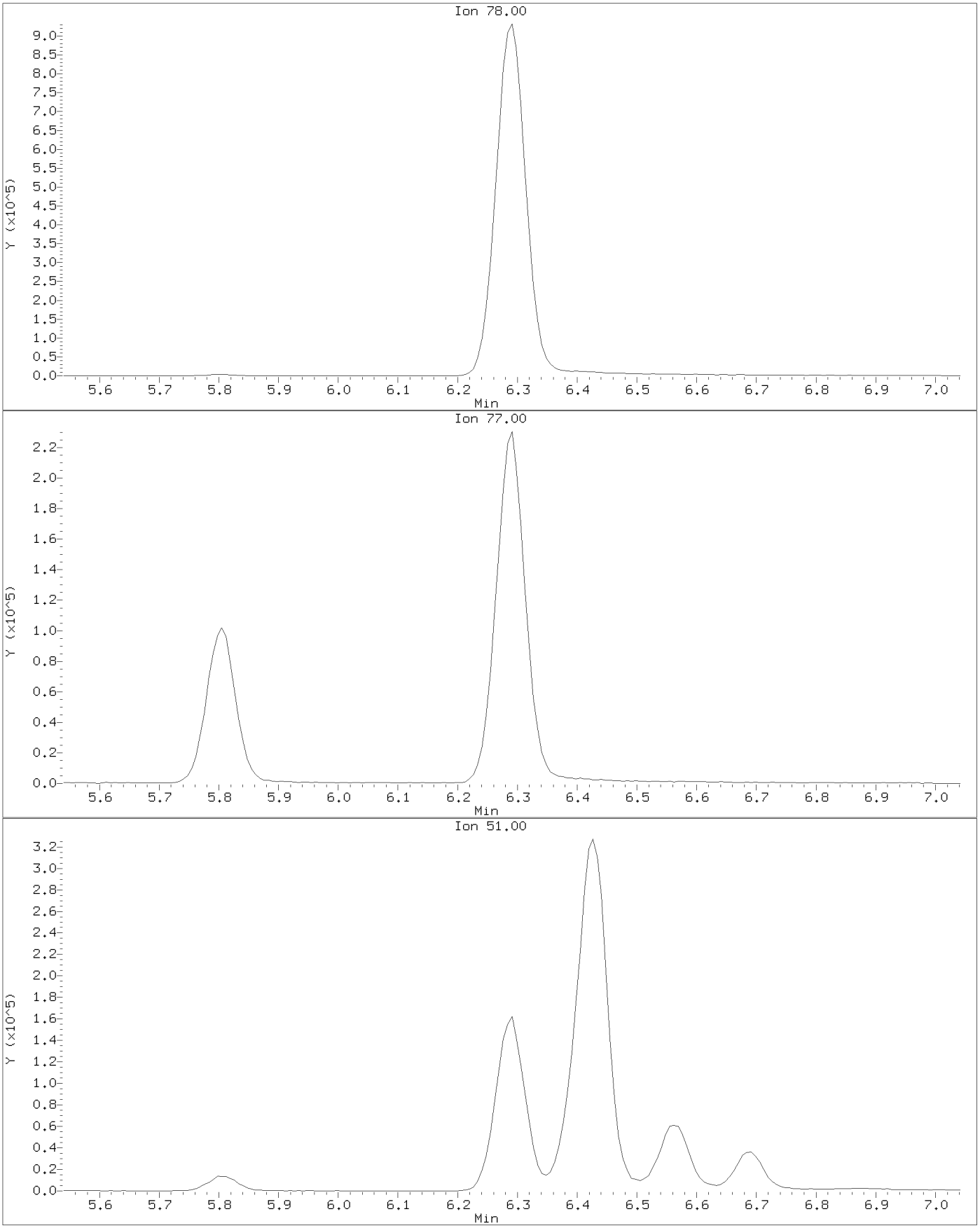
AFTER MANUAL INTEGRATION



Data File: \\target_server\gg\chem\gcms-p.i\P031918B.b\P4810.D
Injection Date: 19-MAR-2018 18:17
Instrument: gcms-p.i
Client Sample ID:

Compound: Benzene
CAS Number: 71-43-2

BEFORE MANUAL INTEGRATION



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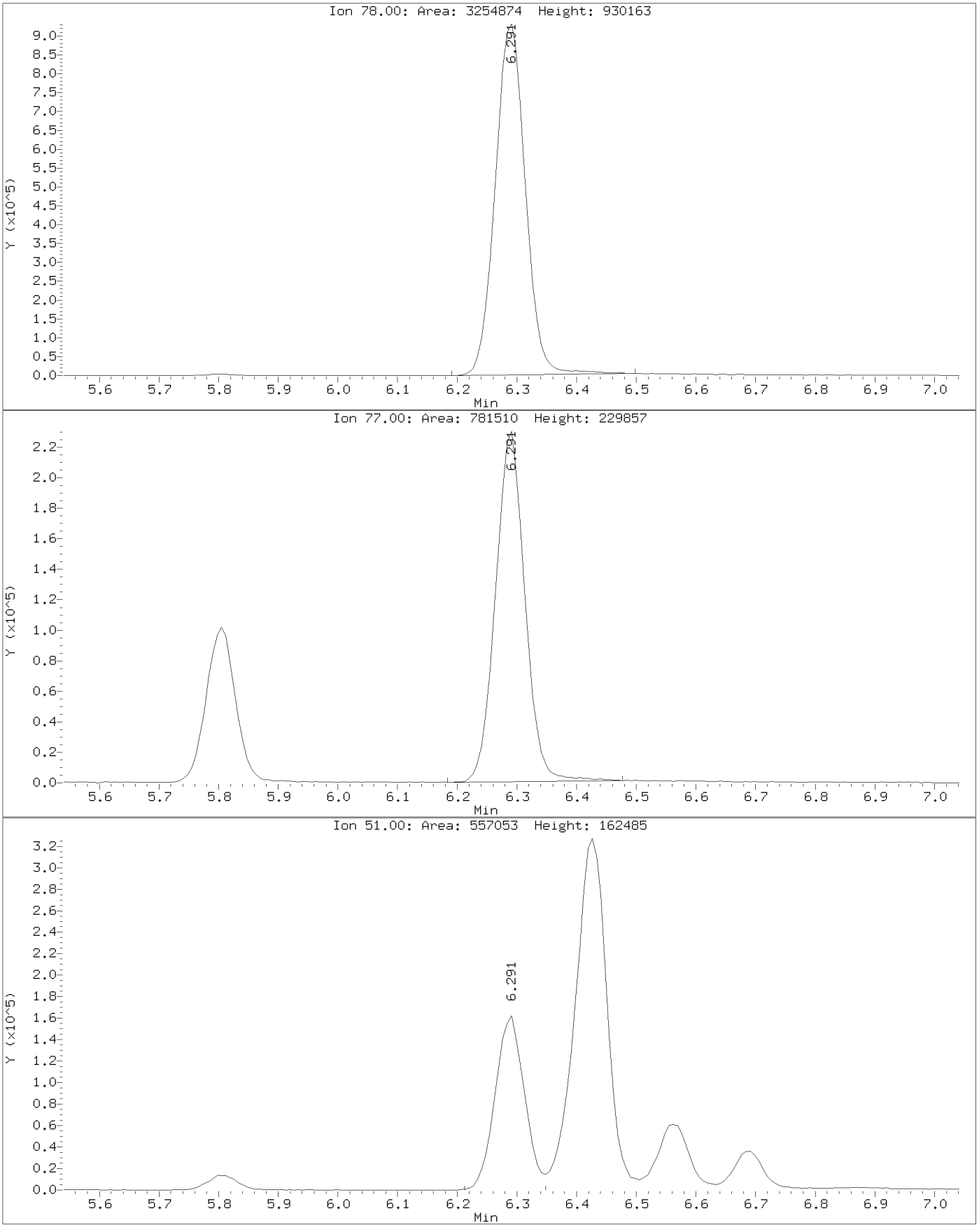
Injection Date: 19-MAR-2018 18:17
Instrument: gcms-p.i
Client Sample ID:

Compound: Benzene
CAS Number: 71-43-2

AFTER MANUAL INTEGRATION



Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL2079
Project : Cornhusker Army Ammunition Plant
Instrument ID: GCMS-W
Lab File IDs : W3298.D W3297.D W3296.D W3295.D W3300.D W3299.D
Column ID:
Calibration Date(s): 23-MAR-18 09:41, 23-MAR-18 13:16

	5.0000 Level 1	10.0000 Level 2	20.0000 Level 3	50.0000 Level 4	100.0000 Level 5	150.0000 Level 6	New Crv	b	m1	m2	%RSD	Max %RSD	
Dichlorodifluoromethane	0.79336	0.71457	0.64305	0.74356	0.72372	0.64224	AVG		0.71008		8.29778	15.00000	O
Chloromethane	0.99817	0.84537	0.76182	0.80985	0.82454	0.71164	AVG		0.82523		11.80783	15.00000	O
Vinyl chloride	0.88149	0.77700	0.71700	0.79816	0.83216	0.71082	AVG		0.78611		8.41696	15.00000	O
Bromomethane	0.58099	0.47046	0.42103	0.43431	0.43988	0.37261	AVG		0.45321		15.50593	15.00000	W(
Chloroethane	0.58151	0.50620	0.46221	0.51134	0.48590	0.37514	AVG		0.48705		13.93175	15.00000	O
Trichlorofluoromethane	1.15923	1.05625	0.93919	1.05543	1.06744	0.96788	AVG		1.04090		7.54398	15.00000	O
1,1-Dichloroethene	0.52632	0.47094	0.43485	0.52453	0.54028	0.47281	AVG		0.49495		8.37552	15.00000	O
Carbon Disulfide	1.93664	1.71356	1.59753	1.89789	1.96719	1.68974	AVG		1.80043		8.49004	15.00000	O
Freon-113	0.38029	0.33588	0.32714	0.38122	0.38348	0.33644	AVG		0.35741		7.49668	15.00000	O
Methylene Chloride	0.98327	0.84292	0.71325	0.71338	0.74717	0.67979	AVG		0.77996		14.65109	15.00000	O
Acetone	0.29516	0.29017	0.25482	0.26076	0.26927	0.29542	AVG		0.27760		6.55550	15.00000	O
trans-1,2-Dichloroethene	0.61045	0.55739	0.50154	0.57424	0.61393	0.52999	AVG		0.56459		7.86325	15.00000	O
Methyl tert-butyl ether	2.08440	2.02944	1.91089	2.13756	2.32622	2.25044	AVG		2.12316		7.08017	15.00000	O
1,1-Dichloroethane	1.18583	1.12435	1.01307	1.17060	1.21398	1.07519	AVG		1.13050		6.68135	15.00000	O
cis-1,2-Dichloroethene	0.65678	0.61183	0.55549	0.63082	0.68422	0.60581	AVG		0.62416		7.13650	15.00000	O
2,2-Dichloropropane	0.92610	0.85950	0.78465	0.92823	0.97671	0.85012	AVG		0.88755		7.78410	15.00000	O
Bromochloromethane	0.27646	0.25977	0.23826	0.27739	0.28757	0.26549	AVG		0.26749		6.47459	15.00000	O
Chloroform	1.20330	1.13532	1.05033	1.14510	1.21822	1.08746	AVG		1.13995		5.68167	15.00000	O
Carbon Tetrachloride	0.46119	0.45056	0.39688	0.47986	0.49107	0.43242	AVG		0.45200		7.54248	15.00000	O
1,1,1-Trichloroethane	1.01538	0.94664	0.85738	1.02578	1.04202	0.92271	AVG		0.96832		7.41937	15.00000	O
1,1-Dichloropropene	0.51102	0.48119	0.43691	0.52936	0.54693	0.47702	AVG		0.49707		8.04551	15.00000	O
2-Butanone	0.39879	0.36456	0.36359	0.38734	0.40391	0.44644	AVG		0.39410		7.78538	15.00000	O
Benzene	1.53769	1.41231	1.26339	1.45293	1.54320	1.33815	AVG		1.42461		7.77044	15.00000	O
1,2-Dichloroethane	0.61623	0.56399	0.52212	0.57252	0.57671	0.55930	AVG		0.56848		5.34582	15.00000	O
Trichloroethene	0.37714	0.35195	0.31428	0.35851	0.37269	0.32321	AVG		0.34963		7.37095	15.00000	O
Dibromomethane	0.22323	0.21523	0.20582	0.22394	0.23370	0.23014	AVG		0.22201		4.57571	15.00000	O
1,2-Dichloropropane	0.39789	0.36716	0.33729	0.38666	0.40664	0.36961	AVG		0.37754		6.63189	15.00000	O
Bromodichloromethane	0.53031	0.50035	0.45677	0.52402	0.54655	0.51306	AVG		0.51184		6.09133	15.00000	O
cis-1,3-dichloropropene	0.63790	0.61032	0.58009	0.70607	0.74313	0.69265	AVG		0.66169		9.41965	15.00000	O
Toluene	0.94690	0.87041	0.79990	0.91510	0.95991	0.85017	AVG		0.89040		6.89429	15.00000	O
4-methyl-2-pentanone	0.43469	0.40254	0.41239	0.44759	0.46846	0.50960	AVG		0.44588		8.80019	15.00000	O
Tetrachloroethene	0.26142	0.25205	0.22337	0.25172	0.27746	0.23480	AVG		0.25014		7.65218	15.00000	O
trans-1,3-Dichloropropene	0.61213	0.56795	0.55145	0.64000	0.67882	0.65336	AVG		0.61729		8.06710	15.00000	O
1,1,2-Trichloroethane	0.32596	0.28739	0.26186	0.30078	0.31674	0.31107	AVG		0.30063		7.71388	15.00000	O
Dibromochloromethane	0.35230	0.33677	0.33591	0.36320	0.41324	0.38524	AVG		0.36444		8.27074	15.00000	O
1,3-Dichloropropane	0.76007	0.68355	0.65811	0.70866	0.75877	0.71307	AVG		0.71371		5.67636	15.00000	O
1,2-Dibromoethane	0.34393	0.32438	0.31869	0.34603	0.38160	0.37363	AVG		0.34804		7.29569	15.00000	O

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL2079
Project : Cornhusker Army Ammunition Plant
Instrument ID: GCMS-W
Lab File IDs : W3298.D W3297.D W3296.D W3295.D W3300.D W3299.D
Column ID:
Calibration Date(s): 23-MAR-18 09:41 23-MAR-18 13:16

2-Hexanone	0.32779	0.30928	0.31829	0.33896	0.36803	0.39394	AVG		0.34272		9.42456	15.00000	O
Chlorobenzene	1.09885	1.00662	0.93918	1.01694	1.09919	0.95719	AVG		1.01966		6.67391	15.00000	O
Ethylbenzene	0.56421	0.53145	0.49195	0.56125	0.60918	0.52218	AVG		0.54670		7.43150	15.00000	O
1,1,1,2-Tetrachloroethane	0.36098	0.33495	0.31604	0.35639	0.39363	0.35254	AVG		0.35242		7.41711	15.00000	O
m+p-Xylenes	0.71884	0.65857	0.62572	0.69828	0.75111	0.64768	AVG		0.68337		6.95106	15.00000	O
o-Xylene	0.61182	0.60516	0.59382	0.67901	0.74810	0.65424	AVG		0.64869		9.01465	15.00000	O
Styrene	1.04767	1.05536	1.04934	1.16726	1.28372	1.13762	AVG		1.12350		8.31918	15.00000	O
Bromoform	0.25508	0.24255	0.24079	0.26787	0.31307	0.31098	AVG		0.27172		12.03827	15.00000	O
Isopropylbenzene	2.63492	2.50769	2.43137	2.81633	2.97896	2.56485	AVG		2.65569		7.73934	15.00000	O
Bromobenzene	0.69799	0.67659	0.64237	0.69285	0.76908	0.68716	AVG		0.69434		5.99710	15.00000	O
N-Propylbenzene	3.96502	3.67349	3.49251	3.84753	3.98749	3.37768	AVG		3.72395		6.78124	15.00000	O
1,1,2,2-Tetrachloroethane	1.04435	0.94527	0.91890	0.96488	1.03292	1.03253	AVG		0.98981		5.40146	15.00000	O
1,3,5-Trimethylbenzene	2.60273	2.44716	2.38119	2.67010	2.85463	2.43677	AVG		2.56543		6.98310	15.00000	O
2-Chlorotoluene	2.36935	2.20297	2.10233	2.31528	2.46272	2.14190	AVG		2.26576		6.17803	15.00000	O
1,2,3-Trichloropropane	0.95991	0.85492	0.83130	0.87212	0.95089	0.95652	AVG		0.90428		6.40921	15.00000	O
4-Chlorotoluene	2.55897	2.37404	2.28272	2.50324	2.63510	2.28859	AVG		2.44044		6.02865	15.00000	O
tert-Butylbenzene	2.43482	2.31017	2.27703	2.58851	2.78630	2.40475	AVG		2.46693		7.74052	15.00000	O
1,2,4-Trimethylbenzene	2.69529	2.62999	2.57602	2.85372	3.03883	2.59017	AVG		2.73067		6.65544	15.00000	O
P-Isopropyltoluene	2.65965	2.55179	2.54626	2.91399	3.04913	2.55099	AVG		2.71197		8.01538	15.00000	O
1,3-Dichlorobenzene	1.57925	1.39885	1.31594	1.43300	1.53836	1.34503	AVG		1.43507		7.31325	15.00000	O
1,4-Dichlorobenzene	1.66732	1.46617	1.37623	1.50034	1.59815	1.39866	AVG		1.50115		7.55769	15.00000	O
N-Butylbenzene	2.90665	2.78577	2.70481	3.03443	3.11691	2.57939	AVG		2.85466		7.12373	15.00000	O
sec-Butylbenzene	3.35116	3.15599	3.03596	3.44005	3.65971	3.05828	AVG		3.28352		7.44605	15.00000	O
1,2-Dichlorobenzene	1.55116	1.38290	1.34502	1.42220	1.54754	1.36129	AVG		1.43502		6.42965	15.00000	O
1,2-Dibromo-3-Chloropropane	0.27011	0.22710	0.24037	0.25907	0.25714	0.19557	AVG		0.24156		11.24537	15.00000	O
Hexachlorobutadiene	0.51680	0.47525	0.44400	0.50570	0.52111	0.42318	AVG		0.48100		8.44291	15.00000	O
1,2,4-Trichlorobenzene	0.91759	0.87588	0.87545	0.97910	1.02642	0.87957	AVG		0.92567		6.86588	15.00000	O
Naphthalene	2.39231	2.39507	2.50458	2.65375	2.91106	2.73840	AVG		2.59920		7.94145	15.00000	O
1,2,3-Trichlorobenzene	0.92458	0.89466	0.84835	0.90758	0.97523	0.84101	AVG		0.89857		5.56095	15.00000	O
Dibromofluoromethane	0.52149	0.52289	0.51572	0.53548	0.51656	0.53216	AVG		0.52405		1.54941	15.00000	
1,2-Dichloroethane-D4	0.74105	0.75056	0.73413	0.75059	0.70463	0.75260	AVG		0.73892		2.46747	15.00000	
Toluene-D8	1.26872	1.25933	1.24732	1.28107	1.24347	1.28398	AVG		1.26398		1.33983	15.00000	
P-Bromofluorobenzene	0.56980	0.57955	0.55529	0.58517	0.57736	0.61052	AVG		0.57961		3.16181	15.00000	

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

Data File: \\target_server\gg\chem\gcms-w.i\W032318.b\W3301.D
Report Date: 28-Mar-2018 12:56

Katahdin Analytical Services

RECOVERY REPORT

Client Name: Client SDG: SDGa01256
Sample Matrix: SOLID Fraction: VOA
Lab Smp Id: WG225302-7
Level: LOW Operator: HG/JSS
Data Type: MS DATA SampleType: LCS
SpikeList File: IND_CHECK4.1.spk Quant Type: ISTD
Sublist File: all.sub
Method File: \\target_server\gg\chem\gcms-w.i\W032318.b\W8SDI(07)D.m
Misc Info: WG225302,WG225302-4,SL2079-7

	SPIKE	COMPOUND	CONC ADDED ug/Kgdrywt	CONC RECOVERED ug/Kgdrywt	% RECOVERED	LIMITS
	1	Dichlorodifluorome	50.0	39.9	79.83*	80-120
	2	Chloromethane	50.0	49.4	98.76	80-120
	3	Vinyl chloride	50.0	48.2	96.39	80-120
	4	Bromomethane	50.0	48.4	96.83	80-120
	5	Chloroethane	50.0	52.2	104.52	80-120
	6	Trichlorofluoromet	50.0	45.5	90.94	80-120
	7	Diethyl Ether	50.0	50.2	100.38	80-120
	8	Tertiary-butyl alc	250	260	104.21	80-120
	9	1,1-Dichloroethene	50.0	49.9	99.82	80-120
	10	Carbon Disulfide	50.0	57.3	114.67	80-120
	11	Freon-113	50.0	53.0	105.92	80-120
	12	Iodomethane	50.0	51.1	102.19	80-120
	13	Acrolein	250	245	98.03	80-120
	14	Methylene Chloride	50.0	46.4	92.78	80-120
	15	Acetone	50.0	45.8	91.53	80-120
	16	Isobutyl Alcohol	1000	1050	104.81	80-120
	17	trans-1,2-Dichloro	50.0	51.7	103.41	80-120
	18	Allyl Chloride	50.0	52.8	105.65	80-120
	19	Methyl tert-butyl	50.0	49.4	98.81	80-120
	20	Acetonitrile	500	460	91.92	80-120
	21	Di-isopropyl ether	50.0	53.8	107.52	80-120
	22	Chloroprene	50.0	54.2	108.44	80-120
	23	Propionitrile	500	493	98.57	80-120
	24	Methacrylonitrile	500	492	98.51	80-120
	25	1,1-Dichloroethane	50.0	52.8	105.57	80-120
	26	Acrylonitrile	250	250	100.19	80-120
	27	Ethyl tertiary-but	50.0	53.4	106.88	80-120
	28	Vinyl Acetate	50.0	58.6	117.28	80-120
	29	cis-1,2-Dichloroet	50.0	52.4	104.71	80-120
M	30	1,2-Dichloroethyle	100	104	104.06	80-120
	31	Methyl Methacrylat	50.0	52.1	104.19	80-120
	32	2,2-Dichloropropan	50.0	53.4	106.90	80-120
	33	Bromochloromethane	50.0	50.0	100.09	80-120
	34	Chloroform	50.0	51.4	102.85	80-120
	35	Carbon Tetrachlori	50.0	51.9	103.87	80-120
	36	Tetrahydrofuran	50.0	49.0	98.11	80-120
	38	1,1,1-Trichloroeth	50.0	50.3	100.61	80-120
	39	1,1-Dichloropropen	50.0	51.8	103.57	80-120
	40	2-Butanone	50.0	45.5	91.07	80-120
	41	Benzene	50.0	50.8	101.69	80-120

Data File: \\target_server\gg\chem\gcms-w.i\W032318.b\W3301.D
Report Date: 28-Mar-2018 12:56

	SPIKE	COMPOUND	CONC ADDED ug/Kgdrywt	CONC RECOVERED ug/Kgdrywt	% RECOVERED	LIMITS
	43	Cyclohexane	50.0	51.6	103.17	80-120
	44	Ethyl Methacrylate	50.0	52.7	105.48	80-120
	46	Tertiary-amyl meth	50.0	52.6	105.25	80-120
	47	1,2-Dichloroethane	50.0	48.4	96.74	80-120
	48	Trichloroethene	50.0	50.0	100.04	80-120
	50	Dibromomethane	50.0	49.6	99.14	80-120
	51	1,2-Dichloropropan	50.0	50.9	101.80	80-120
	52	Bromodichlorometha	50.0	52.3	104.66	80-120
	53	cis-1,3-dichloropr	50.0	50.1	100.27	80-120
	54	1,4-Dioxane	1000	968	96.83	80-120
	56	2-Chloroethylviny	50.0	0.00	*	80-120
	57	Toluene	50.0	51.5	102.99	80-120
	58	4-methyl-2-pentano	50.0	46.0	92.01	80-120
	59	Tetrachloroethene	50.0	53.2	106.34	80-120
	60	trans-1,3-Dichloro	50.0	50.2	100.32	80-120
	61	1,1,2-Trichloroeth	50.0	49.0	98.11	80-120
	62	Dibromochlorometha	50.0	52.6	105.24	80-120
	63	1,3-Dichloropropan	50.0	48.4	96.72	80-120
	64	1,2-Dibromoethane	50.0	49.6	99.11	80-120
	65	2-Hexanone	50.0	48.4	96.83	80-120
	67	Chlorobenzene	50.0	50.9	101.78	80-120
	152	1-Chlorohexane	50.0	52.2	104.37	80-120
	68	Ethylbenzene	50.0	51.8	103.70	80-120
	69	1,1,1,2-Tetrachlor	50.0	52.7	105.48	80-120
M	70	Xylenes (total)	150	157	104.76	80-120
	71	m+p-Xylenes	100	103	103.34	80-120
	72	o-Xylene	50.0	53.8	107.61	80-120
	73	Styrene	50.0	53.2	106.42	80-120
	74	Bromoform	50.0	52.4	104.86	80-120
	75	Isopropylbenzene	50.0	55.2	110.34	80-120
	77	cis-1,4-Dichloro-2	50.0	49.3	98.60	80-120
	78	trans-1,4-Dichloro	50.0	49.3	98.61	80-120
	79	Bromobenzene	50.0	50.7	101.46	80-120
	80	N-Propylbenzene	50.0	51.1	102.28	80-120
	81	1,1,2,2-Tetrachlor	50.0	49.0	98.07	80-120
	82	1,3,5-Trimethylben	50.0	51.5	103.03	80-120
	83	2-Chlorotoluene	50.0	51.1	102.27	80-120
	84	1,2,3-Trichloropro	50.0	46.5	93.07	80-120
	85	4-Chlorotoluene	50.0	50.4	100.71	80-120
	86	tert-Butylbenzene	50.0	52.3	104.62	80-120
	87	Pentachloroethane	50.0	50.2	100.41	80-120
	88	1,2,4-Trimethylben	50.0	51.4	102.87	80-120
	89	P-Isopropyltoluene	50.0	53.4	106.78	80-120
	90	1,3-Dichlorobenzen	50.0	51.1	102.28	80-120
	92	1,4-Dichlorobenzen	50.0	49.4	98.87	80-120
	93	N-Butylbenzene	50.0	52.5	105.07	80-120
	94	sec-Butylbenzene	50.0	52.2	104.45	80-120
	95	1,2-Dichlorobenzen	50.0	50.5	101.05	80-120
	96	1,2-Dibromo-3-Chlo	50.0	52.7	105.45	80-120
	97	1,3,5-Trichloroben	50.0	51.1	102.30	80-120
	98	Hexachlorobutadien	50.0	50.8	101.56	80-120
	99	1,2,4-Trichloroben	50.0	52.1	104.15	80-120
	100	1,2,3-Trimethylben	50.0	51.4	102.81	80-120
	101	Naphthalene	50.0	53.8	107.60	80-120

Data File: \\target_server\gg\chem\gcms-w.i\W032318.b\W3301.D
Report Date: 28-Mar-2018 12:56

SPIKE COMPOUND	CONC ADDED ug/Kgdrywt	CONC RECOVERED ug/Kgdrywt	% RECOVERED	LIMITS
102 1,2,3-Trichloroben	50.0	52.0	103.97	80-120
103 Methyl Acetate	50.0	46.4	92.70	80-120
104 Methylcyclohexane	50.0	55.1	110.22	80-120
M 153 Total Alkylbenzene	350	364	104.16	80-120

SURROGATE COMPOUND	AMOUNT ADDED ug/kg	AMOUNT RECOVERED ug/kg	% RECOVERED	LIMITS
$ 37 Dibromofluorometha	50.0	49.3	98.70	64-130
$ 45 1,2-Dichloroethane	50.0	47.3	94.66	58-134
$ 55 Toluene-D8	50.0	49.2	98.38	67-118
$ 76 P-Bromofluorobenze	50.0	48.3	96.66	47-119

Data File: \\target_server\gg\chem\gcms-w.i\W032318.b\W3301.D
Report Date: 28-Mar-2018 12:56

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W032318.b\W3301.D
Lab Smp Id: WG225302-7
Inj Date : 23-MAR-2018 13:53 MS Autotune Date: 10-APR-2016 11:00
Operator : HG/JSS Inst ID: gcms-w.i
Smp Info : WG225302-7,SL2079
Misc Info : WG225302,WG225302-4,SL2079-7
Comment : SW846 5035
Method : \\target_server\gg\chem\gcms-w.i\W032318.b\W8SDI(07)D.m
Meth Date : 28-Mar-2018 12:44 tcote Quant Type: ISTD
Cal Date : 23-MAR-2018 13:16 Cal File: W3300.D
Als bottle: 8 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: MIS_GUEST

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	0.00000	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	5.000	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/kg)	FINAL (ug/Kgdrywt)	REVIEW COD
1	Dichlorodifluoromethane	85	1.969	1.970	(0.244)	191188	39.9141	39.9(R)	
2	Chloromethane	50	2.191	2.191	(0.271)	274880	49.3790	49.4	
3	Vinyl chloride	62	2.262	2.263	(0.280)	255558	48.1930	48.2	
4	Bromomethane	94	2.605	2.606	(0.323)	148011	48.4134	48.4	
5	Chloroethane	64	2.741	2.735	(0.339)	171691	52.2576	52.2	
6	Trichlorofluoromethane	101	2.891	2.885	(0.358)	319265	45.4691	45.5	
7	Diethyl Ether	59	3.227	3.228	(0.400)	197544	50.1910	50.2	
8	Tertiary-butyl alcohol	59	4.715	4.723	(0.584)	193243	260.513	260	
9	1,1-Dichloroethene	96	3.463	3.464	(0.429)	166645	49.9117	49.9	
10	Carbon Disulfide	76	3.513	3.507	(0.435)	696324	57.3339	57.3	
11	Freon-113	151	3.506	3.500	(0.434)	127686	52.9606	53.0	
12	Iodomethane	142	3.649	3.643	(0.452)	164826	51.0939	51.1	
13	Acrolein	56	3.885	3.886	(0.481)	204155	245.066	245	
14	Methylene Chloride	84	4.200	4.194	(0.520)	244063	46.3878	46.4	
15	Acetone	43	4.278	4.279	(0.530)	85701	45.7657	45.8	
16	Isobutyl Alcohol	43	8.347	8.348	(1.034)	312950	1048.07	1050	
17	trans-1,2-Dichloroethene	96	4.421	4.415	(0.548)	196922	51.7055	51.7	
18	Allyl Chloride	41	4.057	4.058	(0.502)	312492	52.8249	52.8	
19	Methyl tert-butyl ether	73	4.579	4.572	(0.567)	707574	49.4043	49.4	
20	Acetonitrile	39	4.986	4.980	(0.618)	70125	459.590	460	
21	Di-isopropyl ether	45	5.165	5.166	(0.640)	695405	53.7597	53.8	

Data File: \\target_server\gg\chem\gcms-w.i\W032318.b\W3301.D
Report Date: 28-Mar-2018 12:56

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/kg)	CONCENTRATIONS FINAL (ug/Kgdrywt)	REVIEW COD
	22	Chloroprene	53	5.337	5.338	(0.661)	321643	54.2176	54.2	
	23	Propionitrile	54	7.975	7.983	(0.988)	396133	492.873	493	
	24	Methacrylonitrile	41	8.004	8.005	(0.991)	1499643	492.538	492	
	25	1,1-Dichloroethane	63	5.379	5.380	(0.666)	402520	52.7826	52.8	
	26	Acrylonitrile	52	5.494	5.488	(0.680)	386056	250.467	250	
	27	Ethyl tertiary-butyl ether	59	5.816	5.817	(0.720)	684225	53.4380	53.4	
	28	Vinyl Acetate	43	5.851	5.852	(0.654)	514069	58.6378	58.6	
	29	cis-1,2-Dichloroethene	96	6.366	6.367	(0.788)	220440	52.3565	52.4	
M	30	1,2-Dichloroethylene (total)	96				417362	104.062	104	
	31	Methyl Methacrylate	41	12.108	12.102	(1.353)	218733	52.0928	52.1	
	32	2,2-Dichloropropane	77	6.574	6.567	(0.814)	320006	53.4490	53.4	
	33	Bromochloromethane	128	6.731	6.732	(0.834)	90301	50.0449	50.0	
	34	Chloroform	83	6.881	6.875	(0.852)	395442	51.4246	51.4	
	35	Carbon Tetrachloride	117	7.103	7.096	(0.794)	276460	51.9342	51.9	
	36	Tetrahydrofuran	42	7.181	7.168	(0.889)	81633	49.0566	49.0	
$	37	Dibromofluoromethane	113	7.203	7.204	(0.892)	174454	49.3497	49.3	
	38	1,1,1-Trichloroethane	97	7.239	7.232	(0.896)	328594	50.3057	50.3	
	39	1,1-Dichloropropene	75	7.453	7.454	(0.833)	303160	51.7856	51.8	
	40	2-Butanone	43	7.467	7.461	(0.925)	121057	45.5361	45.5	
	41	Benzene	78	7.889	7.883	(0.882)	853045	50.8431	50.8	
*	42	Pentafluorobenzene	168	8.075	8.076	(1.000)	337283	50.0000		
	43	Cyclohexane	56	6.717	6.710	(0.832)	323461	51.5830	51.6	
	44	Ethyl Methacrylate	69	10.127	10.121	(1.132)	192463	52.7387	52.7	
$	45	1,2-Dichloroethane-D4	65	8.125	8.126	(1.006)	235914	47.3292	47.3	
	46	Tertiary-amyl methyl ether	73	8.125	8.119	(1.006)	664971	52.6250	52.6	
	47	1,2-Dichloroethane	62	8.240	8.240	(0.921)	323847	48.3705	48.4	
	48	Trichloroethene	95	8.869	8.863	(0.991)	205968	50.0208	50.0	
*	49	1,4-Difluorobenzene	114	8.947	8.948	(1.000)	588862	50.0000		
	50	Dibromomethane	93	9.541	9.535	(1.066)	129609	49.5702	49.6	
	51	1,2-Dichloropropane	63	9.712	9.706	(1.086)	226319	50.8993	50.9	
	52	Bromodichloromethane	83	9.820	9.821	(1.097)	315445	52.3291	52.3	
	53	cis-1,3-dichloropropene	75	10.821	10.815	(1.209)	390694	50.1345	50.1	
	54	1,4-Dioxane	88	10.170	10.171	(1.137)	79296	968.283	968	
$	55	Toluene-D8	98	11.100	11.093	(1.241)	732217	49.1876	49.2	
	57	Toluene	92	11.171	11.172	(1.249)	539982	51.4935	51.5	
	58	4-methyl-2-pentanone	43	11.793	11.794	(1.318)	241569	46.0026	46.0	
	59	Tetrachloroethene	164	11.743	11.737	(0.877)	148425	53.1692	53.2	
	60	trans-1,3-Dichloropropene	75	11.822	11.823	(1.321)	364675	50.1622	50.2	
	61	1,1,2-Trichloroethane	83	12.058	12.059	(1.348)	173679	49.0533	49.0	
	62	Dibromochloromethane	129	12.308	12.302	(0.919)	214013	52.6186	52.6	
	63	1,3-Dichloropropane	76	12.458	12.459	(0.931)	385199	48.3610	48.4	
	64	1,2-Dibromoethane	107	12.644	12.638	(1.413)	203134	49.5570	49.6	
	65	2-Hexanone	43	13.037	13.038	(0.974)	185181	48.4164	48.4	
*	66	Chlorobenzene-D5	117	13.388	13.389	(1.000)	558008	50.0000		
	67	Chlorobenzene	112	13.409	13.410	(1.002)	579098	50.8892	50.9	
	152	1-Chlorohexane	91	13.409	13.410	(1.661)	314132	52.1841	52.2	
	68	Ethylbenzene	106	13.466	13.467	(1.006)	316361	51.8517	51.8	
	69	1,1,1,2-Tetrachloroethane	131	13.509	13.510	(1.009)	207433	52.7407	52.7	
M	70	Xylenes (total)	106				1177646	157.145	157	
	71	m+p-Xylenes	106	13.674	13.675	(1.021)	788130	103.341	103	
	72	o-Xylene	106	14.253	14.254	(1.065)	389516	53.8042	53.8	
	73	Styrene	104	14.331	14.332	(1.070)	667146	53.2083	53.2	
	74	Bromoform	173	14.346	14.347	(1.072)	158988	52.4286	52.4	
	75	Isopropylbenzene	105	14.675	14.676	(0.892)	1013790	55.1720	55.2	

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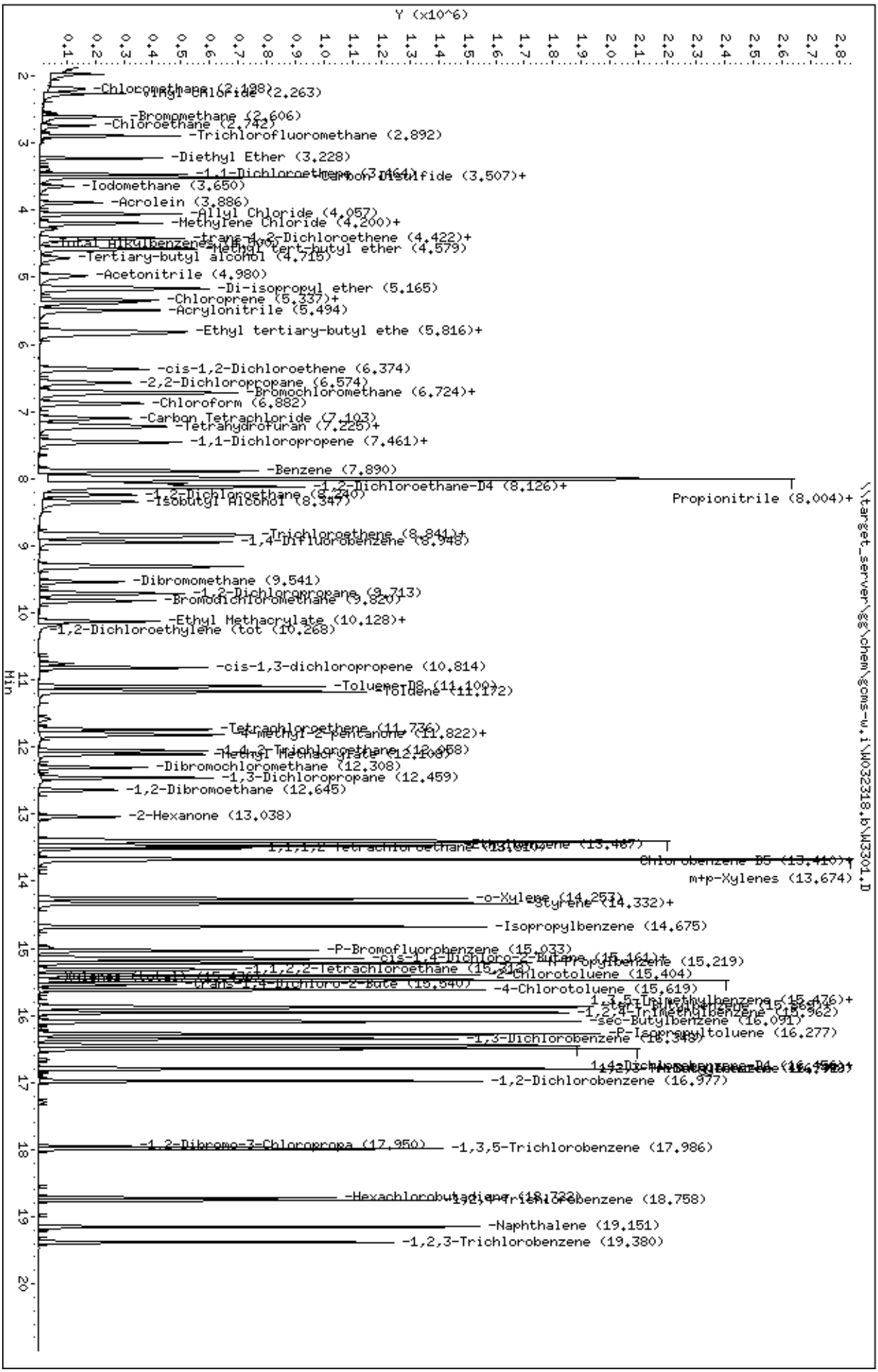
Report Date: 28-Mar-2018 12:56

							CONCENTRATIONS		
		QUANT SIG					ON-COLUMN	FINAL	
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/kg)	(ug/Kgdrywt)	REVIEW COD
$	76 P-Bromofluorobenzene	95	15.032	15.033	(1.680)	329901	48.3282	48.3	
	77 cis-1,4-Dichloro-2-Butene	53	15.139	15.140	(0.920)	110353	49.2989	49.3	
	78 trans-1,4-Dichloro-2-Butene	53	15.540	15.541	(0.945)	89638	49.3040	49.3	
	79 Bromobenzene	156	15.161	15.162	(0.922)	243713	50.7287	50.7	
	80 N-Propylbenzene	91	15.218	15.212	(0.925)	1317664	51.1385	51.1	
	81 1,1,2,2-Tetrachloroethane	83	15.311	15.312	(0.931)	335834	49.0368	49.0	
	82 1,3,5-Trimethylbenzene	105	15.475	15.476	(0.941)	914446	51.5164	51.5	
	83 2-Chlorotoluene	91	15.404	15.405	(0.937)	801650	51.1351	51.1	
	84 1,2,3-Trichloropropane	75	15.475	15.476	(0.941)	291161	46.5350	46.5	
	85 4-Chlorotoluene	91	15.618	15.619	(0.950)	850308	50.3565	50.4	
	86 tert-Butylbenzene	119	15.869	15.870	(0.965)	892887	52.3103	52.3	
	87 Pentachloroethane	117	15.890	15.884	(0.966)	187842	50.2046	50.2	
	88 1,2,4-Trimethylbenzene	105	15.962	15.963	(0.970)	971843	51.4369	51.4	
	89 P-Isopropyltoluene	119	16.276	16.277	(0.990)	1001844	53.3905	53.4	
	90 1,3-Dichlorobenzene	146	16.348	16.349	(0.994)	507773	51.1380	51.1	
*	91 1,4-Dichlorobenzene-D4	152	16.448	16.442	(1.000)	345957	50.0000		
	92 1,4-Dichlorobenzene	146	16.462	16.463	(1.001)	513480	49.4366	49.4	
	93 N-Butylbenzene	91	16.791	16.792	(1.021)	1037707	52.5374	52.5	
	94 sec-Butylbenzene	105	16.090	16.091	(0.978)	1186487	52.2241	52.2	
	95 1,2-Dichlorobenzene	146	16.977	16.978	(1.032)	501657	50.5239	50.5	
	96 1,2-Dibromo-3-Chloropropane	75	17.949	17.951	(1.091)	92333	52.7256	52.7	
	97 1,3,5-Trichlorobenzene	180	17.985	17.986	(2.227)	356643	51.1478	51.1	
	98 Hexachlorobutadiene	225	18.722	18.723	(1.138)	169000	50.7791	50.8	
	99 1,2,4-Trichlorobenzene	180	18.757	18.758	(1.140)	333525	52.0740	52.1	
	100 1,2,3-Trimethylbenzene	105	16.498	16.499	(2.043)	1035817	51.4034	51.4	
	101 Naphthalene	128	19.151	19.152	(1.164)	967539	53.7994	53.8	
	102 1,2,3-Trichlorobenzene	180	19.379	19.380	(1.178)	323209	51.9852	52.0	
	103 Methyl Acetate	43	4.443	4.444	(0.550)	196966	46.3512	46.4	
	104 Methylcyclohexane	83	8.833	8.834	(1.094)	377970	55.1116	55.1	
M	153 Total Alkylbenzenes	100				7322878	364.554	364	

QC Flag Legend

R - Spike/Surrogate failed recovery limits.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Client ID:
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Column phase: RTX-VMS
Instrument: gcms-w.i
Operator: HG/JSS
Column diameter: 0.18
\\target_server\gg\chem\gcms-w.i\W032318.b\W3301.D
Y (x10^6)
Min
Vinyl Chloride (2.263)
Bromomethane (2.606)
Chloroethane (2.742)
Trichlorofluoromethane (2.892)
Diethyl Ether (3.228)
Carbon Disulfide (3.507)+
Iodomethane (3.650)
Acrolein (3.886)
Allyl Chloride (4.057)
Methylene Chloride (4.200)+
trans-1,2-Dichloroethene (4.422)+
Methyl tert-butyl ether (4.579)
Tertiary-butyl alcohol (4.715)
Acetonitrile (4.980)
Di-isopropyl ether (5.165)
Chloroprene (5.337)+
Acrylonitrile (5.494)
Ethyl tertiary-butyl ethe (5.816)+
cis-1,2-Dichloroethene (6.374)
2,2-Dichloropropane (6.574)
Bromochloromethane (6.724)+
Chloroform (6.882)
Carbon Tetrachloride (7.103)
Tetrahydrofuran (7.225)+
1,1-Dichloropropene (7.461)+
Benzene (7.890)
1,2-Dichloroethane-D4 (8.126)+
1,2-Dichloroethane (8.240)
Isobutyl Alcohol (8.347)
Propionitrile (8.004)+
Trichloroethene (8.841)+
1,4-Difluorobenzene (8.948)
Dibromomethane (9.541)
1,2-Dichloropropane (9.713)
Bromodichloromethane (9.820)
Ethyl Methacrylate (10.128)+
1,2-Dichloroethylene (tot (10.268)
cis-1,3-dichloropropene (10.814)
Toluene D8 (11.100)
Toluene (11.172)
Tetrachloroethene (11.736)
4-Methyl-2-pentanone (11.822)+
1,4,2-Trichloroethane (12.058)
Methyl Methacrylate (12.108)
Dibromochloromethane (12.308)
1,3-Dichloropropane (12.459)
1,2-Dibromoethane (12.645)
2-Hexanone (13.038)
1,1,1,2-Tetrachloroethane (13.387)
Chlorobenzene D5 (13.410)+
m+p-Xylenes (13.674)
o-Xylene (14.257)
Styrene (14.332)+
Isopropylbenzene (14.675)
P-Bromofluorobenzene (15.033)
cis-1,4-Dichloro-2-Butene (15.161)+
n-Propylbenzene (15.219)
1,1,2,2-Tetrachloroethane (15.242)
2-Chlorotoluene (15.404)
trans-1,4-Dichloro-2-Bute (15.540)
4-Chlorotoluene (15.619)
1,3,5-Trimethylbenzene (15.476)+
tert-Butylbenzene (15.762)+
1,2,4-Trimethylbenzene (15.962)
sec-Butylbenzene (16.091)
P-Isopropyltoluene (16.277)
1,3-Dichlorobenzene (16.348)
1,4-Dichlorobenzene-D4 (16.456)
1,2,3-Trimethylbenzene (16.782)
1,2-Dichlorobenzene (16.977)
1,2-Dibromo-3-Chloropropa (17.950)
1,3,5-Trichlorobenzene (17.986)
Hexachlorobutadiene (18.722)
1,2,4-Trichlorobenzene (18.758)
Naphthalene (19.151)
1,2,3-Trichlorobenzene (19.380)

Data File: \\target_server\gg\chem\gcms-w.i\W032318.b\W3295.D
Report Date: 28-Mar-2018 12:44

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W032318.b\W3295.D
Lab Smp Id: WG225302-4
Inj Date : 23-MAR-2018 09:41
Operator : HG/JSS   Inst ID: gcms-w.i
Smp Info : WG225302-4
Misc Info : WG225302,WG225302-4
Comment   : SW846 5035
Method   : \\target_server\gg\chem\gcms-w.i\W032318.b\W8SDI(07)D.m
Meth Date : 24-Mar-2018 19:38 HGOULD   Quant Type: ISTD
Cal Date : 23-MAR-2018 09:41   Cal File: W3295.D
Als bottle: 2   Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * ((100/(100-M))*(Vt/Ws))/1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	0.00000	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	5.000	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	AMOUNTS ON-COL (ug/kg)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.969	1.970	(0.244)	229934	50.0000	52.4	
2	Chloromethane	50	2.183	2.191	(0.270)	250435	50.0000	49.1	
3	Vinyl chloride	62	2.262	2.263	(0.280)	246820	50.0000	50.8	
4	Bromomethane	94	2.605	2.606	(0.323)	134303	50.0000	47.9	
5	Chloroethane	64	2.741	2.735	(0.339)	158125	50.0000	52.5	
6	Trichlorofluoromethane	101	2.891	2.885	(0.358)	326377	50.0000	50.7	
7	Diethyl Ether	59	3.227	3.228	(0.400)	178042	50.0000	49.3	
8	Tertiary-butyl alcohol	59	4.722	4.723	(0.585)	171781	250.000	253	
9	1,1-Dichloroethene	96	3.463	3.464	(0.429)	162203	50.0000	53.0	
10	Carbon Disulfide	76	3.506	3.507	(0.434)	586896	50.0000	52.7	
11	Freon-113	151	3.506	3.500	(0.434)	117888	50.0000	53.3	
12	Iodomethane	142	3.649	3.643	(0.452)	143875	50.0000	48.6	
13	Acrolein	56	3.885	3.886	(0.481)	193506	250.000	253	
14	Methylene Chloride	84	4.200	4.194	(0.520)	220602	50.0000	45.7	
15	Acetone	43	4.278	4.279	(0.530)	403187	250.000	235	
16	Isobutyl Alcohol	43	8.347	8.348	(1.034)	284783	1000.00	1040	
17	trans-1,2-Dichloroethene	96	4.414	4.415	(0.547)	177577	50.0000	50.8	
18	Allyl Chloride	41	4.057	4.058	(0.502)	281758	50.0000	51.9	
19	Methyl tert-butyl ether	73	4.571	4.572	(0.566)	661010	50.0000	50.3	
20	Acetonitrile	39	4.972	4.980	(0.616)	67655	500.000	484	
21	Di-isopropyl ether	45	5.165	5.166	(0.640)	613232	50.0000	51.7	
22	Chloroprene	53	5.336	5.338	(0.661)	295409	50.0000	54.3	

Data File: \\target_server\gg\chem\gcms-w.i\W032318.b\W3295.D
Report Date: 28-Mar-2018 12:44

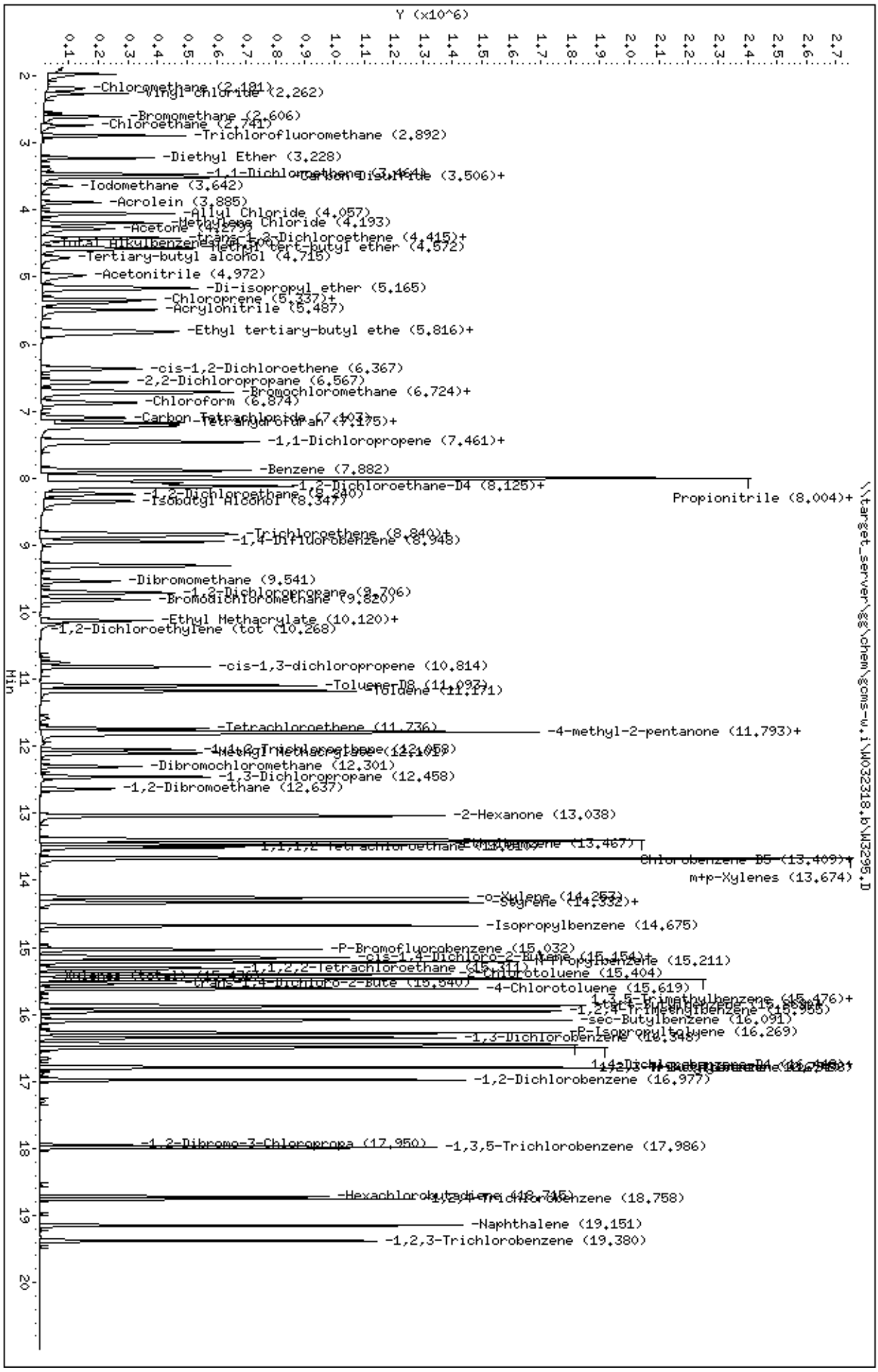
			QUANT SIG					AMOUNTS		
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/kg)	ON-COL (ug/kg)	REVIEW CODE
	23	Propionitrile	54	7.975	7.983	(0.988)	360858	500.000	490	
	24	Methacrylonitrile	41	8.003	8.005	(0.991)	1391218	500.000	498	
	25	1,1-Dichloroethane	63	5.379	5.380	(0.666)	361992	50.0000	51.8	
	26	Acrylonitrile	52	5.487	5.488	(0.679)	345003	250.000	244	
	27	Ethyl tertiary-butyl ether	59	5.815	5.817	(0.720)	607658	50.0000	51.8	
	28	Vinyl Acetate	43	5.851	5.852	(0.654)	387153	50.0000	48.6	
	29	cis-1,2-Dichloroethene	96	6.366	6.367	(0.788)	195071	50.0000	50.5	
M	30	1,2-Dichloroethylene (total)	96				372648	100.000	101	
	31	Methyl Methacrylate	41	12.100	12.102	(1.352)	202821	50.0000	53.2	
	32	2,2-Dichloropropane	77	6.566	6.567	(0.813)	287042	50.0000	52.3	
	33	Bromochloromethane	128	6.731	6.732	(0.834)	85778	50.0000	51.8	
	34	Chloroform	83	6.881	6.875	(0.852)	354106	50.0000	50.2	
	35	Carbon Tetrachloride	117	7.095	7.096	(0.793)	256533	50.0000	53.1	
	36	Tetrahydrofuran	42	7.174	7.168	(0.888)	380022	250.000	249	
$	37	Dibromofluoromethane	113	7.203	7.204	(0.892)	165589	50.0000	51.1	
	38	1,1,1-Trichloroethane	97	7.231	7.232	(0.896)	317208	50.0000	53.0	
	39	1,1-Dichloropropene	75	7.453	7.454	(0.833)	282999	50.0000	53.2	
	40	2-Butanone	43	7.460	7.461	(0.924)	598896	250.000	246	
	41	Benzene	78	7.882	7.883	(0.881)	776736	50.0000	51.0	
*	42	Pentafluorobenzene	168	8.075	8.076	(1.000)	309236	50.0000		
	43	Cyclohexane	56	6.716	6.710	(0.832)	310669	50.0000	54.0	
	44	Ethyl Methacrylate	69	10.120	10.121	(1.131)	175470	50.0000	53.0	
$	45	1,2-Dichloroethane-D4	65	8.125	8.126	(1.006)	232108	50.0000	50.8	
	46	Tertiary-amyl methyl ether	73	8.118	8.119	(1.005)	589509	50.0000	50.9	
	47	1,2-Dichloroethane	62	8.239	8.240	(0.921)	306070	50.0000	50.4	
	48	Trichloroethene	95	8.861	8.863	(0.990)	191660	50.0000	51.3	
*	49	1,4-Difluorobenzene	114	8.947	8.948	(1.000)	534601	50.0000		
	50	Dibromomethane	93	9.541	9.535	(1.066)	119718	50.0000	50.4	
	51	1,2-Dichloropropane	63	9.705	9.706	(1.085)	206711	50.0000	51.2	
	52	Bromodichloromethane	83	9.820	9.821	(1.097)	280140	50.0000	51.2	
	53	cis-1,3-dichloropropene	75	10.813	10.815	(1.209)	377464	50.0000	53.4	
	54	1,4-Dioxane	88	10.170	10.171	(1.137)	74250	1000.00	999	
$	55	Toluene-D8	98	11.092	11.093	(1.240)	684860	50.0000	50.7	
	57	Toluene	92	11.171	11.172	(1.249)	489212	50.0000	51.4	
	58	4-methyl-2-pentanone	43	11.793	11.794	(1.318)	1196398	250.000	251	
	59	Tetrachloroethene	164	11.736	11.737	(0.877)	132738	50.0000	50.3	
	60	trans-1,3-Dichloropropene	75	11.822	11.823	(1.321)	342142	50.0000	51.8	
	61	1,1,2-Trichloroethane	83	12.050	12.059	(1.347)	160796	50.0000	50.0	
	62	Dibromochloromethane	129	12.301	12.302	(0.919)	191521	50.0000	49.8	
	63	1,3-Dichloropropane	76	12.458	12.459	(0.931)	373691	50.0000	49.6	
	64	1,2-Dibromoethane	107	12.637	12.638	(1.412)	184988	50.0000	49.7	
	65	2-Hexanone	43	13.037	13.038	(0.974)	893709	250.000	247	
*	66	Chlorobenzene-D5	117	13.387	13.389	(1.000)	527322	50.0000		
	67	Chlorobenzene	112	13.409	13.410	(1.002)	536253	50.0000	49.9	
	152	1-Chlorohexane	91	13.409	13.410	(1.661)	291336	50.0000	52.8	
	68	Ethylbenzene	106	13.466	13.467	(1.006)	295958	50.0000	51.3	
	69	1,1,1,2-Tetrachloroethane	131	13.509	13.510	(1.009)	187931	50.0000	50.6	
M	70	Xylenes (total)	106				1094495	150.000	154	
	71	m+p-Xylenes	106	13.673	13.675	(1.021)	736438	100.000	102	
	72	o-Xylene	106	14.253	14.254	(1.065)	358057	50.0000	52.3	
	73	Styrene	104	14.331	14.332	(1.070)	615523	50.0000	51.9	
	74	Bromoform	173	14.346	14.347	(1.072)	141253	50.0000	49.3	
	75	Isopropylbenzene	105	14.674	14.676	(0.893)	913582	50.0000	53.0	
$	76	P-Bromofluorobenzene	95	15.032	15.033	(1.680)	312834	50.0000	50.5	

Data File: \\target_server\gg\chem\gcms-w.i\W032318.b\W3295.D
Report Date: 28-Mar-2018 12:44

							AMOUNTS		
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/kg)	ON-COL (ug/kg)	REVIEW CODE
	77 cis-1,4-Dichloro-2-Butene	53	15.139	15.140	(0.921)	107477	50.0000	51.2	
	78 trans-1,4-Dichloro-2-Butene	53	15.540	15.541	(0.945)	85455	50.0000	50.1	
	79 Bromobenzene	156	15.161	15.162	(0.922)	224752	50.0000	49.9	
	80 N-Propylbenzene	91	15.211	15.212	(0.925)	1248089	50.0000	51.6	
	81 1,1,2,2-Tetrachloroethane	83	15.311	15.312	(0.931)	312993	50.0000	48.7	
	82 1,3,5-Trimethylbenzene	105	15.468	15.476	(0.941)	866146	50.0000	52.0	
	83 2-Chlorotoluene	91	15.404	15.405	(0.937)	751046	50.0000	51.1	
	84 1,2,3-Trichloropropane	75	15.475	15.476	(0.941)	282905	50.0000	48.2	
	85 4-Chlorotoluene	91	15.618	15.619	(0.950)	812018	50.0000	51.3	
	86 tert-Butylbenzene	119	15.869	15.870	(0.965)	839680	50.0000	52.5	
	87 Pentachloroethane	117	15.883	15.884	(0.966)	177375	50.0000	50.6	
	88 1,2,4-Trimethylbenzene	105	15.954	15.963	(0.970)	925709	50.0000	52.2	
	89 P-Isopropyltoluene	119	16.276	16.277	(0.990)	945259	50.0000	53.7	
	90 1,3-Dichlorobenzene	146	16.348	16.349	(0.994)	464848	50.0000	49.9	
*	91 1,4-Dichlorobenzene-D4	152	16.441	16.442	(1.000)	324387	50.0000		
	92 1,4-Dichlorobenzene	146	16.462	16.463	(1.001)	486691	50.0000	50.0	
	93 N-Butylbenzene	91	16.791	16.792	(1.021)	984331	50.0000	53.1	
	94 sec-Butylbenzene	105	16.090	16.091	(0.979)	1115909	50.0000	52.4	
	95 1,2-Dichlorobenzene	146	16.977	16.978	(1.033)	461343	50.0000	49.6	
	96 1,2-Dibromo-3-Chloropropane	75	17.949	17.950	(1.092)	81406	50.0000	52.2(H)	
	97 1,3,5-Trichlorobenzene	180	17.985	17.986	(2.227)	339447	50.0000	53.1	
	98 Hexachlorobutadiene	225	18.721	18.723	(1.139)	164041	50.0000	52.6	
	99 1,2,4-Trichlorobenzene	180	18.757	18.758	(1.141)	317608	50.0000	52.9	
	100 1,2,3-Trimethylbenzene	105	16.498	16.499	(2.043)	959022	50.0000	51.9	
	101 Naphthalene	128	19.150	19.152	(1.165)	860843	50.0000	51.0	
	102 1,2,3-Trichlorobenzene	180	19.379	19.380	(1.179)	294408	50.0000	50.5	
	103 Methyl Acetate	43	4.443	4.444	(0.550)	191051	50.0000	49.0	
	104 Methylcyclohexane	83	8.833	8.834	(1.094)	340336	50.0000	54.1	
M	153 Total Alkylbenzenes	100				6925123	50.0000	368	

QC Flag Legend

H - Operator selected an alternate compound hit.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Client ID:
Sample Info: WG225302-4
Column phase: RTX-VMS
Instrument: gcms-w.i
Operator: HG/JSS
Column diameter: 0.18
\\target_server\gg\chem\gcms-w.i\W032318.b\W3295.D
Y (x10^6)
Min
-Chloromethane (2.181)
-Vinyl chloride (2.262)
-Bromomethane (2.606)
-Chloroethane (2.741)
-Trichlorofluoromethane (2.892)
-Diethyl Ether (3.228)
-1,1-Dichloroethene (3.464)
-Carbon Disulfide (3.506)+
-Iodomethane (3.642)
-Acrolein (3.885)
-Allyl Chloride (4.057)
-Methylene Chloride (4.193)
-Acetone (4.267)
-trans-1,3-Dichloroethene (4.415)+
-Total Xylenes
-Methyl tert-butyl ether (4.572)
-Tertiary-butyl alcohol (4.715)
-Acetonitrile (4.972)
-Di-isopropyl ether (5.165)
-Chloroprene (5.237)+
-Acrylonitrile (5.487)
-Ethyl tertiary-butyl ethe (5.816)+
-cis-1,2-Dichloroethene (6.367)
-2,2-Dichloropropane (6.567)
-Bromochloromethane (6.724)+
-Chloroform (6.874)
-Carbon Tetrachloride (7.107)
-Tetrahydrofuran (7.175)+
-1,1-Dichloropropene (7.461)+
-Benzene (7.882)
-1,2-Dichloroethane-D4 (8.125)+
Propionitrile (8.004)+
-1,2-Dichloroethane (8.240)
-Isobutyl Alcohol (8.347)
-Trichloroethene (8.840)+
-1,4-Difluorobenzene (8.948)
-Dibromomethane (9.541)
-1,2-Dichloropropane (9.706)
-Bromodichloromethane (9.820)
-Ethyl Methacrylate (10.120)+
-1,2-Dichloroethylene (tot (10.268)
-cis-1,3-dichloropropene (10.814)
-Toluene D8 (11.092)
Toluene (11.171)
-Tetrachloroethene (11.736)
-4-methyl-2-pentanone (11.793)+
-Methyl Methacrylate (12.059)
-Dibromochloromethane (12.301)
-1,3-Dichloropropane (12.458)
-1,2-Dibromoethane (12.637)
-2-Hexanone (13.038)
Ethylbenzene (13.467)
1,1,1,2-Tetrachloroethane (13.510)
Chlorobenzene D5 (13.409)+
m+p-Xylenes (13.674)
-o-Xylene (14.257)
Styrene (14.332)+
-Isopropylbenzene (14.675)
-P-Bromofluorobenzene (15.032)
-cis-1,4-Dichloro-2-Butene (15.154)+
-n-Propylbenzene (15.211)
-1,1,2,2-Tetrachloroethane (15.311)
-2-Chlorotoluene (15.404)
Xylenes (Total) (15.436)
Bromobenzene (15.540)
-4-Chlorotoluene (15.619)
-1,3,5-Trimethylbenzene (15.476)+
-tert-Butylbenzene (15.864)
-1,2,4-Trimethylbenzene (15.955)
-sec-Butylbenzene (16.091)
-p-Isopropyltoluene (16.269)
-1,3-Dichlorobenzene (16.348)
-1,4-Dichlorobenzene-D4 (16.448)
-1,2,3-Trimethylbenzene (16.588)
-1,2-Dichlorobenzene (16.977)
-1,2-Dibromo-3-Chloropropa (17.950)
-1,3,5-Trichlorobenzene (17.986)
-Hexachlorobutadiene (18.745)
-1,2,4-Trichlorobenzene (18.758)
-Naphthalene (19.151)
-1,2,3-Trichlorobenzene (19.380)

Data File: \\target_server\gg\chem\gcms-w.i\W032318.b\W3296.D
Report Date: 28-Mar-2018 12:44

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W032318.b\W3296.D
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Inj Date : 23-MAR-2018 10:19
Operator : HG/JSS Inst ID: gcms-w.i
Smp Info : WG225302-3
Misc Info : WG225302,WG225302-4
Comment : SW846 5035
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Meth Date : 24-Mar-2018 19:38 HGOULD Quant Type: ISTD
Cal Date : 23-MAR-2018 10:19 Cal File: W3296.D
Als bottle: 3 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * ((100/(100-M))*(Vt/Ws))/1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	0.00000	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	5.000	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	AMOUNTS ON-COL (ug/kg)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.971	1.970	(0.244)	80186	20.0000	18.1	
2	Chloromethane	50	2.186	2.191	(0.271)	94996	20.0000	18.5	
3	Vinyl chloride	62	2.265	2.263	(0.281)	89407	20.0000	18.2	
4	Bromomethane	94	2.608	2.606	(0.323)	52500	20.0000	18.6	
5	Chloroethane	64	2.744	2.735	(0.340)	57635	20.0000	19.0	
6	Trichlorofluoromethane	101	2.887	2.885	(0.358)	117113	20.0000	18.0	
7	Diethyl Ether	59	3.223	3.228	(0.399)	67003	20.0000	18.4	
8	Tertiary-butyl alcohol	59	4.710	4.723	(0.584)	63467	100.000	99.6	
9	1,1-Dichloroethene	96	3.466	3.464	(0.429)	54224	20.0000	17.6	
10	Carbon Disulfide	76	3.509	3.507	(0.435)	199205	20.0000	17.7	
11	Freon-113	151	3.509	3.500	(0.435)	40793	20.0000	18.3	
12	Iodomethane	142	3.645	3.643	(0.452)	51856	20.0000	17.4	
13	Acrolein	56	3.888	3.886	(0.482)	72416	100.000	94.0	
14	Methylene Chloride	84	4.195	4.194	(0.520)	88939	20.0000	18.3	
15	Acetone	43	4.281	4.279	(0.530)	158876	100.000	91.8	
16	Isobutyl Alcohol	43	8.342	8.348	(1.034)	98819	500.000	408	
17	trans-1,2-Dichloroethene	96	4.417	4.415	(0.547)	62540	20.0000	17.8	
18	Allyl Chloride	41	4.059	4.058	(0.503)	98676	20.0000	18.0	
19	Methyl tert-butyl ether	73	4.574	4.572	(0.567)	238280	20.0000	18.0	
20	Acetonitrile	39	4.975	4.980	(0.616)	26789	200.000	190	
21	Di-isopropyl ether	45	5.168	5.166	(0.640)	221207	20.0000	18.5	
22	Chloroprene	53	5.339	5.338	(0.662)	97136	20.0000	17.7	

Data File: \\target_server\gg\chem\gcms-w.i\W032318.b\W3296.D
Report Date: 28-Mar-2018 12:44

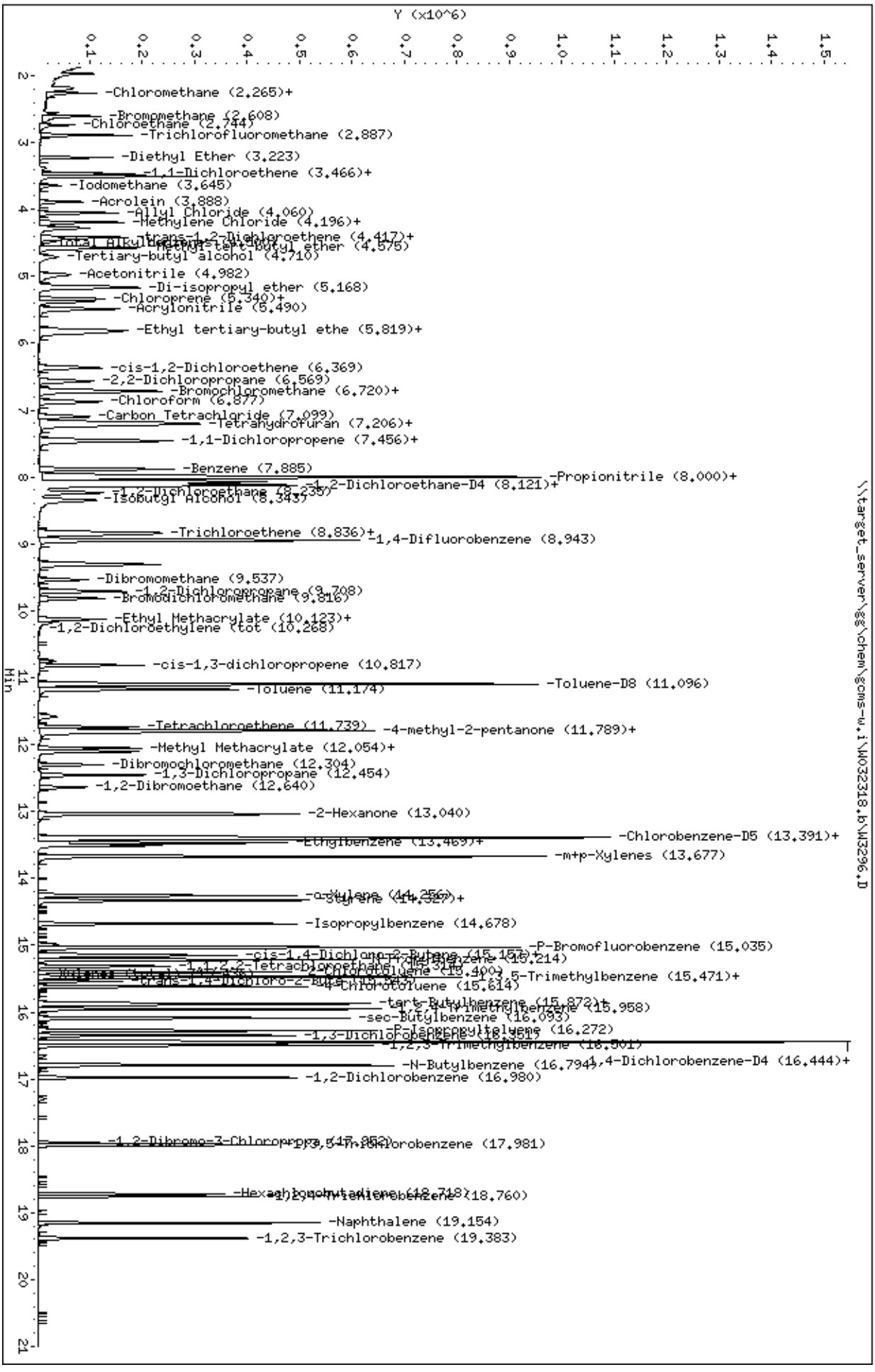
			QUANT SIG					AMOUNTS		
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/kg)	ON-COL (ug/kg)	REVIEW CODE
	23	Propionitrile	54	7.970	7.983	(0.988)	137226	200.000	185	
	24	Methacrylonitrile	41	7.999	8.005	(0.991)	543135	200.000	193	
	25	1,1-Dichloroethane	63	5.382	5.380	(0.667)	126325	20.0000	17.9	
	26	Acrylonitrile	52	5.489	5.488	(0.680)	135550	100.000	95.1	
	27	Ethyl tertiary-butyl ether	59	5.818	5.817	(0.721)	218993	20.0000	18.5	
	28	Vinyl Acetate	43	5.854	5.852	(0.655)	149771	20.0000	18.5	
	29	cis-1,2-Dichloroethene	96	6.369	6.367	(0.789)	69267	20.0000	17.8	
M	30	1,2-Dichloroethylene (total)	96				131807	40.0000	35.6	
	31	Methyl Methacrylate	41	12.103	12.102	(1.353)	71428	20.0000	18.4	
	32	2,2-Dichloropropane	77	6.569	6.567	(0.814)	97843	20.0000	17.7	
	33	Bromochloromethane	128	6.733	6.732	(0.834)	29710	20.0000	17.8	
	34	Chloroform	83	6.876	6.875	(0.852)	130971	20.0000	18.4	
	35	Carbon Tetrachloride	117	7.098	7.096	(0.794)	86205	20.0000	17.6	
	36	Tetrahydrofuran	42	7.177	7.168	(0.889)	139887	100.000	91.0	
$	37	Dibromofluoromethane	113	7.205	7.204	(0.893)	160771	50.0000	49.2	
	38	1,1,1-Trichloroethane	97	7.234	7.232	(0.896)	106911	20.0000	17.7	
	39	1,1-Dichloropropene	75	7.448	7.454	(0.833)	94900	20.0000	17.6	
	40	2-Butanone	43	7.463	7.461	(0.925)	226690	100.000	92.2	
	41	Benzene	78	7.885	7.883	(0.882)	274417	20.0000	17.7	
*	42	Pentafluorobenzene	168	8.071	8.076	(1.000)	311739	50.0000		
	43	Cyclohexane	56	6.719	6.710	(0.833)	103508	20.0000	17.8	
	44	Ethyl Methacrylate	69	10.123	10.121	(1.132)	59871	20.0000	17.8	
$	45	1,2-Dichloroethane-D4	65	8.121	8.126	(1.006)	228856	50.0000	49.7	
	46	Tertiary-amyl methyl ether	73	8.121	8.119	(1.006)	210704	20.0000	18.0	
	47	1,2-Dichloroethane	62	8.235	8.240	(0.921)	113409	20.0000	18.4	
	48	Trichloroethene	95	8.864	8.863	(0.991)	68263	20.0000	18.0	
*	49	1,4-Difluorobenzene	114	8.943	8.948	(1.000)	543019	50.0000		
	50	Dibromomethane	93	9.536	9.535	(1.066)	44706	20.0000	18.5	
	51	1,2-Dichloropropane	63	9.708	9.706	(1.086)	73262	20.0000	17.9	
	52	Bromodichloromethane	83	9.815	9.821	(1.098)	99214	20.0000	17.8	
	53	cis-1,3-dichloropropene	75	10.816	10.815	(1.209)	126000	20.0000	17.5	
	54	1,4-Dioxane	88	10.173	10.171	(1.138)	28082	400.000	372	
$	55	Toluene-D8	98	11.095	11.093	(1.241)	677319	50.0000	49.3	
	57	Toluene	92	11.174	11.172	(1.249)	173744	20.0000	18.0	
	58	4-methyl-2-pentanone	43	11.789	11.794	(1.318)	447873	100.000	92.5	
	59	Tetrachloroethene	164	11.739	11.737	(0.877)	45886	20.0000	17.8	
	60	trans-1,3-Dichloropropene	75	11.824	11.823	(1.322)	119780	20.0000	17.9	
	61	1,1,2-Trichloroethane	83	12.053	12.059	(1.348)	56877	20.0000	17.4	
	62	Dibromochloromethane	129	12.303	12.302	(0.919)	69006	20.0000	18.4	
	63	1,3-Dichloropropane	76	12.461	12.459	(0.931)	135196	20.0000	18.4	
	64	1,2-Dibromoethane	107	12.639	12.638	(1.413)	69222	20.0000	18.3	
	65	2-Hexanone	43	13.040	13.038	(0.974)	326934	100.000	92.9	
*	66	Chlorobenzene-D5	117	13.390	13.389	(1.000)	513573	50.0000		
	67	Chlorobenzene	112	13.412	13.410	(1.002)	192934	20.0000	18.4	
	152	1-Chlorohexane	91	13.412	13.410	(1.662)	94040	20.0000	16.9	
	68	Ethylbenzene	106	13.469	13.467	(1.006)	101060	20.0000	18.0	
	69	1,1,1,2-Tetrachloroethane	131	13.512	13.510	(1.009)	64924	20.0000	17.9	
M	70	Xylenes (total)	106				379069	60.0000	54.9	
	71	m+p-Xylenes	106	13.676	13.675	(1.021)	257082	40.0000	36.6	
	72	o-Xylene	106	14.255	14.254	(1.065)	121987	20.0000	18.3	
	73	Styrene	104	14.327	14.332	(1.070)	215565	20.0000	18.7	
	74	Bromoform	173	14.341	14.347	(1.071)	49465	20.0000	17.7	
	75	Isopropylbenzene	105	14.677	14.676	(0.893)	305085	20.0000	18.3	
$	76	P-Bromofluorobenzene	95	15.035	15.033	(1.681)	301532	50.0000	47.9	

Data File: \\target_server\gg\chem\gcms-w.i\W032318.b\W3296.D
Report Date: 28-Mar-2018 12:44

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	ON-COL (ug/kg)	REVIEW CODE
77	cis-1,4-Dichloro-2-Butene	53	15.135	15.140	(0.920)	38322	20.0000	18.9	
78	trans-1,4-Dichloro-2-Butene	53	15.542	15.541	(0.945)	31065	20.0000	18.8	
79	Bromobenzene	156	15.156	15.162	(0.922)	80604	20.0000	18.5	
80	N-Propylbenzene	91	15.213	15.212	(0.925)	438236	20.0000	18.8	
81	1,1,2,2-Tetrachloroethane	83	15.314	15.312	(0.931)	115302	20.0000	18.6	
82	1,3,5-Trimethylbenzene	105	15.471	15.476	(0.941)	298789	20.0000	18.6	
83	2-Chlorotoluene	91	15.399	15.405	(0.937)	263798	20.0000	18.6	
84	1,2,3-Trichloropropane	75	15.478	15.476	(0.941)	104310	20.0000	18.4	
85	4-Chlorotoluene	91	15.614	15.619	(0.950)	286433	20.0000	18.7	
86	tert-Butylbenzene	119	15.871	15.870	(0.965)	285719	20.0000	18.5	
87	Pentachloroethane	117	15.886	15.884	(0.966)	64134	20.0000	18.9	
88	1,2,4-Trimethylbenzene	105	15.957	15.963	(0.970)	323236	20.0000	18.9	
89	P-Isopropyltoluene	119	16.272	16.277	(0.990)	319502	20.0000	18.8	
90	1,3-Dichlorobenzene	146	16.350	16.349	(0.994)	165122	20.0000	18.3	
* 91	1,4-Dichlorobenzene-D4	152	16.443	16.442	(1.000)	313697	50.0000		
92	1,4-Dichlorobenzene	146	16.465	16.463	(1.001)	172688	20.0000	18.3	
93	N-Butylbenzene	91	16.794	16.792	(1.021)	339396	20.0000	19.0	
94	sec-Butylbenzene	105	16.093	16.091	(0.979)	380948	20.0000	18.5	
95	1,2-Dichlorobenzene	146	16.980	16.978	(1.033)	168772	20.0000	18.7	
96	1,2-Dibromo-3-Chloropropane	75	17.952	17.950	(1.092)	30721	20.0000	20.3(H)	
97	1,3,5-Trichlorobenzene	180	17.988	17.986	(2.229)	117766	20.0000	18.3	
98	Hexachlorobutadiene	225	18.724	18.723	(1.139)	55712	20.0000	18.5	
99	1,2,4-Trichlorobenzene	180	18.760	18.758	(1.141)	109851	20.0000	18.9	
100	1,2,3-Trimethylbenzene	105	16.501	16.499	(2.044)	342870	20.0000	18.4	
101	Naphthalene	128	19.153	19.152	(1.165)	314272	20.0000	19.3	
102	1,2,3-Trichlorobenzene	180	19.382	19.380	(1.179)	106450	20.0000	18.9	
103	Methyl Acetate	43	4.445	4.444	(0.551)	75360	20.0000	19.2	
104	Methylcyclohexane	83	8.828	8.834	(1.094)	115669	20.0000	18.2	
M 153	Total Alkylbenzenes	100				2385826	20.0000	131	

QC Flag Legend

H - Operator selected an alternate compound hit.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Instrument: gcms-w.i
Operator: HG/JSS
Column diameter: 0.18
\\target_server\gg\chem\gcms-w.i\W032318.b\W3296.D
Y (x10^6)
Min
-Chloromethane (2.265)+
-Bromomethane (2.608)
-Chloroethane (2.744)
-Trichlorofluoromethane (2.887)
-Diethyl Ether (3.223)
-1,1-Dichloroethene (3.466)+
-Iodomethane (3.645)
-Acrolein (3.888)
-Allyl Chloride (4.060)
-Methylene Chloride (4.196)+
-trans-1,2-Dichloroethene (4.417)+
-Methyl tert-butyl ether (4.575)
-Tertiary-butyl alcohol (4.710)
-Acetonitrile (4.982)
-Di-isopropyl ether (5.168)
-Chloroprene (5.340)+
-Acrylonitrile (5.490)
-Ethyl tertiary-butyl ethe (5.819)+
-cis-1,2-Dichloroethene (6.369)
-2,2-Dichloropropane (6.569)
-Bromochloromethane (6.720)+
-Chloroform (6.877)
-Carbon Tetrachloride (7.099)
-Tetrahydrofuran (7.206)+
-1,1-Dichloropropene (7.456)+
-Benzene (7.885)
-1,2-Dichloroethane-D4 (8.121)+
-Propionitrile (8.000)+
-Isobutyl Alcohol (8.343)
-Trichloroethene (8.836)+
-1,4-Difluorobenzene (8.943)
-Dibromomethane (9.537)
-Bromodichloromethane (9.816)
-Ethyl Methacrylate (10.123)+
-1,2-Dichloroethylene (tot (10.268)
-cis-1,3-dichloropropene (10.817)
-Toluene (11.174)
-Toluene-D8 (11.096)
-Tetrachloroethene (11.739)
-4-methyl-2-pentanone (11.789)+
-Methyl Methacrylate (12.054)+
-Dibromochloromethane (12.304)
-1,3-Dichloropropane (12.454)
-1,2-Dibromoethane (12.640)
-2-Hexanone (13.040)
-Chlorobenzene-D5 (13.391)+
-Ethylbenzene (13.469)+
-m+p-Xylenes (13.677)
-o-Xylene (14.256)
-Styrene (14.327)+
-Isopropylbenzene (14.678)
-P-Bromofluorobenzene (15.035)
-1,1,2,2-Tetrachloroethane (15.400)
-1,2,5-Trimethylbenzene (15.471)+
-4-Chlorotoluene (15.614)
-tert-Butylbenzene (15.872)+
-1,2,4-Trimethylbenzene (15.958)
-sec-Butylbenzene (16.093)
-P-Isopropyltoluene (16.272)
-1,3-Dichlorobenzene (16.361)
-1,2,3-Trimethylbenzene (16.501)
-N-Butylbenzene (16.794)
-1,4-Dichlorobenzene-D4 (16.444)+
-1,2-Dichlorobenzene (16.980)
-1,2-Dibromo-3-Chloroprop (17.852)
-1,2,4-Trichlorobenzene (17.981)
-Hexachlorobutadiene (18.718)
-1,2,4-Trichlorobenzene (18.760)
-Naphthalene (19.154)
-1,2,3-Trichlorobenzene (19.383)

Data File: \\target_server\gg\chem\gcms-w.i\W032318.b\W3297.D
Report Date: 28-Mar-2018 12:44

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W032318.b\W3297.D
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Inj Date : 23-MAR-2018 10:57
Operator : HG/JSS   Inst ID: gcms-w.i
Smp Info : WG225302-2
Misc Info : WG225302,WG225302-4
Comment   : SW846 5035
Method   : \\target_server\gg\chem\gcms-w.i\W032318.b\W8SDI(07)D.m
Meth Date : 24-Mar-2018 19:38 HGOULD   Quant Type: ISTD
Cal Date : 23-MAR-2018 10:57   Cal File: W3297.D
Als bottle: 4   Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * ((100/(100-M))*(Vt/Ws))/1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	0.00000	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	5.000	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	AMOUNTS ON-COL (ug/kg)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.970	1.970	(0.244)	43405	10.0000	10.1	
2	Chloromethane	50	2.199	2.191	(0.272)	51350	10.0000	10.2	
3	Vinyl chloride	62	2.263	2.263	(0.280)	47197	10.0000	9.9	
4	Bromomethane	94	2.607	2.606	(0.323)	28577	10.0000	10.4	
5	Chloroethane	64	2.742	2.735	(0.340)	30748	10.0000	10.4	
6	Trichlorofluoromethane	101	2.893	2.885	(0.358)	64159	10.0000	10.1	
7	Diethyl Ether	59	3.229	3.228	(0.400)	34792	10.0000	9.8	
8	Tertiary-butyl alcohol	59	4.723	4.723	(0.585)	28123	50.0000	47.4	
9	1,1-Dichloroethene	96	3.465	3.464	(0.429)	28606	10.0000	9.5	
10	Carbon Disulfide	76	3.507	3.507	(0.434)	104086	10.0000	9.5	
11	Freon-113	151	3.507	3.500	(0.434)	20402	10.0000	9.4	
12	Iodomethane	142	3.650	3.643	(0.452)	26772	10.0000	9.2	
13	Acrolein	56	3.886	3.886	(0.481)	33285	50.0000	44.4	
14	Methylene Chloride	84	4.194	4.194	(0.519)	51201	10.0000	10.8	
15	Acetone	43	4.280	4.279	(0.530)	88129	50.0000	52.3	
16	Isobutyl Alcohol	43	8.348	8.348	(1.034)	45253	200.000	219	
17	trans-1,2-Dichloroethene	96	4.416	4.415	(0.547)	33857	10.0000	9.9	
18	Allyl Chloride	41	4.058	4.058	(0.502)	50667	10.0000	9.5	
19	Methyl tert-butyl ether	73	4.573	4.572	(0.566)	123273	10.0000	9.6	
20	Acetonitrile	39	4.988	4.980	(0.618)	13099	100.000	95.3	
21	Di-isopropyl ether	45	5.166	5.166	(0.640)	104697	10.0000	9.0	
22	Chloroprene	53	5.338	5.338	(0.661)	48509	10.0000	9.1	

Data File: \\target_server\gg\chem\gcms-w.i\W032318.b\W3297.D
Report Date: 28-Mar-2018 12:44

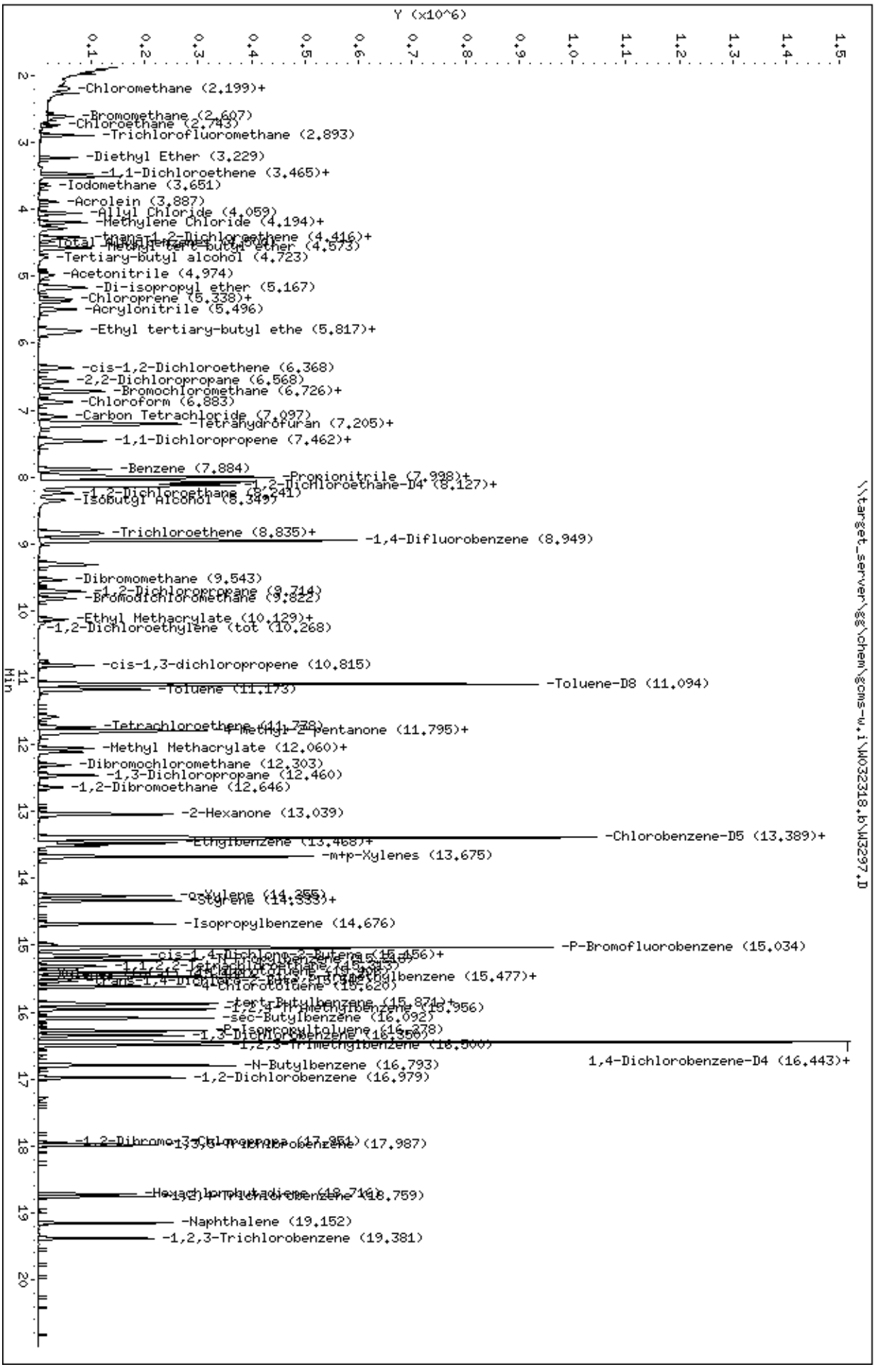
		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	AMOUNTS ON-COL (ug/kg)	REVIEW CODE
	23	Propionitrile	54	7.976	7.983	(0.988)	64079	100.000	88.5	
	24	Methacrylonitrile	41	8.005	8.005	(0.991)	251091	100.000	91.6	
	25	1,1-Dichloroethane	63	5.381	5.380	(0.666)	68296	10.0000	9.9	
	26	Acrylonitrile	52	5.495	5.488	(0.680)	63260	50.0000	45.6	
	27	Ethyl tertiary-butyl ether	59	5.817	5.817	(0.720)	101098	10.0000	8.8	
	28	Vinyl Acetate	43	5.853	5.852	(0.654)	71863	10.0000	9.1	
	29	cis-1,2-Dichloroethene	96	6.367	6.367	(0.788)	37164	10.0000	9.8	
M	30	1,2-Dichloroethylene (total)	96				71021	20.0000	19.7	
	31	Methyl Methacrylate	41	12.109	12.102	(1.353)	31554	10.0000	8.3	
	32	2,2-Dichloropropane	77	6.575	6.567	(0.814)	52208	10.0000	9.7	
	33	Bromochloromethane	128	6.732	6.732	(0.834)	15779	10.0000	9.7	
	34	Chloroform	83	6.875	6.875	(0.851)	68962	10.0000	10	
	35	Carbon Tetrachloride	117	7.104	7.096	(0.794)	47833	10.0000	10	
	36	Tetrahydrofuran	42	7.183	7.168	(0.889)	67851	50.0000	45.3	
$	37	Dibromofluoromethane	113	7.204	7.204	(0.892)	158808	50.0000	49.9	
	38	1,1,1-Trichloroethane	97	7.233	7.232	(0.896)	57501	10.0000	9.8	
	39	1,1-Dichloropropene	75	7.454	7.454	(0.833)	51085	10.0000	9.7	
	40	2-Butanone	43	7.469	7.461	(0.925)	110720	50.0000	46.2	
	41	Benzene	78	7.883	7.883	(0.881)	149935	10.0000	9.9	
*	42	Pentafluorobenzene	168	8.076	8.076	(1.000)	303712	50.0000		
	43	Cyclohexane	56	6.718	6.710	(0.832)	54427	10.0000	9.6	
	44	Ethyl Methacrylate	69	10.121	10.121	(1.131)	27904	10.0000	8.5	
$	45	1,2-Dichloroethane-D4	65	8.126	8.126	(1.006)	227953	50.0000	50.8	
	46	Tertiary-amyl methyl ether	73	8.126	8.119	(1.006)	100128	10.0000	8.8	
	47	1,2-Dichloroethane	62	8.241	8.240	(0.921)	59875	10.0000	9.9	
	48	Trichloroethene	95	8.870	8.863	(0.991)	37364	10.0000	10.1	
*	49	1,4-Difluorobenzene	114	8.949	8.948	(1.000)	530815	50.0000		
	50	Dibromomethane	93	9.542	9.535	(1.066)	22849	10.0000	9.7	
	51	1,2-Dichloropropane	63	9.714	9.706	(1.085)	38979	10.0000	9.7	
	52	Bromodichloromethane	83	9.821	9.821	(1.097)	53119	10.0000	9.8	
	53	cis-1,3-dichloropropene	75	10.815	10.815	(1.209)	64793	10.0000	9.2	
	54	1,4-Dioxane	88	10.179	10.171	(1.137)	12437	200.000	168	
$	55	Toluene-D8	98	11.094	11.093	(1.240)	668470	50.0000	49.8	
	57	Toluene	92	11.172	11.172	(1.248)	92405	10.0000	9.8	
	58	4-methyl-2-pentanone	43	11.794	11.794	(1.318)	213674	50.0000	45.1	
	59	Tetrachloroethene	164	11.737	11.737	(0.877)	25797	10.0000	10.1	
	60	trans-1,3-Dichloropropene	75	11.823	11.823	(1.321)	60295	10.0000	9.2	
	61	1,1,2-Trichloroethane	83	12.059	12.059	(1.348)	30510	10.0000	9.6	
	62	Dibromochloromethane	129	12.302	12.302	(0.919)	34468	10.0000	9.2	
	63	1,3-Dichloropropane	76	12.459	12.459	(0.931)	69960	10.0000	9.6	
	64	1,2-Dibromoethane	107	12.645	12.638	(1.413)	34437	10.0000	9.3	
	65	2-Hexanone	43	13.039	13.038	(0.974)	158271	50.0000	45.1	
*	66	Chlorobenzene-D5	117	13.389	13.389	(1.000)	511740	50.0000		
	67	Chlorobenzene	112	13.410	13.410	(1.002)	103026	10.0000	9.9	
	152	1-Chlorohexane	91	13.410	13.410	(1.660)	53765	10.0000	9.9	
	68	Ethylbenzene	106	13.468	13.467	(1.006)	54393	10.0000	9.7	
	69	1,1,1,2-Tetrachloroethane	131	13.510	13.510	(1.009)	34281	10.0000	9.5	
M	70	Xylenes (total)	106				196743	30.0000	28.6	
	71	m+p-Xylenes	106	13.675	13.675	(1.021)	134806	20.0000	19.3	
	72	o-Xylene	106	14.254	14.254	(1.065)	61937	10.0000	9.3	
	73	Styrene	104	14.333	14.332	(1.070)	108014	10.0000	9.4	
	74	Bromoform	173	14.347	14.347	(1.072)	24825	10.0000	8.9	
	75	Isopropylbenzene	105	14.676	14.676	(0.893)	159584	10.0000	9.4	
$	76	P-Bromofluorobenzene	95	15.033	15.033	(1.680)	307635	50.0000	50.0	

Data File: \\target_server\gg\chem\gcms-w.i\W032318.b\W3297.D
Report Date: 28-Mar-2018 12:44

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	ON-COL (ug/kg)	REVIEW CODE
77	cis-1,4-Dichloro-2-Butene	53	15.141	15.140	(0.921)	18087	10.0000	8.8	
78	trans-1,4-Dichloro-2-Butene	53	15.541	15.541	(0.945)	14476	10.0000	8.6	
79	Bromobenzene	156	15.162	15.162	(0.922)	43057	10.0000	9.7	
80	N-Propylbenzene	91	15.212	15.212	(0.925)	233773	10.0000	9.9	
81	1,1,2,2-Tetrachloroethane	83	15.312	15.312	(0.931)	60155	10.0000	9.6	
82	1,3,5-Trimethylbenzene	105	15.470	15.476	(0.941)	155732	10.0000	9.5	
83	2-Chlorotoluene	91	15.405	15.405	(0.937)	140192	10.0000	9.7	
84	1,2,3-Trichloropropane	75	15.477	15.476	(0.941)	54405	10.0000	9.4	
85	4-Chlorotoluene	91	15.620	15.619	(0.950)	151079	10.0000	9.7	
86	tert-Butylbenzene	119	15.870	15.870	(0.965)	147014	10.0000	9.4	
87	Pentachloroethane	117	15.884	15.884	(0.966)	30912	10.0000	9.0	
88	1,2,4-Trimethylbenzene	105	15.956	15.963	(0.970)	167367	10.0000	9.6	
89	P-Isopropyltoluene	119	16.278	16.277	(0.990)	162390	10.0000	9.4	
90	1,3-Dichlorobenzene	146	16.349	16.349	(0.994)	89020	10.0000	9.7	
* 91	1,4-Dichlorobenzene-D4	152	16.442	16.442	(1.000)	318189	50.0000		
92	1,4-Dichlorobenzene	146	16.463	16.463	(1.001)	93304	10.0000	9.8	
93	N-Butylbenzene	91	16.792	16.792	(1.021)	177280	10.0000	9.8	
94	sec-Butylbenzene	105	16.092	16.091	(0.979)	200840	10.0000	9.6	
95	1,2-Dichlorobenzene	146	16.978	16.978	(1.033)	88005	10.0000	9.6	
96	1,2-Dibromo-3-Chloropropane	75	17.951	17.950	(1.092)	14698	10.0000	9.6(H)	
97	1,3,5-Trichlorobenzene	180	17.986	17.986	(2.227)	59121	10.0000	9.4	
98	Hexachlorobutadiene	225	18.716	18.723	(1.138)	30244	10.0000	9.9	
99	1,2,4-Trichlorobenzene	180	18.759	18.758	(1.141)	55739	10.0000	9.5	
100	1,2,3-Trimethylbenzene	105	16.499	16.499	(2.043)	169994	10.0000	9.4	
101	Naphthalene	128	19.152	19.152	(1.165)	152417	10.0000	9.2	
102	1,2,3-Trichlorobenzene	180	19.381	19.380	(1.179)	56934	10.0000	10	
103	Methyl Acetate	43	4.444	4.444	(0.550)	34096	10.0000	8.9	
104	Methylcyclohexane	83	8.834	8.834	(1.094)	55456	10.0000	9.0	
M 153	Total Alkylbenzenes	100				1244396	10.0000	67.2	

QC Flag Legend

H - Operator selected an alternate compound hit.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Instrument: gcms-w.i
Operator: HG/JSS
Column diameter: 0.18
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Y (x10^6)
Min
-Chloromethane (2.199)+
-Bromomethane (2.607)
-Chloroethane (2.743)
-Trichlorofluoromethane (2.893)
-Diethyl Ether (3.229)
-1,1-Dichloroethene (3.465)+
-Iodomethane (3.651)
-Acrolein (3.887)
-Allyl Chloride (4.059)
-Methylene Chloride (4.194)+
-trans-1,2-Dichloroethene (4.416)+
-Methyl tert-butyl ether (4.573)
-Tertiary-butyl alcohol (4.723)
-Acetonitrile (4.974)
-Di-isopropyl ether (5.167)
-Chloroprene (5.338)+
-Acrylonitrile (5.496)
-Ethyl tertiary-butyl ethe (5.817)+
-cis-1,2-Dichloroethene (6.368)
-2,2-Dichloropropane (6.568)
-Bromochloromethane (6.726)+
-Chloroform (6.883)
-Carbon Tetrachloride (7.097)
-Tetrahydrofuran (7.205)+
-1,1-Dichloropropene (7.462)+
-Benzene (7.884)
-Propionitrile (7.998)+
-1,2-Dichloroethane-D4 (8.127)+
-1,2-Dichloroethane (8.241)
-Isobutyl Alcohol (8.349)
-Trichloroethene (8.835)+
-1,4-Difluorobenzene (8.949)
-Dibromomethane (9.543)
-1,2-Dichloropropane (9.714)
-Bromodichloromethane (9.822)
-Ethyl Methacrylate (10.129)+
-1,2-Dichloroethylene (tot (10.268)
-cis-1,3-dichloropropene (10.815)
-Toluene-D8 (11.094)
-Toluene (11.173)
-Tetrachloroethene (11.778)
-4-Methyl-2-pentanone (11.795)+
-Methyl Methacrylate (12.060)+
-Dibromochloromethane (12.303)
-1,3-Dichloropropane (12.460)
-1,2-Dibromoethane (12.646)
-2-Hexanone (13.039)
-Chlorobenzene-D5 (13.389)+
-Ethylbenzene (13.468)+
-m+p-Xylenes (13.675)
-o-Xylene (14.355)
-Styrene (14.533)+
-Isopropylbenzene (14.676)
-P-Bromofluorobenzene (15.034)
-cis-1,4-Dichloro-2-Butene (15.456)+
-4-Chlorotoluene (15.620)
-tert-Butylbenzene (15.871)+
-1,2,4-Trimethylbenzene (15.956)
-sec-Butylbenzene (16.092)
-P-Isopropyltoluene (16.278)
-1,3-Dichlorobenzene (16.356)
-1,2,3-Trimethylbenzene (16.500)
-N-Butylbenzene (16.793)
1,4-Dichlorobenzene-D4 (16.443)+
-1,2-Dichlorobenzene (16.979)
-1,2-Dibromo-3-Chloropropa (17.351)
-1,3,5-Trichlorobenzene (17.987)
-Hexachlorobutadiene (18.716)
-1,2,4-Trichlorobenzene (18.759)
-Naphthalene (19.152)
-1,2,3-Trichlorobenzene (19.381)

Data File: \\target_server\gg\chem\gcms-w.i\W032318.b\W3298.D
Report Date: 28-Mar-2018 12:44

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W032318.b\W3298.D
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Method : \\target_server\gg\chem\gcms-w.i\W032318.b\W8SDI(07)D.m
Meth Date : 24-Mar-2018 19:38 HGOULD Quant Type: ISTD
Cal Date : 23-MAR-2018 11:34 Cal File: W3298.D
Als bottle: 5 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	0.00000	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	5.000	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	AMOUNTS ON-COL (ug/kg)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.969	1.970	(0.244)	24757	5.00000	5.6	
2	Chloromethane	50	2.191	2.191	(0.271)	31148	5.00000	6.0	
3	Vinyl chloride	62	2.262	2.263	(0.280)	27507	5.00000	5.6	
4	Bromomethane	94	2.613	2.606	(0.324)	18130	5.00000	6.4	
5	Chloroethane	64	2.748	2.735	(0.340)	18146	5.00000	6.0	
6	Trichlorofluoromethane	101	2.891	2.885	(0.358)	36174	5.00000	5.6	
7	Diethyl Ether	59	3.227	3.228	(0.400)	19671	5.00000	5.4	
8	Tertiary-butyl alcohol	59	4.729	4.723	(0.586)	15215	25.0000	26.3	
9	1,1-Dichloroethene	96	3.471	3.464	(0.430)	16424	5.00000	5.3	
10	Carbon Disulfide	76	3.514	3.507	(0.435)	60433	5.00000	5.4	
11	Freon-113	151	3.506	3.500	(0.434)	11867	5.00000	5.3	
12	Iodomethane	142	3.657	3.643	(0.453)	15351	5.00000	5.1	
13	Acrolein	56	3.892	3.886	(0.482)	19740	25.0000	25.6	
14	Methylene Chloride	84	4.200	4.194	(0.520)	30683	5.00000	6.3(a)	
15	Acetone	43	4.293	4.279	(0.532)	46053	25.0000	26.6	
16	Isobutyl Alcohol	43	8.347	8.348	(1.034)	25054	100.000	140	
17	trans-1,2-Dichloroethene	96	4.422	4.415	(0.548)	19049	5.00000	5.4	
18	Allyl Chloride	41	4.057	4.058	(0.502)	29912	5.00000	5.5	
19	Methyl tert-butyl ether	73	4.586	4.572	(0.568)	65044	5.00000	4.9(a)	
20	Acetonitrile	39	4.986	4.980	(0.618)	8066	50.0000	57.1	
21	Di-isopropyl ether	45	5.172	5.166	(0.641)	61262	5.00000	5.1	
22	Chloroprene	53	5.337	5.338	(0.661)	28532	5.00000	5.2	

Data File: \\target_server\gg\chem\gcms-w.i\W032318.b\W3298.D
Report Date: 28-Mar-2018 12:44

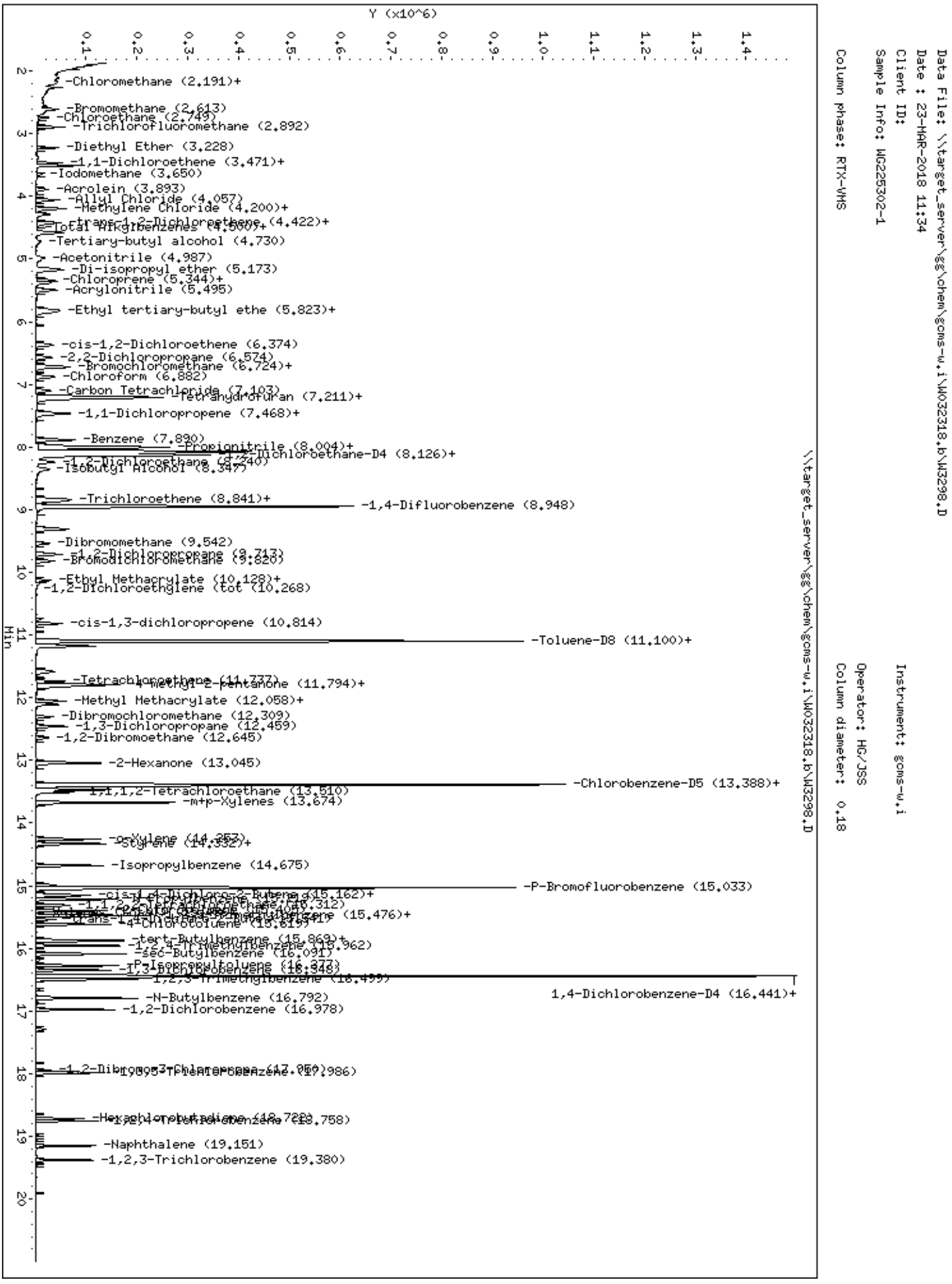
		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	ON-COL (ug/kg)	REVIEW CODE
	23	Propionitrile	54	7.982	7.983	(0.988)	38704	50.0000	52.0	
	24	Methacrylonitrile	41	8.004	8.005	(0.991)	149332	50.0000	53.0	
	25	1,1-Dichloroethane	63	5.387	5.380	(0.667)	37004	5.00000	5.2	
	26	Acrylonitrile	52	5.494	5.488	(0.680)	35328	25.0000	24.8(a)	
	27	Ethyl tertiary-butyl ether	59	5.823	5.817	(0.721)	58224	5.00000	4.9(a)	
	28	Vinyl Acetate	43	5.859	5.852	(0.655)	39473	5.00000	4.8(a)	
	29	cis-1,2-Dichloroethene	96	6.374	6.367	(0.789)	20495	5.00000	5.3	
M	30	1,2-Dichloroethylene (total)	96				39544	10.0000	10.7	
	31	Methyl Methacrylate	41	12.108	12.102	(1.353)	16836	5.00000	4.3(a)	
	32	2,2-Dichloropropane	77	6.574	6.567	(0.814)	28899	5.00000	5.2	
	33	Bromochloromethane	128	6.731	6.732	(0.834)	8627	5.00000	5.2	
	34	Chloroform	83	6.881	6.875	(0.852)	37549	5.00000	5.3	
	35	Carbon Tetrachloride	117	7.103	7.096	(0.794)	25178	5.00000	5.1	
	36	Tetrahydrofuran	42	7.189	7.168	(0.890)	36841	25.0000	23.9(a)	
$	37	Dibromofluoromethane	113	7.210	7.204	(0.893)	162730	50.0000	49.8	
	38	1,1,1-Trichloroethane	97	7.239	7.232	(0.896)	31685	5.00000	5.2	
	39	1,1-Dichloropropene	75	7.453	7.454	(0.833)	27898	5.00000	5.1	
	40	2-Butanone	43	7.475	7.461	(0.926)	62221	25.0000	25.3	
	41	Benzene	78	7.889	7.883	(0.882)	83947	5.00000	5.4	
*	42	Pentafluorobenzene	168	8.075	8.076	(1.000)	312051	50.0000		
	43	Cyclohexane	56	6.724	6.710	(0.833)	27169	5.00000	4.7(a)	
	44	Ethyl Methacrylate	69	10.127	10.121	(1.132)	14891	5.00000	4.4(a)	
$	45	1,2-Dichloroethane-D4	65	8.125	8.126	(1.006)	231245	50.0000	50.1	
	46	Tertiary-amyl methyl ether	73	8.125	8.119	(1.006)	59747	5.00000	5.1	
	47	1,2-Dichloroethane	62	8.240	8.240	(0.921)	33642	5.00000	5.4	
	48	Trichloroethene	95	8.869	8.863	(0.991)	20589	5.00000	5.4	
*	49	1,4-Difluorobenzene	114	8.948	8.948	(1.000)	545930	50.0000		
	50	Dibromomethane	93	9.541	9.535	(1.066)	12187	5.00000	5.0	
	51	1,2-Dichloropropane	63	9.713	9.706	(1.086)	21722	5.00000	5.3	
	52	Bromodichloromethane	83	9.827	9.821	(1.098)	28951	5.00000	5.2	
	53	cis-1,3-dichloropropene	75	10.821	10.815	(1.209)	34825	5.00000	4.8(a)	
	54	1,4-Dioxane	88	10.177	10.171	(1.137)	6859	100.000	90.3(a)	
$	55	Toluene-D8	98	11.100	11.093	(1.241)	692635	50.0000	50.2	
	57	Toluene	92	11.178	11.172	(1.249)	51694	5.00000	5.3	
	58	4-methyl-2-pentanone	43	11.793	11.794	(1.318)	118654	25.0000	24.4(a)	
	59	Tetrachloroethene	164	11.736	11.737	(0.877)	13770	5.00000	5.2	
	60	trans-1,3-Dichloropropene	75	11.822	11.823	(1.321)	33418	5.00000	5.0	
	61	1,1,2-Trichloroethane	83	12.058	12.059	(1.348)	17795	5.00000	5.4	
	62	Dibromochloromethane	129	12.308	12.302	(0.919)	18557	5.00000	4.8(a)	
	63	1,3-Dichloropropane	76	12.458	12.459	(0.931)	40036	5.00000	5.3	
	64	1,2-Dibromoethane	107	12.637	12.638	(1.412)	18776	5.00000	4.9(a)	
	65	2-Hexanone	43	13.037	13.038	(0.974)	86329	25.0000	23.9(a)	
*	66	Chlorobenzene-D5	117	13.388	13.389	(1.000)	526740	50.0000		
	67	Chlorobenzene	112	13.409	13.410	(1.002)	57881	5.00000	5.4	
	152	1-Chlorohexane	91	13.409	13.410	(1.660)	28783	5.00000	5.2	
	68	Ethylbenzene	106	13.466	13.467	(1.006)	29719	5.00000	5.2	
	69	1,1,1,2-Tetrachloroethane	131	13.509	13.510	(1.009)	19014	5.00000	5.1	
M	70	Xylenes (total)	106				107955	15.0000	15.2	
	71	m+p-Xylenes	106	13.674	13.675	(1.021)	75728	10.0000	10.5	
	72	o-Xylene	106	14.253	14.254	(1.065)	32227	5.00000	4.7(a)	
	73	Styrene	104	14.332	14.332	(1.070)	55185	5.00000	4.7(a)	
	74	Bromoform	173	14.346	14.347	(1.072)	13436	5.00000	4.7(a)	
	75	Isopropylbenzene	105	14.675	14.676	(0.893)	84723	5.00000	5.0	
$	76	P-Bromofluorobenzene	95	15.032	15.033	(1.680)	311069	50.0000	49.2	

Data File: \\target_server\gg\chem\gcms-w.i\W032318.b\W3298.D
Report Date: 28-Mar-2018 12:44

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	AMOUNTS ON-COL (ug/kg)	REVIEW CODE
	77 cis-1,4-Dichloro-2-Butene	53	15.140	15.140	(0.921)	10084	5.00000	4.8(a)	
	78 trans-1,4-Dichloro-2-Butene	53	15.540	15.541	(0.945)	8389	5.00000	5.0	
	79 Bromobenzene	156	15.161	15.162	(0.922)	22443	5.00000	5.0	
	80 N-Propylbenzene	91	15.218	15.212	(0.926)	127491	5.00000	5.3	
	81 1,1,2,2-Tetrachloroethane	83	15.318	15.312	(0.932)	33580	5.00000	5.3	
	82 1,3,5-Trimethylbenzene	105	15.476	15.476	(0.941)	83688	5.00000	5.1	
	83 2-Chlorotoluene	91	15.404	15.405	(0.937)	76184	5.00000	5.2	
	84 1,2,3-Trichloropropane	75	15.483	15.476	(0.942)	30865	5.00000	5.3	
	85 4-Chlorotoluene	91	15.619	15.619	(0.950)	82281	5.00000	5.2	
	86 tert-Butylbenzene	119	15.869	15.870	(0.965)	78289	5.00000	4.9(a)	
	87 Pentachloroethane	117	15.890	15.884	(0.967)	18926	5.00000	5.4	
	88 1,2,4-Trimethylbenzene	105	15.962	15.963	(0.971)	86664	5.00000	4.9(a)	
	89 P-Isopropyltoluene	119	16.276	16.277	(0.990)	85518	5.00000	4.9(a)	
	90 1,3-Dichlorobenzene	146	16.348	16.349	(0.994)	50779	5.00000	5.5	
*	91 1,4-Dichlorobenzene-D4	152	16.441	16.442	(1.000)	321539	50.0000		
	92 1,4-Dichlorobenzene	146	16.462	16.463	(1.001)	53611	5.00000	5.6	
	93 N-Butylbenzene	91	16.791	16.792	(1.021)	93460	5.00000	5.1	
	94 sec-Butylbenzene	105	16.091	16.091	(0.979)	107753	5.00000	5.1	
	95 1,2-Dichlorobenzene	146	16.977	16.978	(1.033)	49876	5.00000	5.4	
	96 1,2-Dibromo-3-Chloropropane	75	17.950	17.950	(1.092)	7241	5.00000	4.8(aH)	
	97 1,3,5-Trichlorobenzene	180	17.985	17.986	(2.227)	34382	5.00000	5.3	
	98 Hexachlorobutadiene	225	18.722	18.723	(1.139)	16617	5.00000	5.4	
	99 1,2,4-Trichlorobenzene	180	18.758	18.758	(1.141)	29504	5.00000	5.0	
	100 1,2,3-Trimethylbenzene	105	16.498	16.499	(2.043)	99449	5.00000	5.3	
	101 Naphthalene	128	19.151	19.152	(1.165)	76922	5.00000	4.6(a)	
	102 1,2,3-Trichlorobenzene	180	19.380	19.380	(1.179)	29729	5.00000	5.1	
	103 Methyl Acetate	43	4.450	4.444	(0.551)	19148	5.00000	4.9(a)	
	104 Methylcyclohexane	83	8.833	8.834	(1.094)	31748	5.00000	5.0	
M	153 Total Alkylbenzenes	100				662863	5.00000	35.4	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
H - Operator selected an alternate compound hit.


Data File: \\target_server\gg\chem\gcms-w.i\W032318.b\W3298.D
Date : 23-MAR-2018 11:34
Client ID:
Sample Info: WG225302-1
Column phase: RTX-VMS
Instrument: gcms-w.i
Operator: HG/JSS
Column diameter: 0.18
\\target_server\gg\chem\gcms-w.i\W032318.b\W3298.D
Y (x10^6)
Min
-Chloromethane (2.191)+
-Bromomethane (2.613)
-Chloroethane (2.749)
-Trichlorofluoromethane (2.892)
-Diethyl Ether (3.228)
-1,1-Dichloroethene (3.471)+
-Iodomethane (3.650)
-Acrolein (3.893)
-Allyl Chloride (4.057)
-Methylene Chloride (4.200)+
-trans-1,2-Dichloroethene (4.422)+
-Tertiary-butyl alcohol (4.730)
-Acetonitrile (4.987)
-Di-isopropyl ether (5.173)
-Chloroprene (5.344)+
-Acrylonitrile (5.495)
-Ethyl tertiary-butyl ethe (5.823)+
-cis-1,2-Dichloroethene (6.374)
-2,2-Dichloropropane (6.524)
-Bromochloromethane (6.724)+
-Chloroform (6.882)
-Carbon Tetrachloride (7.103)
-Tetrahydrofuran (7.211)+
-1,1-Dichloropropene (7.468)+
-Benzene (7.890)
-Propionitrile (8.004)+
-1,2-Dichlorobethane-D4 (8.126)+
-Isobutyl Alcohol (8.347)
-Trichloroethene (8.841)+
-1,4-Difluorobenzene (8.948)
-Dibromomethane (9.542)
-Bromodichloromethane (9.820)
-Ethyl Methacrylate (10.128)+
-1,2-Dichloroethglene (tot (10.268)
-cis-1,3-dichloropropene (10.814)
-Toluene-D8 (11.100)+
-Tetrachloroethene (11.737)
-Methyl Methacrylate (12.058)+
-Dibromochloromethane (12.309)
-1,3-Dichloropropane (12.459)
-1,2-Dibromoethane (12.645)
-2-Hexanone (13.045)
-Chlorobenzene-D5 (13.388)+
-m+p-Xylenes (13.674)
-Isopropylbenzene (14.675)
-P-Bromofluorobenzene (15.033)
-tert-Butylbenzene (15.869)+
-sec-Butylbenzene (16.091)
-N-Butylbenzene (16.792)
1,4-Dichlorobenzene-D4 (16.441)+
-1,2-Dichlorobenzene (16.978)
-Naphthalene (19.151)
-1,2,3-Trichlorobenzene (19.380)

Data File: \\target_server\gg\chem\gcms-w.i\W032318.b\W3299.D
Report Date: 28-Mar-2018 12:44

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W032318.b\W3299.D
Lab Smp Id: WG225302-6
Inj Date : 23-MAR-2018 12:37 MS Autotune Date: 10-APR-2016 11:00
Operator : HG/JSS Inst ID: gcms-w.i
Smp Info : WG225302-6
Misc Info : WG225302,WG225302-4
Comment : SW846 5035
Method : \\target_server\gg\chem\gcms-w.i\W032318.b\W8SDI(07)D.m
Meth Date : 24-Mar-2018 19:38 HGOULD Quant Type: ISTD
Cal Date : 23-MAR-2018 12:37 Cal File: W3299.D
Als bottle: 6 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: VOA-WS

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	0.00000	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	5.000	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	ON-COL (ug/kg)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.970	1.970	(0.244)	625844	150.000	136	
2	Chloromethane	50	2.191	2.191	(0.271)	693475	150.000	129	
3	Vinyl chloride	62	2.263	2.263	(0.280)	692682	150.000	136	
4	Bromomethane	94	2.606	2.606	(0.323)	363105	150.000	123	
5	Chloroethane	64	2.735	2.735	(0.339)	365567	150.000	116	
6	Trichlorofluoromethane	101	2.878	2.885	(0.356)	943174	150.000	139	
7	Diethyl Ether	59	3.228	3.228	(0.400)	574304	150.000	152	
8	Tertiary-butyl alcohol	59	4.730	4.723	(0.586)	746536	750.000	750	
9	1,1-Dichloroethene	96	3.457	3.464	(0.428)	460739	150.000	143	
10	Carbon Disulfide	76	3.500	3.507	(0.433)	1646619	150.000	141	
11	Freon-113	151	3.500	3.500	(0.433)	327858	150.000	141	
12	Iodomethane	142	3.643	3.643	(0.451)	481932	150.000	155	
13	Acrolein	56	3.886	3.886	(0.481)	686588	750.000	856	
14	Methylene Chloride	84	4.193	4.194	(0.519)	662437	150.000	131	
15	Acetone	43	4.279	4.279	(0.530)	1439403	750.000	798	
16	Isobutyl Alcohol	43	8.355	8.348	(1.035)	1215724	3000.00	3000	
17	trans-1,2-Dichloroethene	96	4.415	4.415	(0.547)	516464	150.000	141	
18	Allyl Chloride	41	4.050	4.058	(0.502)	820414	150.000	144	
19	Methyl tert-butyl ether	73	4.572	4.572	(0.566)	2193006	150.000	159	
20	Acetonitrile	39	4.980	4.980	(0.617)	233195	1500.00	1590	
21	Di-isopropyl ether	45	5.166	5.166	(0.640)	1926888	150.000	155	

Data File: \\target_server\gg\chem\gcms-w.i\W032318.b\W3299.D
Report Date: 28-Mar-2018 12:44

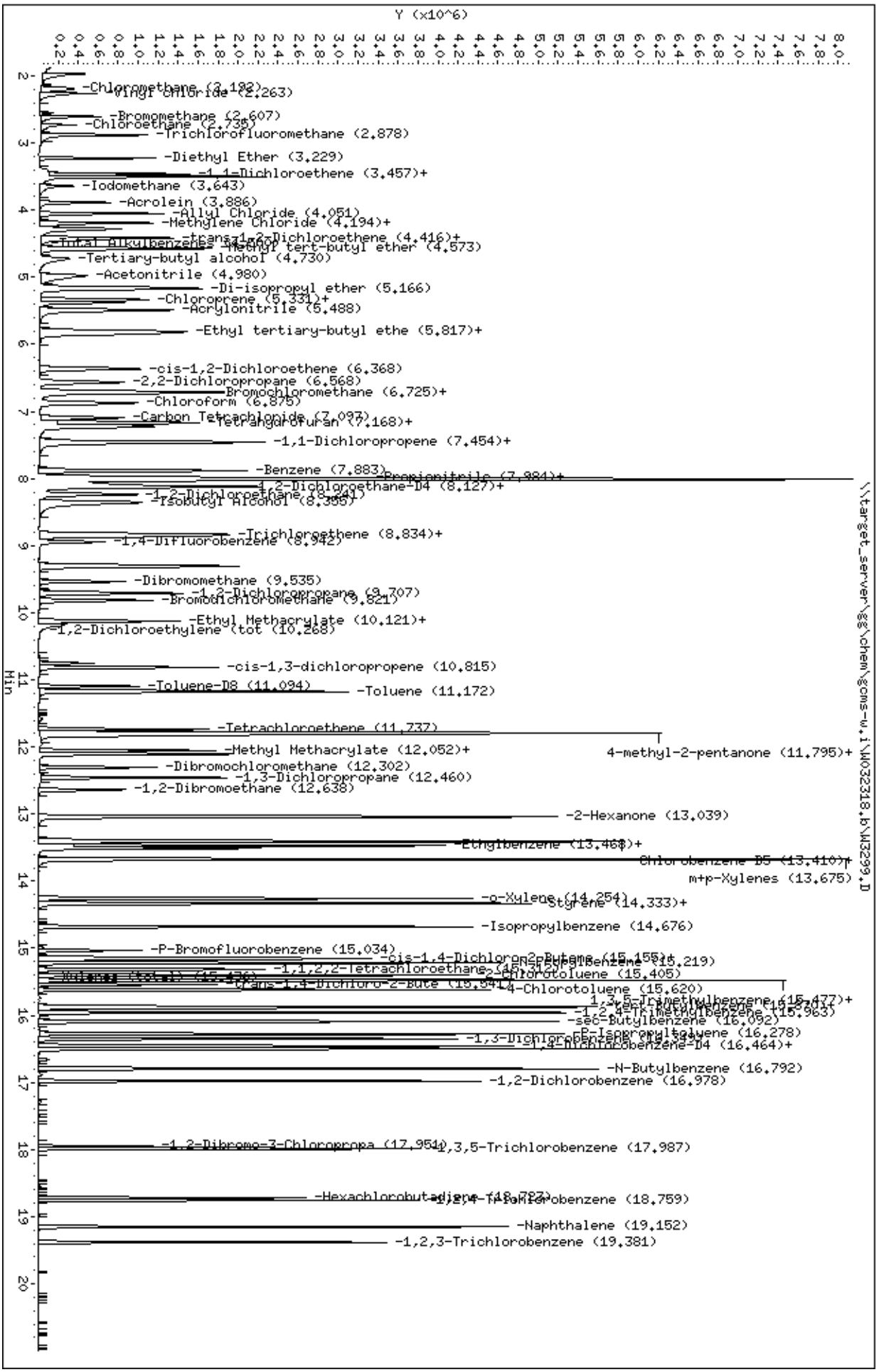
			QUANT SIG					AMOUNTS		
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/kg)	ON-COL (ug/kg)	REVIEW CODE
	22	Chloroprene	53	5.330	5.338	(0.660)	845301	150.000	148	
	23	Propionitrile	54	7.983	7.983	(0.988)	1354429	1500.00	1750	
	24	Methacrylonitrile	41	8.012	8.005	(0.992)	4712634	1500.00	1610	
	25	1,1-Dichloroethane	63	5.373	5.380	(0.665)	1047748	150.000	143	
	26	Acrylonitrile	52	5.488	5.488	(0.680)	1293859	750.000	872	
	27	Ethyl tertiary-butyl ether	59	5.809	5.817	(0.719)	1994582	150.000	162	
	28	Vinyl Acetate	43	5.852	5.852	(0.655)	1377348	150.000	164	
	29	cis-1,2-Dichloroethene	96	6.367	6.367	(0.788)	590352	150.000	146	
M	30	1,2-Dichloroethylene (total)	96				1106816	300.000	286	
	31	Methyl Methacrylate	41	12.102	12.102	(1.353)	725770	150.000	180	
	32	2,2-Dichloropropane	77	6.567	6.567	(0.813)	828425	150.000	144	
	33	Bromochloromethane	128	6.725	6.732	(0.833)	258717	150.000	149	
	34	Chloroform	83	6.875	6.875	(0.851)	1059709	150.000	143	
	35	Carbon Tetrachloride	117	7.096	7.096	(0.794)	731756	150.000	144	
	36	Tetrahydrofuran	42	7.168	7.168	(0.888)	1397269	750.000	872	
$	37	Dibromofluoromethane	113	7.204	7.204	(0.892)	172858	50.0000	50.8	
	38	1,1,1-Trichloroethane	97	7.232	7.232	(0.896)	899164	150.000	143	
	39	1,1-Dichloropropene	75	7.447	7.454	(0.833)	807229	150.000	144	
	40	2-Butanone	43	7.461	7.461	(0.924)	2175229	750.000	850	
	41	Benzene	78	7.883	7.883	(0.882)	2264486	150.000	141	
*	42	Pentafluorobenzene	168	8.076	8.076	(1.000)	324826	50.0000		
	43	Cyclohexane	56	6.710	6.710	(0.831)	898562	150.000	149	
	44	Ethyl Methacrylate	69	10.121	10.121	(1.132)	637734	150.000	182	
$	45	1,2-Dichloroethane-D4	65	8.126	8.126	(1.006)	244464	50.0000	50.9	
	46	Tertiary-amyl methyl ether	73	8.119	8.119	(1.005)	1986107	150.000	163	
	47	1,2-Dichloroethane	62	8.240	8.240	(0.922)	946481	150.000	148	
	48	Trichloroethene	95	8.862	8.863	(0.991)	546944	150.000	139	
*	49	1,4-Difluorobenzene	114	8.941	8.948	(1.000)	564082	50.0000		
	50	Dibromomethane	93	9.535	9.535	(1.066)	389448	150.000	155	
	51	1,2-Dichloropropane	63	9.706	9.706	(1.086)	625476	150.000	147	
	52	Bromodichloromethane	83	9.821	9.821	(1.098)	868227	150.000	150	
	53	cis-1,3-dichloropropene	75	10.814	10.815	(1.210)	1172135	150.000	157	
	54	1,4-Dioxane	88	10.171	10.171	(1.138)	295772	3000.00	3770	
$	55	Toluene-D8	98	11.093	11.093	(1.241)	724268	50.0000	50.8	
	57	Toluene	92	11.172	11.172	(1.249)	1438701	150.000	143	
	58	4-methyl-2-pentanone	43	11.794	11.794	(1.319)	4311833	750.000	857	
	59	Tetrachloroethene	164	11.737	11.737	(0.877)	397531	150.000	141	
	60	trans-1,3-Dichloropropene	75	11.823	11.823	(1.322)	1105651	150.000	159	
	61	1,1,2-Trichloroethane	83	12.051	12.059	(1.348)	526414	150.000	155	
	62	Dibromochloromethane	129	12.302	12.302	(0.919)	652235	150.000	158	
	63	1,3-Dichloropropane	76	12.459	12.459	(0.931)	1207273	150.000	150	
	64	1,2-Dibromoethane	107	12.638	12.638	(1.413)	632279	150.000	161	
	65	2-Hexanone	43	13.038	13.038	(0.974)	3334845	750.000	862	
*	66	Chlorobenzene-D5	117	13.389	13.389	(1.000)	564355	50.0000		
	67	Chlorobenzene	112	13.410	13.410	(1.002)	1620585	150.000	141	
	152	1-Chlorohexane	91	13.410	13.410	(1.660)	847205	150.000	146	
	68	Ethylbenzene	106	13.467	13.467	(1.006)	884080	150.000	143	
	69	1,1,1,2-Tetrachloroethane	131	13.510	13.510	(1.009)	596879	150.000	150	
M	70	Xylenes (total)	106				3300819	150.000	436	
	71	m+p-Xylenes	106	13.675	13.675	(1.021)	2193141	300.000	284	
	72	o-Xylene	106	14.254	14.254	(1.065)	1107678	150.000	151	
	73	Styrene	104	14.332	14.332	(1.070)	1926059	150.000	152(A)	
	74	Bromoform	173	14.347	14.347	(1.072)	526503	150.000	172	
	75	Isopropylbenzene	105	14.676	14.676	(0.893)	2714851	150.000	145	

Data File: \\target_server\gg\chem\gcms-w.i\W032318.b\W3299.D
Report Date: 28-Mar-2018 12:44

			QUANT SIG					AMOUNTS		
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/kg)	ON-COL (ug/kg)	REVIEW CODE
$	76	P-Bromofluorobenzene	95	15.033	15.033	(1.681)	344383	50.0000	52.7	
	77	cis-1,4-Dichloro-2-Butene	53	15.140	15.140	(0.921)	384730	150.000	168	
	78	trans-1,4-Dichloro-2-Butene	53	15.541	15.541	(0.945)	312325	150.000	168	
	79	Bromobenzene	156	15.162	15.162	(0.922)	727343	150.000	148	
	80	N-Propylbenzene	91	15.219	15.212	(0.926)	3575216	150.000	136	
	81	1,1,2,2-Tetrachloroethane	83	15.312	15.312	(0.931)	1092913	150.000	156	
	82	1,3,5-Trimethylbenzene	105	15.476	15.476	(0.941)	2579286	150.000	142	
	83	2-Chlorotoluene	91	15.405	15.405	(0.937)	2267163	150.000	142	
	84	1,2,3-Trichloropropane	75	15.476	15.476	(0.941)	1012466	150.000	159	
	85	4-Chlorotoluene	91	15.619	15.619	(0.950)	2422435	150.000	141	
	86	tert-Butylbenzene	119	15.870	15.870	(0.965)	2545391	150.000	146	
	87	Pentachloroethane	117	15.884	15.884	(0.966)	567199	150.000	149	
	88	1,2,4-Trimethylbenzene	105	15.963	15.963	(0.971)	2741657	150.000	142	
	89	P-Isopropyltoluene	119	16.277	16.277	(0.990)	2700177	150.000	141	
	90	1,3-Dichlorobenzene	146	16.349	16.349	(0.994)	1423688	150.000	140	
*	91	1,4-Dichlorobenzene-D4	152	16.442	16.442	(1.000)	352828	50.0000		
	92	1,4-Dichlorobenzene	146	16.463	16.463	(1.001)	1480455	150.000	140	
	93	N-Butylbenzene	91	16.792	16.792	(1.021)	2730242	150.000	136	
	94	sec-Butylbenzene	105	16.091	16.091	(0.979)	3237138	150.000	140	
	95	1,2-Dichlorobenzene	146	16.978	16.978	(1.033)	1440903	150.000	142	
	96	1,2-Dibromo-3-Chloropropane	75	17.950	17.950	(1.092)	318649	150.000	179(H)	
	97	1,3,5-Trichlorobenzene	180	17.986	17.986	(2.227)	969887	150.000	144	
	98	Hexachlorobutadiene	225	18.723	18.723	(1.139)	447926	150.000	132	
	99	1,2,4-Trichlorobenzene	180	18.758	18.758	(1.141)	931012	150.000	142	
	100	1,2,3-Trimethylbenzene	105	16.499	16.499	(2.043)	2864590	150.000	148	
	101	Naphthalene	128	19.152	19.152	(1.165)	2898556	150.000	158	
	102	1,2,3-Trichlorobenzene	180	19.380	19.380	(1.179)	890198	150.000	140	
	103	Methyl Acetate	43	4.444	4.444	(0.550)	714115	150.000	174	
	104	Methylcyclohexane	83	8.827	8.834	(1.093)	992306	150.000	150	
M	153	Total Alkylbenzenes	100				20109107	150.000	983	

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
H - Operator selected an alternate compound hit.


Data File: \\target_server\gg\chem\gcms-w.i\W032318.b\W3299.D
Date : 23-MAR-2018 12:37
Client ID:
Sample Info: WG225302-6
Column phase: RTX-VMS
Instrument: gcms-w.i
Operator: HG/JSS
Column diameter: 0.18
\\target_server\gg\chem\gcms-w.i\W032318.b\W3299.D
Y (x10^6)
Min
-Chloromethane (2.192)
-Vinyl Chloride (2.263)
-Bromomethane (2.607)
-Chloroethane (2.736)
-Trichlorofluoromethane (2.878)
-Diethyl Ether (3.229)
-1,1-Dichloroethene (3.457)+
-Iodomethane (3.643)
-Acrolein (3.886)
-Allyl Chloride (4.051)
-Methylene Chloride (4.194)+
-trans-1,2-Dichloroethene (4.416)+
-Methyl tert-butyl ether (4.573)
-Tertiary-butyl alcohol (4.730)
-Acetonitrile (4.980)
-Di-isopropyl ether (5.166)
-Chloroprene (5.331)+
-Acrylonitrile (5.488)
-Ethyl tertiary-butyl ethe (5.817)+
-cis-1,2-Dichloroethene (6.368)
-2,2-Dichloropropane (6.568)
-Bromochloromethane (6.725)+
-Chloroform (6.875)
-Carbon Tetrachloride (7.097)
-Tetrahydrofuran (7.168)+
-1,1-Dichloropropene (7.454)+
-Benzene (7.883)
-Propionitrile (7.984)+
-1,2-Dichloroethane-D4 (8.127)+
-1,2-Dichloroethane (8.241)
-Isobutyl Alcohol (8.389)
-Trichloroethene (8.834)+
-1,4-Difluorobenzene (8.942)
-Dibromomethane (9.535)
-1,2-Dichloropropane (9.707)
-Bromodichloromethane (9.821)
-Ethyl Methacrylate (10.121)+
-1,2-Dichloroethylene (tot (10.268)
-cis-1,3-dichloropropene (10.815)
-Toluene-D8 (11.094)
-Toluene (11.172)
-Tetrachloroethene (11.737)
-Methyl Methacrylate (12.052)+
4-methyl-2-pentanone (11.795)+
-Dibromochloromethane (12.302)
-1,3-Dichloropropane (12.460)
-1,2-Dibromoethane (12.638)
-2-Hexanone (13.039)
-Ethylbenzene (13.468)+
Chlorobenzene-D5 (13.410)+
m+p-Xylenes (13.675)
-o-Xylene (14.254)
-Styrene (14.333)+
-Isopropylbenzene (14.676)
-P-Bromofluorobenzene (15.034)
-cis-1,4-Dichloro-2-Butene (15.155)+
-1,1,2,2-Tetrachloroethane (15.219)
-2-Chlorotoluene (15.405)
-trans-1,4-Dichloro-2-Bute (15.541)+
-4-Chlorotoluene (15.620)
-1,3,5-Trimethylbenzene (15.477)+
-tert-Butylbenzene (15.804)+
-1,2,4-Trimethylbenzene (15.963)
-sec-Butylbenzene (16.092)
-P-Isopropyltoluene (16.278)
-1,3-Dichlorobenzene (16.353)
-1,4-Dichlorobenzene-D4 (16.464)+
-N-Butylbenzene (16.792)
-1,2-Dichlorobenzene (16.978)
-1,2-Dibromo-3-Chloropropa (17.954)
1,3,5-Trichlorobenzene (17.987)
-Hexachlorobutadiene (18.787)
1,2,4-Trichlorobenzene (18.759)
-Naphthalene (19.152)
-1,2,3-Trichlorobenzene (19.381)

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Report Date: 28-Mar-2018 12:44

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W032318.b\W3300.D
Lab Smp Id: WG225302-5
Inj Date : 23-MAR-2018 13:16 MS Autotune Date: 10-APR-2016 11:00
Operator : HG/JSS Inst ID: gcms-w.i
Smp Info : WG225302-5
Misc Info : WG225302,WG225302-4
Comment : SW846 5035
Method : \\target_server\gg\chem\gcms-w.i\W032318.b\W8SDI(07)D.m
Meth Date : 24-Mar-2018 19:38 HGOULD Quant Type: ISTD
Cal Date : 23-MAR-2018 13:16 Cal File: W3300.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: VOA-WS

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	0.00000	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	5.000	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	AMOUNTS ON-COL (ug/kg)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.970	1.970	(0.244)	493299	100.000	102	
2	Chloromethane	50	2.191	2.191	(0.271)	562017	100.000	99.9	
3	Vinyl chloride	62	2.263	2.263	(0.280)	567208	100.000	106	
4	Bromomethane	94	2.606	2.606	(0.323)	299830	100.000	97.0	
5	Chloroethane	64	2.735	2.735	(0.339)	331196	100.000	99.8	
6	Trichlorofluoromethane	101	2.885	2.885	(0.357)	727583	100.000	102	
7	Diethyl Ether	59	3.228	3.228	(0.400)	405694	100.000	102	
8	Tertiary-butyl alcohol	59	4.723	4.723	(0.585)	419233	500.000	498	
9	1,1-Dichloroethene	96	3.464	3.464	(0.429)	368260	100.000	109	
10	Carbon Disulfide	76	3.507	3.507	(0.434)	1340862	100.000	109	
11	Freon-113	151	3.500	3.500	(0.433)	261383	100.000	107	
12	Iodomethane	142	3.643	3.643	(0.451)	382378	100.000	117	
13	Acrolein	56	3.886	3.886	(0.481)	417999	500.000	496	
14	Methylene Chloride	84	4.194	4.194	(0.519)	509283	100.000	95.8	
15	Acetone	43	4.279	4.279	(0.530)	917676	500.000	485	
16	Isobutyl Alcohol	43	8.348	8.348	(1.034)	684699	2000.00	1990	
17	trans-1,2-Dichloroethene	96	4.415	4.415	(0.547)	418463	100.000	109	
18	Allyl Chloride	41	4.058	4.058	(0.502)	630245	100.000	105	
19	Methyl tert-butyl ether	73	4.572	4.572	(0.566)	1585582	100.000	110	
20	Acetonitrile	39	4.980	4.980	(0.617)	143209	1000.00	929	
21	Di-isopropyl ether	45	5.166	5.166	(0.640)	1420721	100.000	109	

Data File: \\target_server\gg\chem\gcms-w.i\W032318.b\W3300.D
Report Date: 28-Mar-2018 12:44

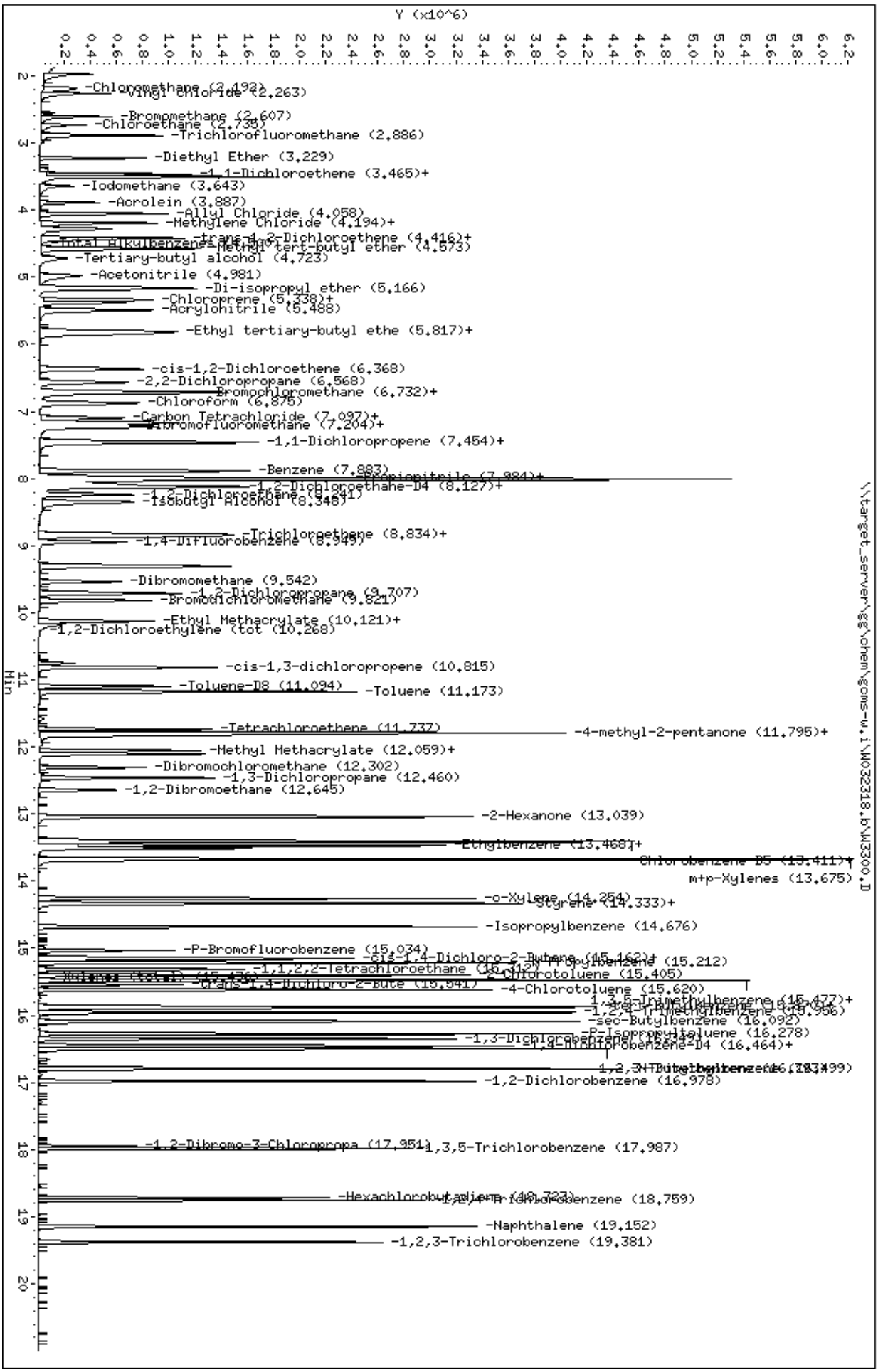
		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	AMOUNTS ON-COL (ug/kg)	REVIEW CODE
	22	Chloroprene	53	5.338	5.338	(0.661)	655731	100.000	109	
	23	Propionitrile	54	7.983	7.983	(0.988)	815361	1000.00	1000	
	24	Methacrylonitrile	41	8.005	8.005	(0.991)	3048031	1000.00	991	
	25	1,1-Dichloroethane	63	5.380	5.380	(0.666)	827463	100.000	107	
	26	Acrylonitrile	52	5.488	5.488	(0.680)	784395	500.000	504	
	27	Ethyl tertiary-butyl ether	59	5.817	5.817	(0.720)	1424875	100.000	110	
	28	Vinyl Acetate	43	5.852	5.852	(0.654)	992097	100.000	113	
	29	cis-1,2-Dichloroethene	96	6.367	6.367	(0.788)	466374	100.000	110	
M	30	1,2-Dichloroethylene (total)	96				884837	100.000	218	
	31	Methyl Methacrylate	41	12.102	12.102	(1.352)	468916	100.000	111	
	32	2,2-Dichloropropane	77	6.567	6.567	(0.813)	665738	100.000	110	
	33	Bromochloromethane	128	6.732	6.732	(0.834)	196013	100.000	108	
	34	Chloroform	83	6.875	6.875	(0.851)	830355	100.000	107	
	35	Carbon Tetrachloride	117	7.096	7.096	(0.793)	580854	100.000	109	
	36	Tetrahydrofuran	42	7.168	7.168	(0.888)	898596	500.000	534	
$	37	Dibromofluoromethane	113	7.204	7.204	(0.892)	176047	50.0000	49.3	
	38	1,1,1-Trichloroethane	97	7.232	7.232	(0.896)	710256	100.000	108	
	39	1,1-Dichloropropene	75	7.454	7.454	(0.833)	646921	100.000	110	
	40	2-Butanone	43	7.461	7.461	(0.924)	1376538	500.000	512	
	41	Benzene	78	7.883	7.883	(0.881)	1825338	100.000	108	
*	42	Pentafluorobenzene	168	8.076	8.076	(1.000)	340806	50.0000		
	43	Cyclohexane	56	6.710	6.710	(0.831)	718438	100.000	113	
	44	Ethyl Methacrylate	69	10.121	10.121	(1.131)	405558	100.000	111	
$	45	1,2-Dichloroethane-D4	65	8.126	8.126	(1.006)	240141	50.0000	47.7	
	46	Tertiary-amyl methyl ether	73	8.119	8.119	(1.005)	1391843	100.000	109	
	47	1,2-Dichloroethane	62	8.240	8.240	(0.921)	682149	100.000	101	
	48	Trichloroethene	95	8.863	8.863	(0.990)	440826	100.000	106	
*	49	1,4-Difluorobenzene	114	8.948	8.948	(1.000)	591414	50.0000		
	50	Dibromomethane	93	9.535	9.535	(1.066)	276425	100.000	105	
	51	1,2-Dichloropropane	63	9.706	9.706	(1.085)	480981	100.000	108	
	52	Bromodichloromethane	83	9.821	9.821	(1.097)	646478	100.000	107	
	53	cis-1,3-dichloropropene	75	10.815	10.815	(1.209)	879000	100.000	112	
	54	1,4-Dioxane	88	10.171	10.171	(1.137)	175862	2000.00	2140	
$	55	Toluene-D8	98	11.093	11.093	(1.240)	735408	50.0000	49.2	
	57	Toluene	92	11.172	11.172	(1.248)	1135403	100.000	108	
	58	4-methyl-2-pentanone	43	11.794	11.794	(1.318)	2770548	500.000	525	
	59	Tetrachloroethene	164	11.737	11.737	(0.877)	315818	100.000	111	
	60	trans-1,3-Dichloropropene	75	11.823	11.823	(1.321)	802930	100.000	110	
	61	1,1,2-Trichloroethane	83	12.059	12.059	(1.348)	374651	100.000	105	
	62	Dibromochloromethane	129	12.302	12.302	(0.919)	470375	100.000	113	
	63	1,3-Dichloropropane	76	12.459	12.459	(0.931)	863672	100.000	106	
	64	1,2-Dibromoethane	107	12.638	12.638	(1.412)	451373	100.000	110	
	65	2-Hexanone	43	13.038	13.038	(0.974)	2094547	500.000	537	
*	66	Chlorobenzene-D5	117	13.389	13.389	(1.000)	569125	50.0000		
	67	Chlorobenzene	112	13.410	13.410	(1.002)	1251158	100.000	108	
	152	1-Chlorohexane	91	13.410	13.410	(1.660)	668726	100.000	110	
	68	Ethylbenzene	106	13.467	13.467	(1.006)	693394	100.000	111	
	69	1,1,1,2-Tetrachloroethane	131	13.510	13.510	(1.009)	448054	100.000	112	
M	70	Xylenes (total)	106				2561437	100.000	335	
	71	m+p-Xylenes	106	13.675	13.675	(1.021)	1709912	200.000	220	
	72	o-Xylene	106	14.254	14.254	(1.065)	851525	100.000	115	
	73	Styrene	104	14.332	14.332	(1.070)	1461199	100.000	114	
	74	Bromoform	173	14.347	14.347	(1.072)	356351	100.000	115	
	75	Isopropylbenzene	105	14.676	14.676	(0.893)	2118214	100.000	112	

Data File: \\target_server\gg\chem\gcms-w.i\W032318.b\W3300.D
Report Date: 28-Mar-2018 12:44

							AMOUNTS		
Compounds		QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/kg)	ON-COL (ug/kg)	REVIEW CODE
$	76 P-Bromofluorobenzene	95	15.033	15.033	(1.680)	341458	50.0000	49.8	
	77 cis-1,4-Dichloro-2-Butene	53	15.140	15.140	(0.921)	243931	100.000	106	
	78 trans-1,4-Dichloro-2-Butene	53	15.541	15.541	(0.945)	200592	100.000	107	
	79 Bromobenzene	156	15.162	15.162	(0.922)	546864	100.000	111	
	80 N-Propylbenzene	91	15.212	15.212	(0.925)	2835335	100.000	107	
	81 1,1,2,2-Tetrachloroethane	83	15.312	15.312	(0.931)	734464	100.000	104	
	82 1,3,5-Trimethylbenzene	105	15.476	15.476	(0.941)	2029807	100.000	111	
	83 2-Chlorotoluene	91	15.405	15.405	(0.937)	1751136	100.000	109	
	84 1,2,3-Trichloropropane	75	15.476	15.476	(0.941)	676140	100.000	105	
	85 4-Chlorotoluene	91	15.619	15.619	(0.950)	1873711	100.000	108	
	86 tert-Butylbenzene	119	15.870	15.870	(0.965)	1981224	100.000	113	
	87 Pentachloroethane	117	15.884	15.884	(0.966)	409836	100.000	106	
	88 1,2,4-Trimethylbenzene	105	15.963	15.963	(0.971)	2160781	100.000	111	
	89 P-Isopropyltoluene	119	16.277	16.277	(0.990)	2168107	100.000	112	
	90 1,3-Dichlorobenzene	146	16.349	16.349	(0.994)	1093862	100.000	107	
*	91 1,4-Dichlorobenzene-D4	152	16.442	16.442	(1.000)	355529	50.0000		
	92 1,4-Dichlorobenzene	146	16.463	16.463	(1.001)	1136378	100.000	106	
	93 N-Butylbenzene	91	16.792	16.792	(1.021)	2216304	100.000	109	
	94 sec-Butylbenzene	105	16.091	16.091	(0.979)	2602265	100.000	111	
	95 1,2-Dichlorobenzene	146	16.978	16.978	(1.033)	1100389	100.000	108	
	96 1,2-Dibromo-3-Chloropropane	75	17.950	17.950	(1.092)	188843	100.000	105(H)	
	97 1,3,5-Trichlorobenzene	180	17.986	17.986	(2.227)	742613	100.000	105	
	98 Hexachlorobutadiene	225	18.723	18.723	(1.139)	370542	100.000	108	
	99 1,2,4-Trichlorobenzene	180	18.758	18.758	(1.141)	729843	100.000	111	
	100 1,2,3-Trimethylbenzene	105	16.499	16.499	(2.043)	2145172	100.000	105	
	101 Naphthalene	128	19.152	19.152	(1.165)	2069929	100.000	112	
	102 1,2,3-Trichlorobenzene	180	19.380	19.380	(1.179)	693443	100.000	108	
	103 Methyl Acetate	43	4.444	4.444	(0.550)	442895	100.000	103	
	104 Methylcyclohexane	83	8.834	8.834	(1.094)	765665	100.000	110	
M	153 Total Alkylbenzenes	100				15993823	100.000	776	

QC Flag Legend

H - Operator selected an alternate compound hit.


Data File: \\target_server\gg\chem\gcms-w.i\W032318.b\W3300.D
Date : 23-MAR-2018 13:16
Client ID:
Sample Info: WG225302-5
Column phase: RTX-VMS
Instrument: gcms-w.i
Operator: HG/JSS
Column diameter: 0.18
\\target_server\gg\chem\gcms-w.i\W032318.b\W3300.D
Y (x10^6)
Min
-Chloromethane (2.492)
-Vinyl Chloride (2.263)
-Bromomethane (2.607)
-Chloroethane (2.735)
-Trichlorofluoromethane (2.886)
-Diethyl Ether (3.229)
-1,1-Dichloroethene (3.465)+
-Iodomethane (3.643)
-Acrolein (3.887)
-Allyl Chloride (4.058)
-Methylene Chloride (4.194)+
-trans-1,2-Dichloroethene (4.416)+
-Methyl tert-butyl ether (4.573)
-Tertiary-butyl alcohol (4.723)
-Acetonitrile (4.981)
-Di-isopropyl ether (5.166)
-Chloroprene (5.338)+
-Acrylonitrile (5.488)
-Ethyl tertiary-butyl ethe (5.817)+
-cis-1,2-Dichloroethene (6.368)
-2,2-Dichloropropane (6.568)
-Bromochloromethane (6.732)+
-Chloroform (6.875)
-Carbon Tetrachloride (7.097)+
-Dibromofluoromethane (7.204)+
-1,1-Dichloropropene (7.454)+
-Benzene (7.883)
-Propionitrile (7.984)+
-1,2-Dichloroethane-D4 (8.127)+
-1,2-Dichloroethane (8.241)
-Isobutyl Alcohol (8.348)
-Trichloroethene (8.834)+
-1,4-Difluorobenzene (8.949)
-Dibromomethane (9.542)
-1,2-Dichloropropane (9.707)
-Bromodichloromethane (9.821)
-Ethyl Methacrylate (10.121)+
-1,2-Dichloroethylene (tot (10.268)
-cis-1,3-dichloropropene (10.815)
-Toluene-D8 (11.094)
-Toluene (11.173)
-Tetrachloroethene (11.737)
-4-methyl-2-pentanone (11.795)+
-Methyl Methacrylate (12.059)+
-Dibromochloromethane (12.302)
-1,3-Dichloropropane (12.460)
-1,2-Dibromoethane (12.645)
-2-Hexanone (13.039)
-Ethylbenzene (13.468)+
Chlorobenzene-D5 (13.411)+
m+p-Xylenes (13.675)
-o-Xylene (14.254)
-Styrene (14.333)+
-Isopropylbenzene (14.676)
-P-Bromofluorobenzene (15.034)
-cis-1,4-Dichloro-2-Butene (15.162)+
-1,1,2,2-Tetrachloroethane (15.212)
-4-Chlorotoluene (15.405)
-trans-1,4-Dichloro-2-Bute (15.541)
-4-Chlorotoluene (15.620)
-sec-Butylbenzene (16.092)
-P-Isopropyltoluene (16.278)
-1,3-Dichlorobenzene (16.323)
-1,4-Dichlorobenzene-D4 (16.464)+
-1,2-Dichlorobenzene (16.978)
-1,2-Dibromo-3-Chloropropa (17.951)
1,3,5-Trichlorobenzene (17.987)
-Hexachlorobutadiene (18.723)
-Naphthalene (19.152)
-1,2,3-Trichlorobenzene (19.381)

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL2079
Project : Cornhusker Army Ammunition Plant
Instrument ID: GCMS-W
Lab File IDs : W3345.D W3344.D W3343.D W3342.D W3347.D W3346.D
Column ID:
Calibration Date(s): 26-MAR-18 10:13, 26-MAR-18 13:19

	5.0000 Level 1	10.0000 Level 2	20.0000 Level 3	50.0000 Level 4	100.0000 Level 5	150.0000 Level 6	New Crv	b	m1	m2	%RSD	Max %RSD	
Dichlorodifluoromethane	0.91827	0.80373	0.99540	0.90963	0.79177	0.82378	AVG		0.87376		9.18273	15.00000	O
Chloromethane	0.93304	0.89545	1.02150	0.88235	0.88345	0.82472	AVG		0.90675		7.29099	15.00000	O
Vinyl chloride	0.93127	0.88382	1.04684	0.94346	0.90719	0.88761	AVG		0.93337		6.46706	15.00000	O
Bromomethane	0.60403	0.52486	0.60414	0.54639	0.52055	0.51939	AVG		0.55323		7.33652	15.00000	O
Chloroethane	0.66256	0.60167	0.70070	0.66085	0.61076	0.61118	AVG		0.64129		6.14829	15.00000	O
Trichlorofluoromethane	1.56351	1.40673	1.62481	1.58922	1.37640	1.53323	AVG		1.51565		6.67543	15.00000	O
1,1-Dichloroethene	0.56237	0.54497	0.55428	0.54903	0.53268	0.54004	AVG		0.54723		1.91786	15.00000	O
Carbon Disulfide	2.21800	1.97873	2.06675	2.02821	2.00444	1.99668	AVG		2.04880		4.30895	15.00000	O
Freon-113	0.50992	0.47268	0.52736	0.47305	0.47347	0.46753	AVG		0.48734		5.12200	15.00000	O
Methylene Chloride	0.98886	0.83469	0.85417	0.75361	0.77488	0.76130	AVG		0.82792		10.7234(	15.00000	O
Acetone	0.36056	0.31190	0.33037	0.32262	0.29218	0.31541	AVG		0.32217		7.06689	15.00000	O
trans-1,2-Dichloroethene	0.68419	0.60373	0.64513	0.61702	0.62518	0.62010	AVG		0.63256		4.53044	15.00000	O
Methyl tert-butyl ether	2.46862	2.27815	2.43873	2.47229	2.55363	2.58235	AVG		2.46563		4.34152	15.00000	O
1,1-Dichloroethane	1.52407	1.38473	1.36011	1.37812	1.32155	1.36099	AVG		1.38826		5.04691	15.00000	O
cis-1,2-Dichloroethene	0.75252	0.68234	0.68657	0.68046	0.69231	0.71797	AVG		0.70203		4.02386	15.00000	O
2,2-Dichloropropane	1.21741	1.13629	1.17756	1.23501	1.12715	1.20230	AVG		1.18262		3.70358	15.00000	O
Bromochloromethane	0.29975	0.27871	0.28515	0.27820	0.29099	0.29289	AVG		0.28761		2.95208	15.00000	O
Chloroform	1.64030	1.43979	1.43937	1.44431	1.35908	1.42766	AVG		1.45842		6.49087	15.00000	O
Carbon Tetrachloride	0.66317	0.58783	0.60283	0.63007	0.57946	0.61392	AVG		0.61288		4.98719	15.00000	O
1,1,1-Trichloroethane	1.41525	1.31091	1.31137	1.34312	1.20231	1.29309	AVG		1.31268		5.27969	15.00000	O
1,1-Dichloropropene	0.61788	0.60139	0.59966	0.64207	0.59591	0.61944	AVG		0.61272		2.84086	15.00000	O
2-Butanone	0.44590	0.39856	0.45033	0.45049	0.43945	0.45276	AVG		0.43958		4.69630	15.00000	O
Benzene	1.74840	1.57695	1.62444	1.62043	1.62174	1.64184	AVG		1.63897		3.52418	15.00000	O
1,2-Dichloroethane	0.84762	0.75442	0.75018	0.77843	0.69983	0.75368	AVG		0.76403		6.33350	15.00000	O
Trichloroethene	0.48764	0.42838	0.42366	0.43100	0.40411	0.42406	AVG		0.43314		6.53996	15.00000	O
Dibromomethane	0.29165	0.25510	0.26508	0.26816	0.26522	0.27357	AVG		0.26980		4.55086	15.00000	O
1,2-Dichloropropane	0.44001	0.41827	0.42770	0.43467	0.43579	0.44483	AVG		0.43355		2.17142	15.00000	O
Bromodichloromethane	0.74433	0.63678	0.65765	0.68850	0.64277	0.68518	AVG		0.67587		5.87713	15.00000	O
cis-1,3-dichloropropene	0.80366	0.72037	0.76762	0.83086	0.82067	0.86319	AVG		0.80106		6.30845	15.00000	O
Toluene	1.12429	1.01459	1.00521	1.03688	1.02172	1.05583	AVG		1.04309		4.17840	15.00000	O
4-methyl-2-pentanone	0.49981	0.48187	0.52857	0.53002	0.52477	0.54147	AVG		0.51775		4.30915	15.00000	O
Tetrachloroethene	0.31152	0.29142	0.28529	0.29080	0.28776	0.29136	AVG		0.29302		3.20112	15.00000	O
trans-1,3-Dichloropropene	0.79285	0.73109	0.77011	0.80242	0.77484	0.81800	AVG		0.78155		3.88670	15.00000	O
1,1,2-Trichloroethane	0.36962	0.33178	0.33627	0.35207	0.34282	0.36041	AVG		0.34883		4.17725	15.00000	O
Dibromochloromethane	0.47363	0.44643	0.46372	0.46695	0.47519	0.49661	AVG		0.47042		3.49462	15.00000	O
1,3-Dichloropropane	0.92361	0.83682	0.86283	0.86775	0.87011	0.89731	AVG		0.87640		3.43468	15.00000	O
1,2-Dibromoethane	0.40606	0.37546	0.39458	0.40867	0.41040	0.42550	AVG		0.40344		4.19302	15.00000	O

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL2079
Project : Cornhusker Army Ammunition Plant
Instrument ID: GCMS-W
Lab File IDs : W3345.D W3344.D W3343.D W3342.D W3347.D W3346.D
Column ID:
Calibration Date(s): 26-MAR-18 10:13, 26-MAR-18 13:19

2-Hexanone	0.38301	0.38962	0.42538	0.42604	0.42517	0.44059	AVG		0.41497		5.55391	15.00000	O
Chlorobenzene	1.32774	1.20881	1.19903	1.22434	1.21537	1.25947	AVG		1.23913		3.88301	15.00000	O
Ethylbenzene	0.67118	0.65618	0.65868	0.65969	0.66170	0.69035	AVG		0.66630		1.93069	15.00000	O
1,1,1,2-Tetrachloroethane	0.46444	0.44651	0.43641	0.44620	0.45184	0.47642	AVG		0.45364		3.18150	15.00000	O
m+p-Xylenes	0.79238	0.78775	0.82865	0.83866	0.83022	0.88029	AVG		0.82632		4.09531	15.00000	O
o-Xylene	0.69483	0.71653	0.77638	0.81252	0.82882	0.87508	AVG		0.78403		8.77723	15.00000	O
Styrene	1.24401	1.24070	1.35927	1.40089	1.42467	1.51346	AVG		1.36383		7.82894	15.00000	O
Bromoform	0.30706	0.30786	0.33488	0.34118	0.36201	0.38885	AVG		0.34031		9.30733	15.00000	O
Isopropylbenzene	3.34400	3.24821	3.54160	3.54641	3.45099	3.54334	AVG		3.44576		3.63043	15.00000	O
Bromobenzene	0.96744	0.83611	0.86489	0.83976	0.85987	0.87259	AVG		0.87344		5.51951	15.00000	O
N-Propylbenzene	5.30869	4.94288	5.18464	5.03492	4.67607	4.77378	AVG		4.98683		4.82047	15.00000	O
1,1,2,2-Tetrachloroethane	1.32788	1.20014	1.29134	1.19397	1.20619	1.22298	AVG		1.24042		4.48823	15.00000	O
1,3,5-Trimethylbenzene	3.36202	3.28963	3.46995	3.45637	3.33135	3.47326	AVG		3.39710		2.34472	15.00000	O
2-Chlorotoluene	3.22548	2.97124	3.11158	3.01827	2.93946	2.99601	AVG		3.04367		3.49834	15.00000	O
1,2,3-Trichloropropane	1.30528	1.15549	1.23492	1.14736	1.15107	1.20245	AVG		1.19943		5.20024	15.00000	O
4-Chlorotoluene	3.47614	3.19596	3.38802	3.30464	3.15489	3.23885	AVG		3.29308		3.69748	15.00000	O
tert-Butylbenzene	3.09509	3.06850	3.36072	3.30161	3.23858	3.37764	AVG		3.24036		4.08781	15.00000	O
1,2,4-Trimethylbenzene	3.65096	3.55016	3.78987	3.67262	3.54020	3.64677	AVG		3.64176		2.50774	15.00000	O
P-Isopropyltoluene	3.39155	3.36706	3.70814	3.69646	3.51742	3.60642	AVG		3.54784		4.16640	15.00000	O
1,3-Dichlorobenzene	1.95618	1.75080	1.81296	1.75582	1.75451	1.77489	AVG		1.80086		4.41652	15.00000	O
1,4-Dichlorobenzene	2.12848	1.87908	1.91113	1.82114	1.81839	1.85167	AVG		1.90165		6.13079	15.00000	O
N-Butylbenzene	3.78228	3.76903	4.08936	4.04278	3.60771	3.70140	AVG		3.83209		5.01221	15.00000	O
sec-Butylbenzene	4.35734	4.32719	4.47250	4.41063	4.17299	4.30311	AVG		4.34063		2.35533	15.00000	O
1,2-Dichlorobenzene	1.95442	1.75222	1.82921	1.72525	1.76972	1.77301	AVG		1.80064		4.59388	15.00000	O
1,2-Dibromo-3-Chloropropane	0.37735	0.32427	0.38623	0.35411	0.35322	0.34836	AVG		0.35726		6.17904	15.00000	O
Hexachlorobutadiene	0.65701	0.61958	0.62773	0.64147	0.58394	0.59060	AVG		0.62006		4.59324	15.00000	O
1,2,4-Trichlorobenzene	1.05209	1.07492	1.13370	1.14708	1.13425	1.15944	AVG		1.11691		3.85432	15.00000	O
Naphthalene	2.70219	2.79462	3.23300	3.14543	3.31517	3.24483	AVG		3.07254		8.41197	15.00000	O
1,2,3-Trichlorobenzene	1.09711	1.07829	1.12746	1.07594	1.08653	1.07149	AVG		1.08947		1.89967	15.00000	O
Dibromofluoromethane	0.59299	0.57938	0.58757	0.59635	0.55835	0.55612	AVG		0.57846		3.01273	15.00000	
1,2-Dichloroethane-D4	0.96123	0.93220	0.97552	0.99013	0.83917	0.92029	AVG		0.93642		5.80304	15.00000	
Toluene-D8	1.28261	1.27671	1.27924	1.29597	1.28453	1.27925	AVG		1.28305		0.53834	15.00000	
P-Bromofluorobenzene	0.58457	0.57307	0.58639	0.60963	0.58183	0.61178	AVG		0.59121		2.67084	15.00000	

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3348A.D
Report Date: 28-Mar-2018 13:14

Katahdin Analytical Services

RECOVERY REPORT

Client Name: Client SDG: WG225400
Sample Matrix: SOLID Fraction: VOA
Lab Smp Id: WG225400-7 Client Smp ID: Independent Source
Level: LOW Operator: HG/JSS
Data Type: MS DATA SampleType: LCS
SpikeList File: IND_CHECK4.1.spk Quant Type: ISTD
Sublist File: all.sub
Method File: \\target_server\gg\chem\gcms-w.i\W032618.b\W8SDI(08)D.m
Misc Info: WG225400,WG225400-4,SL2079-8

	SPIKE	COMPOUND	CONC ADDED ug/Kgdrywt	CONC RECOVERED ug/Kgdrywt	% RECOVERED	LIMITS
	1	Dichlorodifluorome	50.0	51.4	102.79	80-120
	2	Chloromethane	50.0	53.7	107.49	80-120
	3	Vinyl chloride	50.0	48.8	97.58	80-120
	4	Bromomethane	50.0	48.0	96.00	80-120
	5	Chloroethane	50.0	46.3	92.67	80-120
	6	Trichlorofluoromet	50.0	38.7	77.33*	80-120
	7	Diethyl Ether	50.0	49.3	98.67	80-120
	8	Tertiary-butyl alc	250	236	94.42	80-120
	9	1,1-Dichloroethene	50.0	46.1	92.27	80-120
	10	Carbon Disulfide	50.0	52.2	104.51	80-120
	11	Freon-113	50.0	46.7	93.46	80-120
	12	Iodomethane	50.0	49.8	99.64	80-120
	13	Acrolein	250	249	99.50	80-120
	14	Methylene Chloride	50.0	45.3	90.67	80-120
	15	Acetone	50.0	45.9	91.74	80-120
	16	Isobutyl Alcohol	1000	922	92.24	80-120
	17	trans-1,2-Dichloro	50.0	48.8	97.50	80-120
	18	Allyl Chloride	50.0	48.5	96.94	80-120
	19	Methyl tert-butyl	50.0	47.3	94.57	80-120
	20	Acetonitrile	500	468	93.62	80-120
	21	Di-isopropyl ether	50.0	49.8	99.71	80-120
	22	Chloroprene	50.0	46.9	93.80	80-120
	23	Propionitrile	500	475	95.07	80-120
	24	Methacrylonitrile	500	466	93.12	80-120
	25	1,1-Dichloroethane	50.0	48.0	96.07	80-120
	26	Acrylonitrile	250	237	94.91	80-120
	27	Ethyl tertiary-but	50.0	49.7	99.49	80-120
	28	Vinyl Acetate	50.0	57.3	114.65	80-120
	29	cis-1,2-Dichloroet	50.0	49.4	98.76	80-120
M	30	1,2-Dichloroethyle	100	98.1	98.13	80-120
	31	Methyl Methacrylat	50.0	49.5	99.00	80-120
	32	2,2-Dichloropropan	50.0	46.7	93.38	80-120
	33	Bromochloromethane	50.0	49.7	99.48	80-120
	34	Chloroform	50.0	45.8	91.58	80-120
	35	Carbon Tetrachlori	50.0	44.6	89.30	80-120
	36	Tetrahydrofuran	50.0	48.9	97.80	80-120
	38	1,1,1-Trichloroeth	50.0	44.0	88.04	80-120
	39	1,1-Dichloropropen	50.0	46.5	92.97	80-120
	40	2-Butanone	50.0	44.9	89.82	80-120
	41	Benzene	50.0	47.8	95.68	80-120

Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3348A.D
Report Date: 28-Mar-2018 13:14

	SPIKE	COMPOUND	CONC ADDED ug/Kgdrywt	CONC RECOVERED ug/Kgdrywt	% RECOVERED	LIMITS
	43	Cyclohexane	50.0	46.6	93.13	80-120
	44	Ethyl Methacrylate	50.0	50.8	101.70	80-120
	46	Tertiary-amyl meth	50.0	49.3	98.63	80-120
	47	1,2-Dichloroethane	50.0	44.2	88.36	80-120
	48	Trichloroethene	50.0	44.9	89.74	80-120
	50	Dibromomethane	50.0	46.4	92.85	80-120
	51	1,2-Dichloropropan	50.0	48.2	96.40	80-120
	52	Bromodichlorometha	50.0	46.8	93.69	80-120
	53	cis-1,3-dichloropr	50.0	46.7	93.39	80-120
	54	1,4-Dioxane	1000	946	94.55	80-120
	56	2-Chloroethylviny	50.0	0.00	*	80-120
	57	Toluene	50.0	47.1	94.17	80-120
	58	4-methyl-2-pentano	50.0	45.8	91.71	80-120
	59	Tetrachloroethene	50.0	48.2	96.46	80-120
	60	trans-1,3-Dichloro	50.0	47.3	94.54	80-120
	61	1,1,2-Trichloroeth	50.0	47.0	94.01	80-120
	62	Dibromochlorometha	50.0	49.0	97.91	80-120
	63	1,3-Dichloropropan	50.0	45.8	91.70	80-120
	64	1,2-Dibromoethane	50.0	47.3	94.58	80-120
	65	2-Hexanone	50.0	48.7	97.36	80-120
	67	Chlorobenzene	50.0	47.3	94.55	80-120
	152	1-Chlorohexane	50.0	45.0	89.99	80-120
	68	Ethylbenzene	50.0	47.2	94.42	80-120
	69	1,1,1,2-Tetrachlor	50.0	47.9	95.75	80-120
M	70	Xylenes (total)	150	143	95.63	80-120
	71	m+p-Xylenes	100	94.6	94.65	80-120
	72	o-Xylene	50.0	48.8	97.60	80-120
	73	Styrene	50.0	49.0	98.03	80-120
	74	Bromoform	50.0	49.3	98.70	80-120
	75	Isopropylbenzene	50.0	49.1	98.25	80-120
	77	cis-1,4-Dichloro-2	50.0	45.4	90.81	80-120
	78	trans-1,4-Dichloro	50.0	44.1	88.14	80-120
	79	Bromobenzene	50.0	46.9	93.80	80-120
	80	N-Propylbenzene	50.0	45.1	90.22	80-120
	81	1,1,2,2-Tetrachlor	50.0	46.9	93.83	80-120
	82	1,3,5-Trimethylben	50.0	46.0	91.98	80-120
	83	2-Chlorotoluene	50.0	45.6	91.23	80-120
	84	1,2,3-Trichloropro	50.0	43.4	86.87	80-120
	85	4-Chlorotoluene	50.0	45.2	90.41	80-120
	86	tert-Butylbenzene	50.0	46.3	92.55	80-120
	87	Pentachloroethane	50.0	45.5	91.09	80-120
	88	1,2,4-Trimethylben	50.0	46.0	92.08	80-120
	89	P-Isopropyltoluene	50.0	46.7	93.50	80-120
	90	1,3-Dichlorobenzen	50.0	46.8	93.68	80-120
	92	1,4-Dichlorobenzen	50.0	45.3	90.69	80-120
	93	N-Butylbenzene	50.0	45.5	91.02	80-120
	94	sec-Butylbenzene	50.0	45.9	91.77	80-120
	95	1,2-Dichlorobenzen	50.0	46.8	93.60	80-120
	96	1,2-Dibromo-3-Chlo	50.0	47.7	95.34	80-120
	97	1,3,5-Trichloroben	50.0	46.8	93.71	80-120
	98	Hexachlorobutadien	50.0	44.4	88.91	80-120
	99	1,2,4-Trichloroben	50.0	49.4	98.81	80-120
	100	1,2,3-Trimethylben	50.0	45.3	90.59	80-120
	101	Naphthalene	50.0	52.5	105.05	80-120

Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3348A.D
Report Date: 28-Mar-2018 13:14

SPIKE COMPOUND	CONC ADDED ug/Kgdrywt	CONC RECOVERED ug/Kgdrywt	% RECOVERED	LIMITS
102 1,2,3-Trichloroben	50.0	48.1	96.15	80-120
103 Methyl Acetate	50.0	44.0	88.07	80-120
104 Methylcyclohexane	50.0	48.7	97.37	80-120
M 153 Total Alkylbenzene	350	322	91.87	80-120

SURROGATE COMPOUND	AMOUNT ADDED ug/kg	AMOUNT RECOVERED ug/kg	% RECOVERED	LIMITS
$ 37 Dibromofluorometha	50.0	47.8	95.55	64-130
$ 45 1,2-Dichloroethane	50.0	43.5	87.01	58-134
$ 55 Toluene-D8	50.0	49.3	98.63	67-118
$ 76 P-Bromofluorobenze	50.0	47.6	95.25	47-119

Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3348A.D
Report Date: 28-Mar-2018 13:14

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W032618.b\W3348A.D
Lab Smp Id: WG225400-7 Client Smp ID: Independent Source
Inj Date : 26-MAR-2018 13:56 MS Autotune Date: 10-APR-2016 11:00
Operator : HG/JSS Inst ID: gcms-w.i
Smp Info : WG225400-7,SL2079
Misc Info : WG225400,WG225400-4,SL2079-8
Comment : SW846 5035
Method : \\target_server\gg\chem\gcms-w.i\W032618.b\W8SDI(08)D.m
Meth Date : 28-Mar-2018 13:11 tcote Quant Type: ISTD
Cal Date : 26-MAR-2018 13:19 Cal File: W3347.D
Als bottle: 7 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: MIS_GUEST

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	0.00000	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	5.000	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/kg)	FINAL (ug/Kgdrywt)	REVIEW COD
1	Dichlorodifluoromethane	85	1.955	1.955	(0.243)	222766	51.3927	51.4	
2	Chloromethane	50	2.176	2.176	(0.271)	241752	53.7438	53.7	
3	Vinyl chloride	62	2.248	2.248	(0.280)	225916	48.7912	48.8	
4	Bromomethane	94	2.591	2.591	(0.322)	131739	48.0019	48.0	
5	Chloroethane	64	2.727	2.720	(0.339)	147400	46.3329	46.3	
6	Trichlorofluoromethane	101	2.870	2.863	(0.357)	290701	38.6628	38.7(R)	
7	Diethyl Ether	59	3.206	3.206	(0.399)	162360	49.3331	49.3	
8	Tertiary-butyl alcohol	59	4.686	4.686	(0.583)	152814	236.040	236	
9	1,1-Dichloroethene	96	3.442	3.435	(0.428)	125249	46.1372	46.1	
10	Carbon Disulfide	76	3.485	3.485	(0.433)	531105	52.2549	52.2	
11	Freon-113	151	3.485	3.478	(0.433)	112973	46.7296	46.7	
12	Iodomethane	142	3.621	3.621	(0.450)	101813	49.8190	49.8	
13	Acrolein	56	3.864	3.864	(0.481)	163307	248.748	249	
14	Methylene Chloride	84	4.171	4.163	(0.519)	186203	45.3362	45.3	
15	Acetone	43	4.250	4.250	(0.529)	73315	45.8724	45.9	
16	Isobutyl Alcohol	43	8.311	8.318	(1.034)	246269	922.429	922	
17	trans-1,2-Dichloroethene	96	4.386	4.386	(0.546)	152982	48.7513	48.8	
18	Allyl Chloride	41	4.028	4.027	(0.501)	244491	48.4680	48.5	
19	Methyl tert-butyl ether	73	4.543	4.543	(0.565)	578395	47.2872	47.3	
20	Acetonitrile	39	4.943	4.943	(0.615)	56141	468.107	468	
21	Di-isopropyl ether	45	5.129	5.129	(0.638)	548346	49.8538	49.8	

Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3348A.D
Report Date: 28-Mar-2018 13:14

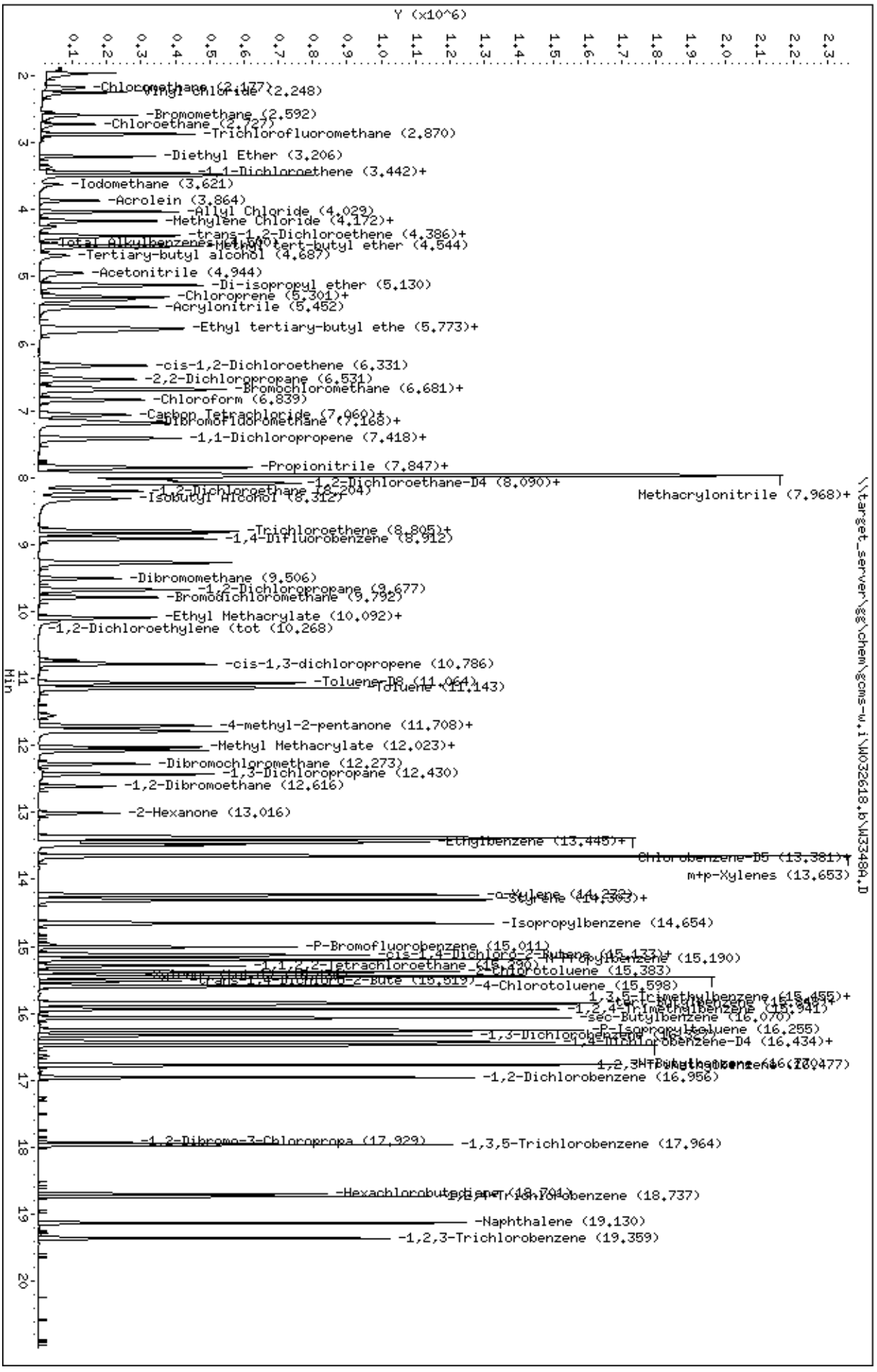
		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/kg)	CONCENTRATIONS FINAL (ug/Kgdrywt)	REVIEW COD
	22	Chloroprene	53	5.301	5.301	(0.659)	279205	46.8983	46.9	
	23	Propionitrile	54	7.939	7.939	(0.988)	310940	475.354	475	
	24	Methacrylonitrile	41	7.968	7.968	(0.991)	1241097	465.613	466	
	25	1,1-Dichloroethane	63	5.344	5.337	(0.665)	330813	48.0350	48.0	
	26	Acrylonitrile	52	5.451	5.451	(0.678)	302393	237.268	237	
	27	Ethyl tertiary-butyl ether	59	5.773	5.773	(0.718)	554651	49.7472	49.7	
	28	Vinyl Acetate	43	5.816	5.808	(0.653)	446814	57.3265	57.3	
	29	cis-1,2-Dichloroethene	96	6.331	6.323	(0.787)	171979	49.3819	49.4	
M	30	1,2-Dichloroethylene (total)	96				324961	98.1332	98.1	
	31	Methyl Methacrylate	41	12.079	12.079	(1.355)	181547	49.4995	49.5	
	32	2,2-Dichloropropane	77	6.531	6.531	(0.812)	273931	46.6920	46.7	
	33	Bromochloromethane	128	6.688	6.688	(0.832)	70966	49.7378	49.7	
	34	Chloroform	83	6.838	6.838	(0.851)	331301	45.7917	45.8	
	35	Carbon Tetrachloride	117	7.060	7.060	(0.792)	235732	44.6520	44.6	
	36	Tetrahydrofuran	42	7.146	7.131	(0.889)	64702	48.8996	48.9	
$	37	Dibromofluoromethane	113	7.167	7.167	(0.892)	137092	47.7733	47.8	
	38	1,1,1-Trichloroethane	97	7.196	7.196	(0.895)	286665	44.0214	44.0	
	39	1,1-Dichloropropene	75	7.417	7.417	(0.832)	245344	46.4845	46.5	
	40	2-Butanone	43	7.432	7.424	(0.924)	97936	44.9107	44.9	
	41	Benzene	78	7.846	7.846	(0.880)	675368	47.8375	47.8	
*	42	Pentafluorobenzene	168	8.039	8.039	(1.000)	248041	50.0000		
	43	Cyclohexane	56	6.674	6.674	(0.830)	246888	46.5674	46.6	
	44	Ethyl Methacrylate	69	10.092	10.091	(1.132)	150811	50.8482	50.8	
$	45	1,2-Dichloroethane-D4	65	8.090	8.089	(1.006)	202106	43.5064	43.5	
	46	Tertiary-amyl methyl ether	73	8.082	8.082	(1.005)	545013	49.3174	49.3	
	47	1,2-Dichloroethane	62	8.204	8.204	(0.921)	290770	44.1814	44.2	
	48	Trichloroethene	95	8.826	8.833	(0.990)	167407	44.8687	44.9	
*	49	1,4-Difluorobenzene	114	8.912	8.912	(1.000)	430697	50.0000		
	50	Dibromomethane	93	9.505	9.505	(1.067)	107891	46.4246	46.4	
	51	1,2-Dichloropropane	63	9.677	9.677	(1.086)	180000	48.1988	48.2	
	52	Bromodichloromethane	83	9.784	9.791	(1.098)	272736	46.8466	46.8	
	53	cis-1,3-dichloropropene	75	10.785	10.785	(1.210)	322209	46.6951	46.7	
	54	1,4-Dioxane	88	10.134	10.141	(1.137)	62676	945.531	946	
$	55	Toluene-D8	98	11.064	11.064	(1.241)	545041	49.3155	49.3	
	57	Toluene	92	11.143	11.142	(1.250)	423045	47.0831	47.1	
	58	4-methyl-2-pentanone	43	11.765	11.765	(1.320)	204517	45.8570	45.8	
	59	Tetrachloroethene	164	11.707	11.707	(0.876)	111577	48.2291	48.2	
	60	trans-1,3-Dichloropropene	75	11.793	11.793	(1.323)	318217	47.2677	47.3	
	61	1,1,2-Trichloroethane	83	12.022	12.029	(1.349)	141247	47.0073	47.0	
	62	Dibromochloromethane	129	12.272	12.279	(0.919)	181825	48.9559	49.0	
	63	1,3-Dichloropropane	76	12.430	12.430	(0.930)	317251	45.8496	45.8	
	64	1,2-Dibromoethane	107	12.608	12.615	(1.415)	164346	47.2905	47.3	
	65	2-Hexanone	43	13.016	13.016	(0.974)	159493	48.6814	48.7	
*	66	Chlorobenzene-D5	117	13.359	13.366	(1.000)	394760	50.0000		
	67	Chlorobenzene	112	13.388	13.388	(1.002)	462495	47.2747	47.3	
	152	1-Chlorohexane	91	13.388	13.382	(1.665)	233481	44.9957	45.0	
	68	Ethylbenzene	106	13.445	13.445	(1.006)	248341	47.2081	47.2	
	69	1,1,1,2-Tetrachloroethane	131	13.488	13.488	(1.010)	171458	47.8725	47.9	
M	70	Xylenes (total)	106				919529	143.444	143	
	71	m+p-Xylenes	106	13.652	13.652	(1.022)	617465	94.6452	94.6	
	72	o-Xylene	106	14.231	14.231	(1.065)	302064	48.7984	48.8	
	73	Styrene	104	14.303	14.310	(1.071)	527763	49.0133	49.0	
	74	Bromoform	173	14.317	14.324	(1.072)	132591	49.3492	49.3	
	75	Isopropylbenzene	105	14.653	14.653	(0.892)	805194	49.1258	49.1	

Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3348A.D
Report Date: 28-Mar-2018 13:14

							CONCENTRATIONS		
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/kg)	FINAL (ug/Kgdrywt)	REVIEW COD
$	76 P-Bromofluorobenzene	95	15.011	15.011	(1.684)	242529	47.6233	47.6	
	77 cis-1,4-Dichloro-2-Butene	53	15.118	15.118	(0.921)	97079	45.4072	45.4	
	78 trans-1,4-Dichloro-2-Butene	53	15.519	15.518	(0.945)	76127	44.0719	44.1	
	79 Bromobenzene	156	15.140	15.139	(0.922)	194849	46.8983	46.9	
	80 N-Propylbenzene	91	15.190	15.197	(0.925)	1070090	45.1118	45.1	
	81 1,1,2,2-Tetrachloroethane	83	15.290	15.290	(0.931)	276814	46.9153	46.9	
	82 1,3,5-Trimethylbenzene	105	15.447	15.454	(0.941)	743156	45.9903	46.0	
	83 2-Chlorotoluene	91	15.383	15.383	(0.937)	660386	45.6136	45.6	
	84 1,2,3-Trichloropropane	75	15.454	15.454	(0.941)	247800	43.4331	43.4	
	85 4-Chlorotoluene	91	15.597	15.597	(0.950)	708125	45.2065	45.2	
	86 tert-Butylbenzene	119	15.847	15.847	(0.965)	713245	46.2743	46.3	
	87 Pentachloroethane	117	15.862	15.869	(0.966)	156831	45.5444	45.5	
	88 1,2,4-Trimethylbenzene	105	15.940	15.940	(0.971)	797564	46.0413	46.0	
	89 P-Isopropyltoluene	119	16.255	16.254	(0.990)	788925	46.7483	46.7	
	90 1,3-Dichlorobenzene	146	16.326	16.332	(0.994)	401221	46.8380	46.8	
*	91 1,4-Dichlorobenzene-D4	152	16.419	16.425	(1.000)	237835	50.0000		
	92 1,4-Dichlorobenzene	146	16.441	16.440	(1.001)	410152	45.3428	45.3	
	93 N-Butylbenzene	91	16.770	16.770	(1.021)	829522	45.5078	45.5	
	94 sec-Butylbenzene	105	16.069	16.069	(0.979)	947374	45.8842	45.9	
	95 1,2-Dichlorobenzene	146	16.956	16.956	(1.033)	400861	46.8017	46.8	
	96 1,2-Dibromo-3-Chloropropane	75	17.928	17.964	(1.092)	81009	47.6700	47.7(H)	
	97 1,3,5-Trichlorobenzene	180	17.964	17.964	(2.234)	291994	46.8560	46.8	
	98 Hexachlorobutadiene	225	18.700	18.700	(1.139)	131118	44.4556	44.4	
	99 1,2,4-Trichlorobenzene	180	18.736	18.736	(1.141)	262480	49.4050	49.4	
	100 1,2,3-Trimethylbenzene	105	16.477	16.476	(2.049)	887913	45.2956	45.3	
	101 Naphthalene	128	19.129	19.129	(1.165)	767643	52.5238	52.5	
	102 1,2,3-Trichlorobenzene	180	19.358	19.358	(1.179)	249139	48.0752	48.1	
	103 Methyl Acetate	43	4.414	4.414	(0.549)	154360	44.0374	44.0	
	104 Methylcyclohexane	83	8.797	8.797	(1.094)	288106	48.6851	48.7	
M	153 Total Alkylbenzenes	100				5889876	321.558	322	

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
H - Operator selected an alternate compound hit.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Date : 26-MAR-2018 13:56
Client ID: Independent Source
Sample Info: WG225400-7,SL2079
Column phase: RTX-VMS
Instrument: gcms-w.i
Operator: HG/JSS
Column diameter: 0.18
\\target_server\gg\chem\gcms-w.i\W032618.b\W3348A.D
Y (x10^6)
Min
-Chloromethane (2.177)
-Vinyl Chloride (2.248)
-Bromomethane (2.592)
-Chloroethane (2.727)
-Trichlorofluoromethane (2.870)
-Diethyl Ether (3.206)
-1,1-Dichloroethene (3.442)+
-Iodomethane (3.621)
-Acrolein (3.864)
-Allyl Chloride (4.029)
-Methylene Chloride (4.172)+
-trans-1,2-Dichloroethene (4.386)+
-Total Alkylbenzenes-Methyl tert-butyl ether (4.544)
-Tertiary-butyl alcohol (4.687)
-Acetonitrile (4.944)
-Di-isopropyl ether (5.130)
-Chloroprene (5.301)+
-Acrylonitrile (5.452)
-Ethyl tertiary-butyl ethe (5.773)+
-cis-1,2-Dichloroethene (6.331)
-2,2-Dichloropropane (6.531)
-Bromochloromethane (6.681)+
-Chloroform (6.839)
-Carbon Tetrachloride (7.060)+
-Dibromofluoromethane (7.168)+
-1,1-Dichloropropene (7.418)+
-Propionitrile (7.847)+
-1,2-Dichloroethane-D4 (8.090)+
Methacrylonitrile (7.968)+
-1,2-Dichloroethane (8.204)
-Isobutyl Alcohol (8.312)
-Trichloroethene (8.805)+
-1,4-Difluorobenzene (8.912)
-Dibromomethane (9.506)
-1,2-Dichloropropane (9.677)
-Bromodichloromethane (9.792)
-Ethyl Methacrylate (10.092)+
-1,2-Dichloroethylene (tot (10.268)
-cis-1,3-dichloropropene (10.786)
-Toluene-D8 (11.064)
-Toluene (11.143)
-4-methyl-2-pentanone (11.708)+
-Methyl Methacrylate (12.023)+
-Dibromochloromethane (12.273)
-1,3-Dichloropropane (12.430)
-1,2-Dibromoethane (12.616)
-2-Hexanone (13.016)
-Ethylbenzene (13.445)+
Chlorobenzene-D5 (13.381)+
m+p-Xylenes (13.653)
-o-Xylene (14.272)
-Styrene (14.363)+
-Isopropylbenzene (14.654)
-P-Bromofluorobenzene (15.011)
-cis-1,4-Dichloro-2-Butene (15.137)+
-n-Propylbenzene (15.190)
-1,1,2,2-Tetrachloroethane (15.290)
-2-Chlorotoluene (15.383)
-4-Chlorotoluene (15.598)
-1,3,5-Trimethylbenzene (15.455)+
-tert-Butylbenzene (15.941)
-1,2,4-Trimethylbenzene (15.941)
-sec-Butylbenzene (16.070)
-P-Isopropyltoluene (16.255)
-1,3-Dichlorobenzene (16.350)
-1,4-Dichlorobenzene-D4 (16.434)+
-1,4-Dichlorobenzene (16.477)
-1,2-Dichlorobenzene (16.956)
-1,2-Dibromo-3-Chloropropa (17.929)
-1,3,5-Trichlorobenzene (17.964)
-Hexachlorobutadiene (18.701)
-1,2,4-Trichlorobenzene (18.737)
-Naphthalene (19.130)
-1,2,3-Trichlorobenzene (19.359)

Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3342.D
Report Date: 28-Mar-2018 14:10

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W032618.b\W3342.D
Lab Smp Id: WG225400-4
Inj Date : 26-MAR-2018 10:13
Operator : HG/JSS   Inst ID: gcms-w.i
Smp Info : WG225400-4
Misc Info : WG225400,WG225400-4
Comment   : SW846 5035
Method   : \\target_server\gg\chem\gcms-w.i\W032618.b\W8SDI(08)D.m
Meth Date : 29-Mar-2018 02:42 jsampson   Quant Type: ISTD
Cal Date : 26-MAR-2018 10:13   Cal File: W3342.D
Als bottle: 1   Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12
Processing Host: VOA-WS

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	0.00000	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	5.000	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	AMOUNTS ON-COL (ug/kg)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.955	1.955	(0.243)	165378	50.0000	52.0	
2	Chloromethane	50	2.170	2.176	(0.270)	160417	50.0000	48.6	
3	Vinyl chloride	62	2.241	2.248	(0.279)	171528	50.0000	50.5	
4	Bromomethane	94	2.585	2.591	(0.322)	99338	50.0000	49.4	
5	Chloroethane	64	2.721	2.720	(0.339)	120148	50.0000	51.5	
6	Trichlorofluoromethane	101	2.864	2.863	(0.357)	288932	50.0000	52.4	
7	Diethyl Ether	59	3.200	3.206	(0.398)	116585	50.0000	48.3	
8	Tertiary-butyl alcohol	59	4.680	4.686	(0.583)	119251	250.000	251	
9	1,1-Dichloroethene	96	3.436	3.435	(0.428)	99818	50.0000	50.2	
10	Carbon Disulfide	76	3.478	3.485	(0.433)	368743	50.0000	49.5	
11	Freon-113	151	3.478	3.478	(0.433)	86003	50.0000	48.5	
12	Iodomethane	142	3.621	3.621	(0.451)	68699	50.0000	46.3	
13	Acrolein	56	3.857	3.864	(0.480)	121346	250.000	252	
14	Methylene Chloride	84	4.165	4.163	(0.518)	137012	50.0000	45.5	
15	Acetone	43	4.244	4.250	(0.528)	293270	250.000	250	
16	Isobutyl Alcohol	43	8.305	8.318	(1.034)	189798	1000.00	966	
17	trans-1,2-Dichloroethene	96	4.387	4.386	(0.546)	112179	50.0000	48.8	
18	Allyl Chloride	41	4.029	4.027	(0.502)	184655	50.0000	49.9	
19	Methyl tert-butyl ether	73	4.537	4.543	(0.565)	449479	50.0000	50.1	
20	Acetonitrile	39	4.944	4.943	(0.616)	46320	500.000	527	
21	Di-isopropyl ether	45	5.123	5.129	(0.638)	405557	50.0000	50.3	

Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3342.D
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		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	AMOUNTS ON-COL (ug/kg)	REVIEW CODE
	22	Chloroprene	53	5.295	5.301	(0.659)	230245	50.0000	52.8	
	23	Propionitrile	54	7.933	7.939	(0.988)	242082	500.000	505	
	24	Methacrylonitrile	41	7.962	7.968	(0.991)	996059	500.000	510	
	25	1,1-Dichloroethane	63	5.337	5.337	(0.664)	250552	50.0000	49.6	
	26	Acrylonitrile	52	5.445	5.451	(0.678)	240040	250.000	257	
	27	Ethyl tertiary-butyl ether	59	5.766	5.773	(0.718)	418697	50.0000	51.2	
	28	Vinyl Acetate	43	5.809	5.808	(0.652)	303275	50.0000	52.5	
	29	cis-1,2-Dichloroethene	96	6.324	6.323	(0.787)	123712	50.0000	48.5	
M	30	1,2-Dichloroethylene (total)	96				235891	100.000	97.2	
	31	Methyl Methacrylate	41	12.073	12.079	(1.356)	147603	50.0000	54.3	
	32	2,2-Dichloropropane	77	6.524	6.531	(0.812)	224534	50.0000	52.2	
	33	Bromochloromethane	128	6.689	6.688	(0.833)	50578	50.0000	48.4	
	34	Chloroform	83	6.839	6.838	(0.851)	262586	50.0000	49.5	
	35	Carbon Tetrachloride	117	7.061	7.060	(0.793)	201254	50.0000	51.4	
	36	Tetrahydrofuran	42	7.132	7.131	(0.888)	252819	250.000	261	
$	37	Dibromofluoromethane	113	7.168	7.167	(0.892)	108420	50.0000	51.5	
	38	1,1,1-Trichloroethane	97	7.189	7.196	(0.895)	244189	50.0000	51.2	
	39	1,1-Dichloropropene	75	7.411	7.417	(0.832)	205087	50.0000	52.4	
	40	2-Butanone	43	7.425	7.424	(0.924)	409508	250.000	256	
	41	Benzene	78	7.847	7.846	(0.881)	517587	50.0000	49.4	
*	42	Pentafluorobenzene	168	8.033	8.039	(1.000)	181807	50.0000		
	43	Cyclohexane	56	6.667	6.674	(0.830)	204275	50.0000	52.6	
	44	Ethyl Methacrylate	69	10.092	10.091	(1.133)	114481	50.0000	52.0	
$	45	1,2-Dichloroethane-D4	65	8.083	8.089	(1.006)	180013	50.0000	52.9	
	46	Tertiary-amyl methyl ether	73	8.083	8.082	(1.006)	414877	50.0000	51.2	
	47	1,2-Dichloroethane	62	8.198	8.204	(0.921)	248641	50.0000	50.9	
	48	Trichloroethene	95	8.827	8.833	(0.991)	137667	50.0000	49.8	
*	49	1,4-Difluorobenzene	114	8.905	8.912	(1.000)	319414	50.0000		
	50	Dibromomethane	93	9.499	9.505	(1.067)	85653	50.0000	49.7	
	51	1,2-Dichloropropane	63	9.670	9.677	(1.086)	138841	50.0000	50.1	
	52	Bromodichloromethane	83	9.785	9.791	(1.099)	219916	50.0000	50.9	
	53	cis-1,3-dichloropropene	75	10.779	10.785	(1.210)	265387	50.0000	51.8	
	54	1,4-Dioxane	88	10.142	10.141	(1.139)	48512	1000.00	985	
$	55	Toluene-D8	98	11.065	11.064	(1.242)	413952	50.0000	50.5	
	57	Toluene	92	11.143	11.142	(1.251)	331193	50.0000	49.7	
	58	4-methyl-2-pentanone	43	11.758	11.765	(1.320)	846479	250.000	256	
	59	Tetrachloroethene	164	11.708	11.707	(0.876)	88563	50.0000	49.6	
	60	trans-1,3-Dichloropropene	75	11.794	11.793	(1.324)	256304	50.0000	51.3	
	61	1,1,2-Trichloroethane	83	12.023	12.029	(1.350)	112455	50.0000	50.5	
	62	Dibromochloromethane	129	12.273	12.279	(0.919)	142209	50.0000	49.6	
	63	1,3-Dichloropropane	76	12.430	12.430	(0.930)	264273	50.0000	49.5	
	64	1,2-Dibromoethane	107	12.609	12.615	(1.416)	130534	50.0000	50.6	
	65	2-Hexanone	43	13.010	13.016	(0.974)	648758	250.000	257	
*	66	Chlorobenzene-D5	117	13.360	13.366	(1.000)	304550	50.0000		
	67	Chlorobenzene	112	13.381	13.388	(1.002)	372872	50.0000	49.4	
	152	1-Chlorohexane	91	13.381	13.382	(1.666)	198998	50.0000	16.1(H)	
	68	Ethylbenzene	106	13.439	13.445	(1.006)	200909	50.0000	49.5	
	69	1,1,1,2-Tetrachloroethane	131	13.481	13.488	(1.009)	135890	50.0000	49.2	
M	70	Xylenes (total)	106				758278	150.000	153	
	71	m+p-Xylenes	106	13.653	13.652	(1.022)	510825	100.000	101	
	72	o-Xylene	106	14.232	14.231	(1.065)	247453	50.0000	51.8	
	73	Styrene	104	14.304	14.310	(1.071)	426641	50.0000	51.4	
	74	Bromoform	173	14.318	14.324	(1.072)	103907	50.0000	50.1	
	75	Isopropylbenzene	105	14.654	14.653	(0.892)	664955	50.0000	51.5	

Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3342.D
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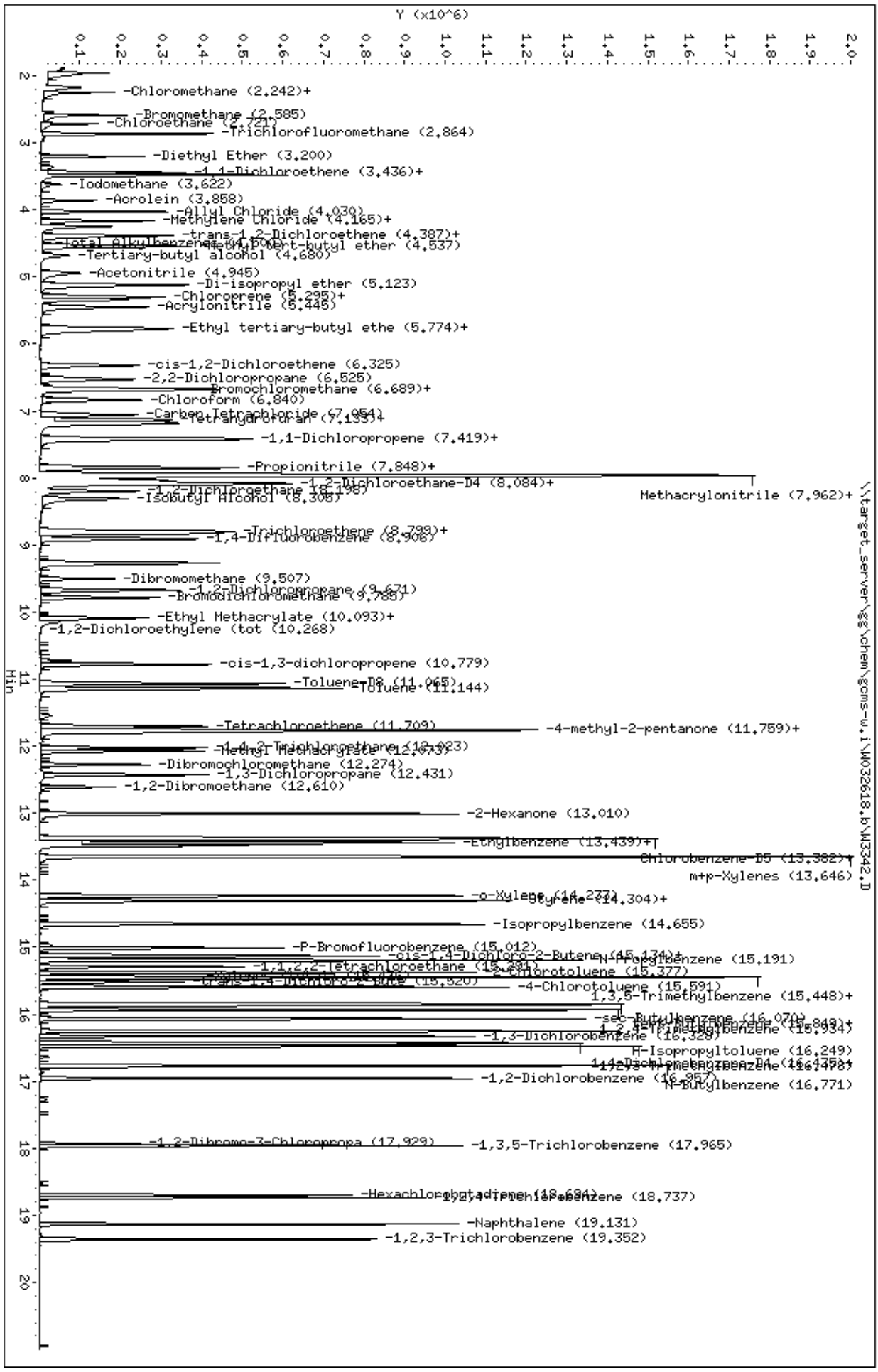
			QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	ON-COL (ug/kg)	REVIEW CODE
$	76	P-Bromofluorobenzene	95	15.012	15.011	(1.686)	194723	50.0000	51.6	
	77	cis-1,4-Dichloro-2-Butene	53	15.112	15.118	(0.920)	85783	50.0000	50.9	
	78	trans-1,4-Dichloro-2-Butene	53	15.519	15.518	(0.945)	70042	50.0000	51.4	
	79	Bromobenzene	156	15.133	15.139	(0.922)	157456	50.0000	48.1	
	80	N-Propylbenzene	91	15.190	15.197	(0.925)	944053	50.0000	50.5	
	81	1,1,2,2-Tetrachloroethane	83	15.290	15.290	(0.931)	223870	50.0000	48.1	
	82	1,3,5-Trimethylbenzene	105	15.448	15.454	(0.941)	648072	50.0000	50.9	
	83	2-Chlorotoluene	91	15.376	15.383	(0.936)	565929	50.0000	49.6	
	84	1,2,3-Trichloropropane	75	15.455	15.454	(0.941)	215132	50.0000	47.8	
	85	4-Chlorotoluene	91	15.591	15.597	(0.949)	619624	50.0000	50.2	
	86	tert-Butylbenzene	119	15.848	15.847	(0.965)	619056	50.0000	50.9	
	87	Pentachloroethane	117	15.862	15.869	(0.966)	133050	50.0000	49.0	
	88	1,2,4-Trimethylbenzene	105	15.934	15.940	(0.970)	688620	50.0000	50.4	
	89	P-Isopropyltoluene	119	16.249	16.254	(0.990)	693090	50.0000	52.1	
	90	1,3-Dichlorobenzene	146	16.327	16.332	(0.994)	329218	50.0000	48.7	
*	91	1,4-Dichlorobenzene-D4	152	16.420	16.425	(1.000)	187501	50.0000		
	92	1,4-Dichlorobenzene	146	16.442	16.440	(1.001)	341466	50.0000	47.9	
	93	N-Butylbenzene	91	16.771	16.770	(1.021)	758026	50.0000	52.7	
	94	sec-Butylbenzene	105	16.070	16.069	(0.979)	826998	50.0000	50.8	
	95	1,2-Dichlorobenzene	146	16.956	16.956	(1.033)	323486	50.0000	47.9	
	96	1,2-Dibromo-3-Chloropropane	75	17.929	17.929	(1.092)	66396	50.0000	49.6(H)	
	97	1,3,5-Trichlorobenzene	180	17.965	17.964	(2.236)	245781	50.0000	53.8	
	98	Hexachlorobutadiene	225	18.701	18.700	(1.139)	120277	50.0000	51.7	
	99	1,2,4-Trichlorobenzene	180	18.737	18.736	(1.141)	215078	50.0000	51.4	
	100	1,2,3-Trimethylbenzene	105	16.477	16.476	(2.051)	756190	50.0000	52.6	
	101	Naphthalene	128	19.130	19.129	(1.165)	589771	50.0000	51.2	
	102	1,2,3-Trichlorobenzene	180	19.359	19.358	(1.179)	201739	50.0000	49.4	
	103	Methyl Acetate	43	4.408	4.414	(0.549)	122349	50.0000	47.6	
	104	Methylcyclohexane	83	8.798	8.797	(1.095)	233403	50.0000	53.8	
M	153	Total Alkylbenzenes	100				5177915	50.0000	358	

QC Flag Legend

H - Operator selected an alternate compound hit.


Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3342.D
Date : 26-MAR-2018 10:13
Client ID:
Sample Info: WG225400-4
Column phase: RTX-VMS
Instrument: gcms-w.i
Operator: HG/JSS
Column diameter: 0.18
Y (x10^6)
Min
-Chloromethane (2.242)+
-Bromomethane (2.585)
-Chloroethane (2.721)
-Trichlorofluoromethane (2.864)
-Diethyl Ether (3.200)
-1,1-Dichloroethene (3.436)+
-Iodomethane (3.622)
-Acrolein (3.858)
-Allyl Chloride (4.030)
-Methylene Chloride (4.165)+
-trans-1,2-Dichloroethene (4.387)+
-Methyl tert-butyl ether (4.537)
-Tertiary-butyl alcohol (4.680)
-Acetonitrile (4.945)
-Di-isopropyl ether (5.123)
-Chloroprene (5.295)+
-Acrylonitrile (5.445)
-Ethyl tertiary-butyl ethe (5.774)+
-cis-1,2-Dichloroethene (6.325)
-2,2-Dichloropropane (6.525)
-Bromochloromethane (6.689)+
-Chloroform (6.840)
-Carbon Tetrachloride (7.054)
-Tetrahydrofuran (7.133)+
-1,1-Dichloropropene (7.419)+
-Propionitrile (7.848)+
-1,2-Dichloroethane-D4 (8.084)+
Methacrylonitrile (7.962)+
-1,2-Dichloroethane (8.198)
-Isobutyl Alcohol (8.305)
-Trichloroethene (8.799)+
-1,4-Difluorobenzene (8.906)
-Dibromomethane (9.507)
-1,2-Dichloropropane (9.671)
-Bromodichloromethane (9.785)
-Ethyl Methacrylate (10.093)+
-1,2-Dichloroethylene (tot (10.268)
-cis-1,3-dichloropropene (10.779)
-Toluene-D8 (11.065)
Toluene (11.144)
-Tetrachloroethene (11.709)
-4-methyl-2-pentanone (11.759)+
-1,1,2-Trichloroethane (12.023)
-Methyl Methacrylate (12.243)
-Dibromochloromethane (12.274)
-1,3-Dichloropropane (12.431)
-1,2-Dibromoethane (12.610)
-2-Hexanone (13.010)
-Ethylbenzene (13.439)+
Chlorobenzene-D5 (13.382)+
m+p-Xylenes (13.646)
-o-Xylene (14.277)
Styrene (14.304)+
-Isopropylbenzene (14.655)
-P-Bromofluorobenzene (15.012)
-cis-1,4-Dichloro-2-Butene (15.134)+
N-Propylbenzene (15.191)
-1,1,2,2-Tetrachloroethane (15.291)
2-Chlorotoluene (15.377)
-trans-1,4-Dichloro-2-Butene (15.520)
-4-Chlorotoluene (15.591)
1,3,5-Trimethylbenzene (15.448)+
-sec-Butylbenzene (16.070)
1,2,4-Trimethylbenzene (15.934)
-1,3-Dichlorobenzene (16.328)
H-Isopropyltoluene (16.249)
1,4-Dichlorobenzene-D4 (16.445)+
1,4-Dichlorobenzene (16.478)
-1,2-Dichlorobenzene (16.857)
N-Butylbenzene (16.771)
-1,2-Dibromo-3-Chloropropa (17.929)
-1,3,5-Trichlorobenzene (17.965)
-Hexachlorobutadiene (18.684)
1,2,4-Trichlorobenzene (18.737)
-Naphthalene (19.131)
-1,2,3-Trichlorobenzene (19.352)

Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3343.D
Report Date: 28-Mar-2018 14:10

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W032618.b\W3343.D
Lab Smp Id: WG225400-3
Inj Date : 26-MAR-2018 10:50 MS Autotune Date: 10-APR-2016 11:00
Operator : HG/JSS Inst ID: gcms-w.i
Smp Info : WG225400-3
Misc Info : WG225400,WG225400-4
Comment : SW846 5035
Method : \\target_server\gg\chem\gcms-w.i\W032618.b\W8SDI(08)D.m
Meth Date : 29-Mar-2018 02:42 jsampson Quant Type: ISTD
Cal Date : 26-MAR-2018 10:50 Cal File: W3343.D
Als bottle: 2 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: VOA-WS

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	0.00000	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	5.000	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	ON-COL (ug/kg)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.957	1.955	(0.244)	74938	20.0000	22.8	
2	Chloromethane	50	2.178	2.176	(0.271)	76903	20.0000	22.5	
3	Vinyl chloride	62	2.243	2.248	(0.279)	78811	20.0000	22.4	
4	Bromomethane	94	2.586	2.591	(0.322)	45482	20.0000	21.8	
5	Chloroethane	64	2.722	2.720	(0.339)	52752	20.0000	21.8	
6	Trichlorofluoromethane	101	2.872	2.863	(0.358)	122323	20.0000	21.4	
7	Diethyl Ether	59	3.201	3.206	(0.398)	53228	20.0000	21.3	
8	Tertiary-butyl alcohol	59	4.681	4.686	(0.583)	53085	100.000	108	
9	1,1-Dichloroethene	96	3.437	3.435	(0.428)	41729	20.0000	20.2	
10	Carbon Disulfide	76	3.487	3.485	(0.434)	155594	20.0000	20.2	
11	Freon-113	151	3.480	3.478	(0.433)	39702	20.0000	21.6	
12	Iodomethane	142	3.623	3.621	(0.451)	27289	20.0000	19.9	
13	Acrolein	56	3.859	3.864	(0.480)	55279	100.000	111	
14	Methylene Chloride	84	4.166	4.163	(0.519)	64306	20.0000	20.6(a)	
15	Acetone	43	4.252	4.250	(0.529)	124358	100.000	102	
16	Isobutyl Alcohol	43	8.306	8.318	(1.034)	83649	500.000	459	
17	trans-1,2-Dichloroethene	96	4.388	4.386	(0.546)	48568	20.0000	20.4	
18	Allyl Chloride	41	4.023	4.027	(0.501)	80534	20.0000	21.0	
19	Methyl tert-butyl ether	73	4.538	4.543	(0.565)	183598	20.0000	19.8	
20	Acetonitrile	39	4.938	4.943	(0.615)	21617	200.000	238	
21	Di-isopropyl ether	45	5.124	5.129	(0.638)	175865	20.0000	21.1	

Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3343.D
Report Date: 28-Mar-2018 14:10

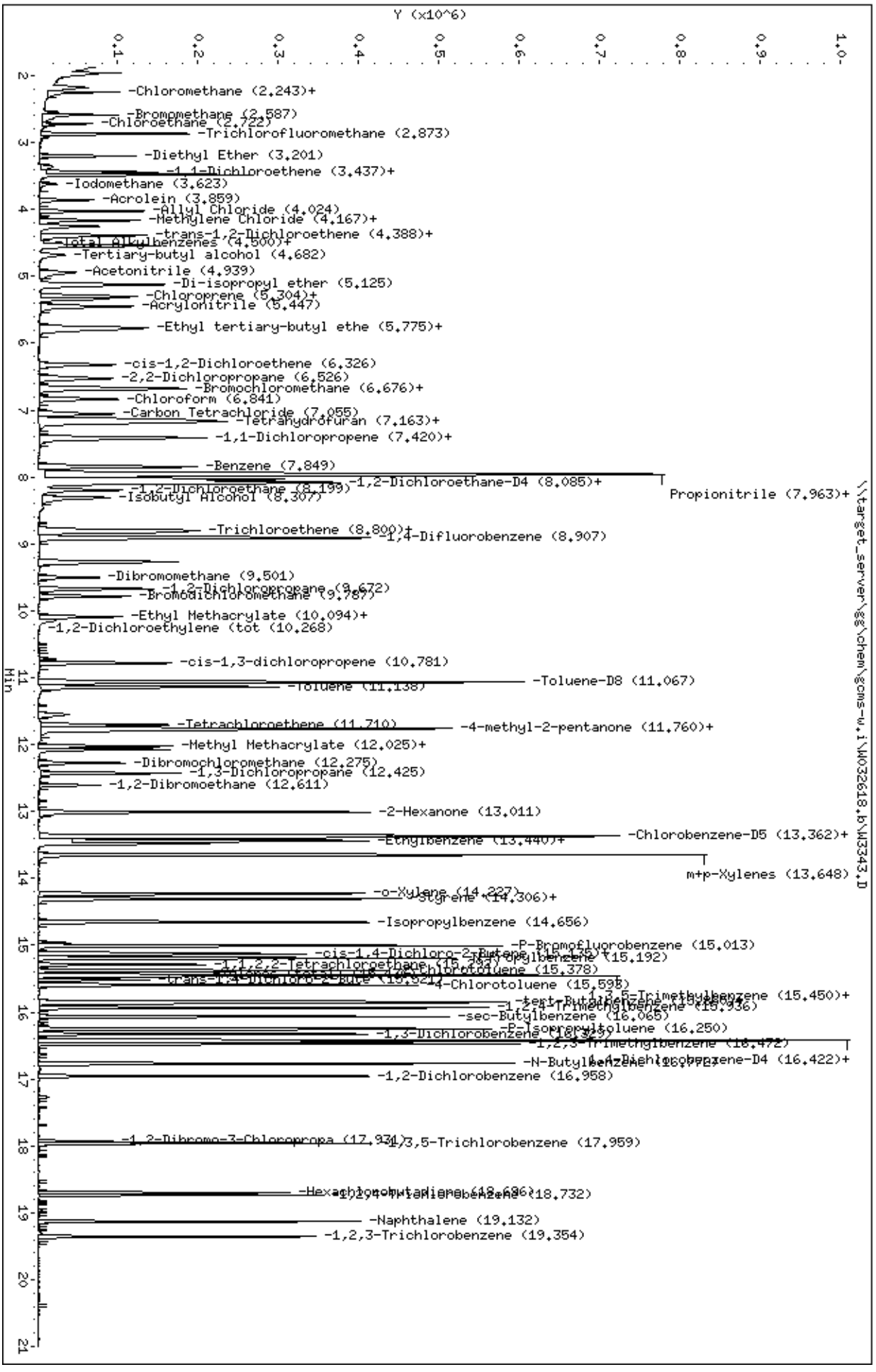
		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	AMOUNTS ON-COL (ug/kg)	REVIEW CODE
	22	Chloroprene	53	5.303	5.301	(0.660)	94924	20.0000	21.0	
	23	Propionitrile	54	7.934	7.939	(0.988)	108153	200.000	218	
	24	Methacrylonitrile	41	7.963	7.968	(0.991)	439924	200.000	218	
	25	1,1-Dichloroethane	63	5.339	5.337	(0.664)	102395	20.0000	19.6	
	26	Acrylonitrile	52	5.453	5.451	(0.679)	107866	100.000	112	
	27	Ethyl tertiary-butyl ether	59	5.775	5.773	(0.719)	172893	20.0000	20.4	
	28	Vinyl Acetate	43	5.811	5.808	(0.652)	119420	20.0000	19.7	
	29	cis-1,2-Dichloroethene	96	6.326	6.323	(0.787)	51688	20.0000	19.6	
M	30	1,2-Dichloroethylene (total)	96				100256	40.0000	40.0	
	31	Methyl Methacrylate	41	12.074	12.079	(1.356)	58715	20.0000	20.6	
	32	2,2-Dichloropropane	77	6.533	6.531	(0.813)	88652	20.0000	19.9	
	33	Bromochloromethane	128	6.690	6.688	(0.833)	21467	20.0000	19.8	
	34	Chloroform	83	6.840	6.838	(0.851)	108362	20.0000	19.7	
	35	Carbon Tetrachloride	117	7.055	7.060	(0.792)	80678	20.0000	19.7	
	36	Tetrahydrofuran	42	7.134	7.131	(0.888)	101104	100.000	101	
$	37	Dibromofluoromethane	113	7.162	7.167	(0.891)	110588	50.0000	50.8	
	38	1,1,1-Trichloroethane	97	7.191	7.196	(0.895)	98726	20.0000	20.0	
	39	1,1-Dichloropropene	75	7.412	7.417	(0.832)	80254	20.0000	19.6	
	40	2-Butanone	43	7.427	7.424	(0.924)	169515	100.000	102	
	41	Benzene	78	7.849	7.846	(0.881)	217403	20.0000	19.8	
*	42	Pentafluorobenzene	168	8.034	8.039	(1.000)	188211	50.0000		
	43	Cyclohexane	56	6.669	6.674	(0.830)	79460	20.0000	19.8	
	44	Ethyl Methacrylate	69	10.094	10.091	(1.133)	47481	20.0000	20.6	
$	45	1,2-Dichloroethane-D4	65	8.084	8.089	(1.006)	183603	50.0000	52.1	
	46	Tertiary-amyl methyl ether	73	8.084	8.082	(1.006)	166539	20.0000	19.9	
	47	1,2-Dichloroethane	62	8.199	8.204	(0.921)	100398	20.0000	19.6	
	48	Trichloroethene	95	8.828	8.833	(0.991)	56699	20.0000	19.6	
*	49	1,4-Difluorobenzene	114	8.907	8.912	(1.000)	334581	50.0000		
	50	Dibromomethane	93	9.500	9.505	(1.067)	35476	20.0000	19.6	
	51	1,2-Dichloropropane	63	9.672	9.677	(1.086)	57240	20.0000	19.7	
	52	Bromodichloromethane	83	9.786	9.791	(1.099)	88015	20.0000	19.5	
	53	cis-1,3-dichloropropene	75	10.780	10.785	(1.210)	102732	20.0000	19.2	
	54	1,4-Dioxane	88	10.144	10.141	(1.139)	20155	400.000	414	
$	55	Toluene-D8	98	11.066	11.064	(1.242)	428009	50.0000	49.8	
	57	Toluene	92	11.138	11.142	(1.250)	134530	20.0000	19.3	
	58	4-methyl-2-pentanone	43	11.760	11.765	(1.320)	353698	100.000	102	
	59	Tetrachloroethene	164	11.710	11.707	(0.876)	35487	20.0000	19.5	
	60	trans-1,3-Dichloropropene	75	11.788	11.793	(1.324)	103066	20.0000	19.7	
	61	1,1,2-Trichloroethane	83	12.024	12.029	(1.350)	45004	20.0000	19.3	
	62	Dibromochloromethane	129	12.274	12.279	(0.919)	57682	20.0000	19.7	
	63	1,3-Dichloropropane	76	12.425	12.430	(0.930)	107328	20.0000	19.7	
	64	1,2-Dibromoethane	107	12.611	12.615	(1.416)	52807	20.0000	19.6	
	65	2-Hexanone	43	13.011	13.016	(0.974)	264569	100.000	102	
*	66	Chlorobenzene-D5	117	13.361	13.366	(1.000)	310977	50.0000		
	67	Chlorobenzene	112	13.383	13.388	(1.002)	149148	20.0000	19.4	
	152	1-Chlorohexane	91	13.383	13.382	(1.666)	77688	20.0000	7.1(H)	
	68	Ethylbenzene	106	13.440	13.445	(1.006)	81934	20.0000	19.8	
	69	1,1,1,2-Tetrachloroethane	131	13.483	13.488	(1.009)	54286	20.0000	19.2	
M	70	Xylenes (total)	106				302728	60.0000	59.9	
	71	m+p-Xylenes	106	13.647	13.652	(1.021)	206154	40.0000	40.1	
	72	o-Xylene	106	14.226	14.231	(1.065)	96574	20.0000	19.8	
	73	Styrene	104	14.305	14.310	(1.071)	169081	20.0000	19.9	
	74	Bromoform	173	14.319	14.324	(1.072)	41656	20.0000	19.7	
	75	Isopropylbenzene	105	14.655	14.653	(0.892)	255702	20.0000	20.6	

Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3343.D
Report Date: 28-Mar-2018 14:10

			QUANT SIG					AMOUNTS		
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/kg)	ON-COL (ug/kg)	REVIEW CODE
$	76	P-Bromofluorobenzene	95	15.006	15.011	(1.685)	196195	50.0000	49.6	
	77	cis-1,4-Dichloro-2-Butene	53	15.113	15.118	(0.920)	34042	20.0000	21.0	
	78	trans-1,4-Dichloro-2-Butene	53	15.521	15.518	(0.945)	29148	20.0000	22.2	
	79	Bromobenzene	156	15.135	15.139	(0.922)	62445	20.0000	19.8	
	80	N-Propylbenzene	91	15.192	15.197	(0.925)	374329	20.0000	20.8	
	81	1,1,2,2-Tetrachloroethane	83	15.292	15.290	(0.931)	93234	20.0000	20.8	
	82	1,3,5-Trimethylbenzene	105	15.449	15.454	(0.941)	250529	20.0000	20.4	
	83	2-Chlorotoluene	91	15.378	15.383	(0.936)	224655	20.0000	20.4	
	84	1,2,3-Trichloropropane	75	15.456	15.454	(0.941)	89161	20.0000	20.6	
	85	4-Chlorotoluene	91	15.592	15.597	(0.949)	244614	20.0000	20.6	
	86	tert-Butylbenzene	119	15.850	15.847	(0.965)	242643	20.0000	20.7	
	87	Pentachloroethane	117	15.864	15.869	(0.966)	54729	20.0000	20.9	
	88	1,2,4-Trimethylbenzene	105	15.935	15.940	(0.970)	273627	20.0000	20.8	
	89	P-Isopropyltoluene	119	16.250	16.254	(0.990)	267726	20.0000	20.9	
	90	1,3-Dichlorobenzene	146	16.329	16.332	(0.994)	130895	20.0000	20.1	
*	91	1,4-Dichlorobenzene-D4	152	16.422	16.425	(1.000)	180499	50.0000		
	92	1,4-Dichlorobenzene	146	16.436	16.440	(1.001)	137983	20.0000	20.1	
	93	N-Butylbenzene	91	16.772	16.770	(1.021)	295250	20.0000	21.3	
	94	sec-Butylbenzene	105	16.071	16.069	(0.979)	322913	20.0000	20.6	
	95	1,2-Dichlorobenzene	146	16.958	16.956	(1.033)	132068	20.0000	20.3	
	96	1,2-Dibromo-3-Chloropropane	75	17.930	17.929	(1.092)	27886	20.0000	21.6(H)	
	97	1,3,5-Trichlorobenzene	180	17.966	17.964	(2.236)	100196	20.0000	21.2	
	98	Hexachlorobutadiene	225	18.695	18.700	(1.138)	45322	20.0000	20.2	
	99	1,2,4-Trichlorobenzene	180	18.738	18.736	(1.141)	81853	20.0000	20.3	
	100	1,2,3-Trimethylbenzene	105	16.479	16.476	(2.051)	313092	20.0000	21.0	
	101	Naphthalene	128	19.131	19.129	(1.165)	233421	20.0000	21.0	
	102	1,2,3-Trichlorobenzene	180	19.353	19.358	(1.179)	81402	20.0000	20.7	
	103	Methyl Acetate	43	4.409	4.414	(0.549)	52836	20.0000	19.9	
	104	Methylcyclohexane	83	8.799	8.797	(1.095)	92952	20.0000	20.7	
M	153	Total Alkylbenzenes	100				2027017	20.0000	146	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
H - Operator selected an alternate compound hit.


Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3343.D
Date : 26-MAR-2018 10:50
Client ID:
Sample Info: WG225400-3
Column phase: RTX-VMS
Instrument: gcms-w.i
Operator: HG/JSS
Column diameter: 0.18
\\target_server\gg\chem\gcms-w.i\W032618.b\W3343.D
Y (x10^6)
Min
-Chloromethane (2.243)+
-Bromomethane (2.587)
-Chloroethane (2.722)
-Trichlorofluoromethane (2.873)
-Diethyl Ether (3.201)
-1,1-Dichloroethene (3.437)+
-Iodomethane (3.623)
-Acrolein (3.859)
-Allyl Chloride (4.024)
-Methylene Chloride (4.167)+
-trans-1,2-Dichloroethene (4.388)+
-Total Alkylbenzenes (4.500)+
-Tertiary-butyl alcohol (4.682)
-Acetonitrile (4.939)
-Di-isopropyl ether (5.125)
-Chloroprene (5.304)+
-Acrylonitrile (5.447)
-Ethyl tertiary-butyl ethe (5.775)+
-cis-1,2-Dichloroethene (6.326)
-2,2-Dichloropropane (6.526)
-Bromochloromethane (6.676)+
-Chloroform (6.841)
-Carbon Tetrachloride (7.055)
-Tetrahydrofuran (7.163)+
-1,1-Dichloropropene (7.420)+
-Benzene (7.849)
-1,2-Dichloroethane-D4 (8.085)+
Propionitrile (7.963)+
-1,2-Dichloroethane (8.199)
-Isobutyl Alcohol (8.307)
-Trichloroethene (8.800)+
-1,4-Difluorobenzene (8.907)
-Dibromomethane (9.501)
-1,2-Dichloropropane (9.672)
-Bromodichloromethane (9.787)
-Ethyl Methacrylate (10.094)+
-1,2-Dichloroethylene (tot (10.268)
-cis-1,3-dichloropropene (10.781)
-Toluene-D8 (11.067)
-Toluene (11.138)
-Tetrachloroethene (11.710)
-4-methyl-2-pentanone (11.760)+
-Methyl Methacrylate (12.025)+
-Dibromochloromethane (12.275)
-1,3-Dichloropropane (12.425)
-1,2-Dibromoethane (12.611)
-2-Hexanone (13.011)
-Chlorobenzene-D5 (13.362)+
-Ethylbenzene (13.440)+
m+p-Xylenes (13.648)
-o-Xylene (14.227)
-Styrene (14.306)+
-Isopropylbenzene (14.656)
-P-Bromofluorobenzene (15.013)
-cis-1,4-Dichloro-2-Butene (15.125)+
-Propylbenzene (15.192)
-1,1,2,2-Tetrachloroethane (15.284)
-2-Chlorotoluene (15.378)
-trans-1,4-Dichloro-2-Bute (15.521)
-4-Chlorotoluene (15.595)
-1,3,5-Trimethylbenzene (15.450)+
-tert-Butylbenzene (15.694)
-1,2,4-Trimethylbenzene (15.936)
-sec-Butylbenzene (16.065)
-P-Isopropyltoluene (16.250)
-1,3-Dichlorobenzene (16.356)
-1,2,3-Trimethylbenzene (16.472)
-N-Butylbenzene (16.722)
-1,4-Dichlorobenzene-D4 (16.422)+
-1,2-Dichlorobenzene (16.958)
-1,2-Dibromo-3-Chloropropa (17.931)
-1,3,5-Trichlorobenzene (17.959)
-Hexachlorobutadiene (18.686)
-1,2,4-Trichlorobenzene (18.732)
-Naphthalene (19.132)
-1,2,3-Trichlorobenzene (19.354)

Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3344.D
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Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W032618.b\W3344.D
Lab Smp Id: WG225400-2
Inj Date : 26-MAR-2018 11:27 MS Autotune Date: 10-APR-2016 11:00
Operator : HG/JSS Inst ID: gcms-w.i
Smp Info : WG225400-2
Misc Info : WG225400,WG225400-4
Comment : SW846 5035
Method : \\target_server\gg\chem\gcms-w.i\W032618.b\W8SDI(08)D.m
Meth Date : 29-Mar-2018 02:42 jsampson Quant Type: ISTD
Cal Date : 26-MAR-2018 11:27 Cal File: W3344.D
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: VOA-WS

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	0.00000	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	5.000	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	ON-COL (ug/kg)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.955	1.955	(0.243)	30899	10.0000	9.2	
2	Chloromethane	50	2.184	2.176	(0.272)	34425	10.0000	9.9	
3	Vinyl chloride	62	2.241	2.248	(0.279)	33978	10.0000	9.5	
4	Bromomethane	94	2.592	2.591	(0.322)	20178	10.0000	9.5	
5	Chloroethane	64	2.720	2.720	(0.338)	23131	10.0000	9.4	
6	Trichlorofluoromethane	101	2.870	2.863	(0.357)	54081	10.0000	9.3	
7	Diethyl Ether	59	3.199	3.206	(0.398)	25616	10.0000	10.0	
8	Tertiary-butyl alcohol	59	4.687	4.686	(0.583)	21195	50.0000	42.2	
9	1,1-Dichloroethene	96	3.442	3.435	(0.428)	20951	10.0000	10	
10	Carbon Disulfide	76	3.485	3.485	(0.434)	76071	10.0000	9.6	
11	Freon-113	151	3.485	3.478	(0.434)	18172	10.0000	9.7	
12	Iodomethane	142	3.621	3.621	(0.450)	11905	10.0000	10	
13	Acrolein	56	3.857	3.864	(0.480)	24027	50.0000	47.2	
14	Methylene Chloride	84	4.165	4.163	(0.518)	32089	10.0000	10.1(a)	
15	Acetone	43	4.250	4.250	(0.529)	59955	50.0000	48.4	
16	Isobutyl Alcohol	43	8.305	8.318	(1.033)	33787	200.000	231	
17	trans-1,2-Dichloroethene	96	4.386	4.386	(0.546)	23210	10.0000	9.5	
18	Allyl Chloride	41	4.029	4.027	(0.501)	37465	10.0000	9.6	
19	Methyl tert-butyl ether	73	4.544	4.543	(0.565)	87582	10.0000	9.2	
20	Acetonitrile	39	4.944	4.943	(0.615)	8563	100.000	92.1	
21	Di-isopropyl ether	45	5.130	5.129	(0.638)	78489	10.0000	9.2	

Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3344.D
Report Date: 28-Mar-2018 14:10

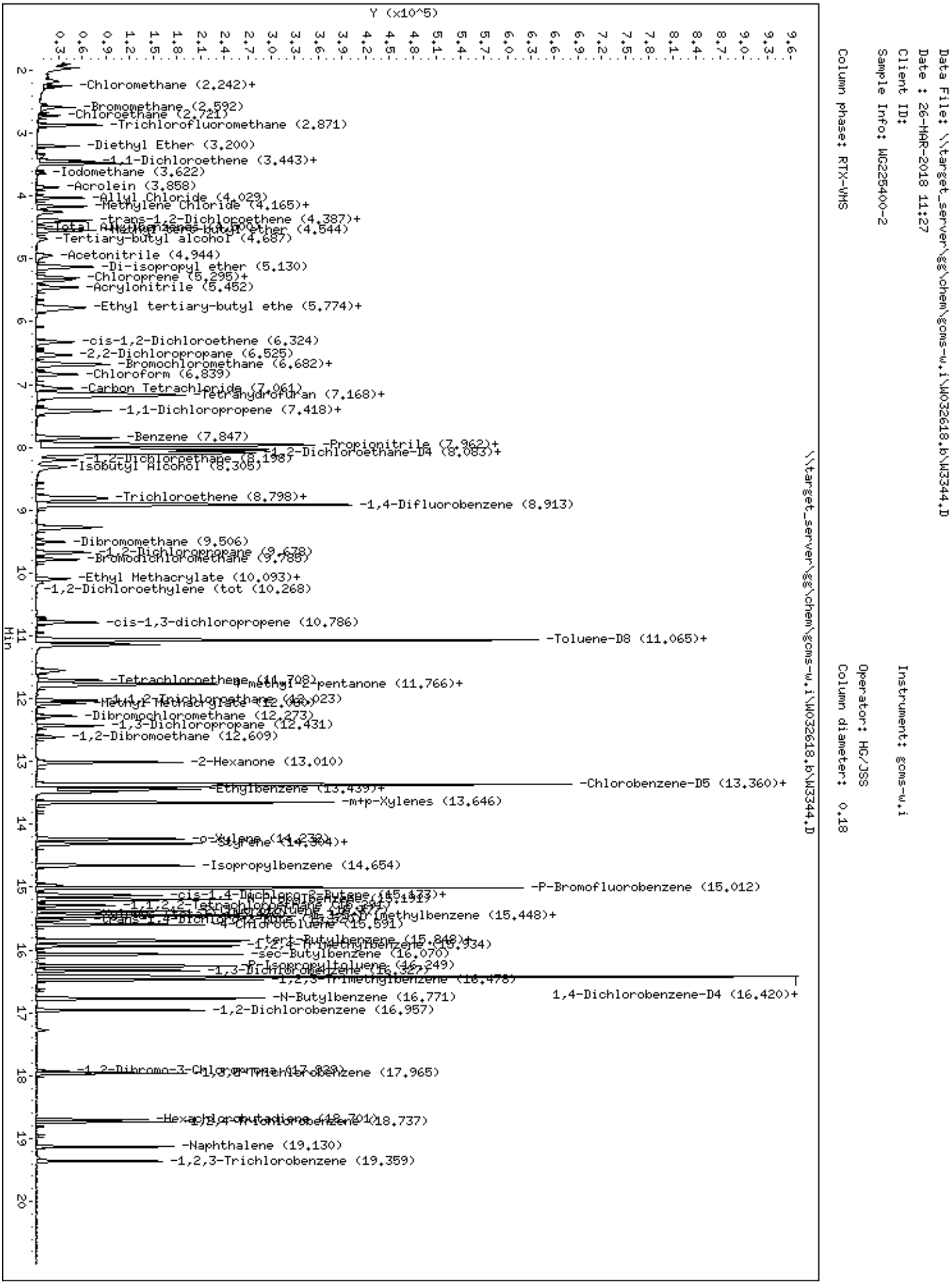
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	AMOUNTS ON-COL (ug/kg)	REVIEW CODE
	22 Chloroprene	53	5.294	5.301	(0.659)	42161	10.0000	9.1	
	23 Propionitrile	54	7.940	7.939	(0.988)	46916	100.000	92.6	
	24 Methacrylonitrile	41	7.961	7.968	(0.990)	197757	100.000	95.7	
	25 1,1-Dichloroethane	63	5.344	5.337	(0.665)	53235	10.0000	10	
	26 Acrylonitrile	52	5.452	5.451	(0.678)	45158	50.0000	45.7	
	27 Ethyl tertiary-butyl ether	59	5.773	5.773	(0.718)	77277	10.0000	8.9	
	28 Vinyl Acetate	43	5.816	5.808	(0.653)	55803	10.0000	9.1	
	29 cis-1,2-Dichloroethene	96	6.331	6.323	(0.787)	26232	10.0000	9.7	
M	30 1,2-Dichloroethylene (total)	96				49442	20.0000	19.3	
	31 Methyl Methacrylate	41	12.080	12.079	(1.355)	24830	10.0000	8.6	
	32 2,2-Dichloropropane	77	6.531	6.531	(0.812)	43684	10.0000	9.6	
	33 Bromochloromethane	128	6.689	6.688	(0.832)	10715	10.0000	9.7	
	34 Chloroform	83	6.839	6.838	(0.851)	55352	10.0000	9.9	
	35 Carbon Tetrachloride	117	7.053	7.060	(0.791)	39698	10.0000	9.6	
	36 Tetrahydrofuran	42	7.146	7.131	(0.889)	45174	50.0000	44.0	
$	37 Dibromofluoromethane	113	7.168	7.167	(0.892)	111369	50.0000	50.1	
	38 1,1,1-Trichloroethane	97	7.196	7.196	(0.895)	50397	10.0000	10	
	39 1,1-Dichloropropene	75	7.411	7.417	(0.832)	40614	10.0000	9.8	
	40 2-Butanone	43	7.432	7.424	(0.924)	76612	50.0000	45.3	
	41 Benzene	78	7.847	7.846	(0.880)	106497	10.0000	9.6	
*	42 Pentafluorobenzene	168	8.040	8.039	(1.000)	192222	50.0000		
	43 Cyclohexane	56	6.667	6.674	(0.829)	37288	10.0000	9.1	
	44 Ethyl Methacrylate	69	10.092	10.091	(1.132)	19309	10.0000	8.3	
$	45 1,2-Dichloroethane-D4	65	8.083	8.089	(1.005)	179190	50.0000	49.8	
	46 Tertiary-amyl methyl ether	73	8.083	8.082	(1.005)	80447	10.0000	9.4	
	47 1,2-Dichloroethane	62	8.197	8.204	(0.920)	50949	10.0000	9.9	
	48 Trichloroethene	95	8.826	8.833	(0.990)	28930	10.0000	9.9	
*	49 1,4-Difluorobenzene	114	8.912	8.912	(1.000)	337668	50.0000		
	50 Dibromomethane	93	9.506	9.505	(1.067)	17228	10.0000	9.4	
	51 1,2-Dichloropropane	63	9.677	9.677	(1.086)	28247	10.0000	9.6	
	52 Bromodichloromethane	83	9.785	9.791	(1.098)	43004	10.0000	9.4	
	53 cis-1,3-dichloropropene	75	10.786	10.785	(1.210)	48649	10.0000	9.0	
	54 1,4-Dioxane	88	10.149	10.141	(1.139)	8018	200.000	186	
$	55 Toluene-D8	98	11.064	11.064	(1.241)	431105	50.0000	49.8	
	57 Toluene	92	11.143	11.142	(1.250)	68519	10.0000	9.7	
	58 4-methyl-2-pentanone	43	11.758	11.765	(1.319)	162712	50.0000	46.5	
	59 Tetrachloroethene	164	11.708	11.707	(0.876)	18113	10.0000	9.9	
	60 trans-1,3-Dichloropropene	75	11.794	11.793	(1.323)	49373	10.0000	9.4	
	61 1,1,2-Trichloroethane	83	12.030	12.029	(1.350)	22406	10.0000	9.5	
	62 Dibromochloromethane	129	12.273	12.279	(0.919)	27748	10.0000	9.5	
	63 1,3-Dichloropropane	76	12.430	12.430	(0.930)	52013	10.0000	9.5	
	64 1,2-Dibromoethane	107	12.609	12.615	(1.415)	25356	10.0000	9.3	
	65 2-Hexanone	43	13.009	13.016	(0.974)	121083	50.0000	46.9	
*	66 Chlorobenzene-D5	117	13.360	13.366	(1.000)	310776	50.0000		
	67 Chlorobenzene	112	13.381	13.388	(1.002)	75134	10.0000	9.8	
	152 1-Chlorohexane	91	13.381	13.382	(1.664)	37177	10.0000	3.9(aH)	
	68 Ethylbenzene	106	13.438	13.445	(1.006)	40785	10.0000	9.8	
	69 1,1,1,2-Tetrachloroethane	131	13.481	13.488	(1.009)	27753	10.0000	9.8	
M	70 Xylenes (total)	106				142461	30.0000	28.2	
	71 m+p-Xylenes	106	13.653	13.652	(1.022)	97925	20.0000	19.1	
	72 o-Xylene	106	14.232	14.231	(1.065)	44536	10.0000	9.1	
	73 Styrene	104	14.303	14.310	(1.071)	77116	10.0000	9.1	
	74 Bromoform	173	14.318	14.324	(1.072)	19135	10.0000	9.0	
	75 Isopropylbenzene	105	14.654	14.653	(0.892)	118730	10.0000	9.4	

Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3344.D
Report Date: 28-Mar-2018 14:10

							AMOUNTS		
Compounds		QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/kg)	ON-COL (ug/kg)	REVIEW CODE
$	76 P-Bromofluorobenzene	95	15.011	15.011	(1.684)	193508	50.0000	48.5	
	77 cis-1,4-Dichloro-2-Butene	53	15.111	15.118	(0.920)	14751	10.0000	9.0	
	78 trans-1,4-Dichloro-2-Butene	53	15.519	15.518	(0.945)	12488	10.0000	9.4	
	79 Bromobenzene	156	15.140	15.139	(0.922)	30562	10.0000	9.6	
	80 N-Propylbenzene	91	15.190	15.197	(0.925)	180674	10.0000	9.9	
	81 1,1,2,2-Tetrachloroethane	83	15.290	15.290	(0.931)	43868	10.0000	9.7	
	82 1,3,5-Trimethylbenzene	105	15.448	15.454	(0.941)	120244	10.0000	9.7	
	83 2-Chlorotoluene	91	15.376	15.383	(0.936)	108606	10.0000	9.8	
	84 1,2,3-Trichloropropane	75	15.455	15.454	(0.941)	42236	10.0000	9.6	
	85 4-Chlorotoluene	91	15.591	15.597	(0.949)	116820	10.0000	9.7	
	86 tert-Butylbenzene	119	15.848	15.847	(0.965)	112161	10.0000	9.5	
	87 Pentachloroethane	117	15.862	15.869	(0.966)	25025	10.0000	9.4	
	88 1,2,4-Trimethylbenzene	105	15.934	15.940	(0.970)	129767	10.0000	9.7	
	89 P-Isopropyltoluene	119	16.255	16.254	(0.990)	123074	10.0000	9.5	
	90 1,3-Dichlorobenzene	146	16.327	16.332	(0.994)	63996	10.0000	9.7	
*	91 1,4-Dichlorobenzene-D4	152	16.420	16.425	(1.000)	182762	50.0000		
	92 1,4-Dichlorobenzene	146	16.441	16.440	(1.001)	68685	10.0000	9.9	
	93 N-Butylbenzene	91	16.770	16.770	(1.021)	137767	10.0000	9.8	
	94 sec-Butylbenzene	105	16.070	16.069	(0.979)	158169	10.0000	10	
	95 1,2-Dichlorobenzene	146	16.956	16.956	(1.033)	64048	10.0000	9.7	
	96 1,2-Dibromo-3-Chloropropane	75	17.929	17.929	(1.092)	11853	10.0000	9.1(H)	
	97 1,3,5-Trichlorobenzene	180	17.964	17.964	(2.234)	44259	10.0000	9.2	
	98 Hexachlorobutadiene	225	18.694	18.700	(1.138)	22647	10.0000	10	
	99 1,2,4-Trichlorobenzene	180	18.737	18.736	(1.141)	39291	10.0000	9.6	
	100 1,2,3-Trimethylbenzene	105	16.477	16.476	(2.049)	141935	10.0000	9.3	
	101 Naphthalene	128	19.130	19.129	(1.165)	102150	10.0000	9.1	
	102 1,2,3-Trichlorobenzene	180	19.359	19.358	(1.179)	39414	10.0000	9.9	
	103 Methyl Acetate	43	4.415	4.414	(0.549)	27029	10.0000	10	
	104 Methylcyclohexane	83	8.798	8.797	(1.094)	42072	10.0000	9.2	
M	153 Total Alkylbenzenes	100				961856	10.0000	68.1	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
H - Operator selected an alternate compound hit.


Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3344.D
Date : 26-MAR-2018 11:27
Client ID:
Sample Info: WG225400-2
Column phase: RTX-VMS
Instrument: gcms-w.i
Operator: HG/JSS
Column diameter: 0.18
\\target_server\gg\chem\gcms-w.i\W032618.b\W3344.D
Y (x10^5)
Min
-Chloromethane (2.242)+
-Bromomethane (2.592)
-Chloroethane (2.721)
-Trichlorofluoromethane (2.871)
-Diethyl Ether (3.200)
-1,1-Dichloroethene (3.443)+
-Iodomethane (3.622)
-Acrolein (3.858)
-Allyl Chloride (4.029)
-Methylene Chloride (4.165)+
-trans-1,2-Dichloroethene (4.387)+
-Tertiary-butyl alcohol (4.687)
-Acetonitrile (4.944)
-Di-isopropyl ether (5.130)
-Chloroprene (5.295)+
-Acrylonitrile (5.452)
-Ethyl tertiary-butyl ethe (5.774)+
-cis-1,2-Dichloroethene (6.324)
-2,2-Dichloropropane (6.525)
-Bromochloromethane (6.682)+
-Chloroform (6.839)
-Carbon Tetrachloride (7.061)
-Tetrahydrofuran (7.168)+
-1,1-Dichloropropene (7.418)+
-Benzene (7.847)
-Propionitrile (7.962)+
-1,2-Dichloroethane-D4 (8.083)+
-Isobutyl Alcohol (8.305)
-Trichloroethene (8.798)+
-1,4-Difluorobenzene (8.913)
-Dibromomethane (9.506)
-Bromodichloromethane (9.785)
-Ethyl Methacrylate (10.093)+
-1,2-Dichloroethylene (tot (10.268)
-cis-1,3-dichloropropene (10.786)
-Toluene-D8 (11.065)+
-Tetrachloroethene (11.708)
-methyl-2-pentanone (11.766)+
-Dibromochloromethane (12.273)
-1,3-Dichloropropane (12.431)
-1,2-Dibromoethane (12.609)
-2-Hexanone (13.010)
-Chlorobenzene-D5 (13.360)+
-Ethylbenzene (13.439)+
-m+p-Xylenes (13.646)
-Isopropylbenzene (14.654)
-P-Bromofluorobenzene (15.012)
-4-Chlorotoluene (15.591)
-tert-Butylbenzene (15.848)+
-sec-Butylbenzene (16.070)
-P-Isopropyltoluene (16.249)
-1,2,3-Trimethylbenzene (16.478)
-N-Butylbenzene (16.771)
1,4-Dichlorobenzene-D4 (16.420)+
-1,2-Dichlorobenzene (16.957)
-1,2-Dibromo-3-Chloropropa (17.929)
-1,3,5-Trichlorobenzene (17.965)
-Hexachlorobutadiene (18.701)
-1,2,4-Trichlorobenzene (18.737)
-Naphthalene (19.130)
-1,2,3-Trichlorobenzene (19.359)

Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3345.D
Report Date: 28-Mar-2018 14:10

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W032618.b\W3345.D
Lab Smp Id: WG225400-1
Inj Date : 26-MAR-2018 12:04 MS Autotune Date: 10-APR-2016 11:00
Operator : HG/JSS Inst ID: gcms-w.i
Smp Info : WG225400-1
Misc Info : WG225400,WG225400-4
Comment : SW846 5035
Method : \\target_server\gg\chem\gcms-w.i\W032618.b\W8SDI(08)D.m
Meth Date : 29-Mar-2018 02:42 jsampson Quant Type: ISTD
Cal Date : 26-MAR-2018 12:04 Cal File: W3345.D
Als bottle: 4 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: VOA-WS

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	0.00000	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	5.000	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	ON-COL (ug/kg)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.957	1.955	(0.243)	16598	5.00000	5.2	
2	Chloromethane	50	2.172	2.176	(0.270)	16865	5.00000	5.1	
3	Vinyl chloride	62	2.250	2.248	(0.280)	16833	5.00000	5.0	
4	Bromomethane	94	2.593	2.591	(0.323)	10918	5.00000	5.4	
5	Chloroethane	64	2.729	2.720	(0.339)	11976	5.00000	5.2	
6	Trichlorofluoromethane	101	2.872	2.863	(0.357)	28261	5.00000	5.2	
7	Diethyl Ether	59	3.201	3.206	(0.398)	11852	5.00000	4.9(a)	
8	Tertiary-butyl alcohol	59	4.688	4.686	(0.583)	10543	25.0000	22.3(a)	
9	1,1-Dichloroethene	96	3.444	3.435	(0.428)	10165	5.00000	5.1	
10	Carbon Disulfide	76	3.487	3.485	(0.434)	40091	5.00000	5.4	
11	Freon-113	151	3.480	3.478	(0.433)	9217	5.00000	5.2	
12	Iodomethane	142	3.623	3.621	(0.451)	6669	5.00000	6.9	
13	Acrolein	56	3.866	3.864	(0.481)	10469	25.0000	21.9(a)	
14	Methylene Chloride	84	4.167	4.163	(0.518)	17874	5.00000	6.0(a)	
15	Acetone	43	4.252	4.250	(0.529)	32586	25.0000	28.0	
16	Isobutyl Alcohol	43	8.321	8.318	(1.035)	13748	100.000	147	
17	trans-1,2-Dichloroethene	96	4.388	4.386	(0.546)	12367	5.00000	5.4	
18	Allyl Chloride	41	4.031	4.027	(0.501)	17890	5.00000	4.9(a)	
19	Methyl tert-butyl ether	73	4.545	4.543	(0.565)	44621	5.00000	5.0	
20	Acetonitrile	39	4.946	4.943	(0.615)	3887	50.0000	44.5(a)	
21	Di-isopropyl ether	45	5.125	5.129	(0.637)	36976	5.00000	4.6(a)	

Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3345.D
Report Date: 28-Mar-2018 14:10

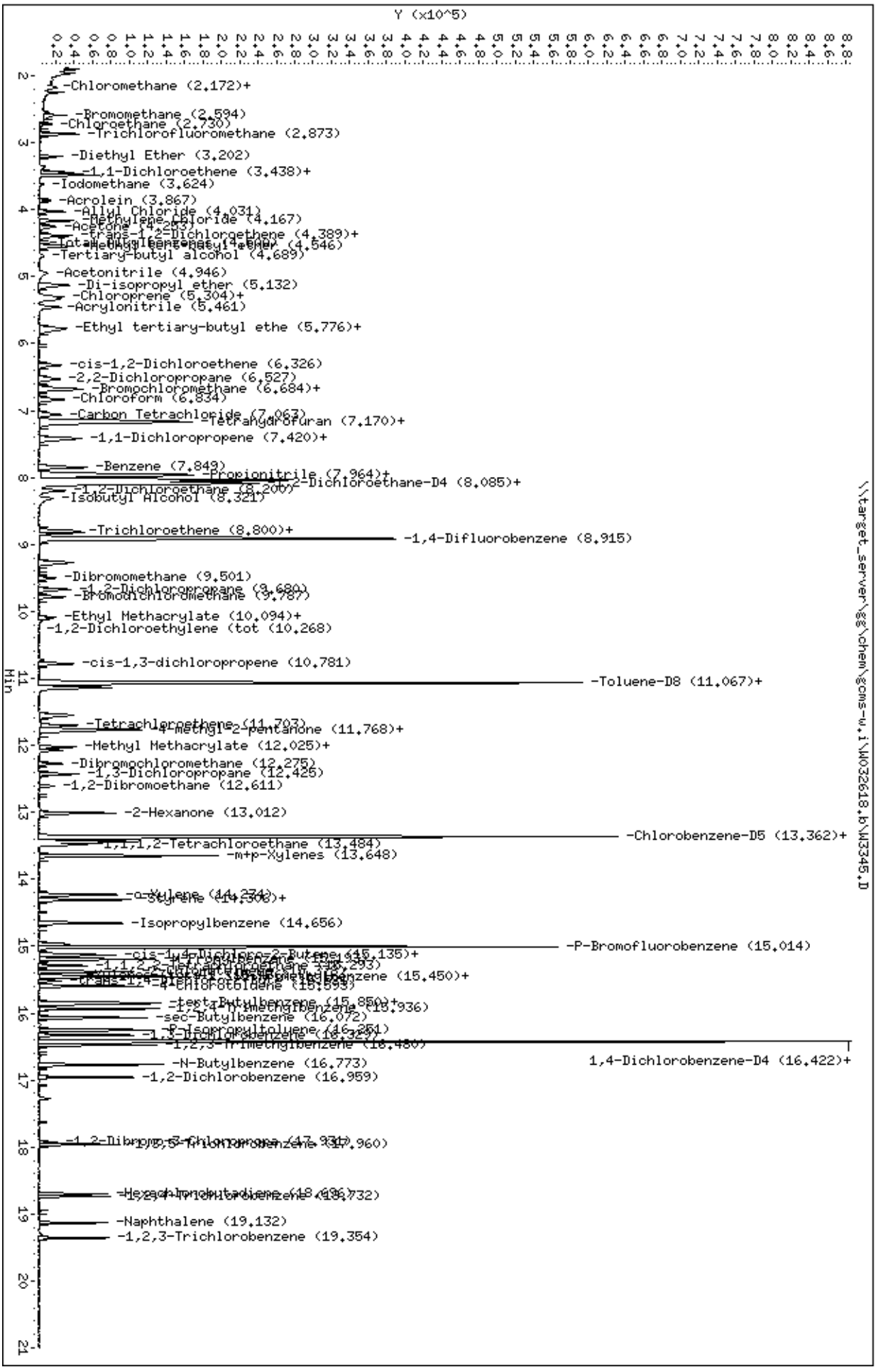
		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	AMOUNTS ON-COL (ug/kg)	REVIEW CODE
	22	Chloroprene	53	5.303	5.301	(0.659)	20115	5.00000	4.6(a)	
	23	Propionitrile	54	7.942	7.939	(0.988)	21904	50.0000	46.0(a)	
	24	Methacrylonitrile	41	7.963	7.968	(0.990)	92549	50.0000	47.6(a)	
	25	1,1-Dichloroethane	63	5.339	5.337	(0.664)	27548	5.00000	5.5	
	26	Acrylonitrile	52	5.461	5.451	(0.679)	21294	25.0000	22.9(a)	
	27	Ethyl tertiary-butyl ether	59	5.775	5.773	(0.718)	37118	5.00000	4.6(a)	
	28	Vinyl Acetate	43	5.811	5.808	(0.652)	26408	5.00000	4.6(a)	
	29	cis-1,2-Dichloroethene	96	6.326	6.323	(0.787)	13602	5.00000	5.4	
M	30	1,2-Dichloroethylene (total)	96				25969	10.0000	10.8	
	31	Methyl Methacrylate	41	12.075	12.079	(1.355)	10448	5.00000	3.9(a)	
	32	2,2-Dichloropropane	77	6.526	6.531	(0.812)	22005	5.00000	5.1	
	33	Bromochloromethane	128	6.698	6.688	(0.833)	5418	5.00000	5.2	
	34	Chloroform	83	6.834	6.838	(0.850)	29649	5.00000	5.6	
	35	Carbon Tetrachloride	117	7.062	7.060	(0.792)	20983	5.00000	5.4	
	36	Tetrahydrofuran	42	7.148	7.131	(0.889)	23302	25.0000	24.2(a)	
$	37	Dibromofluoromethane	113	7.170	7.167	(0.892)	107185	50.0000	51.2	
	38	1,1,1-Trichloroethane	97	7.198	7.196	(0.895)	25581	5.00000	5.4	
	39	1,1-Dichloropropene	75	7.413	7.417	(0.832)	19550	5.00000	5.0	
	40	2-Butanone	43	7.434	7.424	(0.924)	40299	25.0000	25.4	
	41	Benzene	78	7.849	7.846	(0.880)	55320	5.00000	5.3	
*	42	Pentafluorobenzene	168	8.042	8.039	(1.000)	180753	50.0000		
	43	Cyclohexane	56	6.676	6.674	(0.830)	19062	5.00000	4.9(a)	
	44	Ethyl Methacrylate	69	10.094	10.091	(1.132)	8846	5.00000	4.0(a)	
$	45	1,2-Dichloroethane-D4	65	8.085	8.089	(1.005)	173746	50.0000	51.3	
	46	Tertiary-amyl methyl ether	73	8.085	8.082	(1.005)	36625	5.00000	4.5(a)	
	47	1,2-Dichloroethane	62	8.199	8.204	(0.920)	26819	5.00000	5.5	
	48	Trichloroethene	95	8.821	8.833	(0.990)	15429	5.00000	5.6	
*	49	1,4-Difluorobenzene	114	8.914	8.912	(1.000)	316404	50.0000		
	50	Dibromomethane	93	9.501	9.505	(1.066)	9228	5.00000	5.4	
	51	1,2-Dichloropropane	63	9.679	9.677	(1.086)	13922	5.00000	5.1(T)	
	52	Bromodichloromethane	83	9.787	9.791	(1.098)	23551	5.00000	5.5	
	53	cis-1,3-dichloropropene	75	10.788	10.785	(1.210)	25428	5.00000	5.0	
	54	1,4-Dioxane	88	10.151	10.141	(1.139)	3336	100.000	104	
$	55	Toluene-D8	98	11.066	11.064	(1.241)	405822	50.0000	50.0	
	57	Toluene	92	11.145	11.142	(1.250)	35573	5.00000	5.4	
	58	4-methyl-2-pentanone	43	11.760	11.765	(1.319)	79071	25.0000	24.1(a)	
	59	Tetrachloroethene	164	11.703	11.707	(0.876)	9220	5.00000	5.3	
	60	trans-1,3-Dichloropropene	75	11.789	11.793	(1.322)	25086	5.00000	5.1	
	61	1,1,2-Trichloroethane	83	12.025	12.029	(1.349)	11695	5.00000	5.3	
	62	Dibromochloromethane	129	12.275	12.279	(0.919)	14018	5.00000	5.0	
	63	1,3-Dichloropropane	76	12.425	12.430	(0.930)	27336	5.00000	5.3	
	64	1,2-Dibromoethane	107	12.611	12.615	(1.415)	12848	5.00000	5.0(T)	
	65	2-Hexanone	43	13.011	13.016	(0.974)	56680	25.0000	23.1(a)	
*	66	Chlorobenzene-D5	117	13.362	13.366	(1.000)	295970	50.0000		
	67	Chlorobenzene	112	13.383	13.388	(1.002)	39297	5.00000	5.4	
	152	1-Chlorohexane	91	13.383	13.382	(1.664)	19121	5.00000	2.7(aH)	
	68	Ethylbenzene	106	13.440	13.445	(1.006)	19865	5.00000	5.0	
	69	1,1,1,2-Tetrachloroethane	131	13.483	13.488	(1.009)	13746	5.00000	5.1	
M	70	Xylenes (total)	106				67469	15.0000	14.0(a)	
	71	m+p-Xylenes	106	13.648	13.652	(1.021)	46904	10.0000	9.6(a)	
	72	o-Xylene	106	14.234	14.231	(1.065)	20565	5.00000	4.4(a)	
	73	Styrene	104	14.305	14.310	(1.071)	36819	5.00000	4.6(a)	
	74	Bromoform	173	14.320	14.324	(1.072)	9088	5.00000	4.5(a)	
	75	Isopropylbenzene	105	14.656	14.653	(0.892)	56964	5.00000	4.8(a)	

Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3345.D
Report Date: 28-Mar-2018 14:10

							AMOUNTS		
Compounds		QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/kg)	ON-COL (ug/kg)	REVIEW CODE
$	76 P-Bromofluorobenzene	95	15.013	15.011	(1.684)	184960	50.0000	49.4	
	77 cis-1,4-Dichloro-2-Butene	53	15.113	15.118	(0.920)	7466	5.00000	4.9(a)	
	78 trans-1,4-Dichloro-2-Butene	53	15.521	15.518	(0.945)	5577	5.00000	4.5(a)	
	79 Bromobenzene	156	15.135	15.139	(0.922)	16480	5.00000	5.5	
	80 N-Propylbenzene	91	15.192	15.197	(0.925)	90432	5.00000	5.3	
	81 1,1,2,2-Tetrachloroethane	83	15.292	15.290	(0.931)	22620	5.00000	5.4	
	82 1,3,5-Trimethylbenzene	105	15.449	15.454	(0.941)	57271	5.00000	4.9(a)	
	83 2-Chlorotoluene	91	15.378	15.383	(0.936)	54945	5.00000	5.3	
	84 1,2,3-Trichloropropane	75	15.457	15.454	(0.941)	22235	5.00000	5.4	
	85 4-Chlorotoluene	91	15.592	15.597	(0.949)	59215	5.00000	5.3	
	86 tert-Butylbenzene	119	15.850	15.847	(0.965)	52724	5.00000	4.8(a)	
	87 Pentachloroethane	117	15.864	15.869	(0.966)	12233	5.00000	5.0	
	88 1,2,4-Trimethylbenzene	105	15.936	15.940	(0.970)	62193	5.00000	5.0	
	89 P-Isopropyltoluene	119	16.250	16.254	(0.990)	57774	5.00000	4.8(a)	
	90 1,3-Dichlorobenzene	146	16.329	16.332	(0.994)	33323	5.00000	5.4	
*	91 1,4-Dichlorobenzene-D4	152	16.422	16.425	(1.000)	170347	50.0000		
	92 1,4-Dichlorobenzene	146	16.436	16.440	(1.001)	36258	5.00000	5.6	
	93 N-Butylbenzene	91	16.772	16.770	(1.021)	64430	5.00000	4.9(a)	
	94 sec-Butylbenzene	105	16.072	16.069	(0.979)	74226	5.00000	5.0	
	95 1,2-Dichlorobenzene	146	16.958	16.956	(1.033)	33293	5.00000	5.4	
	96 1,2-Dibromo-3-Chloropropane	75	17.931	17.929	(1.092)	6428	5.00000	5.3(H)	
	97 1,3,5-Trichlorobenzene	180	17.966	17.964	(2.234)	19684	5.00000	4.3(a)	
	98 Hexachlorobutadiene	225	18.696	18.700	(1.138)	11192	5.00000	5.3	
	99 1,2,4-Trichlorobenzene	180	18.739	18.736	(1.141)	17922	5.00000	4.7(a)	
	100 1,2,3-Trimethylbenzene	105	16.479	16.476	(2.049)	66387	5.00000	4.6(a)	
	101 Naphthalene	128	19.132	19.129	(1.165)	46031	5.00000	4.4(a)	
	102 1,2,3-Trichlorobenzene	180	19.361	19.358	(1.179)	18689	5.00000	5.0	
	103 Methyl Acetate	43	4.417	4.414	(0.549)	13052	5.00000	5.1	
	104 Methylcyclohexane	83	8.800	8.797	(1.094)	18737	5.00000	4.3(a)	
M	153 Total Alkylbenzenes	100				459050	5.00000	34.8(a)	

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
H - Operator selected an alternate compound hit.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Date : 26-MAR-2018 12:04
Client ID:
Sample Info: WG225400-1
Column phase: RTX-VMS
Instrument: gcms-w.i
Operator: HG/JSS
Column diameter: 0.18
\\target_server\gg\chem\gcms-w.i\W032618.b\W3345.D
Y (x10^5)
Min
-Chloromethane (2.172)+
-Bromomethane (2.594)
-Chloroethane (2.730)
-Trichlorofluoromethane (2.873)
-Diethyl Ether (3.202)
-1,1-Dichloroethene (3.438)+
-Iodomethane (3.624)
-Acrolein (3.867)
-Allyl Chloride (4.031)
-Methylene Chloride (4.167)
-Acetone (4.293)
-trans-1,2-Dichloroethene (4.389)+
-Methyl tert-butyl ether (4.546)
-Tertiary-butyl alcohol (4.689)
-Acetonitrile (4.946)
-Di-isopropyl ether (5.132)
-Chloroprene (5.304)+
-Acrylonitrile (5.461)
-Ethyl tertiary-butyl ethe (5.776)+
-cis-1,2-Dichloroethene (6.326)
-2,2-Dichloropropane (6.527)
-Bromochloromethane (6.684)+
-Chloroform (6.834)
-Carbon Tetrachloride (7.063)
-Tetrahydrofuran (7.170)+
-1,1-Dichloropropene (7.420)+
-Benzene (7.849)
-Propionitrile (7.964)+
-1,2-Dichloroethane-D4 (8.085)+
-1,2-Dichloroethane (8.200)
-Isobutyl Alcohol (8.321)
-Trichloroethene (8.800)+
-1,4-Difluorobenzene (8.915)
-Dibromomethane (9.501)
-1,2-Dichloropropane (9.680)
-Bromodichloromethane (9.787)
-Ethyl Methacrylate (10.094)+
-1,2-Dichloroethylene (tot (10.268)
-cis-1,3-dichloropropene (10.781)
-Toluene-D8 (11.067)+
-Tetrachloroethene (11.703)
-4-methyl-2-pentanone (11.768)+
-Methyl Methacrylate (12.025)+
-Dibromochloromethane (12.275)
-1,3-Dichloropropane (12.426)
-1,2-Dibromoethane (12.611)
-2-Hexanone (13.012)
-Chlorobenzene-D5 (13.362)+
-1,1,1,2-Tetrachloroethane (13.484)
-m+p-Xylenes (13.648)
-o-Xylene (14.274)
-Styrene (14.308)+
-Isopropylbenzene (14.656)
-P-Bromofluorobenzene (15.014)
-cis-1,4-Dichloro-2-Butene (15.135)+
-1,1,2,2-Tetrachloroethane (15.293)
-Bromobenzene (15.450)+
-trans-1,4-Dichloro-2-Butene (15.593)
-tert-Butylbenzene (15.850)+
-1,2,4-Trimethylbenzene (15.936)
-sec-Butylbenzene (16.072)
-P-Isopropyltoluene (16.251)
-1,3-Dichlorobenzene (16.327)
-1,2,3-Trimethylbenzene (16.480)
-N-Butylbenzene (16.773)
1,4-Dichlorobenzene-D4 (16.422)+
-1,2-Dichlorobenzene (16.959)
-1,2-Dibromo-3-Chloropropa (17.931)
-1,3,5-Trichlorobenzene (17.960)
-Hexachlorobutadiene (18.696)
-1,2,4-Trichlorobenzene (18.732)
-Naphthalene (19.132)
-1,2,3-Trichlorobenzene (19.354)

Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3346.D
Report Date: 28-Mar-2018 14:10

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W032618.b\W3346.D
Lab Smp Id: WG225400-6
Inj Date : 26-MAR-2018 12:41 MS Autotune Date: 10-APR-2016 11:00
Operator : HG/JSS Inst ID: gcms-w.i
Smp Info : WG225400-6
Misc Info : WG225400,WG225400-4
Comment : SW846 5035
Method : \\target_server\gg\chem\gcms-w.i\W032618.b\W8SDI(08)D.m
Meth Date : 29-Mar-2018 02:42 jsampson Quant Type: ISTD
Cal Date : 26-MAR-2018 12:41 Cal File: W3346.D
Als bottle: 5 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: VOA-WS

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	0.00000	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	5.000	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	AMOUNTS ON-COL (ug/kg)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.951	1.955	(0.243)	518554	150.000	141	
2	Chloromethane	50	2.180	2.176	(0.271)	519145	150.000	136	
3	Vinyl chloride	62	2.244	2.248	(0.279)	558728	150.000	143	
4	Bromomethane	94	2.587	2.591	(0.322)	326944	150.000	141	
5	Chloroethane	64	2.716	2.720	(0.338)	384726	150.000	143	
6	Trichlorofluoromethane	101	2.859	2.863	(0.356)	965134	150.000	152	
7	Diethyl Ether	59	3.202	3.206	(0.398)	412938	150.000	148	
8	Tertiary-butyl alcohol	59	4.690	4.686	(0.583)	452525	750.000	826	
9	1,1-Dichloroethene	96	3.438	3.435	(0.428)	339945	150.000	148	
10	Carbon Disulfide	76	3.481	3.485	(0.433)	1256868	150.000	146	
11	Freon-113	151	3.474	3.478	(0.432)	294302	150.000	144	
12	Iodomethane	142	3.617	3.621	(0.450)	323578	150.000	149	
13	Acrolein	56	3.860	3.864	(0.480)	426449	750.000	768	
14	Methylene Chloride	84	4.168	4.163	(0.518)	479220	150.000	138	
15	Acetone	43	4.253	4.250	(0.529)	992705	750.000	734	
16	Isobutyl Alcohol	43	8.322	8.318	(1.035)	733854	3000.00	3040	
17	trans-1,2-Dichloroethene	96	4.382	4.386	(0.545)	390339	150.000	147	
18	Allyl Chloride	41	4.025	4.027	(0.500)	645193	150.000	151	
19	Methyl tert-butyl ether	73	4.539	4.543	(0.564)	1625533	150.000	157	
20	Acetonitrile	39	4.940	4.943	(0.614)	150225	1500.00	1480	
21	Di-isopropyl ether	45	5.126	5.129	(0.637)	1479986	150.000	159	

Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3346.D
Report Date: 28-Mar-2018 14:10

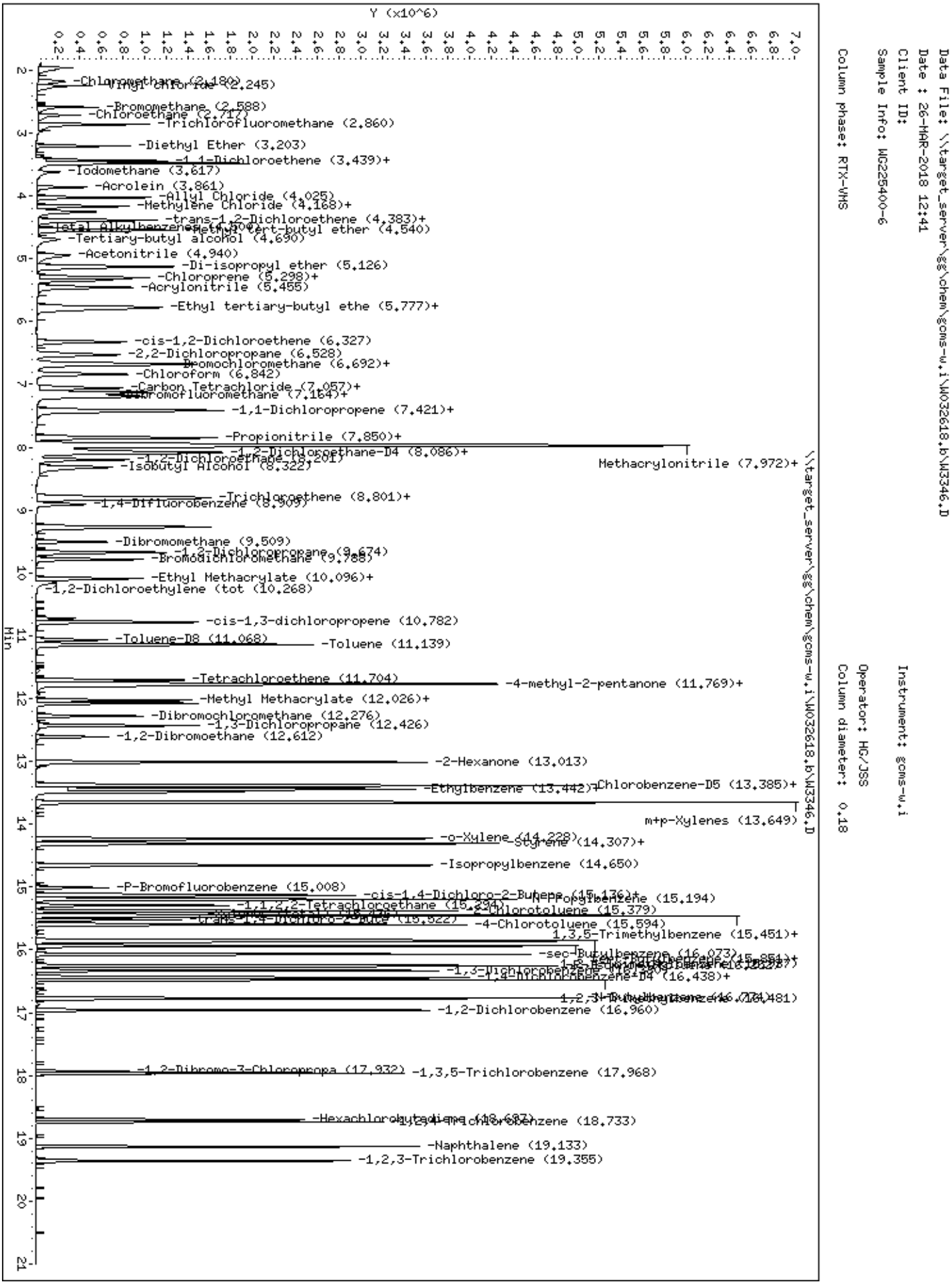
		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	AMOUNTS ON-COL (ug/kg)	REVIEW CODE
	22	Chloroprene	53	5.297	5.301	(0.659)	796279	150.000	158	
	23	Propionitrile	54	7.943	7.939	(0.988)	859411	1500.00	1550	
	24	Methacrylonitrile	41	7.971	7.968	(0.991)	3417154	1500.00	1520	
	25	1,1-Dichloroethane	63	5.340	5.337	(0.664)	856715	150.000	147	
	26	Acrylonitrile	52	5.455	5.451	(0.678)	827103	750.000	767	
	27	Ethyl tertiary-butyl ether	59	5.769	5.773	(0.717)	1546405	150.000	164	
	28	Vinyl Acetate	43	5.812	5.808	(0.652)	1061752	150.000	159	
	29	cis-1,2-Dichloroethene	96	6.327	6.323	(0.787)	451948	150.000	153	
M	30	1,2-Dichloroethylene (total)	96				842287	300.000	300	
	31	Methyl Methacrylate	41	12.076	12.079	(1.356)	538060	150.000	172	
	32	2,2-Dichloropropane	77	6.527	6.531	(0.812)	756822	150.000	152	
	33	Bromochloromethane	128	6.692	6.688	(0.832)	184368	150.000	153	
	34	Chloroform	83	6.842	6.838	(0.851)	898681	150.000	147	
	35	Carbon Tetrachloride	117	7.056	7.060	(0.792)	677736	150.000	150	
	36	Tetrahydrofuran	42	7.128	7.131	(0.886)	898536	750.000	803	
$	37	Dibromofluoromethane	113	7.163	7.167	(0.891)	116689	50.0000	48.1	
	38	1,1,1-Trichloroethane	97	7.192	7.196	(0.894)	813973	150.000	148	
	39	1,1-Dichloropropene	75	7.414	7.417	(0.832)	683825	150.000	152	
	40	2-Butanone	43	7.428	7.424	(0.924)	1425011	750.000	772	
	41	Benzene	78	7.850	7.846	(0.881)	1812503	150.000	150	
*	42	Pentafluorobenzene	168	8.043	8.039	(1.000)	209826	50.0000		
	43	Cyclohexane	56	6.670	6.674	(0.829)	705282	150.000	157	
	44	Ethyl Methacrylate	69	10.095	10.091	(1.133)	442280	150.000	174	
$	45	1,2-Dichloroethane-D4	65	8.086	8.089	(1.005)	193100	50.0000	49.1	
	46	Tertiary-amyl methyl ether	73	8.086	8.082	(1.005)	1525604	150.000	163	
	47	1,2-Dichloroethane	62	8.200	8.204	(0.921)	832022	150.000	148	
	48	Trichloroethene	95	8.829	8.833	(0.991)	468136	150.000	147	
*	49	1,4-Difluorobenzene	114	8.908	8.912	(1.000)	367981	50.0000		
	50	Dibromomethane	93	9.509	9.505	(1.067)	302005	150.000	152	
	51	1,2-Dichloropropane	63	9.673	9.677	(1.086)	491070	150.000	154	
	52	Bromodichloromethane	83	9.788	9.791	(1.099)	756403	150.000	152	
	53	cis-1,3-dichloropropene	75	10.781	10.785	(1.210)	952911	150.000	162	
	54	1,4-Dioxane	88	10.138	10.141	(1.138)	174261	3000.00	2990	
$	55	Toluene-D8	98	11.067	11.064	(1.242)	470739	50.0000	49.8	
	57	Toluene	92	11.139	11.142	(1.250)	1165571	150.000	152	
	58	4-methyl-2-pentanone	43	11.761	11.765	(1.320)	2988775	750.000	784	
	59	Tetrachloroethene	164	11.704	11.707	(0.876)	304517	150.000	149	
	60	trans-1,3-Dichloropropene	75	11.797	11.793	(1.324)	903020	150.000	157	
	61	1,1,2-Trichloroethane	83	12.026	12.029	(1.350)	397876	150.000	155	
	62	Dibromochloromethane	129	12.276	12.279	(0.919)	519030	150.000	158	
	63	1,3-Dichloropropane	76	12.426	12.430	(0.930)	937826	150.000	154	
	64	1,2-Dibromoethane	107	12.612	12.615	(1.416)	469725	150.000	158	
	65	2-Hexanone	43	13.012	13.016	(0.974)	2302436	750.000	796	
*	66	Chlorobenzene-D5	117	13.363	13.366	(1.000)	348384	50.0000		
	67	Chlorobenzene	112	13.384	13.388	(1.002)	1316338	150.000	152	
	152	1-Chlorohexane	91	13.384	13.382	(1.664)	707485	150.000	112(H)	
	68	Ethylbenzene	106	13.441	13.445	(1.006)	721519	150.000	155	
	69	1,1,1,2-Tetrachloroethane	131	13.484	13.488	(1.009)	497927	150.000	158	
M	70	Xylenes (total)	106				2754667	150.000	487	
	71	m+p-Xylenes	106	13.649	13.652	(1.021)	1840079	300.000	320	
	72	o-Xylene	106	14.235	14.231	(1.065)	914588	150.000	167	
	73	Styrene	104	14.306	14.310	(1.071)	1581798	150.000	166(A)	
	74	Bromoform	173	14.321	14.324	(1.072)	406406	150.000	171	
	75	Isopropylbenzene	105	14.657	14.653	(0.892)	2336937	150.000	154	

Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3346.D
Report Date: 28-Mar-2018 14:10

							AMOUNTS		
Compounds		QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/kg)	ON-COL (ug/kg)	REVIEW CODE
$	76 P-Bromofluorobenzene	95	15.007	15.011	(1.685)	225124	50.0000	51.7	
	77 cis-1,4-Dichloro-2-Butene	53	15.114	15.118	(0.920)	313125	150.000	158	
	78 trans-1,4-Dichloro-2-Butene	53	15.522	15.518	(0.945)	249987	150.000	156	
	79 Bromobenzene	156	15.136	15.139	(0.922)	575498	150.000	150	
	80 N-Propylbenzene	91	15.193	15.197	(0.925)	3148448	150.000	144	
	81 1,1,2,2-Tetrachloroethane	83	15.293	15.290	(0.931)	806593	150.000	148	
	82 1,3,5-Trimethylbenzene	105	15.450	15.454	(0.941)	2290715	150.000	153	
	83 2-Chlorotoluene	91	15.379	15.383	(0.936)	1975958	150.000	148	
	84 1,2,3-Trichloropropane	75	15.458	15.454	(0.941)	793048	150.000	150	
	85 4-Chlorotoluene	91	15.593	15.597	(0.949)	2136116	150.000	148	
	86 tert-Butylbenzene	119	15.851	15.847	(0.965)	2227653	150.000	156	
	87 Pentachloroethane	117	15.865	15.869	(0.966)	496525	150.000	156	
	88 1,2,4-Trimethylbenzene	105	15.937	15.940	(0.970)	2405151	150.000	150	
	89 P-Isopropyltoluene	119	16.251	16.254	(0.990)	2378537	150.000	152	
	90 1,3-Dichlorobenzene	146	16.330	16.332	(0.994)	1170589	150.000	148	
*	91 1,4-Dichlorobenzene-D4	152	16.423	16.425	(1.000)	219843	50.0000		
	92 1,4-Dichlorobenzene	146	16.444	16.440	(1.001)	1221230	150.000	146	
	93 N-Butylbenzene	91	16.773	16.770	(1.021)	2441183	150.000	145	
	94 sec-Butylbenzene	105	16.073	16.069	(0.979)	2838028	150.000	149	
	95 1,2-Dichlorobenzene	146	16.959	16.956	(1.033)	1169352	150.000	148	
	96 1,2-Dibromo-3-Chloropropane	75	17.932	17.929	(1.092)	229753	150.000	146(H)	
	97 1,3,5-Trichlorobenzene	180	17.967	17.964	(2.234)	852104	150.000	162	
	98 Hexachlorobutadiene	225	18.704	18.700	(1.139)	389517	150.000	143	
	99 1,2,4-Trichlorobenzene	180	18.740	18.736	(1.141)	764683	150.000	156	
	100 1,2,3-Trimethylbenzene	105	16.480	16.476	(2.049)	2627425	150.000	158	
	101 Naphthalene	128	19.133	19.129	(1.165)	2140059	150.000	158	
	102 1,2,3-Trichlorobenzene	180	19.354	19.358	(1.178)	706678	150.000	148	
	103 Methyl Acetate	43	4.411	4.414	(0.548)	448500	150.000	151	
	104 Methylcyclohexane	83	8.794	8.797	(1.093)	806373	150.000	161	
M	153 Total Alkylbenzenes	100				17729715	150.000	1050	

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
H - Operator selected an alternate compound hit.


Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3346.D
Date : 26-MAR-2018 12:41
Client ID:
Sample Info: WG225400-6
Column phase: RTX-VMS
Instrument: gcms-w.i
Operator: HG/JSS
Column diameter: 0.18
Y (x10^6)
Min
\\target_server\gg\chem\gcms-w.i\W032618.b\W3346.D
-Chloromethane (2.180)
-Vinyl chloride (2.245)
-Bromomethane (2.588)
-Chloroethane (2.717)
-Trichlorofluoromethane (2.860)
-Diethyl Ether (3.203)
-1,1-Dichloroethene (3.439)+
-Iodomethane (3.617)
-Acrolein (3.861)
-Allyl Chloride (4.025)
-Methylene Chloride (4.168)+
-trans-1,2-Dichloroethene (4.383)+
-Tertiary-butyl alcohol (4.690)
-Acetonitrile (4.940)
-Di-isopropyl ether (5.126)
-Chloroprene (5.298)+
-Acrylonitrile (5.455)
-Ethyl tertiary-butyl ethe (5.777)+
-cis-1,2-Dichloroethene (6.327)
-2,2-Dichloropropane (6.528)
-Bromochloromethane (6.692)+
-Chloroform (6.842)
-Carbon Tetrachloride (7.057)+
-Dibromofluoromethane (7.164)+
-1,1-Dichloropropene (7.421)+
-Propionitrile (7.850)+
-1,2-Dichloroethane-D4 (8.086)+
Methacrylonitrile (7.972)+
-Isobutyl Alcohol (8.322)
-Trichloroethene (8.801)+
-1,4-Difluorobenzene (8.909)
-Dibromomethane (9.509)
-1,2-Dichloropropane (9.674)
-Bromodichloromethane (9.788)
-Ethyl Methacrylate (10.096)+
-1,2-Dichloroethylene (tot (10.268)
-cis-1,3-dichloropropene (10.782)
-Toluene-D8 (11.068)
-Toluene (11.139)
-Tetrachloroethene (11.704)
-4-methyl-2-pentanone (11.769)+
-Methyl Methacrylate (12.026)+
-Dibromochloromethane (12.276)
-1,3-Dichloropropane (12.426)
-1,2-Dibromoethane (12.612)
-2-Hexanone (13.013)
-Ethylbenzene (13.442)+
-Chlorobenzene-D5 (13.385)+
m+p-Xylenes (13.649)
-o-Xylene (14.228)
-Styrene (14.307)+
-Isopropylbenzene (14.650)
-P-Bromofluorobenzene (15.008)
-cis-1,4-Dichloro-2-Butene (15.136)+
-1,1,2,2-Tetrachloroethane (15.294)
-2-Chlorotoluene (15.379)
-4-Chlorotoluene (15.594)
1,3,5-Trimethylbenzene (15.451)+
-sec-Butylbenzene (16.073)
-1,4-Dichlorobenzene-D4 (16.438)+
-1,2-Dichlorobenzene (16.960)
-1,2-Dibromo-3-Chloropropa (17.932)
-1,3,5-Trichlorobenzene (17.968)
-Hexachlorobutadiene (18.697)
-1,2,4-Trichlorobenzene (18.733)
-Naphthalene (19.133)
-1,2,3-Trichlorobenzene (19.355)

Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3347.D
Report Date: 28-Mar-2018 14:10

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W032618.b\W3347.D
Lab Smp Id: WG225400-5
Inj Date : 26-MAR-2018 13:19 MS Autotune Date: 10-APR-2016 11:00
Operator : HG/JSS Inst ID: gcms-w.i
Smp Info : WG225400-5
Misc Info : WG225400,WG225400-4
Comment : SW846 5035
Method : \\target_server\gg\chem\gcms-w.i\W032618.b\W8SDI(08)D.m
Meth Date : 29-Mar-2018 02:42 jsampson Quant Type: ISTD
Cal Date : 26-MAR-2018 13:19 Cal File: W3347.D
Als bottle: 6 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: VOA-WS

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	0.00000	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	5.000	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	ON-COL (ug/kg)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.954	1.955	(0.243)	371571	100.000	90.6	
2	Chloromethane	50	2.176	2.176	(0.271)	414596	100.000	97.4	
3	Vinyl chloride	62	2.247	2.248	(0.280)	425738	100.000	97.2	
4	Bromomethane	94	2.590	2.591	(0.322)	244290	100.000	94.1	
5	Chloroethane	64	2.719	2.720	(0.338)	286627	100.000	95.2	
6	Trichlorofluoromethane	101	2.862	2.863	(0.356)	645936	100.000	90.8	
7	Diethyl Ether	59	3.205	3.206	(0.399)	307016	100.000	98.6	
8	Tertiary-butyl alcohol	59	4.685	4.686	(0.583)	328780	500.000	537	
9	1,1-Dichloroethene	96	3.434	3.435	(0.427)	249983	100.000	97.3	
10	Carbon Disulfide	76	3.484	3.485	(0.433)	940672	100.000	97.8	
11	Freon-113	151	3.477	3.478	(0.433)	222198	100.000	97.2	
12	Iodomethane	142	3.620	3.621	(0.450)	222537	100.000	103	
13	Acrolein	56	3.863	3.864	(0.481)	322341	500.000	519	
14	Methylene Chloride	84	4.163	4.163	(0.518)	363648	100.000	93.6	
15	Acetone	43	4.249	4.250	(0.529)	685584	500.000	453	
16	Isobutyl Alcohol	43	8.318	8.318	(1.035)	519960	2000.00	1960	
17	trans-1,2-Dichloroethene	96	4.385	4.386	(0.546)	293393	100.000	98.8	
18	Allyl Chloride	41	4.028	4.027	(0.501)	481697	100.000	101	
19	Methyl tert-butyl ether	73	4.542	4.543	(0.565)	1198401	100.000	104	
20	Acetonitrile	39	4.943	4.943	(0.615)	108972	1000.00	960	
21	Di-isopropyl ether	45	5.129	5.129	(0.638)	1078437	100.000	104	

Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3347.D
Report Date: 28-Mar-2018 14:10

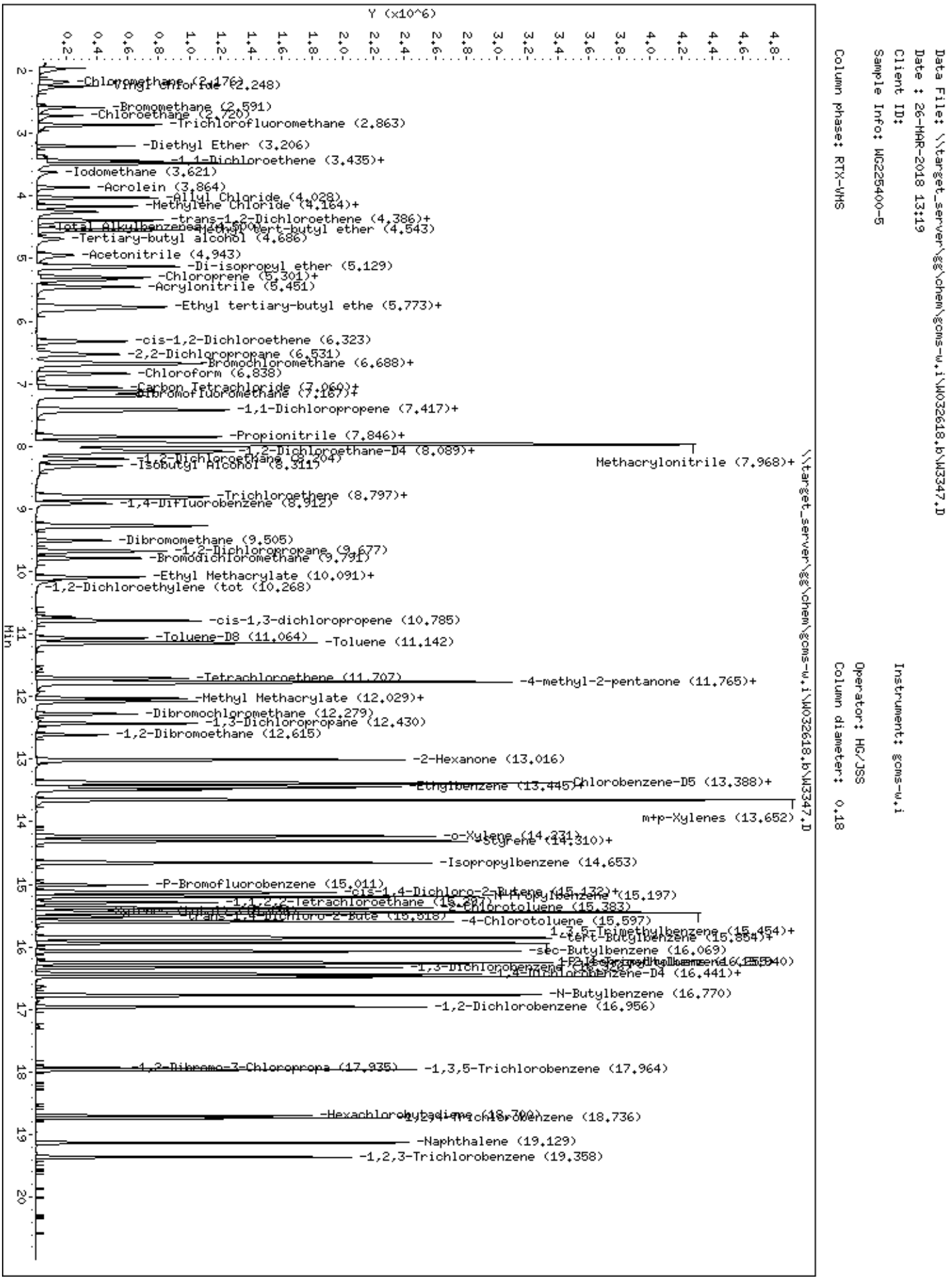
			QUANT SIG					AMOUNTS		
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/kg)	ON-COL (ug/kg)	REVIEW CODE
	22	Chloroprene	53	5.300	5.301	(0.659)	562552	100.000	99.9	
	23	Propionitrile	54	7.939	7.939	(0.988)	631622	1000.00	1020	
	24	Methacrylonitrile	41	7.967	7.968	(0.991)	2451556	1000.00	972	
	25	1,1-Dichloroethane	63	5.336	5.337	(0.664)	620197	100.000	95.2	
	26	Acrylonitrile	52	5.450	5.451	(0.678)	604232	500.000	501	
	27	Ethyl tertiary-butyl ether	59	5.772	5.773	(0.718)	1109952	100.000	105	
	28	Vinyl Acetate	43	5.808	5.808	(0.652)	780717	100.000	106	
	29	cis-1,2-Dichloroethene	96	6.323	6.323	(0.787)	324898	100.000	98.6	
M	30	1,2-Dichloroethylene (total)	96				618291	100.000	197	
	31	Methyl Methacrylate	41	12.079	12.079	(1.355)	379288	100.000	110	
	32	2,2-Dichloropropane	77	6.530	6.531	(0.812)	528963	100.000	95.3	
	33	Bromochloromethane	128	6.687	6.688	(0.832)	136562	100.000	101	
	34	Chloroform	83	6.838	6.838	(0.851)	637806	100.000	93.2	
	35	Carbon Tetrachloride	117	7.059	7.060	(0.792)	469040	100.000	94.5	
	36	Tetrahydrofuran	42	7.131	7.131	(0.887)	645973	500.000	516	
$	37	Dibromofluoromethane	113	7.167	7.167	(0.891)	131014	50.0000	48.3	
	38	1,1,1-Trichloroethane	97	7.195	7.196	(0.895)	564238	100.000	91.6	
	39	1,1-Dichloropropene	75	7.417	7.417	(0.832)	482350	100.000	97.2	
	40	2-Butanone	43	7.424	7.424	(0.924)	1031153	500.000	500	
	41	Benzene	78	7.846	7.846	(0.880)	1312697	100.000	98.9	
*	42	Pentafluorobenzene	168	8.039	8.039	(1.000)	234647	50.0000		
	43	Cyclohexane	56	6.673	6.674	(0.830)	510757	100.000	102	
	44	Ethyl Methacrylate	69	10.091	10.091	(1.132)	312903	100.000	112	
$	45	1,2-Dichloroethane-D4	65	8.089	8.089	(1.006)	196909	50.0000	44.8	
	46	Tertiary-amyl methyl ether	73	8.082	8.082	(1.005)	1093270	100.000	104	
	47	1,2-Dichloroethane	62	8.203	8.204	(0.921)	566466	100.000	91.6	
	48	Trichloroethene	95	8.832	8.833	(0.991)	327103	100.000	93.3	
*	49	1,4-Difluorobenzene	114	8.911	8.912	(1.000)	404719	50.0000		
	50	Dibromomethane	93	9.505	9.505	(1.067)	214677	100.000	98.3	
	51	1,2-Dichloropropane	63	9.676	9.677	(1.086)	352747	100.000	100	
	52	Bromodichloromethane	83	9.791	9.791	(1.099)	520282	100.000	95.1	
	53	cis-1,3-dichloropropene	75	10.784	10.785	(1.210)	664278	100.000	102	
	54	1,4-Dioxane	88	10.141	10.141	(1.138)	128664	2000.00	2020	
$	55	Toluene-D8	98	11.063	11.064	(1.242)	519875	50.0000	50.0	
	57	Toluene	92	11.142	11.142	(1.250)	827017	100.000	98.0	
	58	4-methyl-2-pentanone	43	11.764	11.765	(1.320)	2123837	500.000	507	
	59	Tetrachloroethene	164	11.707	11.707	(0.876)	218635	100.000	98.2	
	60	trans-1,3-Dichloropropene	75	11.793	11.793	(1.323)	627185	100.000	99.1	
	61	1,1,2-Trichloroethane	83	12.029	12.029	(1.350)	277494	100.000	98.3	
	62	Dibromochloromethane	129	12.279	12.279	(0.919)	361040	100.000	101	
	63	1,3-Dichloropropane	76	12.429	12.430	(0.930)	661096	100.000	99.3	
	64	1,2-Dibromoethane	107	12.615	12.615	(1.416)	332197	100.000	102	
	65	2-Hexanone	43	13.015	13.016	(0.974)	1615182	500.000	512	
*	66	Chlorobenzene-D5	117	13.366	13.366	(1.000)	379893	50.0000		
	67	Chlorobenzene	112	13.387	13.388	(1.002)	923421	100.000	98.1	
	152	1-Chlorohexane	91	13.387	13.382	(1.665)	469595	100.000	95.7(H)	
	68	Ethylbenzene	106	13.444	13.445	(1.006)	502752	100.000	99.3	
	69	1,1,1,2-Tetrachloroethane	131	13.487	13.488	(1.009)	343303	100.000	99.6	
M	70	Xylenes (total)	106				1891307	100.000	307	
	71	m+p-Xylenes	106	13.652	13.652	(1.021)	1261583	200.000	201	
	72	o-Xylene	106	14.231	14.231	(1.065)	629724	100.000	106	
	73	Styrene	104	14.309	14.310	(1.071)	1082447	100.000	104	
	74	Bromoform	173	14.324	14.324	(1.072)	275052	100.000	106	
	75	Isopropylbenzene	105	14.653	14.653	(0.892)	1599575	100.000	100	

Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3347.D
Report Date: 28-Mar-2018 14:10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	ON-COL (ug/kg)	REVIEW CODE
$	76 P-Bromofluorobenzene	95	15.010	15.011	(1.684)	235477	50.0000	49.2	
	77 cis-1,4-Dichloro-2-Butene	53	15.117	15.118	(0.920)	209122	100.000	100	
	78 trans-1,4-Dichloro-2-Butene	53	15.518	15.518	(0.945)	163842	100.000	97.3	
	79 Bromobenzene	156	15.139	15.139	(0.922)	398558	100.000	98.4	
	80 N-Propylbenzene	91	15.196	15.197	(0.925)	2167413	100.000	93.8	
	81 1,1,2,2-Tetrachloroethane	83	15.289	15.290	(0.931)	559085	100.000	97.2	
	82 1,3,5-Trimethylbenzene	105	15.454	15.454	(0.941)	1544120	100.000	98.1	
	83 2-Chlorotoluene	91	15.382	15.383	(0.936)	1362473	100.000	96.6	
	84 1,2,3-Trichloropropane	75	15.454	15.454	(0.941)	533537	100.000	96.0	
	85 4-Chlorotoluene	91	15.597	15.597	(0.950)	1462329	100.000	95.8	
	86 tert-Butylbenzene	119	15.847	15.847	(0.965)	1501122	100.000	99.9	
	87 Pentachloroethane	117	15.868	15.869	(0.966)	333870	100.000	99.5	
	88 1,2,4-Trimethylbenzene	105	15.940	15.940	(0.970)	1640926	100.000	97.2	
	89 P-Isopropyltoluene	119	16.254	16.254	(0.990)	1630366	100.000	99.1	
	90 1,3-Dichlorobenzene	146	16.333	16.332	(0.994)	813236	100.000	97.4	
*	91 1,4-Dichlorobenzene-D4	152	16.426	16.425	(1.000)	231756	50.0000		
	92 1,4-Dichlorobenzene	146	16.440	16.440	(1.001)	842847	100.000	95.6	
	93 N-Butylbenzene	91	16.769	16.770	(1.021)	1672219	100.000	94.1	
	94 sec-Butylbenzene	105	16.068	16.069	(0.978)	1934232	100.000	96.1	
	95 1,2-Dichlorobenzene	146	16.955	16.956	(1.032)	820287	100.000	98.3	
	96 1,2-Dibromo-3-Chloropropane	75	17.927	17.929	(1.091)	163723	100.000	98.9(H)	
	97 1,3,5-Trichlorobenzene	180	17.963	17.964	(2.234)	591521	100.000	100	
	98 Hexachlorobutadiene	225	18.700	18.700	(1.138)	270663	100.000	94.2	
	99 1,2,4-Trichlorobenzene	180	18.735	18.736	(1.141)	525739	100.000	102	
	100 1,2,3-Trimethylbenzene	105	16.476	16.476	(2.049)	1807766	100.000	97.5	
	101 Naphthalene	128	19.129	19.129	(1.165)	1536620	100.000	108	
	102 1,2,3-Trichlorobenzene	180	19.357	19.358	(1.178)	503620	100.000	99.7	
	103 Methyl Acetate	43	4.414	4.414	(0.549)	341190	100.000	103	
	104 Methylcyclohexane	83	8.797	8.797	(1.094)	575785	100.000	103	
M	153 Total Alkylbenzenes	100				12090398	100.000	678	

QC Flag Legend

H - Operator selected an alternate compound hit.


Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3347.D
Date : 26-MAR-2018 13:19
Client ID:
Sample Info: WG225400-5
Column phase: RTX-VMS
Instrument: gcms-w.i
Operator: HG/JSS
Column diameter: 0.18
\\target_server\gg\chem\gcms-w.i\W032618.b\W3347.D
Y (x10^6)
Min
-Chloromethane (2.176)
-Vinyl chloride (2.248)
-Bromomethane (2.591)
-Chloroethane (2.720)
-Trichlorofluoromethane (2.863)
-Diethyl Ether (3.206)
-1,1-Dichloroethene (3.435)+
-Iodomethane (3.621)
-Acrolein (3.864)
-Allyl Chloride (4.028)
-Methylene Chloride (4.164)+
-trans-1,2-Dichloroethene (4.386)+
-Total Alkylbenzenes (4.400)
-Ethyl tert-butyl ether (4.543)
-Tertiary-butyl alcohol (4.686)
-Acetonitrile (4.943)
-Di-isopropyl ether (5.129)
-Chloroprene (5.301)+
-Acrylonitrile (5.451)
-Ethyl tertiary-butyl ethe (5.773)+
-cis-1,2-Dichloroethene (6.323)
-2,2-Dichloropropane (6.531)
-Bromochloromethane (6.688)+
-Chloroform (6.838)
-Carbon Tetrachloride (7.060)+
-Dibromofluoromethane (7.167)+
-1,1-Dichloropropene (7.417)+
-Propionitrile (7.846)+
-1,2-Dichloroethane-D4 (8.089)+
-1,2-Dichloroethane (8.204)
-Isobutyl Alcohol (8.311)
Methacrylonitrile (7.968)+
-Trichloroethene (8.797)+
-1,4-Difluorobenzene (8.912)
-Dibromomethane (9.505)
-1,2-Dichloropropane (9.677)
-Bromodichloromethane (9.791)
-Ethyl Methacrylate (10.091)+
-1,2-Dichloroethylene (tot (10.268)
-cis-1,3-dichloropropene (10.785)
-Toluene-D8 (11.064)
-Toluene (11.142)
-Tetrachloroethene (11.707)
-4-methyl-2-pentanone (11.765)+
-Methyl Methacrylate (12.029)+
-Dibromochloromethane (12.279)
-1,3-Dichloropropane (12.430)
-1,2-Dibromoethane (12.615)
-2-Hexanone (13.016)
-Chlorobenzene-D5 (13.388)+
-Ethylbenzene (13.445)
m+p-Xylenes (13.652)
-o-Xylene (14.231)
-Styrene (14.310)+
-Isopropylbenzene (14.653)
-P-Bromofluorobenzene (15.011)
-cis-1,4-Dichloro-2-Butene (15.132)+
-N-Propylbenzene (15.197)
-1,1,2,2-Tetrachloroethane (15.287)
-2-Chlorotoluene (15.383)
-4-Chlorotoluene (15.597)
-1,2,5-Trimethylbenzene (15.454)+
-tert-Butylbenzene (15.884)+
-sec-Butylbenzene (16.069)
-1,3-Dichlorobenzene (16.255)
-1,4-Dichlorobenzene-D4 (16.441)+
-N-Butylbenzene (16.770)
-1,2-Dichlorobenzene (16.956)
-1,2-Dibromo-3-Chloropropa (17.935)
-1,3,5-Trichlorobenzene (17.964)
-Hexachlorobutadiene (18.700)
-1,2,4-Trichlorobenzene (18.736)
-Naphthalene (19.129)
-1,2,3-Trichlorobenzene (19.358)

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL2079
Lab ID : WG225300-4
Analytical Date: 03/23/18 07:53
Lab File ID : P4879.D
Instrument ID: GCMS-P
Initial Calibration Date(s): 03/19/18 16:00 03/19/18 18:51
Column ID:

	Compound	$\overline{\text{RRF}}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
1	Dichlorodifluoromethane	0.41040	0.36517	0.36517	0.010	-11.02184	20.00000	Averaged
2	Chloromethane	0.58524	0.53502	0.53502	0.100	-8.58022	20.00000	Averaged
3	Vinyl chloride	0.61371	0.58653	0.58653	0.010	-4.42993	20.00000	Averaged
4	Bromomethane	0.27205	0.30956	0.30956	0.010	13.78565	20.00000	Averaged
5	Chloroethane	0.39224	0.37623	0.37623	0.010	-4.08073	20.00000	Averaged
6	Trichlorofluoromethane	0.84149	0.87126	0.87126	0.010	3.53855	20.00000	Averaged
8	1,1-Dichloroethene	0.38056	0.36671	0.36671	0.100	-3.63979	20.00000	Averaged
9	Freon-113	0.28377	0.26442	0.26442	0.010	-6.81798	20.00000	Averaged
10	Carbon Disulfide	1.29664	1.26450	1.26450	0.010	-2.47820	20.00000	Averaged
14	Methylene Chloride	50.00000	44.31260	0.41337	0.010	-11.37480	20.00000	Linear
15	Acetone	0.13142	0.12185	0.12185	0.010	-7.28173	20.00000	Averaged
16	trans-1,2-Dichloroethene	0.41302	0.38124	0.38124	0.010	-7.69422	20.00000	Averaged
18	Methyl tert-butyl ether	1.19023	0.99922	0.99922	0.010	-16.04868	20.00000	Averaged
23	1,1-Dichloroethane	0.76941	0.70626	0.70626	0.100	-8.20822	20.00000	Averaged
27	cis-1,2-Dichloroethene	50.00000	42.63164	0.40026	0.010	-14.73672	20.00000	Linear
28	2,2-Dichloropropane	0.52330	0.52643	0.52643	0.010	0.59657	20.00000	Averaged
29	Bromochloromethane	50.00000	47.83397	0.18720	0.010	-4.33205	20.00000	Linear
31	Chloroform	0.73287	0.68140	0.68140	0.010	-7.02357	20.00000	Averaged
32	Carbon Tetrachloride	0.30195	0.30814	0.30814	0.010	2.04931	20.00000	Averaged
35	1,1,1-Trichloroethane	0.63452	0.59238	0.59238	0.010	-6.64136	20.00000	Averaged
36	2-Butanone	0.21262	0.19543	0.19543	0.010	-8.08698	20.00000	Averaged
37	1,1-Dichloropropene	0.33899	0.33300	0.33300	0.010	-1.76568	20.00000	Averaged
38	Benzene	1.02097	0.98232	0.98232	0.010	-3.78605	20.00000	Averaged
44	1,2-Dichloroethane	0.38372	0.36300	0.36300	0.010	-5.40035	20.00000	Averaged
47	Trichloroethene	0.24195	0.24164	0.24164	0.010	-0.12965	20.00000	Averaged
49	Dibromomethane	50.00000	44.50381	0.14843	0.010	-10.99237	20.00000	Linear
50	1,2-Dichloropropane	0.25773	0.25012	0.25012	0.010	-2.95202	20.00000	Averaged
51	Bromodichloromethane	0.32571	0.32656	0.32656	0.010	0.26033	20.00000	Averaged
57	cis-1,3-dichloropropene	50.00000	44.46038	0.44273	0.010	-11.07925	20.00000	Linear
59	Toluene	0.66239	0.63917	0.63917	0.010	-3.50444	20.00000	Averaged
60	Tetrachloroethene	0.17941	0.18941	0.18941	0.010	5.57449	20.00000	Averaged
61	4-methyl-2-pentanone	250	214	0.27744	0.010	-14.38715	20.00000	Linear
62	trans-1,3-Dichloropropene	50.00000	43.92316	0.40484	0.010	-12.15369	20.00000	Linear
63	1,1,2-Trichloroethane	50.00000	43.76072	0.19096	0.010	-12.47856	20.00000	Linear
64	Dibromochloromethane	50.00000	49.73041	0.25073	0.010	-0.53918	20.00000	Linear
65	1,3-Dichloropropane	0.43636	0.45708	0.45708	0.010	4.74902	20.00000	Averaged
66	1,2-Dibromoethane	50.00000	43.29511	0.23034	0.010	-13.40978	20.00000	Linear
67	2-Hexanone	250	235	0.19067	0.010	-6.03156	20.00000	Linear
69	Chlorobenzene	0.69689	0.74024	0.74024	0.300	6.22053	20.00000	Averaged
71	Ethylbenzene	50.00000	49.35989	0.39734	0.010	-1.28021	20.00000	Linear
72	1,1,1,2-Tetrachloroethane	0.23203	0.25753	0.25753	0.010	10.98715	20.00000	Averaged

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG225300-4
Lab File ID : P4879.D
Initial Calibration Date(s): 03/19/18 16:00 03/19/18 18:51

SDG: SL2079
Analytical Date: 03/23/18 07:53
Instrument ID: GCMS-P
Column ID:

Compound	RRF/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
73 m+p-Xylenes	100	98.77580	0.50210	0.010	-1.22420	20.00000	Linear
74 o-Xylene	50.00000	49.10464	0.46582	0.010	-1.79071	20.00000	Linear
75 Styrene	50.00000	48.40886	0.81520	0.010	-3.18228	20.00000	Linear
76 Bromoform	50.00000	46.74039	0.16755	0.100	-6.51923	20.00000	Linear
77 Isopropylbenzene	50.00000	51.96425	2.18541	0.010	3.92850	20.00000	Linear
80 Bromobenzene	0.50641	0.57221	0.57221	0.010	12.99390	20.00000	Averaged
81 N-Propylbenzene	2.40517	2.85078	2.85078	0.010	18.52685	20.00000	Averaged
82 1,1,2,2-Tetrachloroethane	0.59097	0.63368	0.63368	0.300	7.22745	20.00000	Averaged
83 2-Chlorotoluene	1.44109	1.66836	1.66836	0.010	15.77080	20.00000	Averaged
84 1,2,3-Trichloropropane	0.54128	0.57920	0.57920	0.010	7.00461	20.00000	Averaged
85 1,3,5-Trimethylbenzene	50.00000	52.53166	1.93911	0.010	5.06332	20.00000	Linear
87 4-Chlorotoluene	50.00000	52.57020	1.77676	0.010	5.14040	20.00000	Linear
88 tert-Butylbenzene	50.00000	51.55093	1.91176	0.010	3.10186	20.00000	Linear
90 1,2,4-Trimethylbenzene	50.00000	53.09373	2.02799	0.010	6.18746	20.00000	Linear
91 sec-Butylbenzene	50.00000	53.93534	2.38977	0.010	7.87068	20.00000	Linear
92 P-Isopropyltoluene	50.00000	52.57438	1.98486	0.010	5.14876	20.00000	Linear
93 1,3-Dichlorobenzene	0.97948	1.10250	1.10250	0.010	12.55968	20.00000	Averaged
95 1,4-Dichlorobenzene	1.06962	1.16934	1.16934	0.010	9.32285	20.00000	Averaged
97 N-Butylbenzene	50.00000	54.40886	1.83546	0.010	8.81771	20.00000	Linear
99 1,2-Dichlorobenzene	0.93306	1.05254	1.05254	0.010	12.80536	20.00000	Averaged
100 1,2-Dibromo-3-Chloropropane	50.00000	46.43313	0.10543	0.010	-7.13374	20.00000	Linear
102 Hexachlorobutadiene	0.19448	0.21334	0.21334	0.010	9.69811	20.00000	Averaged
103 1,2,4-Trichlorobenzene	0.57871	0.65065	0.65065	0.010	12.42960	20.00000	Averaged
104 Naphthalene	50.00000	46.90097	1.61676	0.010	-6.19806	20.00000	Linear
105 1,2,3-Trichlorobenzene	0.53288	0.56099	0.56099	0.010	5.27350	20.00000	Averaged
34 Dibromofluoromethane	0.49134	0.48217	0.48217	0.010	-1.86697	20.00000	Averaged
42 1,2-Dichloroethane-D4	0.69650	0.66188	0.66188	0.010	-4.97063	20.00000	Averaged
58 Toluene-D8	1.26736	1.22699	1.22699	0.010	-3.18550	20.00000	Averaged
78 P-Bromofluorobenzene	0.55158	0.48537	0.48537	0.010	-12.00386	20.00000	Averaged

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG225300-4
Lab File ID : P4879.D
Initial Calibration Date(s): 03/19/18 16:00 03/19/18 18:51

SDG: SL2079
Analytical Date: 03/23/18 07:53
Instrument ID: GCMS-P
Column ID:

*** = Compound out of QC criteria**

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http://katahdinlab.com
sales@katahdinlab.com

Data File: \\target_server\gg\chem\gcms-p.i\P032318.b\P4879.D
Report Date: 28-Mar-2018 12:29

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-p.i\P032318.b\P4879.D
Lab Smp Id: WG225300-4
Inj Date : 23-MAR-2018 07:53 MS Autotune Date: 24-JAN-2018 13:57
Operator : hg Inst ID: gcms-p.i
Smp Info : WG225300-4,SL2079
Misc Info : WG225300,WG225041-4,SL2079-14
Comment : SW846 5030
Method : \\target_server\gg\chem\gcms-p.i\P032318.b\P8A05(62)D.m
Meth Date : 26-Mar-2018 12:22 gcms-p.i Quant Type: ISTD
Cal Date : 19-MAR-2018 18:17 Cal File: P4810.D
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all50.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

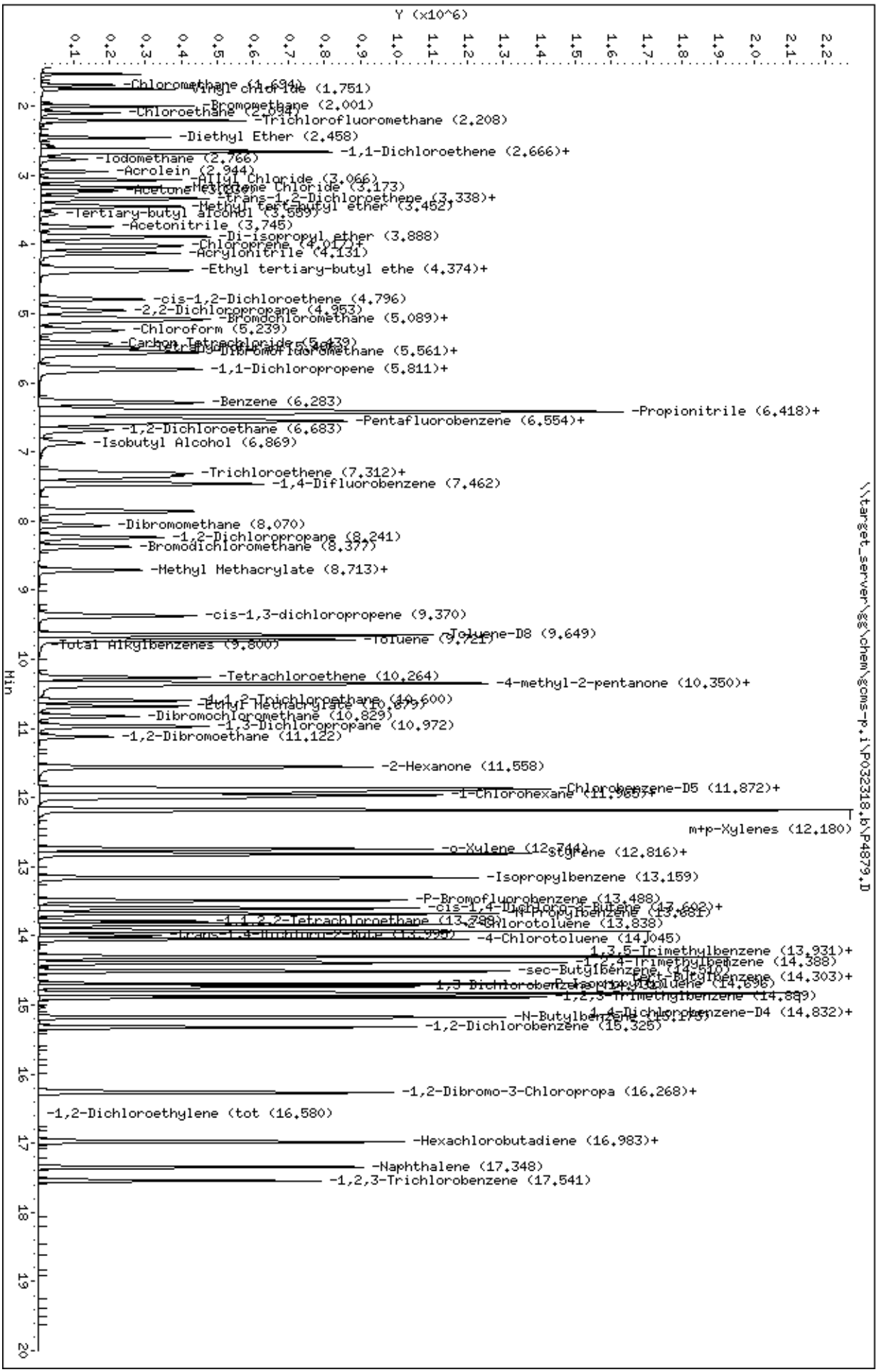
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.536	1.537	(0.235)	168980	50.0000	44.5	
2	Chloromethane	50	1.693	1.694	(0.259)	247580	50.0000	45.7	
3	Vinyl chloride	62	1.750	1.751	(0.268)	271412	50.0000	47.8	
4	Bromomethane	94	2.000	2.001	(0.306)	143246	50.0000	56.9	
5	Chloroethane	64	2.093	2.101	(0.321)	174100	50.0000	48.0	
6	Trichlorofluoromethane	101	2.208	2.209	(0.338)	403173	50.0000	51.8	
7	Diethyl Ether	59	2.458	2.459	(0.376)	185798	50.0000	45.1	
19	Tertiary-butyl alcohol	59	3.559	3.560	(0.545)	55665	250.000	237	
8	1,1-Dichloroethene	96	2.629	2.631	(0.403)	169694	50.0000	48.2	
10	Carbon Disulfide	76	2.665	2.666	(0.408)	585142	50.0000	48.8	
9	Freon-113	151	2.658	2.659	(0.407)	122360	50.0000	46.6	
11	Iodomethane	142	2.765	2.766	(0.423)	149722	50.0000	41.0	
12	Acrolein	56	2.944	2.945	(0.451)	169118	250.000	207	
14	Methylene Chloride	84	3.173	3.181	(0.486)	191285	50.0000	44.3	
15	Acetone	43	3.230	3.231	(0.494)	281938	250.000	232	
45	Isobutyl Alcohol	43	6.868	6.869	(1.051)	127144	1000.00	1090	
16	trans-1,2-Dichloroethene	96	3.337	3.338	(0.511)	176417	50.0000	46.2	
13	Allyl Chloride	41	3.065	3.074	(0.469)	268945	50.0000	43.8	
18	Methyl tert-butyl ether	73	3.451	3.453	(0.528)	462383	50.0000	42.0	
20	Acetonitrile	41	3.744	3.753	(0.573)	267363	500.000	446	
21	Di-isopropyl ether	45	3.887	3.889	(0.595)	546434	50.0000	42.0	
22	Chloroprene	53	4.009	4.017	(0.614)	266151	50.0000	45.0	
39	Propionitrile	54	6.389	6.390	(0.978)	306217	500.000	457	
40	Methacrylonitrile	41	6.418	6.426	(0.982)	1374236	500.000	445	

Data File: \\target_server\gg\chem\gcms-p.i\P032318.b\P4879.D
Report Date: 28-Mar-2018 12:29

							AMOUNTS		
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	23 1,1-Dichloroethane	63	4.045	4.053	(0.619)	326816	50.0000	45.9	
	24 Acrylonitrile	52	4.130	4.131	(0.632)	331235	250.000	214	
	25 Ethyl tertiary-butyl ether	59	4.366	4.368	(0.668)	476000	50.0000	37.6	
	26 Vinyl Acetate	43	4.395	4.396	(0.589)	389366	50.0000	52.6	
	27 cis-1,2-Dichloroethene	96	4.788	4.796	(0.733)	185220	50.0000	42.6	
	52 Methyl Methacrylate	41	8.712	8.706	(1.168)	167565	50.0000	38.7	
	28 2,2-Dichloropropane	77	4.953	4.954	(0.758)	243601	50.0000	50.3	
	29 Bromochloromethane	128	5.103	5.104	(0.781)	86625	50.0000	47.8	
	31 Chloroform	83	5.246	5.240	(0.803)	315313	50.0000	46.5	
	32 Carbon Tetrachloride	117	5.431	5.440	(0.728)	232170	50.0000	51.0	
	33 Tetrahydrofuran	42	5.496	5.497	(0.841)	281823	250.000	198	
$	34 Dibromofluoromethane	113	5.560	5.561	(0.851)	223121	50.0000	49.1	
	35 1,1,1-Trichloroethane	97	5.567	5.576	(0.852)	274122	50.0000	46.7	
	37 1,1-Dichloropropene	75	5.803	5.797	(0.778)	250905	50.0000	49.1	
	36 2-Butanone	43	5.817	5.819	(0.891)	452169	250.000	230	
	38 Benzene	78	6.289	6.290	(0.843)	740136	50.0000	48.1	
*	41 Pentafluorobenzene	168	6.532	6.533	(1.000)	462745	50.0000		
	30 Cyclohexane	56	5.081	5.075	(0.778)	288098	50.0000	41.6	
	53 Ethyl Methacrylate	69	10.678	10.679	(1.431)	254774	50.0000	38.9	
$	42 1,2-Dichloroethane-D4	65	6.561	6.562	(1.004)	306283	50.0000	47.5	
	43 Tertiary-amyl methyl ether	73	6.568	6.562	(1.005)	444573	50.0000	36.4	
	44 1,2-Dichloroethane	62	6.682	6.684	(0.896)	273506	50.0000	47.3	
	47 Trichloroethene	95	7.361	7.363	(0.987)	182065	50.0000	49.9	
*	48 1,4-Difluorobenzene	114	7.461	7.463	(1.000)	753459	50.0000		
	49 Dibromomethane	93	8.062	8.063	(1.080)	111833	50.0000	44.5	
	50 1,2-Dichloropropane	63	8.241	8.242	(1.104)	188456	50.0000	48.5	
	51 Bromodichloromethane	83	8.376	8.378	(1.123)	246051	50.0000	50.1	
	57 cis-1,3-dichloropropene	75	9.377	9.378	(1.257)	333581	50.0000	44.5	
	54 1,4-Dioxane	88	8.712	8.721	(1.168)	31585	1000.00	751	
$	58 Toluene-D8	98	9.649	9.650	(1.293)	924486	50.0000	48.4	
	59 Toluene	92	9.720	9.721	(1.303)	481590	50.0000	48.2	
	61 4-methyl-2-pentanone	43	10.342	10.343	(1.386)	1045196	250.000	214	
	60 Tetrachloroethene	164	10.263	10.265	(0.865)	142930	50.0000	52.8	
	62 trans-1,3-Dichloropropene	75	10.378	10.379	(1.391)	305027	50.0000	43.9	
	63 1,1,2-Trichloroethane	83	10.599	10.593	(1.421)	143879	50.0000	43.8	
	64 Dibromochloromethane	129	10.828	10.829	(0.912)	189206	50.0000	49.7	
	65 1,3-Dichloropropane	76	10.971	10.972	(0.924)	344923	50.0000	52.4	
	66 1,2-Dibromoethane	107	11.121	11.122	(1.490)	173548	50.0000	43.3	
	67 2-Hexanone	43	11.557	11.558	(0.974)	719419	250.000	235	
*	68 Chlorobenzene-D5	117	11.872	11.873	(1.000)	754620	50.0000		
	69 Chlorobenzene	112	11.893	11.894	(1.002)	558602	50.0000	53.1	
	70 1-Chlorohexane	91	11.922	11.923	(1.004)	274410	50.0000	54.4	
	71 Ethylbenzene	106	11.965	11.966	(1.008)	299840	50.0000	49.4	
	72 1,1,1,2-Tetrachloroethane	131	12.000	12.002	(1.011)	194336	50.0000	55.5	
	73 m+p-Xylenes	106	12.179	12.180	(1.026)	757783	100.000	98.8	
	74 o-Xylene	106	12.744	12.745	(1.073)	351514	50.0000	49.1	
	75 Styrene	104	12.815	12.817	(1.079)	615164	50.0000	48.4	
	76 Bromoform	173	12.815	12.817	(1.079)	126435	50.0000	46.7	
	77 Isopropylbenzene	105	13.158	13.160	(0.888)	873867	50.0000	52.0	
$	78 P-Bromofluorobenzene	95	13.487	13.488	(1.808)	365707	50.0000	44.0	
	79 cis-1,4-Dichloro-2-Butene	53	13.609	13.610	(0.918)	96622	50.0000	47.8	
	86 trans-1,4-Dichloro-2-Butene	53	13.995	13.996	(0.944)	77072	50.0000	56.0	
	80 Bromobenzene	156	13.594	13.596	(0.917)	228806	50.0000	56.5	
	81 N-Propylbenzene	91	13.680	13.674	(0.923)	1139923	50.0000	59.3	

Data File: \\target_server\gg\chem\gcms-p.i\P032318.b\P4879.D
Report Date: 28-Mar-2018 12:29

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
82	1,1,2,2-Tetrachloroethane	83	13.787	13.789	(0.930)	253385	50.0000	53.6	
85	1,3,5-Trimethylbenzene	105	13.930	13.932	(0.940)	775380	50.0000	52.5	
83	2-Chlorotoluene	91	13.837	13.839	(0.933)	667116	50.0000	57.9	
84	1,2,3-Trichloropropane	75	13.923	13.924	(0.939)	231601	50.0000	53.5	
87	4-Chlorotoluene	91	14.045	14.046	(0.947)	710462	50.0000	52.6	
88	tert-Butylbenzene	119	14.302	14.303	(0.965)	764444	50.0000	51.6	
89	Pentachloroethane	165	14.309	14.310	(0.965)	110725	50.0000	56.4	
90	1,2,4-Trimethylbenzene	105	14.388	14.389	(0.971)	810921	50.0000	53.1	
92	P-Isopropyltoluene	119	14.695	14.696	(0.991)	793673	50.0000	52.6	
93	1,3-Dichlorobenzene	146	14.738	14.739	(0.994)	440849	50.0000	56.3	
* 94	1,4-Dichlorobenzene-D4	152	14.824	14.825	(1.000)	399864	50.0000		
95	1,4-Dichlorobenzene	146	14.845	14.847	(1.001)	467576	50.0000	54.7	
97	N-Butylbenzene	91	15.174	15.175	(1.024)	733935	50.0000	54.4	
91	sec-Butylbenzene	105	14.509	14.511	(0.979)	955583	50.0000	53.9	
99	1,2-Dichlorobenzene	146	15.324	15.325	(1.034)	420873	50.0000	56.4	
100	1,2-Dibromo-3-Chloropropane	75	16.239	16.239	(1.095)	42158	50.0000	46.4	
101	1,3,5-Trichlorobenzene	180	16.268	16.268	(1.097)	290651	50.0000	55.0	
102	Hexachlorobutadiene	225	16.961	16.962	(1.144)	85306	50.0000	54.8	
103	1,2,4-Trichlorobenzene	180	16.983	16.984	(1.146)	260170	50.0000	56.2	
96	1,2,3-Trimethylbenzene	105	14.888	14.889	(1.004)	820312	50.0000	55.2	
104	Naphthalene	128	17.347	17.347	(1.170)	646486	50.0000	46.9	
105	1,2,3-Trichlorobenzene	180	17.540	17.541	(1.183)	224318	50.0000	52.6	
17	Methyl Acetate	43	3.351	3.353	(0.513)	158399	50.0000	45.8	
46	Methylcyclohexane	83	7.311	7.313	(1.119)	284682	50.0000	40.5	


Data File: \\target_server\gg\chem\gcms-p.i\P032318.b\P4879.D
Date : 23-MAR-2018 07:53
Client ID:
Sample Info: WG225300-4,SL2079
Purge Volume: 5.0
Column phase: RTX-VMS
Instrument: gcms-p.i
Operator: hg
Column diameter: 0.18
\\target_server\gg\chem\gcms-p.i\P032318.b\P4879.D
Y (x10^6)
Min
-Chloromethane (1.694)
-Vinyl chloride (1.751)
-Bromomethane (2.001)
-Chloroethane (2.034)
-Trichlorofluoromethane (2.208)
-Diethyl Ether (2.458)
-1,1-Dichloroethene (2.666)+
-Iodomethane (2.766)
-Acrolein (2.944)
-Allyl Chloride (3.066)
-Methylene Chloride (3.173)
-Acetone (3.209)
-trans-1,2-Dichloroethene (3.338)+
-Methyl tert-butyl ether (3.452)
-Tertiary-butyl alcohol (3.559)
-Acetonitrile (3.745)
-Di-isopropyl ether (3.888)
-Chloroprene (4.017)+
-Acrylonitrile (4.131)
-Ethyl tertiary-butyl ethe (4.374)+
-cis-1,2-Dichloroethene (4.796)
-2,2-Dichloropropane (4.953)
-Bromochloromethane (5.089)+
-Chloroform (5.239)
-Carbon Tetrachloride (5.439)
-Dibromofluoromethane (5.561)+
-1,1-Dichloropropene (5.811)+
-Benzene (6.283)
-Propionitrile (6.418)+
-Pentafluorobenzene (6.554)+
-1,2-Dichloroethane (6.683)
-Isobutyl Alcohol (6.869)
-Trichloroethene (7.312)+
-1,4-Difluorobenzene (7.462)
-Dibromomethane (8.070)
-1,2-Dichloropropane (8.241)
-Bromodichloromethane (8.377)
-Methyl Methacrylate (8.713)+
-cis-1,3-dichloropropene (9.370)
-Toluene-D8 (9.649)
-Toluene (9.721)
-Total Alkylbenzenes (9.800)
-Tetrachloroethene (10.264)
-4-methyl-2-pentanone (10.350)+
-1,1,2-Trichloroethane (10.600)
-Ethyl Methacrylate (10.679)
-Dibromochloromethane (10.829)
-1,3-Dichloropropane (10.972)
-1,2-Dibromoethane (11.122)
-2-Hexanone (11.558)
-Chlorobenzene-D5 (11.872)+
-1-Chlorohexane (11.965)+
m+p-Xylenes (12.180)
-o-Xylene (12.744)
-Styrene (12.816)+
-Isopropylbenzene (13.159)
-P-Bromofluorobenzene (13.488)
-cis-1,4-Dichloro-2-Butene (13.602)+
-n-Propylbenzene (13.681)
-1,1,2,2-Tetrachloroethane (13.788)
-2-Chlorotoluene (13.838)
-trans-1,4-Dichloro-2-Bute (13.998)
-4-Chlorotoluene (14.045)
-1,3,5-Trimethylbenzene (13.931)+
-1,2,4-Trimethylbenzene (14.388)
-sec-Butylbenzene (14.510)
-tert-Butylbenzene (14.303)+
-1,3-Dichlorobenzene (14.696)
-p-Isopropyltoluene (14.696)
-1,2,3-Trimethylbenzene (14.889)
-N-Butylbenzene (15.175)
-1,4-Dichlorobenzene-D4 (14.832)+
-1,2-Dichlorobenzene (15.325)
-1,2-Dibromo-3-Chloropropa (16.268)+
-1,2-Dichloroethylene (tot (16.580)
-Hexachlorobutadiene (16.983)+
-Naphthalene (17.348)
-1,2,3-Trichlorobenzene (17.541)

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG225300-5
Lab File ID : P4898.D
Initial Calibration Date(s): 03/19/18 16:00 03/19/18 18:51

SDG: SL2079
Analytical Date: 03/23/18 18:58
Instrument ID: GCMS-P
Column ID:

	Compound	$\overline{RRF}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
1	Dichlorodifluoromethane	0.41040	0.34611	0.34611	0.010	-15.66513	50.00000	Averaged
2	Chloromethane	0.58524	0.53883	0.53883	0.100	-7.92970	50.00000	Averaged
3	Vinyl chloride	0.61371	0.52993	0.52993	0.010	-13.65141	50.00000	Averaged
4	Bromomethane	0.27205	0.29912	0.29912	0.010	9.94873	50.00000	Averaged
5	Chloroethane	0.39224	0.38338	0.38338	0.010	-2.25843	50.00000	Averaged
6	Trichlorofluoromethane	0.84149	0.87671	0.87671	0.010	4.18598	50.00000	Averaged
8	1,1-Dichloroethene	0.38056	0.35866	0.35866	0.100	-5.75553	50.00000	Averaged
9	Freon-113	0.28377	0.30531	0.30531	0.010	7.59262	50.00000	Averaged
10	Carbon Disulfide	1.29664	1.21933	1.21933	0.010	-5.96228	50.00000	Averaged
14	Methylene Chloride	50.00000	42.73653	0.39882	0.010	-14.52694	50.00000	Linear
15	Acetone	0.13142	0.12588	0.12588	0.010	-4.21666	50.00000	Averaged
16	trans-1,2-Dichloroethene	0.41302	0.35916	0.35916	0.010	-13.03969	50.00000	Averaged
18	Methyl tert-butyl ether	1.19023	0.96483	0.96483	0.010	-18.93767	50.00000	Averaged
23	1,1-Dichloroethane	0.76941	0.69805	0.69805	0.100	-9.27464	50.00000	Averaged
27	cis-1,2-Dichloroethene	50.00000	41.42025	0.38877	0.010	-17.15949	50.00000	Linear
28	2,2-Dichloropropane	0.52330	0.36708	0.36708	0.010	-29.85378	50.00000	Averaged
29	Bromochloromethane	50.00000	48.22266	0.18869	0.010	-3.55469	50.00000	Linear
31	Chloroform	0.73287	0.67070	0.67070	0.010	-8.48317	50.00000	Averaged
32	Carbon Tetrachloride	0.30195	0.29466	0.29466	0.010	-2.41362	50.00000	Averaged
35	1,1,1-Trichloroethane	0.63452	0.58642	0.58642	0.010	-7.58050	50.00000	Averaged
36	2-Butanone	0.21262	0.20710	0.20710	0.010	-2.59939	50.00000	Averaged
37	1,1-Dichloropropene	0.33899	0.32097	0.32097	0.010	-5.31681	50.00000	Averaged
38	Benzene	1.02097	0.95110	0.95110	0.010	-6.84411	50.00000	Averaged
44	1,2-Dichloroethane	0.38372	0.35629	0.35629	0.010	-7.14982	50.00000	Averaged
47	Trichloroethene	0.24195	0.23032	0.23032	0.010	-4.80902	50.00000	Averaged
49	Dibromomethane	50.00000	45.39370	0.15149	0.010	-9.21259	50.00000	Linear
50	1,2-Dichloropropane	0.25773	0.24195	0.24195	0.010	-6.12094	50.00000	Averaged
51	Bromodichloromethane	0.32571	0.31791	0.31791	0.010	-2.39533	50.00000	Averaged
57	cis-1,3-dichloropropene	50.00000	41.45556	0.41162	0.010	-17.08889	50.00000	Linear
59	Toluene	0.66239	0.62517	0.62517	0.010	-5.61759	50.00000	Averaged
60	Tetrachloroethene	0.17941	0.17662	0.17662	0.010	-1.55177	50.00000	Averaged
61	4-methyl-2-pentanone	250	225	0.29236	0.010	-9.95769	50.00000	Linear
62	trans-1,3-Dichloropropene	50.00000	42.06564	0.38682	0.010	-15.86871	50.00000	Linear
63	1,1,2-Trichloroethane	50.00000	45.44039	0.19852	0.010	-9.11923	50.00000	Linear
64	Dibromochloromethane	50.00000	47.95654	0.24151	0.010	-4.08691	50.00000	Linear
65	1,3-Dichloropropane	0.43636	0.45632	0.45632	0.010	4.57488	50.00000	Averaged
66	1,2-Dibromoethane	50.00000	43.06904	0.22909	0.010	-13.86192	50.00000	Linear
67	2-Hexanone	250	242	0.19700	0.010	-3.00430	50.00000	Linear
69	Chlorobenzene	0.69689	0.71818	0.71818	0.300	3.05498	50.00000	Averaged
71	Ethylbenzene	50.00000	48.24576	0.38813	0.010	-3.50848	50.00000	Linear
72	1,1,1,2-Tetrachloroethane	0.23203	0.24815	0.24815	0.010	6.94636	50.00000	Averaged

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG225300-5
Lab File ID : P4898.D
Initial Calibration Date(s): 03/19/18 16:00 03/19/18 18:51

SDG: SL2079
Analytical Date: 03/23/18 18:58
Instrument ID: GCMS-P
Column ID:

Compound	RRF/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
73 m+p-Xylenes	100	96.15297	0.48841	0.010	-3.84703	50.00000	Linear
74 o-Xylene	50.00000	47.76591	0.45279	0.010	-4.46817	50.00000	Linear
75 Styrene	50.00000	46.93076	0.78927	0.010	-6.13848	50.00000	Linear
76 Bromoform	50.00000	45.92369	0.16447	0.100	-8.15261	50.00000	Linear
77 Isopropylbenzene	50.00000	49.30430	2.07153	0.010	-1.39141	50.00000	Linear
80 Bromobenzene	0.50641	0.54734	0.54734	0.010	8.08293	50.00000	Averaged
81 N-Propylbenzene	2.40517	2.71500	2.71500	0.010	12.88154	50.00000	Averaged
82 1,1,2,2-Tetrachloroethane	0.59097	0.62696	0.62696	0.300	6.09008	50.00000	Averaged
83 2-Chlorotoluene	1.44109	1.57961	1.57961	0.010	9.61252	50.00000	Averaged
84 1,2,3-Trichloropropane	0.54128	0.57591	0.57591	0.010	6.39723	50.00000	Averaged
85 1,3,5-Trimethylbenzene	50.00000	50.15065	1.84916	0.010	0.30129	50.00000	Linear
87 4-Chlorotoluene	50.00000	50.38103	1.70187	0.010	0.76205	50.00000	Linear
88 tert-Butylbenzene	50.00000	49.13485	1.81958	0.010	-1.73031	50.00000	Linear
90 1,2,4-Trimethylbenzene	50.00000	50.64434	1.93275	0.010	1.28868	50.00000	Linear
91 sec-Butylbenzene	50.00000	51.30281	2.27131	0.010	2.60562	50.00000	Linear
92 P-Isopropyltoluene	50.00000	49.76792	1.87632	0.010	-0.46416	50.00000	Linear
93 1,3-Dichlorobenzene	0.97948	1.05547	1.05547	0.010	7.75833	50.00000	Averaged
95 1,4-Dichlorobenzene	1.06962	1.11979	1.11979	0.010	4.69031	50.00000	Averaged
97 N-Butylbenzene	50.00000	50.78661	1.71037	0.010	1.57321	50.00000	Linear
99 1,2-Dichlorobenzene	0.93306	1.03260	1.03260	0.010	10.66805	50.00000	Averaged
100 1,2-Dibromo-3-Chloropropane	50.00000	49.44722	0.11252	0.010	-1.10556	50.00000	Linear
102 Hexachlorobutadiene	0.19448	0.19102	0.19102	0.010	-1.77957	50.00000	Averaged
103 1,2,4-Trichlorobenzene	0.57871	0.62251	0.62251	0.010	7.56791	50.00000	Averaged
104 Naphthalene	50.00000	45.82142	1.57842	0.010	-8.35715	50.00000	Linear
105 1,2,3-Trichlorobenzene	0.53288	0.54166	0.54166	0.010	1.64598	50.00000	Averaged
34 Dibromofluoromethane	0.49134	0.49432	0.49432	0.010	0.60701	50.00000	Averaged
42 1,2-Dichloroethane-D4	0.69650	0.68691	0.68691	0.010	-1.37808	50.00000	Averaged
58 Toluene-D8	1.26736	1.23766	1.23766	0.010	-2.34338	50.00000	Averaged
78 P-Bromofluorobenzene	0.55158	0.49890	0.49890	0.010	-9.55088	50.00000	Averaged

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG225300-5
Lab File ID : P4898.D
Initial Calibration Date(s): 03/19/18 16:00 03/19/18 18:51

SDG: SL2079
Analytical Date: 03/23/18 18:58
Instrument ID: GCMS-P
Column ID:

*** = Compound out of QC criteria**

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
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http://katahdinlab.com
sales@katahdinlab.com

Data File: \\target_server\gg\chem\gcms-p.i\P032318.b\P4898.D
Report Date: 28-Mar-2018 14:16

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-p.i\P032318.b\P4898.D
Lab Smp Id: WG225300-5 Client Smp ID: ontinuing Calibrati
Inj Date : 23-MAR-2018 18:58 MS Autotune Date: 24-JAN-2018 13:57
Operator : hg Inst ID: gcms-p.i
Smp Info : WG225300-5,SL2079
Misc Info : WG225300,WG225041-4,SL2079-14
Comment : SW846 5030
Method : \\target_server\gg\chem\gcms-p.i\P032318.b\P8A05(62)D.m
Meth Date : 28-Mar-2018 14:16 gcms-p.i Quant Type: ISTD
Cal Date : 19-MAR-2018 18:17 Cal File: P4810.D
Als bottle: 20 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SW8260-S.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

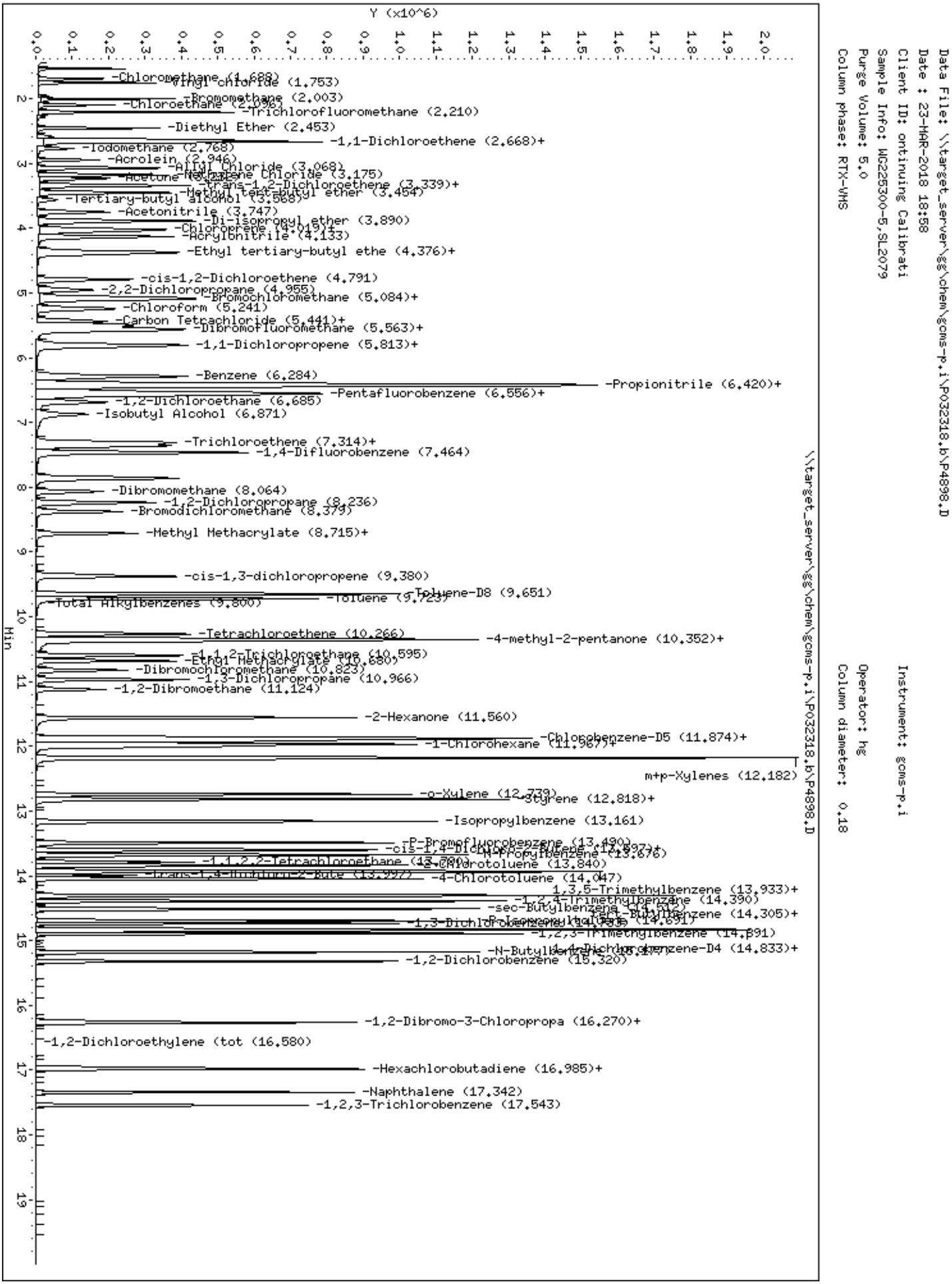
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.538	1.537	(0.235)	145342	50.0000	42.2	
2	Chloromethane	50	1.688	1.694	(0.258)	226270	50.0000	46.0	
3	Vinyl chloride	62	1.752	1.751	(0.268)	222533	50.0000	43.2	
4	Bromomethane	94	2.002	2.001	(0.306)	125608	50.0000	55.0	
5	Chloroethane	64	2.095	2.101	(0.321)	160992	50.0000	48.9	
6	Trichlorofluoromethane	101	2.210	2.209	(0.338)	368155	50.0000	52.1	
7	Diethyl Ether	59	2.453	2.459	(0.375)	169860	50.0000	45.5	
8	1,1-Dichloroethene	96	2.631	2.631	(0.403)	150611	50.0000	47.1	
9	Freon-113	151	2.660	2.659	(0.407)	128210	50.0000	53.8	
10	Carbon Disulfide	76	2.667	2.666	(0.408)	512028	50.0000	47.0	
11	Iodomethane	142	2.767	2.766	(0.424)	111757	50.0000	33.7	
12	Acrolein	56	2.946	2.945	(0.451)	155541	250.000	210	
13	Allyl Chloride	41	3.067	3.074	(0.469)	225909	50.0000	40.6	
14	Methylene Chloride	84	3.175	3.181	(0.486)	167474	50.0000	42.7	
15	Acetone	43	3.232	3.231	(0.495)	264308	250.000	239	
16	trans-1,2-Dichloroethene	96	3.339	3.338	(0.511)	150822	50.0000	43.5	
17	Methyl Acetate	43	3.353	3.353	(0.513)	151805	50.0000	48.4	
18	Methyl tert-butyl ether	73	3.453	3.453	(0.529)	405159	50.0000	40.5	
19	Tertiary-butyl alcohol	59	3.561	3.560	(0.545)	60290	250.000	287	
20	Acetonitrile	41	3.746	3.753	(0.573)	273476	500.000	503	
21	Di-isopropyl ether	45	3.889	3.889	(0.595)	488811	50.0000	41.4	
22	Chloroprene	53	4.011	4.017	(0.614)	237925	50.0000	44.3	
23	1,1-Dichloroethane	63	4.047	4.053	(0.619)	293130	50.0000	45.4	
24	Acrylonitrile	52	4.132	4.131	(0.632)	316077	250.000	225	

Data File: \\target_server\gg\chem\gcms-p.i\P032318.b\P4898.D
Report Date: 28-Mar-2018 14:16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
	25 Ethyl tertiary-butyl ether	59	4.368	4.368	(0.669)	422849	50.0000	36.9	
	26 Vinyl Acetate	43	4.397	4.396	(0.589)	357739	50.0000	52.6	
	27 cis-1,2-Dichloroethene	96	4.790	4.796	(0.733)	163255	50.0000	41.4	
	28 2,2-Dichloropropane	77	4.954	4.954	(0.758)	154146	50.0000	35.1	
	29 Bromochloromethane	128	5.105	5.104	(0.781)	79234	50.0000	48.2	
	30 Cyclohexane	56	5.076	5.075	(0.777)	255400	50.0000	40.6	
	31 Chloroform	83	5.240	5.240	(0.802)	281645	50.0000	45.8	
	32 Carbon Tetrachloride	117	5.433	5.440	(0.728)	203763	50.0000	48.8	
	33 Tetrahydrofuran	42	5.505	5.497	(0.842)	276256	250.000	214	
$	34 Dibromofluoromethane	113	5.562	5.561	(0.851)	207580	50.0000	50.3	
	35 1,1,1-Trichloroethane	97	5.569	5.576	(0.852)	246255	50.0000	46.2	
	36 2-Butanone	43	5.819	5.819	(0.891)	434828	250.000	244	
	37 1,1-Dichloropropene	75	5.805	5.797	(0.778)	221952	50.0000	47.3	
	38 Benzene	78	6.284	6.290	(0.842)	657694	50.0000	46.6	
	39 Propionitrile	54	6.398	6.390	(0.979)	305457	500.000	502	
	40 Methacrylonitrile	41	6.420	6.426	(0.982)	1297824	500.000	463	
*	41 Pentafluorobenzene	168	6.534	6.533	(1.000)	419927	50.0000		
$	42 1,2-Dichloroethane-D4	65	6.563	6.562	(1.004)	288450	50.0000	49.3	
	43 Tertiary-amyl methyl ether	73	6.570	6.562	(1.005)	393047	50.0000	35.5	
	44 1,2-Dichloroethane	62	6.684	6.684	(0.896)	246377	50.0000	46.4	
	45 Isobutyl Alcohol	43	6.870	6.869	(1.051)	140807	1000.00	1350	
	46 Methylcyclohexane	83	7.306	7.313	(1.118)	250628	50.0000	39.4	
	47 Trichloroethene	95	7.363	7.363	(0.987)	159267	50.0000	47.6	
*	48 1,4-Difluorobenzene	114	7.463	7.463	(1.000)	691512	50.0000		
	49 Dibromomethane	93	8.064	8.063	(1.080)	104755	50.0000	45.4	
	50 1,2-Dichloropropane	63	8.235	8.242	(1.103)	167314	50.0000	46.9	
	51 Bromodichloromethane	83	8.378	8.378	(1.123)	219840	50.0000	48.8	
	52 Methyl Methacrylate	41	8.714	8.706	(1.168)	158606	50.0000	39.8	
	53 Ethyl Methacrylate	69	10.680	10.679	(1.431)	234982	50.0000	39.1	
	54 1,4-Dioxane	88	8.714	8.721	(1.168)	41544	1000.00	1080	
	57 cis-1,3-dichloropropene	75	9.379	9.378	(1.257)	284643	50.0000	41.4	
$	58 Toluene-D8	98	9.644	9.650	(1.292)	855858	50.0000	48.8	
	59 Toluene	92	9.722	9.721	(1.303)	432316	50.0000	47.2	
	60 Tetrachloroethene	164	10.265	10.265	(0.865)	124528	50.0000	49.2	
	61 4-methyl-2-pentanone	43	10.351	10.343	(1.387)	1010854	250.000	225	
	62 trans-1,3-Dichloropropene	75	10.380	10.379	(1.391)	267493	50.0000	42.1	
	63 1,1,2-Trichloroethane	83	10.594	10.593	(1.419)	137277	50.0000	45.4	
	64 Dibromochloromethane	129	10.830	10.829	(0.913)	170280	50.0000	48.0	
	65 1,3-Dichloropropane	76	10.973	10.972	(0.925)	321732	50.0000	52.3	
	66 1,2-Dibromoethane	107	11.123	11.122	(1.490)	158417	50.0000	43.1	
	67 2-Hexanone	43	11.559	11.558	(0.974)	694480	250.000	242	
*	68 Chlorobenzene-D5	117	11.867	11.873	(1.000)	705055	50.0000		
	69 Chlorobenzene	112	11.888	11.894	(1.002)	506358	50.0000	51.5	
	70 1-Chlorohexane	91	11.924	11.923	(1.005)	251533	50.0000	53.4	
	71 Ethylbenzene	106	11.967	11.966	(1.008)	273655	50.0000	48.2	
	72 1,1,1,2-Tetrachloroethane	131	12.002	12.002	(1.011)	174961	50.0000	53.5	
	73 m+p-Xylenes	106	12.181	12.180	(1.027)	688716	100.000	96.2	
	74 o-Xylene	106	12.739	12.745	(1.073)	319240	50.0000	47.8	
	75 Styrene	104	12.817	12.817	(1.080)	556476	50.0000	46.9	
	76 Bromoform	173	12.817	12.817	(1.080)	115960	50.0000	45.9	
	77 Isopropylbenzene	105	13.160	13.160	(0.888)	785640	50.0000	49.3	
$	78 P-Bromofluorobenzene	95	13.489	13.488	(1.807)	344996	50.0000	45.2	
	79 cis-1,4-Dichloro-2-Butene	53	13.604	13.610	(0.918)	75138	50.0000	39.5	
	80 Bromobenzene	156	13.596	13.596	(0.917)	207582	50.0000	54.0	

Data File: \\target_server\gg\chem\gcms-p.i\P032318.b\P4898.D
Report Date: 28-Mar-2018 14:16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
81	N-Propylbenzene	91	13.675	13.674	(0.922)	1029679	50.0000	56.4	
82	1,1,2,2-Tetrachloroethane	83	13.789	13.789	(0.930)	237777	50.0000	53.0	
83	2-Chlorotoluene	91	13.839	13.839	(0.933)	599077	50.0000	54.8	
84	1,2,3-Trichloropropane	75	13.925	13.924	(0.939)	218418	50.0000	53.2	
85	1,3,5-Trimethylbenzene	105	13.932	13.932	(0.940)	701306	50.0000	50.2	
86	trans-1,4-Dichloro-2-Butene	53	13.997	13.996	(0.944)	62686	50.0000	48.0	
87	4-Chlorotoluene	91	14.047	14.046	(0.947)	645446	50.0000	50.4	
88	tert-Butylbenzene	119	14.304	14.303	(0.965)	690087	50.0000	49.1	
89	Pentachloroethane	165	14.311	14.310	(0.965)	98877	50.0000	53.1	
90	1,2,4-Trimethylbenzene	105	14.390	14.389	(0.971)	733006	50.0000	50.6	
91	sec-Butylbenzene	105	14.511	14.511	(0.979)	861408	50.0000	51.3	
92	P-Isopropyltoluene	119	14.690	14.696	(0.991)	711607	50.0000	49.8	
93	1,3-Dichlorobenzene	146	14.733	14.739	(0.994)	400293	50.0000	53.9	
* 94	1,4-Dichlorobenzene-D4	152	14.826	14.825	(1.000)	379256	50.0000		
95	1,4-Dichlorobenzene	146	14.840	14.847	(1.001)	424686	50.0000	52.3	
96	1,2,3-Trimethylbenzene	105	14.890	14.889	(1.004)	750009	50.0000	53.2	
97	N-Butylbenzene	91	15.176	15.175	(1.024)	648668	50.0000	50.8	
99	1,2-Dichlorobenzene	146	15.319	15.325	(1.033)	391619	50.0000	55.3	
100	1,2-Dibromo-3-Chloropropane	75	16.234	16.239	(1.095)	42672	50.0000	49.4	
101	1,3,5-Trichlorobenzene	180	16.270	16.268	(1.097)	261207	50.0000	52.2	
102	Hexachlorobutadiene	225	16.963	16.962	(1.144)	72444	50.0000	49.1	
103	1,2,4-Trichlorobenzene	180	16.985	16.984	(1.146)	236091	50.0000	53.8	
104	Naphthalene	128	17.342	17.347	(1.170)	598626	50.0000	45.8	
105	1,2,3-Trichlorobenzene	180	17.542	17.541	(1.183)	205426	50.0000	50.8	


Data File: \\target_server\gg\chem\gcms-p.i\P032318.b\P4898.D
Date : 23-MAR-2018 18:58
Client ID: ontinuing Calibrati
Sample Info: WG225300-5,SL2079
Purge Volume: 5.0
Column phase: RTX-VMS
Instrument: gcms-p.i
Operator: hg
Column diameter: 0.18
\\target_server\gg\chem\gcms-p.i\P032318.b\P4898.D
Y (x10^6)
Min
-Chloromethane (1.688)
-Vinyl chloride (1.753)
-Bromomethane (2.003)
-Chloroethane (2.096)
-Trichlorofluoromethane (2.210)
-Diethyl Ether (2.453)
-1,1-Dichloroethene (2.668)+
-Iodomethane (2.768)
-Acrolein (2.946)
-Allyl Chloride (3.068)
-Methylene Chloride (3.175)
-trans-1,2-Dichloroethene (3.339)+
-Methyl tert-butyl ether (3.454)
-Tertiary-butyl alcohol (3.568)
-Acetonitrile (3.747)
-Di-isopropyl ether (3.890)
-Chloroprene (4.019)+
-Acrylonitrile (4.133)
-Ethyl tertiary-butyl ethe (4.376)+
-cis-1,2-Dichloroethene (4.791)
-2,2-Dichloropropane (4.955)
-Bromochloromethane (5.084)+
-Chloroform (5.241)
-Carbon Tetrachloride (5.441)+
-Dibromofluoromethane (5.563)+
-1,1-Dichloropropene (5.813)+
-Benzene (6.284)
-Propionitrile (6.420)+
-Pentafluorobenzene (6.556)+
-1,2-Dichloroethane (6.685)
-Isobutyl Alcohol (6.871)
-Trichloroethene (7.314)+
-1,4-Difluorobenzene (7.464)
-Dibromomethane (8.064)
-1,2-Dichloropropane (8.236)
-Bromodichloromethane (8.379)
-Methyl Methacrylate (8.715)+
-cis-1,3-dichloropropene (9.380)
-Toluene-D8 (9.651)
-Total Alkylbenzenes (9.800)
-Toluene (9.723)
-Tetrachloroethene (10.266)
-4-methyl-2-pentanone (10.352)+
-1,1,2-Trichloroethane (10.595)
-Ethyl Methacrylate (10.680)
-Dibromochloromethane (10.823)
-1,3-Dichloropropane (10.966)
-1,2-Dibromoethane (11.124)
-2-Hexanone (11.560)
-Chlorobenzene-D5 (11.874)+
-1-Chlorohexane (11.967)+
m+p-Xylenes (12.182)
-o-Xylene (12.739)
-Styrene (12.818)+
-Isopropylbenzene (13.161)
-P-Bromofluorobenzene (13.490)
-N-Propylbenzene (13.676)
-1,1,2,2-Tetrachloroethane (13.790)
-2-Chlorotoluene (13.840)
-4-Chlorotoluene (14.047)
1,3,5-Trimethylbenzene (13.933)+
-1,2,4-Trimethylbenzene (14.390)
-sec-Butylbenzene (14.512)
-P-Isopropyltoluene (14.691)
-1,3-Dichlorobenzene (14.733)
-1,2,3-Trimethylbenzene (14.891)
-N-Butylbenzene (15.177)
-1,4-Dichlorobenzene-D4 (14.833)+
-1,2-Dichlorobenzene (15.320)
-1,2-Dibromo-3-Chloropropa (16.270)+
-1,2-Dichloroethylene (tot (16.580)
-Hexachlorobutadiene (16.985)+
-Naphthalene (17.342)
-1,2,3-Trichlorobenzene (17.543)

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL2079
Lab ID : WG225350-4
Analytical Date: 03/24/18 09:25
Lab File ID : W3321.D
Instrument ID: GCMS-W
Initial Calibration Date(s): 03/23/18 09:41 03/23/18 13:16
Column ID:

	Compound	$\overline{\text{RRF}}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type	
1	Dichlorodifluoromethane	0.71008	0.56466	0.56466	0.010	-20.47947	20.00000	Averaged	*
2	Chloromethane	0.82523	0.67265	0.67265	0.100	-18.49004	20.00000	Averaged	
3	Vinyl chloride	0.78611	0.66718	0.66718	0.010	-15.12840	20.00000	Averaged	
4	Bromomethane	0.45321	0.38789	0.38789	0.010	-14.41280	20.00000	Averaged	
5	Chloroethane	0.48705	0.45670	0.45670	0.010	-6.23236	20.00000	Averaged	
6	Trichlorofluoromethane	1.04090	0.93242	0.93242	0.010	-10.42215	20.00000	Averaged	
9	1,1-Dichloroethene	0.49495	0.43317	0.43317	0.010	-12.48240	20.00000	Averaged	
10	Carbon Disulfide	1.80043	1.56613	1.56613	0.010	-13.01324	20.00000	Averaged	
11	Freon-113	0.35741	0.31967	0.31967	0.010	-10.56014	20.00000	Averaged	
14	Methylene Chloride	0.77996	0.66341	0.66341	0.010	-14.94343	20.00000	Averaged	
15	Acetone	0.27760	0.29173	0.29173	0.010	5.08961	20.00000	Averaged	
17	trans-1,2-Dichloroethene	0.56459	0.49299	0.49299	0.010	-12.68109	20.00000	Averaged	
19	Methyl tert-butyl ether	2.12316	2.21251	2.21251	0.010	4.20834	20.00000	Averaged	
25	1,1-Dichloroethane	1.13050	1.06329	1.06329	0.100	-5.94570	20.00000	Averaged	
29	cis-1,2-Dichloroethene	0.62416	0.58973	0.58973	0.010	-5.51571	20.00000	Averaged	
32	2,2-Dichloropropane	0.88755	0.83421	0.83421	0.010	-6.00996	20.00000	Averaged	
33	Bromochloromethane	0.26749	0.26478	0.26478	0.010	-1.01156	20.00000	Averaged	
34	Chloroform	1.13995	1.11579	1.11579	0.010	-2.11966	20.00000	Averaged	
35	Carbon Tetrachloride	0.45200	0.40368	0.40368	0.010	-10.69035	20.00000	Averaged	
38	1,1,1-Trichloroethane	0.96832	0.90332	0.90332	0.010	-6.71271	20.00000	Averaged	
39	1,1-Dichloropropene	0.49707	0.43896	0.43896	0.010	-11.69120	20.00000	Averaged	
40	2-Butanone	0.39410	0.41876	0.41876	0.010	6.25599	20.00000	Averaged	
41	Benzene	1.42461	1.28237	1.28237	0.010	-9.98463	20.00000	Averaged	
47	1,2-Dichloroethane	0.56848	0.57757	0.57757	0.010	1.59816	20.00000	Averaged	
48	Trichloroethene	0.34963	0.30531	0.30531	0.010	-12.67541	20.00000	Averaged	
50	Dibromomethane	0.22201	0.22121	0.22121	0.010	-0.35806	20.00000	Averaged	
51	1,2-Dichloropropane	0.37754	0.35996	0.35996	0.010	-4.65632	20.00000	Averaged	
52	Bromodichloromethane	0.51184	0.50855	0.50855	0.010	-0.64310	20.00000	Averaged	
53	cis-1,3-dichloropropene	0.66169	0.66101	0.66101	0.010	-0.10325	20.00000	Averaged	
57	Toluene	0.89040	0.78296	0.78296	0.010	-12.06591	20.00000	Averaged	
58	4-methyl-2-pentanone	0.44588	0.46899	0.46899	0.010	5.18467	20.00000	Averaged	
59	Tetrachloroethene	0.25014	0.20688	0.20688	0.010	-17.29114	20.00000	Averaged	
60	trans-1,3-Dichloropropene	0.61729	0.62750	0.62750	0.010	1.65466	20.00000	Averaged	
61	1,1,2-Trichloroethane	0.30063	0.29966	0.29966	0.010	-0.32187	20.00000	Averaged	
62	Dibromochloromethane	0.36444	0.36234	0.36234	0.010	-0.57812	20.00000	Averaged	
63	1,3-Dichloropropane	0.71371	0.70294	0.70294	0.010	-1.50906	20.00000	Averaged	
64	1,2-Dibromoethane	0.34804	0.34567	0.34567	0.010	-0.68247	20.00000	Averaged	
65	2-Hexanone	0.34272	0.36287	0.36287	0.010	5.88050	20.00000	Averaged	
67	Chlorobenzene	1.01966	0.90880	0.90880	0.300	-10.87202	20.00000	Averaged	
68	Ethylbenzene	0.54670	0.47022	0.47022	0.010	-13.98880	20.00000	Averaged	
69	1,1,1,2-Tetrachloroethane	0.35242	0.33551	0.33551	0.010	-4.79871	20.00000	Averaged	

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG225350-4
Lab File ID : W3321.D
Initial Calibration Date(s): 03/23/18 09:41 03/23/18 13:16

SDG: SL2079
Analytical Date: 03/24/18 09:25
Instrument ID: GCMS-W
Column ID:

	Compound	RRF/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
71	m+p-Xylenes	0.68337	0.58921	0.58921	0.010	-13.77887	20.00000	Averaged
72	o-Xylene	0.64869	0.59198	0.59198	0.010	-8.74250	20.00000	Averaged
73	Styrene	1.12350	1.04971	1.04971	0.010	-6.56779	20.00000	Averaged
74	Bromoform	0.27172	0.27300	0.27300	0.100	0.47088	20.00000	Averaged
75	Isopropylbenzene	2.65569	2.34280	2.34280	0.010	-11.78167	20.00000	Averaged
79	Bromobenzene	0.69434	0.63964	0.63964	0.010	-7.87841	20.00000	Averaged
80	N-Propylbenzene	3.72395	3.25553	3.25553	0.010	-12.57860	20.00000	Averaged
81	1,1,2,2-Tetrachloroethane	0.98981	0.97249	0.97249	0.300	-1.74929	20.00000	Averaged
82	1,3,5-Trimethylbenzene	2.56543	2.26299	2.26299	0.010	-11.78903	20.00000	Averaged
83	2-Chlorotoluene	2.26576	2.04289	2.04289	0.010	-9.83631	20.00000	Averaged
84	1,2,3-Trichloropropane	0.90428	0.90869	0.90869	0.010	0.48740	20.00000	Averaged
85	4-Chlorotoluene	2.44044	2.23384	2.23384	0.010	-8.46600	20.00000	Averaged
86	tert-Butylbenzene	2.46693	2.19548	2.19548	0.010	-11.00378	20.00000	Averaged
88	1,2,4-Trimethylbenzene	2.73067	2.48258	2.48258	0.010	-9.08522	20.00000	Averaged
89	P-Isopropyltoluene	2.71197	2.39680	2.39680	0.010	-11.62127	20.00000	Averaged
90	1,3-Dichlorobenzene	1.43507	1.29676	1.29676	0.010	-9.63783	20.00000	Averaged
92	1,4-Dichlorobenzene	1.50115	1.37713	1.37713	0.010	-8.26161	20.00000	Averaged
93	N-Butylbenzene	2.85466	2.52958	2.52958	0.010	-11.38766	20.00000	Averaged
94	sec-Butylbenzene	3.28352	2.84782	2.84782	0.010	-13.26942	20.00000	Averaged
95	1,2-Dichlorobenzene	1.43502	1.34958	1.34958	0.010	-5.95426	20.00000	Averaged
96	1,2-Dibromo-3-Chloropropane	0.25309	0.28461	0.28461	0.010	12.45063	20.00000	Averaged
98	Hexachlorobutadiene	0.48100	0.41765	0.41765	0.010	-13.17126	20.00000	Averaged
99	1,2,4-Trichlorobenzene	0.92567	0.93214	0.93214	0.010	0.69927	20.00000	Averaged
101	Naphthalene	2.59920	2.78494	2.78494	0.010	7.14636	20.00000	Averaged
102	1,2,3-Trichlorobenzene	0.89857	0.91012	0.91012	0.010	1.28538	20.00000	Averaged
37	Dibromofluoromethane	0.52405	0.55162	0.55162	0.010	5.26164	20.00000	Averaged
45	1,2-Dichloroethane-D4	0.73892	0.80324	0.80324	0.010	8.70426	20.00000	Averaged
55	Toluene-D8	1.26398	1.27033	1.27033	0.010	0.50188	20.00000	Averaged
76	P-Bromofluorobenzene	0.57961	0.60240	0.60240	0.010	3.93136	20.00000	Averaged

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG225350-4
Lab File ID : W3321.D
Initial Calibration Date(s): 03/23/18 09:41 03/23/18 13:16

SDG: SL2079
Analytical Date: 03/24/18 09:25
Instrument ID: GCMS-W
Column ID:

*** = Compound out of QC criteria**

600 Technology Way
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http://katahdinlab.com
sales@katahdinlab.com

Data File: \\target_server\gg\chem\gcms-w.i\W032418.b\W3321.D
Report Date: 28-Mar-2018 12:58

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W032418.b\W3321.D
Lab Smp Id: WG225350-4
Inj Date : 24-MAR-2018 09:25 MS Autotune Date: 10-APR-2016 11:00
Operator : HG/JSS Inst ID: gcms-w.i
Smp Info : WG225350-4,SL2079
Misc Info : WG225350,WG225302-4,SL2079-1
Comment : SW846 5035
Method : \\target_server\gg\chem\gcms-w.i\W032418.b\W8SDI(07)D.m
Meth Date : 28-Mar-2018 12:57 gcms-w.i Quant Type: ISTD
Cal Date : 23-MAR-2018 13:16 Cal File: W3300.D
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	0.00000	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	5.000	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	ON-COL (ug/kg)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.970	1.970	(0.244)	140596	50.0000	39.8	
2	Chloromethane	50	2.191	2.191	(0.271)	167483	50.0000	40.8	
3	Vinyl chloride	62	2.263	2.263	(0.280)	166122	50.0000	42.4	
4	Bromomethane	94	2.613	2.606	(0.323)	96582	50.0000	42.8	
5	Chloroethane	64	2.749	2.735	(0.340)	113713	50.0000	46.9	
6	Trichlorofluoromethane	101	2.892	2.885	(0.358)	232164	50.0000	44.8	
7	Diethyl Ether	59	3.235	3.228	(0.400)	147370	50.0000	50.7	
8	Tertiary-butyl alcohol	59	4.730	4.723	(0.585)	158565	250.000	286	
9	1,1-Dichloroethene	96	3.471	3.464	(0.429)	107856	50.0000	43.8	
10	Carbon Disulfide	76	3.521	3.507	(0.435)	389953	50.0000	43.5	
11	Freon-113	151	3.514	3.500	(0.434)	79594	50.0000	44.7	
12	Iodomethane	142	3.657	3.643	(0.452)	96293	50.0000	40.4	
13	Acrolein	56	3.900	3.886	(0.482)	161005	250.000	262	
14	Methylene Chloride	84	4.208	4.194	(0.520)	165183	50.0000	42.5	
15	Acetone	43	4.293	4.279	(0.531)	363191	250.000	263	
16	Isobutyl Alcohol	43	8.362	8.348	(1.034)	257943	1000.00	1150	
17	trans-1,2-Dichloroethene	96	4.429	4.415	(0.548)	122751	50.0000	43.6	
18	Allyl Chloride	41	4.072	4.058	(0.503)	197456	50.0000	45.2	
19	Methyl tert-butyl ether	73	4.587	4.572	(0.567)	550895	50.0000	52.1	
20	Acetonitrile	39	4.994	4.980	(0.617)	56236	500.000	499	
21	Di-isopropyl ether	45	5.180	5.166	(0.640)	483011	50.0000	50.6	
22	Chloroprene	53	5.352	5.338	(0.662)	201483	50.0000	46.0	

Data File: \\target_server\gg\chem\gcms-w.i\W032418.b\W3321.D
Report Date: 28-Mar-2018 12:58

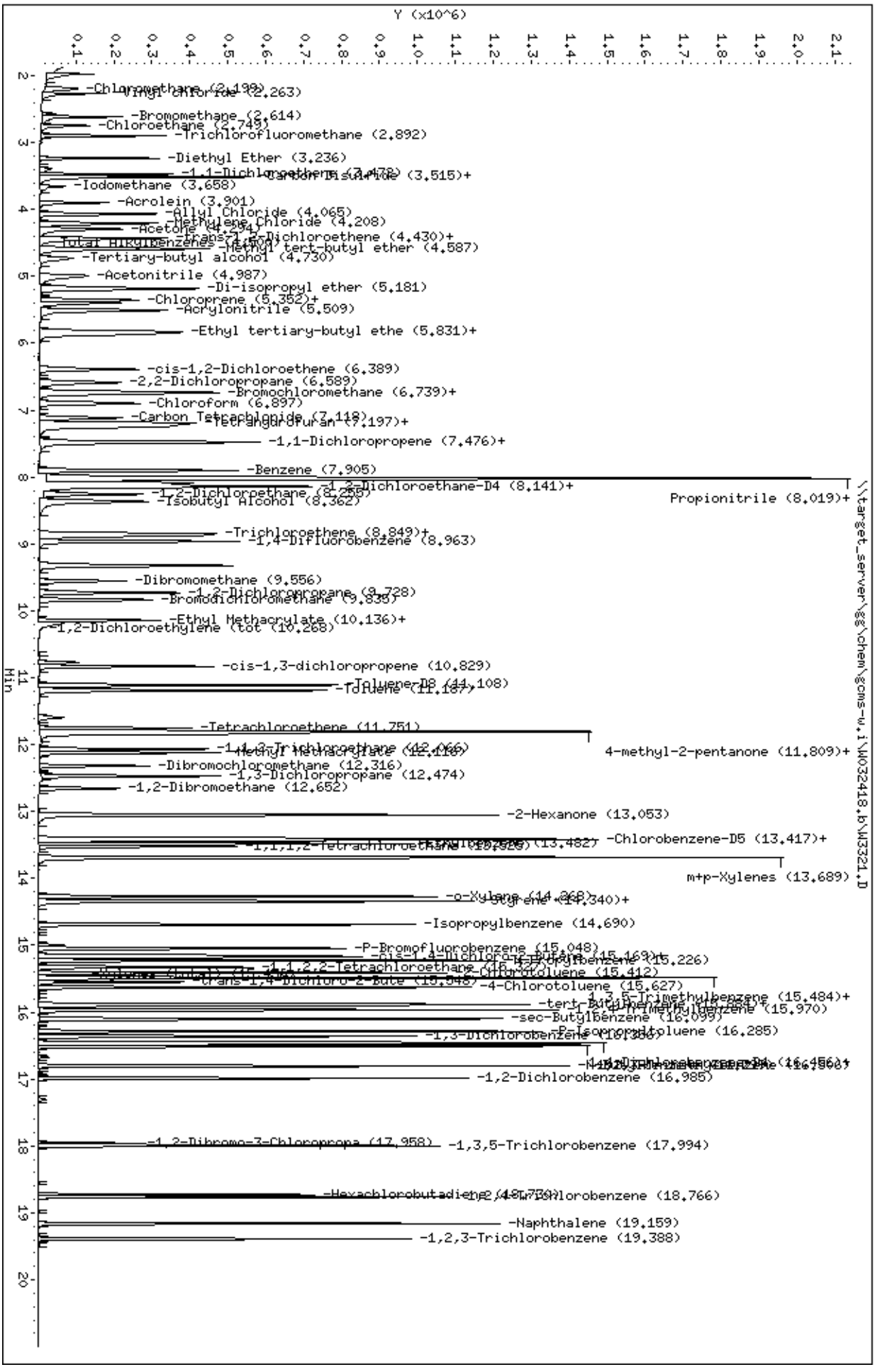
		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	ON-COL (ug/kg)	REVIEW CODE
	23	Propionitrile	54	7.990	7.983	(0.988)	317704	500.000	535	
	24	Methacrylonitrile	41	8.019	8.005	(0.991)	1229106	500.000	547	
	25	1,1-Dichloroethane	63	5.395	5.380	(0.667)	264749	50.0000	47.0	
	26	Acrylonitrile	52	5.509	5.488	(0.681)	307549	250.000	270	
	27	Ethyl tertiary-butyl ether	59	5.831	5.817	(0.721)	496100	50.0000	52.5	
	28	Vinyl Acetate	43	5.874	5.852	(0.655)	370138	50.0000	55.7	
	29	cis-1,2-Dichloroethene	96	6.388	6.367	(0.790)	146838	50.0000	47.2	
M	30	1,2-Dichloroethylene (total)	96				269589	100.000	(a)	
	31	Methyl Methacrylate	41	12.116	12.102	(1.352)	174597	50.0000	54.9	
	32	2,2-Dichloropropane	77	6.589	6.567	(0.814)	207711	50.0000	47.0	
	33	Bromochloromethane	128	6.746	6.732	(0.834)	65929	50.0000	49.5	
	34	Chloroform	83	6.896	6.875	(0.852)	277822	50.0000	48.9	
	35	Carbon Tetrachloride	117	7.118	7.096	(0.794)	180174	50.0000	44.6	
	36	Tetrahydrofuran	42	7.189	7.168	(0.889)	330457	250.000	269	
$	37	Dibromofluoromethane	113	7.225	7.204	(0.893)	137349	50.0000	52.6	
	38	1,1,1-Trichloroethane	97	7.246	7.232	(0.896)	224918	50.0000	46.6	
	39	1,1-Dichloropropene	75	7.468	7.454	(0.833)	195921	50.0000	44.2	
	40	2-Butanone	43	7.482	7.461	(0.925)	521335	250.000	266	
	41	Benzene	78	7.904	7.883	(0.882)	572362	50.0000	45.0	
*	42	Pentafluorobenzene	168	8.090	8.076	(1.000)	248991	50.0000		
	43	Cyclohexane	56	6.732	6.710	(0.832)	210875	50.0000	45.6	
	44	Ethyl Methacrylate	69	10.135	10.121	(1.131)	147265	50.0000	53.2	
$	45	1,2-Dichloroethane-D4	65	8.140	8.126	(1.006)	200000	50.0000	54.4	
	46	Tertiary-amyl methyl ether	73	8.140	8.119	(1.006)	494567	50.0000	53.0	
	47	1,2-Dichloroethane	62	8.255	8.240	(0.921)	257786	50.0000	50.8	
	48	Trichloroethene	95	8.884	8.863	(0.991)	136270	50.0000	43.7	
*	49	1,4-Difluorobenzene	114	8.962	8.948	(1.000)	446332	50.0000		
	50	Dibromomethane	93	9.556	9.535	(1.066)	98735	50.0000	49.8	
	51	1,2-Dichloropropane	63	9.728	9.706	(1.085)	160663	50.0000	47.7	
	52	Bromodichloromethane	83	9.835	9.821	(1.097)	226983	50.0000	49.7	
	53	cis-1,3-dichloropropene	75	10.829	10.815	(1.208)	295030	50.0000	49.9	
	54	1,4-Dioxane	88	10.185	10.171	(1.136)	65478	1000.00	1050	
$	55	Toluene-D8	98	11.107	11.093	(1.239)	566987	50.0000	50.2	
	57	Toluene	92	11.186	11.172	(1.248)	349461	50.0000	44.0	
	58	4-methyl-2-pentanone	43	11.801	11.794	(1.317)	1046636	250.000	263	
	59	Tetrachloroethene	164	11.751	11.737	(0.877)	90605	50.0000	41.4	
	60	trans-1,3-Dichloropropene	75	11.837	11.823	(1.321)	280073	50.0000	50.8	
	61	1,1,2-Trichloroethane	83	12.066	12.059	(1.346)	133750	50.0000	49.8	
	62	Dibromochloromethane	129	12.316	12.302	(0.919)	158685	50.0000	49.7	
	63	1,3-Dichloropropane	76	12.473	12.459	(0.931)	307850	50.0000	49.2	
	64	1,2-Dibromoethane	107	12.652	12.638	(1.412)	154283	50.0000	49.6	
	65	2-Hexanone	43	13.052	13.038	(0.974)	794590	250.000	265	
*	66	Chlorobenzene-D5	117	13.403	13.389	(1.000)	437949	50.0000		
	67	Chlorobenzene	112	13.424	13.410	(1.002)	398010	50.0000	44.6	
	152	1-Chlorohexane	91	13.424	13.410	(1.659)	190624	50.0000	42.9	
	68	Ethylbenzene	106	13.481	13.467	(1.006)	205934	50.0000	43.0	
	69	1,1,1,2-Tetrachloroethane	131	13.524	13.510	(1.009)	146936	50.0000	47.6	
M	70	Xylenes (total)	106				775342	150.000	(a)	
	71	m+p-Xylenes	106	13.689	13.675	(1.021)	516085	100.000	86.2	
	72	o-Xylene	106	14.268	14.254	(1.065)	259257	50.0000	45.6	
	73	Styrene	104	14.339	14.332	(1.070)	459718	50.0000	46.7	
	74	Bromoform	173	14.354	14.347	(1.071)	119561	50.0000	50.2	
	75	Isopropylbenzene	105	14.690	14.676	(0.893)	637226	50.0000	44.1	
$	76	P-Bromofluorobenzene	95	15.047	15.033	(1.679)	268871	50.0000	52.0	

Data File: \\target_server\gg\chem\gcms-w.i\W032418.b\W3321.D
Report Date: 28-Mar-2018 12:58

			QUANT SIG					AMOUNTS		
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/kg)	ON-COL (ug/kg)	REVIEW CODE
	77	cis-1,4-Dichloro-2-Butene	53	15.147	15.140	(0.920)	93348	50.0000	53.0	
	78	trans-1,4-Dichloro-2-Butene	53	15.548	15.541	(0.945)	74058	50.0000	51.8	
	79	Bromobenzene	156	15.169	15.162	(0.922)	173977	50.0000	46.1	
	80	N-Propylbenzene	91	15.226	15.212	(0.925)	885482	50.0000	43.7	
	81	1,1,2,2-Tetrachloroethane	83	15.326	15.312	(0.931)	264511	50.0000	49.1	
	82	1,3,5-Trimethylbenzene	105	15.483	15.476	(0.941)	615518	50.0000	44.1	
	83	2-Chlorotoluene	91	15.412	15.405	(0.937)	555652	50.0000	45.1	
	84	1,2,3-Trichloropropane	75	15.491	15.476	(0.941)	247156	50.0000	50.2	
	85	4-Chlorotoluene	91	15.626	15.619	(0.950)	607588	50.0000	45.8	
	86	tert-Butylbenzene	119	15.877	15.870	(0.965)	597154	50.0000	44.5	
	87	Pentachloroethane	117	15.898	15.884	(0.966)	135846	50.0000	46.2	
	88	1,2,4-Trimethylbenzene	105	15.970	15.963	(0.970)	675245	50.0000	45.4	
	89	P-Isopropyltoluene	119	16.284	16.277	(0.990)	651913	50.0000	44.2	
	90	1,3-Dichlorobenzene	146	16.363	16.349	(0.994)	352710	50.0000	45.2	
*	91	1,4-Dichlorobenzene-D4	152	16.456	16.442	(1.000)	271993	50.0000		
	92	1,4-Dichlorobenzene	146	16.470	16.463	(1.001)	374569	50.0000	45.9	
	93	N-Butylbenzene	91	16.799	16.792	(1.021)	688028	50.0000	44.3	
	94	sec-Butylbenzene	105	16.098	16.091	(0.978)	774587	50.0000	43.4	
	95	1,2-Dichlorobenzene	146	16.985	16.978	(1.032)	367075	50.0000	47.0	
	96	1,2-Dibromo-3-Chloropropane	75	17.957	17.951	(1.091)	77411	50.0000	56.2(H)	
	97	1,3,5-Trichlorobenzene	180	17.993	17.986	(2.224)	259375	50.0000	50.4	
	98	Hexachlorobutadiene	225	18.730	18.723	(1.138)	113598	50.0000	43.4	
	99	1,2,4-Trichlorobenzene	180	18.765	18.758	(1.140)	253536	50.0000	50.3	
	100	1,2,3-Trimethylbenzene	105	16.506	16.499	(2.040)	734038	50.0000	49.3	
	101	Naphthalene	128	19.159	19.152	(1.164)	757485	50.0000	53.6	
	102	1,2,3-Trichlorobenzene	180	19.387	19.380	(1.178)	247546	50.0000	50.6	
	103	Methyl Acetate	43	4.458	4.444	(0.551)	176398	50.0000	56.2	
	104	Methylcyclohexane	83	8.848	8.834	(1.094)	230472	50.0000	45.5	
M	153	Total Alkylbenzenes	100				4887927	50.0000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
H - Operator selected an alternate compound hit.


Data File: \\target_server\gg\chem\gcms-w.i\W032418.b\W3321.D
Date : 24-MAR-2018 09:25
Client ID:
Sample Info: WG225350-4,SL2079
Column phase: RTX-VMS
Instrument: gcms-w.i
Operator: HG/JSS
Column diameter: 0.18
Y (x10^6)
Min
-Chloromethane (2.199)
-Vinyl chloride (2.263)
-Bromomethane (2.614)
-Chloroethane (2.749)
-Trichlorofluoromethane (2.892)
-Diethyl Ether (3.236)
-1,1-Dichloroethene (3.478)
-Carbon Disulfide (3.515)+
-Iodomethane (3.658)
-Acrolein (3.901)
-Allyl Chloride (4.065)
-Methylene Chloride (4.208)
-Acetone (4.294)
-trans-1,2-Dichloroethene (4.430)+
Total Hydrocarbons
-Methyl tert-butyl ether (4.587)
-Tertiary-butyl alcohol (4.730)
-Acetonitrile (4.987)
-Di-isopropyl ether (5.181)
-Chloroprene (5.352)+
-Acrylonitrile (5.509)
-Ethyl tertiary-butyl ethe (5.831)+
-cis-1,2-Dichloroethene (6.389)
-2,2-Dichloropropane (6.589)
-Bromochloromethane (6.739)+
-Chloroform (6.897)
-Carbon Tetrachloride (7.118)
-Tetrahydrofuran (7.197)+
-1,1-Dichloropropene (7.476)+
-Benzene (7.905)
-1,2-Dichloroethane-D4 (8.141)+
-1,2-Dichloroethane (8.259)
-Isobutyl Alcohol (8.362)
Propionitrile (8.019)+
-Trichloroethene (8.849)+
-1,4-Difluorobenzene (8.963)
-Dibromomethane (9.556)
-1,2-Dichloropropane (9.728)
-Bromodichloromethane (9.836)
-Ethyl Methacrylate (10.136)+
-1,2-Dichloroethylene (tot (10.268)
-cis-1,3-dichloropropene (10.829)
-Toluene-D8 (11.108)
-Toluene (11.167)
-Tetrachloroethene (11.751)
-1,1,2-Trichloroethane (12.066)
-Methyl Methacrylate (12.116)
4-methyl-2-pentanone (11.809)+
-Dibromochloromethane (12.316)
-1,3-Dichloropropane (12.474)
-1,2-Dibromoethane (12.652)
-2-Hexanone (13.053)
-1,1,1,2-Tetrachloroethane (13.126)
-Chlorobenzene-D5 (13.417)+
m+p-Xylenes (13.689)
-o-Xylene (14.268)
-Styrene (14.340)+
-Isopropylbenzene (14.690)
-P-Bromofluorobenzene (15.048)
-cis-1,4-Dichloro-2-butene (15.169)+
-Bromobenzene (15.226)
-1,1,2,2-Tetrachloroethane (15.307)
-2-Chlorotoluene (15.412)
-trans-1,4-Dichloro-2-Bute (15.548)
-4-Chlorotoluene (15.627)
-1,3,5-Trimethylbenzene (15.484)+
-tert-Butylbenzene (15.744)+
-1,2,4-Trimethylbenzene (15.970)
-sec-Butylbenzene (16.099)
-P-Isopropyltoluene (16.285)
-1,3-Dichlorobenzene (16.360)
-1,4-Dichlorobenzene-D4 (16.456)+
-n-Butylbenzene (16.590)
-1,2-Dichlorobenzene (16.985)
-1,2-Dibromo-3-Chloropropa (17.958)
-1,3,5-Trichlorobenzene (17.994)
-Hexachlorobutadiene (18.730)
-1,2,4-Trichlorobenzene (18.766)
-Naphthalene (19.159)
-1,2,3-Trichlorobenzene (19.388)
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Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL2079
Lab ID : WG225350-5
Analytical Date: 03/24/18 18:58
Lab File ID : W3336.D
Instrument ID: GCMS-W
Initial Calibration Date(s): 03/23/18 09:41 03/23/18 13:16
Column ID:

	Compound	$\overline{\text{RRF}}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type	
1	Dichlorodifluoromethane	0.71008	0.88805	0.88805	0.010	25.06268	50.00000	Averaged	
2	Chloromethane	0.82523	0.90308	0.90308	0.100	9.43365	50.00000	Averaged	
3	Vinyl chloride	0.78611	0.93545	0.93545	0.010	18.99818	50.00000	Averaged	
4	Bromomethane	0.45321	0.58342	0.58342	0.010	28.72917	50.00000	Averaged	
5	Chloroethane	0.48705	0.68028	0.68028	0.010	39.67261	50.00000	Averaged	
6	Trichlorofluoromethane	1.04090	1.65486	1.65486	0.010	58.98270	50.00000	Averaged	*
9	1,1-Dichloroethene	0.49495	0.56637	0.56637	0.010	14.42887	50.00000	Averaged	
10	Carbon Disulfide	1.80043	2.13356	2.13356	0.010	18.50313	50.00000	Averaged	
11	Freon-113	0.35741	0.41874	0.41874	0.010	17.15977	50.00000	Averaged	
14	Methylene Chloride	0.77996	0.81769	0.81769	0.010	4.83736	50.00000	Averaged	
15	Acetone	0.27760	0.31507	0.31507	0.010	13.49559	50.00000	Averaged	
17	trans-1,2-Dichloroethene	0.56459	0.65318	0.65318	0.010	15.69094	50.00000	Averaged	
19	Methyl tert-butyl ether	2.12316	2.54735	2.54735	0.010	19.97942	50.00000	Averaged	
25	1,1-Dichloroethane	1.13050	1.46757	1.46757	0.100	29.81572	50.00000	Averaged	
29	cis-1,2-Dichloroethene	0.62416	0.73854	0.73854	0.010	18.32536	50.00000	Averaged	
32	2,2-Dichloropropane	0.88755	1.18712	1.18712	0.010	33.75266	50.00000	Averaged	
33	Bromochloromethane	0.26749	0.30252	0.30252	0.010	13.09408	50.00000	Averaged	
34	Chloroform	1.13995	1.58418	1.58418	0.010	38.96906	50.00000	Averaged	
35	Carbon Tetrachloride	0.45200	0.63575	0.63575	0.010	40.65315	50.00000	Averaged	
38	1,1,1-Trichloroethane	0.96832	1.40658	1.40658	0.010	45.25973	50.00000	Averaged	
39	1,1-Dichloropropene	0.49707	0.63526	0.63526	0.010	27.80126	50.00000	Averaged	
40	2-Butanone	0.39410	0.45888	0.45888	0.010	16.43555	50.00000	Averaged	
41	Benzene	1.42461	1.62794	1.62794	0.010	14.27230	50.00000	Averaged	
47	1,2-Dichloroethane	0.56848	0.78904	0.78904	0.010	38.79879	50.00000	Averaged	
48	Trichloroethene	0.34963	0.42831	0.42831	0.010	22.50455	50.00000	Averaged	
50	Dibromomethane	0.22201	0.27076	0.27076	0.010	21.96026	50.00000	Averaged	
51	1,2-Dichloropropane	0.37754	0.44318	0.44318	0.010	17.38598	50.00000	Averaged	
52	Bromodichloromethane	0.51184	0.69870	0.69870	0.010	36.50670	50.00000	Averaged	
53	cis-1,3-dichloropropene	0.66169	0.79655	0.79655	0.010	20.38052	50.00000	Averaged	
57	Toluene	0.89040	1.03599	1.03599	0.010	16.35099	50.00000	Averaged	
58	4-methyl-2-pentanone	0.44588	0.54136	0.54136	0.010	21.41403	50.00000	Averaged	
59	Tetrachloroethene	0.25014	0.28056	0.28056	0.010	12.16180	50.00000	Averaged	
60	trans-1,3-Dichloropropene	0.61729	0.77587	0.77587	0.010	25.69131	50.00000	Averaged	
61	1,1,2-Trichloroethane	0.30063	0.35182	0.35182	0.010	17.02738	50.00000	Averaged	
62	Dibromochloromethane	0.36444	0.43654	0.43654	0.010	19.78341	50.00000	Averaged	
63	1,3-Dichloropropane	0.71371	0.84030	0.84030	0.010	17.73789	50.00000	Averaged	
64	1,2-Dibromoethane	0.34804	0.41149	0.41149	0.010	18.23004	50.00000	Averaged	
65	2-Hexanone	0.34272	0.40778	0.40778	0.010	18.98399	50.00000	Averaged	
67	Chlorobenzene	1.01966	1.13746	1.13746	0.300	11.55228	50.00000	Averaged	
68	Ethylbenzene	0.54670	0.60966	0.60966	0.010	11.51585	50.00000	Averaged	
69	1,1,1,2-Tetrachloroethane	0.35242	0.42724	0.42724	0.010	21.23127	50.00000	Averaged	

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL2079
Lab ID : WG225350-5
Analytical Date: 03/24/18 18:58
Lab File ID : W3336.D
Instrument ID: GCMS-W
Initial Calibration Date(s): 03/23/18 09:41 03/23/18 13:16
Column ID:

Compound	$\overline{\text{RRF}}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
71 m+p-Xylenes	0.68337	0.76629	0.76629	0.010	12.13387	50.00000	Averaged
72 o-Xylene	0.64869	0.75915	0.75915	0.010	17.02813	50.00000	Averaged
73 Styrene	1.12350	1.29711	1.29711	0.010	15.45277	50.00000	Averaged
74 Bromoform	0.27172	0.31947	0.31947	0.100	17.57078	50.00000	Averaged
75 Isopropylbenzene	2.65569	3.18945	3.18945	0.010	20.09887	50.00000	Averaged
79 Bromobenzene	0.69434	0.74306	0.74306	0.010	7.01657	50.00000	Averaged
80 N-Propylbenzene	3.72395	4.52262	4.52262	0.010	21.44663	50.00000	Averaged
81 1,1,2,2-Tetrachloroethane	0.98981	1.09810	1.09810	0.300	10.94089	50.00000	Averaged
82 1,3,5-Trimethylbenzene	2.56543	3.08073	3.08073	0.010	20.08628	50.00000	Averaged
83 2-Chlorotoluene	2.26576	2.77704	2.77704	0.010	22.56571	50.00000	Averaged
84 1,2,3-Trichloropropane	0.90428	1.08116	1.08116	0.010	19.56094	50.00000	Averaged
85 4-Chlorotoluene	2.44044	2.94205	2.94205	0.010	20.55382	50.00000	Averaged
86 tert-Butylbenzene	2.46693	2.92438	2.92438	0.010	18.54317	50.00000	Averaged
88 1,2,4-Trimethylbenzene	2.73067	3.27236	3.27236	0.010	19.83732	50.00000	Averaged
89 P-Isopropyltoluene	2.71197	3.15770	3.15770	0.010	16.43571	50.00000	Averaged
90 1,3-Dichlorobenzene	1.43507	1.51330	1.51330	0.010	5.45107	50.00000	Averaged
92 1,4-Dichlorobenzene	1.50115	1.58624	1.58624	0.010	5.66878	50.00000	Averaged
93 N-Butylbenzene	2.85466	3.36449	3.36449	0.010	17.85975	50.00000	Averaged
94 sec-Butylbenzene	3.28352	3.88719	3.88719	0.010	18.38455	50.00000	Averaged
95 1,2-Dichlorobenzene	1.43502	1.58082	1.58082	0.010	10.16016	50.00000	Averaged
96 1,2-Dibromo-3-Chloropropane	0.25309	0.32323	0.32323	0.010	27.70994	50.00000	Averaged
98 Hexachlorobutadiene	0.48100	0.53754	0.53754	0.010	11.75375	50.00000	Averaged
99 1,2,4-Trichlorobenzene	0.92567	0.93910	0.93910	0.010	1.45137	50.00000	Averaged
101 Naphthalene	2.59920	2.91914	2.91914	0.010	12.30956	50.00000	Averaged
102 1,2,3-Trichlorobenzene	0.89857	0.93439	0.93439	0.010	3.98619	50.00000	Averaged
37 Dibromofluoromethane	0.52405	0.58735	0.58735	0.010	12.07892	50.00000	Averaged
45 1,2-Dichloroethane-D4	0.73892	0.97588	0.97588	0.010	32.06813	50.00000	Averaged
55 Toluene-D8	1.26398	1.31955	1.31955	0.010	4.39622	50.00000	Averaged
76 P-Bromofluorobenzene	0.57961	0.65664	0.65664	0.010	13.28833	50.00000	Averaged

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG225350-5
Lab File ID : W3336.D
Initial Calibration Date(s): 03/23/18 09:41 03/23/18 13:16

SDG: SL2079
Analytical Date: 03/24/18 18:58
Instrument ID: GCMS-W
Column ID:

*** = Compound out of QC criteria**

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http://katahdinlab.com
sales@katahdinlab.com

Data File: \\target_server\gg\chem\gcms-w.i\W032418.b\W3336.D
Report Date: 28-Mar-2018 13:01

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W032418.b\W3336.D
Lab Smp Id: WG225350-5 Client Smp ID: ontinuing Calibrati
Inj Date : 24-MAR-2018 18:58 MS Autotune Date: 10-APR-2016 11:00
Operator : HG/JSS Inst ID: gcms-w.i
Smp Info : WG225350-5,SL2079
Misc Info : WG225350,WG225302-4,SL2079-1
Comment : SW846 5035
Method : \\target_server\gg\chem\gcms-w.i\W032418.b\W8SDI(07)D.m
Meth Date : 28-Mar-2018 13:00 gcms-w.i Quant Type: ISTD
Cal Date : 23-MAR-2018 13:16 Cal File: W3300.D
Als bottle: 18 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SW8260-S.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	0.00000	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	5.000	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	ON-COL (ug/kg)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.969	1.970	(0.243)	143977	50.0000	62.5	
2	Chloromethane	50	2.191	2.191	(0.271)	146414	50.0000	54.7	
3	Vinyl chloride	62	2.262	2.263	(0.280)	151662	50.0000	59.5	
4	Bromomethane	94	2.613	2.606	(0.323)	94588	50.0000	64.4	
5	Chloroethane	64	2.749	2.735	(0.340)	110291	50.0000	69.8	
6	Trichlorofluoromethane	101	2.892	2.885	(0.357)	268297	50.0000	79.5	
7	Diethyl Ether	59	3.235	3.228	(0.400)	108432	50.0000	57.3	
8	Tertiary-butyl alcohol	59	4.722	4.723	(0.584)	105843	250.000	293	
9	1,1-Dichloroethene	96	3.471	3.464	(0.429)	91824	50.0000	57.2	
10	Carbon Disulfide	76	3.514	3.507	(0.434)	345908	50.0000	59.2	
11	Freon-113	151	3.514	3.500	(0.434)	67889	50.0000	58.6	
12	Iodomethane	142	3.657	3.643	(0.452)	57337	50.0000	37.0	
13	Acrolein	56	3.893	3.886	(0.481)	103176	250.000	258	
14	Methylene Chloride	84	4.207	4.194	(0.520)	132570	50.0000	52.4	
15	Acetone	43	4.293	4.279	(0.531)	255403	250.000	284	
16	Isobutyl Alcohol	43	8.361	8.348	(1.034)	174785	1000.00	1190	
17	trans-1,2-Dichloroethene	96	4.429	4.415	(0.547)	105898	50.0000	57.8	
18	Allyl Chloride	41	4.064	4.058	(0.502)	171920	50.0000	60.4	
19	Methyl tert-butyl ether	73	4.586	4.572	(0.567)	412995	50.0000	60.0	
20	Acetonitrile	39	4.994	4.980	(0.617)	41975	500.000	572	
21	Di-isopropyl ether	45	5.180	5.166	(0.640)	373051	50.0000	60.0	
22	Chloroprene	53	5.351	5.338	(0.661)	197943	50.0000	69.4	

Data File: \\target_server\gg\chem\gcms-w.i\W032418.b\W3336.D
Report Date: 28-Mar-2018 13:01

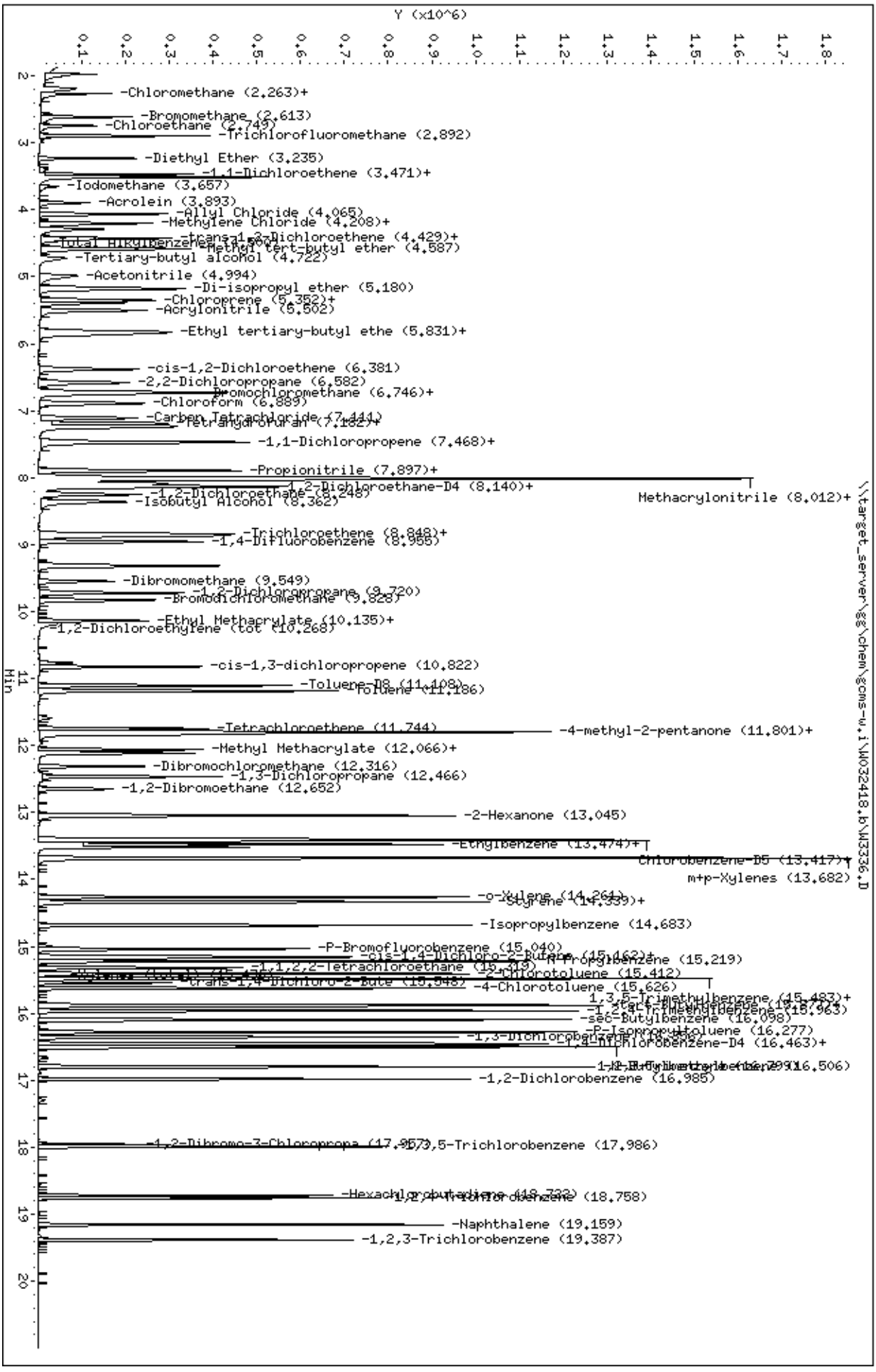
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	AMOUNTS ON-COL (ug/kg)	REVIEW CODE
	23 Propionitrile	54	7.990	7.983	(0.988)	217094	500.000	562	
	24 Methacrylonitrile	41	8.011	8.005	(0.990)	928434	500.000	634	
	25 1,1-Dichloroethane	63	5.394	5.380	(0.667)	237933	50.0000	64.9	
	26 Acrylonitrile	52	5.501	5.488	(0.680)	217043	250.000	293	
	27 Ethyl tertiary-butyl ether	59	5.830	5.817	(0.721)	379777	50.0000	61.7	
	28 Vinyl Acetate	43	5.866	5.852	(0.655)	264666	50.0000	60.6	
	29 cis-1,2-Dichloroethene	96	6.381	6.367	(0.789)	119737	50.0000	59.2	
	31 Methyl Methacrylate	41	12.115	12.102	(1.353)	135711	50.0000	64.9	
	32 2,2-Dichloropropane	77	6.581	6.567	(0.814)	192465	50.0000	66.9	
	33 Bromochloromethane	128	6.745	6.732	(0.834)	49046	50.0000	56.5	
	34 Chloroform	83	6.888	6.875	(0.852)	256839	50.0000	69.5	
	35 Carbon Tetrachloride	117	7.117	7.096	(0.795)	186334	50.0000	70.3	
	36 Tetrahydrofuran	42	7.182	7.168	(0.888)	224480	250.000	281	
$	37 Dibromofluoromethane	113	7.217	7.204	(0.892)	95225	50.0000	56.0	
	38 1,1,1-Trichloroethane	97	7.246	7.232	(0.896)	228044	50.0000	72.6	
	39 1,1-Dichloropropene	75	7.468	7.454	(0.834)	186192	50.0000	63.9	
	40 2-Butanone	43	7.475	7.461	(0.924)	371981	250.000	291	
	41 Benzene	78	7.897	7.883	(0.882)	477138	50.0000	57.1	
*	42 Pentafluorobenzene	168	8.090	8.076	(1.000)	162127	50.0000		
	43 Cyclohexane	56	6.724	6.710	(0.831)	187152	50.0000	62.1	
	44 Ethyl Methacrylate	69	10.135	10.121	(1.132)	105564	50.0000	58.1	
$	45 1,2-Dichloroethane-D4	65	8.140	8.126	(1.006)	158217	50.0000	66.0	
	46 Tertiary-amyl methyl ether	73	8.133	8.119	(1.005)	370690	50.0000	61.0	
	47 1,2-Dichloroethane	62	8.247	8.240	(0.921)	231264	50.0000	69.4	
	48 Trichloroethene	95	8.876	8.863	(0.991)	125535	50.0000	61.2	
*	49 1,4-Difluorobenzene	114	8.955	8.948	(1.000)	293094	50.0000		
	50 Dibromomethane	93	9.548	9.535	(1.066)	79359	50.0000	61.0	
	51 1,2-Dichloropropane	63	9.720	9.706	(1.085)	129894	50.0000	58.7	
	52 Bromodichloromethane	83	9.827	9.821	(1.097)	204785	50.0000	68.2	
	53 cis-1,3-dichloropropene	75	10.828	10.815	(1.209)	233464	50.0000	60.2	
	54 1,4-Dioxane	88	10.178	10.171	(1.137)	44369	1000.00	1090	
$	55 Toluene-D8	98	11.107	11.093	(1.240)	386752	50.0000	52.2	
	57 Toluene	92	11.186	11.172	(1.249)	303641	50.0000	58.2	
	58 4-methyl-2-pentanone	43	11.801	11.794	(1.318)	793343	250.000	304	
	59 Tetrachloroethene	164	11.751	11.737	(0.877)	82763	50.0000	56.1	
	60 trans-1,3-Dichloropropene	75	11.829	11.823	(1.321)	227404	50.0000	62.8	
	61 1,1,2-Trichloroethane	83	12.065	12.059	(1.347)	103117	50.0000	58.5	
	62 Dibromochloromethane	129	12.315	12.302	(0.919)	128778	50.0000	59.9	
	63 1,3-Dichloropropane	76	12.466	12.459	(0.931)	247885	50.0000	58.9	
	64 1,2-Dibromoethane	107	12.651	12.638	(1.413)	120606	50.0000	59.1	
	65 2-Hexanone	43	13.045	13.038	(0.974)	601460	250.000	297	
*	66 Chlorobenzene-D5	117	13.395	13.389	(1.000)	294995	50.0000		
	67 Chlorobenzene	112	13.417	13.410	(1.002)	335544	50.0000	55.8	
	152 1-Chlorohexane	91	13.417	13.410	(1.658)	177572	50.0000	61.4	
	68 Ethylbenzene	106	13.474	13.467	(1.006)	179846	50.0000	55.8	
	69 1,1,1,2-Tetrachloroethane	131	13.517	13.510	(1.009)	126035	50.0000	60.6	
	71 m+p-Xylenes	106	13.681	13.675	(1.021)	452101	100.000	112	
	72 o-Xylene	106	14.260	14.254	(1.065)	223946	50.0000	58.5	
	73 Styrene	104	14.339	14.332	(1.070)	382640	50.0000	57.7	
	74 Bromoform	173	14.353	14.347	(1.072)	94241	50.0000	58.8	
	75 Isopropylbenzene	105	14.682	14.676	(0.893)	591104	50.0000	60.0	
$	76 P-Bromofluorobenzene	95	15.040	15.033	(1.679)	192456	50.0000	56.6	
	77 cis-1,4-Dichloro-2-Butene	53	15.147	15.140	(0.921)	71890	50.0000	60.0	
	78 trans-1,4-Dichloro-2-Butene	53	15.547	15.541	(0.945)	58317	50.0000	59.9	

Data File: \\target_server\gg\chem\gcms-w.i\W032418.b\W3336.D
Report Date: 28-Mar-2018 13:01

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	ON-COL (ug/kg)	REVIEW CODE
79	Bromobenzene	156	15.168	15.162	(0.922)	137712	50.0000	53.5	
80	N-Propylbenzene	91	15.218	15.212	(0.925)	838181	50.0000	60.7	
81	1,1,2,2-Tetrachloroethane	83	15.318	15.312	(0.931)	203512	50.0000	55.5	
82	1,3,5-Trimethylbenzene	105	15.476	15.476	(0.941)	570955	50.0000	60.0	
83	2-Chlorotoluene	91	15.411	15.405	(0.937)	514672	50.0000	61.3	
84	1,2,3-Trichloropropane	75	15.483	15.476	(0.941)	200373	50.0000	59.8	
85	4-Chlorotoluene	91	15.626	15.619	(0.950)	545253	50.0000	60.3	
86	tert-Butylbenzene	119	15.876	15.870	(0.965)	541978	50.0000	59.3	
87	Pentachloroethane	117	15.891	15.884	(0.966)	110713	50.0000	55.2	
88	1,2,4-Trimethylbenzene	105	15.962	15.963	(0.970)	606470	50.0000	59.9	
89	P-Isopropyltoluene	119	16.277	16.277	(0.990)	585219	50.0000	58.2	
90	1,3-Dichlorobenzene	146	16.355	16.349	(0.994)	280461	50.0000	52.7	
* 91	1,4-Dichlorobenzene-D4	152	16.448	16.442	(1.000)	185331	50.0000		
92	1,4-Dichlorobenzene	146	16.470	16.463	(1.001)	293980	50.0000	52.8	
93	N-Butylbenzene	91	16.799	16.792	(1.021)	623545	50.0000	58.9	
94	sec-Butylbenzene	105	16.098	16.091	(0.979)	720416	50.0000	59.2	
95	1,2-Dichlorobenzene	146	16.984	16.978	(1.033)	292975	50.0000	55.1	
96	1,2-Dibromo-3-Chloropropane	75	17.957	17.951	(1.092)	59904	50.0000	63.8(H)	
97	1,3,5-Trichlorobenzene	180	17.993	17.986	(2.224)	189701	50.0000	56.6	
98	Hexachlorobutadiene	225	18.722	18.723	(1.138)	99623	50.0000	55.9	
99	1,2,4-Trichlorobenzene	180	18.765	18.758	(1.141)	174045	50.0000	50.7	
100	1,2,3-Trimethylbenzene	105	16.505	16.499	(2.040)	654317	50.0000	67.6	
101	Naphthalene	128	19.158	19.152	(1.165)	541008	50.0000	56.2	
102	1,2,3-Trichlorobenzene	180	19.387	19.380	(1.179)	173171	50.0000	52.0	
103	Methyl Acetate	43	4.457	4.444	(0.551)	120659	50.0000	59.1	
104	Methylcyclohexane	83	8.848	8.834	(1.094)	208869	50.0000	63.4	

QC Flag Legend

H - Operator selected an alternate compound hit.


Data File: \\target_server\gg\chem\gcms-w.i\W032418.b\W3336.D
Date : 24-MAR-2018 18:58
Client ID: ontinuing Calibrati
Sample Info: WG225350-5,SL2079
Column phase: RTX-VMS
Instrument: gcms-w.i
Operator: HG/JSS
Column diameter: 0.18
\\target_server\gg\chem\gcms-w.i\W032418.b\W3336.D
Y (x10^6)
Min
-Chloromethane (2.263)+
-Bromomethane (2.613)
-Chloroethane (2.749)
-Trichlorofluoromethane (2.892)
-Diethyl Ether (3.235)
-1,1-Dichloroethene (3.471)+
-Iodomethane (3.657)
-Acrolein (3.893)
-Allyl Chloride (4.065)
-Methylene Chloride (4.208)+
-trans-1,2-Dichloroethene (4.429)+
-Methyl tert-butyl ether (4.587)
-Tertiary-butyl alcohol (4.722)
-Acetonitrile (4.994)
-Di-isopropyl ether (5.180)
-Chloroprene (5.352)+
-Acrylonitrile (5.502)
-Ethyl tertiary-butyl ethe (5.831)+
-cis-1,2-Dichloroethene (6.381)
-2,2-Dichloropropane (6.582)
Bromochloromethane (6.746)+
-Chloroform (6.889)
-Carbon Tetrachloride (7.141)
-1,1-Dichloropropene (7.468)+
-Propionitrile (7.897)+
-1,2-Dichloroethane-D4 (8.140)+
-1,2-Dichloroethane (8.248)
-Isobutyl Alcohol (8.362)
Methacrylonitrile (8.012)+
-Trichloroethene (8.848)+
-1,4-Difluorobenzene (8.955)
-Dibromomethane (9.549)
-1,2-Dichloropropane (9.720)
-Bromodichloromethane (9.828)
-Ethyl Methacrylate (10.135)+
-1,2-Dichloroethylene (tot (10.268)
-cis-1,3-dichloropropene (10.822)
-Toluene-D8 (11.108)
Toluene (11.186)
-Tetrachloroethene (11.744)
-4-methyl-2-pentanone (11.801)+
-Methyl Methacrylate (12.066)+
-Dibromochloromethane (12.316)
-1,3-Dichloropropane (12.466)
-1,2-Dibromoethane (12.652)
-2-Hexanone (13.045)
-Ethylbenzene (13.474)+
Chlorobenzene-D5 (13.417)+
m+p-Xylenes (13.682)
-o-Xylene (14.264)
-Styrene (14.339)+
-Isopropylbenzene (14.683)
-P-Bromofluorobenzene (15.040)
-cis-1,4-Dichloro-2-Butene (15.462)+
-n-Propylbenzene (15.219)
-1,1,2,2-Tetrachloroethane (15.319)
-2-Chlorotoluene (15.412)
trans-1,4-Dichloro-2-Bute (15.548)
-4-Chlorotoluene (15.626)
1,3,5-Trimethylbenzene (15.483)+
-1,2,4-Trimethylbenzene (15.963)
-sec-Butylbenzene (16.098)
-P-Isopropyltoluene (16.277)
-1,3-Dichlorobenzene (16.380)
-1,4-Dichlorobenzene-D4 (16.463)+
-1,4-Dichlorobenzene (16.506)
-1,2-Dichlorobenzene (16.985)
-1,2-Dibromo-3-Chloropropa (17.957)
1,3,5-Trichlorobenzene (17.986)
-Hexachlorobutadiene (18.722)
1,2,4-Trichlorobenzene (18.758)
-Naphthalene (19.159)
-1,2,3-Trichlorobenzene (19.387)

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG225350-6
Lab File ID : W3337.D
Initial Calibration Date(s): 03/23/18 09:41 03/23/18 13:16

SDG: SL2079
Analytical Date: 03/24/18 19:35
Instrument ID: GCMS-W
Column ID:

	Compound	$\overline{\text{RRF}}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
1	Dichlorodifluoromethane	0.71008	0.90069	0.90069	0.010	26.84292	50.00000	Averaged
2	Chloromethane	0.82523	0.90895	0.90895	0.100	10.14453	50.00000	Averaged
3	Vinyl chloride	0.78611	0.93619	0.93619	0.010	19.09154	50.00000	Averaged
4	Bromomethane	0.45321	0.53791	0.53791	0.010	18.68699	50.00000	Averaged
5	Chloroethane	0.48705	0.64268	0.64268	0.010	31.95418	50.00000	Averaged
6	Trichlorofluoromethane	1.04090	1.48194	1.48194	0.010	42.37095	50.00000	Averaged
9	1,1-Dichloroethene	0.49495	0.53535	0.53535	0.010	8.16067	50.00000	Averaged
10	Carbon Disulfide	1.80043	2.03219	2.03219	0.010	12.87281	50.00000	Averaged
11	Freon-113	0.35741	0.43298	0.43298	0.010	21.14411	50.00000	Averaged
14	Methylene Chloride	0.77996	0.78580	0.78580	0.010	0.74886	50.00000	Averaged
15	Acetone	0.27760	0.31118	0.31118	0.010	12.09651	50.00000	Averaged
17	trans-1,2-Dichloroethene	0.56459	0.62054	0.62054	0.010	9.90998	50.00000	Averaged
19	Methyl tert-butyl ether	2.12316	2.51713	2.51713	0.010	18.55597	50.00000	Averaged
25	1,1-Dichloroethane	1.13050	1.35652	1.35652	0.100	19.99289	50.00000	Averaged
29	cis-1,2-Dichloroethene	0.62416	0.70525	0.70525	0.010	12.99254	50.00000	Averaged
32	2,2-Dichloropropane	0.88755	1.11439	1.11439	0.010	25.55775	50.00000	Averaged
33	Bromochloromethane	0.26749	0.29767	0.29767	0.010	11.28059	50.00000	Averaged
34	Chloroform	1.13995	1.46163	1.46163	0.010	28.21801	50.00000	Averaged
35	Carbon Tetrachloride	0.45200	0.59735	0.59735	0.010	32.15823	50.00000	Averaged
38	1,1,1-Trichloroethane	0.96832	1.28126	1.28126	0.010	32.31760	50.00000	Averaged
39	1,1-Dichloropropene	0.49707	0.60542	0.60542	0.010	21.79695	50.00000	Averaged
40	2-Butanone	0.39410	0.45497	0.45497	0.010	15.44438	50.00000	Averaged
41	Benzene	1.42461	1.59624	1.59624	0.010	12.04735	50.00000	Averaged
47	1,2-Dichloroethane	0.56848	0.74992	0.74992	0.010	31.91725	50.00000	Averaged
48	Trichloroethene	0.34963	0.40928	0.40928	0.010	17.06216	50.00000	Averaged
50	Dibromomethane	0.22201	0.27451	0.27451	0.010	23.64858	50.00000	Averaged
51	1,2-Dichloropropane	0.37754	0.42958	0.42958	0.010	13.78249	50.00000	Averaged
52	Bromodichloromethane	0.51184	0.66395	0.66395	0.010	29.71725	50.00000	Averaged
53	cis-1,3-dichloropropene	0.66169	0.79535	0.79535	0.010	20.19924	50.00000	Averaged
57	Toluene	0.89040	1.00224	1.00224	0.010	12.56126	50.00000	Averaged
58	4-methyl-2-pentanone	0.44588	0.54246	0.54246	0.010	21.66193	50.00000	Averaged
59	Tetrachloroethene	0.25014	0.27265	0.27265	0.010	8.99880	50.00000	Averaged
60	trans-1,3-Dichloropropene	0.61729	0.75198	0.75198	0.010	21.82097	50.00000	Averaged
61	1,1,2-Trichloroethane	0.30063	0.34602	0.34602	0.010	15.09662	50.00000	Averaged
62	Dibromochloromethane	0.36444	0.44342	0.44342	0.010	21.66965	50.00000	Averaged
63	1,3-Dichloropropane	0.71371	0.83917	0.83917	0.010	17.57993	50.00000	Averaged
64	1,2-Dibromoethane	0.34804	0.39995	0.39995	0.010	14.91416	50.00000	Averaged
65	2-Hexanone	0.34272	0.41481	0.41481	0.010	21.03600	50.00000	Averaged
67	Chlorobenzene	1.01966	1.13471	1.13471	0.300	11.28339	50.00000	Averaged
68	Ethylbenzene	0.54670	0.60305	0.60305	0.010	10.30715	50.00000	Averaged
69	1,1,1,2-Tetrachloroethane	0.35242	0.41925	0.41925	0.010	18.96274	50.00000	Averaged

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG225350-6
Lab File ID : W3337.D
Initial Calibration Date(s): 03/23/18 09:41 03/23/18 13:16

SDG: SL2079
Analytical Date: 03/24/18 19:35
Instrument ID: GCMS-W
Column ID:

	Compound	RRF/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
71	m+p-Xylenes	0.68337	0.75666	0.75666	0.010	10.72503	50.00000	Averaged
72	o-Xylene	0.64869	0.74749	0.74749	0.010	15.23041	50.00000	Averaged
73	Styrene	1.12350	1.30785	1.30785	0.010	16.40907	50.00000	Averaged
74	Bromoform	0.27172	0.32740	0.32740	0.100	20.49181	50.00000	Averaged
75	Isopropylbenzene	2.65569	3.07358	3.07358	0.010	15.73573	50.00000	Averaged
79	Bromobenzene	0.69434	0.74731	0.74731	0.010	7.62821	50.00000	Averaged
80	N-Propylbenzene	3.72395	4.28318	4.28318	0.010	15.01693	50.00000	Averaged
81	1,1,2,2-Tetrachloroethane	0.98981	1.08141	1.08141	0.300	9.25436	50.00000	Averaged
82	1,3,5-Trimethylbenzene	2.56543	2.96658	2.96658	0.010	15.63667	50.00000	Averaged
83	2-Chlorotoluene	2.26576	2.67203	2.67203	0.010	17.93118	50.00000	Averaged
84	1,2,3-Trichloropropane	0.90428	1.04440	1.04440	0.010	15.49548	50.00000	Averaged
85	4-Chlorotoluene	2.44044	2.83065	2.83065	0.010	15.98925	50.00000	Averaged
86	tert-Butylbenzene	2.46693	2.81302	2.81302	0.010	14.02931	50.00000	Averaged
88	1,2,4-Trimethylbenzene	2.73067	3.21144	3.21144	0.010	17.60634	50.00000	Averaged
89	P-Isopropyltoluene	2.71197	3.08165	3.08165	0.010	13.63178	50.00000	Averaged
90	1,3-Dichlorobenzene	1.43507	1.52329	1.52329	0.010	6.14748	50.00000	Averaged
92	1,4-Dichlorobenzene	1.50115	1.56704	1.56704	0.010	4.38967	50.00000	Averaged
93	N-Butylbenzene	2.85466	3.29618	3.29618	0.010	15.46658	50.00000	Averaged
94	sec-Butylbenzene	3.28352	3.76058	3.76058	0.010	14.52869	50.00000	Averaged
95	1,2-Dichlorobenzene	1.43502	1.55426	1.55426	0.010	8.30942	50.00000	Averaged
96	1,2-Dibromo-3-Chloropropane	0.25309	0.31386	0.31386	0.010	24.00783	50.00000	Averaged
98	Hexachlorobutadiene	0.48100	0.51783	0.51783	0.010	7.65590	50.00000	Averaged
99	1,2,4-Trichlorobenzene	0.92567	0.94323	0.94323	0.010	1.89684	50.00000	Averaged
101	Naphthalene	2.59920	2.98838	2.98838	0.010	14.97345	50.00000	Averaged
102	1,2,3-Trichlorobenzene	0.89857	0.95425	0.95425	0.010	6.19701	50.00000	Averaged
37	Dibromofluoromethane	0.52405	0.57188	0.57188	0.010	9.12659	50.00000	Averaged
45	1,2-Dichloroethane-D4	0.73892	0.91246	0.91246	0.010	23.48463	50.00000	Averaged
55	Toluene-D8	1.26398	1.28713	1.28713	0.010	1.83144	50.00000	Averaged
76	P-Bromofluorobenzene	0.57961	0.65185	0.65185	0.010	12.46308	50.00000	Averaged

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG225350-6
Lab File ID : W3337.D
Initial Calibration Date(s): 03/23/18 09:41 03/23/18 13:16

SDG: SL2079
Analytical Date: 03/24/18 19:35
Instrument ID: GCMS-W
Column ID:

*** = Compound out of QC criteria**

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
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http://katahdinlab.com
sales@katahdinlab.com

Data File: \\target_server\gg\chem\gcms-w.i\W032418.b\W3337.D
Report Date: 28-Mar-2018 13:01

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W032418.b\W3337.D
Lab Smp Id: WG225350-6 Client Smp ID: ontinuing Calibrati
Inj Date : 24-MAR-2018 19:35 MS Autotune Date: 10-APR-2016 11:00
Operator : HG/JSS Inst ID: gcms-w.i
Smp Info : WG225350-6,SL2079
Misc Info : WG225350,WG225302-4,SL2079-1
Comment : SW846 5035
Method : \\target_server\gg\chem\gcms-w.i\W032418.b\W8SDI(07)D.m
Meth Date : 28-Mar-2018 13:00 gcms-w.i Quant Type: ISTD
Cal Date : 23-MAR-2018 13:16 Cal File: W3300.D
Als bottle: 19 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SW8260-S.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	0.00000	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	5.000	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	ON-COL (ug/kg)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.969	1.970	(0.244)	173775	50.0000	63.4	
2	Chloromethane	50	2.190	2.191	(0.271)	175368	50.0000	55.1	
3	Vinyl chloride	62	2.262	2.263	(0.280)	180623	50.0000	59.5	
4	Bromomethane	94	2.612	2.606	(0.323)	103781	50.0000	59.3	
5	Chloroethane	64	2.741	2.735	(0.339)	123996	50.0000	66.0	
6	Trichlorofluoromethane	101	2.891	2.885	(0.358)	285919	50.0000	71.2	
7	Diethyl Ether	59	3.234	3.228	(0.400)	119601	50.0000	53.1	
8	Tertiary-butyl alcohol	59	4.729	4.723	(0.585)	115432	250.000	271	
9	1,1-Dichloroethene	96	3.470	3.464	(0.429)	103287	50.0000	54.1	
10	Carbon Disulfide	76	3.513	3.507	(0.435)	392081	50.0000	56.4	
11	Freon-113	151	3.513	3.500	(0.435)	83537	50.0000	60.6	
12	Iodomethane	142	3.649	3.643	(0.452)	84507	50.0000	45.8	
13	Acrolein	56	3.892	3.886	(0.482)	119848	250.000	251	
14	Methylene Chloride	84	4.207	4.194	(0.521)	151609	50.0000	50.4	
15	Acetone	43	4.285	4.279	(0.530)	300189	250.000	280	
16	Isobutyl Alcohol	43	8.354	8.348	(1.034)	193861	1000.00	1120	
17	trans-1,2-Dichloroethene	96	4.428	4.415	(0.548)	119724	50.0000	55.0	
18	Allyl Chloride	41	4.064	4.058	(0.503)	188322	50.0000	55.6	
19	Methyl tert-butyl ether	73	4.586	4.572	(0.567)	485643	50.0000	59.3	
20	Acetonitrile	39	4.993	4.980	(0.618)	45822	500.000	525	
21	Di-isopropyl ether	45	5.179	5.166	(0.641)	409452	50.0000	55.3	
22	Chloroprene	53	5.351	5.338	(0.662)	231060	50.0000	68.1	

Data File: \\target_server\gg\chem\gcms-w.i\W032418.b\W3337.D
Report Date: 28-Mar-2018 13:01

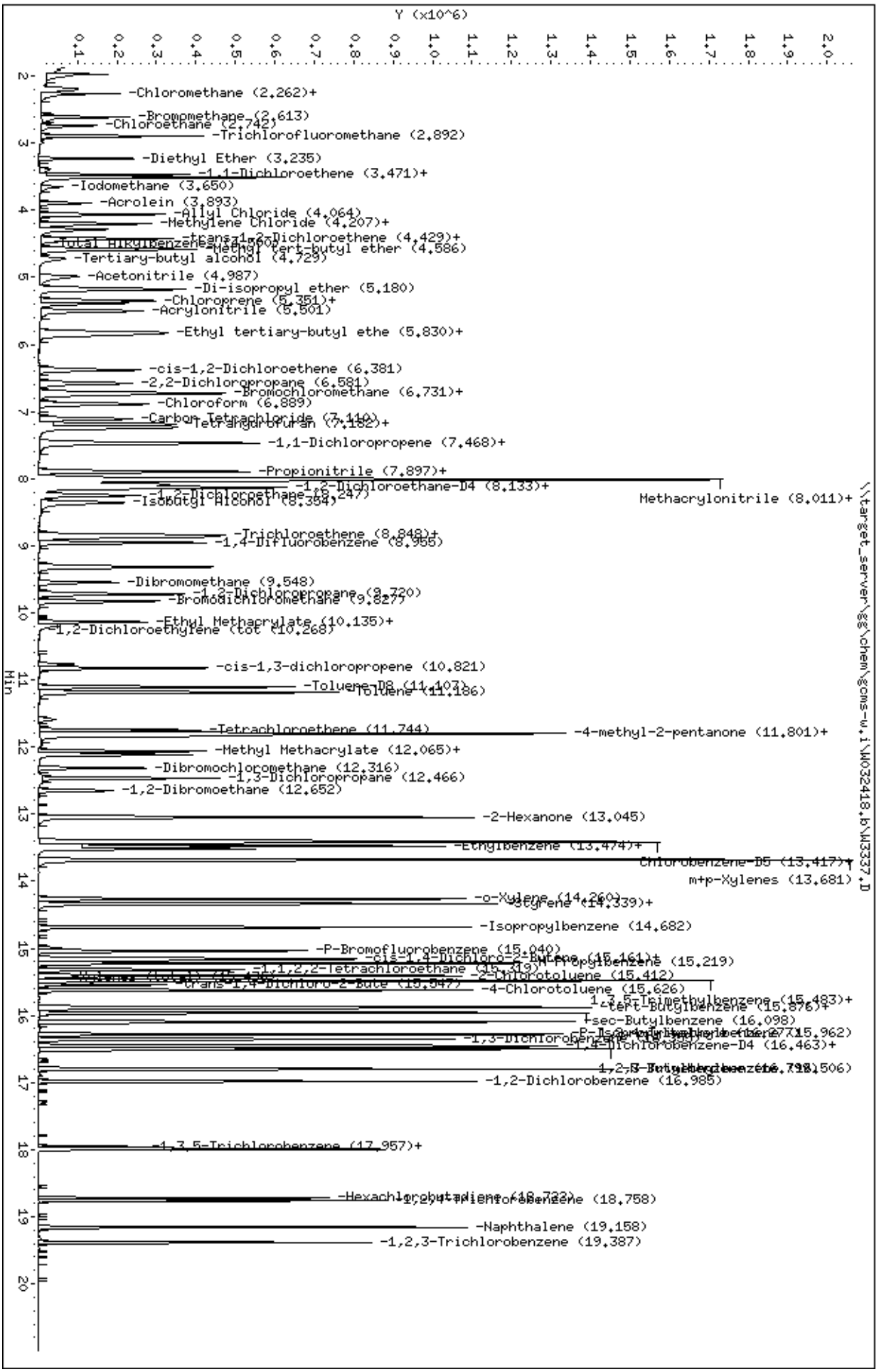
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	AMOUNTS ON-COL (ug/kg)	REVIEW CODE
	23 Propionitrile	54	7.982	7.983	(0.988)	244112	500.000	531	
	24 Methacrylonitrile	41	8.011	8.005	(0.991)	996291	500.000	572	
	25 1,1-Dichloroethane	63	5.387	5.380	(0.666)	261721	50.0000	60.0	
	26 Acrylonitrile	52	5.501	5.488	(0.681)	237132	250.000	269	
	27 Ethyl tertiary-butyl ether	59	5.830	5.817	(0.721)	422378	50.0000	57.7	
	28 Vinyl Acetate	43	5.866	5.852	(0.655)	312159	50.0000	61.6	
	29 cis-1,2-Dichloroethene	96	6.380	6.367	(0.789)	136068	50.0000	56.5	
	31 Methyl Methacrylate	41	12.115	12.102	(1.353)	142972	50.0000	58.9	
	32 2,2-Dichloropropane	77	6.581	6.567	(0.814)	215005	50.0000	62.8	
	33 Bromochloromethane	128	6.738	6.732	(0.834)	57430	50.0000	55.6	
	34 Chloroform	83	6.888	6.875	(0.852)	281999	50.0000	64.1	
	35 Carbon Tetrachloride	117	7.110	7.096	(0.794)	203348	50.0000	66.1	
	36 Tetrahydrofuran	42	7.181	7.168	(0.889)	269303	250.000	283	
$	37 Dibromofluoromethane	113	7.217	7.204	(0.893)	110335	50.0000	54.6	
	38 1,1,1-Trichloroethane	97	7.246	7.232	(0.896)	247199	50.0000	66.2	
	39 1,1-Dichloropropene	75	7.467	7.454	(0.834)	206094	50.0000	60.9	
	40 2-Butanone	43	7.474	7.461	(0.925)	438898	250.000	289	
	41 Benzene	78	7.896	7.883	(0.882)	543385	50.0000	56.0	
*	42 Pentafluorobenzene	168	8.082	8.076	(1.000)	192935	50.0000		
	43 Cyclohexane	56	6.731	6.710	(0.833)	212231	50.0000	59.2	
	44 Ethyl Methacrylate	69	10.134	10.121	(1.132)	112340	50.0000	53.2	
$	45 1,2-Dichloroethane-D4	65	8.132	8.126	(1.006)	176045	50.0000	61.7	
	46 Tertiary-amyl methyl ether	73	8.132	8.119	(1.006)	408398	50.0000	56.5	
	47 1,2-Dichloroethane	62	8.247	8.240	(0.921)	255286	50.0000	66.0	
	48 Trichloroethene	95	8.876	8.863	(0.991)	139326	50.0000	58.5	
*	49 1,4-Difluorobenzene	114	8.954	8.948	(1.000)	340416	50.0000		
	50 Dibromomethane	93	9.548	9.535	(1.066)	93448	50.0000	61.8	
	51 1,2-Dichloropropane	63	9.720	9.706	(1.085)	146235	50.0000	56.9	
	52 Bromodichloromethane	83	9.827	9.821	(1.097)	226019	50.0000	64.8	
	53 cis-1,3-dichloropropene	75	10.828	10.815	(1.209)	270750	50.0000	60.1	
	54 1,4-Dioxane	88	10.177	10.171	(1.137)	48134	1000.00	1020	
$	55 Toluene-D8	98	11.107	11.093	(1.240)	438160	50.0000	50.9	
	57 Toluene	92	11.185	11.172	(1.249)	341179	50.0000	56.3	
	58 4-methyl-2-pentanone	43	11.800	11.794	(1.318)	923315	250.000	304	
	59 Tetrachloroethene	164	11.750	11.737	(0.877)	91222	50.0000	54.5	
	60 trans-1,3-Dichloropropene	75	11.829	11.823	(1.321)	255987	50.0000	60.9	
	61 1,1,2-Trichloroethane	83	12.065	12.059	(1.347)	117790	50.0000	57.5	
	62 Dibromochloromethane	129	12.315	12.302	(0.919)	148359	50.0000	60.8	
	63 1,3-Dichloropropane	76	12.465	12.459	(0.931)	280772	50.0000	58.8	
	64 1,2-Dibromoethane	107	12.651	12.638	(1.413)	136150	50.0000	57.4	
	65 2-Hexanone	43	13.044	13.038	(0.974)	693936	250.000	302	
*	66 Chlorobenzene-D5	117	13.395	13.389	(1.000)	334581	50.0000		
	67 Chlorobenzene	112	13.416	13.410	(1.002)	379654	50.0000	55.6	
	152 1-Chlorohexane	91	13.416	13.410	(1.660)	199687	50.0000	58.0	
	68 Ethylbenzene	106	13.473	13.467	(1.006)	201769	50.0000	55.2	
	69 1,1,1,2-Tetrachloroethane	131	13.516	13.510	(1.009)	140273	50.0000	59.5	
	71 m+p-Xylenes	106	13.681	13.675	(1.021)	506327	100.000	111	
	72 o-Xylene	106	14.260	14.254	(1.065)	250096	50.0000	57.6	
	73 Styrene	104	14.339	14.332	(1.070)	437582	50.0000	58.2	
	74 Bromoform	173	14.353	14.347	(1.072)	109543	50.0000	60.2	
	75 Isopropylbenzene	105	14.682	14.676	(0.893)	657291	50.0000	57.9	
$	76 P-Bromofluorobenzene	95	15.039	15.033	(1.679)	221901	50.0000	56.2	
	77 cis-1,4-Dichloro-2-Butene	53	15.146	15.140	(0.921)	76005	50.0000	54.9	
	78 trans-1,4-Dichloro-2-Butene	53	15.547	15.541	(0.945)	62942	50.0000	56.0	

Data File: \\target_server\gg\chem\gcms-w.i\W032418.b\W3337.D
Report Date: 28-Mar-2018 13:01

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	ON-COL (ug/kg)	REVIEW CODE
79	Bromobenzene	156	15.168	15.162	(0.922)	159813	50.0000	53.8	
80	N-Propylbenzene	91	15.218	15.212	(0.925)	915966	50.0000	57.5	
81	1,1,2,2-Tetrachloroethane	83	15.318	15.312	(0.931)	231261	50.0000	54.6	
82	1,3,5-Trimethylbenzene	105	15.475	15.476	(0.941)	634409	50.0000	57.8	
83	2-Chlorotoluene	91	15.411	15.405	(0.937)	571420	50.0000	59.0	
84	1,2,3-Trichloropropane	75	15.483	15.476	(0.941)	223347	50.0000	57.7	
85	4-Chlorotoluene	91	15.626	15.619	(0.950)	605341	50.0000	58.0	
86	tert-Butylbenzene	119	15.876	15.870	(0.965)	601571	50.0000	57.0	
87	Pentachloroethane	117	15.890	15.884	(0.966)	121084	50.0000	52.4	
88	1,2,4-Trimethylbenzene	105	15.962	15.963	(0.970)	686773	50.0000	58.8	
89	P-Isopropyltoluene	119	16.276	16.277	(0.990)	659018	50.0000	56.8	
90	1,3-Dichlorobenzene	146	16.355	16.349	(0.994)	325759	50.0000	53.1	
* 91	1,4-Dichlorobenzene-D4	152	16.448	16.442	(1.000)	213852	50.0000		
92	1,4-Dichlorobenzene	146	16.469	16.463	(1.001)	335115	50.0000	52.2	
93	N-Butylbenzene	91	16.798	16.792	(1.021)	704894	50.0000	57.7	
94	sec-Butylbenzene	105	16.097	16.091	(0.979)	804207	50.0000	57.3	
95	1,2-Dichlorobenzene	146	16.984	16.978	(1.033)	332382	50.0000	54.2	
96	1,2-Dibromo-3-Chloropropane	75	17.957	17.951	(1.092)	67119	50.0000	62.0(H)	
97	1,3,5-Trichlorobenzene	180	17.992	17.986	(2.226)	217187	50.0000	54.4	
98	Hexachlorobutadiene	225	18.722	18.723	(1.138)	110739	50.0000	53.8	
99	1,2,4-Trichlorobenzene	180	18.764	18.758	(1.141)	201711	50.0000	50.9	
100	1,2,3-Trimethylbenzene	105	16.505	16.499	(2.042)	724376	50.0000	62.8	
101	Naphthalene	128	19.158	19.152	(1.165)	639072	50.0000	57.5	
102	1,2,3-Trichlorobenzene	180	19.387	19.380	(1.179)	204069	50.0000	53.1	
103	Methyl Acetate	43	4.457	4.444	(0.551)	130630	50.0000	53.7	
104	Methylcyclohexane	83	8.840	8.834	(1.094)	220382	50.0000	56.2	

QC Flag Legend

H - Operator selected an alternate compound hit.


Data File: \\target_server\gg\chem\gcms-w.i\W032418.b\W3337.D
Date : 24-MAR-2018 19:35
Client ID: ontinuing Calibrati
Sample Info: WG225350-6,SL2079
Column phase: RTX-VMS
Instrument: gcms-w.i
Operator: HG/JSS
Column diameter: 0.18
\\target_server\gg\chem\gcms-w.i\W032418.b\W3337.D
Y (x10^6)
Min
-Chloromethane (2.262)+
-Bromomethane (2.613)
-Chloroethane (2.742)
-Trichlorofluoromethane (2.892)
-Diethyl Ether (3.235)
-1,1-Dichloroethene (3.471)+
-Iodomethane (3.650)
-Acrolein (3.893)
-Allyl Chloride (4.064)
-Methylene Chloride (4.207)+
-trans-1,2-Dichloroethene (4.429)+
-Methyl tert-butyl ether (4.586)
-Tertiary-butyl alcohol (4.729)
-Acetonitrile (4.987)
-Di-isopropyl ether (5.180)
-Chloroprene (5.351)+
-Acrylonitrile (5.501)
-Ethyl tertiary-butyl ethe (5.830)+
-cis-1,2-Dichloroethene (6.381)
-2,2-Dichloropropane (6.581)
-Bromochloromethane (6.731)+
-Chloroform (6.889)
-Carbon Tetrachloride (7.110)
-Tetrahydrofuran (7.182)+
-1,1-Dichloropropene (7.468)+
-Propionitrile (7.897)+
-1,2-Dichloroethane-D4 (8.133)+
-1,2-Dichloroethane (8.247)
-Isobutyl Alcohol (8.354)+
Methacrylonitrile (8.011)+
-Trichloroethene (8.848)+
-1,4-Difluorobenzene (8.955)
-Dibromomethane (9.548)
-1,2-Dichloropropane (9.720)
-Bromodichloromethane (9.827)
-Ethyl Methacrylate (10.135)+
-1,2-Dichloroethylene (tot (10.268)
-cis-1,3-dichloropropene (10.821)
-Toluene-D8 (11.107)
Toluene (11.186)
-Tetrachloroethene (11.744)
-4-methyl-2-pentanone (11.801)+
-Methyl Methacrylate (12.065)+
-Dibromochloromethane (12.316)
-1,3-Dichloropropane (12.466)
-1,2-Dibromoethane (12.652)
-2-Hexanone (13.045)
-Ethylbenzene (13.474)+
Chlorobenzene-D5 (13.417)+
m+p-Xylenes (13.681)
-o-Xylene (14.260)
-Styrene (14.339)+
-Isopropylbenzene (14.682)
-P-Bromofluorobenzene (15.040)
-cis-1,4-Dichloro-2-Butene (15.161)+
-n-Propylbenzene (15.219)
-1,1,2,2-Tetrachloroethane (15.340)
-2-Chlorotoluene (15.412)
-4-Chlorotoluene (15.626)
1,3,5-Trimethylbenzene (15.483)+
-tert-Butylbenzene (15.876)+
-sec-Butylbenzene (16.098)
-1,3-Dichlorobenzene (15.962)
-1,4-Dichlorobenzene-D4 (16.463)+
-1,2-Dichlorobenzene (16.985)
-1,3,5-Trichlorobenzene (17.957)+
-Hexachlorobutadiene (18.722)
-1,2,4-Trichlorobenzene (18.758)
-Naphthalene (19.158)
-1,2,3-Trichlorobenzene (19.387)

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL2079
Lab ID : WG225350-7
Analytical Date: 03/24/18 20:12
Lab File ID : W3338.D
Instrument ID: GCMS-W
Initial Calibration Date(s): 03/23/18 09:41 03/23/18 13:16
Column ID:

	Compound	$\overline{\text{RRF}}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
1	Dichlorodifluoromethane	0.71008	0.91394	0.91394	0.010	28.70921	50.00000	Averaged
2	Chloromethane	0.82523	0.96385	0.96385	0.100	16.79760	50.00000	Averaged
3	Vinyl chloride	0.78611	0.98406	0.98406	0.010	25.18185	50.00000	Averaged
4	Bromomethane	0.45321	0.56953	0.56953	0.010	25.66401	50.00000	Averaged
5	Chloroethane	0.48705	0.66080	0.66080	0.010	35.67362	50.00000	Averaged
6	Trichlorofluoromethane	1.04090	1.49854	1.49854	0.010	43.96491	50.00000	Averaged
9	1,1-Dichloroethene	0.49495	0.59378	0.59378	0.010	19.96591	50.00000	Averaged
10	Carbon Disulfide	1.80043	2.15575	2.15575	0.010	19.73561	50.00000	Averaged
11	Freon-113	0.35741	0.45327	0.45327	0.010	26.82051	50.00000	Averaged
14	Methylene Chloride	0.77996	0.82147	0.82147	0.010	5.32139	50.00000	Averaged
15	Acetone	0.27760	0.40892	0.40892	0.010	47.30426	50.00000	Averaged
17	trans-1,2-Dichloroethene	0.56459	0.67193	0.67193	0.010	19.01259	50.00000	Averaged
19	Methyl tert-butyl ether	2.12316	2.69449	2.69449	0.010	26.90944	50.00000	Averaged
25	1,1-Dichloroethane	1.13050	1.46641	1.46641	0.100	29.71272	50.00000	Averaged
29	cis-1,2-Dichloroethene	0.62416	0.74620	0.74620	0.010	19.55274	50.00000	Averaged
32	2,2-Dichloropropane	0.88755	1.17698	1.17698	0.010	32.60956	50.00000	Averaged
33	Bromochloromethane	0.26749	0.30538	0.30538	0.010	14.16509	50.00000	Averaged
34	Chloroform	1.13995	1.53695	1.53695	0.010	34.82530	50.00000	Averaged
35	Carbon Tetrachloride	0.45200	0.61101	0.61101	0.010	35.18097	50.00000	Averaged
38	1,1,1-Trichloroethane	0.96832	1.33039	1.33039	0.010	37.39175	50.00000	Averaged
39	1,1-Dichloropropene	0.49707	0.62203	0.62203	0.010	25.13990	50.00000	Averaged
40	2-Butanone	0.39410	0.50571	0.50571	0.010	28.32005	50.00000	Averaged
41	Benzene	1.42461	1.66947	1.66947	0.010	17.18770	50.00000	Averaged
47	1,2-Dichloroethane	0.56848	0.77540	0.77540	0.010	36.39861	50.00000	Averaged
48	Trichloroethene	0.34963	0.42372	0.42372	0.010	21.19076	50.00000	Averaged
50	Dibromomethane	0.22201	0.27760	0.27760	0.010	25.03832	50.00000	Averaged
51	1,2-Dichloropropane	0.37754	0.45227	0.45227	0.010	19.79347	50.00000	Averaged
52	Bromodichloromethane	0.51184	0.68514	0.68514	0.010	33.85819	50.00000	Averaged
53	cis-1,3-dichloropropene	0.66169	0.82112	0.82112	0.010	24.09377	50.00000	Averaged
57	Toluene	0.89040	1.02817	1.02817	0.010	15.47332	50.00000	Averaged
58	4-methyl-2-pentanone	0.44588	0.55320	0.55320	0.010	24.07018	50.00000	Averaged
59	Tetrachloroethene	0.25014	0.35110	0.35110	0.010	40.36234	50.00000	Averaged
60	trans-1,3-Dichloropropene	0.61729	0.77384	0.77384	0.010	25.36108	50.00000	Averaged
61	1,1,2-Trichloroethane	0.30063	0.35975	0.35975	0.010	19.66597	50.00000	Averaged
62	Dibromochloromethane	0.36444	0.45857	0.45857	0.010	25.82839	50.00000	Averaged
63	1,3-Dichloropropane	0.71371	0.85753	0.85753	0.010	20.15144	50.00000	Averaged
64	1,2-Dibromoethane	0.34804	0.41221	0.41221	0.010	18.43672	50.00000	Averaged
65	2-Hexanone	0.34272	0.43144	0.43144	0.010	25.89018	50.00000	Averaged
67	Chlorobenzene	1.01966	1.16698	1.16698	0.300	14.44810	50.00000	Averaged
68	Ethylbenzene	0.54670	0.62760	0.62760	0.010	14.79711	50.00000	Averaged
69	1,1,1,2-Tetrachloroethane	0.35242	0.43491	0.43491	0.010	23.40581	50.00000	Averaged

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG225350-7
Lab File ID : W3338.D
Initial Calibration Date(s): 03/23/18 09:41 03/23/18 13:16

SDG: SL2079
Analytical Date: 03/24/18 20:12
Instrument ID: GCMS-W
Column ID:

Compound	$\overline{\text{RRF}}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
71 m+p-Xylenes	0.68337	0.78404	0.78404	0.010	14.73153	50.00000	Averaged
72 o-Xylene	0.64869	0.78112	0.78112	0.010	20.41466	50.00000	Averaged
73 Styrene	1.12350	1.34537	1.34537	0.010	19.74865	50.00000	Averaged
74 Bromoform	0.27172	0.33788	0.33788	0.100	24.34589	50.00000	Averaged
75 Isopropylbenzene	2.65569	3.12791	3.12791	0.010	17.78159	50.00000	Averaged
79 Bromobenzene	0.69434	0.77806	0.77806	0.010	12.05763	50.00000	Averaged
80 N-Propylbenzene	3.72395	4.37461	4.37461	0.010	17.47210	50.00000	Averaged
81 1,1,2,2-Tetrachloroethane	0.98981	1.08882	1.08882	0.300	10.00312	50.00000	Averaged
82 1,3,5-Trimethylbenzene	2.56543	3.05306	3.05306	0.010	19.00783	50.00000	Averaged
83 2-Chlorotoluene	2.26576	2.72198	2.72198	0.010	20.13561	50.00000	Averaged
84 1,2,3-Trichloropropane	0.90428	1.06998	1.06998	0.010	18.32449	50.00000	Averaged
85 4-Chlorotoluene	2.44044	2.90590	2.90590	0.010	19.07247	50.00000	Averaged
86 tert-Butylbenzene	2.46693	2.71631	2.71631	0.010	10.10900	50.00000	Averaged
88 1,2,4-Trimethylbenzene	2.73067	3.25144	3.25144	0.010	19.07124	50.00000	Averaged
89 P-Isopropyltoluene	2.71197	3.18866	3.18866	0.010	17.57738	50.00000	Averaged
90 1,3-Dichlorobenzene	1.43507	1.56600	1.56600	0.010	9.12356	50.00000	Averaged
92 1,4-Dichlorobenzene	1.50115	1.64310	1.64310	0.010	9.45648	50.00000	Averaged
93 N-Butylbenzene	2.85466	3.36525	3.36525	0.010	17.88608	50.00000	Averaged
94 sec-Butylbenzene	3.28352	3.82518	3.82518	0.010	16.49625	50.00000	Averaged
95 1,2-Dichlorobenzene	1.43502	1.61956	1.61956	0.010	12.85968	50.00000	Averaged
96 1,2-Dibromo-3-Chloropropane	0.25309	0.33847	0.33847	0.010	33.73367	50.00000	Averaged
98 Hexachlorobutadiene	0.48100	0.53484	0.53484	0.010	11.19318	50.00000	Averaged
99 1,2,4-Trichlorobenzene	0.92567	1.00756	1.00756	0.010	8.84679	50.00000	Averaged
101 Naphthalene	2.59920	3.10572	3.10572	0.010	19.48768	50.00000	Averaged
102 1,2,3-Trichlorobenzene	0.89857	1.00413	1.00413	0.010	11.74816	50.00000	Averaged
37 Dibromofluoromethane	0.52405	0.57166	0.57166	0.010	9.08547	50.00000	Averaged
45 1,2-Dichloroethane-D4	0.73892	0.90326	0.90326	0.010	22.24004	50.00000	Averaged
55 Toluene-D8	1.26398	1.30081	1.30081	0.010	2.91356	50.00000	Averaged
76 P-Bromofluorobenzene	0.57961	0.63598	0.63598	0.010	9.72413	50.00000	Averaged

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG225350-7
Lab File ID : W3338.D
Initial Calibration Date(s): 03/23/18 09:41 03/23/18 13:16

SDG: SL2079
Analytical Date: 03/24/18 20:12
Instrument ID: GCMS-W
Column ID:

*** = Compound out of QC criteria**

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http://katahdinlab.com
sales@katahdinlab.com

Data File: \\target_server\gg\chem\gcms-w.i\W032418.b\W3338.D
Report Date: 28-Mar-2018 13:01

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W032418.b\W3338.D
Lab Smp Id: WG225350-7 Client Smp ID: ontinuing Calibrati
Inj Date : 24-MAR-2018 20:12 MS Autotune Date: 10-APR-2016 11:00
Operator : HG/JSS Inst ID: gcms-w.i
Smp Info : WG225350-7,SL2079
Misc Info : WG225350,WG225302-4,SL2079-1
Comment : SW846 5035
Method : \\target_server\gg\chem\gcms-w.i\W032418.b\W8SDI(07)D.m
Meth Date : 28-Mar-2018 13:00 gcms-w.i Quant Type: ISTD
Cal Date : 23-MAR-2018 13:16 Cal File: W3300.D
Als bottle: 20 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SW8260-S.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	0.00000	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	5.000	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	AMOUNTS ON-COL (ug/kg)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.972	1.970	(0.244)	184189	50.0000	64.4	
2	Chloromethane	50	2.200	2.191	(0.272)	194247	50.0000	58.4	
3	Vinyl chloride	62	2.265	2.263	(0.280)	198320	50.0000	62.6	
4	Bromomethane	94	2.608	2.606	(0.323)	114778	50.0000	62.8	
5	Chloroethane	64	2.744	2.735	(0.339)	133172	50.0000	67.8	
6	Trichlorofluoromethane	101	2.894	2.885	(0.358)	302003	50.0000	72.0	
7	Diethyl Ether	59	3.230	3.228	(0.400)	134138	50.0000	57.0	
8	Tertiary-butyl alcohol	59	4.724	4.723	(0.584)	130201	250.000	290	
9	1,1-Dichloroethene	96	3.473	3.464	(0.430)	119665	50.0000	60.0	
10	Carbon Disulfide	76	3.516	3.507	(0.435)	434453	50.0000	59.9	
11	Freon-113	151	3.509	3.500	(0.434)	91348	50.0000	63.4	
12	Iodomethane	142	3.652	3.643	(0.452)	95890	50.0000	49.7	
13	Acrolein	56	3.895	3.886	(0.482)	119728	250.000	240	
14	Methylene Chloride	84	4.203	4.194	(0.520)	165552	50.0000	52.7	
15	Acetone	43	4.288	4.279	(0.530)	412051	250.000	368	
16	Isobutyl Alcohol	43	8.357	8.348	(1.034)	201999	1000.00	1120	
17	trans-1,2-Dichloroethene	96	4.424	4.415	(0.547)	135416	50.0000	59.5	
18	Allyl Chloride	41	4.067	4.058	(0.503)	201678	50.0000	57.0	
19	Methyl tert-butyl ether	73	4.581	4.572	(0.567)	543026	50.0000	63.4	
20	Acetonitrile	39	4.982	4.980	(0.616)	45038	500.000	494	
21	Di-isopropyl ether	45	5.175	5.166	(0.640)	452409	50.0000	58.5	
22	Chloroprene	53	5.347	5.338	(0.661)	241061	50.0000	68.0	

Data File: \\target_server\gg\chem\gcms-w.i\W032418.b\W3338.D
Report Date: 28-Mar-2018 13:01

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	AMOUNTS ON-COL (ug/kg)	REVIEW CODE
	23 Propionitrile	54	7.985	7.983	(0.988)	258165	500.000	538	
	24 Methacrylonitrile	41	8.014	8.005	(0.991)	1052083	500.000	578	
	25 1,1-Dichloroethane	63	5.389	5.380	(0.667)	295528	50.0000	64.8	
	26 Acrylonitrile	52	5.504	5.488	(0.681)	250651	250.000	272	
	27 Ethyl tertiary-butyl ether	59	5.826	5.817	(0.721)	438125	50.0000	57.3	
	28 Vinyl Acetate	43	5.861	5.852	(0.654)	313368	50.0000	57.8	
	29 cis-1,2-Dichloroethene	96	6.376	6.367	(0.789)	150383	50.0000	59.8	
	31 Methyl Methacrylate	41	12.111	12.102	(1.352)	156301	50.0000	60.2	
	32 2,2-Dichloropropane	77	6.584	6.567	(0.814)	237199	50.0000	66.3	
	33 Bromochloromethane	128	6.748	6.732	(0.835)	61544	50.0000	57.1	
	34 Chloroform	83	6.891	6.875	(0.852)	309744	50.0000	67.4	
	35 Carbon Tetrachloride	117	7.113	7.096	(0.794)	222323	50.0000	67.6	
	36 Tetrahydrofuran	42	7.184	7.168	(0.889)	299615	250.000	301	
$	37 Dibromofluoromethane	113	7.213	7.204	(0.892)	115208	50.0000	54.5	
	38 1,1,1-Trichloroethane	97	7.241	7.232	(0.896)	268116	50.0000	68.7	
	39 1,1-Dichloropropene	75	7.463	7.454	(0.833)	226333	50.0000	62.6	
	40 2-Butanone	43	7.477	7.461	(0.925)	509587	250.000	321	
	41 Benzene	78	7.899	7.883	(0.882)	607451	50.0000	58.6	
*	42 Pentafluorobenzene	168	8.085	8.076	(1.000)	201532	50.0000		
	43 Cyclohexane	56	6.727	6.710	(0.832)	231083	50.0000	61.7	
	44 Ethyl Methacrylate	69	10.130	10.121	(1.131)	124399	50.0000	55.2	
$	45 1,2-Dichloroethane-D4	65	8.135	8.126	(1.006)	182036	50.0000	61.1	
	46 Tertiary-amyl methyl ether	73	8.128	8.119	(1.005)	422689	50.0000	56.0	
	47 1,2-Dichloroethane	62	8.249	8.240	(0.921)	282136	50.0000	68.2	
	48 Trichloroethene	95	8.872	8.863	(0.990)	154173	50.0000	60.6	
*	49 1,4-Difluorobenzene	114	8.957	8.948	(1.000)	363859	50.0000		
	50 Dibromomethane	93	9.551	9.535	(1.066)	101006	50.0000	62.5	
	51 1,2-Dichloropropane	63	9.722	9.706	(1.085)	164563	50.0000	59.9	
	52 Bromodichloromethane	83	9.830	9.821	(1.097)	249296	50.0000	66.9	
	53 cis-1,3-dichloropropene	75	10.824	10.815	(1.208)	298772	50.0000	62.0	
	54 1,4-Dioxane	88	10.180	10.171	(1.136)	50687	1000.00	1000	
$	55 Toluene-D8	98	11.102	11.093	(1.239)	473311	50.0000	51.4	
	57 Toluene	92	11.181	11.172	(1.248)	374109	50.0000	57.7	
	58 4-methyl-2-pentanone	43	11.796	11.794	(1.317)	1006435	250.000	310	
	59 Tetrachloroethene	164	11.746	11.737	(0.877)	126060	50.0000	70.2	
	60 trans-1,3-Dichloropropene	75	11.832	11.823	(1.321)	281567	50.0000	62.7	
	61 1,1,2-Trichloroethane	83	12.068	12.059	(1.347)	130900	50.0000	59.8	
	62 Dibromochloromethane	129	12.311	12.302	(0.919)	164649	50.0000	62.9	
	63 1,3-Dichloropropane	76	12.468	12.459	(0.931)	307892	50.0000	60.1	
	64 1,2-Dibromoethane	107	12.647	12.638	(1.412)	149987	50.0000	59.2	
	65 2-Hexanone	43	13.047	13.038	(0.974)	774543	250.000	315	
*	66 Chlorobenzene-D5	117	13.398	13.389	(1.000)	359046	50.0000		
	67 Chlorobenzene	112	13.419	13.410	(1.002)	419001	50.0000	57.2	
	152 1-Chlorohexane	91	13.419	13.410	(1.660)	213593	50.0000	59.4	
	68 Ethylbenzene	106	13.476	13.467	(1.006)	225336	50.0000	57.4	
	69 1,1,1,2-Tetrachloroethane	131	13.519	13.510	(1.009)	156152	50.0000	61.7	
	71 m+p-Xylenes	106	13.684	13.675	(1.021)	563011	100.000	115	
	72 o-Xylene	106	14.263	14.254	(1.065)	280458	50.0000	60.2	
	73 Styrene	104	14.334	14.332	(1.070)	483050	50.0000	59.9	
	74 Bromoform	173	14.349	14.347	(1.071)	121313	50.0000	62.2	
	75 Isopropylbenzene	105	14.685	14.676	(0.893)	715716	50.0000	58.9	
$	76 P-Bromofluorobenzene	95	15.042	15.033	(1.679)	231406	50.0000	54.9	
	77 cis-1,4-Dichloro-2-Butene	53	15.142	15.140	(0.920)	78486	50.0000	53.0	
	78 trans-1,4-Dichloro-2-Butene	53	15.543	15.541	(0.945)	63981	50.0000	53.2	

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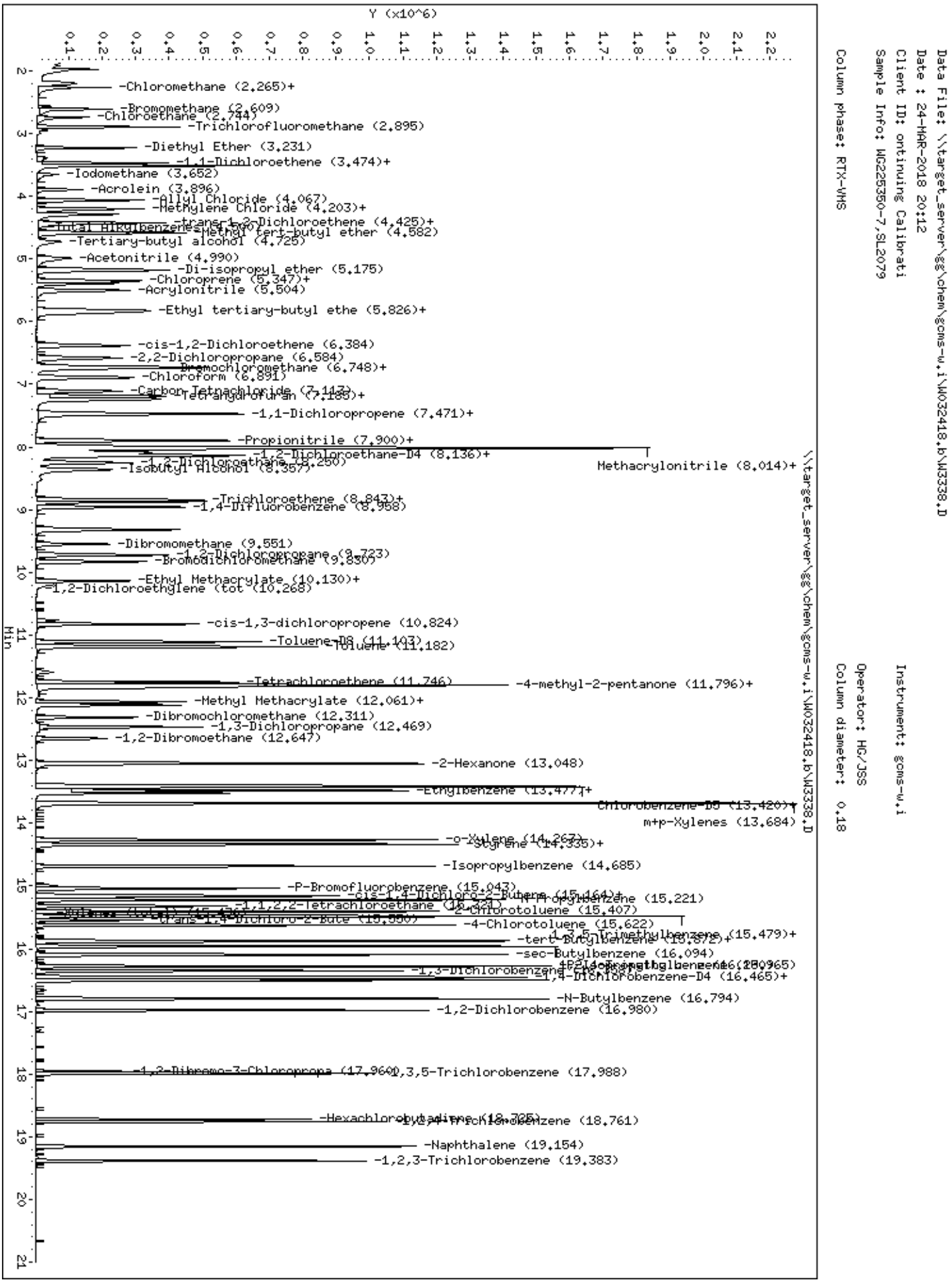
Report Date: 28-Mar-2018 13:01

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	ON-COL (ug/kg)	REVIEW CODE
79	Bromobenzene	156	15.164	15.162	(0.922)	178033	50.0000	56.0	
80	N-Propylbenzene	91	15.221	15.212	(0.925)	1000980	50.0000	58.7	
81	1,1,2,2-Tetrachloroethane	83	15.321	15.312	(0.931)	249139	50.0000	55.0	
82	1,3,5-Trimethylbenzene	105	15.478	15.476	(0.941)	698590	50.0000	59.5	
83	2-Chlorotoluene	91	15.407	15.405	(0.937)	622833	50.0000	60.1	
84	1,2,3-Trichloropropane	75	15.485	15.476	(0.941)	244829	50.0000	59.2	
85	4-Chlorotoluene	91	15.621	15.619	(0.950)	664916	50.0000	59.5	
86	tert-Butylbenzene	119	15.872	15.870	(0.965)	621536	50.0000	55.0	
87	Pentachloroethane	117	15.893	15.884	(0.966)	91047	50.0000	36.8	
88	1,2,4-Trimethylbenzene	105	15.964	15.963	(0.970)	743982	50.0000	59.5	
89	P-Isopropyltoluene	119	16.279	16.277	(0.990)	729616	50.0000	58.8	
90	1,3-Dichlorobenzene	146	16.358	16.349	(0.994)	358326	50.0000	54.6	
* 91	1,4-Dichlorobenzene-D4	152	16.451	16.442	(1.000)	228816	50.0000		
92	1,4-Dichlorobenzene	146	16.465	16.463	(1.001)	375968	50.0000	54.7	
93	N-Butylbenzene	91	16.794	16.792	(1.021)	770022	50.0000	58.9	
94	sec-Butylbenzene	105	16.093	16.091	(0.978)	875263	50.0000	58.2	
95	1,2-Dichlorobenzene	146	16.987	16.978	(1.033)	370581	50.0000	56.4	
96	1,2-Dibromo-3-Chloropropane	75	17.959	17.951	(1.092)	77448	50.0000	66.9(H)	
97	1,3,5-Trichlorobenzene	180	17.988	17.986	(2.225)	234318	50.0000	56.2	
98	Hexachlorobutadiene	225	18.724	18.723	(1.138)	122381	50.0000	55.6	
99	1,2,4-Trichlorobenzene	180	18.760	18.758	(1.140)	230546	50.0000	54.4	
100	1,2,3-Trimethylbenzene	105	16.501	16.499	(2.041)	766093	50.0000	63.6	
101	Naphthalene	128	19.153	19.152	(1.164)	710638	50.0000	59.7	
102	1,2,3-Trichlorobenzene	180	19.382	19.380	(1.178)	229762	50.0000	55.9	
103	Methyl Acetate	43	4.453	4.444	(0.551)	139955	50.0000	55.1	
104	Methylcyclohexane	83	8.843	8.834	(1.094)	239685	50.0000	58.5	

QC Flag Legend

H - Operator selected an alternate compound hit.


Data File: \\target_server\gg\chem\gcms-w.i\W032418.b\W3338.D
Date : 24-MAR-2018 20:12
Client ID: ontinuing Calibrati
Sample Info: WG225350-7,SL2079
Column phase: RTX-VMS
Instrument: gcms-w.i
Operator: HG/JSS
Column diameter: 0.18
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Y (x10^6)
Min
-Chloromethane (2.265)+
-Bromomethane (2.609)
-Chloroethane (2.744)
-Trichlorofluoromethane (2.895)
-Diethyl Ether (3.231)
-1,1-Dichloroethene (3.474)+
-Iodomethane (3.652)
-Acrolein (3.896)
-Allyl Chloride (4.067)
-Methylene Chloride (4.203)+
-trans-1,2-Dichloroethene (4.425)+
-Methyl tert-butyl ether (4.582)
-Tertiary-butyl alcohol (4.725)
-Acetonitrile (4.990)
-Di-isopropyl ether (5.175)
-Chloroprene (5.347)+
-Acrylonitrile (5.504)
-Ethyl tertiary-butyl ethe (5.826)+
-cis-1,2-Dichloroethene (6.384)
-2,2-Dichloropropane (6.584)
Bromochloromethane (6.748)+
-Chloroform (6.891)
-Carbon Tetrachloride (7.142)
-Tetrahydrofuran (7.188)+
-1,1-Dichloropropene (7.471)+
-Propionitrile (7.900)+
-1,2-Dichloroethane-D4 (8.136)+
Methacrylonitrile (8.014)+
-1,2-Dichloroethane (8.250)
-Isobutyl Alcohol (8.357)+
-Trichloroethene (8.843)+
-1,4-Difluorobenzene (8.958)
-Dibromomethane (9.551)
-1,2-Dichloropropane (9.723)
-Bromodichloromethane (9.830)
-Ethyl Methacrylate (10.130)+
-1,2-Dichloroethylene (tot (10.268)
-cis-1,3-dichloropropene (10.824)
-Toluene-D8 (11.103)
-Toluene (11.182)
-Tetrachloroethene (11.746)
-4-methyl-2-pentanone (11.796)+
-Methyl Methacrylate (12.061)+
-Dibromochloromethane (12.311)
-1,3-Dichloropropane (12.469)
-1,2-Dibromoethane (12.647)
-2-Hexanone (13.048)
-Ethylbenzene (13.477)+
Chlorobenzene-D5 (13.420)+
m+p-Xylenes (13.684)
-o-Xylene (14.267)
-Styrene (14.335)+
-Isopropylbenzene (14.685)
-P-Bromofluorobenzene (15.043)
-cis-1,4-Dichloro-2-Butene (15.164)+
-n-Propylbenzene (15.221)
-1,1,2,2-Tetrachloroethane (15.241)
-2-Chlorotoluene (15.407)
-4-Chlorotoluene (15.622)
-1,3,5-Trimethylbenzene (15.479)+
-tert-Butylbenzene (15.872)+
-sec-Butylbenzene (16.094)
-1,3-Dichlorobenzene-D4 (16.280965)
-1,4-Dichlorobenzene-D4 (16.465)+
-N-Butylbenzene (16.794)
-1,2-Dichlorobenzene (16.980)
-1,2-Dibromo-3-Chloroprop (17.960)
1,3,5-Trichlorobenzene (17.988)
-Hexachlorobutadiene (18.725)
-1,2,4-Trichlorobenzene (18.761)
-Naphthalene (19.154)
-1,2,3-Trichlorobenzene (19.383)

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL2079
Lab ID : WG225400-11
Analytical Date: 03/26/18 21:20
Lab File ID : W3360.D
Instrument ID: GCMS-W
Initial Calibration Date(s): 03/26/18 10:13 03/26/18 13:19
Column ID:

	Compound	$\overline{\text{RRF}}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
1	Dichlorodifluoromethane	0.87376	0.97521	0.97521	0.010	11.60981	50.00000	Averaged
2	Chloromethane	0.90675	0.99703	0.99703	0.100	9.95593	50.00000	Averaged
3	Vinyl chloride	0.93337	0.99288	0.99288	0.010	6.37638	50.00000	Averaged
4	Bromomethane	0.55323	0.58235	0.58235	0.010	5.26420	50.00000	Averaged
5	Chloroethane	0.64129	0.68871	0.68871	0.010	7.39480	50.00000	Averaged
6	Trichlorofluoromethane	1.51565	1.59605	1.59605	0.010	5.30435	50.00000	Averaged
9	1,1-Dichloroethene	0.54723	0.53320	0.53320	0.010	-2.56347	50.00000	Averaged
10	Carbon Disulfide	2.04880	2.03242	2.03242	0.010	-0.79974	50.00000	Averaged
11	Freon-113	0.48734	0.47840	0.47840	0.010	-1.83432	50.00000	Averaged
14	Methylene Chloride	0.82792	0.77323	0.77323	0.010	-6.60592	50.00000	Averaged
15	Acetone	0.32217	0.31153	0.31153	0.010	-3.30471	50.00000	Averaged
17	trans-1,2-Dichloroethene	0.63256	0.62813	0.62813	0.010	-0.69978	50.00000	Averaged
19	Methyl tert-butyl ether	2.46563	2.45577	2.45577	0.010	-0.39980	50.00000	Averaged
25	1,1-Dichloroethane	1.38826	1.39190	1.39190	0.100	0.26197	50.00000	Averaged
29	cis-1,2-Dichloroethene	0.70203	0.70542	0.70542	0.010	0.48333	50.00000	Averaged
32	2,2-Dichloropropane	1.18262	1.18621	1.18621	0.010	0.30334	50.00000	Averaged
33	Bromochloromethane	0.28761	0.29102	0.29102	0.010	1.18469	50.00000	Averaged
34	Chloroform	1.45842	1.51619	1.51619	0.010	3.96099	50.00000	Averaged
35	Carbon Tetrachloride	0.61288	0.60544	0.60544	0.010	-1.21334	50.00000	Averaged
38	1,1,1-Trichloroethane	1.31268	1.33954	1.33954	0.010	2.04632	50.00000	Averaged
39	1,1-Dichloropropene	0.61272	0.61041	0.61041	0.010	-0.37811	50.00000	Averaged
40	2-Butanone	0.43958	0.44582	0.44582	0.010	1.41983	50.00000	Averaged
41	Benzene	1.63897	1.62749	1.62749	0.010	-0.69993	50.00000	Averaged
47	1,2-Dichloroethane	0.76403	0.75070	0.75070	0.010	-1.74370	50.00000	Averaged
48	Trichloroethene	0.43314	0.41883	0.41883	0.010	-3.30483	50.00000	Averaged
50	Dibromomethane	0.26980	0.26466	0.26466	0.010	-1.90230	50.00000	Averaged
51	1,2-Dichloropropane	0.43355	0.42047	0.42047	0.010	-3.01518	50.00000	Averaged
52	Bromodichloromethane	0.67587	0.66639	0.66639	0.010	-1.40285	50.00000	Averaged
53	cis-1,3-dichloropropene	0.80106	0.79161	0.79161	0.010	-1.17903	50.00000	Averaged
57	Toluene	1.04309	0.99886	0.99886	0.010	-4.23999	50.00000	Averaged
58	4-methyl-2-pentanone	0.51775	0.51786	0.51786	0.010	0.02045	50.00000	Averaged
59	Tetrachloroethene	0.29302	0.29470	0.29470	0.010	0.57219	50.00000	Averaged
60	trans-1,3-Dichloropropene	0.78155	0.75810	0.75810	0.010	-3.00104	50.00000	Averaged
61	1,1,2-Trichloroethane	0.34883	0.33047	0.33047	0.010	-5.26406	50.00000	Averaged
62	Dibromochloromethane	0.47042	0.46880	0.46880	0.010	-0.34506	50.00000	Averaged
63	1,3-Dichloropropane	0.87640	0.86422	0.86422	0.010	-1.39087	50.00000	Averaged
64	1,2-Dibromoethane	0.40344	0.39213	0.39213	0.010	-2.80434	50.00000	Averaged
65	2-Hexanone	0.41497	0.42115	0.42115	0.010	1.48830	50.00000	Averaged
67	Chlorobenzene	1.23913	1.18634	1.18634	0.300	-4.26022	50.00000	Averaged
68	Ethylbenzene	0.66630	0.65311	0.65311	0.010	-1.97949	50.00000	Averaged
69	1,1,1,2-Tetrachloroethane	0.45364	0.44271	0.44271	0.010	-2.40766	50.00000	Averaged

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL2079
Lab ID : WG225400-11
Analytical Date: 03/26/18 21:20
Lab File ID : W3360.D
Instrument ID: GCMS-W
Initial Calibration Date(s): 03/26/18 10:13 03/26/18 13:19
Column ID:

Compound	RRF/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
71 m+p-Xylenes	0.82632	0.81084	0.81084	0.010	-1.87445	50.00000	Averaged
72 o-Xylene	0.78403	0.79756	0.79756	0.010	1.72650	50.00000	Averaged
73 Styrene	1.36383	1.36628	1.36628	0.010	0.17932	50.00000	Averaged
74 Bromoform	0.34031	0.34052	0.34052	0.100	0.06334	50.00000	Averaged
75 Isopropylbenzene	3.44576	3.48252	3.48252	0.010	1.06675	50.00000	Averaged
79 Bromobenzene	0.87344	0.82179	0.82179	0.010	-5.91368	50.00000	Averaged
80 N-Propylbenzene	4.98683	4.87936	4.87936	0.010	-2.15510	50.00000	Averaged
81 1,1,2,2-Tetrachloroethane	1.24042	1.20010	1.20010	0.300	-3.24984	50.00000	Averaged
82 1,3,5-Trimethylbenzene	3.39710	3.37087	3.37087	0.010	-0.77210	50.00000	Averaged
83 2-Chlorotoluene	3.04367	3.00058	3.00058	0.010	-1.41594	50.00000	Averaged
84 1,2,3-Trichloropropane	1.19943	1.15122	1.15122	0.010	-4.01967	50.00000	Averaged
85 4-Chlorotoluene	3.29308	3.18967	3.18967	0.010	-3.14043	50.00000	Averaged
86 tert-Butylbenzene	3.24036	3.21192	3.21192	0.010	-0.87773	50.00000	Averaged
88 1,2,4-Trimethylbenzene	3.64176	3.58904	3.58904	0.010	-1.44773	50.00000	Averaged
89 P-Isopropyltoluene	3.54784	3.53089	3.53089	0.010	-0.47788	50.00000	Averaged
90 1,3-Dichlorobenzene	1.80086	1.66892	1.66892	0.010	-7.32633	50.00000	Averaged
92 1,4-Dichlorobenzene	1.90165	1.73837	1.73837	0.010	-8.58605	50.00000	Averaged
93 N-Butylbenzene	3.83209	3.77769	3.77769	0.010	-1.41978	50.00000	Averaged
94 sec-Butylbenzene	4.34063	4.31046	4.31046	0.010	-0.69509	50.00000	Averaged
95 1,2-Dichlorobenzene	1.80064	1.71387	1.71387	0.010	-4.81889	50.00000	Averaged
96 1,2-Dibromo-3-Chloropropane	0.35726	0.37988	0.37988	0.010	6.33223	50.00000	Averaged
98 Hexachlorobutadiene	0.62006	0.59008	0.59008	0.010	-4.83372	50.00000	Averaged
99 1,2,4-Trichlorobenzene	1.11691	1.04221	1.04221	0.010	-6.68800	50.00000	Averaged
101 Naphthalene	3.07254	3.16549	3.16549	0.010	3.02527	50.00000	Averaged
102 1,2,3-Trichlorobenzene	1.08947	1.02721	1.02721	0.010	-5.71418	50.00000	Averaged
37 Dibromofluoromethane	0.57846	0.58962	0.58962	0.010	1.93004	50.00000	Averaged
45 1,2-Dichloroethane-D4	0.93642	0.96389	0.96389	0.010	2.93329	50.00000	Averaged
55 Toluene-D8	1.28305	1.29485	1.29485	0.010	0.91934	50.00000	Averaged
76 P-Bromofluorobenzene	0.59121	0.59782	0.59782	0.010	1.11740	50.00000	Averaged

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG225400-11
Lab File ID : W3360.D
Initial Calibration Date(s): 03/26/18 10:13 03/26/18 13:19

SDG: SL2079
Analytical Date: 03/26/18 21:20
Instrument ID: GCMS-W
Column ID:

*** = Compound out of QC criteria**

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://katahdinlab.com
sales@katahdinlab.com

Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3360.D
Report Date: 28-Mar-2018 13:21

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W032618.b\W3360.D
Lab Smp Id: WG225400-11 Client Smp ID: ontinuing Calibrati
Inj Date : 26-MAR-2018 21:20 MS Autotune Date: 10-APR-2016 11:00
Operator : HG/JSS Inst ID: gcms-w.i
Smp Info : WG225400-11,SL2079
Misc Info : WG225400,WG225400-4,SL2079-8
Comment : SW846 5035
Method : \\target_server\gg\chem\gcms-w.i\W032618.b\W8SDI(08)D.m
Meth Date : 28-Mar-2018 13:21 gcms-w.i Quant Type: ISTD
Cal Date : 26-MAR-2018 13:19 Cal File: W3347.D
Als bottle: 19 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	0.00000	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	5.000	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	AMOUNTS ON-COL (ug/kg)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.956	1.955	(0.243)	182035	50.0000	55.8	
2	Chloromethane	50	2.178	2.176	(0.271)	186108	50.0000	55.0	
3	Vinyl chloride	62	2.249	2.248	(0.280)	185334	50.0000	53.2	
4	Bromomethane	94	2.593	2.591	(0.322)	108703	50.0000	52.6	
5	Chloroethane	64	2.721	2.720	(0.338)	128557	50.0000	53.7	
6	Trichlorofluoromethane	101	2.871	2.863	(0.357)	297923	50.0000	52.6	
7	Diethyl Ether	59	3.207	3.206	(0.399)	123579	50.0000	49.9	
8	Tertiary-butyl alcohol	59	4.680	4.686	(0.582)	126785	250.000	260	
9	1,1-Dichloroethene	96	3.443	3.435	(0.428)	99529	50.0000	48.7	
10	Carbon Disulfide	76	3.486	3.485	(0.434)	379377	50.0000	49.6	
11	Freon-113	151	3.486	3.478	(0.434)	89299	50.0000	49.1	
12	Iodomethane	142	3.622	3.621	(0.450)	75123	50.0000	49.0	
13	Acrolein	56	3.858	3.864	(0.480)	117467	250.000	238	
14	Methylene Chloride	84	4.166	4.163	(0.518)	144333	50.0000	46.7	
15	Acetone	43	4.251	4.250	(0.529)	290751	250.000	242	
16	Isobutyl Alcohol	43	8.313	8.318	(1.034)	190608	1000.00	946	
17	trans-1,2-Dichloroethene	96	4.387	4.386	(0.546)	117249	50.0000	49.6	
18	Allyl Chloride	41	4.030	4.027	(0.501)	195996	50.0000	51.6	
19	Methyl tert-butyl ether	73	4.544	4.543	(0.565)	458401	50.0000	49.8	
20	Acetonitrile	39	4.945	4.943	(0.615)	47090	500.000	522	
21	Di-isopropyl ether	45	5.131	5.129	(0.638)	424661	50.0000	51.3	
22	Chloroprene	53	5.302	5.301	(0.659)	236132	50.0000	52.7	

Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3360.D
Report Date: 28-Mar-2018 13:21

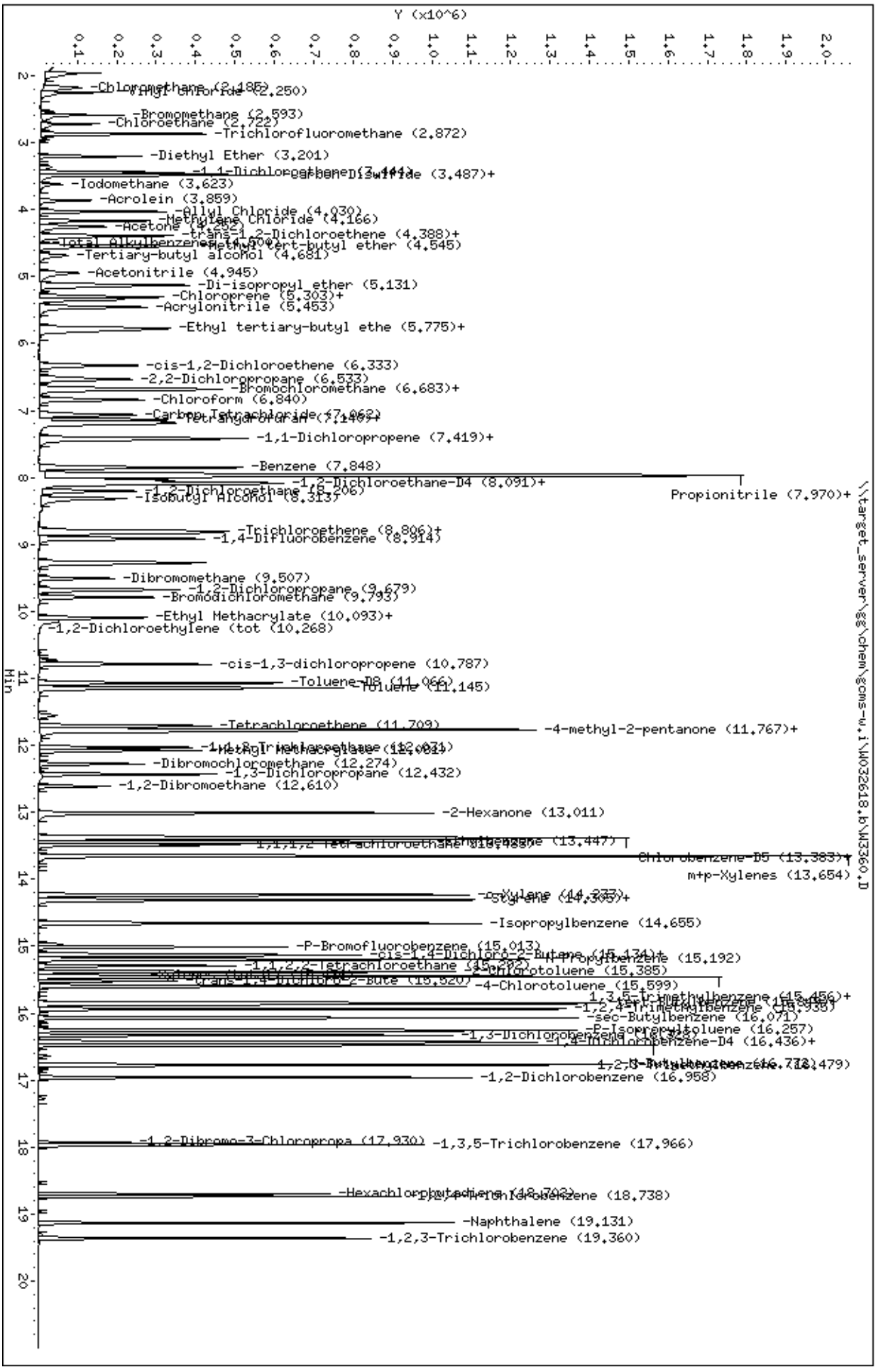
		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	ON-COL (ug/kg)	REVIEW CODE
	23	Propionitrile	54	7.941	7.939	(0.988)	247237	500.000	502	
	24	Methacrylonitrile	41	7.969	7.968	(0.991)	1019796	500.000	508	
	25	1,1-Dichloroethane	63	5.345	5.337	(0.665)	259816	50.0000	50.1	
	26	Acrylonitrile	52	5.453	5.451	(0.678)	237347	250.000	247	
	27	Ethyl tertiary-butyl ether	59	5.774	5.773	(0.718)	430653	50.0000	51.3	
	28	Vinyl Acetate	43	5.810	5.808	(0.652)	300045	50.0000	49.4	
	29	cis-1,2-Dichloroethene	96	6.332	6.323	(0.787)	131676	50.0000	50.2	
M	30	1,2-Dichloroethylene (total)	96				248925	100.000	(a)	
	31	Methyl Methacrylate	41	12.081	12.079	(1.355)	152467	50.0000	53.3	
	32	2,2-Dichloropropane	77	6.532	6.531	(0.812)	221421	50.0000	50.2	
	33	Bromochloromethane	128	6.697	6.688	(0.833)	54323	50.0000	50.6	
	34	Chloroform	83	6.840	6.838	(0.851)	283016	50.0000	52.0	
	35	Carbon Tetrachloride	117	7.061	7.060	(0.792)	203212	50.0000	49.4	
	36	Tetrahydrofuran	42	7.133	7.131	(0.887)	258096	250.000	259	
$	37	Dibromofluoromethane	113	7.169	7.167	(0.892)	110061	50.0000	51.0	
	38	1,1,1-Trichloroethane	97	7.197	7.196	(0.895)	250042	50.0000	51.0	
	39	1,1-Dichloropropene	75	7.419	7.417	(0.832)	204878	50.0000	49.8	
	40	2-Butanone	43	7.426	7.424	(0.924)	416093	250.000	254	
	41	Benzene	78	7.848	7.846	(0.880)	546254	50.0000	49.6	
*	42	Pentafluorobenzene	168	8.041	8.039	(1.000)	186663	50.0000		
	43	Cyclohexane	56	6.675	6.674	(0.830)	210439	50.0000	52.7	
	44	Ethyl Methacrylate	69	10.093	10.091	(1.132)	117754	50.0000	50.9	
$	45	1,2-Dichloroethane-D4	65	8.091	8.089	(1.006)	179923	50.0000	51.5	
	46	Tertiary-amyl methyl ether	73	8.084	8.082	(1.005)	411832	50.0000	49.5	
	47	1,2-Dichloroethane	62	8.205	8.204	(0.921)	251967	50.0000	49.1	
	48	Trichloroethene	95	8.835	8.833	(0.991)	140575	50.0000	48.3	
*	49	1,4-Difluorobenzene	114	8.913	8.912	(1.000)	335641	50.0000		
	50	Dibromomethane	93	9.507	9.505	(1.067)	88832	50.0000	49.0	
	51	1,2-Dichloropropane	63	9.678	9.677	(1.086)	141128	50.0000	48.5	
	52	Bromodichloromethane	83	9.793	9.791	(1.099)	223667	50.0000	49.3	
	53	cis-1,3-dichloropropene	75	10.787	10.785	(1.210)	265698	50.0000	49.4	
	54	1,4-Dioxane	88	10.136	10.141	(1.137)	50858	1000.00	983	
$	55	Toluene-D8	98	11.065	11.064	(1.241)	434604	50.0000	50.4	
	57	Toluene	92	11.144	11.142	(1.250)	335258	50.0000	47.9	
	58	4-methyl-2-pentanone	43	11.766	11.765	(1.320)	869071	250.000	250	
	59	Tetrachloroethene	164	11.709	11.707	(0.876)	92168	50.0000	50.3	
	60	trans-1,3-Dichloropropene	75	11.795	11.793	(1.323)	254448	50.0000	48.5	
	61	1,1,2-Trichloroethane	83	12.031	12.029	(1.350)	110918	50.0000	47.4	
	62	Dibromochloromethane	129	12.281	12.279	(0.919)	146617	50.0000	49.8	
	63	1,3-Dichloropropane	76	12.431	12.430	(0.930)	270285	50.0000	49.3	
	64	1,2-Dibromoethane	107	12.610	12.615	(1.415)	131615	50.0000	48.6	
	65	2-Hexanone	43	13.010	13.016	(0.974)	658570	250.000	254	
*	66	Chlorobenzene-D5	117	13.361	13.366	(1.000)	312752	50.0000		
	67	Chlorobenzene	112	13.389	13.388	(1.002)	371029	50.0000	47.9	
	152	1-Chlorohexane	91	13.389	13.382	(1.665)	194086	50.0000	49.7	
	68	Ethylbenzene	106	13.446	13.445	(1.006)	204261	50.0000	49.0	
	69	1,1,1,2-Tetrachloroethane	131	13.489	13.488	(1.010)	138460	50.0000	48.8	
M	70	Xylenes (total)	106				756620	150.000	(a)	
	71	m+p-Xylenes	106	13.654	13.652	(1.022)	507181	100.000	98.1	
	72	o-Xylene	106	14.233	14.231	(1.065)	249439	50.0000	50.9	
	73	Styrene	104	14.304	14.310	(1.071)	427307	50.0000	50.1	
	74	Bromoform	173	14.319	14.324	(1.072)	106499	50.0000	50.0	
	75	Isopropylbenzene	105	14.655	14.653	(0.892)	657990	50.0000	50.5	
$	76	P-Bromofluorobenzene	95	15.012	15.011	(1.684)	200652	50.0000	50.6	

Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3360.D
Report Date: 28-Mar-2018 13:21

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	ON-COL (ug/kg)	REVIEW CODE
	77 cis-1,4-Dichloro-2-Butene	53	15.112	15.118	(0.920)	81701	50.0000	48.1	
	78 trans-1,4-Dichloro-2-Butene	53	15.520	15.518	(0.945)	65624	50.0000	47.8	
	79 Bromobenzene	156	15.141	15.139	(0.922)	155270	50.0000	47.0	
	80 N-Propylbenzene	91	15.191	15.197	(0.925)	921911	50.0000	48.9	
	81 1,1,2,2-Tetrachloroethane	83	15.291	15.290	(0.931)	226749	50.0000	48.4	
	82 1,3,5-Trimethylbenzene	105	15.448	15.454	(0.941)	636895	50.0000	49.6	
	83 2-Chlorotoluene	91	15.384	15.383	(0.937)	566932	50.0000	49.3	
	84 1,2,3-Trichloropropane	75	15.456	15.454	(0.941)	217512	50.0000	48.0	
	85 4-Chlorotoluene	91	15.599	15.597	(0.950)	602659	50.0000	48.4	
	86 tert-Butylbenzene	119	15.849	15.847	(0.965)	606863	50.0000	49.6	
	87 Pentachloroethane	117	15.863	15.869	(0.966)	129503	50.0000	47.3	
	88 1,2,4-Trimethylbenzene	105	15.935	15.940	(0.970)	678117	50.0000	49.3	
	89 P-Isopropyltoluene	119	16.256	16.254	(0.990)	667129	50.0000	49.8	
	90 1,3-Dichlorobenzene	146	16.328	16.332	(0.994)	315328	50.0000	46.3	
*	91 1,4-Dichlorobenzene-D4	152	16.421	16.425	(1.000)	188941	50.0000		
	92 1,4-Dichlorobenzene	146	16.442	16.440	(1.001)	328450	50.0000	45.7	
	93 N-Butylbenzene	91	16.771	16.770	(1.021)	713760	50.0000	49.3	
	94 sec-Butylbenzene	105	16.071	16.069	(0.979)	814422	50.0000	49.6	
	95 1,2-Dichlorobenzene	146	16.957	16.956	(1.033)	323820	50.0000	47.6	
	96 1,2-Dibromo-3-Chloropropane	75	17.930	17.929	(1.092)	71775	50.0000	53.2	
	97 1,3,5-Trichlorobenzene	180	17.965	17.964	(2.234)	225393	50.0000	48.1	
	98 Hexachlorobutadiene	225	18.702	18.700	(1.139)	111491	50.0000	47.6	
	99 1,2,4-Trichlorobenzene	180	18.738	18.736	(1.141)	196917	50.0000	46.6	
	100 1,2,3-Trimethylbenzene	105	16.478	16.476	(2.049)	755608	50.0000	51.2	
	101 Naphthalene	128	19.131	19.129	(1.165)	598091	50.0000	51.5	
	102 1,2,3-Trichlorobenzene	180	19.360	19.358	(1.179)	194083	50.0000	47.1	
	103 Methyl Acetate	43	4.416	4.414	(0.549)	140365	50.0000	53.2	
	104 Methylcyclohexane	83	8.799	8.797	(1.094)	232078	50.0000	52.1	
M	153 Total Alkylbenzenes	100				5039097	50.0000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).


Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3360.D
Date : 26-MAR-2018 21:20
Client ID: ontinuing Calibrati
Sample Info: WG225400-11,SL2079
Column phase: RTX-VMS
Instrument: gcms-w.i
Operator: HG/JSS
Column diameter: 0.18
\\target_server\gg\chem\gcms-w.i\W032618.b\W3360.D
Y (x10^6)
Min
-Chloromethane (2.185)
-Vinyl Chloride (2.250)
-Bromomethane (2.593)
-Chloroethane (2.722)
-Trichlorofluoromethane (2.872)
-Diethyl Ether (3.201)
-1,1-Dichloroethene (3.441)
-Carbon Disulfide (3.487)+
-Iodomethane (3.623)
-Acrolein (3.859)
-Allyl Chloride (4.030)
-Methylene Chloride (4.166)
-Acetone (4.252)
-trans-1,2-Dichloroethene (4.388)+
-Total Alkylbenzenes (4.400)+
-Methyl tert-butyl ether (4.545)
-Tertiary-butyl alcohol (4.681)
-Acetonitrile (4.945)
-Di-isopropyl ether (5.131)
-Chloroprene (5.303)+
-Acrylonitrile (5.453)
-Ethyl tertiary-butyl ethe (5.775)+
-cis-1,2-Dichloroethene (6.333)
-2,2-Dichloropropane (6.533)
-Bromochloromethane (6.683)+
-Chloroform (6.840)
-Carbon Tetrachloride (7.062)
-Tetrahydrofuran (7.140)+
-1,1-Dichloropropene (7.419)+
-Benzene (7.848)
-1,2-Dichloroethane-D4 (8.091)+
-1,2-Dichloroethane (8.206)
-Isobutyl Alcohol (8.313)
Propionitrile (7.970)+
-Trichloroethene (8.806)+
-1,4-Difluorobenzene (8.914)
-Dibromomethane (9.507)
-1,2-Dichloropropane (9.679)
-Bromodichloromethane (9.793)
-Ethyl Methacrylate (10.093)+
-1,2-Dichloroethylene (tot (10.268)
-cis-1,3-dichloropropene (10.787)
-Toluene-D8 (11.066)
Toluene (11.145)
-Tetrachloroethene (11.709)
-4-methyl-2-pentanone (11.767)+
-1,1,2-Trichloroethane (12.071)
Methyl Methacrylate (12.081)
-Dibromochloromethane (12.274)
-1,3-Dichloropropane (12.432)
-1,2-Dibromoethane (12.610)
-2-Hexanone (13.011)
1,1,1,2-Tetrachloroethane (13.288)
Chlorobenzene (13.447)
Chlorobenzene-D5 (13.383)+
m+p-Xylenes (13.654)
-o-Xylene (14.237)
Styrene (14.305)+
-Isopropylbenzene (14.655)
-P-Bromofluorobenzene (15.013)
cis-1,4-Dichloro-2-Butene (15.134)+
n-Propylbenzene (15.192)
1,1,2,2-Tetrachloroethane (15.282)
2-Chlorotoluene (15.385)
trans-1,4-Dichloro-2-Bute (15.520)
-4-Chlorotoluene (15.599)
1,3,5-Trimethylbenzene (15.456)+
-1,2,4-Trimethylbenzene (15.935)
-sec-Butylbenzene (16.071)
-1,3-Dichlorobenzene (16.229)
-P-Isopropyltoluene (16.257)
-1,4-Dichlorobenzene-D4 (16.436)+
1,2,3-Trimethylbenzene (16.773)
-1,2-Dichlorobenzene (16.958)
-1,2-Dibromo-3-Chloropropa (17.930)
-1,3,5-Trichlorobenzene (17.966)
-Hexachlorobutadiene (18.703)
1,2,4-Trichlorobenzene (18.738)
-Naphthalene (19.131)
-1,2,3-Trichlorobenzene (19.360)

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL2079
Lab ID : WG225463-4
Analytical Date: 03/27/18 08:47
Lab File ID : W3365.D
Instrument ID: GCMS-W
Initial Calibration Date(s): 03/26/18 10:13 03/26/18 13:19
Column ID:

	Compound	$\overline{\text{RRF}}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type	
1	Dichlorodifluoromethane	0.87376	0.94400	0.94400	0.010	8.03872	20.00000	Averaged	
2	Chloromethane	0.90675	0.94633	0.94633	0.100	4.36501	20.00000	Averaged	
3	Vinyl chloride	0.93337	0.99683	0.99683	0.010	6.79981	20.00000	Averaged	
4	Bromomethane	0.55323	0.55719	0.55719	0.010	0.71692	20.00000	Averaged	
5	Chloroethane	0.64129	0.65792	0.65792	0.010	2.59368	20.00000	Averaged	
6	Trichlorofluoromethane	1.51565	1.50842	1.50842	0.010	-0.47700	20.00000	Averaged	
9	1,1-Dichloroethene	0.54723	0.57078	0.57078	0.010	4.30383	20.00000	Averaged	
10	Carbon Disulfide	2.04880	2.08810	2.08810	0.010	1.91796	20.00000	Averaged	
11	Freon-113	0.48734	0.49805	0.49805	0.010	2.19873	20.00000	Averaged	
14	Methylene Chloride	0.82792	0.78905	0.78905	0.010	-4.69538	20.00000	Averaged	
15	Acetone	0.32217	0.39882	0.39882	0.010	23.78956	20.00000	Averaged	*
17	trans-1,2-Dichloroethene	0.63256	0.64977	0.64977	0.010	2.72065	20.00000	Averaged	
19	Methyl tert-butyl ether	2.46563	2.42586	2.42586	0.010	-1.61273	20.00000	Averaged	
25	1,1-Dichloroethane	1.38826	1.39876	1.39876	0.100	0.75598	20.00000	Averaged	
29	cis-1,2-Dichloroethene	0.70203	0.71123	0.71123	0.010	1.31036	20.00000	Averaged	
32	2,2-Dichloropropane	1.18262	1.20702	1.20702	0.010	2.06326	20.00000	Averaged	
33	Bromochloromethane	0.28761	0.29125	0.29125	0.010	1.26496	20.00000	Averaged	
34	Chloroform	1.45842	1.45235	1.45235	0.010	-0.41600	20.00000	Averaged	
35	Carbon Tetrachloride	0.61288	0.61083	0.61083	0.010	-0.33463	20.00000	Averaged	
38	1,1,1-Trichloroethane	1.31268	1.30212	1.30212	0.010	-0.80430	20.00000	Averaged	
39	1,1-Dichloropropene	0.61272	0.63677	0.63677	0.010	3.92396	20.00000	Averaged	
40	2-Butanone	0.43958	0.45679	0.45679	0.010	3.91446	20.00000	Averaged	
41	Benzene	1.63897	1.64994	1.64994	0.010	0.66969	20.00000	Averaged	
47	1,2-Dichloroethane	0.76403	0.69858	0.69858	0.010	-8.56641	20.00000	Averaged	
48	Trichloroethene	0.43314	0.42446	0.42446	0.010	-2.00405	20.00000	Averaged	
50	Dibromomethane	0.26980	0.26032	0.26032	0.010	-3.51046	20.00000	Averaged	
51	1,2-Dichloropropane	0.43355	0.43038	0.43038	0.010	-0.72925	20.00000	Averaged	
52	Bromodichloromethane	0.67587	0.63875	0.63875	0.010	-5.49223	20.00000	Averaged	
53	cis-1,3-dichloropropene	0.80106	0.80046	0.80046	0.010	-0.07464	20.00000	Averaged	
57	Toluene	1.04309	1.04487	1.04487	0.010	0.17146	20.00000	Averaged	
58	4-methyl-2-pentanone	0.51775	0.49092	0.49092	0.010	-5.18274	20.00000	Averaged	
59	Tetrachloroethene	0.29302	0.31080	0.31080	0.010	6.06523	20.00000	Averaged	
60	trans-1,3-Dichloropropene	0.78155	0.75722	0.75722	0.010	-3.11320	20.00000	Averaged	
61	1,1,2-Trichloroethane	0.34883	0.33214	0.33214	0.010	-4.78292	20.00000	Averaged	
62	Dibromochloromethane	0.47042	0.46337	0.46337	0.010	-1.49898	20.00000	Averaged	
63	1,3-Dichloropropane	0.87640	0.84808	0.84808	0.010	-3.23153	20.00000	Averaged	
64	1,2-Dibromoethane	0.40344	0.38241	0.38241	0.010	-5.21461	20.00000	Averaged	
65	2-Hexanone	0.41497	0.42060	0.42060	0.010	1.35664	20.00000	Averaged	
67	Chlorobenzene	1.23913	1.24070	1.24070	0.300	0.12681	20.00000	Averaged	
68	Ethylbenzene	0.66630	0.68171	0.68171	0.010	2.31283	20.00000	Averaged	
69	1,1,1,2-Tetrachloroethane	0.45364	0.44848	0.44848	0.010	-1.13647	20.00000	Averaged	

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL2079
Lab ID : WG225463-4
Analytical Date: 03/27/18 08:47
Lab File ID : W3365.D
Instrument ID: GCMS-W
Initial Calibration Date(s): 03/26/18 10:13 03/26/18 13:19
Column ID:

Compound	RRF/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
71 m+p-Xylenes	0.82632	0.86893	0.86893	0.010	5.15625	20.00000	Averaged
72 o-Xylene	0.78403	0.82836	0.82836	0.010	5.65488	20.00000	Averaged
73 Styrene	1.36383	1.42914	1.42914	0.010	4.78801	20.00000	Averaged
74 Bromoform	0.34031	0.32934	0.32934	0.100	-3.22324	20.00000	Averaged
75 Isopropylbenzene	3.44576	3.67432	3.67432	0.010	6.63327	20.00000	Averaged
79 Bromobenzene	0.87344	0.84245	0.84245	0.010	-3.54810	20.00000	Averaged
80 N-Propylbenzene	4.98683	5.17432	5.17432	0.010	3.75974	20.00000	Averaged
81 1,1,2,2-Tetrachloroethane	1.24042	1.14604	1.14604	0.300	-7.60816	20.00000	Averaged
82 1,3,5-Trimethylbenzene	3.39710	3.53778	3.53778	0.010	4.14119	20.00000	Averaged
83 2-Chlorotoluene	3.04367	3.09474	3.09474	0.010	1.67776	20.00000	Averaged
84 1,2,3-Trichloropropane	1.19943	1.09377	1.09377	0.010	-8.80957	20.00000	Averaged
85 4-Chlorotoluene	3.29308	3.33710	3.33710	0.010	1.33658	20.00000	Averaged
86 tert-Butylbenzene	3.24036	3.38521	3.38521	0.010	4.47022	20.00000	Averaged
88 1,2,4-Trimethylbenzene	3.64176	3.77192	3.77192	0.010	3.57410	20.00000	Averaged
89 P-Isopropyltoluene	3.54784	3.82009	3.82009	0.010	7.67362	20.00000	Averaged
90 1,3-Dichlorobenzene	1.80086	1.84184	1.84184	0.010	2.27555	20.00000	Averaged
92 1,4-Dichlorobenzene	1.90165	1.88001	1.88001	0.010	-1.13788	20.00000	Averaged
93 N-Butylbenzene	3.83209	4.20411	4.20411	0.010	9.70786	20.00000	Averaged
94 sec-Butylbenzene	4.34063	4.58835	4.58835	0.010	5.70706	20.00000	Averaged
95 1,2-Dichlorobenzene	1.80064	1.79179	1.79179	0.010	-0.49172	20.00000	Averaged
96 1,2-Dibromo-3-Chloropropane	0.35726	0.32161	0.32161	0.010	-9.97918	20.00000	Averaged
98 Hexachlorobutadiene	0.62006	0.66925	0.66925	0.010	7.93383	20.00000	Averaged
99 1,2,4-Trichlorobenzene	1.11691	1.21068	1.21068	0.010	8.39536	20.00000	Averaged
101 Naphthalene	3.07254	3.14980	3.14980	0.010	2.51454	20.00000	Averaged
102 1,2,3-Trichlorobenzene	1.08947	1.11261	1.11261	0.010	2.12362	20.00000	Averaged
37 Dibromofluoromethane	0.57846	0.56956	0.56956	0.010	-1.53808	20.00000	Averaged
45 1,2-Dichloroethane-D4	0.93642	0.86805	0.86805	0.010	-7.30154	20.00000	Averaged
55 Toluene-D8	1.28305	1.27319	1.27319	0.010	-0.76901	20.00000	Averaged
76 P-Bromofluorobenzene	0.59121	0.57683	0.57683	0.010	-2.43244	20.00000	Averaged

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG225463-4
Lab File ID : W3365.D
Initial Calibration Date(s): 03/26/18 10:13 03/26/18 13:19

SDG: SL2079
Analytical Date: 03/27/18 08:47
Instrument ID: GCMS-W
Column ID:

*** = Compound out of QC criteria**

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://katahdinlab.com
sales@katahdinlab.com

Data File: \\target_server\gg\chem\gcms-w.i\W032718.b\W3365.D
Report Date: 28-Mar-2018 14:17

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W032718.b\W3365.D
Lab Smp Id: WG225463-4 Client Smp ID: ontinuing Calibrati
Inj Date : 27-MAR-2018 08:47 MS Autotune Date: 10-APR-2016 11:00
Operator : HG/JSS Inst ID: gcms-w.i
Smp Info : WG225463-4,SL2079
Misc Info : WG225463,WG225400-4,SL2079-5
Comment : SW846 5035
Method : \\target_server\gg\chem\gcms-w.i\W032718.b\W8SDI(08)D.m
Meth Date : 28-Mar-2018 14:17 gcms-w.i Quant Type: ISTD
Cal Date : 26-MAR-2018 13:19 Cal File: W3347.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	0.00000	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	5.000	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	AMOUNTS ON-COL (ug/kg)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.955	1.955	(0.243)	204441	50.0000	54.0	
2	Chloromethane	50	2.169	2.176	(0.270)	204945	50.0000	52.2	
3	Vinyl chloride	62	2.248	2.248	(0.279)	215882	50.0000	53.4	
4	Bromomethane	94	2.591	2.591	(0.322)	120670	50.0000	50.4	
5	Chloroethane	64	2.727	2.720	(0.339)	142485	50.0000	51.3	
6	Trichlorofluoromethane	101	2.870	2.863	(0.357)	326676	50.0000	49.8	
7	Diethyl Ether	59	3.206	3.206	(0.398)	139198	50.0000	48.4	
8	Tertiary-butyl alcohol	59	4.693	4.686	(0.583)	129592	250.000	229	
9	1,1-Dichloroethene	96	3.442	3.435	(0.428)	123613	50.0000	52.2	
10	Carbon Disulfide	76	3.492	3.485	(0.434)	452215	50.0000	51.0	
11	Freon-113	151	3.485	3.478	(0.433)	107862	50.0000	51.1	
12	Iodomethane	142	3.628	3.621	(0.451)	97228	50.0000	54.0	
13	Acrolein	56	3.864	3.864	(0.480)	138894	250.000	242	
14	Methylene Chloride	84	4.171	4.163	(0.518)	170882	50.0000	47.6	
15	Acetone	43	4.257	4.250	(0.529)	431853	250.000	309	
16	Isobutyl Alcohol	43	8.318	8.318	(1.034)	206057	1000.00	887	
17	trans-1,2-Dichloroethene	96	4.393	4.386	(0.546)	140719	50.0000	51.4	
18	Allyl Chloride	41	4.035	4.027	(0.502)	229485	50.0000	52.1	
19	Methyl tert-butyl ether	73	4.550	4.543	(0.566)	525364	50.0000	49.2	
20	Acetonitrile	39	4.951	4.943	(0.615)	50470	500.000	482	
21	Di-isopropyl ether	45	5.136	5.129	(0.638)	496707	50.0000	51.7	
22	Chloroprene	53	5.308	5.301	(0.660)	269356	50.0000	51.8	

Data File: \\target_server\gg\chem\gcms-w.i\W032718.b\W3365.D
Report Date: 28-Mar-2018 14:17

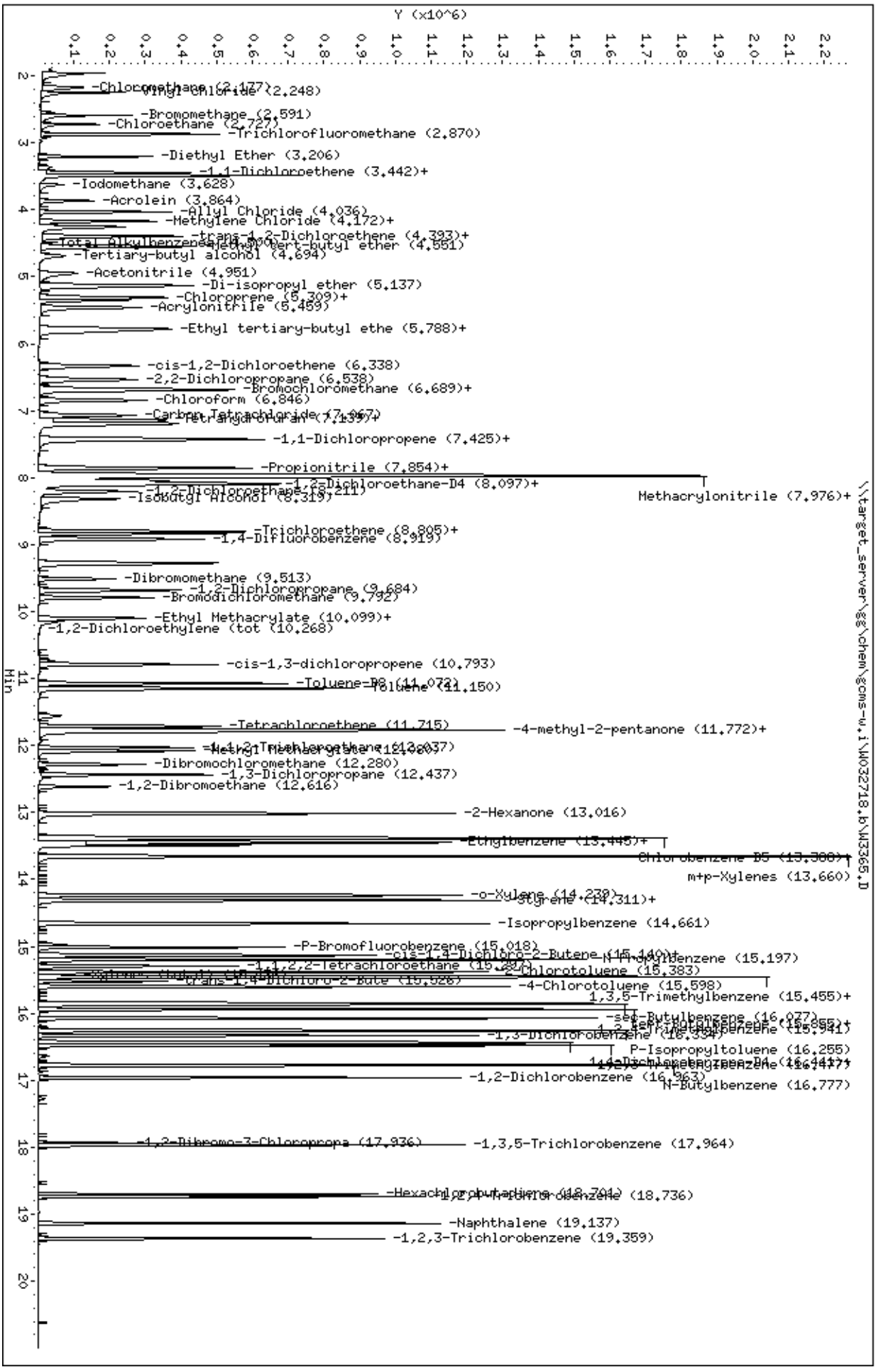
		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	ON-COL (ug/kg)	REVIEW CODE
	23	Propionitrile	54	7.946	7.939	(0.988)	263115	500.000	461	
	24	Methacrylonitrile	41	7.975	7.968	(0.991)	1086767	500.000	467	
	25	1,1-Dichloroethane	63	5.351	5.337	(0.665)	302926	50.0000	50.4	
	26	Acrylonitrile	52	5.458	5.451	(0.678)	263800	250.000	237	
	27	Ethyl tertiary-butyl ether	59	5.780	5.773	(0.718)	485258	50.0000	49.8	
	28	Vinyl Acetate	43	5.816	5.808	(0.652)	341866	50.0000	49.4	
	29	cis-1,2-Dichloroethene	96	6.330	6.323	(0.787)	154029	50.0000	50.6	
M	30	1,2-Dichloroethylene (total)	96				294748	100.000	(a)	
	31	Methyl Methacrylate	41	12.079	12.079	(1.354)	162243	50.0000	49.8	
	32	2,2-Dichloropropane	77	6.538	6.531	(0.813)	261402	50.0000	51.0	
	33	Bromochloromethane	128	6.702	6.688	(0.833)	63076	50.0000	50.6	
	34	Chloroform	83	6.845	6.838	(0.851)	314533	50.0000	49.8	
	35	Carbon Tetrachloride	117	7.067	7.060	(0.792)	233447	50.0000	49.8	
	36	Tetrahydrofuran	42	7.138	7.131	(0.887)	278256	250.000	241	
$	37	Dibromofluoromethane	113	7.174	7.167	(0.892)	123349	50.0000	49.2	
	38	1,1,1-Trichloroethane	97	7.203	7.196	(0.895)	281997	50.0000	49.6	
	39	1,1-Dichloropropene	75	7.424	7.417	(0.832)	243360	50.0000	52.0	
	40	2-Butanone	43	7.432	7.424	(0.924)	494629	250.000	260	
	41	Benzene	78	7.853	7.846	(0.881)	630575	50.0000	50.3	
*	42	Pentafluorobenzene	168	8.047	8.039	(1.000)	216568	50.0000		
	43	Cyclohexane	56	6.681	6.674	(0.830)	254404	50.0000	55.0	
	44	Ethyl Methacrylate	69	10.099	10.091	(1.132)	131335	50.0000	49.9	
$	45	1,2-Dichloroethane-D4	65	8.097	8.089	(1.006)	187992	50.0000	46.3	
	46	Tertiary-amyl methyl ether	73	8.089	8.082	(1.005)	466107	50.0000	48.3	
	47	1,2-Dichloroethane	62	8.211	8.204	(0.921)	266982	50.0000	45.7	
	48	Trichloroethene	95	8.833	8.833	(0.990)	162220	50.0000	49.0	
*	49	1,4-Difluorobenzene	114	8.919	8.912	(1.000)	382180	50.0000		
	50	Dibromomethane	93	9.512	9.505	(1.067)	99491	50.0000	48.2	
	51	1,2-Dichloropropane	63	9.684	9.677	(1.086)	164484	50.0000	49.6	
	52	Bromodichloromethane	83	9.791	9.791	(1.098)	244117	50.0000	47.2	
	53	cis-1,3-dichloropropene	75	10.792	10.785	(1.210)	305920	50.0000	50.0	
	54	1,4-Dioxane	88	10.142	10.141	(1.137)	51869	1000.00	884	
$	55	Toluene-D8	98	11.071	11.064	(1.241)	486586	50.0000	49.6	
	57	Toluene	92	11.150	11.142	(1.250)	399330	50.0000	50.1	
	58	4-methyl-2-pentanone	43	11.765	11.765	(1.319)	938095	250.000	237	
	59	Tetrachloroethene	164	11.715	11.707	(0.876)	109002	50.0000	53.0	
	60	trans-1,3-Dichloropropene	75	11.800	11.793	(1.323)	289394	50.0000	48.4	
	61	1,1,2-Trichloroethane	83	12.029	12.029	(1.349)	126939	50.0000	47.6	
	62	Dibromochloromethane	129	12.279	12.279	(0.919)	162512	50.0000	49.2	
	63	1,3-Dichloropropane	76	12.437	12.430	(0.930)	297439	50.0000	48.4	
	64	1,2-Dibromoethane	107	12.615	12.615	(1.414)	146148	50.0000	47.4	
	65	2-Hexanone	43	13.016	13.016	(0.974)	737560	250.000	253	
*	66	Chlorobenzene-D5	117	13.366	13.366	(1.000)	350719	50.0000		
	67	Chlorobenzene	112	13.395	13.388	(1.002)	435136	50.0000	50.1	
	152	1-Chlorohexane	91	13.388	13.382	(1.664)	241980	50.0000	53.4	
	68	Ethylbenzene	106	13.445	13.445	(1.006)	239088	50.0000	51.2	
	69	1,1,1,2-Tetrachloroethane	131	13.488	13.488	(1.009)	157291	50.0000	49.4	
M	70	Xylenes (total)	106				900024	150.000	(a)	
	71	m+p-Xylenes	106	13.659	13.652	(1.022)	609502	100.000	105	
	72	o-Xylene	106	14.239	14.231	(1.065)	290522	50.0000	52.8	
	73	Styrene	104	14.310	14.310	(1.071)	501225	50.0000	52.4	
	74	Bromoform	173	14.324	14.324	(1.072)	115505	50.0000	48.4	
	75	Isopropylbenzene	105	14.660	14.653	(0.892)	784788	50.0000	53.3	
$	76	P-Bromofluorobenzene	95	15.018	15.011	(1.684)	220453	50.0000	48.8	

Data File: \\target_server\gg\chem\gcms-w.i\W032718.b\W3365.D
Report Date: 28-Mar-2018 14:17

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	ON-COL (ug/kg)	REVIEW CODE
	77 cis-1,4-Dichloro-2-Butene	53	15.118	15.118	(0.920)	87331	50.0000	45.5	
	78 trans-1,4-Dichloro-2-Butene	53	15.526	15.518	(0.945)	69294	50.0000	44.7	
	79 Bromobenzene	156	15.139	15.139	(0.922)	179937	50.0000	48.2	
	80 N-Propylbenzene	91	15.197	15.197	(0.925)	1105168	50.0000	51.9	
	81 1,1,2,2-Tetrachloroethane	83	15.297	15.290	(0.931)	244780	50.0000	46.2	
	82 1,3,5-Trimethylbenzene	105	15.454	15.454	(0.941)	755623	50.0000	52.1	
	83 2-Chlorotoluene	91	15.383	15.383	(0.936)	660996	50.0000	50.8	
	84 1,2,3-Trichloropropane	75	15.461	15.454	(0.941)	233614	50.0000	45.6	
	85 4-Chlorotoluene	91	15.597	15.597	(0.950)	712761	50.0000	50.7	
	86 tert-Butylbenzene	119	15.854	15.847	(0.965)	723037	50.0000	52.2	
	87 Pentachloroethane	117	15.869	15.869	(0.966)	149348	50.0000	48.3	
	88 1,2,4-Trimethylbenzene	105	15.940	15.940	(0.970)	805634	50.0000	51.8	
	89 P-Isopropyltoluene	119	16.255	16.254	(0.990)	815921	50.0000	53.8	
	90 1,3-Dichlorobenzene	146	16.334	16.332	(0.994)	393393	50.0000	51.1	
*	91 1,4-Dichlorobenzene-D4	152	16.426	16.425	(1.000)	213587	50.0000		
	92 1,4-Dichlorobenzene	146	16.448	16.440	(1.001)	401546	50.0000	49.4	
	93 N-Butylbenzene	91	16.777	16.770	(1.021)	897943	50.0000	54.8	
	94 sec-Butylbenzene	105	16.076	16.069	(0.979)	980012	50.0000	52.8	
	95 1,2-Dichlorobenzene	146	16.963	16.956	(1.033)	382702	50.0000	49.8	
	96 1,2-Dibromo-3-Chloropropane	75	17.935	17.929	(1.092)	68691	50.0000	45.0	
	97 1,3,5-Trichlorobenzene	180	17.971	17.964	(2.233)	290464	50.0000	53.4	
	98 Hexachlorobutadiene	225	18.700	18.700	(1.138)	142943	50.0000	54.0	
	99 1,2,4-Trichlorobenzene	180	18.743	18.736	(1.141)	258586	50.0000	54.2	
	100 1,2,3-Trimethylbenzene	105	16.484	16.476	(2.048)	856258	50.0000	50.0	
	101 Naphthalene	128	19.136	19.129	(1.165)	672756	50.0000	51.2	
	102 1,2,3-Trichlorobenzene	180	19.365	19.358	(1.179)	237638	50.0000	51.1	
	103 Methyl Acetate	43	4.421	4.414	(0.549)	146615	50.0000	47.9	
	104 Methylcyclohexane	83	8.804	8.797	(1.094)	283003	50.0000	54.8	
M	153 Total Alkylbenzenes	100				6083338	50.0000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).


Data File: \\target_server\gg\chem\gcms-w.i\W032718.b\W3365.D
Date : 27-MAR-2018 08:47
Client ID: ontinuing Calibrati
Sample Info: WG225463-4,SL2079
Column phase: RTX-VMS
Instrument: gcms-w.i
Operator: HG/JSS
Column diameter: 0.18
\\target_server\gg\chem\gcms-w.i\W032718.b\W3365.D
Y (x10^6)
Min
-Chloromethane (2.177)
-Vinyl Chloride (2.248)
-Bromomethane (2.591)
-Chloroethane (2.727)
-Trichlorofluoromethane (2.870)
-Diethyl Ether (3.206)
-1,1-Dichloroethene (3.442)+
-Iodomethane (3.628)
-Acrolein (3.864)
-Allyl Chloride (4.036)
-Methylene Chloride (4.172)+
-trans-1,2-Dichloroethene (4.393)+
-Total Alkylbenzenes (4.490)+
-Methyl tert-butyl ether (4.551)
-Tertiary-butyl alcohol (4.694)
-Acetonitrile (4.951)
-Di-isopropyl ether (5.137)
-Chloroprene (5.309)+
-Acrylonitrile (5.459)
-Ethyl tertiary-butyl ethe (5.788)+
-cis-1,2-Dichloroethene (6.338)
-2,2-Dichloropropane (6.538)
-Bromochloromethane (6.689)+
-Chloroform (6.846)
-Carbon Tetrachloride (7.067)
-Tetrahydrofuran (7.139)+
-1,1-Dichloropropene (7.425)+
-Propionitrile (7.854)+
-1,2-Dichloroethane-D4 (8.097)+
-1,2-Dichloroethane (8.211)
-Isobutyl Alcohol (8.319)
Methacrylonitrile (7.976)+
-Trichloroethene (8.805)+
-1,4-Difluorobenzene (8.919)
-Dibromomethane (9.513)
-1,2-Dichloropropane (9.684)
-Bromodichloromethane (9.792)
-Ethyl Methacrylate (10.099)+
-1,2-Dichloroethylene (tot (10.268)
-cis-1,3-dichloropropene (10.793)
-Toluene-D8 (11.072)
Toluene (11.150)
-Tetrachloroethene (11.715)
-4-methyl-2-pentanone (11.772)+
-1,1,2-Trichloroethane (12.037)
-Methyl Methacrylate (12.200)
-Dibromochloromethane (12.280)
-1,3-Dichloropropane (12.437)
-1,2-Dibromoethane (12.616)
-2-Hexanone (13.016)
-Ethylbenzene (13.445)+
Chlorobenzene-D5 (13.300)+
m+p-Xylenes (13.660)
-o-Xylene (14.239)
-Styrene (14.311)+
-Isopropylbenzene (14.661)
-P-Bromofluorobenzene (15.018)
-cis-1,4-Dichloro-2-Butene (15.140)+
N-Propylbenzene (15.197)
-1,1,2,2-Tetrachloroethane (15.292)
2-Chlorotoluene (15.383)
-trans-1,4-Dichloro-2-Bute (15.626)
-4-Chlorotoluene (15.598)
1,3,5-Trimethylbenzene (15.455)+
-sec-Butylbenzene (16.077)
-1,3-Dichlorobenzene (16.354)
P-Isopropyltoluene (16.255)
-1,2-Dichlorobenzene (16.563)
N-Butylbenzene (16.777)
-1,2-Dibromo-3-Chloroprop (17.936)
-1,3,5-Trichlorobenzene (17.964)
(18.736)
-Naphthalene (19.137)
-1,2,3-Trichlorobenzene (19.359)

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL2079
Lab ID : WG225463-5
Analytical Date: 03/27/18 19:08
Lab File ID : W3381.D
Instrument ID: GCMS-W
Initial Calibration Date(s): 03/26/18 10:13 03/26/18 13:19
Column ID:

	Compound	$\overline{\text{RRF}}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
1	Dichlorodifluoromethane	0.87376	0.83859	0.83859	0.010	-4.02521	50.00000	Averaged
2	Chloromethane	0.90675	0.88737	0.88737	0.100	-2.13692	50.00000	Averaged
3	Vinyl chloride	0.93337	0.85741	0.85741	0.010	-8.13798	50.00000	Averaged
4	Bromomethane	0.55323	0.54881	0.54881	0.010	-0.79899	50.00000	Averaged
5	Chloroethane	0.64129	0.61849	0.61849	0.010	-3.55492	50.00000	Averaged
6	Trichlorofluoromethane	1.51565	1.45507	1.45507	0.010	-3.99717	50.00000	Averaged
9	1,1-Dichloroethene	0.54723	0.44726	0.44726	0.010	-18.26748	50.00000	Averaged
10	Carbon Disulfide	2.04880	1.70874	1.70874	0.010	-16.59804	50.00000	Averaged
11	Freon-113	0.48734	0.38484	0.38484	0.010	-21.03138	50.00000	Averaged
14	Methylene Chloride	0.82792	0.70113	0.70113	0.010	-15.31387	50.00000	Averaged
15	Acetone	0.32217	0.29032	0.29032	0.010	-9.88554	50.00000	Averaged
17	trans-1,2-Dichloroethene	0.63256	0.52096	0.52096	0.010	-17.64231	50.00000	Averaged
19	Methyl tert-butyl ether	2.46563	2.36537	2.36537	0.010	-4.06605	50.00000	Averaged
25	1,1-Dichloroethane	1.38826	1.23271	1.23271	0.100	-11.20512	50.00000	Averaged
29	cis-1,2-Dichloroethene	0.70203	0.62467	0.62467	0.010	-11.01979	50.00000	Averaged
32	2,2-Dichloropropane	1.18262	1.04119	1.04119	0.010	-11.95890	50.00000	Averaged
33	Bromochloromethane	0.28761	0.26992	0.26992	0.010	-6.15058	50.00000	Averaged
34	Chloroform	1.45842	1.37810	1.37810	0.010	-5.50734	50.00000	Averaged
35	Carbon Tetrachloride	0.61288	0.53395	0.53395	0.010	-12.87880	50.00000	Averaged
38	1,1,1-Trichloroethane	1.31268	1.19063	1.19063	0.010	-9.29784	50.00000	Averaged
39	1,1-Dichloropropene	0.61272	0.53104	0.53104	0.010	-13.33220	50.00000	Averaged
40	2-Butanone	0.43958	0.40467	0.40467	0.010	-7.94245	50.00000	Averaged
41	Benzene	1.63897	1.40095	1.40095	0.010	-14.52254	50.00000	Averaged
47	1,2-Dichloroethane	0.76403	0.74644	0.74644	0.010	-2.30217	50.00000	Averaged
48	Trichloroethene	0.43314	0.36731	0.36731	0.010	-15.19942	50.00000	Averaged
50	Dibromomethane	0.26980	0.25281	0.25281	0.010	-6.29662	50.00000	Averaged
51	1,2-Dichloropropane	0.43355	0.38990	0.38990	0.010	-10.06801	50.00000	Averaged
52	Bromodichloromethane	0.67587	0.63640	0.63640	0.010	-5.83906	50.00000	Averaged
53	cis-1,3-dichloropropene	0.80106	0.73111	0.73111	0.010	-8.73170	50.00000	Averaged
57	Toluene	1.04309	0.89501	0.89501	0.010	-14.19628	50.00000	Averaged
58	4-methyl-2-pentanone	0.51775	0.48676	0.48676	0.010	-5.98583	50.00000	Averaged
59	Tetrachloroethene	0.29302	0.24286	0.24286	0.010	-17.11881	50.00000	Averaged
60	trans-1,3-Dichloropropene	0.78155	0.73118	0.73118	0.010	-6.44440	50.00000	Averaged
61	1,1,2-Trichloroethane	0.34883	0.32491	0.32491	0.010	-6.85546	50.00000	Averaged
62	Dibromochloromethane	0.47042	0.43133	0.43133	0.010	-8.30891	50.00000	Averaged
63	1,3-Dichloropropane	0.87640	0.79188	0.79188	0.010	-9.64462	50.00000	Averaged
64	1,2-Dibromoethane	0.40344	0.36726	0.36726	0.010	-8.96778	50.00000	Averaged
65	2-Hexanone	0.41497	0.37253	0.37253	0.010	-10.22683	50.00000	Averaged
67	Chlorobenzene	1.23913	1.05082	1.05082	0.300	-15.19654	50.00000	Averaged
68	Ethylbenzene	0.66630	0.55892	0.55892	0.010	-16.11592	50.00000	Averaged
69	1,1,1,2-Tetrachloroethane	0.45364	0.40147	0.40147	0.010	-11.50029	50.00000	Averaged

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL2079
Lab ID : WG225463-5
Analytical Date: 03/27/18 19:08
Lab File ID : W3381.D
Instrument ID: GCMS-W
Initial Calibration Date(s): 03/26/18 10:13 03/26/18 13:19
Column ID:

Compound	RRF/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
71 m+p-Xylenes	0.82632	0.70646	0.70646	0.010	-14.50522	50.00000	Averaged
72 o-Xylene	0.78403	0.70799	0.70799	0.010	-9.69854	50.00000	Averaged
73 Styrene	1.36383	1.22908	1.22908	0.010	-9.88028	50.00000	Averaged
74 Bromoform	0.34031	0.31403	0.31403	0.100	-7.72085	50.00000	Averaged
75 Isopropylbenzene	3.44576	3.07128	3.07128	0.010	-10.86783	50.00000	Averaged
79 Bromobenzene	0.87344	0.73990	0.73990	0.010	-15.28951	50.00000	Averaged
80 N-Propylbenzene	4.98683	4.38788	4.38788	0.010	-12.01073	50.00000	Averaged
81 1,1,2,2-Tetrachloroethane	1.24042	1.11482	1.11482	0.300	-10.12520	50.00000	Averaged
82 1,3,5-Trimethylbenzene	3.39710	3.02049	3.02049	0.010	-11.08625	50.00000	Averaged
83 2-Chlorotoluene	3.04367	2.72302	2.72302	0.010	-10.53517	50.00000	Averaged
84 1,2,3-Trichloropropane	1.19943	1.07953	1.07953	0.010	-9.99609	50.00000	Averaged
85 4-Chlorotoluene	3.29308	2.93127	2.93127	0.010	-10.98717	50.00000	Averaged
86 tert-Butylbenzene	3.24036	2.91326	2.91326	0.010	-10.09463	50.00000	Averaged
88 1,2,4-Trimethylbenzene	3.64176	3.30339	3.30339	0.010	-9.29144	50.00000	Averaged
89 P-Isopropyltoluene	3.54784	3.14768	3.14768	0.010	-11.27906	50.00000	Averaged
90 1,3-Dichlorobenzene	1.80086	1.55450	1.55450	0.010	-13.68012	50.00000	Averaged
92 1,4-Dichlorobenzene	1.90165	1.60076	1.60076	0.010	-15.82236	50.00000	Averaged
93 N-Butylbenzene	3.83209	3.35857	3.35857	0.010	-12.35678	50.00000	Averaged
94 sec-Butylbenzene	4.34063	3.80172	3.80172	0.010	-12.41554	50.00000	Averaged
95 1,2-Dichlorobenzene	1.80064	1.58955	1.58955	0.010	-11.72278	50.00000	Averaged
96 1,2-Dibromo-3-Chloropropane	0.35726	0.32603	0.32603	0.010	-8.74155	50.00000	Averaged
98 Hexachlorobutadiene	0.62006	0.52013	0.52013	0.010	-16.11633	50.00000	Averaged
99 1,2,4-Trichlorobenzene	1.11691	0.97720	0.97720	0.010	-12.50929	50.00000	Averaged
101 Naphthalene	3.07254	2.91052	2.91052	0.010	-5.27317	50.00000	Averaged
102 1,2,3-Trichlorobenzene	1.08947	0.97848	0.97848	0.010	-10.18790	50.00000	Averaged
37 Dibromofluoromethane	0.57846	0.61239	0.61239	0.010	5.86607	50.00000	Averaged
45 1,2-Dichloroethane-D4	0.93642	1.02300	1.02300	0.010	9.24494	50.00000	Averaged
55 Toluene-D8	1.28305	1.31299	1.31299	0.010	2.33328	50.00000	Averaged
76 P-Bromofluorobenzene	0.59121	0.62046	0.62046	0.010	4.94699	50.00000	Averaged

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG225463-5
Lab File ID : W3381.D
Initial Calibration Date(s): 03/26/18 10:13 03/26/18 13:19

SDG: SL2079
Analytical Date: 03/27/18 19:08
Instrument ID: GCMS-W
Column ID:

*** = Compound out of QC criteria**

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http://katahdinlab.com
sales@katahdinlab.com

Data File: \\target_server\gg\chem\gcms-w.i\W032718.b\W3381.D
Report Date: 28-Mar-2018 13:50

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W032718.b\W3381.D
Lab Smp Id: WG225463-5 Client Smp ID: ontinuing Calibrati
Inj Date : 27-MAR-2018 19:08 MS Autotune Date: 10-APR-2016 11:00
Operator : HG/JSS Inst ID: gcms-w.i
Smp Info : WG225463-5,SL2079
Misc Info : WG225463,WG225400-4,SL2079-5
Comment : SW846 5035
Method : \\target_server\gg\chem\gcms-w.i\W032718.b\W8SDI(08)D.m
Meth Date : 28-Mar-2018 13:49 gcms-w.i Quant Type: ISTD
Cal Date : 26-MAR-2018 13:19 Cal File: W3347.D
Als bottle: 18 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	0.00000	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	5.000	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	ON-COL (ug/kg)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.961	1.955	(0.243)	136788	50.0000	48.0	
2	Chloromethane	50	2.183	2.176	(0.271)	144745	50.0000	48.9	
3	Vinyl chloride	62	2.254	2.248	(0.280)	139857	50.0000	45.9	
4	Bromomethane	94	2.598	2.591	(0.322)	89519	50.0000	49.6	
5	Chloroethane	64	2.733	2.720	(0.339)	100886	50.0000	48.2	
6	Trichlorofluoromethane	101	2.876	2.863	(0.357)	237345	50.0000	48.0	
7	Diethyl Ether	59	3.213	3.206	(0.399)	97770	50.0000	45.2	
8	Tertiary-butyl alcohol	59	4.700	4.686	(0.583)	103204	250.000	242	
9	1,1-Dichloroethene	96	3.456	3.435	(0.429)	72956	50.0000	40.9	
10	Carbon Disulfide	76	3.499	3.485	(0.434)	278723	50.0000	41.7	
11	Freon-113	151	3.491	3.478	(0.433)	62774	50.0000	39.5	
12	Iodomethane	142	3.634	3.621	(0.451)	50297	50.0000	38.6	
13	Acrolein	56	3.877	3.864	(0.481)	97253	250.000	225	
14	Methylene Chloride	84	4.185	4.163	(0.519)	114366	50.0000	42.3	
15	Acetone	43	4.264	4.250	(0.529)	236782	250.000	225	
16	Isobutyl Alcohol	43	8.332	8.318	(1.034)	144504	1000.00	832	
17	trans-1,2-Dichloroethene	96	4.407	4.386	(0.547)	84977	50.0000	41.2	
18	Allyl Chloride	41	4.042	4.027	(0.501)	151935	50.0000	45.8	
19	Methyl tert-butyl ether	73	4.564	4.543	(0.566)	385830	50.0000	48.0	
20	Acetonitrile	39	4.964	4.943	(0.616)	37440	500.000	475	
21	Di-isopropyl ether	45	5.150	5.129	(0.639)	346174	50.0000	47.8	
22	Chloroprene	53	5.322	5.301	(0.660)	181722	50.0000	46.4	

Data File: \\target_server\gg\chem\gcms-w.i\W032718.b\W3381.D
Report Date: 28-Mar-2018 13:50

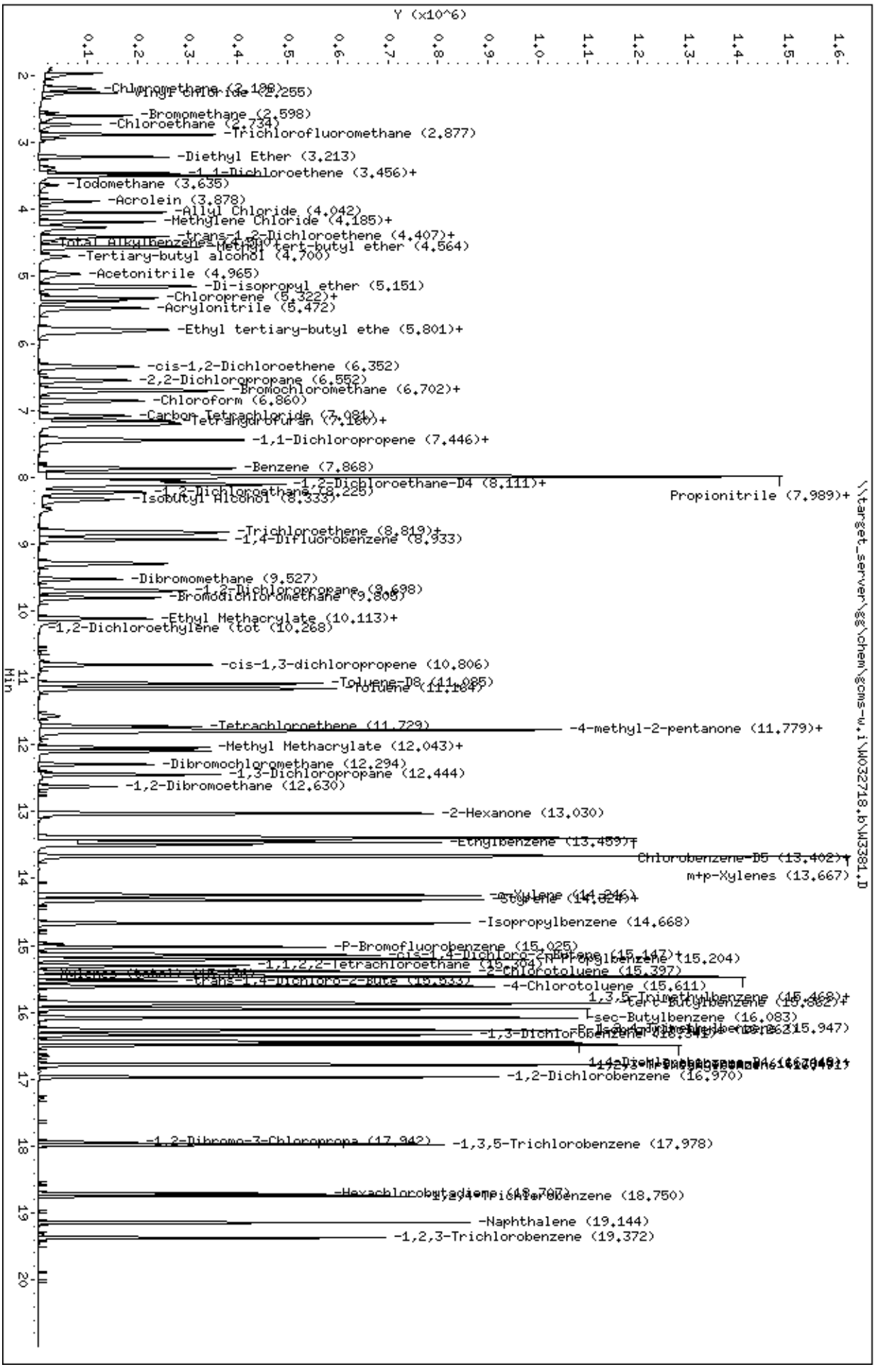
		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	ON-COL (ug/kg)	REVIEW CODE
	23	Propionitrile	54	7.960	7.939	(0.988)	193476	500.000	450	
	24	Methacrylonitrile	41	7.989	7.968	(0.991)	851407	500.000	486	
	25	1,1-Dichloroethane	63	5.365	5.337	(0.666)	201074	50.0000	44.4	
	26	Acrylonitrile	52	5.472	5.451	(0.679)	196560	250.000	234	
	27	Ethyl tertiary-butyl ether	59	5.801	5.773	(0.720)	333055	50.0000	45.4	
	28	Vinyl Acetate	43	5.837	5.808	(0.653)	252448	50.0000	47.6	
	29	cis-1,2-Dichloroethene	96	6.351	6.323	(0.788)	101893	50.0000	44.5	
M	30	1,2-Dichloroethylene (total)	96				186870	100.000	(a)	
	31	Methyl Methacrylate	41	12.093	12.079	(1.354)	126181	50.0000	50.6	
	32	2,2-Dichloropropane	77	6.559	6.531	(0.814)	169835	50.0000	44.0	
	33	Bromochloromethane	128	6.709	6.688	(0.832)	44029	50.0000	46.9	
	34	Chloroform	83	6.859	6.838	(0.851)	224790	50.0000	47.2	
	35	Carbon Tetrachloride	117	7.088	7.060	(0.793)	156304	50.0000	43.6	
	36	Tetrahydrofuran	42	7.159	7.131	(0.888)	200696	250.000	231	
$	37	Dibromofluoromethane	113	7.188	7.167	(0.892)	99891	50.0000	52.9	
	38	1,1,1-Trichloroethane	97	7.217	7.196	(0.895)	194210	50.0000	45.4	
	39	1,1-Dichloropropene	75	7.438	7.417	(0.833)	155451	50.0000	43.3	
	40	2-Butanone	43	7.445	7.424	(0.924)	330039	250.000	230	
	41	Benzene	78	7.867	7.846	(0.881)	410102	50.0000	42.7	
*	42	Pentafluorobenzene	168	8.060	8.039	(1.000)	163116	50.0000		
	43	Cyclohexane	56	6.702	6.674	(0.831)	160232	50.0000	46.0	
	44	Ethyl Methacrylate	69	10.112	10.091	(1.132)	93836	50.0000	46.5	
$	45	1,2-Dichloroethane-D4	65	8.110	8.089	(1.006)	166867	50.0000	54.6	
	46	Tertiary-amyl methyl ether	73	8.110	8.082	(1.006)	304387	50.0000	41.9	
	47	1,2-Dichloroethane	62	8.225	8.204	(0.921)	218506	50.0000	48.8	
	48	Trichloroethene	95	8.847	8.833	(0.990)	107522	50.0000	42.4	
*	49	1,4-Difluorobenzene	114	8.933	8.912	(1.000)	292732	50.0000		
	50	Dibromomethane	93	9.526	9.505	(1.066)	74005	50.0000	46.8	
	51	1,2-Dichloropropane	63	9.698	9.677	(1.086)	114135	50.0000	45.0	
	52	Bromodichloromethane	83	9.805	9.791	(1.098)	186296	50.0000	47.1	
	53	cis-1,3-dichloropropene	75	10.806	10.785	(1.210)	214020	50.0000	45.6	
	54	1,4-Dioxane	88	10.162	10.141	(1.138)	39192	1000.00	873	
$	55	Toluene-D8	98	11.085	11.064	(1.241)	384354	50.0000	51.2	
	57	Toluene	92	11.163	11.142	(1.250)	261997	50.0000	42.9	
	58	4-methyl-2-pentanone	43	11.778	11.765	(1.319)	712451	250.000	235	
	59	Tetrachloroethene	164	11.728	11.707	(0.877)	67657	50.0000	41.4	
	60	trans-1,3-Dichloropropene	75	11.814	11.793	(1.323)	214041	50.0000	46.8	
	61	1,1,2-Trichloroethane	83	12.043	12.029	(1.348)	95113	50.0000	46.6	
	62	Dibromochloromethane	129	12.293	12.279	(0.919)	120162	50.0000	45.8	
	63	1,3-Dichloropropane	76	12.443	12.430	(0.930)	220604	50.0000	45.2	
	64	1,2-Dibromoethane	107	12.629	12.615	(1.414)	107510	50.0000	45.5	
	65	2-Hexanone	43	13.030	13.016	(0.974)	518904	250.000	224	
*	66	Chlorobenzene-D5	117	13.380	13.366	(1.000)	278583	50.0000		
	67	Chlorobenzene	112	13.401	13.388	(1.002)	292741	50.0000	42.4	
	152	1-Chlorohexane	91	13.401	13.382	(1.663)	145427	50.0000	42.6	
	68	Ethylbenzene	106	13.459	13.445	(1.006)	155705	50.0000	41.9	
	69	1,1,1,2-Tetrachloroethane	131	13.502	13.488	(1.009)	111842	50.0000	44.2	
M	70	Xylenes (total)	106				590851	150.000	(a)	
	71	m+p-Xylenes	106	13.666	13.652	(1.021)	393618	100.000	85.5	
	72	o-Xylene	106	14.245	14.231	(1.065)	197233	50.0000	45.2	
	73	Styrene	104	14.317	14.310	(1.070)	342402	50.0000	45.0	
	74	Bromoform	173	14.331	14.324	(1.071)	87484	50.0000	46.1	
	75	Isopropylbenzene	105	14.667	14.653	(0.893)	511239	50.0000	44.6	
$	76	P-Bromofluorobenzene	95	15.025	15.011	(1.682)	181628	50.0000	52.5	

Data File: \\target_server\gg\chem\gcms-w.i\W032718.b\W3381.D
Report Date: 28-Mar-2018 13:50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/kg)	AMOUNTS ON-COL (ug/kg)	REVIEW CODE
	77 cis-1,4-Dichloro-2-Butene	53	15.132	15.118	(0.921)	68394	50.0000	45.7	
	78 trans-1,4-Dichloro-2-Butene	53	15.532	15.518	(0.945)	53904	50.0000	44.6	
	79 Bromobenzene	156	15.153	15.139	(0.922)	123162	50.0000	42.4	
	80 N-Propylbenzene	91	15.203	15.197	(0.925)	730397	50.0000	44.0	
	81 1,1,2,2-Tetrachloroethane	83	15.303	15.290	(0.931)	185571	50.0000	44.9	
	82 1,3,5-Trimethylbenzene	105	15.461	15.454	(0.941)	502784	50.0000	44.4	
	83 2-Chlorotoluene	91	15.396	15.383	(0.937)	453268	50.0000	44.7	
	84 1,2,3-Trichloropropane	75	15.468	15.454	(0.941)	179697	50.0000	45.0	
	85 4-Chlorotoluene	91	15.611	15.597	(0.950)	487933	50.0000	44.5	
	86 tert-Butylbenzene	119	15.861	15.847	(0.965)	484935	50.0000	45.0	
	87 Pentachloroethane	117	15.875	15.869	(0.966)	107328	50.0000	44.5	
	88 1,2,4-Trimethylbenzene	105	15.947	15.940	(0.970)	549876	50.0000	45.4	
	89 P-Isopropyltoluene	119	16.269	16.254	(0.990)	523956	50.0000	44.4	
	90 1,3-Dichlorobenzene	146	16.340	16.332	(0.994)	258759	50.0000	43.2	
*	91 1,4-Dichlorobenzene-D4	152	16.433	16.425	(1.000)	166458	50.0000		
	92 1,4-Dichlorobenzene	146	16.455	16.440	(1.001)	266460	50.0000	42.1	
	93 N-Butylbenzene	91	16.783	16.770	(1.021)	559061	50.0000	43.8	
	94 sec-Butylbenzene	105	16.083	16.069	(0.979)	632826	50.0000	43.8	
	95 1,2-Dichlorobenzene	146	16.969	16.956	(1.033)	264594	50.0000	44.1	
	96 1,2-Dibromo-3-Chloropropane	75	17.942	17.929	(1.092)	54270	50.0000	45.6	
	97 1,3,5-Trichlorobenzene	180	17.978	17.964	(2.230)	184230	50.0000	45.0	
	98 Hexachlorobutadiene	225	18.714	18.700	(1.139)	86579	50.0000	41.9	
	99 1,2,4-Trichlorobenzene	180	18.750	18.736	(1.141)	162662	50.0000	43.7	
	100 1,2,3-Trimethylbenzene	105	16.490	16.476	(2.046)	617268	50.0000	47.9	
	101 Naphthalene	128	19.143	19.129	(1.165)	484479	50.0000	47.4	
	102 1,2,3-Trichlorobenzene	180	19.372	19.358	(1.179)	162875	50.0000	44.9	
	103 Methyl Acetate	43	4.435	4.414	(0.550)	110965	50.0000	48.1	
	104 Methylcyclohexane	83	8.818	8.797	(1.094)	173920	50.0000	44.7	
M	153 Total Alkylbenzenes	100				3983835	50.0000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).


Data File: \\target_server\gg\chem\gcms-w.i\W032718.b\W3381.D
Date : 27-MAR-2018 19:08
Client ID: ontinuing Calibrati
Sample Info: WG225463-5,SL2079
Column phase: RTX-VMS
Instrument: gcms-w.i
Operator: HG/JSS
Column diameter: 0.18
\\target_server\gg\chem\gcms-w.i\W032718.b\W3381.D
Y (x10^6)
Min
-Chloromethane (2.186)
-Vinyl Chloride (2.255)
-Bromomethane (2.598)
-Chloroethane (2.734)
-Trichlorofluoromethane (2.877)
-Diethyl Ether (3.213)
-1,1-Dichloroethene (3.456)+
-Iodomethane (3.635)
-Acrolein (3.878)
-Allyl Chloride (4.042)
-Methylene Chloride (4.185)+
-trans-1,2-Dichloroethene (4.407)+
-Total Alkylbenzenes-Methyl tert-butyl ether (4.564)
-Tertiary-butyl alcohol (4.700)
-Acetonitrile (4.965)
-Di-isopropyl ether (5.151)
-Chloroprene (5.322)+
-Acrylonitrile (5.472)
-Ethyl tertiary-butyl ethe (5.801)+
-cis-1,2-Dichloroethene (6.352)
-2,2-Dichloropropane (6.552)
-Bromochloromethane (6.702)+
-Chloroform (6.860)
-Carbon Tetrachloride (7.084)
-Tetrahydrofuran (7.160)+
-1,1-Dichloropropene (7.446)+
-Benzene (7.868)
-1,2-Dichloroethane-D4 (8.111)+
-1,2-Dichloroethane (8.225)
-Isobutyl Alcohol (8.333)
Propionitrile (7.989)+
-Trichloroethene (8.819)+
-1,4-Difluorobenzene (8.933)
-Dibromomethane (9.527)
-1,2-Dichloropropane (9.698)
-Bromodichloromethane (9.805)
-Ethyl Methacrylate (10.113)+
-1,2-Dichloroethylene (tot (10.268)
-cis-1,3-dichloropropene (10.806)
-Toluene-D8 (11.085)
-Toluene (11.184)
-Tetrachloroethene (11.729)
-4-methyl-2-pentanone (11.779)+
-Methyl Methacrylate (12.043)+
-Dibromochloromethane (12.294)
-1,3-Dichloropropane (12.444)
-1,2-Dibromoethane (12.630)
-2-Hexanone (13.030)
-Ethylbenzene (13.459)+
Chlorobenzene-D5 (13.402)+
m+p-Xylenes (13.667)
-o-Xylene (14.246)
-Styrene (14.324)+
-Isopropylbenzene (14.668)
-P-Bromofluorobenzene (15.025)
-cis-1,4-Dichloro-2-Butene (15.147)+
-1,1,2,2-Tetrachloroethane (15.204)
-2-Chlorotoluene (15.397)
-trans-1,4-Dichloro-2-Bute (15.533)
-4-Chlorotoluene (15.611)
1,3,5-Trimethylbenzene (15.468)+
-tert-Butylbenzene (15.662)+
-sec-Butylbenzene (16.083)
-1,3-Dichlorobenzene (16.341)
-1,2-Dichlorobenzene (16.970)
-1,2-Dibromo-3-Chloroprope (17.942)
-1,3,5-Trichlorobenzene (17.978)
-Hexachlorobutadiene (18.707)
-1,2,4-Trichlorobenzene (18.750)
-Naphthalene (19.144)
-1,2,3-Trichlorobenzene (19.372)

Data File: \\target_server\gg\chem\gcms-p.i\P031918B.b\PB983a.D

Date : 19-MAR-2018 14:29

Client ID:

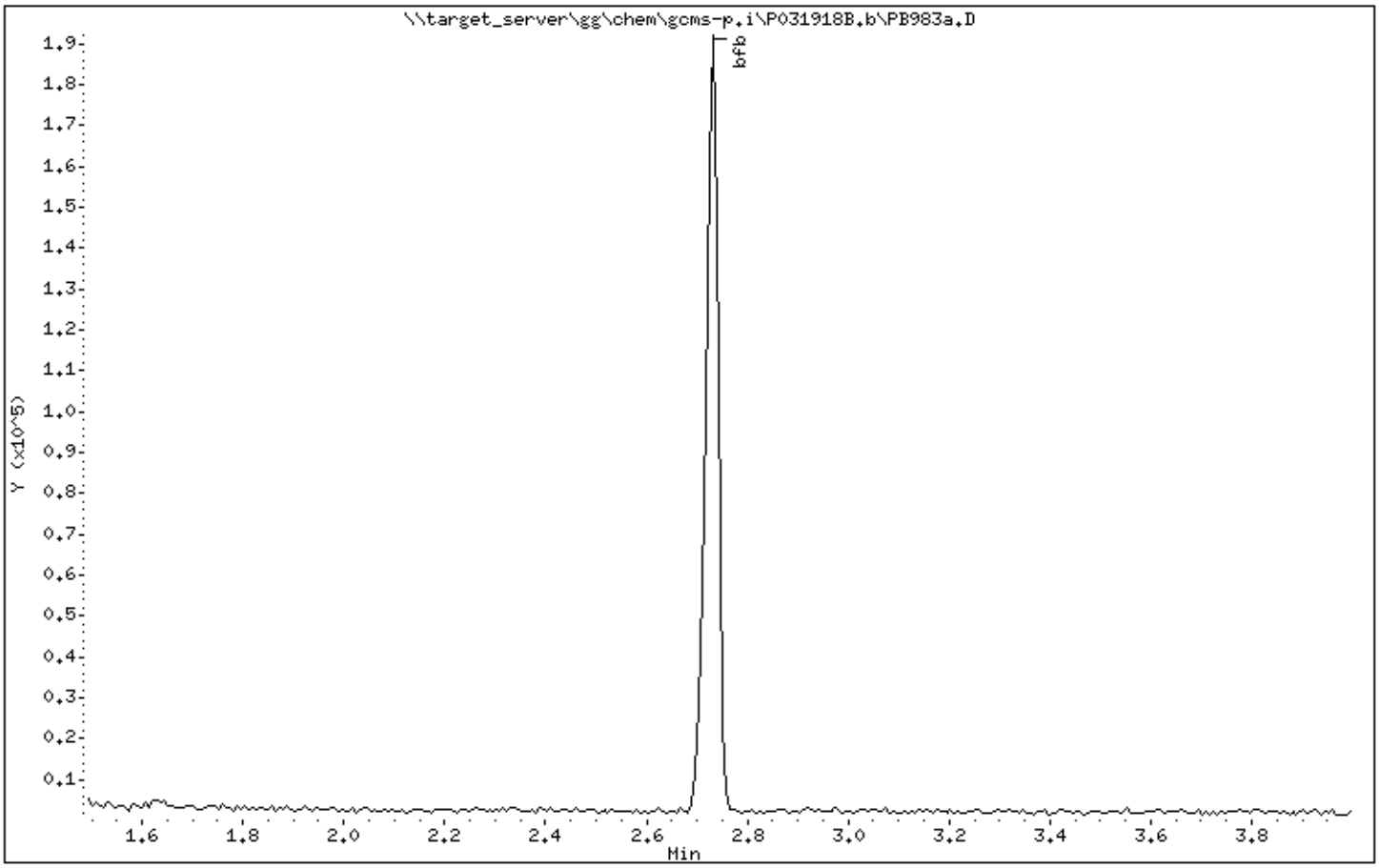
Instrument: gcms-p.i

Sample Info: WG225041-10,SL2079

Operator: hg

Column phase: RTX-VMS

Column diameter: 0.18



Data File: \\target_server\gg\chem\gcms-p.i\P031918B.b\PB983a.D

Date : 19-MAR-2018 14:29

Client ID:

Instrument: gcms-p.i

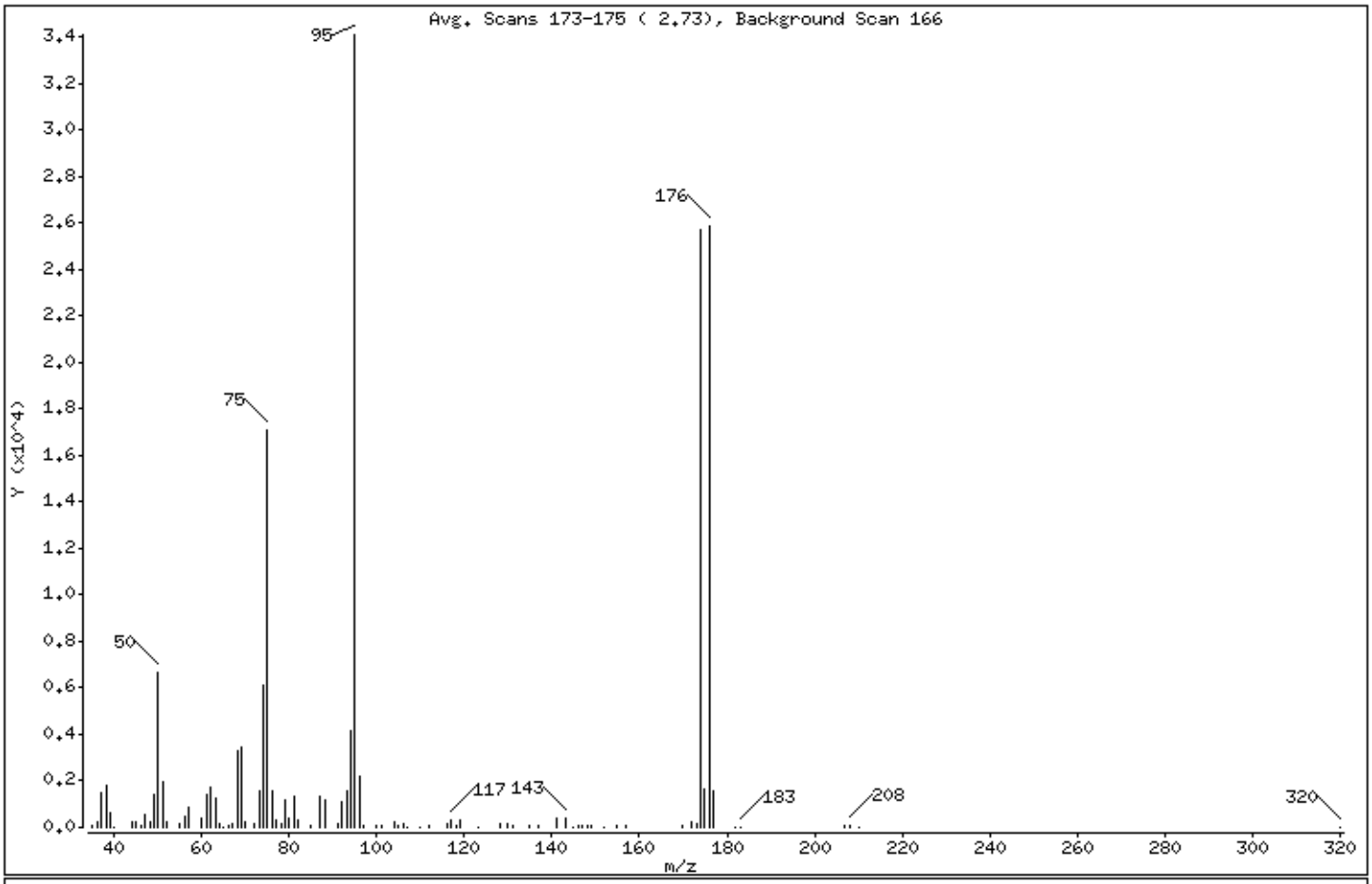
Sample Info: WG225041-10,SL2079

Operator: hg

Column phase: RTX-VMS

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	19.55
75	30.00 - 60.00% of mass 95	50.07
96	5.00 - 9.00% of mass 95	6.50
173	Less than 2.00% of mass 174	0.52 (0.69)
174	Greater than 50.00% of mass 95	75.33
175	5.00 - 9.00% of mass 174	4.84 (6.43)
176	95.00 - 101.00% of mass 174	75.96 (100.84)
177	5.00 - 9.00% of mass 176	4.63 (6.10)

Date : 19-MAR-2018 14:29

Client ID: Instrument: gcms-p.i

Sample Info: WG225041-10,SL2079

Operator: hg

Column phase: RTX-VMS Column diameter: 0.18

Data File: PB983a.D
Spectrum: Avg. Scans 173-175 (2.73), Background Scan 166
Location of Maximum: 95.00
Number of points: 91

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	49	65.00	37	94.00	4165	143.00	429
36.00	269	66.00	71	95.00	34112	145.00	36
37.00	1517	67.00	141	96.00	2217	146.00	45
38.00	1791	68.00	3295	97.00	93	147.00	76
39.00	620	69.00	3442	100.00	41	148.00	92
40.00	18	70.00	208	101.00	41	149.00	45
44.00	213	72.00	186	104.00	250	152.00	34
45.00	212	73.00	1591	105.00	78	155.00	109
46.00	40	74.00	6118	106.00	137	157.00	51
47.00	587	75.00	17080	107.00	36	170.00	40
48.00	204	76.00	1600	110.00	36	172.00	215
49.00	1414	77.00	276	112.00	42	173.00	177
50.00	6668	78.00	149	116.00	187	174.00	25696
51.00	1947	79.00	1147	117.00	320	175.00	1651
52.00	204	80.00	397	118.00	55	176.00	25912
55.00	151	81.00	1315	119.00	287	177.00	1580
56.00	479	82.00	332	123.00	37	182.00	33
57.00	829	85.00	49	128.00	151	183.00	39
60.00	394	87.00	1320	130.00	195	207.00	43
61.00	1400	88.00	1159	131.00	88	208.00	53
62.00	1696	91.00	175	135.00	57	210.00	35
63.00	1291	92.00	1118	137.00	92	320.00	34
64.00	152	93.00	1538	141.00	376		

Data File: \\target_server\gg\chem\gcms-p.i\P032318.b\PB987a.D

Date : 23-MAR-2018 07:30

Client ID:

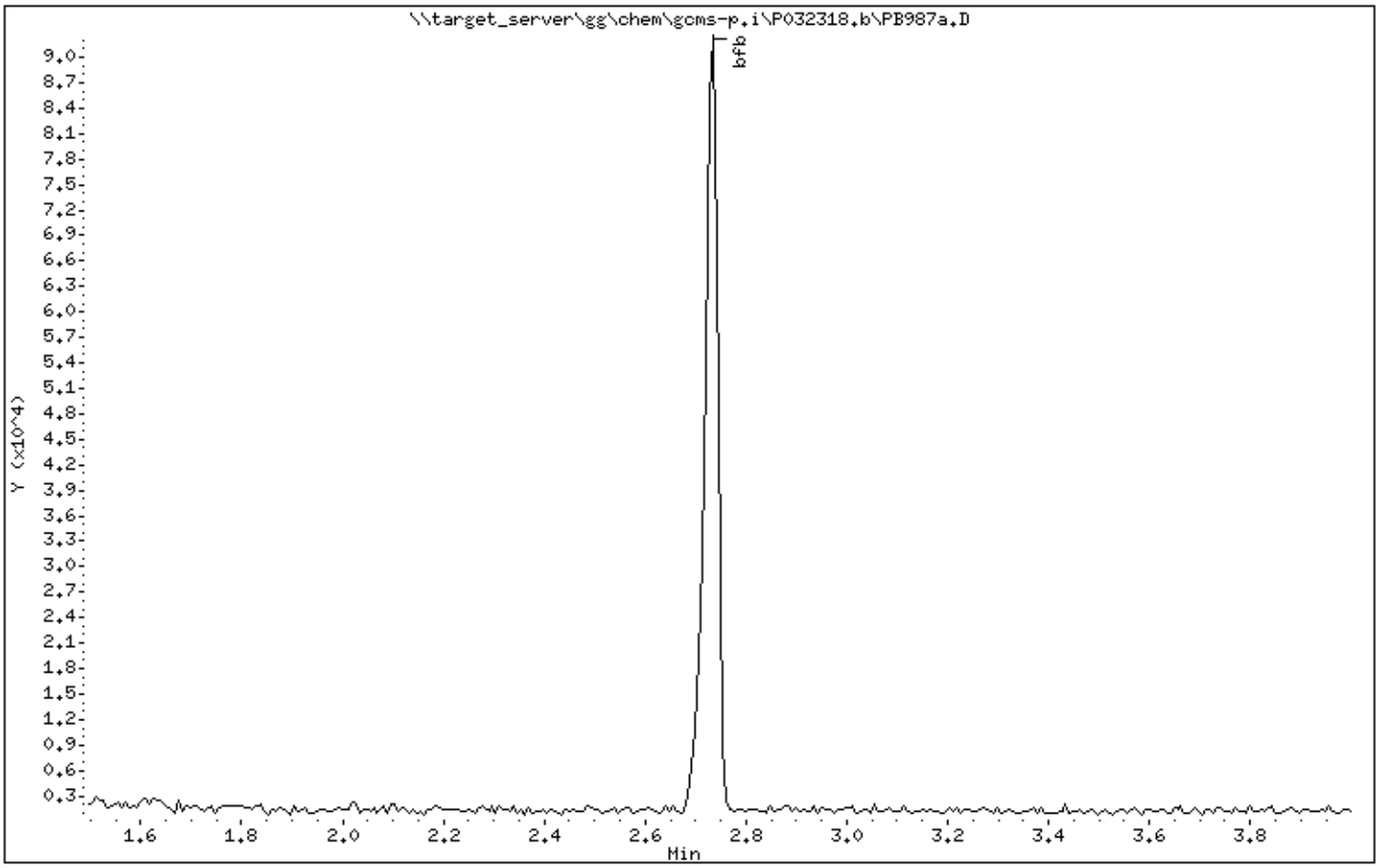
Instrument: gcms-p.i

Sample Info: WG225300-3,SL2079

Operator: hg

Column phase: RTX-VMS

Column diameter: 0.18



Data File: \\target_server\gg\chem\gcms-p.i\P032318.b\PB987a.D

Date : 23-MAR-2018 07:30

Client ID:

Instrument: gcms-p.i

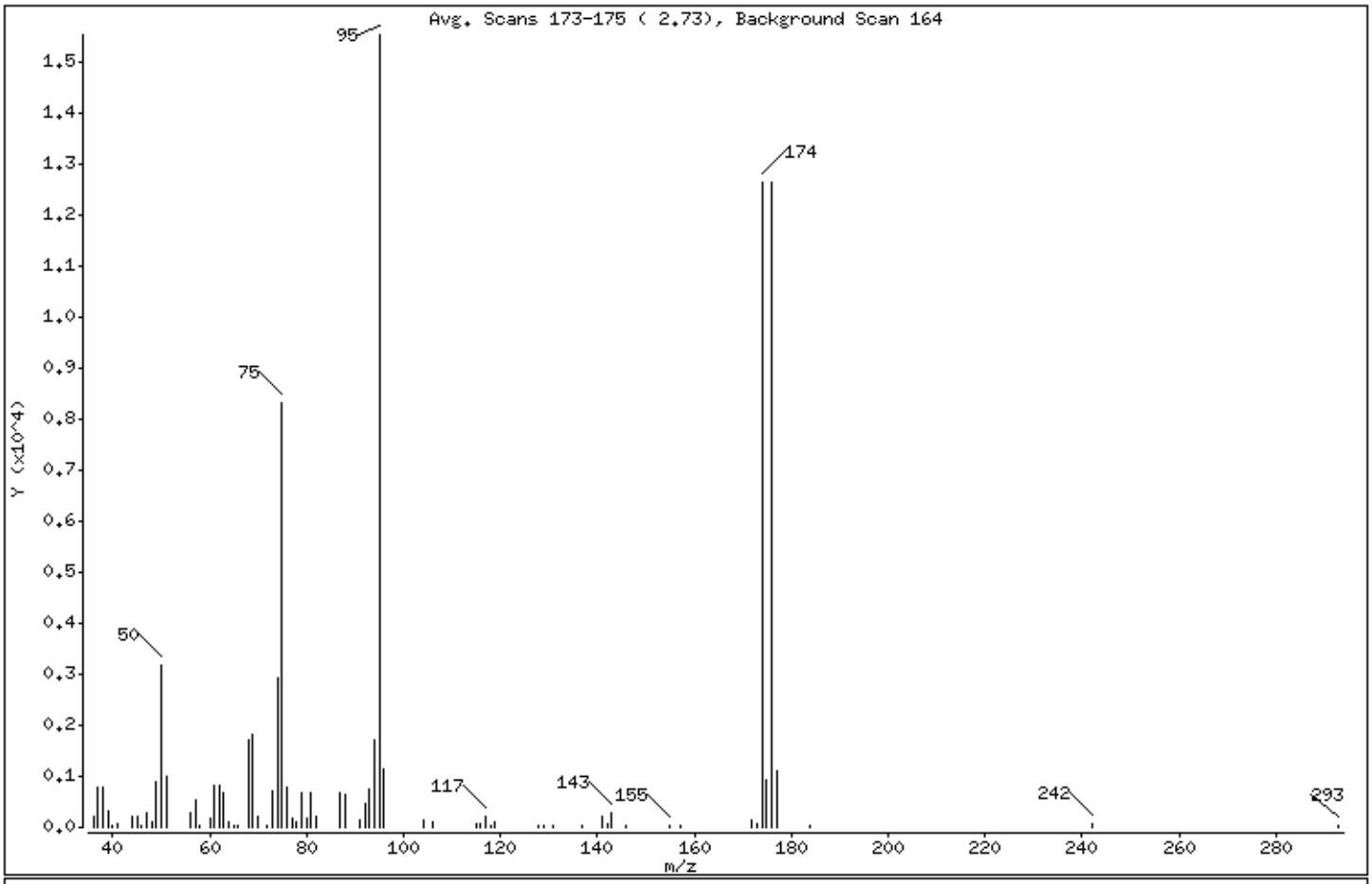
Sample Info: WG225300-3,SL2079

Operator: hg

Column phase: RTX-VMS

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	20.55
75	30.00 - 60.00% of mass 95	53.63
96	5.00 - 9.00% of mass 95	7.44
173	Less than 2.00% of mass 174	0.55 (0.68)
174	Greater than 50.00% of mass 95	81.41
175	5.00 - 9.00% of mass 174	5.91 (7.26)
176	95.00 - 101.00% of mass 174	81.31 (99.88)
177	5.00 - 9.00% of mass 176	7.02 (8.63)

Date : 23-MAR-2018 07:30

Client ID: Instrument: gcms-p.i

Sample Info: WG225300-3,SL2079

Operator: hg

Column phase: RTX-VMS Column diameter: 0.18

Data File: PB987a.D
Spectrum: Avg. Scans 173-175 (2.73), Background Scan 164
Location of Maximum: 95.00
Number of points: 72

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	206	62.00	830	87.00	687	141.00	230
37.00	784	63.00	686	88.00	638	142.00	78
38.00	781	64.00	98	91.00	138	143.00	269
39.00	307	65.00	45	92.00	461	146.00	34
40.00	37	66.00	35	93.00	764	155.00	50
41.00	75	68.00	1698	94.00	1728	157.00	34
44.00	208	69.00	1815	95.00	15521	172.00	159
45.00	228	70.00	202	96.00	1154	173.00	86
46.00	37	72.00	46	104.00	159	174.00	12635
47.00	269	73.00	729	106.00	116	175.00	917
48.00	116	74.00	2913	115.00	79	176.00	12620
49.00	902	75.00	8324	116.00	81	177.00	1089
50.00	3189	76.00	789	117.00	226	184.00	34
51.00	998	77.00	167	118.00	42	242.00	59
56.00	284	78.00	122	119.00	96	293.00	36
57.00	520	79.00	664	128.00	45		
58.00	37	80.00	172	129.00	35		
60.00	177	81.00	688	131.00	33		
61.00	821	82.00	197	137.00	45		

Data File: \\target_server\gg\chem\gcms-w.i\W032318.b\WB800a.D

Date : 23-MAR-2018 08:34

Client ID:

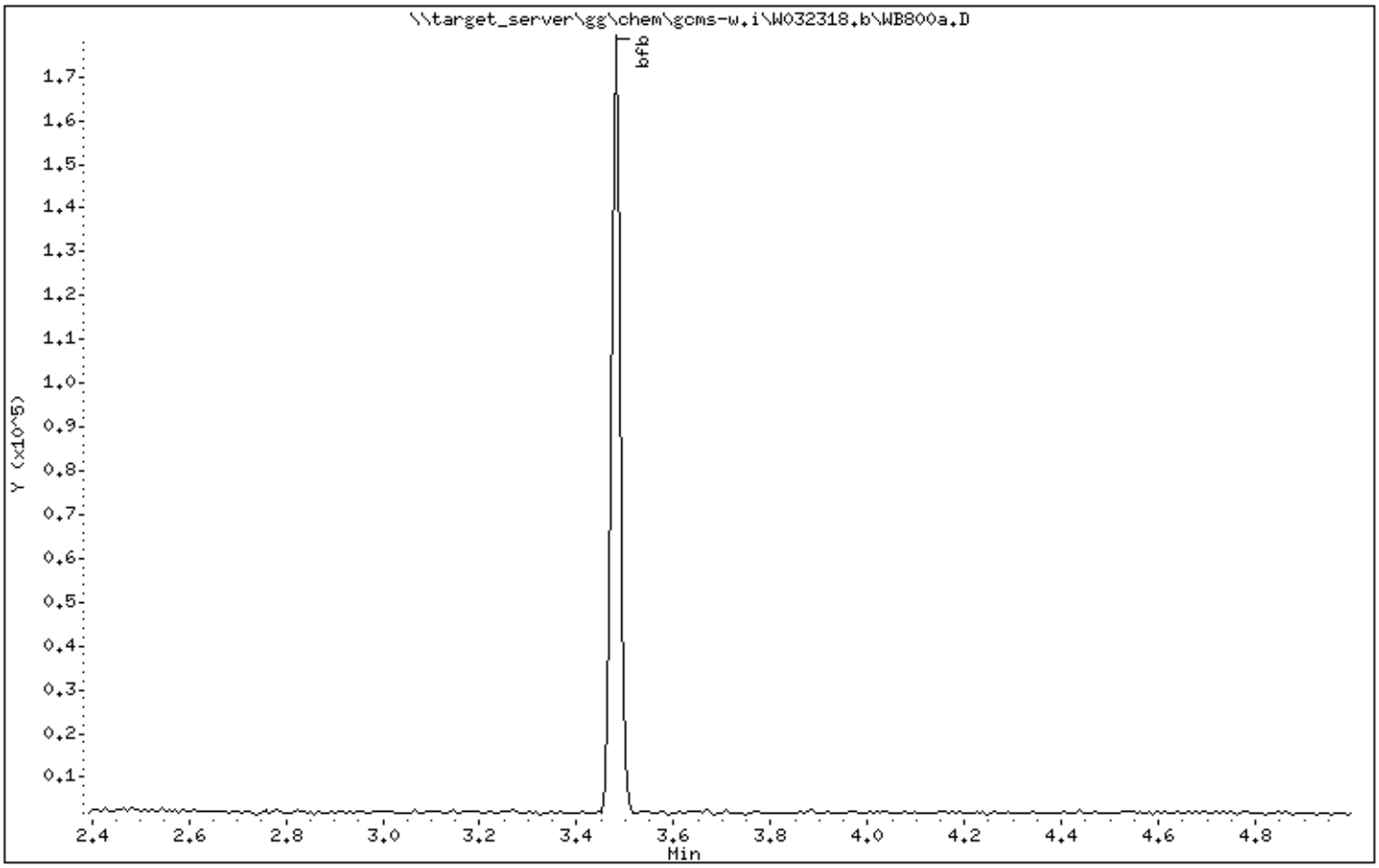
Instrument: gcms-w.i

Sample Info: WG225302-10,SL2079

Operator: HG/JSS

Column phase: RTX-VMS

Column diameter: 0.18



Data File: \\target_server\gg\chem\gcms-w.i\W032318.b\WB800a.D

Date : 23-MAR-2018 08:34

Client ID:

Instrument: gcms-w.i

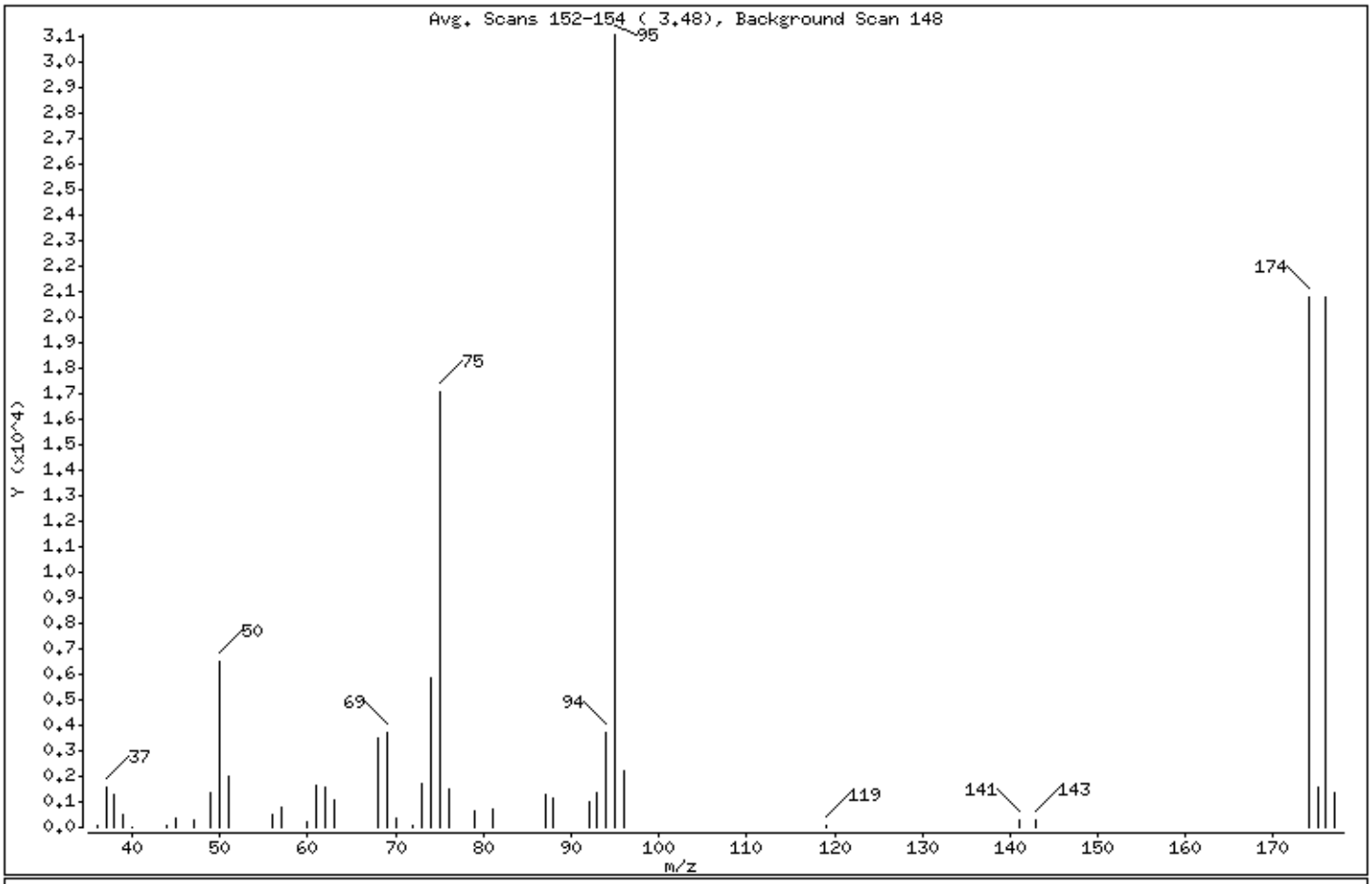
Sample Info: WG225302-10,SL2079

Operator: HG/JSS

Column phase: RTX-VMS

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	20.88
75	30.00 - 60.00% of mass 95	54.95
96	5.00 - 9.00% of mass 95	7.16
173	Less than 2.00% of mass 174	0.00 (0.00)
174	Greater than 50.00% of mass 95	66.98
175	5.00 - 9.00% of mass 174	5.07 (7.57)
176	95.00 - 101.00% of mass 174	66.90 (99.88)
177	5.00 - 9.00% of mass 176	4.41 (6.59)

Data File: \\target_server\gg\chem\gcms-w.i\W032318.b\WB800a.D

Date : 23-MAR-2018 08:34

Client ID:

Instrument: gcms-w.i

Sample Info: WG225302-10,SL2079

Operator: HG/JSS

Column phase: RTX-VMS

Column diameter: 0.18

Data File: WB800a.D
Spectrum: Avg. Scans 152-154 (3.48), Background Scan 148
Location of Maximum: 95.00
Number of points: 41

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	101	56.00	472	74.00	5876	96.00	2226
37.00	1558	57.00	799	75.00	17080	119.00	91
38.00	1255	60.00	199	76.00	1516	141.00	257
39.00	515	61.00	1611	79.00	662	143.00	288
40.00	25	62.00	1551	81.00	686	174.00	20816
44.00	56	63.00	1078	87.00	1294	175.00	1576
45.00	322	68.00	3502	88.00	1116	176.00	20792
47.00	318	69.00	3723	92.00	969	177.00	1370
49.00	1369	70.00	324	93.00	1353		
50.00	6490	72.00	91	94.00	3709		
51.00	1981	73.00	1691	95.00	31080		

Data File: \\target_server\gg\chem\gcms-w.i\W032418.b\WB801a.D

Date : 24-MAR-2018 07:19

Client ID:

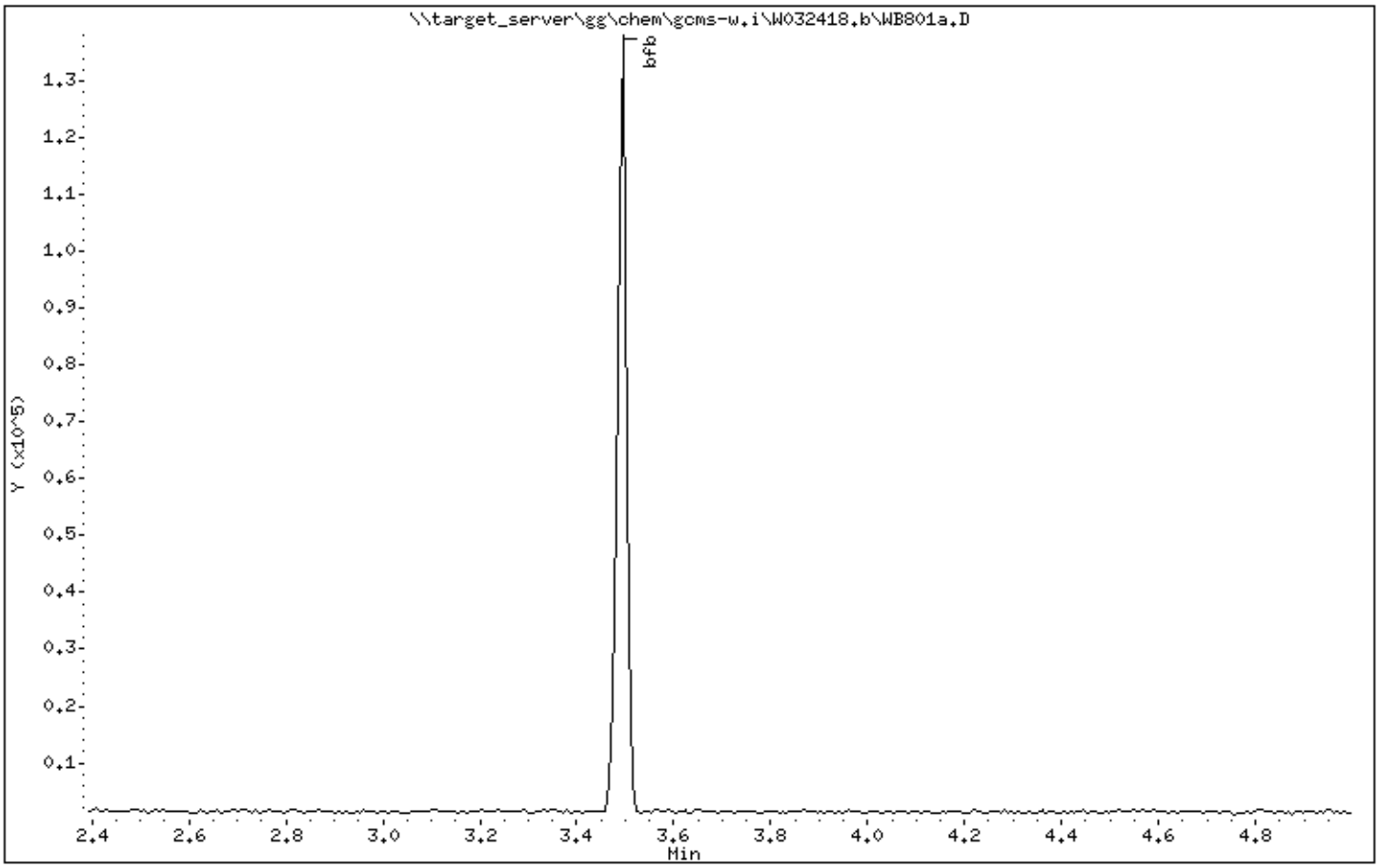
Instrument: gcms-w.i

Sample Info: WG225350-3,SL2079

Operator: HG/JSS

Column phase: RTX-VMS

Column diameter: 0.18



Data File: \\target_server\gg\chem\gcms-w.i\W032418.b\WB801a.D

Date : 24-MAR-2018 07:19

Client ID:

Instrument: gcms-w.i

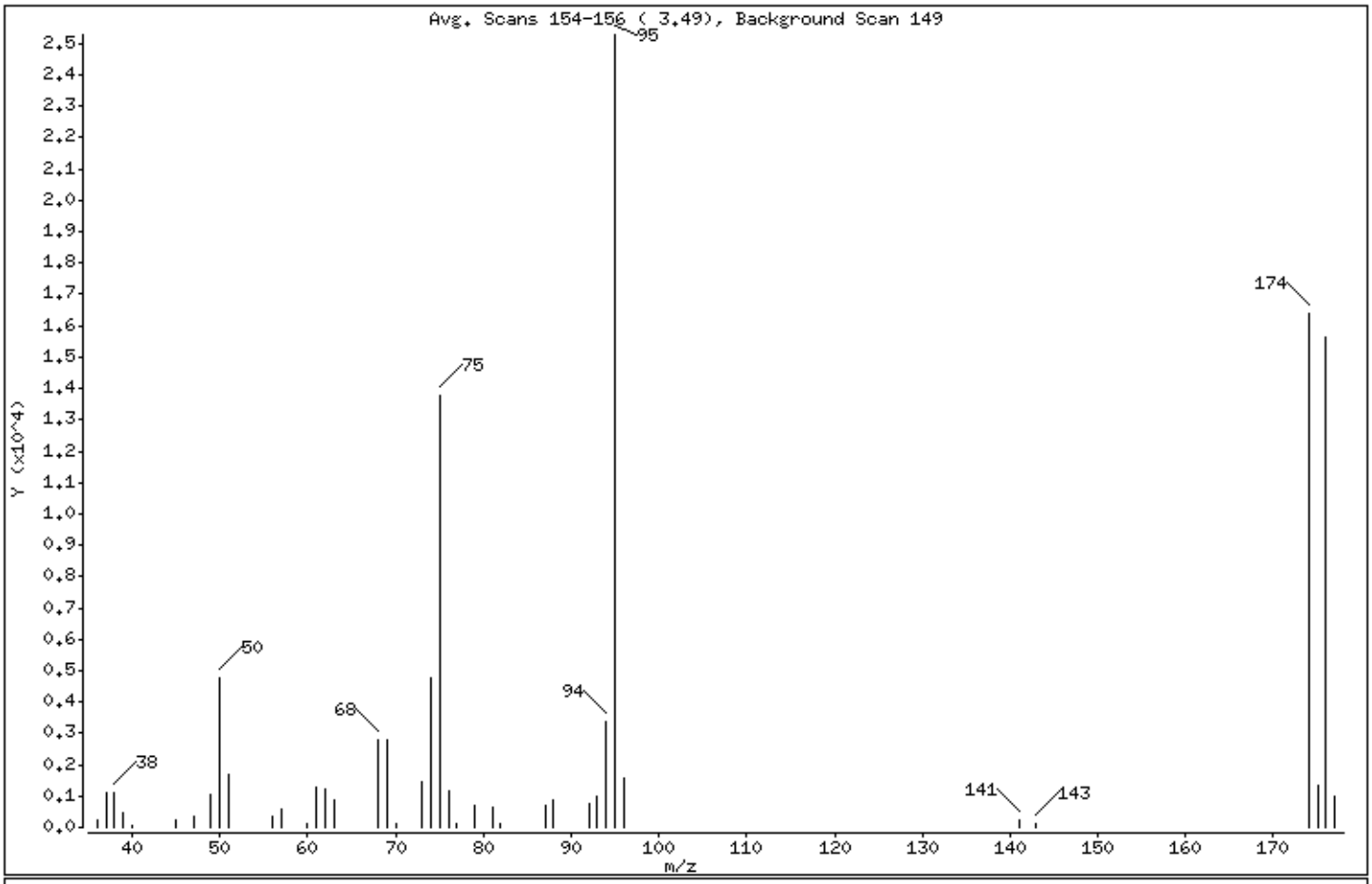
Sample Info: WG225350-3,SL2079

Operator: HG/JSS

Column phase: RTX-VMS

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	18.92
75	30.00 - 60.00% of mass 95	54.47
96	5.00 - 9.00% of mass 95	6.16
173	Less than 2.00% of mass 174	0.00 (0.00)
174	Greater than 50.00% of mass 95	64.78
175	5.00 - 9.00% of mass 174	5.21 (8.05)
176	95.00 - 101.00% of mass 174	61.88 (95.52)
177	5.00 - 9.00% of mass 176	3.81 (6.16)

Data File: \\target_server\gg\chem\gcms-w.i\W032418.b\WB801a.D

Date : 24-MAR-2018 07:19

Client ID:

Instrument: gcms-w.i

Sample Info: WG225350-3,SL2079

Operator: HG/JSS

Column phase: RTX-VMS

Column diameter: 0.18

Data File: WB801a.D
Spectrum: Avg. Scans 154-156 (3.49), Background Scan 149
Location of Maximum: 95.00
Number of points: 40

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	221	57.00	586	76.00	1138	96.00	1556
37.00	1084	60.00	142	77.00	106	141.00	256
38.00	1116	61.00	1299	79.00	716	143.00	132
39.00	489	62.00	1192	81.00	615	174.00	16377
40.00	30	63.00	872	82.00	91	175.00	1318
45.00	218	68.00	2811	87.00	695	176.00	15643
47.00	328	69.00	2805	88.00	874	177.00	963
49.00	1030	70.00	142	92.00	738		
50.00	4783	73.00	1428	93.00	963		
51.00	1674	74.00	4786	94.00	3353		
56.00	377	75.00	13770	95.00	25280		

Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\WB802a.D

Date : 26-MAR-2018 09:46

Client ID:

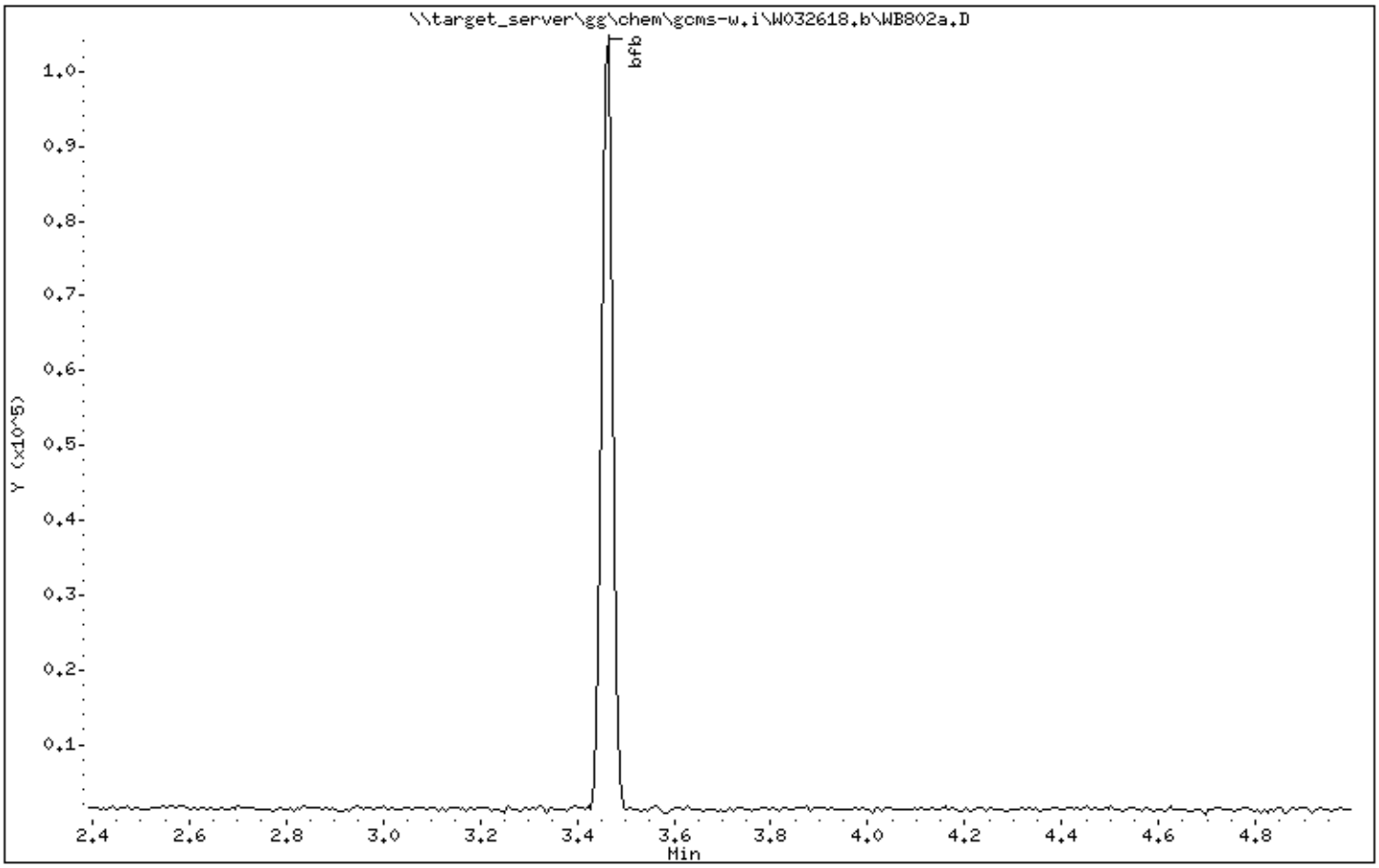
Instrument: gcms-w.i

Sample Info: WG225400-10,SL2079

Operator: HG/JSS

Column phase: RTX-VMS

Column diameter: 0.18



Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\WB802a.D

Date : 26-MAR-2018 09:46

Client ID:

Instrument: gcms-w.i

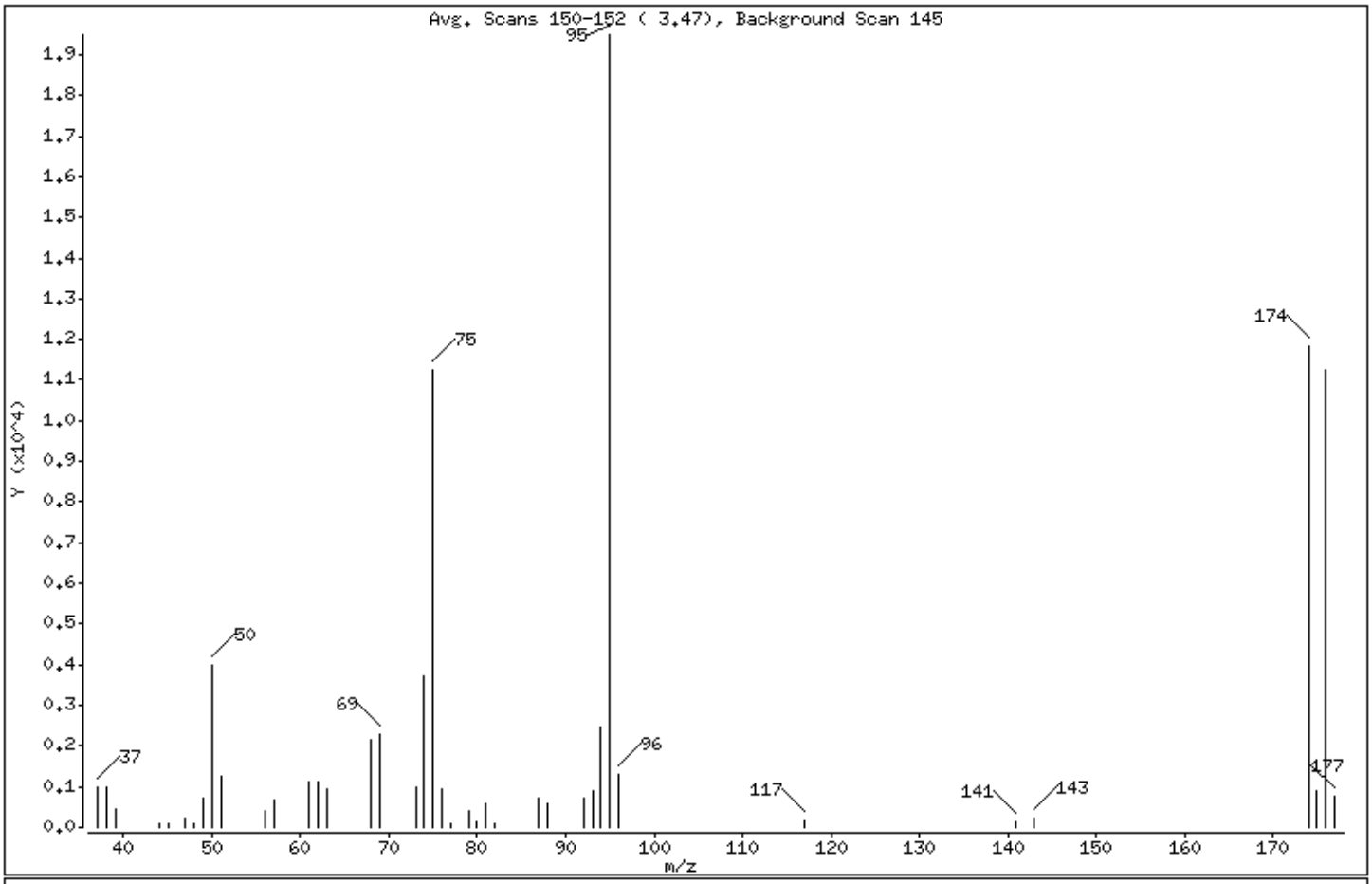
Sample Info: WG225400-10,SL2079

Operator: HG/JSS

Column phase: RTX-VMS

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	20.57
75	30.00 - 60.00% of mass 95	57.75
96	5.00 - 9.00% of mass 95	6.71
173	Less than 2.00% of mass 174	0.00 (0.00)
174	Greater than 50.00% of mass 95	60.70
175	5.00 - 9.00% of mass 174	4.62 (7.61)
176	95.00 - 101.00% of mass 174	57.67 (95.00)
177	5.00 - 9.00% of mass 176	3.93 (6.82)

Date : 26-MAR-2018 09:46

Client ID:

Instrument: gcms-w.i

Sample Info: WG225400-10,SL2079

Operator: HG/JSS

Column phase: RTX-VMS

Column diameter: 0.18

Data File: WB802a.D
Spectrum: Avg. Scans 150-152 (3.47), Background Scan 145
Location of Maximum: 95.00
Number of points: 40

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	1004	57.00	654	79.00	381	117.00	182
38.00	970	61.00	1132	80.00	116	141.00	123
39.00	431	62.00	1115	81.00	602	143.00	241
44.00	101	63.00	950	82.00	84	174.00	11830
45.00	90	68.00	2130	87.00	711	175.00	900
47.00	246	69.00	2293	88.00	583	176.00	11239
48.00	88	73.00	976	92.00	700	177.00	766
49.00	732	74.00	3709	93.00	917		
50.00	4009	75.00	11255	94.00	2453		
51.00	1267	76.00	921	95.00	19488		
56.00	389	77.00	86	96.00	1308		

Data File: \\target_server\gg\chem\gcms-w.i\W032718.b\WB803a.D

Date : 27-MAR-2018 07:33

Client ID:

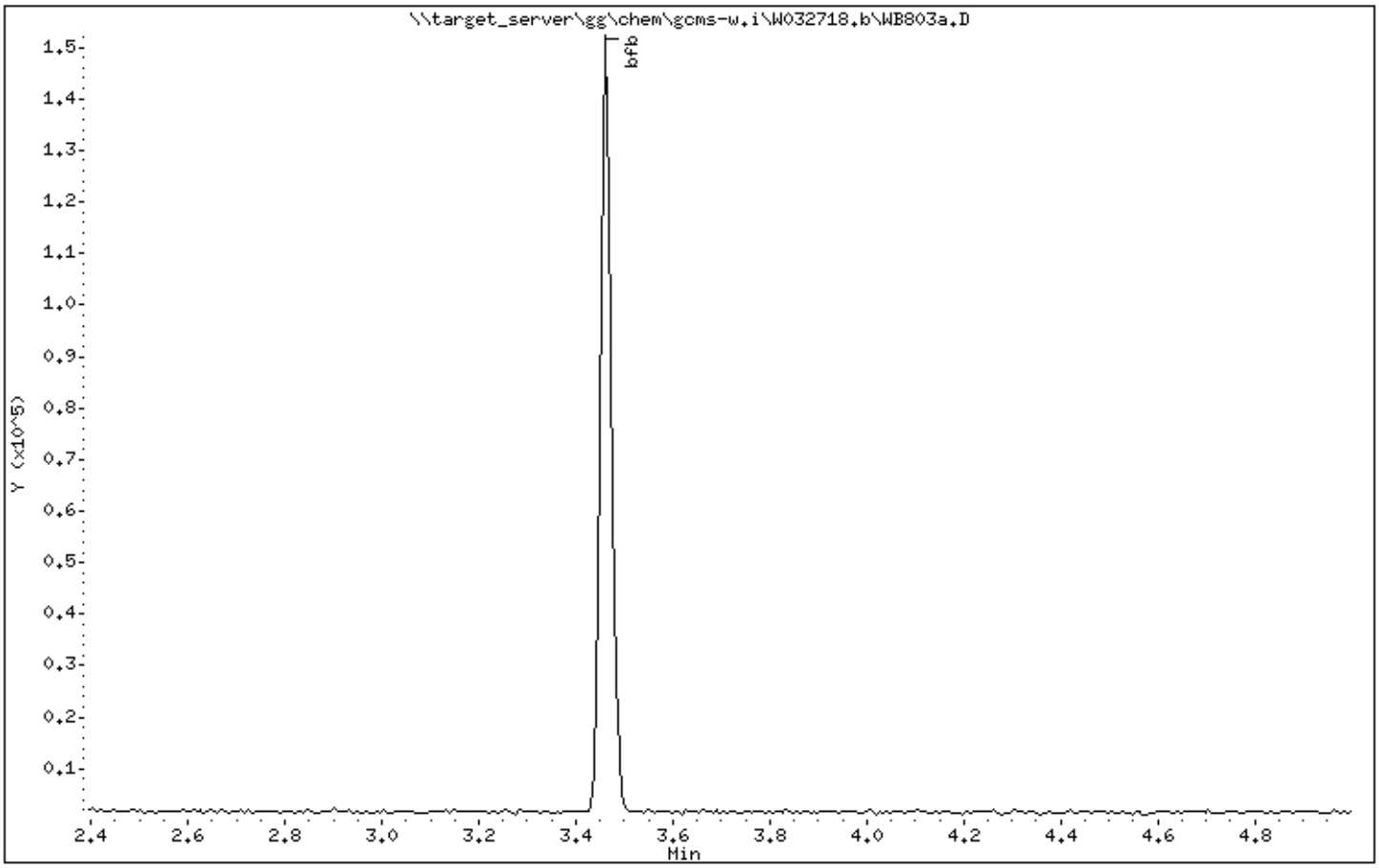
Instrument: gcms-w.i

Sample Info: WG225463-3,SL2079

Operator: HG/JSS

Column phase: RTX-VMS

Column diameter: 0.18



Data File: \\target_server\gg\chem\gcms-w.i\W032718.b\WB803a.D

Date : 27-MAR-2018 07:33

Client ID:

Instrument: gcms-w.i

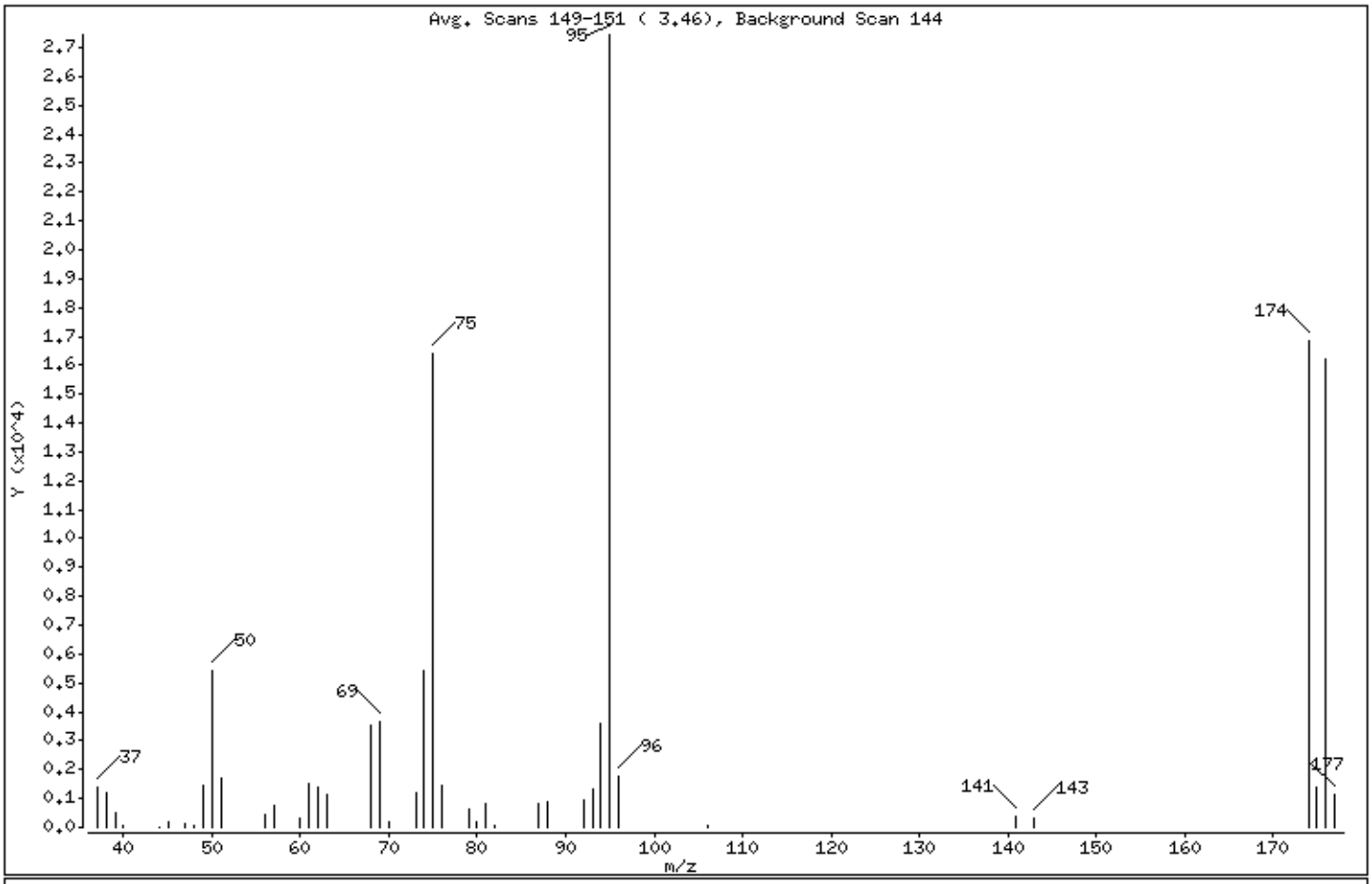
Sample Info: WG225463-3,SL2079

Operator: HG/JSS

Column phase: RTX-VMS

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	19.69
75	30.00 - 60.00% of mass 95	59.77
96	5.00 - 9.00% of mass 95	6.50
173	Less than 2.00% of mass 174	0.00 (0.00)
174	Greater than 50.00% of mass 95	61.37
175	5.00 - 9.00% of mass 174	5.08 (8.28)
176	95.00 - 101.00% of mass 174	59.09 (96.29)
177	5.00 - 9.00% of mass 176	4.25 (7.19)

Data File: \\target_server\gg\chem\gcms-w.i\W032718.b\WB803a.D

Date : 27-MAR-2018 07:33

Client ID:

Instrument: gcms-w.i

Sample Info: WG225463-3,SL2079

Operator: HG/JSS

Column phase: RTX-VMS

Column diameter: 0.18

Data File: WB803a.D
Spectrum: Avg. Scans 149-151 (3.46), Background Scan 144
Location of Maximum: 95.00
Number of points: 42

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	1377	56.00	447	75.00	16400	95.00	27440
38.00	1229	57.00	757	76.00	1443	96.00	1783
39.00	518	60.00	299	79.00	653	106.00	89
40.00	47	61.00	1520	80.00	210	141.00	365
44.00	11	62.00	1378	81.00	845	143.00	310
45.00	204	63.00	1125	82.00	86	174.00	16840
47.00	114	68.00	3539	87.00	838	175.00	1394
48.00	88	69.00	3672	88.00	888	176.00	16215
49.00	1437	70.00	205	92.00	959	177.00	1166
50.00	5404	73.00	1219	93.00	1354		
51.00	1679	74.00	5449	94.00	3565		

Raw QC Data Section

Report of Analytical Results

Client:
Lab ID: WG225300-2
Client ID: Method Blank Sample
Project:
SDG: SL2079
Lab File ID: P4882.D

Sample Date:
Received Date:
Extract Date: 23-MAR-18
Extracted By: hg
Extraction Method: SW846 5030
Lab Prep Batch: WG225300

Analysis Date: 23-MAR-18
Analyst: hg
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,1,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.19	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
1,1-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.21	0.50
1,2,3-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.27	0.50
1,2,3-Trichloropropane	U	0.50	ug/L	1	1	1.0	0.19	0.50
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
1,2,4-Trimethylbenzene	U	0.50	ug/L	1	1	1.0	0.19	0.50
1,2-Dibromo-3-Chloropropane	U	0.50	ug/L	1	1	1.0	0.50	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,3,5-Trimethylbenzene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,3-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
2,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
2-Chlorotoluene	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
4-Chlorotoluene	U	0.50	ug/L	1	1	1.0	0.26	0.50
P-Isopropyltoluene	U	0.50	ug/L	1	1	1.0	0.25	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
Bromobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50

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Report of Analytical Results

Client:
Lab ID: WG225300-2
Client ID: Method Blank Sample
Project:
SDG: SL2079
Lab File ID: P4882.D

Sample Date:
Received Date:
Extract Date: 23-MAR-18
Extracted By: hg
Extraction Method: SW846 5030
Lab Prep Batch: WG225300

Analysis Date: 23-MAR-18
Analyst: hg
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Bromochloromethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Dibromomethane	U	0.50	ug/L	1	1	1.0	0.46	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
Hexachlorobutadiene	U	0.75	ug/L	1	1	1.0	0.52	0.75
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
m+p-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
Naphthalene	U	0.50	ug/L	1	1	1.0	0.30	0.50
N-Butylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
N-Propylbenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
sec-Butylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
tert-Butylbenzene	U	0.50	ug/L	1	1	1.0	0.31	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Dibromofluoromethane		106.	%					
1,2-Dichloroethane-d4		108.	%					

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Report of Analytical Results

Client:
Lab ID: WG225300-2
Client ID: Method Blank Sample
Project:
SDG: SL2079
Lab File ID: P4882.D

Sample Date:
Received Date:
Extract Date: 23-MAR-18
Extracted By: hg
Extraction Method: SW846 5030
Lab Prep Batch: WG225300

Analysis Date: 23-MAR-18
Analyst: hg
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Toluene-d8		95.1	%					
P-Bromofluorobenzene	*	80.0	%					

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Data File: \\target_server\gg\chem\gcms-p.i\P032318.b\P4882.D
Report Date: 28-Mar-2018 12:29

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-p.i\P032318.b\P4882.D
Lab Smp Id: WG225300-2
Inj Date : 23-MAR-2018 09:49 MS Autotune Date: 24-JAN-2018 13:57
Operator : hg Inst ID: gcms-p.i
Smp Info : WG225300-2,SL2079
Misc Info : WG225300,WG225041-4,SL2079-14
Comment : SW846 5030
Method : \\TARGET_SERVER\GG\chem\gcms-p.i\P032318.b\P8A05(62)D.m
Meth Date : 26-Mar-2018 12:22 gcms-p.i Quant Type: ISTD
Cal Date : 19-MAR-2018 18:17 Cal File: P4810.D
Als bottle: 4 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all50.sub
Target Version: 4.12

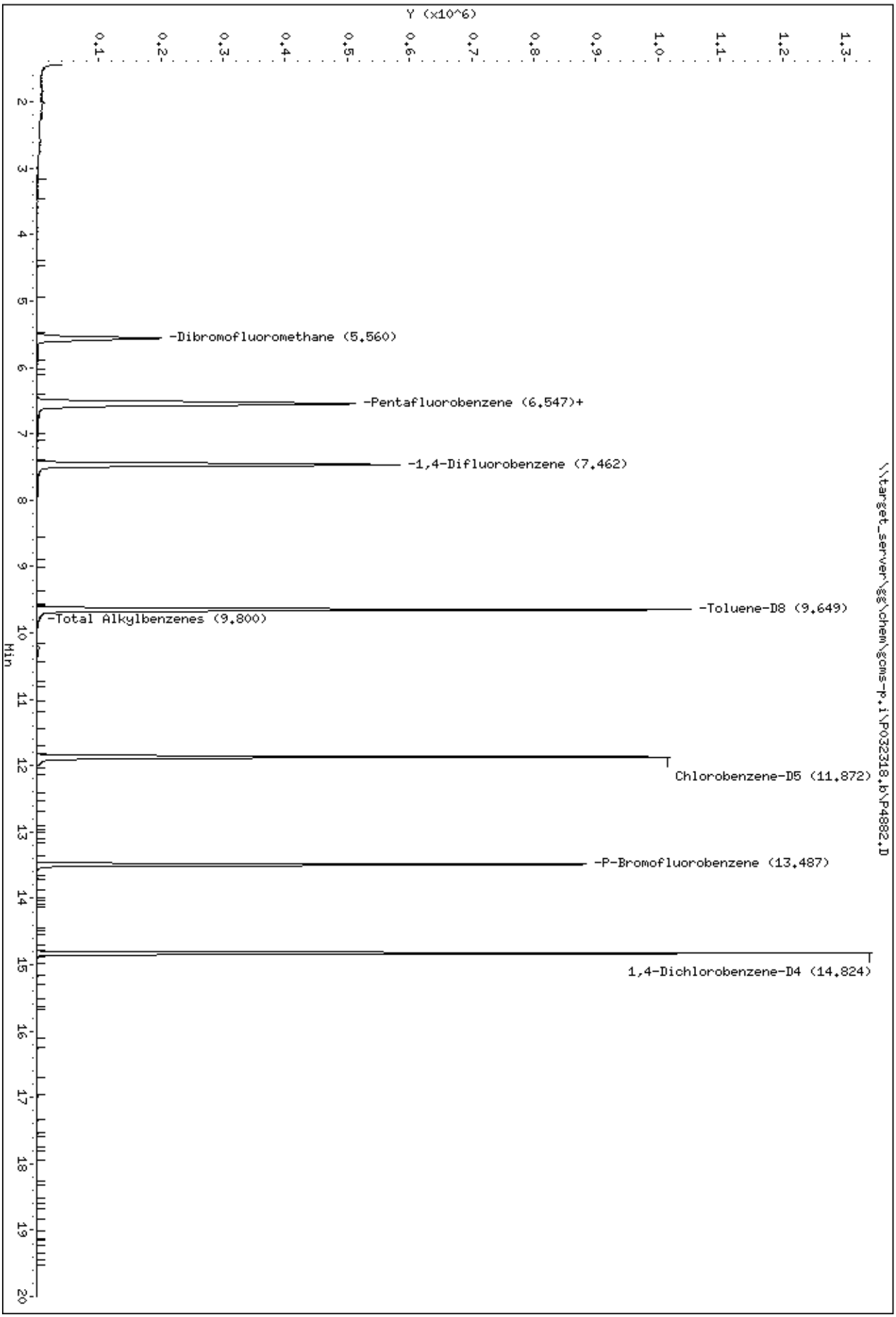
Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)	REVIEW CODE
$ 34 Dibromofluoromethane	113	5.560	5.561	(0.850)	204361	52.9783	53.0	
* 41 Pentafluorobenzene	168	6.539	6.533	(1.000)	392542	50.0000		
$ 42 1,2-Dichloroethane-D4	65	6.560	6.562	(1.003)	295046	53.9573	54.0	
* 48 1,4-Difluorobenzene	114	7.468	7.463	(1.000)	700536	50.0000		
$ 58 Toluene-D8	98	9.648	9.650	(1.292)	844461	47.5575	47.6	
* 68 Chlorobenzene-D5	117	11.871	11.873	(1.000)	661139	50.0000		
$ 78 P-Bromofluorobenzene	95	13.487	13.488	(1.806)	308946	39.9772	40.0(R)	
* 94 1,4-Dichlorobenzene-D4	152	14.831	14.825	(1.000)	331920	50.0000		

QC Flag Legend

R - Spike/Surrogate failed recovery limits.


Y (x10^6)
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
Min
-Dibromofluoromethane (5.560)
-Pentafluorobenzene (6.547)+
-1,4-Difluorobenzene (7.462)
-Toluene-D8 (9.649)
-Total Alkylbenzenes (9.800)
Chlorobenzene-D5 (11.872)
-P-Bromofluorobenzene (13.487)
1,4-Dichlorobenzene-D4 (14.824)
\\target_server\gg\chem\gcms-p.i\P032318.b\P4882.D
Data File: \\target_server\gg\chem\gcms-p.i\P032318.b\P4882.D
Date : 23-MAR-2018 09:49
Client ID:
Sample Info: WG225300-2,SL2079
Instrument: gcms-p.i

Report of Analytical Results

Client:
Lab ID: WG225350-2
Client ID: Method Blank Sample
Project:
SDG: SL2079
Lab File ID: W3324.D

Sample Date:
Received Date:
Extract Date: 24-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225350

Analysis Date: 24-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: NA
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,1,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
1,1,1-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.42	2.5
1,1,2,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.84	2.5
Freon-113	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
1,1,2-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.97	2.5
1,1-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.7	2.5
1,1-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.93	2.5
1,1-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
1,2,3-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.76	2.5
1,2,3-Trichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
1,2,4-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.79	2.5
1,2,4-Trimethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.87	2.5
1,2-Dibromo-3-Chloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.5	2.5
1,2-Dibromoethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
1,2-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
1,2-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
1,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
1,3,5-Trimethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.67	2.5
1,3-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.62	2.5
1,3-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	0.94	2.5
1,4-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.44	2.5
2,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	0.50	2.5
2-Butanone	U	12	ug/Kgdrywt	1	25	25.	5.9	12.
2-Chlorotoluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
2-Hexanone	U	12	ug/Kgdrywt	1	25	25.	4.8	12.
4-Chlorotoluene	U	2.5	ug/Kgdrywt	1	5	5.0	0.49	2.5
P-Isopropyltoluene	U	2.5	ug/Kgdrywt	1	5	5.0	0.76	2.5
4-Methyl-2-Pentanone	U	12	ug/Kgdrywt	1	25	25.	5.9	12.
Acetone	U	12	ug/Kgdrywt	1	25	25.	5.1	12.
Benzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
Bromobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.74	2.5
Bromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Bromodichloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.60	2.5
Bromoform	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5

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Report of Analytical Results

Client:
Lab ID: WG225350-2
Client ID: Method Blank Sample
Project:
SDG: SL2079
Lab File ID: W3324.D

Sample Date:
Received Date:
Extract Date: 24-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225350

Analysis Date: 24-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: NA
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Bromomethane	U	5.0	ug/Kgdrywt	1	10	10.	1.1	5.0
Carbon Disulfide	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
Carbon Tetrachloride	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
Chlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Dibromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	7.0	2.5
Chloroethane	U	5.0	ug/Kgdrywt	1	10	10.	1.3	5.0
Chloroform	U	2.5	ug/Kgdrywt	1	5	5.0	0.35	2.5
Chloromethane	U	5.0	ug/Kgdrywt	1	10	10.	1.4	5.0
cis-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
cis-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.72	2.5
Dibromomethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Dichlorodifluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.92	5.0
Ethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.65	2.5
Hexachlorobutadiene	U	2.5	ug/Kgdrywt	1	5	5.0	0.74	2.5
Isopropylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
m+p-Xylenes	U	5.0	ug/Kgdrywt	1	10	10.	1.7	5.0
Methyl tert-butyl Ether	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
Methylene Chloride	U	12	ug/Kgdrywt	1	25	25.	7.9	12.
N-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
N-Propylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.83	2.5
Naphthalene	U	2.5	ug/Kgdrywt	1	5	5.0	0.88	2.5
o-Xylene	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
sec-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Styrene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
tert-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Tetrachloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
Toluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
trans-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.71	2.5
trans-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.86	2.5
Trichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.59	2.5
Trichlorofluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.91	5.0
Vinyl Chloride	U	5.0	ug/Kgdrywt	1	10	10.	0.87	5.0
1,2-Dichloroethane-D4		117.	%					
p-Bromofluorobenzene		102.	%					

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Report of Analytical Results

Client:
Lab ID: WG225350-2
Client ID: Method Blank Sample
Project:
SDG: SL2079
Lab File ID: W3324.D

Sample Date:
Received Date:
Extract Date: 24-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225350

Analysis Date: 24-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: NA
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dibromofluoromethane		110.	%					
Toluene-D8		100.	%					

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Data File: \\target_server\gg\chem\gcms-w.i\W032418.b\W3324.D
Report Date: 28-Mar-2018 12:59

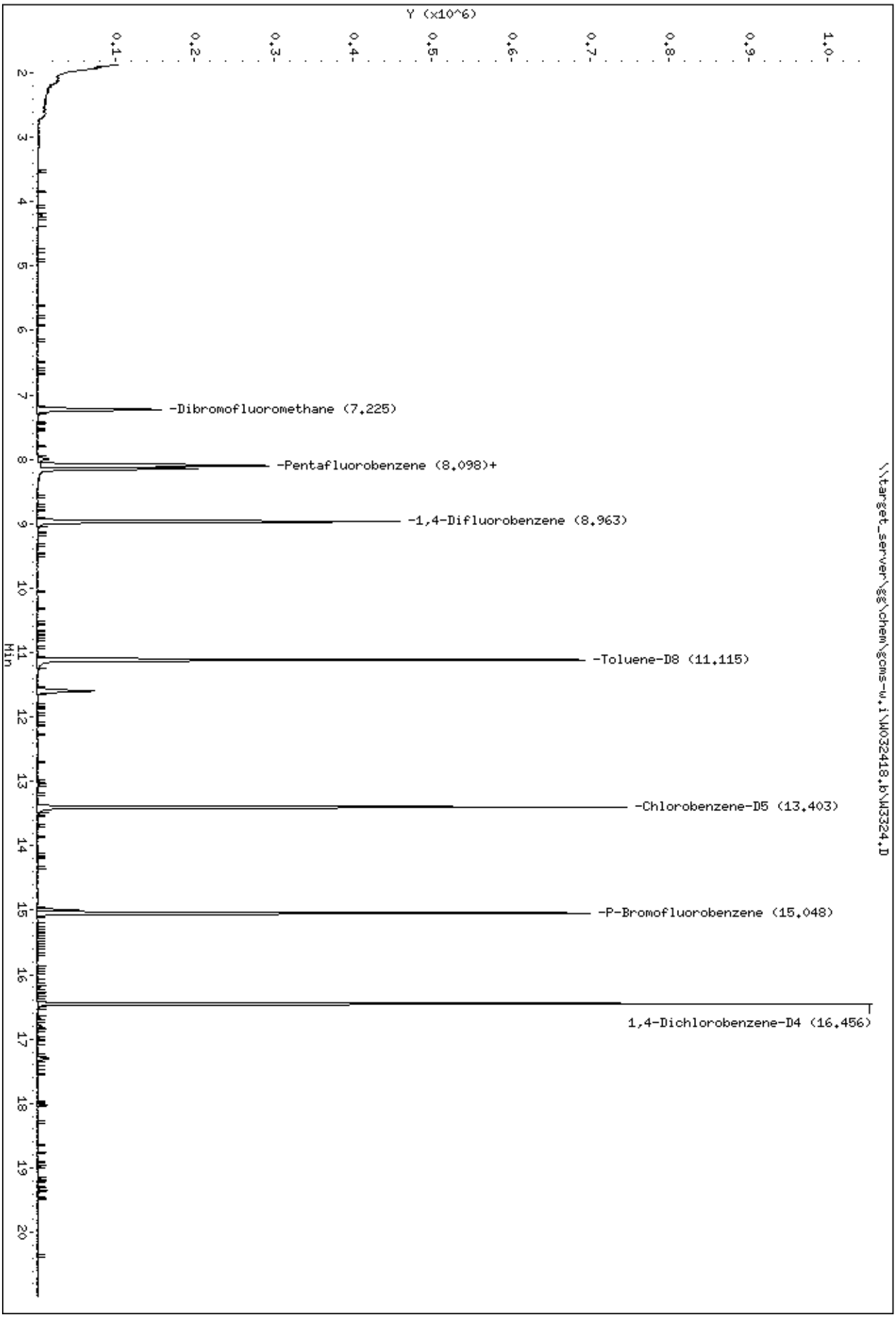
Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W032418.b\W3324.D
Lab Smp Id: WG225350-2
Inj Date : 24-MAR-2018 11:32 MS Autotune Date: 10-APR-2016 11:00
Operator : HG/JSS Inst ID: gcms-w.i
Smp Info : WG225350-2,SL2079
Misc Info : WG225350,WG225302-4,SL2079-1
Comment : SW846 5035
Method : \\target_server\gg\chem\gcms-w.i\W032418.b\W8SDI(07)D.m
Meth Date : 28-Mar-2018 12:57 gcms-w.i Quant Type: ISTD
Cal Date : 23-MAR-2018 13:16 Cal File: W3300.D
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	0.00000	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	5.000	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/kg)	FINAL (ug/Kgdrywt)	REVIEW COD
$ 37 Dibromofluoromethane	113	7.225	7.204	(0.892)	120828	54.8432	54.8	
* 42 Pentafluorobenzene	168	8.097	8.076	(1.000)	210205	50.0000		
$ 45 1,2-Dichloroethane-D4	65	8.140	8.126	(1.005)	182205	58.6526	58.6	
* 49 1,4-Difluorobenzene	114	8.962	8.948	(1.000)	388627	50.0000		
$ 55 Toluene-D8	98	11.115	11.093	(1.240)	492198	50.0998	50.1	
* 66 Chlorobenzene-D5	117	13.403	13.389	(1.000)	377122	50.0000		
$ 76 P-Bromofluorobenzene	95	15.047	15.033	(1.679)	230023	51.0586	51.0	
* 91 1,4-Dichlorobenzene-D4	152	16.456	16.442	(1.000)	224500	50.0000		



Data File: \\target_server\gg\chem\gcms-w.i\W032418.b\W3324.D
Date : 24-MAR-2018 11:32
Client ID:
Sample Info: WG225350-2,SL2079

Instrument: gcms-w.i

Report of Analytical Results

Client:
Lab ID: WG225400-9
Client ID: Method Blank Sample
Project:
SDG: SL2079
Lab File ID: W3350.D

Sample Date:
Received Date:
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: NA
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,1,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
1,1,1-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.42	2.5
1,1,2,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.84	2.5
Freon-113	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
1,1,2-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.97	2.5
1,1-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.7	2.5
1,1-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.93	2.5
1,1-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
1,2,3-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.76	2.5
1,2,3-Trichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
1,2,4-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.79	2.5
1,2,4-Trimethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.87	2.5
1,2-Dibromo-3-Chloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.5	2.5
1,2-Dibromoethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
1,2-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
1,2-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
1,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
1,3,5-Trimethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.67	2.5
1,3-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.62	2.5
1,3-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	0.94	2.5
1,4-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.44	2.5
2,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	0.50	2.5
2-Butanone	U	12	ug/Kgdrywt	1	25	25.	5.9	12.
2-Chlorotoluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
2-Hexanone	U	12	ug/Kgdrywt	1	25	25.	4.8	12.
4-Chlorotoluene	U	2.5	ug/Kgdrywt	1	5	5.0	0.49	2.5
P-Isopropyltoluene	U	2.5	ug/Kgdrywt	1	5	5.0	0.76	2.5
4-Methyl-2-Pentanone	U	12	ug/Kgdrywt	1	25	25.	5.9	12.
Acetone	U	12	ug/Kgdrywt	1	25	25.	5.1	12.
Benzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
Bromobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.74	2.5
Bromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Bromodichloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.60	2.5
Bromoform	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5

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Report of Analytical Results

Client:
Lab ID: WG225400-9
Client ID: Method Blank Sample
Project:
SDG: SL2079
Lab File ID: W3350.D

Sample Date:
Received Date:
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: NA
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Bromomethane	U	5.0	ug/Kgdrywt	1	10	10.	1.1	5.0
Carbon Disulfide	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
Carbon Tetrachloride	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
Chlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Dibromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	7.0	2.5
Chloroethane	U	5.0	ug/Kgdrywt	1	10	10.	1.3	5.0
Chloroform	U	2.5	ug/Kgdrywt	1	5	5.0	0.35	2.5
Chloromethane	U	5.0	ug/Kgdrywt	1	10	10.	1.4	5.0
cis-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
cis-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.72	2.5
Dibromomethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Dichlorodifluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.92	5.0
Ethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.65	2.5
Hexachlorobutadiene	U	2.5	ug/Kgdrywt	1	5	5.0	0.74	2.5
Isopropylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
m+p-Xylenes	U	5.0	ug/Kgdrywt	1	10	10.	1.7	5.0
Methyl tert-butyl Ether	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
Methylene Chloride	U	12	ug/Kgdrywt	1	25	25.	7.9	12.
N-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
N-Propylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.83	2.5
Naphthalene	U	2.5	ug/Kgdrywt	1	5	5.0	0.88	2.5
o-Xylene	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
sec-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Styrene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
tert-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Tetrachloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
Toluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
trans-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.71	2.5
trans-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.86	2.5
Trichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.59	2.5
Trichlorofluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.91	5.0
Vinyl Chloride	U	5.0	ug/Kgdrywt	1	10	10.	0.87	5.0
1,2-Dichloroethane-D4		99.7	%					
p-Bromofluorobenzene		94.6	%					

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Report of Analytical Results

Client:
Lab ID: WG225400-9
Client ID: Method Blank Sample
Project:
SDG: SL2079
Lab File ID: W3350.D

Sample Date:
Received Date:
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: NA
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dibromofluoromethane		103.	%					
Toluene-D8		99.6	%					

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Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3350.D
Report Date: 28-Mar-2018 13:20

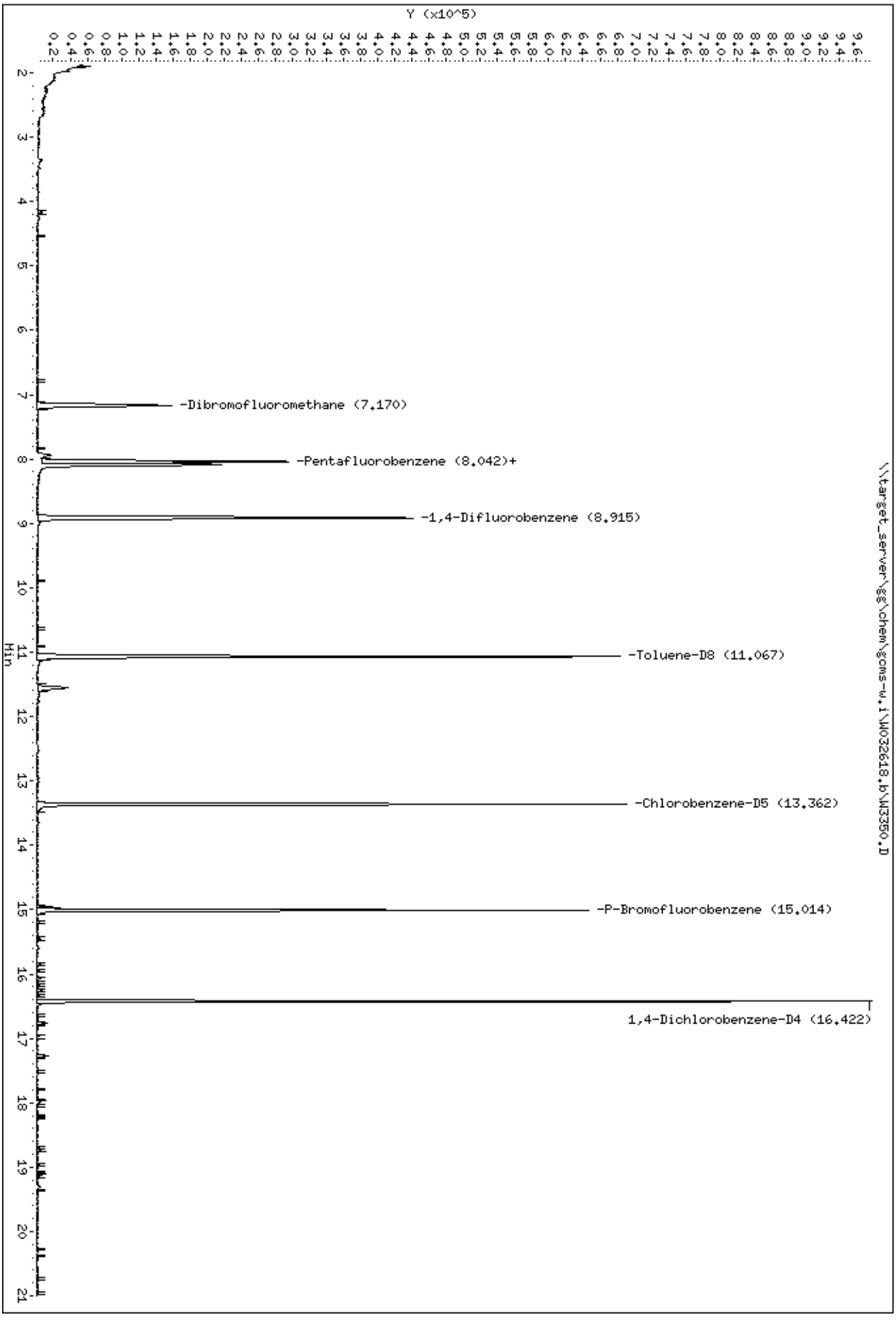
Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W032618.b\W3350.D
Lab Smp Id: WG225400-9
Inj Date : 26-MAR-2018 15:10 MS Autotune Date: 10-APR-2016 11:00
Operator : HG/JSS Inst ID: gcms-w.i
Smp Info : WG225400-9,SL2079
Misc Info : WG225400,WG225400-4,SL2079-8
Comment : SW846 5035
Method : \\TARGET_SERVER\GG\chem\gcms-w.i\W032618.b\W8SDI(08)D.m
Meth Date : 28-Mar-2018 13:17 TCOTE Quant Type: ISTD
Cal Date : 26-MAR-2018 13:19 Cal File: W3347.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: TARGET_SERVER

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	0.00000	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	5.000	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/kg)	FINAL (ug/Kgdrywt)	REVIEW COD
$ 37 Dibromofluoromethane	113	7.169	7.167	(0.892)	121091	51.4128	51.4	
* 42 Pentafluorobenzene	168	8.042	8.039	(1.000)	203581	50.0000		
$ 45 1,2-Dichloroethane-D4	65	8.085	8.089	(1.005)	190086	49.8552	49.8	
* 49 1,4-Difluorobenzene	114	8.914	8.912	(1.000)	366514	50.0000		
$ 55 Toluene-D8	98	11.066	11.064	(1.241)	468546	49.8181	49.8	
* 66 Chlorobenzene-D5	117	13.361	13.366	(1.000)	338466	50.0000		
$ 76 P-Bromofluorobenzene	95	15.013	15.011	(1.684)	204996	47.3023	47.3	
* 91 1,4-Dichlorobenzene-D4	152	16.422	16.425	(1.000)	190927	50.0000		



Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3350.D
Date : 26-MAR-2018 15:10
Client ID:
Sample Info: WG225400-9,SL2079

Instrument: gcms-w.i

Report of Analytical Results

Client:
Lab ID: WG225463-2
Client ID: Method Blank Sample
Project:
SDG: SL2079
Lab File ID: W3368.D

Sample Date:
Received Date:
Extract Date: 27-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225463

Analysis Date: 27-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: NA
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,1,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
1,1,1-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.42	2.5
1,1,2,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.84	2.5
Freon-113	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
1,1,2-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.97	2.5
1,1-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.7	2.5
1,1-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.93	2.5
1,1-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
1,2,3-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.76	2.5
1,2,3-Trichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
1,2,4-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.79	2.5
1,2,4-Trimethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.87	2.5
1,2-Dibromo-3-Chloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.5	2.5
1,2-Dibromoethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
1,2-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
1,2-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
1,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
1,3,5-Trimethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.67	2.5
1,3-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.62	2.5
1,3-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	0.94	2.5
1,4-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.44	2.5
2,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	0.50	2.5
2-Butanone	U	12	ug/Kgdrywt	1	25	25.	5.9	12.
2-Chlorotoluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
2-Hexanone	U	12	ug/Kgdrywt	1	25	25.	4.8	12.
4-Chlorotoluene	U	2.5	ug/Kgdrywt	1	5	5.0	0.49	2.5
P-Isopropyltoluene	U	2.5	ug/Kgdrywt	1	5	5.0	0.76	2.5
4-Methyl-2-Pentanone	U	12	ug/Kgdrywt	1	25	25.	5.9	12.
Acetone	U	12	ug/Kgdrywt	1	25	25.	5.1	12.
Benzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
Bromobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.74	2.5
Bromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Bromodichloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.60	2.5
Bromoform	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5

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Report of Analytical Results

Client:
Lab ID: WG225463-2
Client ID: Method Blank Sample
Project:
SDG: SL2079
Lab File ID: W3368.D

Sample Date:
Received Date:
Extract Date: 27-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225463

Analysis Date: 27-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: NA
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Bromomethane	U	5.0	ug/Kgdrywt	1	10	10.	1.1	5.0
Carbon Disulfide	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
Carbon Tetrachloride	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
Chlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Dibromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	7.0	2.5
Chloroethane	U	5.0	ug/Kgdrywt	1	10	10.	1.3	5.0
Chloroform	U	2.5	ug/Kgdrywt	1	5	5.0	0.35	2.5
Chloromethane	U	5.0	ug/Kgdrywt	1	10	10.	1.4	5.0
cis-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
cis-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.72	2.5
Dibromomethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Dichlorodifluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.92	5.0
Ethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.65	2.5
Hexachlorobutadiene	U	2.5	ug/Kgdrywt	1	5	5.0	0.74	2.5
Isopropylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
m+p-Xylenes	U	5.0	ug/Kgdrywt	1	10	10.	1.7	5.0
Methyl tert-butyl Ether	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
Methylene Chloride	U	12	ug/Kgdrywt	1	25	25.	7.9	12.
N-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
N-Propylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.83	2.5
Naphthalene	U	2.5	ug/Kgdrywt	1	5	5.0	0.88	2.5
o-Xylene	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
sec-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Styrene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
tert-Butylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Tetrachloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
Toluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
trans-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.71	2.5
trans-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.86	2.5
Trichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.59	2.5
Trichlorofluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.91	5.0
Vinyl Chloride	U	5.0	ug/Kgdrywt	1	10	10.	0.87	5.0
1,2-Dichloroethane-D4		107.	%					
p-Bromofluorobenzene		99.8	%					

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Report of Analytical Results

Client:
Lab ID: WG225463-2
Client ID: Method Blank Sample
Project:
SDG: SL2079
Lab File ID: W3368.D

Sample Date:
Received Date:
Extract Date: 27-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225463

Analysis Date: 27-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: NA
Report Date: 28-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dibromofluoromethane		107.	%					
Toluene-D8		100.	%					

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Data File: \\target_server\gg\chem\gcms-w.i\W032718.b\W3368.D
Report Date: 28-Mar-2018 13:49

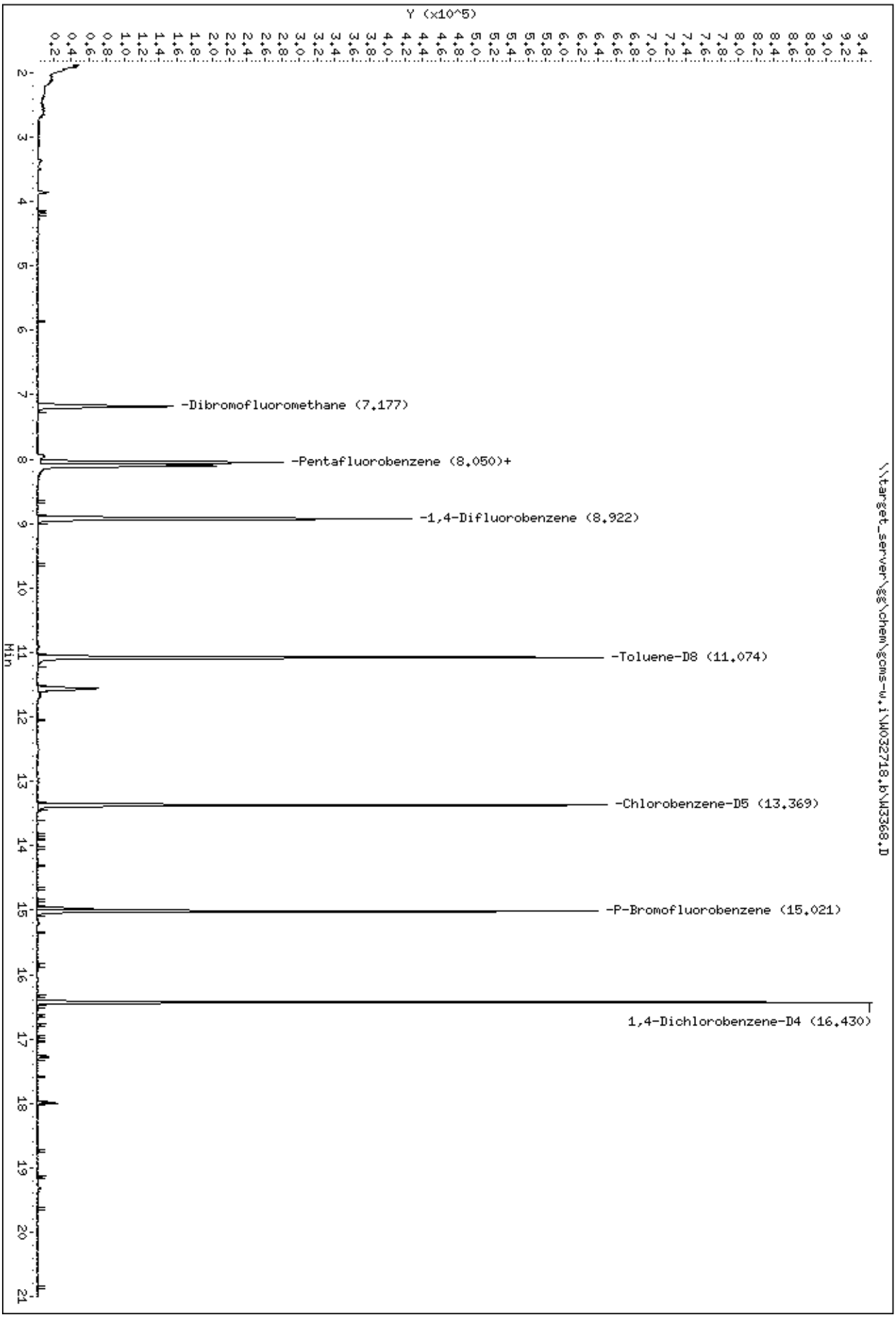
Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W032718.b\W3368.D
Lab Smp Id: WG225463-2 Client Smp ID: WG225463-Blank
Inj Date : 27-MAR-2018 11:06 MS Autotune Date: 10-APR-2016 11:00
Operator : HG/JSS Inst ID: gcms-w.i
Smp Info : WG225463-2,SL2079
Misc Info : WG225463,WG225400-4,SL2079-5
Comment : SW846 5035
Method : \\target_server\gg\chem\gcms-w.i\W032718.b\W8SDI(08)D.m
Meth Date : 28-Mar-2018 13:44 tcote Quant Type: ISTD
Cal Date : 26-MAR-2018 13:19 Cal File: W3347.D
Als bottle: 5 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: MIS_GUEST

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	0.00000	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	5.000	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/kg)	FINAL (ug/Kgdrywt)	REVIEW COD
$ 37 Dibromofluoromethane	113	7.177	7.167	(0.892)	116015	53.4429	53.4	
* 42 Pentafluorobenzene	168	8.049	8.039	(1.000)	187638	50.0000		
$ 45 1,2-Dichloroethane-D4	65	8.099	8.089	(1.006)	188825	53.7324	53.7	
* 49 1,4-Difluorobenzene	114	8.922	8.912	(1.000)	344800	50.0000		
$ 55 Toluene-D8	98	11.074	11.064	(1.241)	442683	50.0324	50.0	
* 66 Chlorobenzene-D5	117	13.369	13.366	(1.000)	315582	50.0000		
$ 76 P-Bromofluorobenzene	95	15.021	15.011	(1.684)	203432	49.8976	49.9	
* 91 1,4-Dichlorobenzene-D4	152	16.429	16.425	(1.000)	177808	50.0000		


Y (x10^5)
Min
-Dibromofluoromethane (7.177)
-Pentafluorobenzene (8.050)+
-1,4-Difluorobenzene (8.922)
-Toluene-D8 (11.074)
-Chlorobenzene-D5 (13.369)
-P-Bromofluorobenzene (15.021)
1,4-Dichlorobenzene-D4 (16.430)
\\target_server\gg\chem\gcms-w.i\W032718.b\W3368.D
Data File: \\target_server\gg\chem\gcms-w.i\W032718.b\W3368.D
Date : 27-MAR-2018 11:06
Client ID: WG225463-Blank
Sample Info: WG225463-2,SL2079
Instrument: gcms-w.i

LCS Recovery Report

Client:
Lab ID: WG225300-1
Client ID: LCS
Project:
SDG: SL2079
LCS File ID: P4880.D

Sample Date:
Received Date:
Extract Date: 23-MAR-18
Extracted By: hg
Extraction Method: SW846 5030
Lab Prep Batch: WG225300

Analysis Date: 23-MAR-18
Analyst: hg
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 28-MAR-18

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
1,1,1,2-Tetrachloroethane	109.	50.0	54.7	ug/L	78-125
1,1,1-Trichloroethane	95.0	50.0	47.5	ug/L	74-131
1,1,2,2-Tetrachloroethane	109.	50.0	54.6	ug/L	71-121
Freon-113	99.4	50.0	49.7	ug/L	70-136
1,1,2-Trichloroethane	88.6	50.0	44.3	ug/L	80-120
1,1-Dichloroethane	99.4	50.0	49.7	ug/L	77-125
1,1-Dichloroethene	100.	50.0	50.2	ug/L	71-131
1,1-Dichloropropene	98.0	50.0	49.0	ug/L	79-125
1,2,3-Trichlorobenzene	106.	50.0	52.9	ug/L	69-129
1,2,3-Trichloropropane	104.	50.0	52.1	ug/L	73-122
1,2,4-Trichlorobenzene	111.	50.0	55.7	ug/L	69-130
1,2,4-Trimethylbenzene	101.	50.0	50.7	ug/L	76-124
1,2-Dibromo-3-Chloropropane	96.8	50.0	48.4	ug/L	62-128
1,2-Dichlorobenzene	110.	50.0	55.2	ug/L	80-120
1,2-Dichloroethane	93.8	50.0	46.9	ug/L	73-128
1,2-Dichloropropane	96.0	50.0	48.0	ug/L	78-122
1,3,5-Trimethylbenzene	101.	50.0	50.4	ug/L	75-124
1,3-Dichlorobenzene	111.	50.0	55.4	ug/L	80-120
1,3-Dichloropropane	102.	50.0	51.1	ug/L	80-120
1,4-Dichlorobenzene	105.	50.0	52.5	ug/L	79-120
2,2-Dichloropropane	107.	50.0	53.3	ug/L	60-139
2-Butanone	101.	50.0	50.6	ug/L	56-143
2-Chlorotoluene	111.	50.0	55.3	ug/L	79-122
2-Hexanone	93.0	50.0	46.5	ug/L	57-139
4-Chlorotoluene	102.	50.0	51.1	ug/L	78-122
P-Isopropyltoluene	103.	50.0	51.6	ug/L	77-127
4-Methyl-2-Pentanone	87.6	50.0	43.8	ug/L	67-130
Acetone	121.	50.0	60.4	ug/L	39-160
Benzene	94.6	50.0	47.3	ug/L	79-120
Bromobenzene	108.	50.0	53.9	ug/L	80-120
Bromoform	95.8	50.0	47.9	ug/L	66-130
Bromomethane	107.	50.0	53.4	ug/L	53-141
Carbon Disulfide	108.	50.0	54.2	ug/L	64-133
Carbon Tetrachloride	102.	50.0	50.9	ug/L	72-136
Chlorobenzene	104.	50.0	52.1	ug/L	82-120

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LCS Recovery Report

Client:
Lab ID: WG225300-1
Client ID: LCS
Project:
SDG: SL2079
LCS File ID: P4880.D

Sample Date:
Received Date:
Extract Date: 23-MAR-18
Extracted By: hg
Extraction Method: SW846 5030
Lab Prep Batch: WG225300

Analysis Date: 23-MAR-18
Analyst: hg
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 28-MAR-18

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
Bromochloromethane	93.0	50.0	46.5	ug/L	78-123
Dibromochloromethane	101.	50.0	50.4	ug/L	74-126
Chloroethane	96.4	50.0	48.2	ug/L	60-138
Chloroform	96.2	50.0	48.1	ug/L	79-124
Chloromethane	93.4	50.0	46.7	ug/L	50-139
cis-1,2-Dichloroethene	89.2	50.0	44.6	ug/L	78-123
cis-1,3-Dichloropropene	85.6	50.0	42.8	ug/L	75-124
Dibromomethane	88.8	50.0	44.4	ug/L	79-123
Bromodichloromethane	103.	50.0	51.4	ug/L	79-125
Dichlorodifluoromethane	84.2	50.0	42.1	ug/L	32-152
Ethylbenzene	96.2	50.0	48.1	ug/L	79-121
1,2-Dibromoethane	87.6	50.0	43.8	ug/L	77-121
Hexachlorobutadiene	108.	50.0	54.0	ug/L	66-134
Isopropylbenzene	105.	50.0	52.4	ug/L	72-131
Methyl tert-butyl Ether	88.8	50.0	44.4	ug/L	71-124
Methylene Chloride	90.6	50.0	45.3	ug/L	74-124
m+p-Xylenes	96.6	100.	96.6	ug/L	80-121
Naphthalene	98.0	50.0	49.0	ug/L	61-128
N-Butylbenzene	108.	50.0	53.8	ug/L	75-128
N-Propylbenzene	114.	50.0	57.2	ug/L	76-126
o-Xylene	95.2	50.0	47.6	ug/L	78-122
sec-Butylbenzene	105.	50.0	52.3	ug/L	77-126
Styrene	95.0	50.0	47.5	ug/L	78-123
tert-Butylbenzene	99.2	50.0	49.6	ug/L	78-124
Tetrachloroethene	105.	50.0	52.6	ug/L	74-129
Toluene	95.6	50.0	47.8	ug/L	80-121
trans-1,2-Dichloroethene	94.2	50.0	47.1	ug/L	75-124
trans-1,3-Dichloropropene	86.8	50.0	43.4	ug/L	73-127
Trichloroethene	98.0	50.0	49.0	ug/L	79-123
Trichlorofluoromethane	93.8	50.0	46.9	ug/L	65-141
Vinyl Chloride	92.6	50.0	46.3	ug/L	58-137
Dibromofluoromethane	98.6				80-120
1,2-Dichloroethane-d4	97.9				81-120
Toluene-d8	98.1				89-120
P-Bromofluorobenzene	88.3				85-120

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Data File: \\target_server\gg\chem\gcms-p.i\P032318.b\P4880.D
Report Date: 28-Mar-2018 12:29

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Data file : \\target_server\gg\chem\gcms-p.i\P032318.b\P4880.D
Lab Smp Id: WG225300-1
Inj Date : 23-MAR-2018 08:35 MS Autotune Date: 24-JAN-2018 13:57
Operator : hg Inst ID: gcms-p.i
Smp Info : WG225300-1,SL2079
Misc Info : WG225300,WG225041-4,SL2079-14
Comment : SW846 5030
Method : \\target_server\gg\chem\gcms-p.i\P032318.b\P8A05(62)D.m
Meth Date : 26-Mar-2018 12:22 gcms-p.i Quant Type: ISTD
Cal Date : 19-MAR-2018 18:17 Cal File: P4810.D
Als bottle: 2 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all50.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.536	1.537	(0.235)	165881	42.0720	42.1	
2	Chloromethane	50	1.694	1.694	(0.259)	262800	46.7411	46.7	
3	Vinyl chloride	62	1.751	1.751	(0.268)	272991	46.3009	46.3	
4	Bromomethane	94	2.001	2.001	(0.306)	139501	53.3741	53.4	
5	Chloroethane	64	2.101	2.101	(0.322)	181450	48.1518	48.2	
6	Trichlorofluoromethane	101	2.208	2.209	(0.338)	379006	46.8819	46.9	
7	Diethyl Ether	59	2.459	2.459	(0.376)	207035	48.4607	48.5	
19	Tertiary-butyl alcohol	59	3.566	3.560	(0.546)	71335	297.902	298	
8	1,1-Dichloroethene	96	2.630	2.631	(0.403)	183391	50.1600	50.2	
10	Carbon Disulfide	76	2.666	2.666	(0.408)	675365	54.2160	54.2	
9	Freon-113	151	2.659	2.659	(0.407)	135600	49.7394	49.7	
11	Iodomethane	142	2.766	2.766	(0.423)	173275	45.6704	45.7	
12	Acrolein	56	2.945	2.945	(0.451)	203945	240.782	241	
14	Methylene Chloride	84	3.180	3.181	(0.487)	203043	45.3222	45.3	
15	Acetone	43	3.231	3.231	(0.495)	76236	60.3796	60.4	
45	Isobutyl Alcohol	43	6.869	6.869	(1.051)	147011	1223.80	1220	
16	trans-1,2-Dichloroethene	96	3.338	3.338	(0.511)	186808	47.0796	47.1	
13	Allyl Chloride	41	3.066	3.074	(0.469)	304266	47.7636	47.8	
18	Methyl tert-butyl ether	73	3.452	3.453	(0.528)	507920	44.4191	44.4	
20	Acetonitrile	41	3.745	3.753	(0.573)	309908	498.557	498	
21	Di-isopropyl ether	45	3.888	3.889	(0.595)	627263	46.4802	46.5	
22	Chloroprene	53	4.017	4.017	(0.615)	297753	48.5045	48.5	
39	Propionitrile	54	6.390	6.390	(0.978)	351724	505.809	506	
40	Methacrylonitrile	41	6.419	6.426	(0.982)	1543778	481.719	482	

Data File: \\target_server\gg\chem\gcms-p.i\P032318.b\P4880.D
Report Date: 28-Mar-2018 12:29

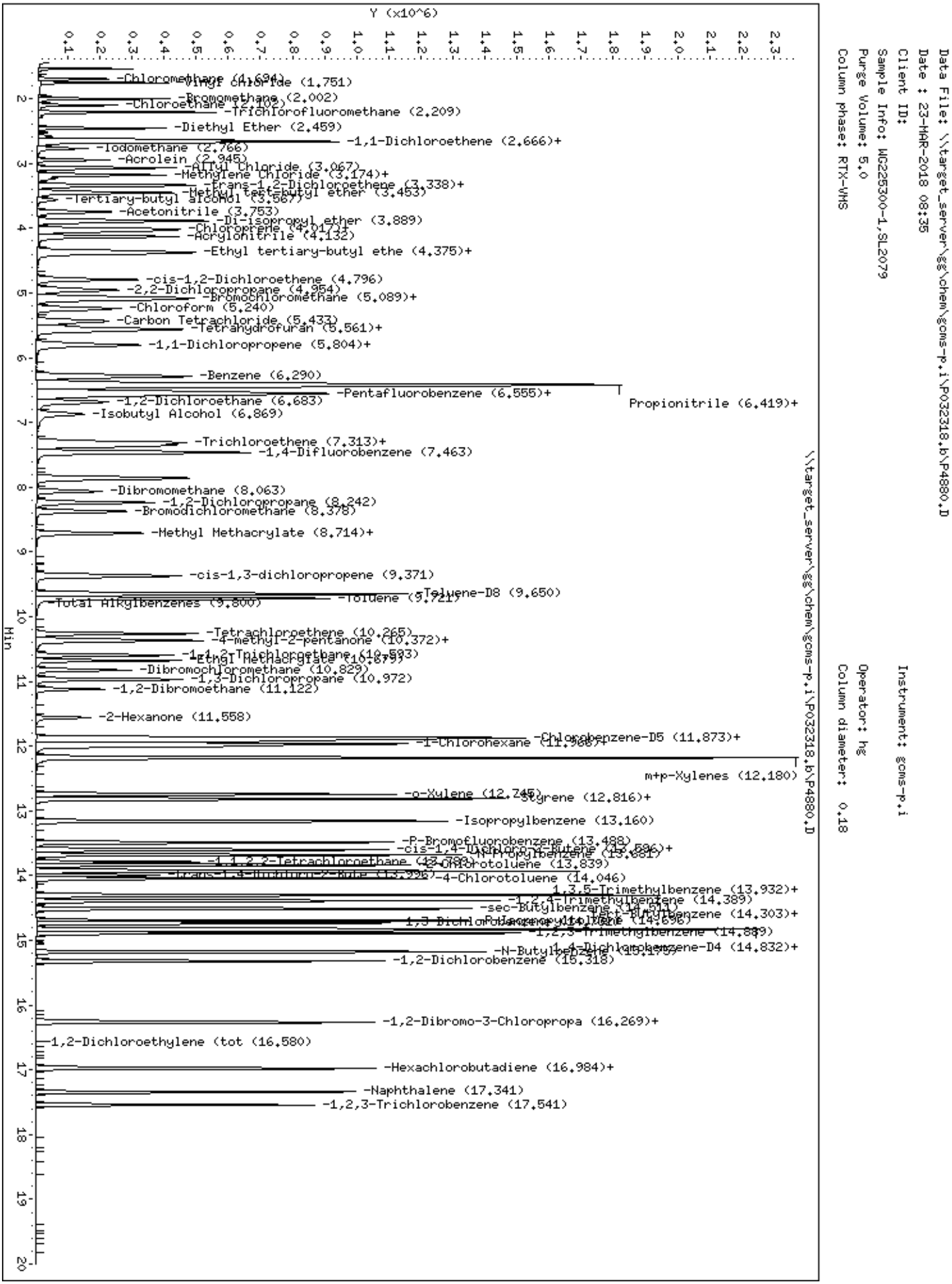
							CONCENTRATIONS		
		QUANT SIG					ON-COLUMN	FINAL	
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/l)	(ug/l)	REVIEW CODE
	23 1,1-Dichloroethane	63	4.045	4.053	(0.619)	367679	49.7414	49.7	
	24 Acrylonitrile	52	4.131	4.131	(0.632)	378476	235.631	236	
	25 Ethyl tertiary-butyl ether	59	4.367	4.368	(0.668)	545359	41.3981	41.4(R)	
	26 Vinyl Acetate	43	4.396	4.396	(0.589)	485031	61.7339	61.7	
	27 cis-1,2-Dichloroethene	96	4.789	4.796	(0.733)	201371	44.6287	44.6	
M	98 1,2-Dichloroethylene (total)	96				388179	91.7083	91.7	
	52 Methyl Methacrylate	41	8.713	8.706	(1.168)	188956	41.3376	41.3	
	28 2,2-Dichloropropane	77	4.953	4.954	(0.758)	268194	53.3460	53.3	
	29 Bromochloromethane	128	5.103	5.104	(0.781)	87453	46.4906	46.5	
	31 Chloroform	83	5.246	5.240	(0.803)	338738	48.1109	48.1	
	32 Carbon Tetrachloride	117	5.432	5.440	(0.728)	243485	50.9179	50.9	
	33 Tetrahydrofuran	42	5.511	5.497	(0.844)	59555	44.8172	44.8	
$	34 Dibromofluoromethane	113	5.561	5.561	(0.851)	232638	49.2838	49.3	
	35 1,1,1-Trichloroethane	97	5.568	5.576	(0.852)	289774	47.5356	47.5	
	37 1,1-Dichloropropene	75	5.804	5.797	(0.778)	263034	48.9960	49.0	
	36 2-Butanone	43	5.825	5.819	(0.892)	103369	50.6040	50.6	
	38 Benzene	78	6.290	6.290	(0.843)	764820	47.3021	47.3	
*	41 Pentafluorobenzene	168	6.533	6.533	(1.000)	480356	50.0000		
	30 Cyclohexane	56	5.075	5.075	(0.777)	304043	42.2224	42.2	
	53 Ethyl Methacrylate	69	10.679	10.679	(1.431)	276931	40.1607	40.2	
$	42 1,2-Dichloroethane-D4	65	6.561	6.562	(1.004)	327680	48.9704	49.0	
	43 Tertiary-amyl methyl ether	73	6.569	6.562	(1.005)	500208	39.2582	39.2(R)	
	44 1,2-Dichloroethane	62	6.690	6.684	(0.897)	285220	46.9350	46.9	
	47 Trichloroethene	95	7.362	7.363	(0.987)	187918	49.0425	49.0	
*	48 1,4-Difluorobenzene	114	7.462	7.463	(1.000)	791836	50.0000		
	49 Dibromomethane	93	8.063	8.063	(1.080)	117393	44.4538	44.4	
	50 1,2-Dichloropropane	63	8.241	8.242	(1.104)	196103	48.0458	48.0	
	51 Bromodichloromethane	83	8.377	8.378	(1.123)	264984	51.3710	51.4	
	57 cis-1,3-dichloropropene	75	9.378	9.378	(1.257)	336980	42.8024	42.8	
	54 1,4-Dioxane	88	8.713	8.721	(1.168)	39129	884.980	885	
$	58 Toluene-D8	98	9.649	9.650	(1.293)	984655	49.0590	49.0	
	59 Toluene	92	9.721	9.721	(1.303)	501443	47.8020	47.8	
	61 4-methyl-2-pentanone	43	10.350	10.343	(1.387)	190089	43.7641	43.8	
	60 Tetrachloroethene	164	10.264	10.265	(0.865)	148512	52.6444	52.6	
	62 trans-1,3-Dichloropropene	75	10.379	10.379	(1.391)	316679	43.4173	43.4	
	63 1,1,2-Trichloroethane	83	10.593	10.593	(1.420)	153147	44.3050	44.3	
	64 Dibromochloromethane	129	10.829	10.829	(0.912)	199795	50.3831	50.4	
	65 1,3-Dichloropropane	76	10.972	10.972	(0.924)	350396	51.0672	51.1	
	66 1,2-Dibromoethane	107	11.122	11.122	(1.490)	184472	43.7723	43.8	
	67 2-Hexanone	43	11.558	11.558	(0.974)	130054	46.5010	46.5	
*	68 Chlorobenzene-D5	117	11.872	11.873	(1.000)	786218	50.0000		
	69 Chlorobenzene	112	11.894	11.894	(1.002)	571348	52.1389	52.1	
	70 1-Chlorohexane	91	11.922	11.923	(1.004)	285391	54.3547	54.4	
	71 Ethylbenzene	106	11.965	11.966	(1.008)	304247	48.1057	48.1	
	72 1,1,1,2-Tetrachloroethane	131	12.001	12.002	(1.011)	199463	54.6685	54.7	
M	106 Xylenes (total)	106				1125755	144.121	144	
	73 m+p-Xylenes	106	12.180	12.180	(1.026)	771334	96.5596	96.6	
	74 o-Xylene	106	12.745	12.745	(1.073)	354421	47.5609	47.6	
	75 Styrene	104	12.816	12.817	(1.079)	627841	47.4604	47.5	
	76 Bromoform	173	12.816	12.817	(1.079)	135235	47.9233	47.9	
	77 Isopropylbenzene	105	13.159	13.160	(0.888)	931394	52.4444	52.4	
$	78 P-Bromofluorobenzene	95	13.488	13.488	(1.807)	385717	44.1564	44.2	
	79 cis-1,4-Dichloro-2-Butene	53	13.609	13.610	(0.918)	106830	50.0187	50.0	
	86 trans-1,4-Dichloro-2-Butene	53	13.995	13.996	(0.944)	84887	58.4288	58.4	

Data File: \\target_server\gg\chem\gcms-p.i\P032318.b\P4880.D
Report Date: 28-Mar-2018 12:29

			QUANT SIG					CONCENTRATIONS		
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/l)	FINAL (ug/l)	REVIEW CODE
	80	Bromobenzene	156	13.595	13.596	(0.917)	230580	53.9209	53.9	
	81	N-Propylbenzene	91	13.681	13.674	(0.923)	1161567	57.1917	57.2	
	82	1,1,2,2-Tetrachloroethane	83	13.788	13.789	(0.930)	272302	54.5662	54.6	
	85	1,3,5-Trimethylbenzene	105	13.931	13.932	(0.940)	784384	50.3787	50.4	
	83	2-Chlorotoluene	91	13.838	13.839	(0.933)	673293	55.3286	55.3	
	84	1,2,3-Trichloropropane	75	13.924	13.924	(0.939)	238246	52.1237	52.1	
	87	4-Chlorotoluene	91	14.045	14.046	(0.947)	728815	51.0912	51.1	
	88	tert-Butylbenzene	119	14.303	14.303	(0.965)	775338	49.5745	49.6	
	89	Pentachloroethane	165	14.310	14.310	(0.965)	113512	54.7987	54.8	
	90	1,2,4-Trimethylbenzene	105	14.389	14.389	(0.971)	816296	50.6601	50.7	
	92	P-Isopropyltoluene	119	14.696	14.696	(0.991)	821492	51.5610	51.6	
	93	1,3-Dichlorobenzene	146	14.739	14.739	(0.994)	458581	55.4443	55.4	
*	94	1,4-Dichlorobenzene-D4	152	14.825	14.825	(1.000)	422216	50.0000		
	95	1,4-Dichlorobenzene	146	14.846	14.847	(1.001)	474043	52.4837	52.5	
	97	N-Butylbenzene	91	15.175	15.175	(1.024)	765828	53.7825	53.8	
	91	sec-Butylbenzene	105	14.510	14.511	(0.979)	977376	52.2709	52.3	
	99	1,2-Dichlorobenzene	146	15.325	15.325	(1.034)	435283	55.2456	55.2	
	100	1,2-Dibromo-3-Chloropropane	75	16.240	16.239	(1.095)	46493	48.4268	48.4	
	101	1,3,5-Trichlorobenzene	180	16.268	16.268	(1.097)	313761	56.2691	56.3	
	102	Hexachlorobutadiene	225	16.962	16.962	(1.144)	88633	53.9713	54.0	
	103	1,2,4-Trichlorobenzene	180	16.983	16.984	(1.146)	272031	55.6659	55.7	
	96	1,2,3-Trimethylbenzene	105	14.889	14.889	(1.004)	882501	56.2900	56.3	
	104	Naphthalene	128	17.341	17.347	(1.170)	714588	49.0325	49.0	
	105	1,2,3-Trichlorobenzene	180	17.541	17.541	(1.183)	238134	52.9205	52.9	
	17	Methyl Acetate	43	3.352	3.353	(0.513)	176402	49.1552	49.2	
	46	Methylcyclohexane	83	7.312	7.313	(1.119)	317120	43.3660	43.4	
M	55	Total Alkylbenzenes	100				6102281	365.419	365	

QC Flag Legend

R - Spike/Surrogate failed recovery limits.


Data File: \\target_server\gg\chem\gcms-p.i\P032318.b\P4880.D
Date : 23-MAR-2018 08:35
Client ID:
Sample Info: WG225300-1,SL2079
Purge Volume: 5.0
Column phase: RTX-VMS
Instrument: gcms-p.i
Operator: hg
Column diameter: 0.18
\\target_server\gg\chem\gcms-p.i\P032318.b\P4880.D
Y (x10^6)
Min
-Chloromethane (1.694)
-Vinyl chloride (1.751)
-Bromomethane (2.002)
-Chloroethane (2.102)
-Trichlorofluoromethane (2.209)
-Diethyl Ether (2.459)
-1,1-Dichloroethene (2.666)+
-Iodomethane (2.766)
-Acrolein (2.945)
-Allyl Chloride (3.067)
-Methylene Chloride (3.174)+
-trans-1,2-Dichloroethene (3.338)+
-Methyl tert-butyl ether (3.453)
-Tertiary-butyl alcohol (3.567)
-Acetonitrile (3.753)
-Di-isopropyl ether (3.889)
-Chloroprene (4.017)+
-Acrylonitrile (4.132)
-Ethyl tertiary-butyl ethe (4.375)+
-cis-1,2-Dichloroethene (4.796)
-2,2-Dichloropropane (4.954)
-Bromochloromethane (5.089)+
-Chloroform (5.240)
-Carbon Tetrachloride (5.433)
-Tetrahydrofuran (5.561)+
-1,1-Dichloropropene (5.804)+
-Benzene (6.290)
-Pentafluorobenzene (6.555)+
Propionitrile (6.419)+
-1,2-Dichloroethane (6.683)
-Isobutyl Alcohol (6.869)
-Trichloroethene (7.313)+
-1,4-Difluorobenzene (7.463)
-Dibromomethane (8.063)
-1,2-Dichloropropane (8.242)
-Bromodichloromethane (8.378)
-Methyl Methacrylate (8.714)+
-cis-1,3-dichloropropene (9.371)
-Toluene-D8 (9.650)
-Total Alkylbenzenes (9.800)
-Toluene (9.721)
-Tetrachloroethene (10.265)
-4-methyl-2-pentanone (10.372)+
-1,1,2-Trichloroethane (10.593)
-Ethyl Methacrylate (10.679)
-Dibromochloromethane (10.829)
-1,3-Dichloropropane (10.972)
-1,2-Dibromoethane (11.122)
-2-Hexanone (11.558)
-Chlorobenzene-D5 (11.873)+
-1-Chlorohexane (11.966)+
m+p-Xylenes (12.180)
-o-Xylene (12.745)
-Styrene (12.816)+
-Isopropylbenzene (13.160)
-P-Bromofluorobenzene (13.488)
-cis-1,4-Dichloro-2-Butene (13.596)+
-N-Propylbenzene (13.681)
-1,1,2,2-Tetrachloroethane (13.780)
-2-Chlorotoluene (13.839)
-trans-1,4-Dichloro-2-Bute (13.996)
-4-Chlorotoluene (14.046)
1,3,5-Trimethylbenzene (13.932)+
-1,2,4-Trimethylbenzene (14.389)
-sec-Butylbenzene (14.511)
-Tert-Butylbenzene (14.303)+
-P-Isopropyltoluene (14.696)
-1,2,3-Trimethylbenzene (14.889)
-N-Butylbenzene (15.175)
1,4-Dichlorobenzene-D4 (14.832)+
-1,2-Dichlorobenzene (15.318)
-1,2-Dibromo-3-Chloropropa (16.269)+
-1,2-Dichloroethylene (tot (16.580)
-Hexachlorobutadiene (16.984)+
-Naphthalene (17.341)
-1,2,3-Trichlorobenzene (17.541)

LCS Recovery Report

Client:
Lab ID: WG225350-1
Client ID: LCS
Project:
SDG: SL2079
LCS File ID: W3322.D

Sample Date:
Received Date:
Extract Date: 24-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225350

Analysis Date: 24-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: NA
Report Date: 28-MAR-18

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
1,1,1,2-Tetrachloroethane	111.	50.0	55.6	ug/Kgdrywt	78-125
1,1,1-Trichloroethane	113.	50.0	56.6	ug/Kgdrywt	73-130
1,1,2,2-Tetrachloroethane	105.	50.0	52.5	ug/Kgdrywt	70-125
Freon-113	114.	50.0	56.8	ug/Kgdrywt	66-136
1,1,2-Trichloroethane	106.	50.0	53.0	ug/Kgdrywt	78-125
1,1-Dichloroethane	116.	50.0	57.8	ug/Kgdrywt	76-125
1,1-Dichloroethene	101.	50.0	50.7	ug/Kgdrywt	70-131
1,1-Dichloropropene	113.	50.0	56.4	ug/Kgdrywt	76-125
1,2,3-Trichlorobenzene	111.	50.0	55.4	ug/Kgdrywt	66-130
1,2,3-Trichloropropane	100.	50.0	50.0	ug/Kgdrywt	73-125
1,2,4-Trichlorobenzene	111.	50.0	55.4	ug/Kgdrywt	67-129
1,2,4-Trimethylbenzene	109.	50.0	54.6	ug/Kgdrywt	75-125
1,2-Dibromo-3-Chloropropane	115.	50.0	57.4	ug/Kgdrywt	61-132
1,2-Dibromoethane	105.	50.0	52.4	ug/Kgdrywt	78-125
1,2-Dichlorobenzene	106.	50.0	53.2	ug/Kgdrywt	78-125
1,2-Dichloroethane	108.	50.0	54.2	ug/Kgdrywt	73-128
1,2-Dichloropropane	108.	50.0	53.8	ug/Kgdrywt	76-125
1,3,5-Trimethylbenzene	110.	50.0	55.1	ug/Kgdrywt	73-125
1,3-Dichlorobenzene	109.	50.0	54.4	ug/Kgdrywt	77-125
1,3-Dichloropropane	102.	50.0	51.1	ug/Kgdrywt	77-125
1,4-Dichlorobenzene	106.	50.0	52.8	ug/Kgdrywt	75-120
2,2-Dichloropropane	120.	50.0	59.8	ug/Kgdrywt	67-133
2-Butanone	102.	50.0	50.8	ug/Kgdrywt	51-148
2-Chlorotoluene	110.	50.0	54.8	ug/Kgdrywt	75-125
2-Hexanone	98.4	50.0	49.2	ug/Kgdrywt	53-145
4-Chlorotoluene	109.	50.0	54.5	ug/Kgdrywt	72-125
P-Isopropyltoluene	111.	50.0	55.4	ug/Kgdrywt	73-127
4-Methyl-2-Pentanone	99.8	50.0	49.9	ug/Kgdrywt	65-135
Acetone	103.	50.0	51.7	ug/Kgdrywt	36-164
Benzene	109.	50.0	54.6	ug/Kgdrywt	77-125
Bromobenzene	107.	50.0	53.6	ug/Kgdrywt	78-125
Bromochloromethane	104.	50.0	51.9	ug/Kgdrywt	78-125
Bromodichloromethane	115.	50.0	57.6	ug/Kgdrywt	75-127
Bromoform	110.	50.0	54.8	ug/Kgdrywt	67-132
Bromomethane	103.	50.0	51.4	ug/Kgdrywt	53-143

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
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LCS Recovery Report

Client:
Lab ID: WG225350-1
Client ID: LCS
Project:
SDG: SL2079
LCS File ID: W3322.D

Sample Date:
Received Date:
Extract Date: 24-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225350

Analysis Date: 24-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: NA
Report Date: 28-MAR-18

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
Carbon Disulfide	121.	50.0	60.4	ug/Kgdrywt	63-132
Carbon Tetrachloride	114.	50.0	56.9	ug/Kgdrywt	70-135
Chlorobenzene	106.	50.0	53.0	ug/Kgdrywt	79-125
Dibromochloromethane	114.	50.0	56.9	ug/Kgdrywt	74-126
Chloroethane	114.	50.0	57.1	ug/Kgdrywt	59-139
Chloroform	114.	50.0	57.2	ug/Kgdrywt	78-125
Chloromethane	101.	50.0	50.7	ug/Kgdrywt	50-136
cis-1,2-Dichloroethene	111.	50.0	55.7	ug/Kgdrywt	77-125
cis-1,3-Dichloropropene	108.	50.0	54.2	ug/Kgdrywt	74-126
Dibromomethane	112.	50.0	56.0	ug/Kgdrywt	78-125
Dichlorodifluoromethane	89.2	50.0	44.6	ug/Kgdrywt	29-149
Ethylbenzene	108.	50.0	54.0	ug/Kgdrywt	76-125
Hexachlorobutadiene	105.	50.0	52.7	ug/Kgdrywt	61-135
Isopropylbenzene	114.	50.0	57.0	ug/Kgdrywt	68-134
m+p-Xylenes	107.	100.	107.	ug/Kgdrywt	77-125
Methyl tert-butyl Ether	106.	50.0	53.0	ug/Kgdrywt	73-125
Methylene Chloride	97.0	50.0	48.5	ug/Kgdrywt	70-128
N-Butylbenzene	112.	50.0	56.2	ug/Kgdrywt	70-128
N-Propylbenzene	108.	50.0	54.1	ug/Kgdrywt	73-125
Naphthalene	112.	50.0	56.0	ug/Kgdrywt	62-129
o-Xylene	110.	50.0	54.8	ug/Kgdrywt	77-125
sec-Butylbenzene	110.	50.0	54.9	ug/Kgdrywt	73-126
Styrene	109.	50.0	54.6	ug/Kgdrywt	76-125
tert-Butylbenzene	109.	50.0	54.4	ug/Kgdrywt	73-125
Tetrachloroethene	108.	50.0	53.9	ug/Kgdrywt	73-128
Toluene	107.	50.0	53.7	ug/Kgdrywt	77-125
trans-1,2-Dichloroethene	108.	50.0	54.2	ug/Kgdrywt	74-125
trans-1,3-Dichloropropene	113.	50.0	56.4	ug/Kgdrywt	71-130
Trichloroethene	108.	50.0	53.8	ug/Kgdrywt	77-125
Trichlorofluoromethane	105.	50.0	52.7	ug/Kgdrywt	62-140
Vinyl Chloride	103.	50.0	51.5	ug/Kgdrywt	56-135
1,2-Dichloroethane-D4	104.				71-136
p-Bromofluorobenzene	104.				79-125
Dibromofluoromethane	103.				78-125
Toluene-D8	100.				85-125

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Data File: \\target_server\gg\chem\gcms-w.i\W032418.b\W3322.D
Report Date: 28-Mar-2018 12:58

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W032418.b\W3322.D
Lab Smp Id: WG225350-1
Inj Date : 24-MAR-2018 10:10 MS Autotune Date: 10-APR-2016 11:00
Operator : HG/JSS Inst ID: gcms-w.i
Smp Info : WG225350-1,SL2079
Misc Info : WG225350,WG225302-4,SL2079-1
Comment : SW846 5035
Method : \\target_server\gg\chem\gcms-w.i\W032418.b\W8SDI(07)D.m
Meth Date : 28-Mar-2018 12:57 gcms-w.i Quant Type: ISTD
Cal Date : 23-MAR-2018 13:16 Cal File: W3300.D
Als bottle: 4 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	0.00000	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	5.000	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/kg)	FINAL (ug/Kgdrywt)	REVIEW COD
1	Dichlorodifluoromethane	85	1.976	1.970	(0.244)	170042	44.5549	44.6	
2	Chloromethane	50	2.190	2.191	(0.271)	224943	50.7160	50.7	
3	Vinyl chloride	62	2.269	2.263	(0.281)	217673	51.5196	51.5	
4	Bromomethane	94	2.612	2.606	(0.323)	125244	51.4165	51.4	
5	Chloroethane	64	2.748	2.735	(0.340)	149596	57.1473	57.1	
6	Trichlorofluoromethane	101	2.898	2.885	(0.358)	294782	52.6914	52.7	
7	Diethyl Ether	59	3.234	3.228	(0.400)	169834	54.1577	54.2	
8	Tertiary-butyl alcohol	59	4.729	4.723	(0.585)	167559	281.007	281	
9	1,1-Dichloroethene	96	3.478	3.464	(0.430)	134801	50.6730	50.7	
10	Carbon Disulfide	76	3.520	3.507	(0.435)	584739	60.4276	60.4	
11	Freon-113	151	3.513	3.500	(0.434)	109029	56.7578	56.8	
12	Iodomethane	142	3.656	3.643	(0.452)	130455	50.7548	50.8	
13	Acrolein	56	3.899	3.886	(0.482)	175195	263.948	264	
14	Methylene Chloride	84	4.207	4.194	(0.520)	203200	48.4729	48.5	
15	Acetone	43	4.293	4.279	(0.531)	77134	51.6979	51.7	
16	Isobutyl Alcohol	43	8.361	8.348	(1.034)	264964	1104.93	1100	
17	trans-1,2-Dichloroethene	96	4.428	4.415	(0.547)	164508	54.2129	54.2	
18	Allyl Chloride	41	4.071	4.058	(0.503)	266637	56.5710	56.6	
19	Methyl tert-butyl ether	73	4.586	4.572	(0.567)	604379	52.9634	53.0	
20	Acetonitrile	39	4.993	4.980	(0.617)	60164	494.889	495	
21	Di-isopropyl ether	45	5.179	5.166	(0.640)	581804	56.4506	56.4	
22	Chloroprene	53	5.351	5.338	(0.661)	280809	59.4088	59.4	

Data File: \\target_server\gg\chem\gcms-w.i\W032418.b\W3322.D
Report Date: 28-Mar-2018 12:58

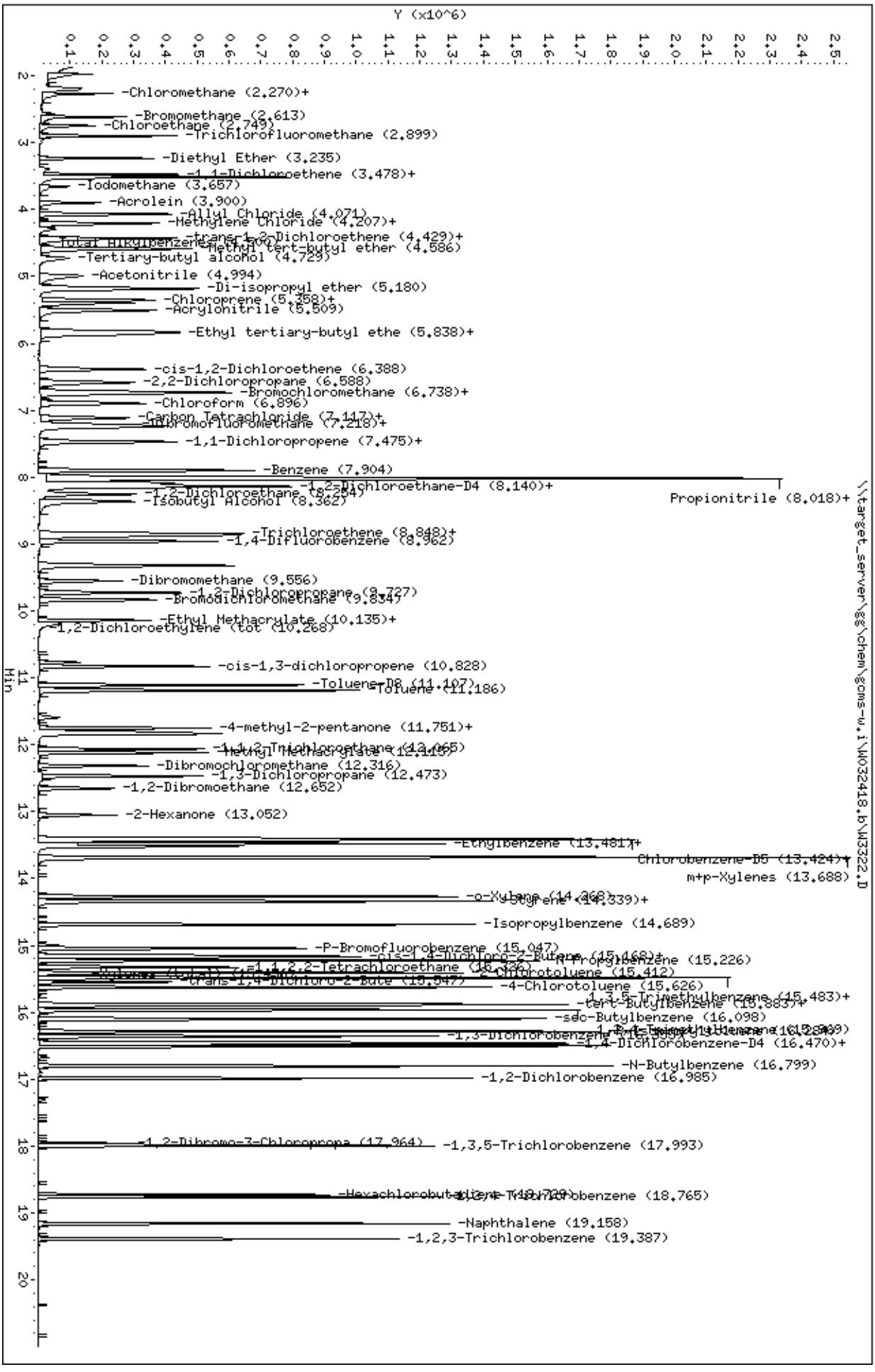
		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/kg)	CONCENTRATIONS FINAL (ug/Kgdrywt)	REVIEW COD
	23	Propionitrile	54	7.989	7.983	(0.988)	340651	531.958	532	
	24	Methacrylonitrile	41	8.018	8.005	(0.991)	1327101	547.053	547	
	25	1,1-Dichloroethane	63	5.394	5.380	(0.667)	351164	57.7946	57.8	
	26	Acrylonitrile	52	5.508	5.488	(0.681)	334345	272.251	272	
	27	Ethyl tertiary-butyl ether	59	5.830	5.817	(0.721)	582246	57.0730	57.1	
	28	Vinyl Acetate	43	5.873	5.852	(0.655)	471504	66.6809	66.7	
	29	cis-1,2-Dichloroethene	96	6.388	6.367	(0.790)	186816	55.6888	55.7	
M	30	1,2-Dichloroethylene (total)	96				351324	109.902	110	
	31	Methyl Methacrylate	41	12.115	12.102	(1.352)	189367	55.9150	55.9	
	32	2,2-Dichloropropane	77	6.588	6.567	(0.814)	285521	59.8540	59.8	
	33	Bromochloromethane	128	6.752	6.732	(0.835)	74585	51.8791	51.9	
	34	Chloroform	83	6.895	6.875	(0.852)	350822	57.2596	57.2	
	35	Carbon Tetrachloride	117	7.117	7.096	(0.794)	244401	56.9225	56.9	
	36	Tetrahydrofuran	42	7.196	7.168	(0.890)	71137	53.6538	53.6	
$	37	Dibromofluoromethane	113	7.217	7.204	(0.892)	144713	51.3789	51.4	
	38	1,1,1-Trichloroethane	97	7.253	7.232	(0.897)	294878	56.6596	56.6	
	39	1,1-Dichloropropene	75	7.467	7.454	(0.833)	266326	56.4042	56.4	
	40	2-Butanone	43	7.482	7.461	(0.925)	107730	50.8599	50.8	
	41	Benzene	78	7.903	7.883	(0.882)	738343	54.5605	54.6	
*	42	Pentafluorobenzene	168	8.089	8.076	(1.000)	268733	50.0000		
	43	Cyclohexane	56	6.731	6.710	(0.832)	280882	56.2189	56.2	
	44	Ethyl Methacrylate	69	10.134	10.121	(1.131)	163179	55.4378	55.4	
$	45	1,2-Dichloroethane-D4	65	8.139	8.126	(1.006)	206400	51.9707	52.0	
	46	Tertiary-amyl methyl ether	73	8.132	8.119	(1.005)	565791	56.1977	56.2	
	47	1,2-Dichloroethane	62	8.254	8.240	(0.921)	292753	54.2129	54.2	
	48	Trichloroethene	95	8.876	8.863	(0.990)	178752	53.8222	53.8	
*	49	1,4-Difluorobenzene	114	8.962	8.948	(1.000)	474956	50.0000		
	50	Dibromomethane	93	9.555	9.535	(1.066)	118200	56.0484	56.0	
	51	1,2-Dichloropropane	63	9.720	9.706	(1.085)	192811	53.7629	53.8	
	52	Bromodichloromethane	83	9.834	9.821	(1.097)	280079	57.6050	57.6	
	53	cis-1,3-dichloropropene	75	10.828	10.815	(1.208)	340417	54.1591	54.2	
	54	1,4-Dioxane	88	10.184	10.171	(1.136)	69496	1052.13	1050	
$	55	Toluene-D8	98	11.107	11.093	(1.239)	603499	50.2635	50.3	
	57	Toluene	92	11.185	11.172	(1.248)	454289	53.7113	53.7	
	58	4-methyl-2-pentanone	43	11.807	11.794	(1.318)	211327	49.8949	49.9	
	59	Tetrachloroethene	164	11.750	11.737	(0.877)	123557	53.8674	53.9	
	60	trans-1,3-Dichloropropene	75	11.836	11.823	(1.321)	330592	56.3797	56.4	
	61	1,1,2-Trichloroethane	83	12.065	12.059	(1.346)	151352	52.9992	53.0	
	62	Dibromochloromethane	129	12.315	12.302	(0.919)	190292	56.9411	56.9	
	63	1,3-Dichloropropane	76	12.472	12.459	(0.931)	334441	51.1017	51.1	
	64	1,2-Dibromoethane	107	12.651	12.638	(1.412)	173264	52.4072	52.4	
	65	2-Hexanone	43	13.052	13.038	(0.974)	154500	49.1621	49.2	
*	66	Chlorobenzene-D5	117	13.402	13.389	(1.000)	458495	50.0000		
	67	Chlorobenzene	112	13.423	13.410	(1.002)	495620	53.0063	53.0	
	152	1-Chlorohexane	91	13.423	13.410	(1.659)	263117	54.8591	54.8	
	68	Ethylbenzene	106	13.481	13.467	(1.006)	270970	54.0514	54.0	
	69	1,1,1,2-Tetrachloroethane	131	13.523	13.510	(1.009)	179665	55.5952	55.6	
M	70	Xylenes (total)	106				994284	161.452	161	
	71	m+p-Xylenes	106	13.688	13.675	(1.021)	668010	106.602	107	
	72	o-Xylene	106	14.267	14.254	(1.065)	326274	54.8504	54.8	
	73	Styrene	104	14.339	14.332	(1.070)	562893	54.6374	54.6	
	74	Bromoform	173	14.353	14.347	(1.071)	136659	54.8464	54.8	
	75	Isopropylbenzene	105	14.689	14.676	(0.893)	864090	57.0280	57.0	
$	76	P-Bromofluorobenzene	95	15.046	15.033	(1.679)	285321	51.8216	51.8	

Data File: \\target_server\gg\chem\gcms-w.i\W032418.b\W3322.D
Report Date: 28-Mar-2018 12:58

			QUANT SIG					CONCENTRATIONS		
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/kg)	FINAL (ug/Kgdrywt)	REVIEW COD
	77	cis-1,4-Dichloro-2-Butene	53	15.147	15.140	(0.920)	101296	54.8787	54.9	
	78	trans-1,4-Dichloro-2-Butene	53	15.547	15.541	(0.945)	80478	53.6816	53.7	
	79	Bromobenzene	156	15.168	15.162	(0.922)	212443	53.6261	53.6	
	80	N-Propylbenzene	91	15.225	15.212	(0.925)	1148940	54.0754	54.1	
	81	1,1,2,2-Tetrachloroethane	83	15.325	15.312	(0.931)	296382	52.4817	52.5	
	82	1,3,5-Trimethylbenzene	105	15.483	15.476	(0.941)	806208	55.0799	55.1	
	83	2-Chlorotoluene	91	15.411	15.405	(0.937)	707910	54.7609	54.8	
	84	1,2,3-Trichloropropane	75	15.490	15.476	(0.941)	258164	50.0380	50.0	
	85	4-Chlorotoluene	91	15.626	15.619	(0.950)	758809	54.4966	54.5	
	86	tert-Butylbenzene	119	15.876	15.870	(0.965)	765999	54.4224	54.4	
	87	Pentachloroethane	117	15.897	15.884	(0.966)	164757	53.4014	53.4	
	88	1,2,4-Trimethylbenzene	105	15.969	15.963	(0.970)	850869	54.6135	54.6	
	89	P-Isopropyltoluene	119	16.283	16.277	(0.990)	857800	55.4381	55.4	
	90	1,3-Dichlorobenzene	146	16.362	16.349	(0.994)	445896	54.4586	54.4	
*	91	1,4-Dichlorobenzene-D4	152	16.455	16.442	(1.000)	285275	50.0000		
	92	1,4-Dichlorobenzene	146	16.469	16.463	(1.001)	451965	52.7701	52.8	
	93	N-Butylbenzene	91	16.798	16.792	(1.021)	916268	56.2567	56.2	
	94	sec-Butylbenzene	105	16.097	16.091	(0.978)	1028774	54.9144	54.9	
	95	1,2-Dichlorobenzene	146	16.984	16.978	(1.032)	435861	53.2349	53.2	
	96	1,2-Dibromo-3-Chloropropane	75	17.957	17.951	(1.091)	82960	57.4503	57.4(H)	
	97	1,3,5-Trichlorobenzene	180	17.992	17.986	(2.224)	313739	56.4723	56.5	
	98	Hexachlorobutadiene	225	18.729	18.723	(1.138)	144530	52.6641	52.7	
	99	1,2,4-Trichlorobenzene	180	18.764	18.758	(1.140)	292423	55.3684	55.4	
	100	1,2,3-Trimethylbenzene	105	16.505	16.499	(2.040)	898148	55.9410	55.9	
	101	Naphthalene	128	19.158	19.152	(1.164)	829818	55.9565	56.0	
	102	1,2,3-Trichlorobenzene	180	19.387	19.380	(1.178)	283931	55.3819	55.4	
	103	Methyl Acetate	43	4.457	4.444	(0.551)	170137	50.2506	50.2	
	104	Methylcyclohexane	83	8.847	8.834	(1.094)	325236	59.5193	59.5	
M	153	Total Alkylbenzenes	100				6374858	384.800	385	

QC Flag Legend

H - Operator selected an alternate compound hit.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Date : 24-MAR-2018 10:10
Client ID:
Sample Info: WG225350-1,SL2079
Column phase: RTX-VMS
Instrument: gcms-w.i
Operator: HG/JSS
Column diameter: 0.18
Y (x10^6)
Min
\\target_server\gg\chem\gcms-w.i\W032418.b\W3322.D
-Chloromethane (2.270)+
-Bromomethane (2.613)
-Chloroethane (2.749)
-Trichlorofluoromethane (2.899)
-Diethyl Ether (3.235)
-1,1-Dichloroethene (3.478)+
-Iodomethane (3.657)
-Acrolein (3.900)
-Allyl Chloride (4.071)
-Methylene Chloride (4.207)+
-trans-1,2-Dichloroethene (4.429)+
Total Hydrocarbons
Methyl tert-butyl ether (4.586)
-Tertiary-butyl alcohol (4.729)
-Acetonitrile (4.994)
-Di-isopropyl ether (5.180)
-Chloroprene (5.358)+
-Acrylonitrile (5.509)
-Ethyl tertiary-butyl ethe (5.838)+
-cis-1,2-Dichloroethene (6.388)
-2,2-Dichloropropane (6.588)
-Bromochloromethane (6.738)+
-Chloroform (6.896)
-Carbon Tetrachloride (7.117)+
-Dibromofluoromethane (7.218)+
-1,1-Dichloropropene (7.475)+
-Benzene (7.904)
-1,2-Dichloroethane-D4 (8.140)+
-1,2-Dichloroethane (8.204)
-Isobutyl Alcohol (8.362)
Propionitrile (8.018)+
-Trichloroethene (8.848)+
-1,4-Difluorobenzene (8.962)
-Dibromomethane (9.556)
-1,2-Dichloropropane (9.727)
-Bromodichloromethane (9.834)
-Ethyl Methacrylate (10.135)+
-1,2-Dichloroethylene (tot (10.268)
-cis-1,3-dichloropropene (10.828)
-Toluene-D8 (11.107)
-Toluene (11.186)
-4-methyl-2-pentanone (11.751)+
-1,1,2-Trichloroethane (12.065)
-Methyl Methacrylate (12.119)
-Dibromochloromethane (12.316)
-1,3-Dichloropropane (12.473)
-1,2-Dibromoethane (12.652)
-2-Hexanone (13.052)
-Ethylbenzene (13.481)+
Chlorobenzene-D5 (13.424)+
m+p-Xylenes (13.688)
-o-Xylene (14.268)
-Styrene (14.339)+
-Isopropylbenzene (14.689)
-P-Bromofluorobenzene (15.047)
-cis-1,4-Dichloro-2-Butene (15.168)+
-n-Propylbenzene (15.226)
-1,1,2,2-Tetrachloroethane (15.330)
-2-Chlorotoluene (15.412)
-trans-1,4-Dichloro-2-Bute (15.547)
-4-Chlorotoluene (15.626)
-1,3,5-Trimethylbenzene (15.483)+
-tert-Butylbenzene (15.883)+
-sec-Butylbenzene (16.098)
-1,3-Dichlorobenzene (16.309)
-1,4-Dichlorobenzene-D4 (16.470)+
-N-Butylbenzene (16.799)
-1,2-Dichlorobenzene (16.985)
-1,2-Dibromo-3-Chloropropa (17.964)
-1,3,5-Trichlorobenzene (17.993)
-Hexachlorobutadiene (18.729)
-1,2,4-Trichlorobenzene (18.765)
-Naphthalene (19.158)
-1,2,3-Trichlorobenzene (19.387)

LCS Recovery Report

Client:
Lab ID: WG225400-8
Client ID: LCS
Project:
SDG: SL2079
LCS File ID: W3348.D

Sample Date:
Received Date:
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: NA
Report Date: 28-MAR-18

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
1,1,1,2-Tetrachloroethane	95.8	50.0	47.9	ug/Kgdrywt	78-125
1,1,1-Trichloroethane	88.0	50.0	44.0	ug/Kgdrywt	73-130
1,1,2,2-Tetrachloroethane	93.8	50.0	46.9	ug/Kgdrywt	70-125
Freon-113	93.4	50.0	46.7	ug/Kgdrywt	66-136
1,1,2-Trichloroethane	94.0	50.0	47.0	ug/Kgdrywt	78-125
1,1-Dichloroethane	96.0	50.0	48.0	ug/Kgdrywt	76-125
1,1-Dichloroethene	92.2	50.0	46.1	ug/Kgdrywt	70-131
1,1-Dichloropropene	93.0	50.0	46.5	ug/Kgdrywt	76-125
1,2,3-Trichlorobenzene	96.2	50.0	48.1	ug/Kgdrywt	66-130
1,2,3-Trichloropropane	86.8	50.0	43.4	ug/Kgdrywt	73-125
1,2,4-Trichlorobenzene	98.8	50.0	49.4	ug/Kgdrywt	67-129
1,2,4-Trimethylbenzene	92.0	50.0	46.0	ug/Kgdrywt	75-125
1,2-Dibromo-3-Chloropropane	95.4	50.0	47.7	ug/Kgdrywt	61-132
1,2-Dibromoethane	94.6	50.0	47.3	ug/Kgdrywt	78-125
1,2-Dichlorobenzene	93.6	50.0	46.8	ug/Kgdrywt	78-125
1,2-Dichloroethane	88.4	50.0	44.2	ug/Kgdrywt	73-128
1,2-Dichloropropane	96.4	50.0	48.2	ug/Kgdrywt	76-125
1,3,5-Trimethylbenzene	92.0	50.0	46.0	ug/Kgdrywt	73-125
1,3-Dichlorobenzene	93.6	50.0	46.8	ug/Kgdrywt	77-125
1,3-Dichloropropane	91.6	50.0	45.8	ug/Kgdrywt	77-125
1,4-Dichlorobenzene	90.6	50.0	45.3	ug/Kgdrywt	75-120
2,2-Dichloropropane	93.4	50.0	46.7	ug/Kgdrywt	67-133
2-Butanone	89.8	50.0	44.9	ug/Kgdrywt	51-148
2-Chlorotoluene	91.2	50.0	45.6	ug/Kgdrywt	75-125
2-Hexanone	97.4	50.0	48.7	ug/Kgdrywt	53-145
4-Chlorotoluene	90.4	50.0	45.2	ug/Kgdrywt	72-125
P-Isopropyltoluene	93.4	50.0	46.7	ug/Kgdrywt	73-127
4-Methyl-2-Pentanone	91.6	50.0	45.8	ug/Kgdrywt	65-135
Acetone	91.8	50.0	45.9	ug/Kgdrywt	36-164
Benzene	95.6	50.0	47.8	ug/Kgdrywt	77-125
Bromobenzene	93.8	50.0	46.9	ug/Kgdrywt	78-125
Bromochloromethane	99.4	50.0	49.7	ug/Kgdrywt	78-125
Bromodichloromethane	93.6	50.0	46.8	ug/Kgdrywt	75-127
Bromoform	98.6	50.0	49.3	ug/Kgdrywt	67-132
Bromomethane	96.0	50.0	48.0	ug/Kgdrywt	53-143

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
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LCS Recovery Report

Client:
Lab ID: WG225400-8
Client ID: LCS
Project:
SDG: SL2079
LCS File ID: W3348.D

Sample Date:
Received Date:
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: NA
Report Date: 28-MAR-18

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
Carbon Disulfide	104.	50.0	52.2	ug/Kgdrywt	63-132
Carbon Tetrachloride	89.2	50.0	44.6	ug/Kgdrywt	70-135
Chlorobenzene	94.6	50.0	47.3	ug/Kgdrywt	79-125
Dibromochloromethane	98.0	50.0	49.0	ug/Kgdrywt	74-126
Chloroethane	92.6	50.0	46.3	ug/Kgdrywt	59-139
Chloroform	91.6	50.0	45.8	ug/Kgdrywt	78-125
Chloromethane	107.	50.0	53.7	ug/Kgdrywt	50-136
cis-1,2-Dichloroethene	98.8	50.0	49.4	ug/Kgdrywt	77-125
cis-1,3-Dichloropropene	93.4	50.0	46.7	ug/Kgdrywt	74-126
Dibromomethane	92.8	50.0	46.4	ug/Kgdrywt	78-125
Dichlorodifluoromethane	103.	50.0	51.4	ug/Kgdrywt	29-149
Ethylbenzene	94.4	50.0	47.2	ug/Kgdrywt	76-125
Hexachlorobutadiene	88.8	50.0	44.4	ug/Kgdrywt	61-135
Isopropylbenzene	98.2	50.0	49.1	ug/Kgdrywt	68-134
m+p-Xylenes	94.6	100.	94.6	ug/Kgdrywt	77-125
Methyl tert-butyl Ether	94.6	50.0	47.3	ug/Kgdrywt	73-125
Methylene Chloride	90.6	50.0	45.3	ug/Kgdrywt	70-128
N-Butylbenzene	91.0	50.0	45.5	ug/Kgdrywt	70-128
N-Propylbenzene	90.2	50.0	45.1	ug/Kgdrywt	73-125
Naphthalene	105.	50.0	52.5	ug/Kgdrywt	62-129
o-Xylene	97.6	50.0	48.8	ug/Kgdrywt	77-125
sec-Butylbenzene	91.8	50.0	45.9	ug/Kgdrywt	73-126
Styrene	98.0	50.0	49.0	ug/Kgdrywt	76-125
tert-Butylbenzene	92.6	50.0	46.3	ug/Kgdrywt	73-125
Tetrachloroethene	96.4	50.0	48.2	ug/Kgdrywt	73-128
Toluene	94.2	50.0	47.1	ug/Kgdrywt	77-125
trans-1,2-Dichloroethene	97.6	50.0	48.8	ug/Kgdrywt	74-125
trans-1,3-Dichloropropene	94.6	50.0	47.3	ug/Kgdrywt	71-130
Trichloroethene	89.8	50.0	44.9	ug/Kgdrywt	77-125
Trichlorofluoromethane	77.4	50.0	38.7	ug/Kgdrywt	62-140
Vinyl Chloride	97.6	50.0	48.8	ug/Kgdrywt	56-135
1,2-Dichloroethane-D4	87.0				71-136
p-Bromofluorobenzene	95.2				79-125
Dibromofluoromethane	95.5				78-125
Toluene-D8	98.6				85-125

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Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3348.D
Report Date: 28-Mar-2018 13:20

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W032618.b\W3348.D
Lab Smp Id: WG225400-8 Client Smp ID: Independent Source
Inj Date : 26-MAR-2018 13:56 MS Autotune Date: 10-APR-2016 11:00
Operator : HG/JSS Inst ID: gcms-w.i
Smp Info : WG225400-8,SL2079
Misc Info : WG225400,WG225400-4,SL2079-8
Comment : SW846 5035
Method : \\target_server\gg\chem\gcms-w.i\W032618.b\W8SDI(08)D.m
Meth Date : 28-Mar-2018 13:17 TCOTE Quant Type: ISTD
Cal Date : 26-MAR-2018 13:19 Cal File: W3347.D
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: MIS_GUEST

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	0.00000	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	5.000	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/kg)	FINAL (ug/Kgdrywt)	REVIEW COD
1	Dichlorodifluoromethane	85	1.955	1.955	(0.243)	222766	51.3927	51.4	
2	Chloromethane	50	2.176	2.176	(0.271)	241752	53.7438	53.7	
3	Vinyl chloride	62	2.248	2.248	(0.280)	225916	48.7912	48.8	
4	Bromomethane	94	2.591	2.591	(0.322)	131739	48.0019	48.0	
5	Chloroethane	64	2.727	2.720	(0.339)	147400	46.3329	46.3	
6	Trichlorofluoromethane	101	2.870	2.863	(0.357)	290701	38.6628	38.7	
7	Diethyl Ether	59	3.206	3.206	(0.399)	162360	49.3331	49.3	
8	Tertiary-butyl alcohol	59	4.686	4.686	(0.583)	152814	236.040	236	
9	1,1-Dichloroethene	96	3.442	3.435	(0.428)	125249	46.1372	46.1	
10	Carbon Disulfide	76	3.485	3.485	(0.433)	531105	52.2549	52.2	
11	Freon-113	151	3.485	3.478	(0.433)	112973	46.7296	46.7	
12	Iodomethane	142	3.621	3.621	(0.450)	101813	49.8190	49.8	
13	Acrolein	56	3.864	3.864	(0.481)	163307	248.748	249	
14	Methylene Chloride	84	4.171	4.163	(0.519)	186203	45.3362	45.3	
15	Acetone	43	4.250	4.250	(0.529)	73315	45.8724	45.9	
16	Isobutyl Alcohol	43	8.311	8.318	(1.034)	246269	922.429	922	
17	trans-1,2-Dichloroethene	96	4.386	4.386	(0.546)	152982	48.7513	48.8	
18	Allyl Chloride	41	4.028	4.027	(0.501)	244491	48.4680	48.5	
19	Methyl tert-butyl ether	73	4.543	4.543	(0.565)	578395	47.2872	47.3	
20	Acetonitrile	39	4.943	4.943	(0.615)	56141	468.107	468	
21	Di-isopropyl ether	45	5.129	5.129	(0.638)	548346	49.8538	49.8	

Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3348.D
Report Date: 28-Mar-2018 13:20

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/kg)	CONCENTRATIONS FINAL (ug/Kgdrywt)	REVIEW COD
	22	Chloroprene	53	5.301	5.301	(0.659)	279205	46.8983	46.9	
	23	Propionitrile	54	7.939	7.939	(0.988)	310940	475.354	475	
	24	Methacrylonitrile	41	7.968	7.968	(0.991)	1241097	465.613	466	
	25	1,1-Dichloroethane	63	5.344	5.337	(0.665)	330813	48.0350	48.0	
	26	Acrylonitrile	52	5.451	5.451	(0.678)	302393	237.268	237	
	27	Ethyl tertiary-butyl ether	59	5.773	5.773	(0.718)	554651	49.7472	49.7	
	28	Vinyl Acetate	43	5.816	5.808	(0.653)	446814	57.3265	57.3	
	29	cis-1,2-Dichloroethene	96	6.331	6.323	(0.787)	171979	49.3819	49.4	
M	30	1,2-Dichloroethylene (total)	96				324961	98.1332	98.1	
	31	Methyl Methacrylate	41	12.079	12.079	(1.355)	181547	49.4995	49.5	
	32	2,2-Dichloropropane	77	6.531	6.531	(0.812)	273931	46.6920	46.7	
	33	Bromochloromethane	128	6.688	6.688	(0.832)	70966	49.7378	49.7	
	34	Chloroform	83	6.838	6.838	(0.851)	331301	45.7917	45.8	
	35	Carbon Tetrachloride	117	7.060	7.060	(0.792)	235732	44.6520	44.6	
	36	Tetrahydrofuran	42	7.146	7.131	(0.889)	64702	48.8996	48.9	
$	37	Dibromofluoromethane	113	7.167	7.167	(0.892)	137092	47.7733	47.8	
	38	1,1,1-Trichloroethane	97	7.196	7.196	(0.895)	286665	44.0214	44.0	
	39	1,1-Dichloropropene	75	7.417	7.417	(0.832)	245344	46.4845	46.5	
	40	2-Butanone	43	7.432	7.424	(0.924)	97936	44.9107	44.9	
	41	Benzene	78	7.846	7.846	(0.880)	675368	47.8375	47.8	
*	42	Pentafluorobenzene	168	8.039	8.039	(1.000)	248041	50.0000		
	43	Cyclohexane	56	6.674	6.674	(0.830)	246888	46.5674	46.6	
	44	Ethyl Methacrylate	69	10.092	10.091	(1.132)	150811	50.8482	50.8	
$	45	1,2-Dichloroethane-D4	65	8.090	8.089	(1.006)	202106	43.5064	43.5	
	46	Tertiary-amyl methyl ether	73	8.082	8.082	(1.005)	545013	49.3174	49.3	
	47	1,2-Dichloroethane	62	8.204	8.204	(0.921)	290770	44.1814	44.2	
	48	Trichloroethene	95	8.826	8.833	(0.990)	167407	44.8687	44.9	
*	49	1,4-Difluorobenzene	114	8.912	8.912	(1.000)	430697	50.0000		
	50	Dibromomethane	93	9.505	9.505	(1.067)	107891	46.4246	46.4	
	51	1,2-Dichloropropane	63	9.677	9.677	(1.086)	180000	48.1988	48.2	
	52	Bromodichloromethane	83	9.784	9.791	(1.098)	272736	46.8466	46.8	
	53	cis-1,3-dichloropropene	75	10.785	10.785	(1.210)	322209	46.6951	46.7	
	54	1,4-Dioxane	88	10.134	10.141	(1.137)	62676	945.531	946	
$	55	Toluene-D8	98	11.064	11.064	(1.241)	545041	49.3155	49.3	
	57	Toluene	92	11.143	11.142	(1.250)	423045	47.0831	47.1	
	58	4-methyl-2-pentanone	43	11.765	11.765	(1.320)	204517	45.8570	45.8	
	59	Tetrachloroethene	164	11.707	11.707	(0.876)	111577	48.2291	48.2	
	60	trans-1,3-Dichloropropene	75	11.793	11.793	(1.323)	318217	47.2677	47.3	
	61	1,1,2-Trichloroethane	83	12.022	12.029	(1.349)	141247	47.0073	47.0	
	62	Dibromochloromethane	129	12.272	12.279	(0.919)	181825	48.9559	49.0	
	63	1,3-Dichloropropane	76	12.430	12.430	(0.930)	317251	45.8496	45.8	
	64	1,2-Dibromoethane	107	12.608	12.615	(1.415)	164346	47.2905	47.3	
	65	2-Hexanone	43	13.016	13.016	(0.974)	159493	48.6814	48.7	
*	66	Chlorobenzene-D5	117	13.359	13.366	(1.000)	394760	50.0000		
	67	Chlorobenzene	112	13.388	13.388	(1.002)	462495	47.2747	47.3	
	152	1-Chlorohexane	91	13.388	13.382	(1.665)	233481	44.9957	45.0	
	68	Ethylbenzene	106	13.445	13.445	(1.006)	248341	47.2081	47.2	
	69	1,1,1,2-Tetrachloroethane	131	13.488	13.488	(1.010)	171458	47.8725	47.9	
M	70	Xylenes (total)	106				919529	143.444	143	
	71	m+p-Xylenes	106	13.652	13.652	(1.022)	617465	94.6452	94.6	
	72	o-Xylene	106	14.231	14.231	(1.065)	302064	48.7984	48.8	
	73	Styrene	104	14.303	14.310	(1.071)	527763	49.0133	49.0	
	74	Bromoform	173	14.317	14.324	(1.072)	132591	49.3492	49.3	
	75	Isopropylbenzene	105	14.653	14.653	(0.892)	805194	49.1258	49.1	

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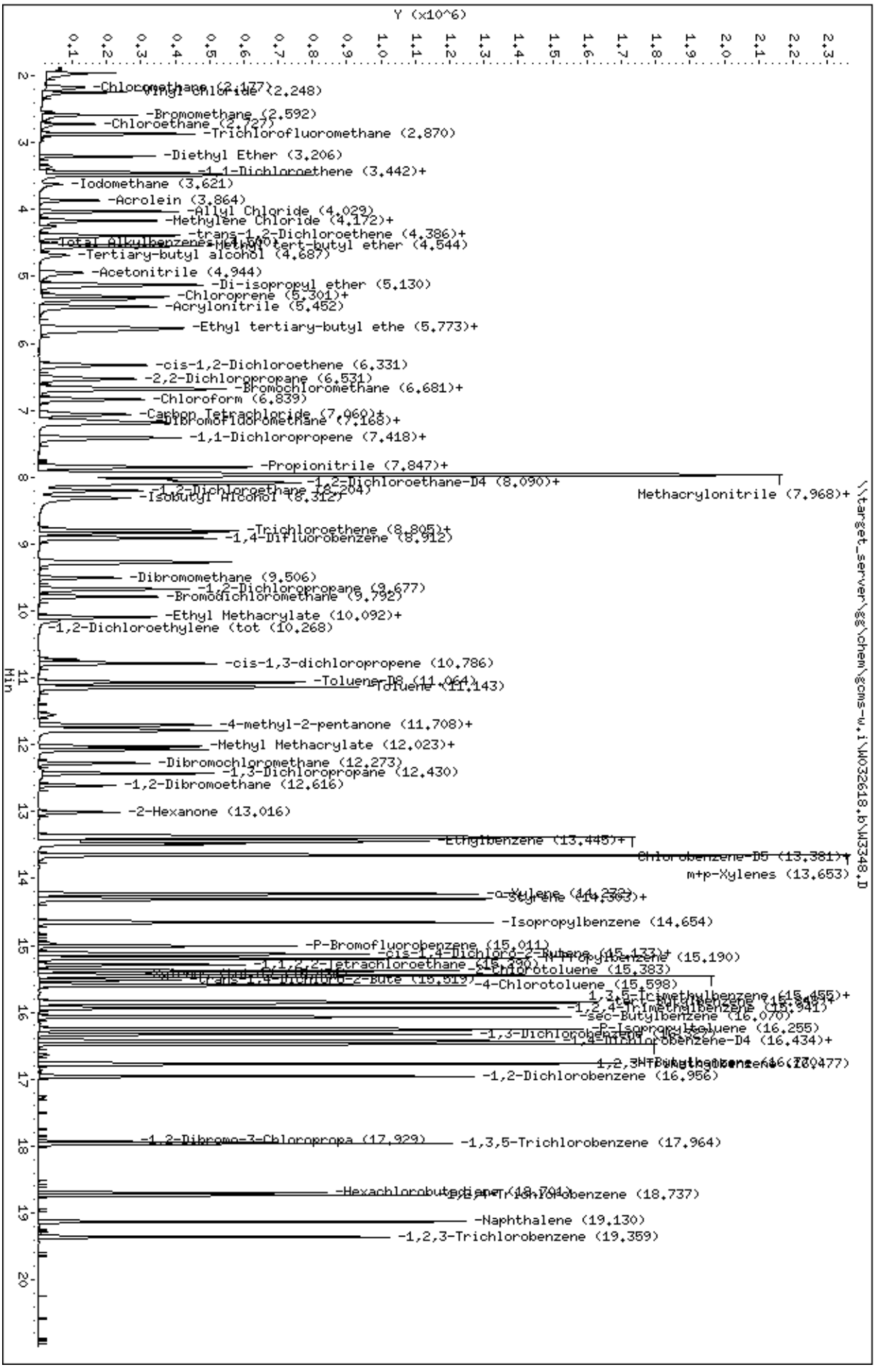
Report Date: 28-Mar-2018 13:20

			QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/kg)	FINAL (ug/Kgdrywt)	REVIEW COD
$	76	P-Bromofluorobenzene	95	15.011	15.011	(1.684)	242529	47.6233	47.6	
	77	cis-1,4-Dichloro-2-Butene	53	15.118	15.118	(0.921)	97079	45.4072	45.4	
	78	trans-1,4-Dichloro-2-Butene	53	15.519	15.518	(0.945)	76127	44.0719	44.1	
	79	Bromobenzene	156	15.140	15.139	(0.922)	194849	46.8983	46.9	
	80	N-Propylbenzene	91	15.190	15.197	(0.925)	1070090	45.1118	45.1	
	81	1,1,2,2-Tetrachloroethane	83	15.290	15.290	(0.931)	276814	46.9153	46.9	
	82	1,3,5-Trimethylbenzene	105	15.447	15.454	(0.941)	743156	45.9903	46.0	
	83	2-Chlorotoluene	91	15.383	15.383	(0.937)	660386	45.6136	45.6	
	84	1,2,3-Trichloropropane	75	15.454	15.454	(0.941)	247800	43.4331	43.4	
	85	4-Chlorotoluene	91	15.597	15.597	(0.950)	708125	45.2065	45.2	
	86	tert-Butylbenzene	119	15.847	15.847	(0.965)	713245	46.2743	46.3	
	87	Pentachloroethane	117	15.862	15.869	(0.966)	156831	45.5444	45.5	
	88	1,2,4-Trimethylbenzene	105	15.940	15.940	(0.971)	797564	46.0413	46.0	
	89	P-Isopropyltoluene	119	16.255	16.254	(0.990)	788925	46.7483	46.7	
	90	1,3-Dichlorobenzene	146	16.326	16.332	(0.994)	401221	46.8380	46.8	
*	91	1,4-Dichlorobenzene-D4	152	16.419	16.425	(1.000)	237835	50.0000		
	92	1,4-Dichlorobenzene	146	16.441	16.440	(1.001)	410152	45.3428	45.3	
	93	N-Butylbenzene	91	16.770	16.770	(1.021)	829522	45.5078	45.5	
	94	sec-Butylbenzene	105	16.069	16.069	(0.979)	947374	45.8842	45.9	
	95	1,2-Dichlorobenzene	146	16.956	16.956	(1.033)	400861	46.8017	46.8	
	96	1,2-Dibromo-3-Chloropropane	75	17.928	17.929	(1.092)	81009	47.6700	47.7	
	97	1,3,5-Trichlorobenzene	180	17.964	17.964	(2.234)	291994	46.8560	46.8	
	98	Hexachlorobutadiene	225	18.700	18.700	(1.139)	131118	44.4556	44.4	
	99	1,2,4-Trichlorobenzene	180	18.736	18.736	(1.141)	262480	49.4050	49.4	
	100	1,2,3-Trimethylbenzene	105	16.477	16.476	(2.049)	887913	45.2956	45.3	
	101	Naphthalene	128	19.129	19.129	(1.165)	767643	52.5238	52.5	
	102	1,2,3-Trichlorobenzene	180	19.358	19.358	(1.179)	249139	48.0752	48.1	
	103	Methyl Acetate	43	4.414	4.414	(0.549)	154360	44.0374	44.0	
	104	Methylcyclohexane	83	8.797	8.797	(1.094)	288106	48.6851	48.7	
M	153	Total Alkylbenzenes	100				5889876	321.558	322	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Date : 26-MAR-2018 13:56
Client ID: Independent Source
Sample Info: WG225400-8,SL2079
Column phase: RTX-VMS
Instrument: gcms-w.i
Operator: HG/JSS
Column diameter: 0.18
\\target_server\gg\chem\gcms-w.i\W032618.b\W3348.D
Y (x10^6)
Min
-Chloromethane (2.177)
-Vinyl Chloride (2.248)
-Bromomethane (2.592)
-Chloroethane (2.727)
-Trichlorofluoromethane (2.870)
-Diethyl Ether (3.206)
-1,1-Dichloroethene (3.442)+
-Iodomethane (3.621)
-Acrolein (3.864)
-Allyl Chloride (4.029)
-Methylene Chloride (4.172)+
-trans-1,2-Dichloroethene (4.386)+
-Total Alkylbenzenes-Methyl tert-butyl ether (4.544)
-Tertiary-butyl alcohol (4.687)
-Acetonitrile (4.944)
-Di-isopropyl ether (5.130)
-Chloroprene (5.301)+
-Acrylonitrile (5.452)
-Ethyl tertiary-butyl ethe (5.773)+
-cis-1,2-Dichloroethene (6.331)
-2,2-Dichloropropane (6.531)
-Bromochloromethane (6.681)+
-Chloroform (6.839)
-Carbon Tetrachloride (7.060)+
-Dibromofluoromethane (7.168)+
-1,1-Dichloropropene (7.418)+
-Propionitrile (7.847)+
-1,2-Dichloroethane-D4 (8.090)+
Methacrylonitrile (7.968)+
-1,2-Dichloroethane (8.204)
-Isobutyl Alcohol (8.312)
-Trichloroethene (8.805)+
-1,4-Difluorobenzene (8.912)
-Dibromomethane (9.506)
-1,2-Dichloropropane (9.677)
-Bromodichloromethane (9.792)
-Ethyl Methacrylate (10.092)+
-1,2-Dichloroethylene (tot (10.268)
-cis-1,3-dichloropropene (10.786)
-Toluene-D8 (11.064)
-Toluene (11.143)
-4-methyl-2-pentanone (11.708)+
-Methyl Methacrylate (12.023)+
-Dibromochloromethane (12.273)
-1,3-Dichloropropane (12.430)
-1,2-Dibromoethane (12.616)
-2-Hexanone (13.016)
-Ethylbenzene (13.445)+
Chlorobenzene-D5 (13.381)+
m+p-Xylenes (13.653)
-o-Xylene (14.272)
-Styrene (14.363)+
-Isopropylbenzene (14.654)
-P-Bromofluorobenzene (15.011)
-cis-1,4-Dichloro-2-Butene (15.137)+
-n-Propylbenzene (15.190)
-1,1,2,2-Tetrachloroethane (15.290)
-2-Chlorotoluene (15.383)
-4-Chlorotoluene (15.598)
-1,3,5-Trimethylbenzene (15.455)+
-tert-Butylbenzene (15.844)+
-1,2,4-Trimethylbenzene (15.941)
-sec-Butylbenzene (16.070)
-P-Isopropyltoluene (16.255)
-1,3-Dichlorobenzene (16.352)
-1,4-Dichlorobenzene-D4 (16.434)+
-1,4-Dichlorobenzene (16.477)
-1,2-Dichlorobenzene (16.956)
-1,2-Dibromo-3-Chloropropa (17.929)
-1,3,5-Trichlorobenzene (17.964)
-Hexachlorobutadiene (18.701)
-1,2,4-Trichlorobenzene (18.737)
-Naphthalene (19.130)
-1,2,3-Trichlorobenzene (19.359)

LCS Recovery Report

Client:
Lab ID: WG225463-1
Client ID: LCS
Project:
SDG: SL2079
LCS File ID: W3366.D

Sample Date:
Received Date:
Extract Date: 27-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225463

Analysis Date: 27-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: NA
Report Date: 28-MAR-18

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
1,1,1,2-Tetrachloroethane	89.6	50.0	44.8	ug/Kgdrywt	78-125
1,1,1-Trichloroethane	82.0	50.0	41.0	ug/Kgdrywt	73-130
1,1,2,2-Tetrachloroethane	94.0	50.0	47.0	ug/Kgdrywt	70-125
Freon-113	84.4	50.0	42.2	ug/Kgdrywt	66-136
1,1,2-Trichloroethane	90.6	50.0	45.3	ug/Kgdrywt	78-125
1,1-Dichloroethane	89.0	50.0	44.5	ug/Kgdrywt	76-125
1,1-Dichloroethene	83.2	50.0	41.6	ug/Kgdrywt	70-131
1,1-Dichloropropene	85.2	50.0	42.6	ug/Kgdrywt	76-125
1,2,3-Trichlorobenzene	95.4	50.0	47.7	ug/Kgdrywt	66-130
1,2,3-Trichloropropane	87.6	50.0	43.8	ug/Kgdrywt	73-125
1,2,4-Trichlorobenzene	98.6	50.0	49.3	ug/Kgdrywt	67-129
1,2,4-Trimethylbenzene	89.4	50.0	44.7	ug/Kgdrywt	75-125
1,2-Dibromo-3-Chloropropane	87.6	50.0	43.8	ug/Kgdrywt	61-132
1,2-Dibromoethane	91.6	50.0	45.8	ug/Kgdrywt	78-125
1,2-Dichlorobenzene	90.4	50.0	45.2	ug/Kgdrywt	78-125
1,2-Dichloroethane	86.4	50.0	43.2	ug/Kgdrywt	73-128
1,2-Dichloropropane	89.0	50.0	44.5	ug/Kgdrywt	76-125
1,3,5-Trimethylbenzene	88.8	50.0	44.4	ug/Kgdrywt	73-125
1,3-Dichlorobenzene	90.0	50.0	45.0	ug/Kgdrywt	77-125
1,3-Dichloropropane	90.6	50.0	45.3	ug/Kgdrywt	77-125
1,4-Dichlorobenzene	87.2	50.0	43.6	ug/Kgdrywt	75-120
2,2-Dichloropropane	87.2	50.0	43.6	ug/Kgdrywt	67-133
2-Butanone	95.6	50.0	47.8	ug/Kgdrywt	51-148
2-Chlorotoluene	86.8	50.0	43.4	ug/Kgdrywt	75-125
2-Hexanone	104.	50.0	51.9	ug/Kgdrywt	53-145
4-Chlorotoluene	87.0	50.0	43.5	ug/Kgdrywt	72-125
P-Isopropyltoluene	91.0	50.0	45.5	ug/Kgdrywt	73-127
4-Methyl-2-Pentanone	92.4	50.0	46.2	ug/Kgdrywt	65-135
Acetone	112.	50.0	56.0	ug/Kgdrywt	36-164
Benzene	86.6	50.0	43.3	ug/Kgdrywt	77-125
Bromobenzene	89.4	50.0	44.7	ug/Kgdrywt	78-125
Bromochloromethane	92.0	50.0	46.0	ug/Kgdrywt	78-125
Bromodichloromethane	89.2	50.0	44.6	ug/Kgdrywt	75-127
Bromoform	95.8	50.0	47.9	ug/Kgdrywt	67-132
Bromomethane	81.8	50.0	40.9	ug/Kgdrywt	53-143

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LCS Recovery Report

Client:
Lab ID: WG225463-1
Client ID: LCS
Project:
SDG: SL2079
LCS File ID: W3366.D

Sample Date:
Received Date:
Extract Date: 27-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225463

Analysis Date: 27-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: NA
Report Date: 28-MAR-18

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
Carbon Disulfide	90.0	50.0	45.0	ug/Kgdrywt	63-132
Carbon Tetrachloride	83.2	50.0	41.6	ug/Kgdrywt	70-135
Chlorobenzene	87.4	50.0	43.7	ug/Kgdrywt	79-125
Dibromochloromethane	94.2	50.0	47.1	ug/Kgdrywt	74-126
Chloroethane	81.6	50.0	40.8	ug/Kgdrywt	59-139
Chloroform	85.6	50.0	42.8	ug/Kgdrywt	78-125
Chloromethane	86.8	50.0	43.4	ug/Kgdrywt	50-136
cis-1,2-Dichloroethene	90.6	50.0	45.3	ug/Kgdrywt	77-125
cis-1,3-Dichloropropene	88.8	50.0	44.4	ug/Kgdrywt	74-126
Dibromomethane	91.2	50.0	45.6	ug/Kgdrywt	78-125
Dichlorodifluoromethane	80.6	50.0	40.3	ug/Kgdrywt	29-149
Ethylbenzene	86.0	50.0	43.0	ug/Kgdrywt	76-125
Hexachlorobutadiene	84.8	50.0	42.4	ug/Kgdrywt	61-135
Isopropylbenzene	92.4	50.0	46.2	ug/Kgdrywt	68-134
m+p-Xylenes	87.8	100.	87.8	ug/Kgdrywt	77-125
Methyl tert-butyl Ether	92.4	50.0	46.2	ug/Kgdrywt	73-125
Methylene Chloride	85.4	50.0	42.7	ug/Kgdrywt	70-128
N-Butylbenzene	90.6	50.0	45.3	ug/Kgdrywt	70-128
N-Propylbenzene	86.2	50.0	43.1	ug/Kgdrywt	73-125
Naphthalene	103.	50.0	51.6	ug/Kgdrywt	62-129
o-Xylene	89.8	50.0	44.9	ug/Kgdrywt	77-125
sec-Butylbenzene	87.4	50.0	43.7	ug/Kgdrywt	73-126
Styrene	91.8	50.0	45.9	ug/Kgdrywt	76-125
tert-Butylbenzene	87.2	50.0	43.6	ug/Kgdrywt	73-125
Tetrachloroethene	94.2	50.0	47.1	ug/Kgdrywt	73-128
Toluene	85.6	50.0	42.8	ug/Kgdrywt	77-125
trans-1,2-Dichloroethene	84.8	50.0	42.4	ug/Kgdrywt	74-125
trans-1,3-Dichloropropene	92.4	50.0	46.2	ug/Kgdrywt	71-130
Trichloroethene	83.0	50.0	41.5	ug/Kgdrywt	77-125
Trichlorofluoromethane	74.0	50.0	37.0	ug/Kgdrywt	62-140
Vinyl Chloride	81.6	50.0	40.8	ug/Kgdrywt	56-135
1,2-Dichloroethane-D4	93.0				71-136
p-Bromofluorobenzene	98.0				79-125
Dibromofluoromethane	96.3				78-125
Toluene-D8	99.8				85-125

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Data File: \\target_server\gg\chem\gcms-w.i\W032718.b\W3366.D
Report Date: 28-Mar-2018 13:49

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W032718.b\W3366.D
Lab Smp Id: WG225463-1 Client Smp ID: WG225463-LCS
Inj Date : 27-MAR-2018 09:36 MS Autotune Date: 10-APR-2016 11:00
Operator : HG/JSS Inst ID: gcms-w.i
Smp Info : WG225463-1,SL2079
Misc Info : WG225463,WG225400-4,SL2079-5
Comment : SW846 5035
Method : \\target_server\gg\chem\gcms-w.i\W032718.b\W8SDI(08)D.m
Meth Date : 28-Mar-2018 13:44 tcote Quant Type: ISTD
Cal Date : 26-MAR-2018 13:19 Cal File: W3347.D
Als bottle: 3 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: MIS_GUEST

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	0.00000	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	5.000	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/kg)	FINAL (ug/Kgdrywt)	REVIEW COD
1	Dichlorodifluoromethane	85	1.955	1.955	(0.243)	160371	40.2633	40.3	
2	Chloromethane	50	2.177	2.176	(0.271)	179455	43.4156	43.4	
3	Vinyl chloride	62	2.248	2.248	(0.279)	173612	40.8043	40.8	
4	Bromomethane	94	2.591	2.591	(0.322)	103085	40.8762	40.9	
5	Chloroethane	64	2.727	2.720	(0.339)	119401	40.8443	40.8	
6	Trichlorofluoromethane	101	2.870	2.863	(0.357)	255404	36.9663	37.0	
7	Diethyl Ether	59	3.206	3.206	(0.398)	141412	46.7603	46.8	
8	Tertiary-butyl alcohol	59	4.686	4.686	(0.582)	146179	245.719	246	
9	1,1-Dichloroethene	96	3.442	3.435	(0.428)	103666	41.5571	41.6	
10	Carbon Disulfide	76	3.492	3.485	(0.434)	420044	44.9752	45.0	
11	Freon-113	151	3.485	3.478	(0.433)	93839	42.2409	42.2	
12	Iodomethane	142	3.628	3.621	(0.451)	86898	46.6465	46.6	
13	Acrolein	56	3.864	3.864	(0.480)	145866	241.791	242	
14	Methylene Chloride	84	4.171	4.163	(0.518)	161065	42.6767	42.7	
15	Acetone	43	4.257	4.250	(0.529)	82299	56.0383	56.0	
16	Isobutyl Alcohol	43	8.319	8.318	(1.034)	224670	916.393	916	
17	trans-1,2-Dichloroethene	96	4.393	4.386	(0.546)	122191	42.3757	42.4	
18	Allyl Chloride	41	4.036	4.027	(0.502)	209545	45.2065	45.2	
19	Methyl tert-butyl ether	73	4.550	4.543	(0.566)	519745	46.2425	46.2	
20	Acetonitrile	39	4.944	4.943	(0.614)	54693	496.282	496	
21	Di-isopropyl ether	45	5.137	5.129	(0.638)	477065	47.2012	47.2	

Data File: \\target_server\gg\chem\gcms-w.i\W032718.b\W3366.D
Report Date: 28-Mar-2018 13:49

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/kg)	CONCENTRATIONS FINAL (ug/Kgdrywt)	REVIEW COD
	22	Chloroprene	53	5.308	5.301	(0.660)	235683	43.0818	43.1	
	23	Propionitrile	54	7.947	7.939	(0.988)	290853	483.888	484	
	24	Methacrylonitrile	41	7.975	7.968	(0.991)	1154458	471.334	471	
	25	1,1-Dichloroethane	63	5.351	5.337	(0.665)	281714	44.5159	44.5	
	26	Acrylonitrile	52	5.459	5.451	(0.678)	274465	234.361	234	
	27	Ethyl tertiary-butyl ether	59	5.780	5.773	(0.718)	489913	47.8189	47.8	
	28	Vinyl Acetate	43	5.816	5.808	(0.652)	397441	55.1232	55.1	
	29	cis-1,2-Dichloroethene	96	6.331	6.323	(0.787)	144856	45.2648	45.3	
M	30	1,2-Dichloroethylene (total)	96				267047	87.6404	87.6	
	31	Methyl Methacrylate	41	12.080	12.079	(1.354)	168407	49.6369	49.6	
	32	2,2-Dichloropropane	77	6.538	6.531	(0.813)	235253	43.6383	43.6	
	33	Bromochloromethane	128	6.695	6.688	(0.832)	60371	46.0464	46.0	
	34	Chloroform	83	6.846	6.838	(0.851)	284546	42.8004	42.8	
	35	Carbon Tetrachloride	117	7.067	7.060	(0.792)	203425	41.6543	41.6	
	36	Tetrahydrofuran	42	7.153	7.131	(0.889)	57332	47.1537	47.2	
$	37	Dibromofluoromethane	113	7.175	7.167	(0.892)	127023	48.1712	48.2	
	38	1,1,1-Trichloroethane	97	7.196	7.196	(0.894)	245400	41.0105	41.0	
	39	1,1-Dichloropropene	75	7.425	7.417	(0.832)	207877	42.5767	42.6	
	40	2-Butanone	43	7.439	7.424	(0.924)	95893	47.8548	47.8	
	41	Benzene	78	7.854	7.846	(0.881)	565941	43.3343	43.3	
*	42	Pentafluorobenzene	168	8.047	8.039	(1.000)	227925	50.0000		
	43	Cyclohexane	56	6.681	6.674	(0.830)	207198	42.5304	42.5	
	44	Ethyl Methacrylate	69	10.099	10.091	(1.132)	138235	50.3841	50.4	
$	45	1,2-Dichloroethane-D4	65	8.097	8.089	(1.006)	198584	46.5211	46.5	
	46	Tertiary-amyl methyl ether	73	8.090	8.082	(1.005)	484637	47.7245	47.7	
	47	1,2-Dichloroethane	62	8.211	8.204	(0.921)	263153	43.2246	43.2	
	48	Trichloroethene	95	8.833	8.833	(0.990)	143374	41.5406	41.5	
*	49	1,4-Difluorobenzene	114	8.919	8.912	(1.000)	398418	50.0000		
	50	Dibromomethane	93	9.513	9.505	(1.067)	98142	45.6510	45.6	
	51	1,2-Dichloropropane	63	9.684	9.677	(1.086)	153892	44.5464	44.5	
	52	Bromodichloromethane	83	9.791	9.791	(1.098)	240175	44.5960	44.6	
	53	cis-1,3-dichloropropene	75	10.793	10.785	(1.210)	283775	44.4571	44.4	
	54	1,4-Dioxane	88	10.149	10.141	(1.138)	59091	962.932	963	
$	55	Toluene-D8	98	11.071	11.064	(1.241)	510127	49.8959	49.9	
	57	Toluene	92	11.150	11.142	(1.250)	355451	42.7652	42.8	
	58	4-methyl-2-pentanone	43	11.772	11.765	(1.320)	190504	46.1757	46.2	
	59	Tetrachloroethene	164	11.715	11.707	(0.876)	100824	47.1042	47.1	
	60	trans-1,3-Dichloropropene	75	11.801	11.793	(1.323)	287423	46.1525	46.2	
	61	1,1,2-Trichloroethane	83	12.029	12.029	(1.349)	125965	45.3178	45.3	
	62	Dibromochloromethane	129	12.280	12.279	(0.919)	161912	47.1185	47.1	
	63	1,3-Dichloropropane	76	12.437	12.430	(0.930)	289898	45.2833	45.3	
	64	1,2-Dibromoethane	107	12.616	12.615	(1.414)	147428	45.8593	45.8	
	65	2-Hexanone	43	13.016	13.016	(0.974)	157271	51.8836	51.9	
*	66	Chlorobenzene-D5	117	13.367	13.366	(1.000)	365235	50.0000		
	67	Chlorobenzene	112	13.388	13.388	(1.002)	395210	43.6627	43.7	
	152	1-Chlorohexane	91	13.388	13.382	(1.664)	200299	42.0078	42.0	
	68	Ethylbenzene	106	13.445	13.445	(1.006)	209566	43.0576	43.0	
	69	1,1,1,2-Tetrachloroethane	131	13.488	13.488	(1.009)	148337	44.7650	44.8	
M	70	Xylenes (total)	106				787499	132.766	133	
	71	m+p-Xylenes	106	13.653	13.652	(1.021)	530204	87.8395	87.8	
	72	o-Xylene	106	14.239	14.231	(1.065)	257295	44.9261	44.9	
	73	Styrene	104	14.310	14.310	(1.071)	457087	45.8812	45.9	
	74	Bromoform	173	14.325	14.324	(1.072)	119074	47.9010	47.9	
	75	Isopropylbenzene	105	14.661	14.653	(0.892)	695996	46.2527	46.2	

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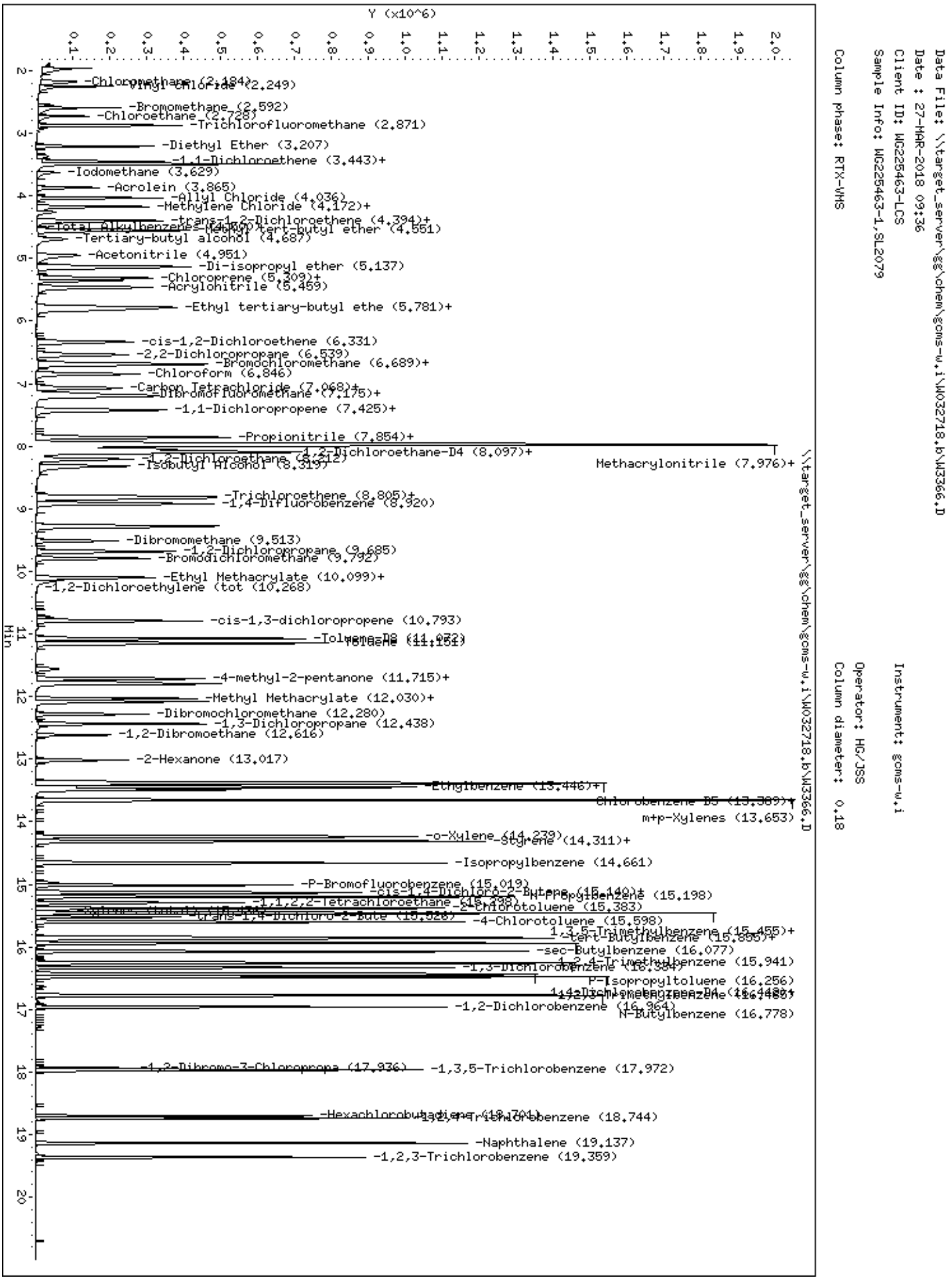
Report Date: 28-Mar-2018 13:49

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/kg)	CONCENTRATIONS FINAL (ug/Kgdrywt)	REVIEW COD
$	76	P-Bromofluorobenzene	95	15.018	15.011	(1.684)	230916	49.0165	49.0	
	77	cis-1,4-Dichloro-2-Butene	53	15.118	15.118	(0.920)	92538	47.1455	47.1	
	78	trans-1,4-Dichloro-2-Butene	53	15.526	15.518	(0.945)	75520	47.6218	47.6	
	79	Bromobenzene	156	15.140	15.139	(0.922)	170489	44.6968	44.7	
	80	N-Propylbenzene	91	15.197	15.197	(0.925)	939218	43.1277	43.1	
	81	1,1,2,2-Tetrachloroethane	83	15.297	15.290	(0.931)	254553	46.9922	47.0	
	82	1,3,5-Trimethylbenzene	105	15.454	15.454	(0.941)	659520	44.4565	44.4	
	83	2-Chlorotoluene	91	15.383	15.383	(0.936)	576590	43.3794	43.4	
	84	1,2,3-Trichloropropane	75	15.462	15.454	(0.941)	229331	43.7827	43.8	
	85	4-Chlorotoluene	91	15.597	15.597	(0.950)	625743	43.5119	43.5	
	86	tert-Butylbenzene	119	15.855	15.847	(0.965)	617390	43.6296	43.6	
	87	Pentachloroethane	117	15.869	15.869	(0.966)	133278	42.1582	42.2	
	88	1,2,4-Trimethylbenzene	105	15.941	15.940	(0.970)	711148	44.7160	44.7	
	89	P-Isopropyltoluene	119	16.255	16.254	(0.990)	704507	45.4712	45.5	
	90	1,3-Dichlorobenzene	146	16.334	16.332	(0.994)	354062	45.0209	45.0	
*	91	1,4-Dichlorobenzene-D4	152	16.427	16.425	(1.000)	218351	50.0000		
	92	1,4-Dichlorobenzene	146	16.448	16.440	(1.001)	362365	43.6345	43.6	
	93	N-Butylbenzene	91	16.777	16.770	(1.021)	758682	45.3355	45.3	
	94	sec-Butylbenzene	105	16.076	16.069	(0.979)	828865	43.7266	43.7	
	95	1,2-Dichlorobenzene	146	16.963	16.956	(1.033)	355380	45.1940	45.2	
	96	1,2-Dibromo-3-Chloropropane	75	17.936	17.929	(1.092)	68327	43.7951	43.8	
	97	1,3,5-Trichlorobenzene	180	17.971	17.964	(2.233)	265155	46.3044	46.3	
	98	Hexachlorobutadiene	225	18.708	18.700	(1.139)	114860	42.4183	42.4	
	99	1,2,4-Trichlorobenzene	180	18.743	18.736	(1.141)	240377	49.2820	49.3	
	100	1,2,3-Trimethylbenzene	105	16.484	16.476	(2.048)	798359	44.3216	44.3	
	101	Naphthalene	128	19.137	19.129	(1.165)	692601	51.6179	51.6	
	102	1,2,3-Trichlorobenzene	180	19.366	19.358	(1.179)	226929	47.6969	47.7	
	103	Methyl Acetate	43	4.422	4.414	(0.550)	142417	44.2161	44.2	
	104	Methylcyclohexane	83	8.805	8.797	(1.094)	244279	44.9223	44.9	
M	153	Total Alkylbenzenes	100				5219330	310.463	310	


Data File: \\target_server\gg\chem\gcms-w.i\W032718.b\W3366.D
Date : 27-MAR-2018 09:36
Client ID: WG225463-LCS
Sample Info: WG225463-1,SL2079
Column phase: RTX-VMS
Instrument: gcms-w.i
Operator: HG/JSS
Column diameter: 0.18
Y (x10^6)
Min
\\target_server\gg\chem\gcms-w.i\W032718.b\W3366.D
-Chloromethane (2.184)
-Vinyl Chloride (2.249)
-Bromomethane (2.592)
-Chloroethane (2.728)
-Trichlorofluoromethane (2.871)
-Diethyl Ether (3.207)
-1,1-Dichloroethene (3.443)+
-Iodomethane (3.629)
-Acrolein (3.865)
-Allyl Chloride (4.036)
-Methylene Chloride (4.172)+
-trans-1,2-Dichloroethene (4.394)+
-Methyl tert-butyl ether (4.551)
-Tertiary-butyl alcohol (4.687)
-Acetonitrile (4.951)
-Di-isopropyl ether (5.137)
-Chloroprene (5.309)+
-Acrylonitrile (5.459)
-Ethyl tertiary-butyl ethe (5.781)+
-cis-1,2-Dichloroethene (6.331)
-2,2-Dichloropropane (6.539)
-Bromochloromethane (6.689)+
-Chloroform (6.846)
-Carbon Tetrachloride (7.068)+
-Dibromofluoromethane (7.175)+
-1,1-Dichloropropene (7.425)+
-Propionitrile (7.854)+
-1,2-Dichloroethane-D4 (8.097)+
-1,2-Dichloroethane (8.212)
-Isobutyl Alcohol (8.319)
Methacrylonitrile (7.976)+
-Trichloroethene (8.805)+
-1,4-Difluorobenzene (8.920)
-Dibromomethane (9.513)
-1,2-Dichloropropane (9.685)
-Bromodichloromethane (9.792)
-Ethyl Methacrylate (10.099)+
-1,2-Dichloroethylene (tot (10.268)
-cis-1,3-dichloropropene (10.793)
-Toluene-D8 (11.072)
-Toluene (11.151)
-4-methyl-2-pentanone (11.715)+
-Methyl Methacrylate (12.030)+
-Dibromochloromethane (12.280)
-1,3-Dichloropropane (12.438)
-1,2-Dibromoethane (12.616)
-2-Hexanone (13.017)
-Ethylbenzene (13.446)+
Chlorobenzene-D5 (13.389)+
m+p-Xylenes (13.653)
-o-Xylene (14.239)
-Styrene (14.311)+
-Isopropylbenzene (14.661)
-P-Bromofluorobenzene (15.019)
-cis-1,4-Dichloro-2-Butene (15.140)+
N-Propylbenzene (15.198)
-1,1,2,2-Tetrachloroethane (15.296)
2-Chlorotoluene (15.383)
trans-1,4-Dichloro-2-Bute (15.528)
-4-Chlorotoluene (15.598)
1,3,5-Trimethylbenzene (15.455)+
-tert-Butylbenzene (15.885)+
-sec-Butylbenzene (16.077)
1,2,4-Trimethylbenzene (15.941)
-1,3-Dichlorobenzene (16.334)
P-Isopropyltoluene (16.256)
1,4-Dichlorobenzene-D4 (16.448)+
1,2,3-Trimethylbenzene (16.488)+
-1,2-Dichlorobenzene (16.964)
N-Butylbenzene (16.778)
-1,2-Dibromo-3-Chloropropa (17.936)
-1,3,5-Trichlorobenzene (17.972)
-Hexachlorobutadiene (18.701)
1,2,4-Trichlorobenzene (18.744)
-Naphthalene (19.137)
-1,2,3-Trichlorobenzene (19.359)

MS/MSD Recovery Report

MS ID: WG225400-12
MSD ID: WG225400-13
Sample ID: SL2079-9
Client ID: CHAAP-BKRD-SS10
Project:
SDG: SL2079
MS File ID: W3358.D

Received Date:
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400
Report Date: 29-MAR-18
MSD File ID: W3359.D

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 75.

Compound	MS Spike	MSD Spike	Conc Units	Samp Conc	MS Conc	MSD Conc	MS Rec (%)	MSD Rec (%)	RPD (%)	RPD Limit	Limits
1,1,1,2-Tetrachloroethane	92.0	79.0	ug/Kgdrywt	U3.0	100	82.	110.	103.	21*	20	78-125
1,1,1-Trichloroethane	92.0	79.0	ug/Kgdrywt	U3.0	110	94.	124.	119.	20	20	73-130
1,1,2,2-Tetrachloroethane	92.0	79.0	ug/Kgdrywt	U3.0	94.	78.	102.	98.9	18	20	70-125
Freon-113	92.0	79.0	ug/Kgdrywt	U3.0	110	88.	120.	112.	22*	20	66-136
1,1,2-Trichloroethane	92.0	79.0	ug/Kgdrywt	U3.0	93.	77.	102.	97.7	19	20	78-125
1,1-Dichloroethane	92.0	79.0	ug/Kgdrywt	U3.0	110	93.	122.	117.	19	20	76-125
1,1-Dichloroethene	92.0	79.0	ug/Kgdrywt	U3.0	110	88.	115.	112.	18	20	70-131
1,1-Dichloropropene	92.0	79.0	ug/Kgdrywt	U3.0	110	90.	120.	113.	20	20	76-125
1,2,3-Trichlorobenzene	92.0	79.0	ug/Kgdrywt	UMM3.0	57.	50.	62.4*	62.8*	14	20	66-130
1,2,3-Trichloropropane	92.0	79.0	ug/Kgdrywt	U3.0	92.	75.	99.4	94.9	20	20	73-125
1,2,4-Trichlorobenzene	92.0	79.0	ug/Kgdrywt	U3.0	66.	54.	71.3	67.7	20	20	67-129
1,2,4-Trimethylbenzene	92.0	79.0	ug/Kgdrywt	U3.0	100	83.	112.	106.	21*	20	75-125
1,2-Dibromo-3-Chloropropane	92.0	79.0	ug/Kgdrywt	U3.0	87.	78.	94.8	98.2	12	20	61-132
1,2-Dibromoethane	92.0	79.0	ug/Kgdrywt	U3.0	88.	73.	96.1	92.2	19	20	78-125
1,2-Dichlorobenzene	92.0	79.0	ug/Kgdrywt	U3.0	83.	67.	90.6	84.7	22*	20	78-125
1,2-Dichloroethane	92.0	79.0	ug/Kgdrywt	U3.0	100	83.	113.	104.	23*	20	73-128
1,2-Dichloropropane	92.0	79.0	ug/Kgdrywt	U3.0	100	82.	110.	104.	21*	20	76-125
1,3,5-Trimethylbenzene	92.0	79.0	ug/Kgdrywt	U3.0	110	87.	116.	110.	21*	20	73-125
1,3-Dichlorobenzene	92.0	79.0	ug/Kgdrywt	U3.0	87.	70.	95.0	88.1	23*	20	77-125
1,3-Dichloropropane	92.0	79.0	ug/Kgdrywt	U3.0	91.	77.	99.1	97.5	17	20	77-125
1,4-Dichlorobenzene	92.0	79.0	ug/Kgdrywt	U3.0	84.	66.	91.3	83.8	24*	20	75-120
2,2-Dichloropropane	92.0	79.0	ug/Kgdrywt	U3.0	120	94.	125.	119.	20	20	67-133
2-Butanone	92.0	79.0	ug/Kgdrywt	U15	72.	57.	78.7	71.6	24*	20	51-148
2-Chlorotoluene	92.0	79.0	ug/Kgdrywt	U3.0	100	82.	110.	103.	21*	20	75-125
2-Hexanone	92.0	79.0	ug/Kgdrywt	UMM15	38.	31.	40.9*	39.0*	20	20	53-145
4-Chlorotoluene	92.0	79.0	ug/Kgdrywt	U3.0	98.	77.	107.	97.7	24*	20	72-125
P-Isopropyltoluene	92.0	79.0	ug/Kgdrywt	U3.0	110	89.	118.	112.	21*	20	73-127
4-Methyl-2-Pentanone	92.0	79.0	ug/Kgdrywt	UM15	62.	51.	67.7	64.4*	20	20	65-135
Acetone	92.0	79.0	ug/Kgdrywt	J9.1	97.	85.	95.4	95.6	14	20	36-164
Benzene	92.0	79.0	ug/Kgdrywt	U3.0	100	83.	111.	105.	21*	20	77-125
Bromobenzene	92.0	79.0	ug/Kgdrywt	U3.0	87.	72.	94.6	91.5	18	20	78-125
Bromochloromethane	92.0	79.0	ug/Kgdrywt	U3.0	99.	84.	107.	107.	16	20	78-125
Bromodichloromethane	92.0	79.0	ug/Kgdrywt	U3.0	110	84.	117.	106.	25*	20	75-127

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Tel:(207) 874-2400 Fax:(207) 775-4029

http://www.katahdinlab.com

MS/MSD Recovery Report

MS ID: WG225400-12
MSD ID: WG225400-13
Sample ID: SL2079-9
Client ID: CHAAP-BKRD-SS10
Project:
SDG: SL2079
MS File ID: W3358.D

Received Date:
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400
Report Date: 29-MAR-18
MSD File ID: W3359.D

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 75.

Compound	MS Spike	MSD Spike	Conc Units	Samp Conc	MS Conc	MSD Conc	MS Rec (%)	MSD Rec (%)	RPD (%)	RPD Limit	Limits
Bromoform	92.0	79.0	ug/Kgdrywt	U3.0	92.	71.	100.	90.4	25*	20	67-132
Bromomethane	92.0	79.0	ug/Kgdrywt	U6.0	93.	72.	101.	90.9	26*	20	53-143
Carbon Disulfide	92.0	79.0	ug/Kgdrywt	U3.0	110	91.	120.	116.	18	20	63-132
Carbon Tetrachloride	92.0	79.0	ug/Kgdrywt	U3.0	120	92.	126.	117.	23*	20	70-135
Chlorobenzene	92.0	79.0	ug/Kgdrywt	U3.0	94.	75.	103.	94.9	23*	20	79-125
Dibromochloromethane	92.0	79.0	ug/Kgdrywt	U3.0	100	77.	108.	97.8	25*	20	74-126
Chloroethane	92.0	79.0	ug/Kgdrywt	U6.0	120	97.	129.	123.	20	20	59-139
Chloroform	92.0	79.0	ug/Kgdrywt	U3.0	110	91.	122.	116.	20	20	78-125
Chloromethane	92.0	79.0	ug/Kgdrywt	U6.0	120	100	125.	126.	14	20	50-136
cis-1,2-Dichloroethene	92.0	79.0	ug/Kgdrywt	U3.0	100	86.	113.	109.	19	20	77-125
cis-1,3-Dichloropropene	92.0	79.0	ug/Kgdrywt	U3.0	82.	63.	89.6	79.7	27*	20	74-126
Dibromomethane	92.0	79.0	ug/Kgdrywt	U3.0	100	82.	112.	104.	22*	20	78-125
Dichlorodifluoromethane	92.0	79.0	ug/Kgdrywt	UMM6.0	140	120	154.*	149.*	18	20	29-149
Ethylbenzene	92.0	79.0	ug/Kgdrywt	U3.0	100	81.	108.	102.	21*	20	76-125
Hexachlorobutadiene	92.0	79.0	ug/Kgdrywt	U3.0	82.	66.	89.3	83.3	22*	20	61-135
Isopropylbenzene	92.0	79.0	ug/Kgdrywt	U3.0	110	94.	124.	119.	19	20	68-134
m+p-Xylenes	180.	160.	ug/Kgdrywt	U6.0	200	160	112.	103.	20	20	77-125
Methyl tert-butyl Ether	92.0	79.0	ug/Kgdrywt	U3.0	98.	83.	107.	105.	16	20	73-125
Methylene Chloride	92.0	79.0	ug/Kgdrywt	U15	96.	80.	105.	101.	19	20	70-128
N-Butylbenzene	92.0	79.0	ug/Kgdrywt	U3.0	110	86.	116.	109.	22*	20	70-128
N-Propylbenzene	92.0	79.0	ug/Kgdrywt	U3.0	110	86.	115.	109.	20	20	73-125
Naphthalene	92.0	79.0	ug/Kgdrywt	UMM3.0	51.	45.	55.9*	57.5*	12	20	62-129
o-Xylene	92.0	79.0	ug/Kgdrywt	U3.0	100	81.	109.	103.	21*	20	77-125
sec-Butylbenzene	92.0	79.0	ug/Kgdrywt	U3.0	110	88.	117.	111.	20	20	73-126
Styrene	92.0	79.0	ug/Kgdrywt	U3.0	87.	67.	94.3	84.7	26*	20	76-125
tert-Butylbenzene	92.0	79.0	ug/Kgdrywt	U3.0	110	87.	117.	110.	22*	20	73-125
Tetrachloroethene	92.0	79.0	ug/Kgdrywt	U3.0	110	87.	115.	110.	20	20	73-128
Toluene	92.0	79.0	ug/Kgdrywt	U3.0	99.	81.	108.	102.	20	20	77-125
trans-1,2-Dichloroethene	92.0	79.0	ug/Kgdrywt	U3.0	100	86.	113.	108.	19	20	74-125
trans-1,3-Dichloropropene	92.0	79.0	ug/Kgdrywt	U3.0	89.	69.	96.5	87.1	25*	20	71-130
Trichloroethene	92.0	79.0	ug/Kgdrywt	U3.0	100	84.	113.	106.	22*	20	77-125
Trichlorofluoromethane	92.0	79.0	ug/Kgdrywt	U6.0	120	96.	130.	121.	23*	20	62-140
Vinyl Chloride	92.0	79.0	ug/Kgdrywt	U6.0	110	98.	122.	124.	13	20	56-135

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://www.katahdinlab.com

MS/MSD Recovery Report

MS ID: WG225400-12
MSD ID: WG225400-13
Sample ID: SL2079-9
Client ID: CHAAP-BKRD-SS10
Project:
SDG: SL2079
MS File ID: W3358.D

Received Date:
Extract Date: 26-MAR-18
Extracted By: HG/JSS
Extraction Method: SW846 5035
Lab Prep Batch: WG225400
Report Date: 29-MAR-18
MSD File ID: W3359.D

Analysis Date: 26-MAR-18
Analyst: HG/JSS
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 75.

1,2-Dichloroethane-D4	112.	108.	71-136
p-Bromofluorobenzene	99.2	96.8	79-125
Dibromofluoromethane	105.	107.	78-125
Toluene-D8	102.	100.	85-125

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Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3358.D
Report Date: 28-Mar-2018 14:18

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W032618.b\W3358.D
Lab Smp Id: WG225400-12 Client Smp ID: CHAAP-BKRD-SS10MS
Inj Date : 26-MAR-2018 20:06 MS Autotune Date: 10-APR-2016 11:00
Operator : HG/JSS Inst ID: gcms-w.i
Smp Info : WG225400-12,SL2079
Misc Info : WG225400,WG225400-4,SL2079-9
Comment : SW846 5035
Method : \\target_server\gg\chem\gcms-w.i\W032618.b\W8SDI(08)D.m
Meth Date : 29-Mar-2018 02:42 jsampson Quant Type: ISTD
Cal Date : 26-MAR-2018 13:19 Cal File: W3347.D
Als bottle: 17 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: MIS_GUEST

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	25.390	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	3.630	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/kg)	FINAL (ug/Kgdrywt)	REVIEW COD
1	Dichlorodifluoromethane	85	1.951	1.955	(0.243)	198470	76.7159	142	
2	Chloromethane	50	2.173	2.176	(0.270)	167435	62.3653	115	
3	Vinyl chloride	62	2.245	2.248	(0.279)	167426	60.5838	112	
4	Bromomethane	94	2.588	2.591	(0.322)	82647	50.4556	93.1	
5	Chloroethane	64	2.724	2.720	(0.339)	122621	64.5796	119	
6	Trichlorofluoromethane	101	2.867	2.863	(0.357)	291823	65.0287	120	
7	Diethyl Ether	59	3.203	3.206	(0.399)	105946	53.9365	99.6	
8	Tertiary-butyl alcohol	59	4.683	4.686	(0.583)	103666	268.286	495	
9	1,1-Dichloroethene	96	3.439	3.435	(0.428)	92671	57.1952	106	
10	Carbon Disulfide	76	3.482	3.485	(0.433)	361874	59.6544	110	
11	Freon-113	151	3.482	3.478	(0.433)	85601	59.3247	110	
12	Iodomethane	142	3.625	3.621	(0.451)	41435	35.4000	65.4	
13	Acrolein	56	3.868	3.864	(0.481)	6939	17.7088	32.7(a)	
14	Methylene Chloride	84	4.168	4.163	(0.519)	127972	52.2050	96.4	
15	Acetone	43	4.254	4.250	(0.529)	50056	52.4751	96.9	
16	Isobutyl Alcohol	43	8.315	8.318	(1.035)	54554	394.465	728	
17	trans-1,2-Dichloroethene	96	4.390	4.386	(0.546)	105582	56.3734	104	
18	Allyl Chloride	41	4.025	4.027	(0.501)	170299	56.5644	104	
19	Methyl tert-butyl ether	73	4.540	4.543	(0.565)	387990	53.1470	98.1	
20	Acetonitrile	39	4.940	4.943	(0.615)	16996	237.438	438	
21	Di-isopropyl ether	45	5.126	5.129	(0.638)	378360	57.6352	106	

Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3358.D
Report Date: 28-Mar-2018 14:18

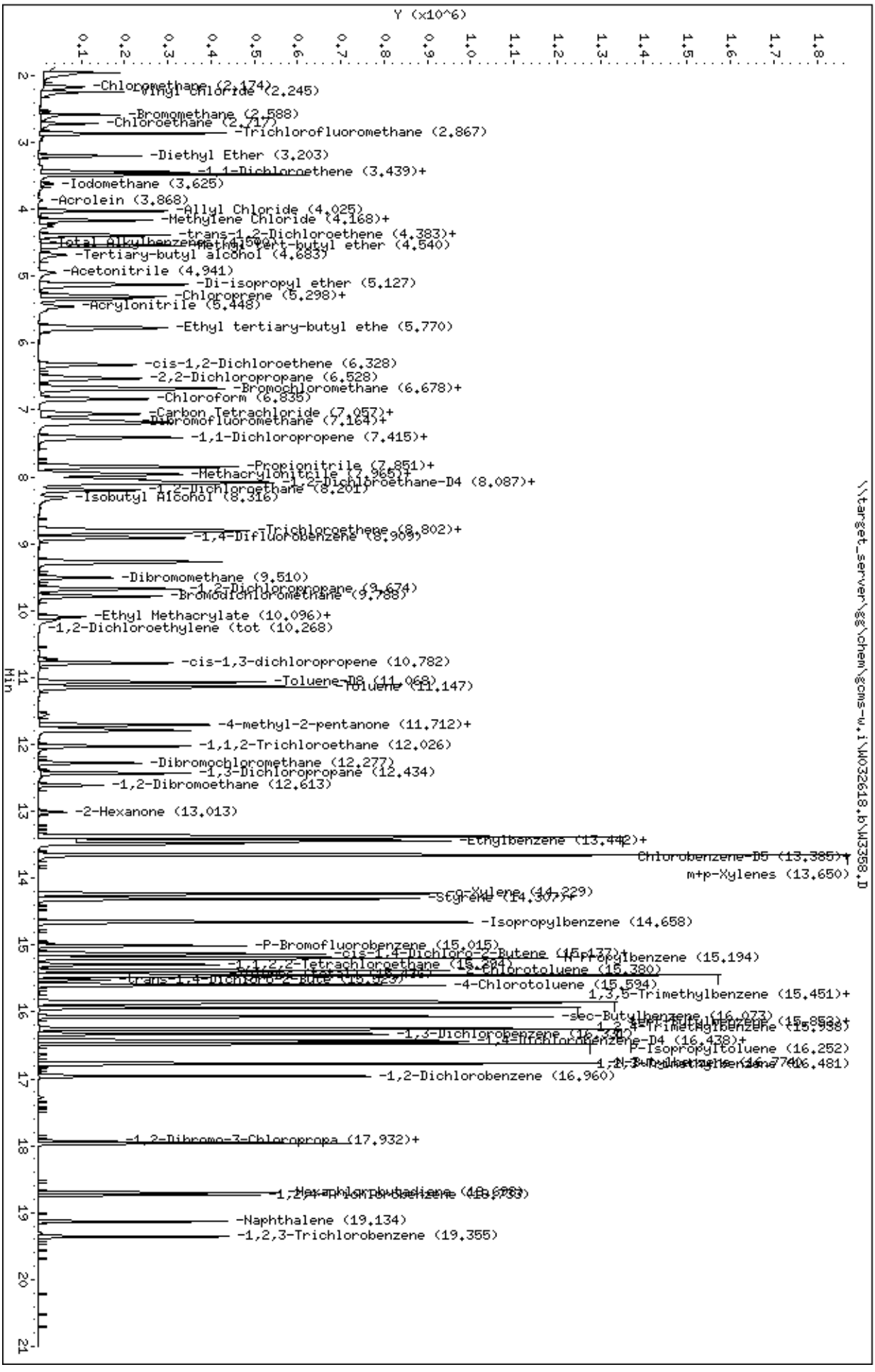
		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/kg)	FINAL (ug/Kgdrywt)	REVIEW COD
	22	Chloroprene	53	5.298	5.301	(0.659)	222165	62.5242	115	
	23	Propionitrile	54	7.936	7.939	(0.988)	77045	197.344	364	
	24	Methacrylonitrile	41	7.965	7.968	(0.991)	182747	114.870	212	
	25	1,1-Dichloroethane	63	5.341	5.337	(0.665)	249643	60.7342	112	
	26	Acrylonitrile	52	5.448	5.451	(0.678)	73855	97.0925	179	
	27	Ethyl tertiary-butyl ether	59	5.770	5.773	(0.718)	385195	57.8853	107	
	29	cis-1,2-Dichloroethene	96	6.327	6.323	(0.787)	117515	56.5359	104	
M	30	1,2-Dichloroethylene (total)	96				223097	112.909	208	
	32	2,2-Dichloropropane	77	6.535	6.531	(0.813)	217926	62.2370	115	
	33	Bromochloromethane	128	6.692	6.688	(0.833)	45560	53.5005	98.8	
	34	Chloroform	83	6.835	6.838	(0.851)	261177	60.4836	112	
	35	Carbon Tetrachloride	117	7.057	7.060	(0.791)	205593	62.9569	116	
	36	Tetrahydrofuran	42	7.150	7.131	(0.890)	38273	48.4639	89.5	
$	37	Dibromofluoromethane	113	7.164	7.167	(0.891)	89778	52.4182	96.8	
	38	1,1,1-Trichloroethane	97	7.192	7.196	(0.895)	240723	61.9363	114	
	39	1,1-Dichloropropene	75	7.414	7.417	(0.832)	194505	59.5767	110	
	40	2-Butanone	43	7.428	7.424	(0.924)	51076	39.2430	72.4	
	41	Benzene	78	7.850	7.846	(0.881)	481282	55.1113	102	
*	42	Pentafluorobenzene	168	8.036	8.039	(1.000)	148042	50.0000		
	43	Cyclohexane	56	6.678	6.674	(0.831)	190102	60.0768	111	
	44	Ethyl Methacrylate	69	10.095	10.091	(1.132)	48315	26.3352	48.6	
$	45	1,2-Dichloroethane-D4	65	8.086	8.089	(1.006)	155142	55.9554	103	
	46	Tertiary-amyl methyl ether	73	8.086	8.082	(1.006)	369360	55.9991	103	
	47	1,2-Dichloroethane	62	8.201	8.204	(0.920)	230388	56.5930	104	
	48	Trichloroethene	95	8.830	8.833	(0.990)	129535	56.1268	104	
*	49	1,4-Difluorobenzene	114	8.916	8.912	(1.000)	266415	50.0000		
	50	Dibromomethane	93	9.502	9.505	(1.066)	80186	55.7795	103	
	51	1,2-Dichloropropane	63	9.674	9.677	(1.085)	126344	54.6930	101	
	52	Bromodichloromethane	83	9.788	9.791	(1.098)	211828	58.8210	108	
	53	cis-1,3-dichloropropene	75	10.782	10.785	(1.209)	190433	44.6159	82.4	
	54	1,4-Dioxane	88	10.138	10.141	(1.137)	39575	964.380	1780	
$	55	Toluene-D8	98	11.068	11.064	(1.241)	350455	51.2624	94.6	
	57	Toluene	92	11.146	11.142	(1.250)	297812	53.5838	98.9	
	58	4-methyl-2-pentanone	43	11.761	11.765	(1.319)	93134	33.7597	62.3	
	59	Tetrachloroethene	164	11.711	11.707	(0.876)	82850	57.5350	106	
	60	trans-1,3-Dichloropropene	75	11.790	11.793	(1.322)	200321	48.1040	88.8	
	61	1,1,2-Trichloroethane	83	12.026	12.029	(1.349)	94020	50.5847	93.4	
	62	Dibromochloromethane	129	12.276	12.279	(0.919)	124801	53.9852	99.7	
	63	1,3-Dichloropropane	76	12.433	12.430	(0.930)	212777	49.4040	91.2	
	64	1,2-Dibromoethane	107	12.612	12.615	(1.415)	102931	47.8822	88.4	
	65	2-Hexanone	43	13.013	13.016	(0.974)	41500	20.3505	37.6(a)	
*	66	Chlorobenzene-D5	117	13.363	13.366	(1.000)	245713	50.0000		
	67	Chlorobenzene	112	13.384	13.388	(1.002)	311746	51.1950	94.5	
	152	1-Chlorohexane	91	13.384	13.382	(1.665)	181455	58.5905	108	
	68	Ethylbenzene	106	13.442	13.445	(1.006)	176754	53.9812	99.6	
	69	1,1,1,2-Tetrachloroethane	131	13.485	13.488	(1.009)	122553	54.9740	101	
M	70	Xylenes (total)	106				654841	164.047	303	
	71	m+p-Xylenes	106	13.649	13.652	(1.021)	445078	109.604	202	
	72	o-Xylene	106	14.228	14.231	(1.065)	209763	54.4428	100	
	73	Styrene	104	14.307	14.310	(1.071)	315184	47.0267	86.8	
	74	Bromoform	173	14.321	14.324	(1.072)	83518	49.9403	92.2	
	75	Isopropylbenzene	105	14.657	14.653	(0.892)	619368	61.8022	114	
$	76	P-Bromofluorobenzene	95	15.008	15.011	(1.683)	156255	49.6024	91.6	
	77	cis-1,4-Dichloro-2-Butene	53	15.115	15.118	(0.920)	45109	34.5071	63.7	

Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3358.D
Report Date: 28-Mar-2018 14:18

			QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/kg)	FINAL (ug/Kgdrywt)	REVIEW COD
	78	trans-1,4-Dichloro-2-Butene	53	15.522	15.518	(0.945)	34310	32.4855	60.0	
	79	Bromobenzene	156	15.136	15.139	(0.922)	119654	47.1012	87.0	
	80	N-Propylbenzene	91	15.193	15.197	(0.925)	834180	57.5142	106	
	81	1,1,2,2-Tetrachloroethane	83	15.294	15.290	(0.931)	183068	50.7440	93.7	
	82	1,3,5-Trimethylbenzene	105	15.451	15.454	(0.941)	572702	57.9643	107	
	83	2-Chlorotoluene	91	15.379	15.383	(0.936)	486220	54.9256	101	
	84	1,2,3-Trichloropropane	75	15.458	15.454	(0.941)	172919	49.5687	91.5	
	85	4-Chlorotoluene	91	15.594	15.597	(0.949)	509355	53.1811	98.2	
	86	tert-Butylbenzene	119	15.851	15.847	(0.965)	549565	58.3130	108	
	87	Pentachloroethane	117	15.866	15.869	(0.966)	114835	54.5410	101	
	88	1,2,4-Trimethylbenzene	105	15.937	15.940	(0.970)	589235	55.6310	103	
	89	P-Isopropyltoluene	119	16.252	16.254	(0.990)	609509	59.0685	109	
	90	1,3-Dichlorobenzene	146	16.330	16.332	(0.994)	247903	47.3306	87.4	
*	91	1,4-Dichlorobenzene-D4	152	16.423	16.425	(1.000)	145422	50.0000		
	92	1,4-Dichlorobenzene	146	16.438	16.440	(1.001)	251789	45.5246	84.0	
	93	N-Butylbenzene	91	16.774	16.770	(1.021)	646007	57.9617	107	
	94	sec-Butylbenzene	105	16.073	16.069	(0.979)	738708	58.5140	108	
	95	1,2-Dichlorobenzene	146	16.960	16.956	(1.033)	236508	45.1605	83.4	
	96	1,2-Dibromo-3-Chloropropane	75	17.932	17.929	(1.092)	49084	47.2387	87.2	
	97	1,3,5-Trichlorobenzene	180	17.968	17.964	(2.236)	163376	43.9256	81.1	
	98	Hexachlorobutadiene	225	18.697	18.700	(1.138)	80304	44.5294	82.2	
	99	1,2,4-Trichlorobenzene	180	18.740	18.736	(1.141)	115505	35.5567	65.6	
	100	1,2,3-Trimethylbenzene	105	16.480	16.476	(2.051)	655533	56.0298	103	
	101	Naphthalene	128	19.133	19.129	(1.165)	248597	27.8188	51.4	
	102	1,2,3-Trichlorobenzene	180	19.355	19.358	(1.178)	98534	31.0965	57.4	
	103	Methyl Acetate	43	4.418	4.414	(0.550)	33458	15.9928	29.5	
	104	Methylcyclohexane	83	8.794	8.797	(1.094)	226312	64.0752	118	
M	153	Total Alkylbenzenes	100				4539906	404.967	748	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).


Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3358.D
Date : 26-MAR-2018 20:06
Client ID: CHAAP-BKRD-SS1OHS
Sample Info: WG225400-12,SL2079
Column phase: RTX-VMS
Instrument: gcms-w.i
Operator: HG/JSS
Column diameter: 0.18
\\target_server\gg\chem\gcms-w.i\W032618.b\W3358.D
Y (x10^6)
Min
-Chloromethane (2.174)
-Vinyl Chloride (2.245)
-Bromomethane (2.588)
-Chloroethane (2.717)
-Trichlorofluoromethane (2.867)
-Diethyl Ether (3.203)
-1,1-Dichloroethene (3.439)+
-Iodomethane (3.625)
-Acrolein (3.868)
-Allyl Chloride (4.025)
-Methylene Chloride (4.168)+
-trans-1,2-Dichloroethene (4.383)+
Total Alkylbenzenes
-Methyl tert-butyl ether (4.540)
-Tertiary-butyl alcohol (4.683)
-Acetonitrile (4.941)
-Di-isopropyl ether (5.127)
-Chloroprene (5.298)+
-Acrylonitrile (5.448)
-Ethyl tertiary-butyl ethe (5.770)
-cis-1,2-Dichloroethene (6.328)
-2,2-Dichloropropane (6.528)
-Bromochloromethane (6.678)+
-Chloroform (6.835)
-Carbon Tetrachloride (7.057)+
-Dibromofluoromethane (7.164)+
-1,1-Dichloropropene (7.415)+
-Propionitrile (7.851)+
-Methacrylonitrile (7.965)+
-1,2-Dichloroethane-D4 (8.087)+
-1,2-Dichloroethane (8.201)
-Isobutyl Alcohol (8.316)
-Trichloroethene (8.802)+
-1,4-Difluorobenzene (8.909)
-Dibromomethane (9.510)
-1,2-Dichloropropane (9.674)
-Bromodichloromethane (9.788)
-Ethyl Methacrylate (10.096)+
-1,2-Dichloroethylene (tot (10.268)
-cis-1,3-dichloropropene (10.782)
-Toluene-D8 (11.068)
-Toluene (11.147)
-4-methyl-2-pentanone (11.712)+
-1,1,2-Trichloroethane (12.026)
-Dibromochloromethane (12.277)
-1,3-Dichloropropane (12.434)
-1,2-Dibromoethane (12.613)
-2-Hexanone (13.013)
-Ethylbenzene (13.442)+
Chlorobenzene-D5 (13.385)+
m+p-Xylenes (13.650)
-Isopropylbenzene (14.658)
-P-Bromofluorobenzene (15.015)
-Propylbenzene (15.194)
-4-Chlorotoluene (15.594)
1,3,5-Trimethylbenzene (15.451)+
-sec-Butylbenzene (16.073)
-1,3-Dichlorobenzene (16.
P-Isopropyltoluene (16.252)
-1,2-Dichlorobenzene (16.960)
-1,2-Dibromo-3-Chloropropa (17.932)+
-Naphthalene (19.134)
-1,2,3-Trichlorobenzene (19.355)

Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3359.D
Report Date: 28-Mar-2018 14:18

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W032618.b\W3359.D
Lab Smp Id: WG225400-13 Client Smp ID: CHAAP-BKRD-SS10MSD
Inj Date : 26-MAR-2018 20:43 MS Autotune Date: 10-APR-2016 11:00
Operator : HG/JSS Inst ID: gcms-w.i
Smp Info : WG225400-13,SL2079
Misc Info : WG225400,WG225400-4,SL2079-9
Comment : SW846 5035
Method : \\target_server\gg\chem\gcms-w.i\W032618.b\W8SDI(08)D.m
Meth Date : 29-Mar-2018 02:42 jsampson Quant Type: ISTD
Cal Date : 26-MAR-2018 13:19 Cal File: W3347.D
Als bottle: 18 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: MIS_GUEST

Concentration Formula: Amt * DF * (100/(100-M))*(Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
M	25.390	% Moisture
Vt	5.000	Volume of DI Water (mL)
Ws	4.240	Weight of Sample (g)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/kg)	FINAL (ug/Kgdrywt)	REVIEW COD
1 Dichlorodifluoromethane	85	1.955	1.955	(0.243)	216159	74.4925	118	
2 Chloromethane	50	2.176	2.176	(0.271)	191044	63.4423	100	
3 Vinyl chloride	62	2.248	2.248	(0.280)	192332	62.0488	98.1	
4 Bromomethane	94	2.591	2.591	(0.322)	83517	45.4576	71.8	
5 Chloroethane	64	2.720	2.720	(0.338)	130903	61.4652	97.1	
6 Trichlorofluoromethane	101	2.870	2.863	(0.357)	304613	60.5177	95.6	
7 Diethyl Ether	59	3.206	3.206	(0.399)	113588	51.5560	81.5	
8 Tertiary-butyl alcohol	59	4.686	4.686	(0.583)	120191	277.321	438	
9 1,1-Dichloroethene	96	3.442	3.435	(0.428)	101455	55.8261	88.2	
10 Carbon Disulfide	76	3.485	3.485	(0.433)	393287	57.8021	91.4	
11 Freon-113	151	3.485	3.478	(0.433)	90374	55.8404	88.2	
12 Iodomethane	142	3.621	3.621	(0.450)	48186	36.5601	57.8	
13 Acrolein	56	3.864	3.864	(0.481)	5513	12.5438	19.8(a)	
14 Methylene Chloride	84	4.171	4.163	(0.519)	139039	50.5688	79.9	
15 Acetone	43	4.257	4.250	(0.530)	57235	53.4943	84.6	
16 Isobutyl Alcohol	43	8.318	8.318	(1.035)	62642	401.862	635	
17 trans-1,2-Dichloroethene	96	4.386	4.386	(0.546)	113816	54.1797	85.6	
18 Allyl Chloride	41	4.028	4.027	(0.501)	176744	52.3389	82.7	
19 Methyl tert-butyl ether	73	4.543	4.543	(0.565)	431482	52.6950	83.3	
20 Acetonitrile	39	4.951	4.943	(0.616)	17549	218.577	345	
21 Di-isopropyl ether	45	5.129	5.129	(0.638)	398005	54.0530	85.4	

Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3359.D
Report Date: 28-Mar-2018 14:18

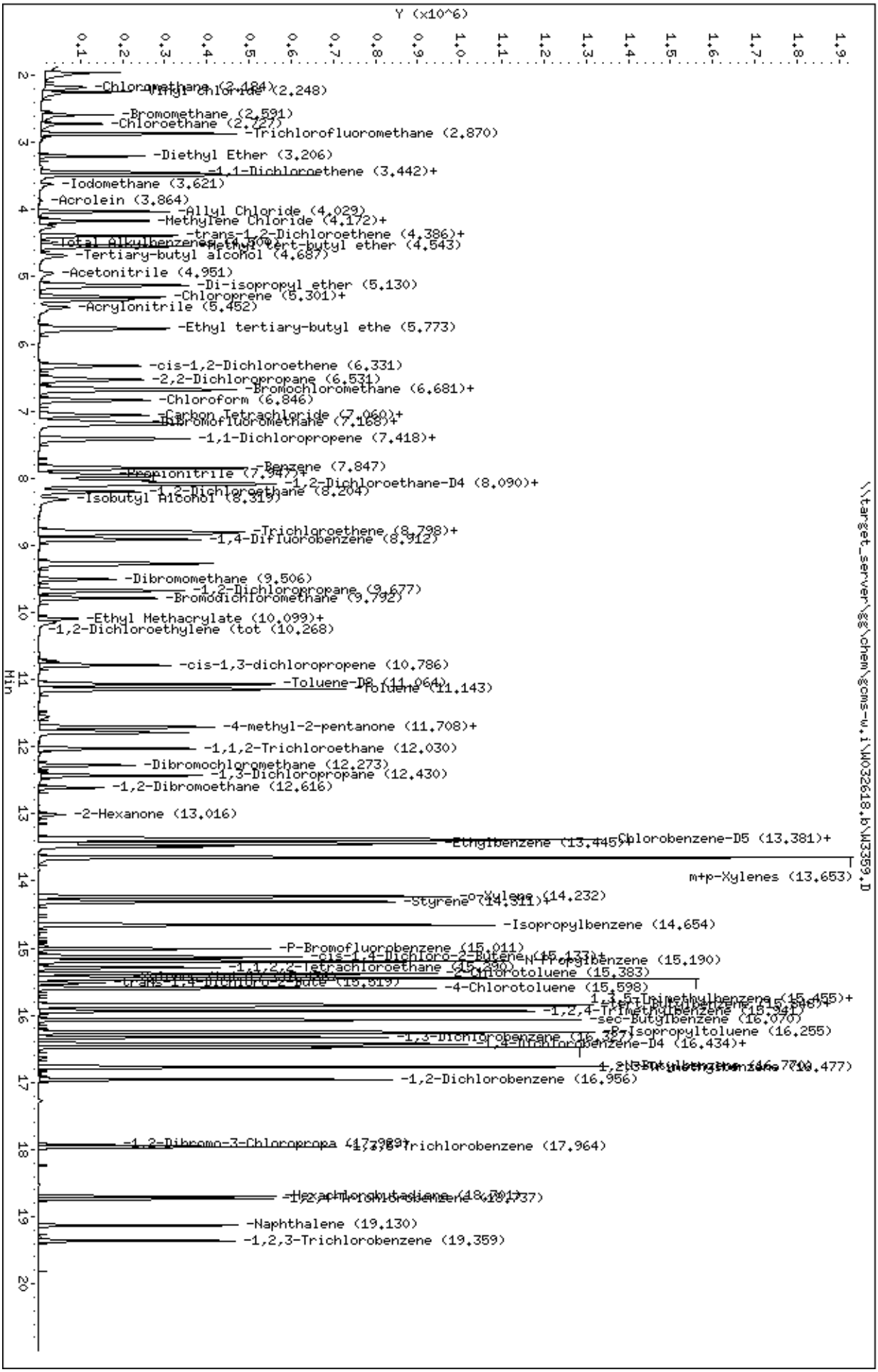
		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/kg)	FINAL (ug/Kgdrywt)	REVIEW COD
	22	Chloroprene	53	5.301	5.301	(0.659)	217832	54.6566	86.4	
	23	Propionitrile	54	7.946	7.939	(0.988)	73602	168.080	266	
	24	Methacrylonitrile	41	7.968	7.968	(0.991)	159875	89.5956	142	
	25	1,1-Dichloroethane	63	5.344	5.337	(0.665)	270810	58.7391	92.8	
	26	Acrylonitrile	52	5.451	5.451	(0.678)	67886	79.5673	126	
	27	Ethyl tertiary-butyl ether	59	5.773	5.773	(0.718)	398783	53.4285	84.4	
	29	cis-1,2-Dichloroethene	96	6.331	6.323	(0.787)	126951	54.4522	86.1	
M	30	1,2-Dichloroethylene (total)	96				240767	108.632	172	
	32	2,2-Dichloropropane	77	6.531	6.531	(0.812)	234072	59.5989	94.2	
	33	Bromochloromethane	128	6.695	6.688	(0.833)	51041	53.4370	84.4	
	34	Chloroform	83	6.845	6.838	(0.851)	280235	57.8594	91.4	
	35	Carbon Tetrachloride	117	7.060	7.060	(0.792)	214153	58.3987	92.3	
	36	Tetrahydrofuran	42	7.146	7.131	(0.889)	46605	52.6147	83.2	
$	37	Dibromofluoromethane	113	7.167	7.167	(0.891)	102519	53.3661	84.3	
	38	1,1,1-Trichloroethane	97	7.196	7.196	(0.895)	258505	59.2987	93.7	
	39	1,1-Dichloropropene	75	7.417	7.417	(0.832)	207956	56.7232	89.6	
	40	2-Butanone	43	7.439	7.424	(0.925)	52260	35.7984	56.6	
	41	Benzene	78	7.846	7.846	(0.880)	513209	52.3334	82.7	
*	42	Pentafluorobenzene	168	8.039	8.039	(1.000)	166049	50.0000		
	43	Cyclohexane	56	6.681	6.674	(0.831)	212259	59.8047	94.5	
	44	Ethyl Methacrylate	69	10.099	10.091	(1.133)	42301	20.5329	32.4	
$	45	1,2-Dichloroethane-D4	65	8.089	8.089	(1.006)	168497	54.1818	85.6	
	46	Tertiary-amyl methyl ether	73	8.089	8.082	(1.006)	381460	51.5619	81.5	
	47	1,2-Dichloroethane	62	8.204	8.204	(0.921)	238795	52.2362	82.6	
	48	Trichloroethene	95	8.833	8.833	(0.991)	137461	53.0403	83.8	
*	49	1,4-Difluorobenzene	114	8.912	8.912	(1.000)	299168	50.0000		
	50	Dibromomethane	93	9.505	9.505	(1.067)	83834	51.9325	82.1	
	51	1,2-Dichloropropane	63	9.677	9.677	(1.086)	134611	51.8921	82.0	
	52	Bromodichloromethane	83	9.791	9.791	(1.099)	215163	53.2059	84.1	
	53	cis-1,3-dichloropropene	75	10.785	10.785	(1.210)	190907	39.8302	63.0	
	54	1,4-Dioxane	88	10.149	10.141	(1.139)	45401	984.395	1560	
$	55	Toluene-D8	98	11.064	11.064	(1.241)	385096	50.1625	79.3	
	57	Toluene	92	11.143	11.142	(1.250)	318140	50.9745	80.6	
	58	4-methyl-2-pentanone	43	11.765	11.765	(1.320)	99821	32.2222	50.9	
	59	Tetrachloroethene	164	11.707	11.707	(0.876)	87136	54.9763	86.9	
	60	trans-1,3-Dichloropropene	75	11.793	11.793	(1.323)	203568	43.5319	68.8	
	61	1,1,2-Trichloroethane	83	12.029	12.029	(1.350)	101949	48.8456	77.2	
	62	Dibromochloromethane	129	12.279	12.279	(0.919)	124512	48.9334	77.3	
	63	1,3-Dichloropropane	76	12.430	12.430	(0.930)	231042	48.7378	77.0	
	64	1,2-Dibromoethane	107	12.616	12.615	(1.416)	111263	46.0916	72.8	
	65	2-Hexanone	43	13.016	13.016	(0.974)	43759	19.4954	30.8(a)	
*	66	Chlorobenzene-D5	117	13.366	13.366	(1.000)	270452	50.0000		
	67	Chlorobenzene	112	13.388	13.388	(1.002)	318096	47.4594	75.0	
	152	1-Chlorohexane	91	13.388	13.382	(1.665)	182908	52.6550	83.2	
	68	Ethylbenzene	106	13.445	13.445	(1.006)	184367	51.1558	80.8	
	69	1,1,1,2-Tetrachloroethane	131	13.488	13.488	(1.009)	126545	51.5723	81.5	
M	70	Xylenes (total)	106				684449	155.764	246	
	71	m+p-Xylenes	106	13.652	13.652	(1.021)	466563	104.385	165	
	72	o-Xylene	106	14.231	14.231	(1.065)	217886	51.3782	81.2	
	73	Styrene	104	14.303	14.310	(1.070)	312063	42.3019	66.9	
	74	Bromoform	173	14.317	14.324	(1.071)	83186	45.1918	71.4	
	75	Isopropylbenzene	105	14.653	14.653	(0.892)	643616	59.6437	94.3	
$	76	P-Bromofluorobenzene	95	15.011	15.011	(1.684)	171278	48.4188	76.5	
	77	cis-1,4-Dichloro-2-Butene	53	15.118	15.118	(0.921)	39753	28.2421	44.6	

Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3359.D
Report Date: 28-Mar-2018 14:18

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/kg)	CONCENTRATIONS FINAL (ug/Kgdrywt)	REVIEW COD
78	trans-1,4-Dichloro-2-Butene	53	15.518	15.518	(0.945)	30969	27.2320	43.0	
79	Bromobenzene	156	15.140	15.139	(0.922)	125159	45.7562	72.3	
80	N-Propylbenzene	91	15.190	15.197	(0.925)	854888	54.7403	86.5	
81	1,1,2,2-Tetrachloroethane	83	15.290	15.290	(0.931)	192064	49.4426	78.1	
82	1,3,5-Trimethylbenzene	105	15.454	15.454	(0.941)	583645	54.8610	86.7	
83	2-Chlorotoluene	91	15.383	15.383	(0.937)	491481	51.5622	81.5	
84	1,2,3-Trichloropropane	75	15.454	15.454	(0.941)	178207	47.4431	75.0	
85	4-Chlorotoluene	91	15.597	15.597	(0.950)	504006	48.8715	77.2	
86	tert-Butylbenzene	119	15.847	15.847	(0.965)	558102	54.9975	86.9	
87	Pentachloroethane	117	15.862	15.869	(0.966)	110866	48.9023	77.3	
88	1,2,4-Trimethylbenzene	105	15.940	15.940	(0.971)	602098	52.7932	83.4	
89	P-Isopropyltoluene	119	16.255	16.254	(0.990)	622560	56.0325	88.6	
90	1,3-Dichlorobenzene	146	16.326	16.332	(0.994)	248462	44.0558	69.6	
* 91	1,4-Dichlorobenzene-D4	152	16.419	16.425	(1.000)	156584	50.0000		
92	1,4-Dichlorobenzene	146	16.441	16.440	(1.001)	249381	41.8751	66.2	
93	N-Butylbenzene	91	16.770	16.770	(1.021)	651443	54.2829	85.8	
94	sec-Butylbenzene	105	16.069	16.069	(0.979)	757321	55.7122	88.0	
95	1,2-Dichlorobenzene	146	16.956	16.956	(1.033)	238658	42.3226	66.9	
96	1,2-Dibromo-3-Chloropropane	75	17.928	17.929	(1.092)	54917	49.0848	77.6	
97	1,3,5-Trichlorobenzene	180	17.964	17.964	(2.234)	153533	36.8027	58.2	
98	Hexachlorobutadiene	225	18.700	18.700	(1.139)	80807	41.6142	65.8	
99	1,2,4-Trichlorobenzene	180	18.736	18.736	(1.141)	118390	33.8468	53.5	
100	1,2,3-Trimethylbenzene	105	16.477	16.476	(2.049)	619993	47.2455	74.7	
101	Naphthalene	128	19.129	19.129	(1.165)	276566	28.7425	45.4	
102	1,2,3-Trichlorobenzene	180	19.358	19.358	(1.179)	107150	31.4051	49.6	
103	Methyl Acetate	43	4.421	4.414	(0.550)	27419	11.6849	18.5	
104	Methylcyclohexane	83	8.797	8.797	(1.094)	229635	57.9654	91.6	
M 153	Total Alkylbenzenes	100				4630057	383.420	606	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).


Data File: \\target_server\gg\chem\gcms-w.i\W032618.b\W3359.D
Date : 26-MAR-2018 20:43
Client ID: CHAAP-BKRD-SS1OHSD
Sample Info: WG225400-13,SL2079
Column phase: RTX-VMS
Instrument: gcms-w.i
Operator: HG/JSS
Column diameter: 0.18
\\target_server\gg\chem\gcms-w.i\W032618.b\W3359.D
Y (x10^6)
Min
Vinyl Chloride (2.248)
Bromomethane (2.591)
Chloroethane (2.727)
Trichlorofluoromethane (2.870)
Diethyl Ether (3.206)
1,1-Dichloroethene (3.442)+
Iodomethane (3.621)
Acrolein (3.864)
Allyl Chloride (4.029)
Methylene Chloride (4.172)+
trans-1,2-Dichloroethene (4.386)+
Methyl tert-butyl ether (4.543)
Tertiary-butyl alcohol (4.687)
Acetonitrile (4.951)
Di-isopropyl ether (5.130)
Chloroprene (5.301)+
Acrylonitrile (5.452)
Ethyl tertiary-butyl ethe (5.773)
cis-1,2-Dichloroethene (6.331)
2,2-Dichloropropane (6.531)
Bromochloromethane (6.681)+
Chloroform (6.846)
Carbon Tetrachloride (7.060)+
Dibromofluoromethane (7.168)+
1,1-Dichloropropene (7.418)+
Benzene (7.847)
Propionitrile (7.947)+
1,2-Dichloroethane-D4 (8.090)+
1,2-Dichloroethane (8.204)
Isobutyl Alcohol (8.319)
Trichloroethene (8.798)+
1,4-Difluorobenzene (8.912)
Dibromomethane (9.506)
1,2-Dichloropropane (9.677)
Bromodichloromethane (9.792)
Ethyl Methacrylate (10.099)+
1,2-Dichloroethylene (tot (10.268)
cis-1,3-dichloropropene (10.786)
Toluene-D8 (11.064)
Toluene (11.143)
4-methyl-2-pentanone (11.708)+
1,1,2-Trichloroethane (12.030)
Dibromochloromethane (12.273)
1,3-Dichloropropane (12.430)
1,2-Dibromoethane (12.616)
2-Hexanone (13.016)
Chlorobenzene-D5 (13.381)+
Ethylbenzene (13.445)+
m+p-Xylenes (13.653)
o-Xylene (14.232)
Styrene (14.311)+
Isopropylbenzene (14.654)
P-Bromofluorobenzene (15.011)
cis-1,4-Dichloro-2-Butene (15.133)+
N-Propylbenzene (15.190)
1,1,2,2-Tetrachloroethane (15.280)
2-Chlorotoluene (15.383)
4-Chlorotoluene (15.598)
1,3,5-Trimethylbenzene (15.455)+
1,2,4-Trimethylbenzene (15.941)+
sec-Butylbenzene (16.070)
4-Isopropyltoluene (16.255)
1,3-Dichlorobenzene (16.357)+
1,4-Dichlorobenzene-D4 (16.434)+
1,4-Dichlorobenzene (16.477)
1,2-Dichlorobenzene (16.956)
1,2-Dibromo-3-Chloropropa (17.389)+
1,2,4-Trichlorobenzene (17.964)
Hexachlorobutadiene (18.201)+
1,2,3,4-Tetrachlorobenzene (18.737)
Naphthalene (19.130)
1,2,3-Trichlorobenzene (19.359)

Logbooks and Supporting Documents

KATAHDIN ANALYTICAL SERVICES

GCMS-P INSTRUMENT RUNLOG

DATE/TIME OF BFB INJECTION: 3-19-18B

SAMPLE NAME	DATAFILE	DF	ALS #	METHOD	PREP METHOD 5030	5035	1311	Criteria KAS	DoD	QAPP	pH Paper Lot #: Y/N	ANALYST	PH	TRC	KI Paper Lot # COMMENTS
WG225041 - 16	P3983	1	-1	VOABFBAQ							Y	[illegible]	N/A	N/A	'A' Files P6A05(22)
Cond. STD	P4804	1	1	P8A05(62)							—				
Rinse	05	1	2	P8A05(62)D							—				Curve
WG225041 -4	06	1	3								Y				OK
-3	07	1	4								Y				
-2	08	1	5								Y				
-1	09	1	6								Y				
-6	10	1	7								Y				
-5	11	1	8								Y				
-7	12	1	9								Y				
Rinse	13	1	10								—				

TT 3/20/18

STANDARD	CODE
BFB	V1025
CAL. STD.	V1037/V1038A
LCS/MS MIX	V1030
EXTRAS MIX	V1039

STANDARD	CODE
IS MIX	V1016
SS MIX	↓

Circle Methods:

SW846 8260	OLM 04.2
SW846 8260 SIM	OLC 03.2
SW846 8260 SIM	EPA 624
(heated purge)	EPA 524

GCMS-P INSTRUMENT RUNLOG

KATAHDIN ANALYTICAL SERVICES

DATE/TIME OF BFB INJECTION: 3-23-18 7:30

SAMPLE NAME	DATAFILE	DF	ALS #	METHOD	PREP METHOD 5030	5035	1311	Criteria KAS	DoD	QAPP	pH Paper Lot #: Y/N	ANALYST	PH	TRC	KI Paper Lot # COMMENTS
W6225300 -3	P4987	1	-	VOABCDAQ	✓						Y	E			
VStd50 -4	P4879		1	P8A05(62)							Y				
LCS -1	80		2								Y				
VBlankA	81		3								N				
B -2	82		4								Y				4.2
SL2079-14B	83		5						5.0 J		Y/N		<2		1SS↓
15 B	84		6								N		<2		1SS↓
SL2296-14RA B	85		7						4.2		Y		<2		
-17RA B	86		8								Y		<2		
-13 A	87	✓	9								Y		<2		
-21DL B	88	4	10								Y		<2		
-9DL B	89	2	11								Y		<2		
-20DL B	90	2	12						↓		Y		<2		
SLD010-3RA C	91	1	13						5.0		N		<2		1SS↓
-5RA C	92		14								N		<2		1SS↓
SL2295-1 A	93		15								N		<2		1SS↓
-3 A	94		16								N		<2		1SS↓
-4 A	95		17								N		<2		1SS↓
-5 A	96		18								N		<2		1SS↓
-6 A	97		19						↓		N		<2		1SS↓
CCV1	98		20								N		<2		1SS↓
2	99		21								Y				18:58
3	P4900		22								N				Not needed
Rmsc	↓ 01		23								N				↓
↓	↓ 02	✓	24	✓	✓						—	✓			
											—				

STANDARD	CODE
BFB	V1025
CAL. STD.	V1037 | V1038
LCS/MS MIX	~~V1~~ V1030
EXTRAS MIX	V1039

STANDARD	CODE
IS MIX	V1045
SS MIX	↓

Circle Methods:

SW846 8260	OLM 04.2
SW846 8260 SIM	OLC 03.2
SW846 8260 SIM (heated purge)	EPA 624
	EPA 524

3-23-18

Katahdin Analytical Services 1000343

GCMS-W INSTRUMENT RUNLOG

KATAHDIN ANALYTICAL SERVICES

DATE/TIME OF BFB INJECTION: 3-23-18 8:34

SAMPLE NAME	DATAFILE	DF	ALS #	METHOD	PREP METHOD 5030	PREP METHOD 5035	PREP METHOD 1311	Criteria KAS	Criteria DoD	Criteria QAPP	Y/N	ANALYST	PH	TRCv	COMMENTS
W225302-10	W3300	1	—	W8BFMSL		✓					Y	✓	✓		
Rmse -4	W3294		1	W8501(07)							N				
-4	95		2								Y				
-3	96		3								Y				
-2	97		4								Y				
-1	98		5								Y				
-6	99		6								Y				
-5	W3300		7								Y				
-7/8	01		8								Y				
VBlankA	02		9								N				
B	03		10								Y				
8 SL2ppb-7B	04		11						WD		N	3-9C			
3264 -8B	05		12								N				
-9D	06		13								N				
-10B	07		14								N				
-11B	08		15								N				
-12B	09		16								N				
-13B	10		17								N				
-9MSE	11		18								N				20:12 ~~of of clock~~
-9MSOF	12		19								N				out of clock
CCV1	13		20								Y				100%
✓ 2	14		21								Y				100%
✓ 3	15		22								Y				100%
Rmse	16		23								N				
↓	17	✓	24	✓	✓	✓					N	✓	✓		
			3-24-18												

STANDARD	CODE
BFB	V1025
CAL. STD.	V1040 V1041
LCS/MS MIX	V1044
EXTRAS MIX	V1042

STANDARD	CODE
IS MIX	V1008
SS MIX	✓

Circle Methods:

(SW846 8260) EPA 624

SW846 8260 SIM EPA 524

SW846 8260 SIM (heated purge)

GCMS-W INSTRUMENT RUNLOG **KATAHDIN ANALYTICAL SERVICES**

DATE/TIME OF BFB INJECTION: 3-24-18 7:19

SAMPLE NAME	DATAFILE	DF	ALS #	METHOD	PREP METHOD 5030	PREP METHOD 5035	PREP METHOD 1311	Criteria KAS	Criteria DoD	Criteria QAPP	Y/N	ANALYST	PH	TRCv	COMMENTS
~~W22 23 24 25 26~~ 3	WB801	1	-	VOA8260SL		✓					Y	KE			
VSTD50	W3319		1	WBSD1(07)							N				
↓ -4	20		2								N				
KS -1	21		3								Y				
VBlankA	22		4								Y				
↓ ~~79~~ B -2	23		5								Y				
SL2~~099~~-1RA C	24		6								Y				Target hits
2RA C	25		7						5.0		Y				
3RA C	26		8								Y				
4RA C	27		9								Y				
5 C	28		10								Y				
6 C	29		11								N				1 ss↑ No hits
SL2329-1B	30		12								N				1 IS↓ 2ss↑ RA
-2B	31		13								N				1 IS↓ 2ss↑
-3B	32		14								N				2 ss↑
-4B	33		15								N				2 IS↓ 2ss↑
-5B	34		16								N				2 IS↓ 2ss↑
CCV1	35		17								N				2 IS↓ 2ss↑
↓ 2	36		18								N				4 IS↓ 2ss↑
3	37		19								N				1858 ✓ TCFM↑↓
Rmca	38		20								Y				
Rmca	39		21								Y				
	40		22								—				
											—				

STANDARD	CODE
BFB	V1925
CAL. STD.	V1046/1045A
LCS/MS MIX	V1044
EXTRAS MIX	V1047

STANDARD	CODE
IS MIX	V1056
SS MIX	

Circle Methods:

SW846 8260

~~SW846 8260 SIM~~

SW846 8260 SIM (heated purge)

EPA 624

EPA 524

TTC 3/26/18

Katahdin Analytical Services 1900345

GCMS-W INSTRUMENT RUNLOG

KATAHDIN ANALYTICAL SERVICES

DATE/TIME OF BFB INJECTION: 032618 9:46

SAMPLE NAME	DATAFILE	DF	ALS #	METHOD	PREP METHOD 5030	PREP METHOD 5035	PREP METHOD 1311	Criteria KAS	Criteria DoD	Criteria QAPP	Y/N	ANALYST	PH	TRCv	COMMENTS
WG225400-10	WB802	1	-1	VOABFBSL							Y				
-4	W3342	1	1	W8SDT(OB)							Y		N/A		
-3	43	1	2								Y				
-2	44	1	3								Y				
-1	45	1	4								Y				
-6	46	1	5								Y				
-5	47	1	6								Y				
-7	48	1	7								Y				
Rinse	49	1	8								N				target hits
WG225400-9	50	1	9								Y				
SB2079-7 C	51	1	10			8			5.6		Y				
-8 C	52	1	11								Y				
-10 C	53	1	12								Y				
-11 C	54	1	13								Y				
-12 C	55	1	14								Y				
-13 C	56	1	15								Y				
-9 G	57	1	16								Y				
-9MS H	58	1	17								Y				
-9MSD I	59	1	18								Y				
CCV 1	60	1	19								Y				
2	61	1	20								Y				21:20
3	62	1	21								N				not needed
Rinse	63	1	1								N				
											N				

STANDARD	CODE
BFB	V1025
CAL. STD.	V1046/V1048A
LCS/MS MIX	V1044
EXTRAS MIX	V1047

STANDARD	CODE
IS MIX	V1050
SS MIX	

Circle Methods:

(SW846 8260)

SW846 8260 SIM

SW846 8260 SIM (heated purge)

EPA 624

EPA 524

032718

KATAHDIN ANALYTICAL SERVICES

GCMS-W INSTRUMENT RUNLOG

DATE/TIME OF BFB INJECTION: 3-27-18 733

SAMPLE NAME	DATAFILE	DF	ALS #	METHOD	PREP METHOD 5030	PREP METHOD 5035	PREP METHOD 1311	Criteria KAS	Criteria DoD	Criteria QAPP	Y/N	ANALYST	PH	TRCv	COMMENTS
WG225463 -3	WB803	1	–	VOABFBSL		✓					Y	[illegible]			
VStd50	W33164		1	W8SD1(08)							N				
✓ -4	65		2								Y				Acetone ↑
LCS	66		3								Y				
VBlmkA	67		4								N				Target hits
✓ B	68		5								Y				
SL 2079-5RA2 D	69		6						5.0		Y		N/A		
✓ -6RA2 D	70		7								Y				
SL2329-1RA C	71		8								Y				
-2 RA C	72		9								Y				1ss ↑ No hits
-3 RA C	73		10								Y			-TTC 3/28/18	~~1ss↑~~
-4 RA C	74		11								Y				1ss↑ No hits
-5 RA C	75		12								Y				1ss↑ No hits >LOD
-6 B	76		13												1 JS↓ 2ss↑ 1ss↓
-7 B	77		14								Y				2 ss↑ No hits
-8 D	78		15												1 JS↓ 1ss↑
-8MS E-6	79		16												
-8MSD F-7	80		17												
CCV1 -5	81		18								Y				1908 ✓
2	82		19								N				Not needed
✓ 3	83		20								N				↓
Rinse	84		21								–				

TTC 3/28/18

STANDARD	CODE
BFB	V1025
CAL. STD.	V1040/V1041A
LCS/MS MIX	V1043
EXTRAS MIX	V1042

STANDARD	CODE
IS MIX	V1050
SS MIX	✓

Circle Methods:

SW846 8260 — EPA 624

SW846 8260 SIM — EPA 524

SW846 8260 SIM (heated purge)

KATAHDIN ANAI KATAHDIN ANALYTICAL SERVICES

Organics Vial Prep I Organics Vial Prep Log

Methods: SW8260 SW8015 ME DEP 4.2.17 MA DEP VPH

Balance ID: Bal 05

Date Initial Weighing	Analyst Initial Weighing	Date Final Weighing	Analyst Final Weighing	Vial Number	Vial + Preservative (g)	Vial + Preservative + Sample (g)	Sample Weight (g)	Preservative	Pres. Volume (mL)	Sample Name	Comments
3.7.18	SO			108780	29.53			DI / MEOH / NaHSO4	5 / 10		
				108781	29.49			DI / MEOH / NaHSO4	5 / 10		
				108782	29.32			DI / MEOH / NaHSO4	5 / 10		
				108783	29.41			DI / MEOH / NaHSO4	5 / 10		
				108784	29.47			DI / MEOH / NaHSO4	5 / 10		
				108785	29.40			DI / MEOH / NaHSO4	5 / 10		
				108786	29.31			DI / MEOH / NaHSO4	5 / 10		
				108787	29.60			DI / MEOH / NaHSO4	5 / 10		
				108788	29.38			DI / MEOH / NaHSO4	5 / 10		
				108789	29.47			DI / MEOH / NaHSO4	5 / 10		
				108790	29.29			DI / MEOH / NaHSO4	5 / 10		
				108791	29.33			DI / MEOH / NaHSO4	5 / 10		
				108792	29.49			DI / MEOH / NaHSO4	5 / 10		
				108793	29.53			DI / MEOH / NaHSO4	5 / 10		
				108794	29.50			DI / MEOH / NaHSO4	5 / 10		
				108795	29.31			DI / MEOH / NaHSO4	5 / 10		
				108796	29.52			DI / MEOH / NaHSO4	5 / 10		
✓	✓			108797	29.37			DI / MEOH / NaHSO4	5 / 10		
3.7.18	SO	3.8.18		108798	31.11	37.05	5.94	DI / MEOH / NaHSO4	5 / 10	SL2079-3C	
↓	↓			108799	31.27			DI / MEOH / NaHSO4	5 / 10		

40 mL Vial Lot # 2415

MeOH Lot #: 05435

NaSO4 Lot #:

DI Preservative = Deionized Water +Stirbar

NaHSO4 Preservative = 20% NaSO4 Solution + stirbar

KATAHDIN ANAI KATAHDIN ANALYTICAL SERVICES

Organics Vial Prep I Organics Vial Prep Log

Methods: SW8260 SW8015 ME DEP 4.2.17 MA DEP VPH

Balance ID: Bal05

Date Initial Weighing	Analyst Initial Weighing	Date Final Weighing	Analyst Final Weighing	Vial Number	Vial + Preservative (g)	Vial + Preservative + Sample (g)	Sample Weight (g)	Preservative	Pres. Volume (mL)	Sample Name	Comments
3-19-18	SO	3-21-18	~~SO~~	108800	31.44	37.45	6.01	DI / MEOH / NaHSO4	5 / 10	SL2079-3B	
		3-21-18	~~SO~~	108801	31.29	35.97	4.68	DI / MEOH / NaHSO4	5 / 10	SL2079-7B	
		3-26-18	JH	108802	31.39	36.85	5.46	DI / MEOH / NaHSO4	5 / 10	SL2079-7C	
				108803	31.55			DI / MEOH / NaHSO4	5 / 10		
				108804	31.19			DI / MEOH / NaHSO4	5 / 10		
		3-24-18	JH	108805	31.24	37.21	5.97	DI / MEOH / NaHSO4	5 / 10	SL2079-1C	
		3-21-18	~~SO~~	108806	31.50	37.05	6.00	DI / MEOH / NaHSO4	5 / 10	SL2079-1B	
				108807	31.30			DI / MEOH / NaHSO4	5 / 10		
		3-26-18	JH	108808	31.40	35.39	3.99	DI / MEOH / NaHSO4	5 / 10	SL2079-10C	
		3-21-18	~~SO~~	108809	31.35	36.28	4.93	DI / MEOH / NaHSO4	5 / 10	SL2079-10B	
				108810	31.65			DI / MEOH / NaHSO4	5 / 10		
				108811	31.48			DI / MEOH / NaHSO4	5 / 10		
				108812	31.29			DI / MEOH / NaHSO4	5 / 10		
		3-24-18	JH	108813	31.58	37.30	5.72	DI / MEOH / NaHSO4	5 / 10	SL2329-6B	
				108814	31.33			DI / MEOH / NaHSO4	5 / 10		
				108815	31.36			DI / MEOH / NaHSO4	5 / 10		
				108816	31.31			DI / MEOH / NaHSO4	5 / 10		
				108817	31.31			DI / MEOH / NaHSO4	5 / 10		
				108818	31.38			DI / MEOH / NaHSO4	5 / 10		
↓	↓			108819	31.25			DI / MEOH / NaHSO4	5 / 10		

40 mL Vial Lot # 2415

MeOH Lot #:

NaSO4 Lot #:

DI Preservative = Deionized Water +Stirbar

NaHSO4 Preservative = 20% NaSO4 Solution + stirbar

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QAGC372

GC-003 - Revision 2 - 12/14/2015

Katahdin Analytical Services 1000349

KATAHDIN ANAI KATAHDIN ANALYTICAL SERVICES

Organics Vial Prep I Organics Vial Prep Log

Methods: SW8260 SW8015 ME DEP 4.2.17 MA DEP VPH

Balance ID: Bal 05

Date Initial Weighing	Analyst Initial Weighing	Date Final Weighing	Analyst Final Weighing	Vial Number	Vial + Preservative (g)	Vial + Preservative + Sample (g)	Sample Weight (g)	Preservative	Pres. Volume (mL)	Sample Name	Comments
3-7-18	SO			108820	31.43			DI / MEOH / NaHSO4	5 / 10		
				108821	31.32			DI / MEOH / NaHSO4	5 / 10		
				108822	31.35			DI / MEOH / NaHSO4	5 / 10		
				108823	31.37			DI / MEOH / NaHSO4	5 / 10		
				108824	31.24			DI / MEOH / NaHSO4	5 / 10		
		3-27-18		108825	31.42	40.55	9.13	DI / MEOH / NaHSO4	5 / 10	SL2329-2C	
		3-24-18		108826	31.62	39.90	8.28	DI / MEOH / NaHSO4	5 / 10	SL2329-2B	
				108827	31.41			DI / MEOH / NaHSO4	5 / 10		
				108828	31.42			DI / MEOH / NaHSO4	5 / 10		
				108829	31.46			DI / MEOH / NaHSO4	5 / 10		
				108830	31.33			DI / MEOH / NaHSO4	5 / 10		
		3-24-18		108831	31.34	36.55	5.21	DI / MEOH / NaHSO4	5 / 10	SL2079-13C	
		3-21-18		108832	31.37	36.21	4.84	DI / MEOH / NaHSO4	5 / 10	SL2079-13B	
				108833	31.34			DI / MEOH / NaHSO4	5 / 10		
		3-26-18		108834	31.24	37.06		DI / MEOH / NaHSO4	5 / 10	SL2079-11C	
				108835	31.35			DI / MEOH / NaHSO4	5 / 10		
		3-21-18		108836	31.29	36.86	5.57	DI / MEOH / NaHSO4	5 / 10	SL2079-11B	
		3-21-18		108837	31.41	36.50	5.09	DI / MEOH / NaHSO4	5 / 10	SL2079-12B	
		3-26-18		108838	31.25	36.82		DI / MEOH / NaHSO4	5 / 10	SL2079-12C	
				108839	31.32			DI / MEOH / NaHSO4	5 / 10		

40 mL Vial Lot # 2415

MeOH Lot #:

NaSO4 Lot #:

DI Preservative = Deionized Water +Stirbar
NaHSO4 Preservative = 20% NaSO4 Solution + stirbar

KATAHDIN ANAI KATAHDIN ANALYTICAL SERVICES

Organics Vial Prep I Organics Vial Prep Log

Methods: SW8260 SW8015 ME DEP 4.2.17 MA DEP VPH

Balance ID: Bal05

Date Initial Weighing	Analyst Initial Weighing	Date Final Weighing	Analyst Final Weighing	Vial Number	Vial + Preservative (g)	Vial + Preservative + Sample (g)	Sample Weight (g)	Preservative	Pres. Volume (mL)	Sample Name	Comments
3-7-18	SO	3-21-18		108840	31.30	37.14	5.84	DI / MEOH / NaHSO4	5 / 10	SL2079-2B	
		3-24-18		108841	31.32	37.20	5.88	DI / MEOH / NaHSO4	5 / 10	SL2079-2C	
				108842	31.41			DI / MEOH / NaHSO4	5 / 10		
		3-21-18		108843	31.36	37.25	5.81	DI / MEOH / NaHSO4	5 / 10	SL2079-6B	
		3-27-18		108844	31.42	37.73	6.31	DI / MEOH / NaHSO4	5 / 10	SL2079-6D	
		3-24-18		108845	31.37	37.57	6.20	DI / MEOH / NaHSO4	5 / 10	SL2079-6C	
				108846	31.51			DI / MEOH / NaHSO4	5 / 10		
		3-24-18		108847	31.67	39.90	8.23	DI / MEOH / NaHSO4	5 / 10	SL2329-1B	
		3-27-18		108848	31.57	37.40	5.83	DI / MEOH / NaHSO4	5 / 10	SL2329-1C	
				108849	31.40			DI / MEOH / NaHSO4	5 / 10		
				108850	31.29			DI / MEOH / NaHSO4	5 / 10		
		3-27-18		108851	31.44	39.98	8.54	DI / MEOH / NaHSO4	5 / 10	SL2329-9B	
				108852	31.51			DI / MEOH / NaHSO4	5 / 10		
				108853	31.37			DI / MEOH / NaHSO4	5 / 10		
				108854	31.49			DI / MEOH / NaHSO4	5 / 10		
				108855	31.54			DI / MEOH / NaHSO4	5 / 10		
				108856	31.47			DI / MEOH / NaHSO4	5 / 10		
				108857	31.76			DI / MEOH / NaHSO4	5 / 10		
				108858	31.52			DI / MEOH / NaHSO4	5 / 10		
↓	↓			108859	31.72			DI / MEOH / NaHSO4	5 / 10		

40 mL Vial Lot # 2415

MeOH Lot #:

NaSO4 Lot #:

DI Preservative = Deionized Water +Stirbar
NaHSO4 Preservative = 20% NaSO4 Solution + stirbar

KATAHDIN ANAI KATAHDIN ANALYTICAL SERVICES

Organics Vial Prep l Organics Vial Prep Log

Methods: SW8260 SW8015 ME DEP 4.2.17 MA DEP VPH

Balance ID: Ba105

Date Initial Weighing	Analyst Initial Weighing	Date Final Weighing	Analyst Final Weighing	Vial Number	Vial + Preservative (g)	Vial + Preservative + Sample (g)	Sample Weight (g)	Preservative	Pres. Volume (mL)	Sample Name	Comments
3-7-18	SO			108880	31.38			DI / MEOH / NaHSO4	5 / 10		
				108881	31.36			DI / MEOH / NaHSO4	5 / 10		
		3-24-18		108882	31.29	35.81	4.52	DI / MEOH / NaHSO4	5 / 10	SL2329-5B	
				108883	31.33			DI / MEOH / NaHSO4	5 / 10		
		3-24-18		108884	31.32	36.28	4.96	DI / MEOH / NaHSO4	5 / 10	SL2329-5C	
				108885	31.35			DI / MEOH / NaHSO4	5 / 10		
				108886	31.54			DI / MEOH / NaHSO4	5 / 10		
				108887	31.39			DI / MEOH / NaHSO4	5 / 10		
		3-21-18		108888	31.09	37.08	5.99	DI / MEOH / NaHSO4	5 / 10	SL2079-4B	
		3-14-18		108889	31.41	37.78	6.37	DI / MEOH / NaHSO4	5 / 10	SL2079-4C	
				108890	31.48			DI / MEOH / NaHSO4	5 / 10		
		3-27-18		108891	31.40	37.64	6.24	DI / MEOH / NaHSO4	5 / 10	SL2079-5D	
		3-24-18		108892	31.40	37.03	5.63	DI / MEOH / NaHSO4	5 / 10	SL2079-5C	
		3-21-18		108893	31.47	37.36	5.89	DI / MEOH / NaHSO4	5 / 10	SL2079-5B	
				108894	31.47			DI / MEOH / NaHSO4	5 / 10		
		3-26-18		108895	31.55	37.06	5.51	DI / MEOH / NaHSO4	5 / 10	SL2079-8C	
		3-21-18		108896	31.36	36.33	4.97	DI / MEOH / NaHSO4	5 / 10	SL2079-8B	
		3-26-18		108897	31.48	37.19	5.71	DI / MEOH / NaHSO4	5 / 10	SL2329-8D	
		3-26-18		108898	31.49	37.26	5.77	DI / MEOH / NaHSO4	5 / 10	SL2329-8E	MS
		3-26-18		108899	31.36	36.95	5.59	DI / MEOH / NaHSO4	5 / 10	SL2329-8F	MSD

40 mL Vial Lot # 2415

MeOH Lot #:

NaSO4 Lot #:

DI Preservative = Deionized Water +Stirbar
NaHSO4 Preservative = 20% NaSO4 Solution + stirbar

Katahdin Analytical Services 1000352

KATAHDIN ANAI KATAHDIN ANALYTICAL SERVICES

Organics Vial Prep I Organics Vial Prep Log

Methods: SW8260 SW8015 ME DEP 4.2.17 MA DEP VPH

Balance ID: Bal05

Date Initial Weighing	Analyst Initial Weighing	Date Final Weighing	Analyst Final Weighing	Vial Number	Vial + Preservative (g)	Vial + Preservative + Sample (g)	Sample Weight (g)	Preservative	Pres. Volume (mL)	Sample Name	Comments
3-7-18	SO			108900	31.34	35.80	4.46	DI / MEOH / NaHSO4	5 / 10	SL2079-9E	MS
		3-21-18	[illegible]	108901	31.40	36.92	5.52	DI / MEOH / NaHSO4	5 / 10	SL2079-9D	
		3-21-18	[illegible]	108902	31.35	36.74	5.39	DI / MEOH / NaHSO4	5 / 10	SL2079-9F	MSD
				108903	31.38			DI / MEOH / NaHSO4	5 / 10		
				108904	31.30			DI / MEOH / NaHSO4	5 / 10		
				108905	31.40			DI / MEOH / NaHSO4	5 / 10		
				108906	31.45			DI / MEOH / NaHSO4	5 / 10		
				108907	31.54			DI / MEOH / NaHSO4	5 / 10		
				108908	31.38			DI / MEOH / NaHSO4	5 / 10		
		3-26-18	[illegible]	108909	31.55	37.01	5.46	DI / MEOH / NaHSO4	5 / 10	SL2079-9G	
		3-26-18		108910	31.44	35.07	3.63	DI / MEOH / NaHSO4	5 / 10	-9H	
		3-26-18		108911	31.46	35.72	4.24	DI / MEOH / NaHSO4	5 / 10	-9I	
3-9-18	SO			108912	29.13			DI / MEOH / NaHSO4	5 / 10		
				108913	29.31			DI / MEOH / NaHSO4	5 / 10		
				108914	31.44			DI / MEOH / NaHSO4	5 / 10		
				108915	31.32			DI / MEOH / NaHSO4	5 / 10		
				108916	31.22			DI / MEOH / NaHSO4	5 / 10		
				108917	31.38			DI / MEOH / NaHSO4	5 / 10		
				108918	31.35			DI / MEOH / NaHSO4	5 / 10		
				108919	31.54			DI / MEOH / NaHSO4	5 / 10		

40 mL Vial Lot # 2415

MeOH Lot #: DS435

NaSO4 Lot #:

DI Preservative = Deionized Water +Stirbar

NaHSO4 Preservative = 20% NaSO4 Solution + stirbar

SW8270 SIM
POLYNUCLEAR AROMATIC HYDROCARBONS DATA

QC Summary Section

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** Cornhusker Army Ammunition Plant **Matrix:** AQ
Lab Code: KAS **SDG:** SL2079

Client Sample ID	Lab Sample ID	Col. ID	2MN	#	FLO	#	PYR	#
CHAAP-BKRD-EB-031418	SL2079-14		75.6		70.0		78.1	
Method Blank Sample	WG225023-1		82.6		78.7		106.	
Laboratory Control S	WG225023-2		86.8		83.6		86.8	

		QC Limits
FLO	FLUORENE-D10	29-120
PYR	PYRENE-D10	53-166
2MN	2-METHYLNAPHTHALENE-D10	43-120

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://katahdinlab.com
sales@katahdinlab.com

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** Cornhusker Army Ammunition Plant **Matrix:** SL
Lab Code: KAS **SDG:** SL2079

Client Sample ID	Lab Sample ID	Col. ID	2MN	#	FLO	#	PYR	#
CHAAP-BKRD-SB08	SL2079-1		52.0		57.5		70.5	
CHAAP-BKRD-SS11	SL2079-10		55.0		52.5		44.4	
CHAAP-BKRD-SS12	SL2079-11		46.4		47.8		44.8	
CHAAP-BKRD-SS13	SL2079-12		48.1		48.2		48.6	
CHAAP-BKRD-SS109	SL2079-13		56.5		52.5		37.2	
CHAAP-BKRD-SB09	SL2079-2		38.0		48.8		58.0	
CHAAP-BKRD-SB10	SL2079-3		44.2		53.5		61.5	
CHAAP-BKRD-SB11	SL2079-4		40.2		49.8		55.0	
CHAAP-BKRD-SB12	SL2079-5		40.2		43.8		54.0	
CHAAP-BKRD-SB13	SL2079-6		45.2		53.5		63.0	
CHAAP-BKRD-SS08	SL2079-7		49.7		51.5		45.5	
CHAAP-BKRD-SS09	SL2079-8		58.0		54.0		36.2	
CHAAP-BKRD-SS10	SL2079-9		44.5		46.3		37.8	
Method Blank Sample	WG225021-1		77.4		67.6		83.8	
Laboratory Control S	WG225021-2		91.3		66.6		66.2	
Matrix Spike	WG225021-3		82.6		62.2		57.2	
Matrix Spike Duplica	WG225021-4		80.0		60.6		55.6	

		QC Limits
2MN	2-METHYLNAPHTHALENE-D10	19-125
FLO	FLUORENE-D10	20-125
PYR	PYRENE-D10	31-128

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

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Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : N8029.D
Instrument ID : GCMS-N
Matrix : SL

SDG : SL2079
Lab Sample ID : WG225021-1
Date Extracted : 19-MAR-18
Date Analyzed : 20-MAR-18
Time Analyzed : 13:18

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG225021-2	N8030.D	03/20/18	13:50
CHAAP-BKRD-SB08	SL2079-1	N8031.D	03/20/18	14:21
CHAAP-BKRD-SB09	SL2079-2	N8032.D	03/20/18	14:53
CHAAP-BKRD-SB10	SL2079-3	N8033.D	03/20/18	15:24
CHAAP-BKRD-SB11	SL2079-4	N8034.D	03/20/18	15:56
CHAAP-BKRD-SB12	SL2079-5	N8035.D	03/20/18	16:27
CHAAP-BKRD-SB13	SL2079-6	N8036.D	03/20/18	16:59
CHAAP-BKRD-SS08	SL2079-7	N8037.D	03/20/18	17:30
CHAAP-BKRD-SS09	SL2079-8	N8038.D	03/20/18	18:02
CHAAP-BKRD-SS10	SL2079-9	N8039.D	03/20/18	18:34
Matrix Spike	WG225021-3	N8040.D	03/20/18	19:06
Matrix Spike Duplica	WG225021-4	N8041.D	03/20/18	19:38
CHAAP-BKRD-SS11	SL2079-10	N8060.D	03/21/18	15:52
CHAAP-BKRD-SS12	SL2079-11	N8061.D	03/21/18	16:24
CHAAP-BKRD-SS13	SL2079-12	N8062.D	03/21/18	16:55
CHAAP-BKRD-SS109	SL2079-13	N8063.D	03/21/18	17:27

Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : N8025.D
Instrument ID : GCMS-N
Matrix : AQ

SDG : SL2079
Lab Sample ID : WG225023-1
Date Extracted : 19-MAR-18
Date Analyzed : 20-MAR-18
Time Analyzed : 11:11

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG225023-2	N8026.D	03/20/18	11:44
CHAAP-BKRD-EB-031418	SL2079-14	N8027.D	03/20/18	12:15

Form 5
Semivolatile Organic Instrument Performance Check

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : ND493.D
Instrument ID : GCMS-N

SDG : SL2079
Date Analyzed : 16-MAR-18
Time Analyzed : 11:43

m/e	Ion Abundance Criteria	% Relative Abundance		
51	30.0 - 60.0% of mass 198	43.5		
68	Less than 2.0% of mass 69	0.6	1.66	1
69	Less than 100.0% of mass 198	37.5		
70	Less than 2.0% of mass 69	0.2	0.44	1
127	40.0 - 60.0% of mass 198	55.9		
197	Less than 1.0% of mass 198	0.5		
198	Base Peak, 100% relative abundance	100		
199	5.0 - 9.0% of mass 198	7.1		
275	10.0 - 30.0% of mass 198	24.3		
365	1.0 - 100.0% of mass 198	3.0		
441	0.0 - 100.0% of mass 443	11.0	76.73	2
442	40.0 - 100.0% of mass 198	79.3		
443	17.0 - 23.0% of mass 442	14.4	18.13	3

1-Value is % mass 69
2-Value is % mass 443
3-Value is % mass 442

This check applies to the following samples, LCS, MS, MSD and standards:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Initial Calibration	WG224895-4	N7968.D	03/16/18	11:59
Initial Calibration	WG224895-2	N7969.D	03/16/18	12:30
Initial Calibration	WG224895-3	N7970.D	03/16/18	13:03
Initial Calibration	WG224895-5	N7971.D	03/16/18	13:34
Initial Calibration	WG224895-6	N7972.D	03/16/18	14:06
Initial Calibration	WG224895-7	N7973.D	03/16/18	14:38
Independent Source	WG224895-8	N7974.D	03/16/18	15:10

Form 5
Semivolatile Organic Instrument Performance Check

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : ND495.D
Instrument ID : GCMS-N

SDG : SL2079
Date Analyzed : 20-MAR-18
Time Analyzed : 10:23

m/e	Ion Abundance Criteria	% Relative Abundance		
51	30.0 - 60.0% of mass 198	41.0		
68	Less than 2.0% of mass 69	0.5	1.35	1
69	Less than 100.0% of mass 198	37.5		
70	Less than 2.0% of mass 69	0.1	0.21	1
127	40.0 - 60.0% of mass 198	53.9		
197	Less than 1.0% of mass 198	0.3		
198	Base Peak, 100% relative abundance	100		
199	5.0 - 9.0% of mass 198	6.7		
275	10.0 - 30.0% of mass 198	22.0		
365	1.0 - 100.0% of mass 198	2.7		
441	0.0 - 100.0% of mass 443	11.4	80.16	2
442	40.0 - 100.0% of mass 198	77.9		
443	17.0 - 23.0% of mass 442	14.2	18.21	3

1-Value is % mass 69
2-Value is % mass 443
3-Value is % mass 442

This check applies to the following samples, LCS, MS, MSD and standards:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Continuing Calibrati	WG225084-2	N8024.D	03/20/18	10:39
Method Blank Sample	WG225023-1	N8025.D	03/20/18	11:11
Laboratory Control S	WG225023-2	N8026.D	03/20/18	11:44
CHAAP-BKRD-EB-031418	SL2079-14	N8027.D	03/20/18	12:15
Method Blank Sample	WG225021-1	N8029.D	03/20/18	13:18
Laboratory Control S	WG225021-2	N8030.D	03/20/18	13:50
CHAAP-BKRD-SB08	SL2079-1	N8031.D	03/20/18	14:21
CHAAP-BKRD-SB09	SL2079-2	N8032.D	03/20/18	14:53
CHAAP-BKRD-SB10	SL2079-3	N8033.D	03/20/18	15:24
CHAAP-BKRD-SB11	SL2079-4	N8034.D	03/20/18	15:56
CHAAP-BKRD-SB12	SL2079-5	N8035.D	03/20/18	16:27
CHAAP-BKRD-SB13	SL2079-6	N8036.D	03/20/18	16:59
CHAAP-BKRD-SS08	SL2079-7	N8037.D	03/20/18	17:30
CHAAP-BKRD-SS09	SL2079-8	N8038.D	03/20/18	18:02
CHAAP-BKRD-SS10	SL2079-9	N8039.D	03/20/18	18:34
Matrix Spike	WG225021-3	N8040.D	03/20/18	19:06
Matrix Spike Duplica	WG225021-4	N8041.D	03/20/18	19:38
Continuing Calibrati	WG225084-3	N8045.D	03/20/18	21:48

Form 5
Semivolatile Organic Instrument Performance Check

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : ND496.D
Instrument ID : GCMS-N

SDG : SL2079
Date Analyzed : 21-MAR-18
Time Analyzed : 10:41

m/e	Ion Abundance Criteria	% Relative Abundance		
51	30.0 - 60.0% of mass 198	31.2		
68	Less than 2.0% of mass 69	0.6	1.70	1
69	Less than 100.0% of mass 198	37.0		
70	Less than 2.0% of mass 69	0.2	0.61	1
127	40.0 - 60.0% of mass 198	57.5		
197	Less than 1.0% of mass 198	0.0		
198	Base Peak, 100% relative abundance	100		
199	5.0 - 9.0% of mass 198	6.1		
275	10.0 - 30.0% of mass 198	22.0		
365	1.0 - 100.0% of mass 198	2.6		
441	0.0 - 100.0% of mass 443	12.1	72.78	2
442	40.0 - 100.0% of mass 198	87.2		
443	17.0 - 23.0% of mass 442	16.6	19.00	3

1-Value is % mass 69
2-Value is % mass 443
3-Value is % mass 442

This check applies to the following samples, LCS, MS, MSD and standards:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Initial Calibration	WG225136-4	N8051.D	03/21/18	10:57
Initial Calibration	WG225136-2	N8052.D	03/21/18	11:30
Initial Calibration	WG225136-3	N8053.D	03/21/18	12:02
Initial Calibration	WG225136-5	N8054.D	03/21/18	12:34
Initial Calibration	WG225136-6	N8055.D	03/21/18	13:06
Initial Calibration	WG225136-7	N8056.D	03/21/18	13:37
Independent Source	WG225136-8	N8057.D	03/21/18	14:08
CHAAP-BKRD-SS11	SL2079-10	N8060.D	03/21/18	15:52
CHAAP-BKRD-SS12	SL2079-11	N8061.D	03/21/18	16:24
CHAAP-BKRD-SS13	SL2079-12	N8062.D	03/21/18	16:55
CHAAP-BKRD-SS109	SL2079-13	N8063.D	03/21/18	17:27
Continuing Calibrati	WG225136-9	N8072.D	03/21/18	22:17

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Form 8
Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition I
Lab ID : WG224895-4
Lab File ID : N7968.D

SDG: SL2079
Analytical Date: 03/16/18 11:59
Instrument ID: GCMS-N

		1,4-DICHLOROBENZENE-D4			NAPHTHALENE-D8			ACENAPHTHENE-D10		
		Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
	Std .	49167		6.98		153512		8.63		60609		10.95	
	Upper Limit	98334		7.14		307024		8.79		121218		11.12	
	Lower Limit	24583.5		6.81		76756		8.46		30304.5		10.79	
Client Sample ID	Lab Sample ID												
Continuing Calibrati	WG225084-2	49920		6.94		161126		8.59		67002		10.93	
Method Blank Sample	WG225023-1	51696		6.94		175691		8.61		78341		10.93	
Laboratory Control S	WG225023-2	51394		6.94		177263		8.59		77880		10.93	
CHAAP-BKRD-EB-03	SL2079-14	57514		6.94		192295		8.60		85455		10.93	
Method Blank Sample	WG225021-1	55702		6.94		188335		8.60		83863		10.93	
Laboratory Control S	WG225021-2	58278		6.94		197151		8.59		90454		10.93	
CHAAP-BKRD-SB08	SL2079-1	54825		6.94		179583		8.60		79857		10.93	
CHAAP-BKRD-SB09	SL2079-2	58091		6.94		197698		8.60		87813		10.93	
CHAAP-BKRD-SB10	SL2079-3	54635		6.94		185196		8.60		83031		10.93	
CHAAP-BKRD-SB11	SL2079-4	56723		6.94		189102		8.60		77401		10.93	
CHAAP-BKRD-SB12	SL2079-5	59161		6.94		186619		8.60		69423		10.93	
CHAAP-BKRD-SB13	SL2079-6	56273		6.94		186509		8.60		80260		10.93	
CHAAP-BKRD-SS08	SL2079-7	56897		6.94		186844		8.60		83131		10.93	
CHAAP-BKRD-SS09	SL2079-8	58589		6.94		198936		8.60		88115		10.93	
CHAAP-BKRD-SS10	SL2079-9	55286		6.94		192013		8.59		87094		10.93	
Matrix Spike	WG225021-3	53752		6.94		182165		8.59		82467		10.92	
Matrix Spike Duplica	WG225021-4	53922		6.94		184680		8.59		81822		10.92	
Continuing Calibrati	WG225084-3	53555		6.94		178719		8.59		72827		10.92	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 10 seconds of internal standard RT
RT Lower Limit = - 10 seconds of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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Form 8
Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition I
Lab ID : WG224895-4
Lab File ID : N7968.D

SDG: SL2079
Analytical Date: 03/16/18 11:59
Instrument ID: GCMS-N

		PHENANTHRENE-D10				CHRYSENE-D12				PERYLENE-D12			
		Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
	Std .	88968		12.94		42741		16.62		36674		19.51	
	Upper Limit	177936		13.11		85482		16.78		73348		19.67	
	Lower Limit	44484		12.78		21370.5		16.45		18337		19.34	
Client Sample ID	Lab Sample ID												
Continuing Calibrati	WG225084-2	93335		12.91		31368		16.55		23549		19.42	
Method Blank Sample	WG225023-1	114343		12.92		38046		16.57		23785		19.42	
Laboratory Control S	WG225023-2	119760		12.91		56639		16.55		34854		19.41	
CHAAP-BKRD-EB-03	SL2079-14	124970		12.92		54925		16.57		35094		19.41	
Method Blank Sample	WG225021-1	123576		12.91		48547		16.55		31056		19.41	
Laboratory Control S	WG225021-2	139517		12.91		74011		16.55		48980		19.40	
CHAAP-BKRD-SB08	SL2079-1	116204		12.91		46131		16.56		29989		19.41	
CHAAP-BKRD-SB09	SL2079-2	133193		12.91		62173		16.56		41720		19.41	
CHAAP-BKRD-SB10	SL2079-3	130323		12.91		59778		16.56		36345		19.41	
CHAAP-BKRD-SB11	SL2079-4	103635		12.91		48247		16.56		33066		19.41	
CHAAP-BKRD-SB12	SL2079-5	84804		12.92		32773		16.57		25603		19.41	
CHAAP-BKRD-SB13	SL2079-6	116821		12.91		52039		16.56		34129		19.41	
CHAAP-BKRD-SS08	SL2079-7	130336		12.91		56653		16.56		34709		19.40	
CHAAP-BKRD-SS09	SL2079-8	138073		12.91		64565		16.56		41299		19.40	
CHAAP-BKRD-SS10	SL2079-9	134867		12.91		65880		16.55		42838		19.40	
Matrix Spike	WG225021-3	128069		12.90		63524		16.55		42519		19.40	
Matrix Spike Duplica	WG225021-4	123931		12.90		60953		16.55		39527		19.40	
Continuing Calibrati	WG225084-3	101327		12.90		52131		16.55		36096		19.41	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 10 seconds of internal standard RT
RT Lower Limit = - 10 seconds of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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Form 8
Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition I
Lab ID : WG225136-4
Lab File ID : N8051.D

SDG: SL2079
Analytical Date: 03/21/18 10:57
Instrument ID: GCMS-N

		1,4-DICHLOROBENZENE-D4			NAPHTHALENE-D8			ACENAPHTHENE-D10		
		Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
	Std .	67704		6.94		211188		8.58		90519		10.92	
	Upper Limit	135408		7.11		422376		8.75		181038		11.08	
	Lower Limit	33852		6.77		105594		8.41		45259.5		10.75	
Client Sample ID	Lab Sample ID												
CHAAP-BKRD-SS11	SL2079-10	59048		6.94		189351		8.59		84442		10.92	
CHAAP-BKRD-SS12	SL2079-11	59426		6.94		188849		8.59		85397		10.93	
CHAAP-BKRD-SS13	SL2079-12	59115		6.94		187132		8.59		83414		10.92	
CHAAP-BKRD-SS109	SL2079-13	55890		6.94		172649		8.59		74018		10.93	
Continuing Calibrati	WG225136-9	63632		6.93		206220		8.59		86741		10.92	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 10 seconds of internal standard RT
RT Lower Limit = - 10 seconds of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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Form 8
Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition I
Lab ID : WG225136-4
Lab File ID : N8051.D

SDG: SL2079
Analytical Date: 03/21/18 10:57
Instrument ID: GCMS-N

		PHENANTHRENE-D10			CHRYSENE-D12			PERYLENE-D12		
		Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
	Std .	128283		12.90		55605		16.55		32614		19.42	
	Upper Limit	256566		13.06		111210		16.72		65228		19.59	
	Lower Limit	64141.5		12.73		27802.5		16.39		16307		19.26	
Client Sample ID	Lab Sample ID												
CHAAP-BKRD-SS11	SL2079-10	122144		12.91		39411		16.56		20544		19.41	
CHAAP-BKRD-SS12	SL2079-11	123043		12.91		40047		16.56		20577		19.41	
CHAAP-BKRD-SS13	SL2079-12	122241		12.91		38167		16.56		19393		19.41	
CHAAP-BKRD-SS109	SL2079-13	104844		12.91		35677		16.56		19023		19.41	
Continuing Calibrati	WG225136-9	129377		12.90		44618		16.55		20549		19.42	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 10 seconds of internal standard RT
RT Lower Limit = - 10 seconds of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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Sample Data Section

KATAHDIN ANALYTICAL SERVICES - ORGANIC DATA QUALIFIERS

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.

* Compound recovery or percent RPD (relative percent difference) was outside of quality control limits.

D Indicates the result was obtained from analysis of a diluted sample. Surrogate recoveries may not be calculable.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

or

J Used for Pesticides, PCBs, Herbicides, Formaldehyde, Explosives and Method 504.1 analytes when there is a greater than 40% difference for detected concentrations between the two GC columns.

B Indicates the analyte was detected in the laboratory method blank analyzed concurrently with the sample.

C Indicates that the flagged compound did not meet DoD criteria in the corresponding daily calibration verification (CV).

L Indicates that the flagged compound did not meet DoD criteria in the corresponding Laboratory Control Sample (LCS) and/or Laboratory Control Sample Duplicate (LCSD) prepared and/or analyzed concurrently with the sample.

M Indicates that the flagged compound did not meet DoD criteria in the Matrix Spike and/or Matrix Spike Duplicate prepared and/or analyzed concurrently with the native sample.

N Presumptive evidence of a compound based on a mass spectral library search.

A Indicates that a tentatively identified compound is a suspected aldol-condensation product.

P Used for Pesticide/Aroclor analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. (for CLP methods only).

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Manual Integration Codes For GC/MS, GC, HPLC and/or IC

M1	Peak splitting.
M2	Well defined peaks on the shoulders of the other peaks.
M3	There is additional area due to a coeluting interferant.
M4	There are negative spikes in the baseline.
M5	There are rising or falling baselines.
M6	The software has failed to detect a peak or misidentified a peak.
M7	Excessive peak tailing.
M8	Analysis such as GRO, DRO and TPH require a baseline hold.
M9	Peak was not completely integrated as in GC/MS.
M10	Primary ion was correctly integrated, but secondary or tertiary ion needed manual integration as in GC/MS.
M11	For GC analysis, when a sample is diluted by 1:10 or more, the surrogate is set to undetected and then the area under the surrogate is manually integrated.
M12	Manual integration saved in method due to TurboChrom floating point error.

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-1
Client ID: CHAAP-BKRD-SB08
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: N8031.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: DP
Extraction Method: SW846 3550C
Lab Prep Batch: WG225021

Analysis Date: 20-MAR-18
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: SL
% Solids: 81.
Report Date: 26-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	12	ug/Kgdrywt	1	20	24.	3.2	12.
2-Methylnaphthalene	U	12	ug/Kgdrywt	1	20	24.	2.7	12.
Acenaphthylene	U	12	ug/Kgdrywt	1	20	24.	1.5	12.
Acenaphthene	U	12	ug/Kgdrywt	1	20	24.	1.8	12.
Fluorene	U	12	ug/Kgdrywt	1	20	24.	3.9	12.
Phenanthrene	U	12	ug/Kgdrywt	1	20	24.	2.2	12.
Anthracene	U	12	ug/Kgdrywt	1	20	24.	1.5	12.
Fluoranthene	J	2.4	ug/Kgdrywt	1	20	24.	2.2	12.
Pyrene	U	12	ug/Kgdrywt	1	20	24.	2.6	12.
Benzo(a)anthracene	U	12	ug/Kgdrywt	1	20	24.	2.3	12.
Chrysene	U	12	ug/Kgdrywt	1	20	24.	2.1	12.
Benzo(b)Fluoranthene	U	12	ug/Kgdrywt	1	20	24.	3.0	12.
Benzo(k)fluoranthene	U	12	ug/Kgdrywt	1	20	24.	3.8	12.
Benzo(a)pyrene	U	12	ug/Kgdrywt	1	20	24.	4.0	12.
Indeno(1,2,3-cd)pyrene	U	12	ug/Kgdrywt	1	20	24.	2.3	12.
Dibenzo(a,h)anthracene	U	12	ug/Kgdrywt	1	20	24.	2.2	12.
Benzo(g,h,i)perylene	U	12	ug/Kgdrywt	1	20	24.	2.4	12.
2-Methylnaphthalene-D10		52.0	%					
Fluorene-D10		57.5	%					
Pyrene-D10		70.5	%					

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Report Date: 26-Mar-2018 13:04

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N032018.b\N8031.D
Lab Smp Id: SL2079-1 Client Smp ID: CHAAP-BKRD-SB08
Inj Date : 20-MAR-2018 14:21
Operator : JCG Inst ID: gcms-n.i
Smp Info : SL2079-1
Misc Info : WG225084,WG225021,WG224895-4
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N032018.b\NSPSIM86.m
Meth Date : 21-Mar-2018 08:53 cgomez Quant Type: ISTD
Cal Date : 16-MAR-2018 14:38 Cal File: N7973.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ati-corn-aap.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/Ws*Vi)*(100/(100-M))*1000 * CpndVariable

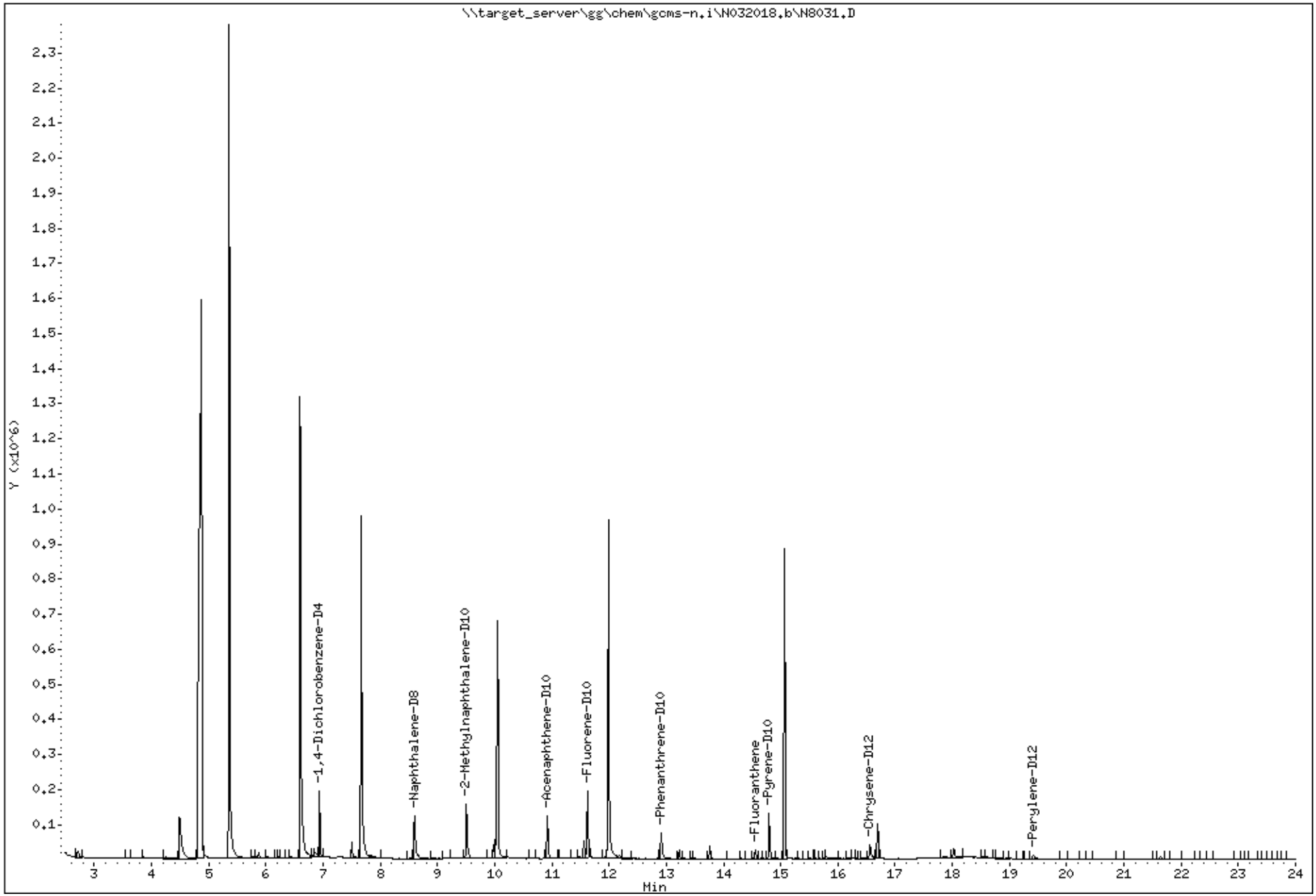
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Final Volume (L)
Ws	0.03010	Weight of Sample (Kg)
Vi	1.000	Volume injected (uL)
M	18.939	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/Kgdrywt)	REVIEW COD
*	10 1,4-Dichlorobenzene-D4	152	6.940	6.940	(1.000)	54825	0.80000	(Q)	
*	26 Naphthalene-D8	136	8.601	8.591	(1.000)	179583	0.80000		
$	32 2-Methylnaphthalene-D10	152	9.508	9.508	(1.105)	109915	1.04034	42.6	
*	47 Acenaphthene-D10	164	10.926	10.926	(1.000)	79857	0.80000		
$	55 Fluorene-D10	174	11.623	11.623	(1.064)	112924	1.14800	47.0	
*	65 Phenanthrene-D10	188	12.906	12.906	(1.000)	116204	0.80000		
	70 Fluoranthene	202	14.537	14.527	(1.126)	9932	0.05885	2.41(a)	
$	71 Pyrene-D10	212	14.799	14.799	(0.894)	114638	1.40708	57.7	
*	76 Chrysene-D12	240	16.563	16.563	(1.000)	46131	0.80000		
*	83 Perylene-D12	264	19.411	19.422	(1.000)	29989	0.80000		

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8031.D
Date : 20-MAR-2018 14:21
Client ID: CHAAP-BKRD-SB08 Instrument: gcms-n.i
Sample Info: SL2079-1



Katahdin Analytical Services 2000019

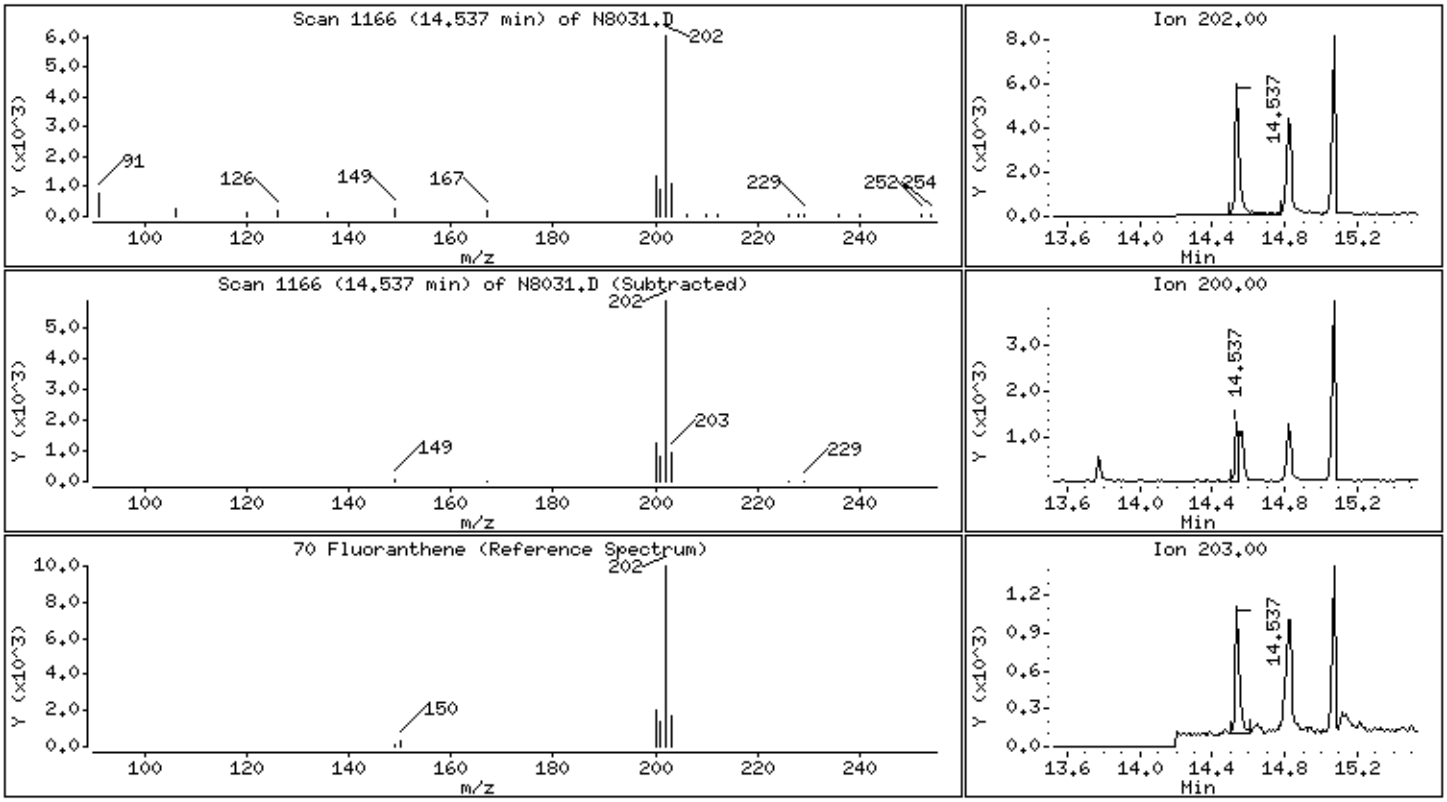
Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8031.D

Date : 20-MAR-2018 14:21

Client ID: CHAAP-BKRD-SB08 Instrument: gcms-n.i

Sample Info: SL2079-1

70 Fluoranthene Concentration: 2.41 ug/Kgdrywt



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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-2
Client ID: CHAAP-BKRD-SB09
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: N8032.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: DP
Extraction Method: SW846 3550C
Lab Prep Batch: WG225021

Analysis Date: 20-MAR-18
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: SL
% Solids: 86.
Report Date: 26-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	11	ug/Kgdrywt	1	20	22.	2.9	11.
2-Methylnaphthalene	U	11	ug/Kgdrywt	1	20	22.	2.4	11.
Acenaphthylene	U	11	ug/Kgdrywt	1	20	22.	1.3	11.
Acenaphthene	U	11	ug/Kgdrywt	1	20	22.	1.7	11.
Fluorene	U	11	ug/Kgdrywt	1	20	22.	3.6	11.
Phenanthrene	U	11	ug/Kgdrywt	1	20	22.	2.0	11.
Anthracene	U	11	ug/Kgdrywt	1	20	22.	1.3	11.
Fluoranthene	J	2.2	ug/Kgdrywt	1	20	22.	2.0	11.
Pyrene	U	11	ug/Kgdrywt	1	20	22.	2.3	11.
Benzo(a)anthracene	U	11	ug/Kgdrywt	1	20	22.	2.1	11.
Chrysene	U	11	ug/Kgdrywt	1	20	22.	1.9	11.
Benzo(b)Fluoranthene	U	11	ug/Kgdrywt	1	20	22.	2.7	11.
Benzo(k)fluoranthene	U	11	ug/Kgdrywt	1	20	22.	3.4	11.
Benzo(a)pyrene	U	11	ug/Kgdrywt	1	20	22.	3.7	11.
Indeno(1,2,3-cd)pyrene	U	11	ug/Kgdrywt	1	20	22.	2.1	11.
Dibenzo(a,h)anthracene	U	11	ug/Kgdrywt	1	20	22.	2.0	11.
Benzo(g,h,i)perylene	U	11	ug/Kgdrywt	1	20	22.	2.2	11.
2-Methylnaphthalene-D10		38.0	%					
Fluorene-D10		48.8	%					
Pyrene-D10		58.0	%					

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Report Date: 26-Mar-2018 13:04

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Data file : \\target_server\gg\chem\gcms-n.i\N032018.b\N8032.D
Lab Smp Id: SL2079-2 Client Smp ID: CHAAP-BKRD-SB09
Inj Date : 20-MAR-2018 14:53
Operator : JCG Inst ID: gcms-n.i
Smp Info : SL2079-2
Misc Info : WG225084,WG225021,WG224895-4
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N032018.b\NSPSIM86.m
Meth Date : 21-Mar-2018 08:53 cgomez Quant Type: ISTD
Cal Date : 16-MAR-2018 14:38 Cal File: N7973.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ati-corn-aap.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/Ws*Vi)*(100/(100-M))*1000 * CpndVariable

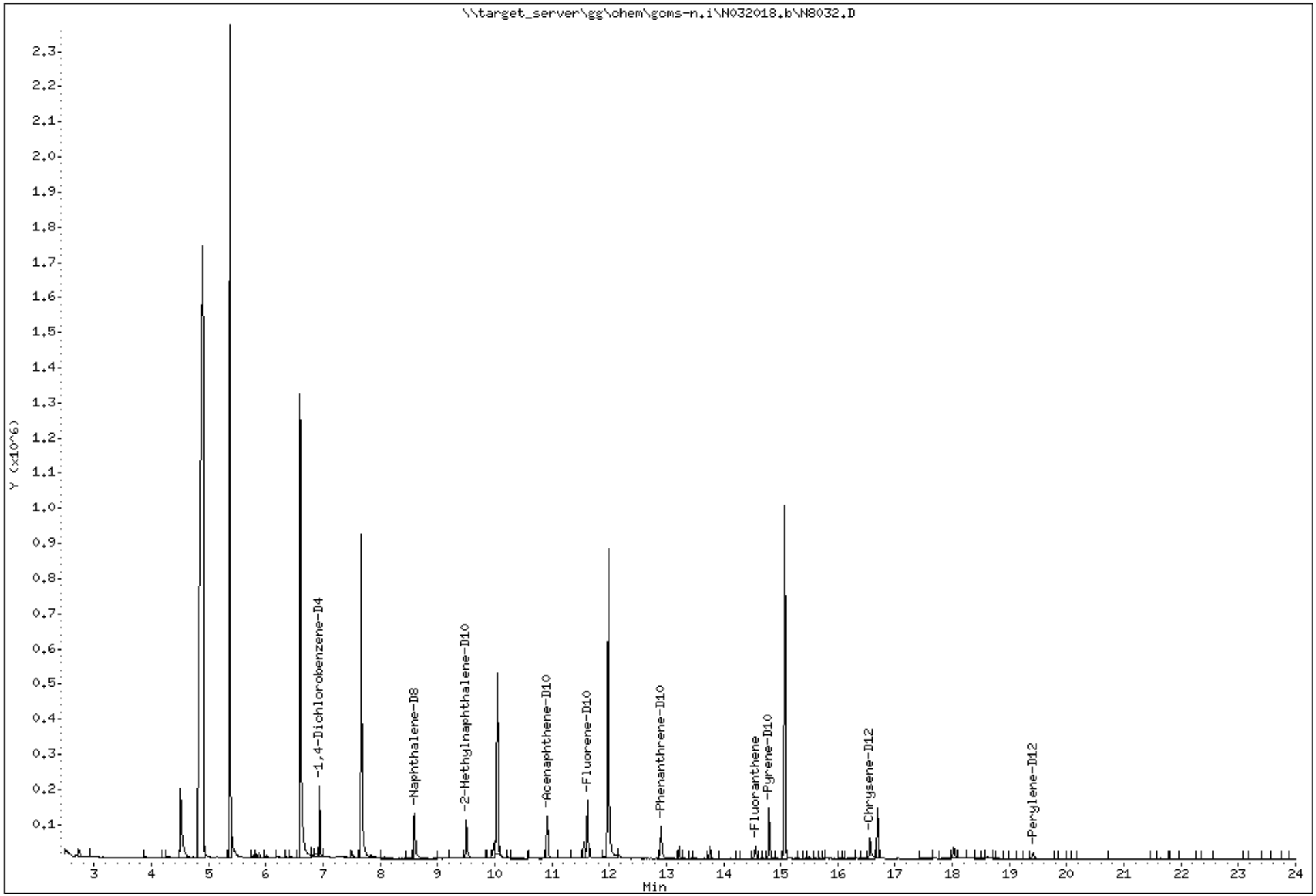
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Final Volume (L)
Ws	0.03140	Weight of Sample (Kg)
Vi	1.000	Volume injected (uL)
M	13.906	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/Kgdrywt)	REVIEW COD
*	10 1,4-Dichlorobenzene-D4	152	6.940	6.940	(1.000)	58091	0.80000	(Q)	
*	26 Naphthalene-D8	136	8.601	8.591	(1.000)	197698	0.80000		
$	32 2-Methylnaphthalene-D10	152	9.508	9.508	(1.105)	88457	0.76053	28.1	
*	47 Acenaphthene-D10	164	10.926	10.926	(1.000)	87813	0.80000		
$	55 Fluorene-D10	174	11.623	11.623	(1.064)	105636	0.97661	36.1	
*	65 Phenanthrene-D10	188	12.906	12.906	(1.000)	133193	0.80000		
	70 Fluoranthene	202	14.536	14.527	(1.126)	11628	0.06011	2.22(a)	
$	71 Pyrene-D10	212	14.799	14.799	(0.894)	127596	1.16204	43.0	
*	76 Chrysene-D12	240	16.563	16.563	(1.000)	62173	0.80000		
*	83 Perylene-D12	264	19.411	19.422	(1.000)	41720	0.80000		

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8032.D
Date : 20-MAR-2018 14:53
Client ID: CHAAP-BKRD-SB09 Instrument: gcms-n.i
Sample Info: SL2079-2



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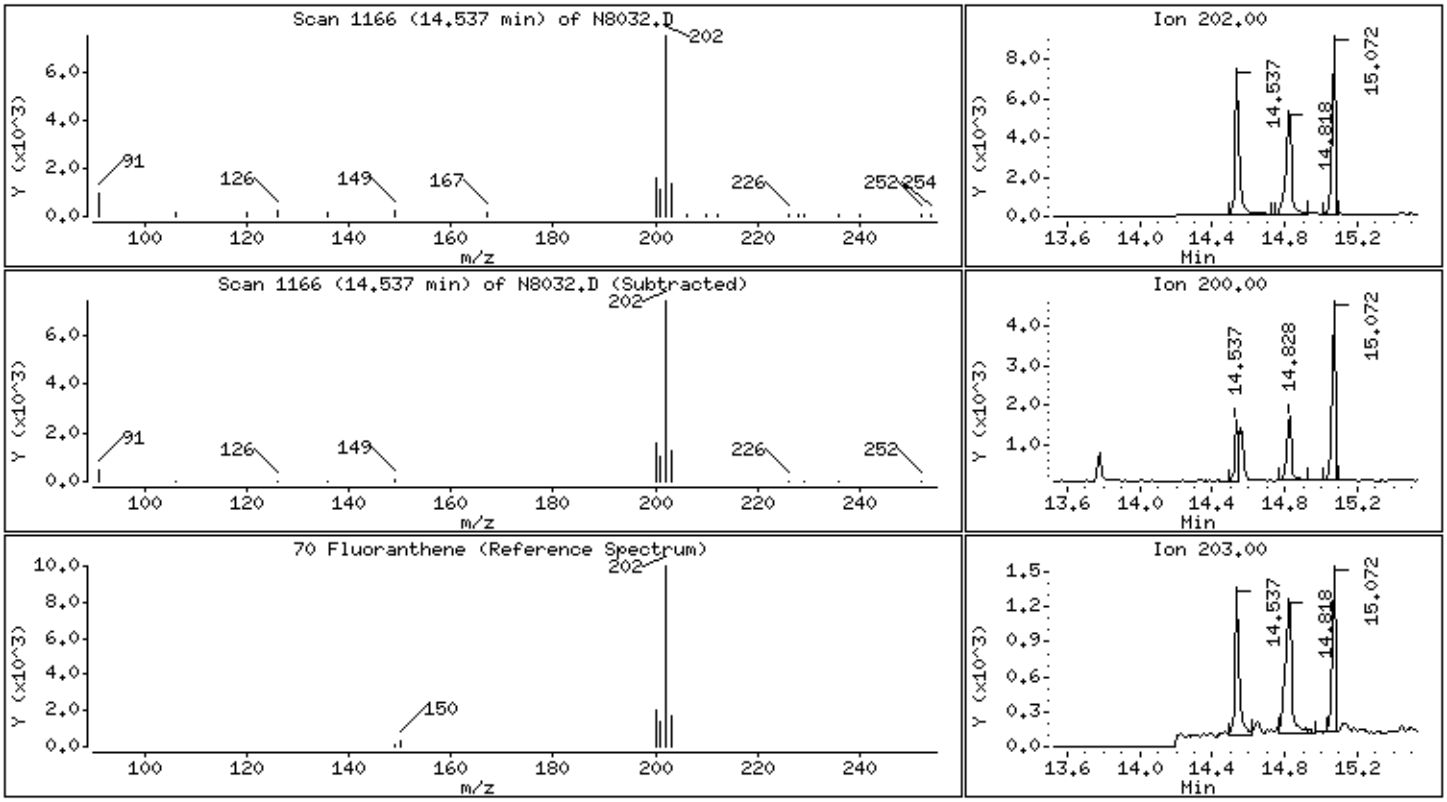
Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8032.D

Date : 20-MAR-2018 14:53

Client ID: CHAAP-BKRD-SB09 Instrument: gcms-n.i

Sample Info: SL2079-2

70 Fluoranthene Concentration: 2.22 ug/Kgdrywt



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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-3
Client ID: CHAAP-BKRD-SB10
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: N8033.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: DP
Extraction Method: SW846 3550C
Lab Prep Batch: WG225021

Analysis Date: 20-MAR-18
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: SL
% Solids: 84.
Report Date: 26-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	12	ug/Kgdrywt	1	20	23.	3.0	12.
2-Methylnaphthalene	U	12	ug/Kgdrywt	1	20	23.	2.6	12.
Acenaphthylene	U	12	ug/Kgdrywt	1	20	23.	1.4	12.
Acenaphthene	U	12	ug/Kgdrywt	1	20	23.	1.7	12.
Fluorene	U	12	ug/Kgdrywt	1	20	23.	3.7	12.
Phenanthrene	U	12	ug/Kgdrywt	1	20	23.	2.1	12.
Anthracene	U	12	ug/Kgdrywt	1	20	23.	1.4	12.
Fluoranthene	J	2.9	ug/Kgdrywt	1	20	23.	2.1	12.
Pyrene	U	12	ug/Kgdrywt	1	20	23.	2.4	12.
Benzo(a)anthracene	U	12	ug/Kgdrywt	1	20	23.	2.2	12.
Chrysene	U	12	ug/Kgdrywt	1	20	23.	2.0	12.
Benzo(b)Fluoranthene	U	12	ug/Kgdrywt	1	20	23.	2.8	12.
Benzo(k)fluoranthene	U	12	ug/Kgdrywt	1	20	23.	3.6	12.
Benzo(a)pyrene	U	12	ug/Kgdrywt	1	20	23.	3.8	12.
Indeno(1,2,3-cd)pyrene	U	12	ug/Kgdrywt	1	20	23.	2.2	12.
Dibenzo(a,h)anthracene	U	12	ug/Kgdrywt	1	20	23.	2.1	12.
Benzo(g,h,i)perylene	U	12	ug/Kgdrywt	1	20	23.	2.3	12.
2-Methylnaphthalene-D10		44.2	%					
Fluorene-D10		53.5	%					
Pyrene-D10		61.5	%					

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Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8033.D
Report Date: 26-Mar-2018 13:04

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Data file : \\target_server\gg\chem\gcms-n.i\N032018.b\N8033.D
Lab Smp Id: SL2079-3 Client Smp ID: CHAAP-BKRD-SB10
Inj Date : 20-MAR-2018 15:24 MS Autotune Date: 25-OCT-2017 07:54
Operator : JCG Inst ID: gcms-n.i
Smp Info : SL2079-3
Misc Info : WG225084,WG225021,WG224895-4
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N032018.b\NSPSIM86.m
Meth Date : 21-Mar-2018 08:53 cgomez Quant Type: ISTD
Cal Date : 16-MAR-2018 14:38 Cal File: N7973.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ati-corn-aap.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/Ws*Vi)*(100/(100-M))*1000 * CpndVariable

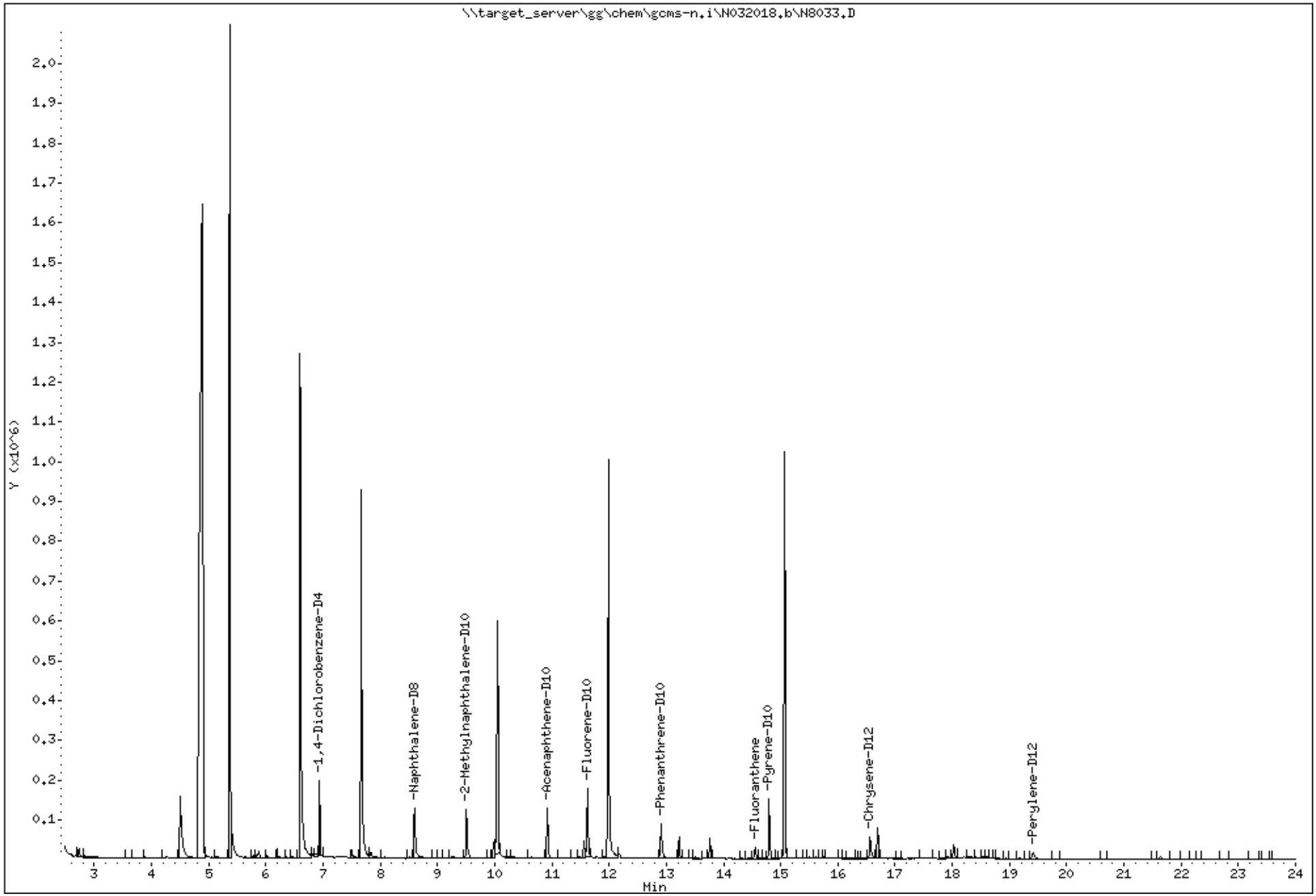
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Final Volume (L)
Ws	0.03090	Weight of Sample (Kg)
Vi	1.000	Volume injected (uL)
M	16.356	% Moisture
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/Kgdrywt)	REVIEW COD
* 10 1,4-Dichlorobenzene-D4	152	6.940	6.940	(1.000)	54635	0.80000	(Q)	
* 26 Naphthalene-D8	136	8.601	8.591	(1.000)	185196	0.80000		
$ 32 2-Methylnaphthalene-D10	152	9.508	9.508	(1.105)	96266	0.88354	34.2	
* 47 Acenaphthene-D10	164	10.926	10.926	(1.000)	83031	0.80000		
$ 55 Fluorene-D10	174	11.623	11.623	(1.064)	109745	1.07303	41.5	
* 65 Phenanthrene-D10	188	12.906	12.906	(1.000)	130323	0.80000		
70 Fluoranthene	202	14.536	14.527	(1.126)	14073	0.07435	2.88(a)	
$ 71 Pyrene-D10	212	14.799	14.799	(0.894)	129563	1.22722	47.5	
* 76 Chrysene-D12	240	16.563	16.563	(1.000)	59778	0.80000		
* 83 Perylene-D12	264	19.411	19.422	(1.000)	36345	0.80000		

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8033.D
Date : 20-MAR-2018 15:24
Client ID: CHAAP-BKRD-SB10 Instrument: gcms-n.i
Sample Info: SL2079-3



Katahdin Analytical Services 2000027

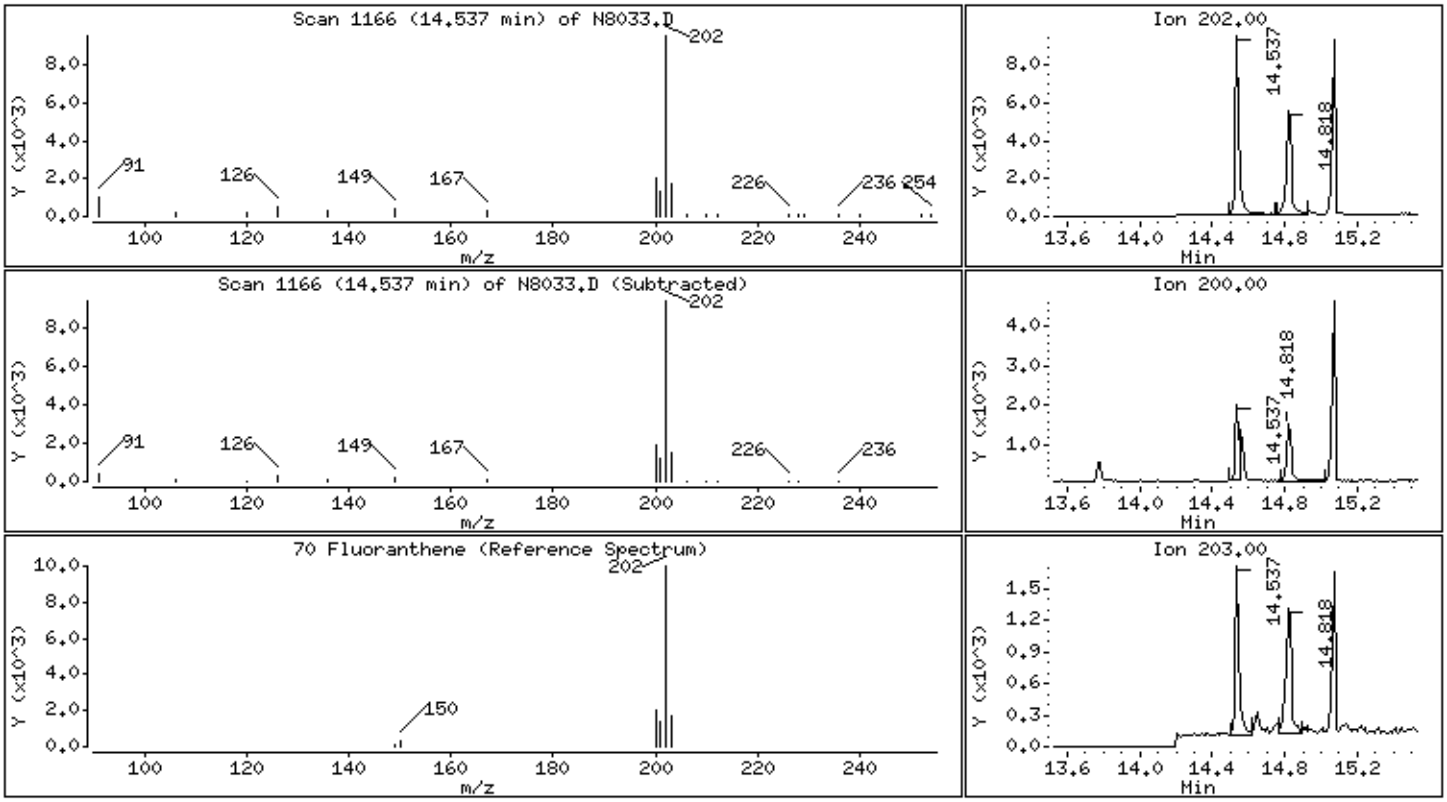
Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8033.D

Date : 20-MAR-2018 15:24

Client ID: CHAAP-BKRD-SB10 Instrument: gcms-n.i

Sample Info: SL2079-3

70 Fluoranthene Concentration: 2.88 ug/Kgdrywt



Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-4
Client ID: CHAAP-BKRD-SB11
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: N8034.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: DP
Extraction Method: SW846 3550C
Lab Prep Batch: WG225021

Analysis Date: 20-MAR-18
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: SL
% Solids: 80.
Report Date: 26-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	12	ug/Kgdrywt	1	20	25.	3.2	12.
2-Methylnaphthalene	U	12	ug/Kgdrywt	1	20	25.	2.8	12.
Acenaphthylene	U	12	ug/Kgdrywt	1	20	25.	1.5	12.
Acenaphthene	U	12	ug/Kgdrywt	1	20	25.	1.9	12.
Fluorene	U	12	ug/Kgdrywt	1	20	25.	4.0	12.
Phenanthrene	U	12	ug/Kgdrywt	1	20	25.	2.2	12.
Anthracene	U	12	ug/Kgdrywt	1	20	25.	1.5	12.
Fluoranthene	U	12	ug/Kgdrywt	1	20	25.	2.2	12.
Pyrene	U	12	ug/Kgdrywt	1	20	25.	2.6	12.
Benzo(a)anthracene	U	12	ug/Kgdrywt	1	20	25.	2.4	12.
Chrysene	U	12	ug/Kgdrywt	1	20	25.	2.1	12.
Benzo(b)Fluoranthene	U	12	ug/Kgdrywt	1	20	25.	3.0	12.
Benzo(k)fluoranthene	U	12	ug/Kgdrywt	1	20	25.	3.9	12.
Benzo(a)pyrene	U	12	ug/Kgdrywt	1	20	25.	4.1	12.
Indeno(1,2,3-cd)pyrene	U	12	ug/Kgdrywt	1	20	25.	2.4	12.
Dibenzo(a,h)anthracene	U	12	ug/Kgdrywt	1	20	25.	2.2	12.
Benzo(g,h,i)perylene	U	12	ug/Kgdrywt	1	20	25.	2.5	12.
2-Methylnaphthalene-D10		40.2	%					
Fluorene-D10		49.8	%					
Pyrene-D10		55.0	%					

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Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8034.D
Report Date: 26-Mar-2018 13:04

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N032018.b\N8034.D
Lab Smp Id: SL2079-4 Client Smp ID: CHAAP-BKRD-SB11
Inj Date : 20-MAR-2018 15:56 MS Autotune Date: 25-OCT-2017 07:54
Operator : JCG Inst ID: gcms-n.i
Smp Info : SL2079-4
Misc Info : WG225084,WG225021,WG224895-4
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N032018.b\NSPSIM86.m
Meth Date : 21-Mar-2018 08:53 cgomez Quant Type: ISTD
Cal Date : 16-MAR-2018 14:38 Cal File: N7973.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ati-corn-aap.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/Ws*Vi)*(100/(100-M))*1000 * CpndVariable

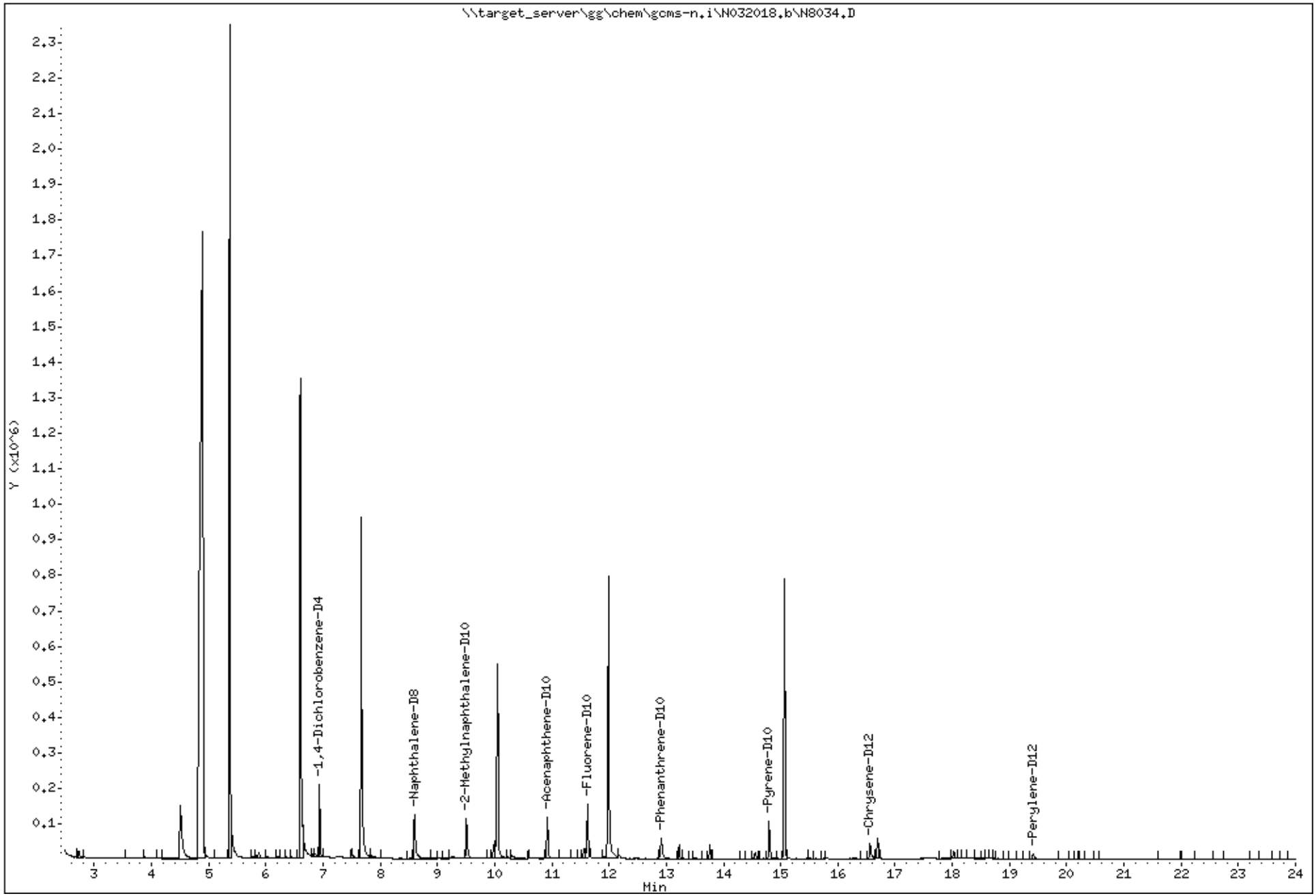
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Final Volume (L)
Ws	0.03010	Weight of Sample (Kg)
Vi	1.000	Volume injected (uL)
M	20.323	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/Kgdrywt)	REVIEW COD
*	10 1,4-Dichlorobenzene-D4	152	6.940	6.940	(1.000)	56723	0.80000	(Q)	
*	26 Naphthalene-D8	136	8.601	8.591	(1.000)	189102	0.80000		
$	32 2-Methylnaphthalene-D10	152	9.508	9.508	(1.105)	89379	0.80339	33.5	
*	47 Acenaphthene-D10	164	10.926	10.926	(1.000)	77401	0.80000		
$	55 Fluorene-D10	174	11.623	11.623	(1.064)	94964	0.99605	41.5	
*	65 Phenanthrene-D10	188	12.906	12.906	(1.000)	103635	0.80000		
$	71 Pyrene-D10	212	14.799	14.799	(0.894)	93794	1.10075	45.9	
*	76 Chrysene-D12	240	16.563	16.563	(1.000)	48247	0.80000		
*	83 Perylene-D12	264	19.411	19.422	(1.000)	33066	0.80000		

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8034.D
Date : 20-MAR-2018 15:56
Client ID: CHAAP-BKRD-SB11 Instrument: gcms-n.i
Sample Info: SL2079-4



Katahdin Analytical Services 2000031

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-5
Client ID: CHAAP-BKRD-SB12
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: N8035.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: DP
Extraction Method: SW846 3550C
Lab Prep Batch: WG225021

Analysis Date: 20-MAR-18
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: SL
% Solids: 83.
Report Date: 26-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	12	ug/Kgdrywt	1	20	23.	3.0	12.
2-Methylnaphthalene	U	12	ug/Kgdrywt	1	20	23.	2.6	12.
Acenaphthylene	U	12	ug/Kgdrywt	1	20	23.	1.4	12.
Acenaphthene	U	12	ug/Kgdrywt	1	20	23.	1.7	12.
Fluorene	U	12	ug/Kgdrywt	1	20	23.	3.7	12.
Phenanthrene	J	3.0	ug/Kgdrywt	1	20	23.	2.1	12.
Anthracene	U	12	ug/Kgdrywt	1	20	23.	1.4	12.
Fluoranthene	J	3.2	ug/Kgdrywt	1	20	23.	2.1	12.
Pyrene	J	4.0	ug/Kgdrywt	1	20	23.	2.4	12.
Benzo(a)anthracene	J	2.8	ug/Kgdrywt	1	20	23.	2.2	12.
Chrysene	U	12	ug/Kgdrywt	1	20	23.	2.0	12.
Benzo(b)Fluoranthene	U	12	ug/Kgdrywt	1	20	23.	2.8	12.
Benzo(k)fluoranthene	U	12	ug/Kgdrywt	1	20	23.	3.6	12.
Benzo(a)pyrene	U	12	ug/Kgdrywt	1	20	23.	3.8	12.
Indeno(1,2,3-cd)pyrene	U	12	ug/Kgdrywt	1	20	23.	2.2	12.
Dibenzo(a,h)anthracene	U	12	ug/Kgdrywt	1	20	23.	2.1	12.
Benzo(g,h,i)perylene	U	12	ug/Kgdrywt	1	20	23.	2.3	12.
2-Methylnaphthalene-D10		40.2	%					
Fluorene-D10		43.8	%					
Pyrene-D10		54.0	%					

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Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8035.D
Report Date: 26-Mar-2018 13:04

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N032018.b\N8035.D
Lab Smp Id: SL2079-5 Client Smp ID: CHAAP-BKRD-SB12
Inj Date : 20-MAR-2018 16:27 MS Autotune Date: 25-OCT-2017 07:54
Operator : JCG Inst ID: gcms-n.i
Smp Info : SL2079-5
Misc Info : WG225084,WG225021,WG224895-4
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N032018.b\NSPSIM86.m
Meth Date : 21-Mar-2018 08:53 cgomez Quant Type: ISTD
Cal Date : 16-MAR-2018 14:38 Cal File: N7973.D
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ati-corn-aap.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/Ws*Vi)*(100/(100-M))*1000 * CpndVariable

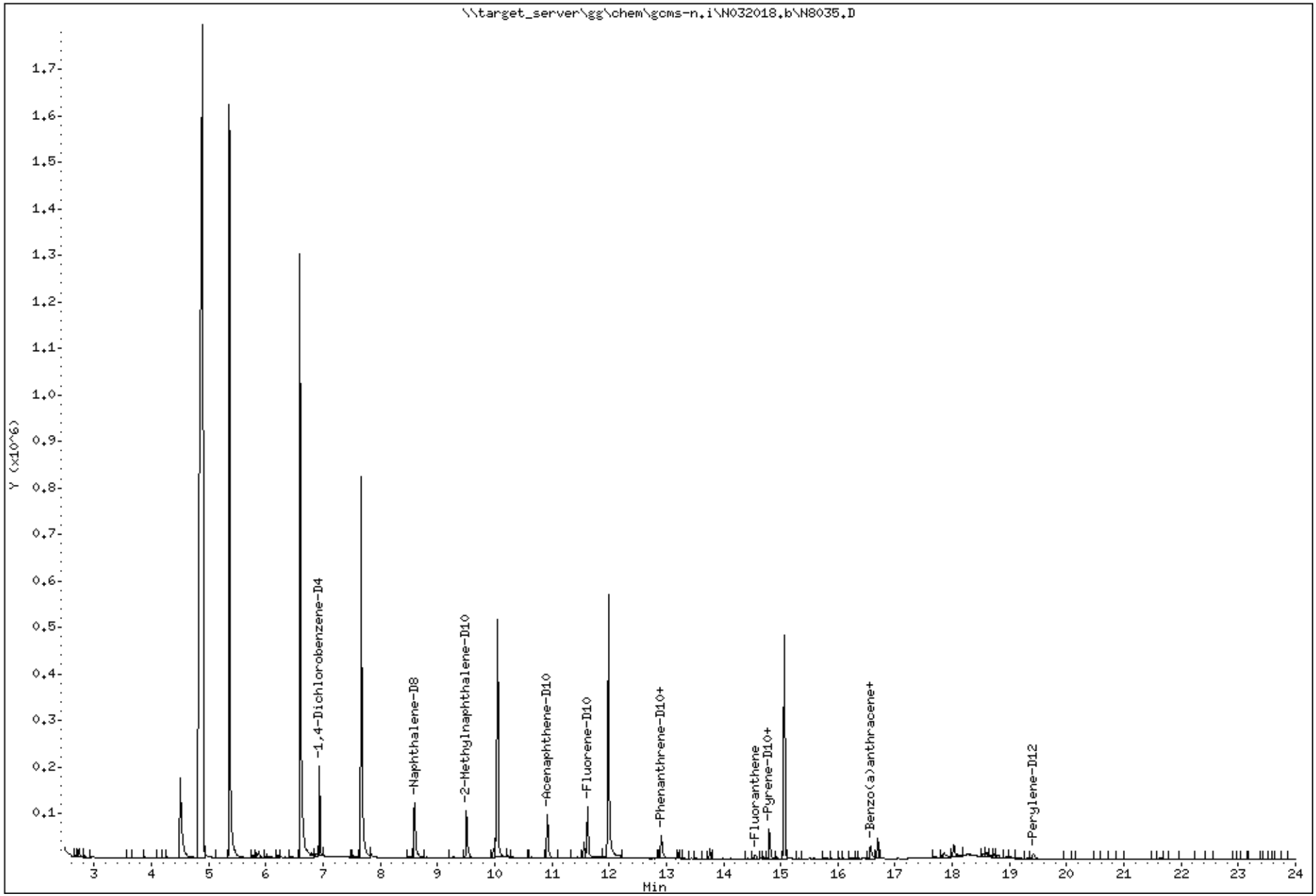
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Final Volume (L)
Ws	0.03100	Weight of Sample (Kg)
Vi	1.000	Volume injected (uL)
M	16.970	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/Kgdrywt)	REVIEW COD
*	10 1,4-Dichlorobenzene-D4	152	6.940	6.940	(1.000)	59161	0.80000	(Q)	
*	26 Naphthalene-D8	136	8.601	8.591	(1.000)	186619	0.80000		
$	32 2-Methylnaphthalene-D10	152	9.508	9.508	(1.105)	88135	0.80275	31.2	
*	47 Acenaphthene-D10	164	10.926	10.926	(1.000)	69423	0.80000		
$	55 Fluorene-D10	174	11.623	11.623	(1.064)	74798	0.87469	34.0	
*	65 Phenanthrene-D10	188	12.916	12.906	(1.000)	84804	0.80000		
	66 Phenanthrene	178	12.948	12.927	(1.002)	10134	0.07734	3.00(a)	
	70 Fluoranthene	202	14.537	14.527	(1.125)	10183	0.08267	3.21(a)	
$	71 Pyrene-D10	212	14.799	14.799	(0.893)	62525	1.08024	42.0	
	72 Pyrene	202	14.827	14.827	(0.895)	10252	0.10169	3.95(a)	
	74 Benzo(a)anthracene	228	16.563	16.544	(0.999)	4161	0.07254	2.82(a)	
*	76 Chrysene-D12	240	16.572	16.563	(1.000)	32773	0.80000		
*	83 Perylene-D12	264	19.411	19.422	(1.000)	25603	0.80000		

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8035.D
Date : 20-MAR-2018 16:27
Client ID: CHAAP-BKRD-SB12 Instrument: gcms-n.i
Sample Info: SL2079-5



Katahdin Analytical Services 2000034

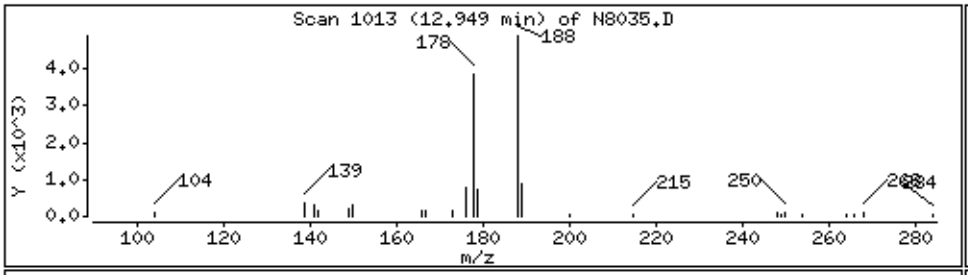
Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8035.D

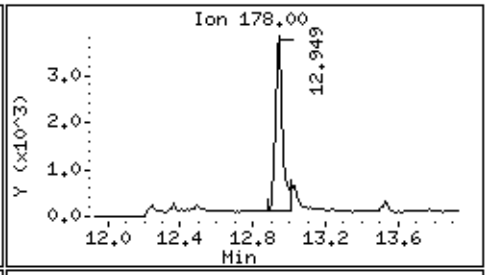
Date : 20-MAR-2018 16:27

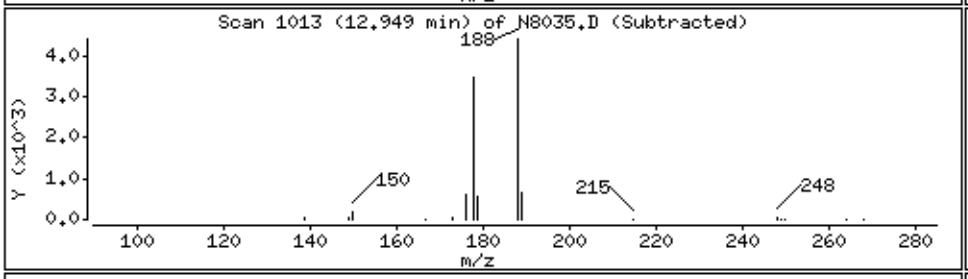
Client ID: CHAAP-BKRD-SB12 Instrument: gcms-n.i

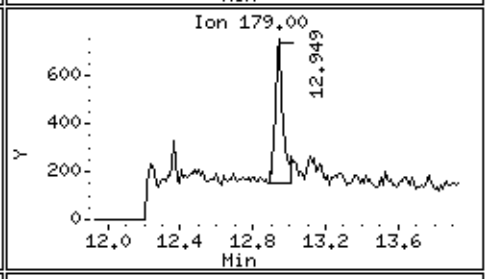
Sample Info: SL2079-5

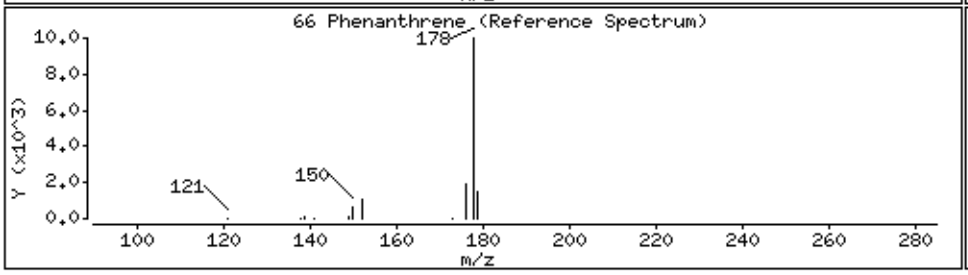
66 Phenanthrene Concentration: 3.00 ug/Kgdrywt

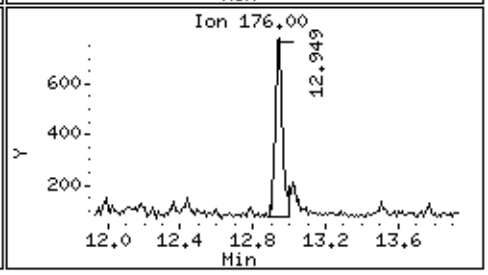




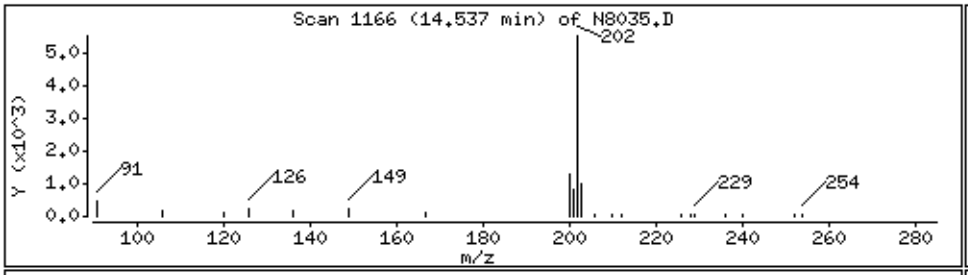


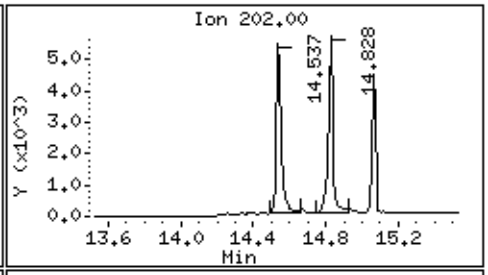


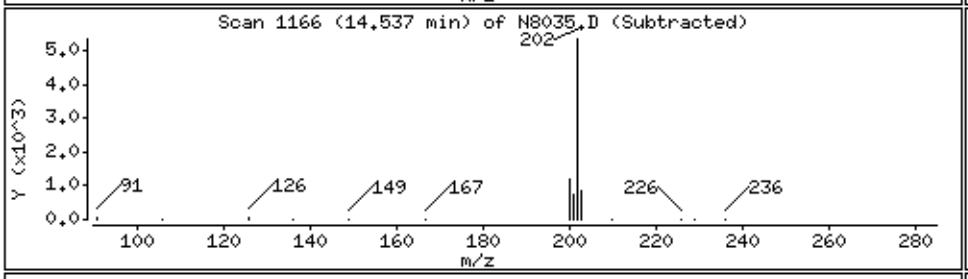


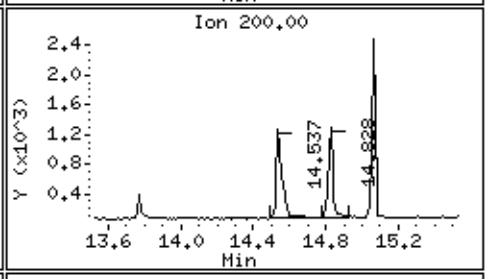


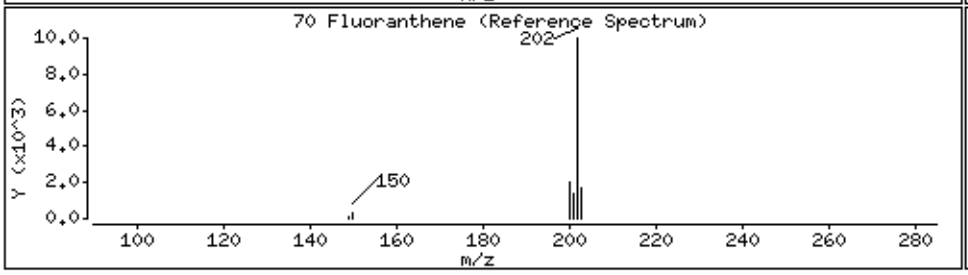
70 Fluoranthene Concentration: 3.21 ug/Kgdrywt

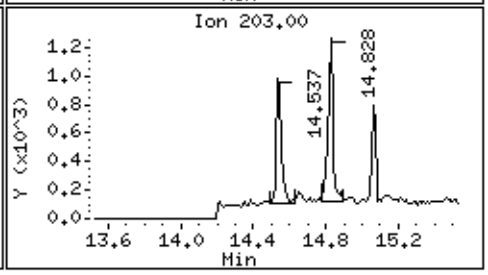












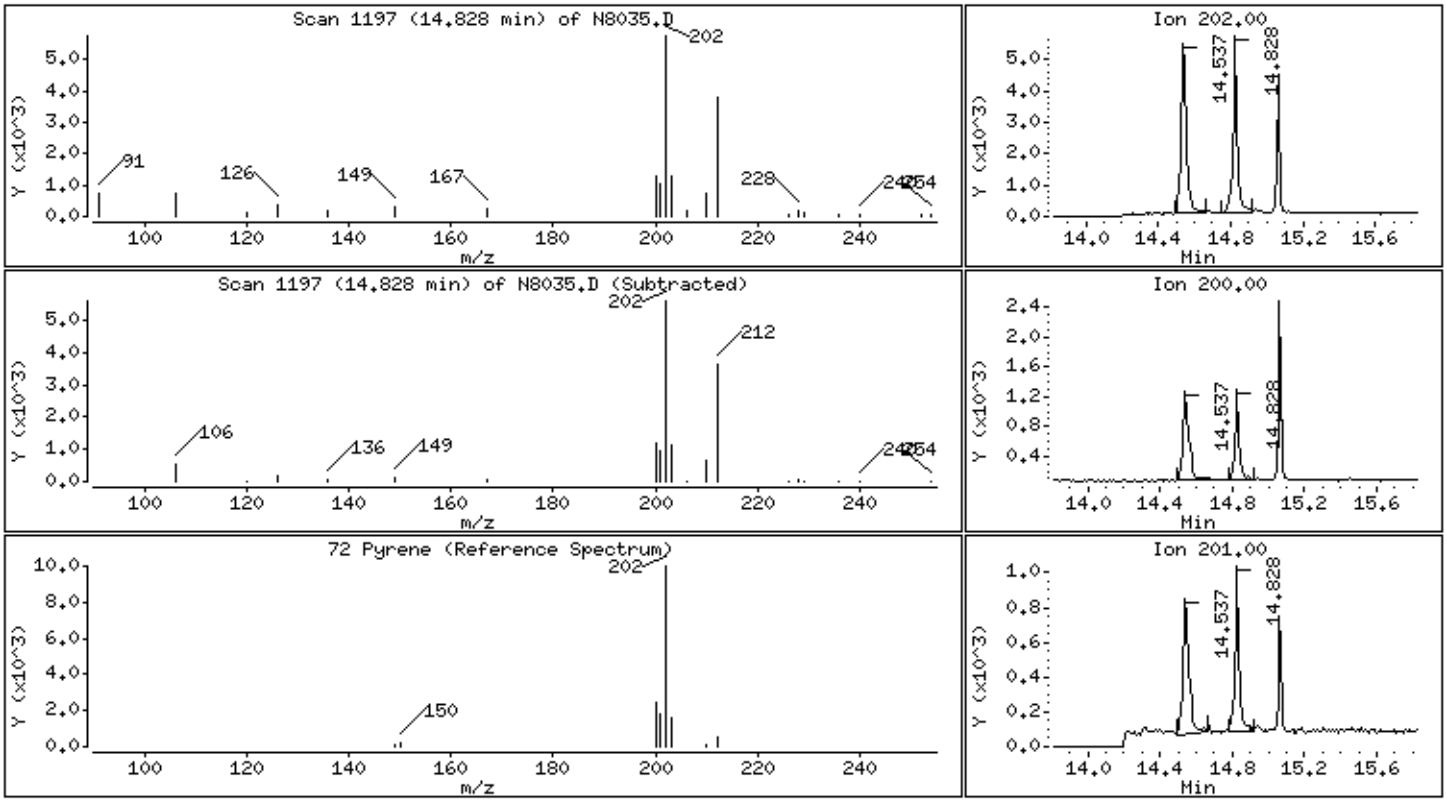
Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8035.D

Date : 20-MAR-2018 16:27

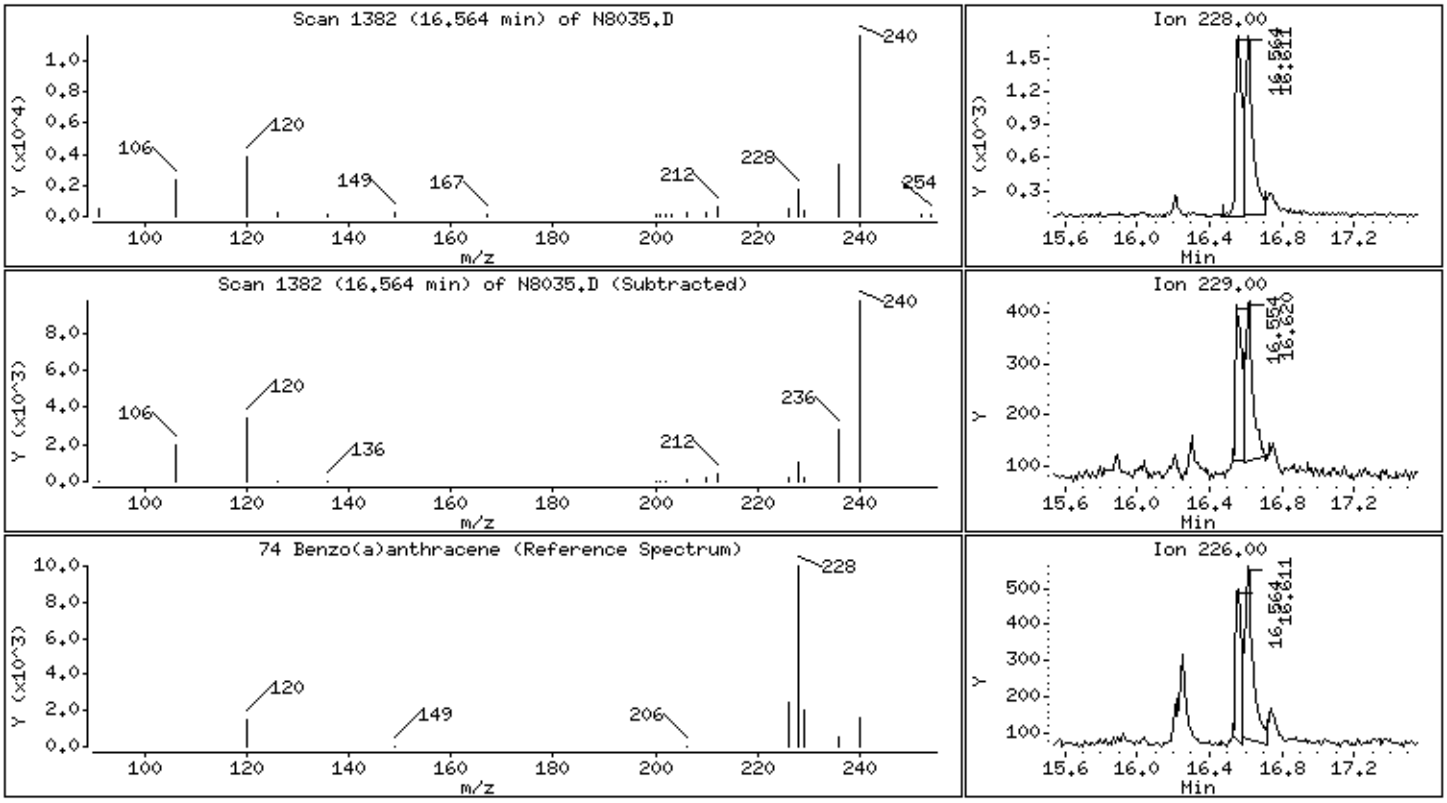
Client ID: CHAAP-BKRD-SB12 Instrument: gcms-n.i

Sample Info: SL2079-5

72 Pyrene Concentration: 3.95 ug/Kgdrywt



74 Benzo(a)anthracene Concentration: 2.82 ug/Kgdrywt



Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-6
Client ID: CHAAP-BKRD-SB13
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: N8036.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: DP
Extraction Method: SW846 3550C
Lab Prep Batch: WG225021

Analysis Date: 20-MAR-18
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: SL
% Solids: 80.
Report Date: 26-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	12	ug/Kgdrywt	1	20	25.	3.2	12.
2-Methylnaphthalene	U	12	ug/Kgdrywt	1	20	25.	2.7	12.
Acenaphthylene	U	12	ug/Kgdrywt	1	20	25.	1.5	12.
Acenaphthene	U	12	ug/Kgdrywt	1	20	25.	1.8	12.
Fluorene	U	12	ug/Kgdrywt	1	20	25.	3.9	12.
Phenanthrene	U	12	ug/Kgdrywt	1	20	25.	2.2	12.
Anthracene	U	12	ug/Kgdrywt	1	20	25.	1.5	12.
Fluoranthene	U	12	ug/Kgdrywt	1	20	25.	2.2	12.
Pyrene	U	12	ug/Kgdrywt	1	20	25.	2.6	12.
Benzo(a)anthracene	U	12	ug/Kgdrywt	1	20	25.	2.3	12.
Chrysene	U	12	ug/Kgdrywt	1	20	25.	2.1	12.
Benzo(b)Fluoranthene	U	12	ug/Kgdrywt	1	20	25.	3.0	12.
Benzo(k)fluoranthene	U	12	ug/Kgdrywt	1	20	25.	3.8	12.
Benzo(a)pyrene	U	12	ug/Kgdrywt	1	20	25.	4.1	12.
Indeno(1,2,3-cd)pyrene	U	12	ug/Kgdrywt	1	20	25.	2.3	12.
Dibenzo(a,h)anthracene	U	12	ug/Kgdrywt	1	20	25.	2.2	12.
Benzo(g,h,i)perylene	U	12	ug/Kgdrywt	1	20	25.	2.5	12.
2-Methylnaphthalene-D10		45.2	%					
Fluorene-D10		53.5	%					
Pyrene-D10		63.0	%					

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Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8036.D
Report Date: 26-Mar-2018 13:04

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N032018.b\N8036.D
Lab Smp Id: SL2079-6 Client Smp ID: CHAAP-BKRD-SB13
Inj Date : 20-MAR-2018 16:59 MS Autotune Date: 25-OCT-2017 07:54
Operator : JCG Inst ID: gcms-n.i
Smp Info : SL2079-6
Misc Info : WG225084,WG225021,WG224895-4
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N032018.b\NSPSIM86.m
Meth Date : 21-Mar-2018 08:53 cgomez Quant Type: ISTD
Cal Date : 16-MAR-2018 14:38 Cal File: N7973.D
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ati-corn-aap.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/Ws*Vi)*(100/(100-M))*1000 * CpndVariable

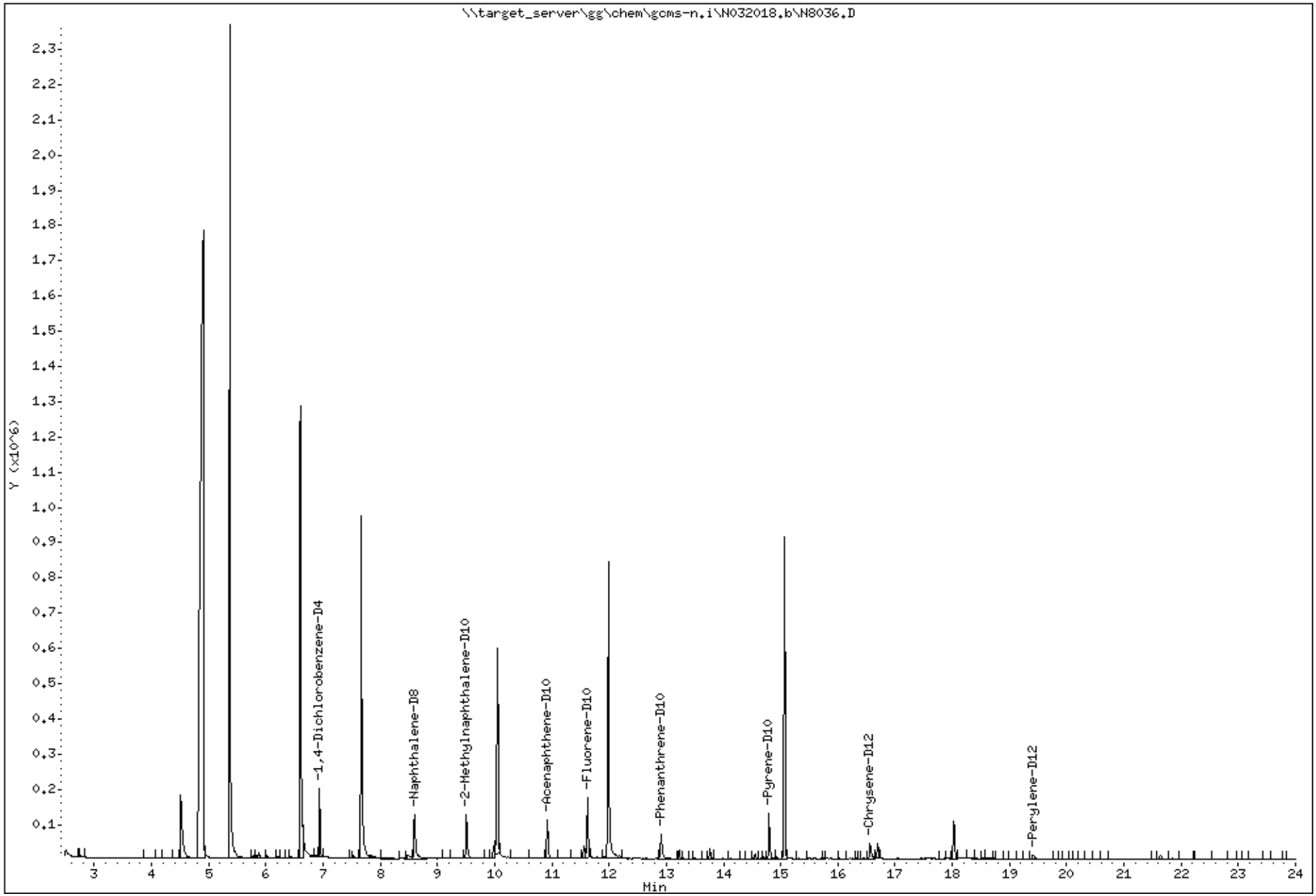
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Final Volume (L)
Ws	0.03050	Weight of Sample (Kg)
Vi	1.000	Volume injected (uL)
M	20.177	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/Kgdrywt)	REVIEW COD
*	10 1,4-Dichlorobenzene-D4	152	6.940	6.940	(1.000)	56273	0.80000	(Q)	
*	26 Naphthalene-D8	136	8.601	8.591	(1.000)	186509	0.80000		
$	32 2-Methylnaphthalene-D10	152	9.508	9.508	(1.105)	99066	0.90284	37.1	
*	47 Acenaphthene-D10	164	10.926	10.926	(1.000)	80260	0.80000		
$	55 Fluorene-D10	174	11.623	11.623	(1.064)	106218	1.07440	44.1	
*	65 Phenanthrene-D10	188	12.906	12.906	(1.000)	116821	0.80000		
$	71 Pyrene-D10	212	14.799	14.799	(0.894)	116051	1.26271	51.9	
*	76 Chrysene-D12	240	16.563	16.563	(1.000)	52039	0.80000		
*	83 Perylene-D12	264	19.411	19.422	(1.000)	34129	0.80000		

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8036.D
Date : 20-MAR-2018 16:59
Client ID: CHAAP-BKRD-SB13 Instrument: gcms-n.i
Sample Info: SL2079-6



Katahdin Analytical Services 2000039

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-7
Client ID: CHAAP-BKRD-SS08
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: N8037.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: DP
Extraction Method: SW846 3550C
Lab Prep Batch: WG225021

Analysis Date: 20-MAR-18
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: SL
% Solids: 79.
Report Date: 26-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	12	ug/Kgdrywt	1	20	25.	3.2	12.
2-Methylnaphthalene	U	12	ug/Kgdrywt	1	20	25.	2.7	12.
Acenaphthylene	U	12	ug/Kgdrywt	1	20	25.	1.5	12.
Acenaphthene	U	12	ug/Kgdrywt	1	20	25.	1.9	12.
Fluorene	U	12	ug/Kgdrywt	1	20	25.	4.0	12.
Phenanthrene	U	12	ug/Kgdrywt	1	20	25.	2.2	12.
Anthracene	U	12	ug/Kgdrywt	1	20	25.	1.5	12.
Fluoranthene	J	2.5	ug/Kgdrywt	1	20	25.	2.2	12.
Pyrene	J	2.8	ug/Kgdrywt	1	20	25.	2.6	12.
Benzo(a)anthracene	U	12	ug/Kgdrywt	1	20	25.	2.4	12.
Chrysene	U	12	ug/Kgdrywt	1	20	25.	2.1	12.
Benzo(b)Fluoranthene	U	12	ug/Kgdrywt	1	20	25.	3.0	12.
Benzo(k)fluoranthene	U	12	ug/Kgdrywt	1	20	25.	3.8	12.
Benzo(a)pyrene	U	12	ug/Kgdrywt	1	20	25.	4.1	12.
Indeno(1,2,3-cd)pyrene	U	12	ug/Kgdrywt	1	20	25.	2.4	12.
Dibenzo(a,h)anthracene	U	12	ug/Kgdrywt	1	20	25.	2.2	12.
Benzo(g,h,i)perylene	U	12	ug/Kgdrywt	1	20	25.	2.5	12.
2-Methylnaphthalene-D10		49.7	%					
Fluorene-D10		51.5	%					
Pyrene-D10		45.5	%					

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P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

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Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8037.D
Report Date: 26-Mar-2018 13:04

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N032018.b\N8037.D
Lab Smp Id: SL2079-7 Client Smp ID: CHAAP-BKRD-SS08
Inj Date : 20-MAR-2018 17:30 MS Autotune Date: 25-OCT-2017 07:54
Operator : JCG Inst ID: gcms-n.i
Smp Info : SL2079-7
Misc Info : WG225084,WG225021,WG224895-4
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N032018.b\NSPSIM86.m
Meth Date : 21-Mar-2018 08:53 cgomez Quant Type: ISTD
Cal Date : 16-MAR-2018 14:38 Cal File: N7973.D
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ati-corn-aap.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/Ws*Vi)*(100/(100-M))*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Final Volume (L)
Ws	0.03060	Weight of Sample (Kg)
Vi	1.000	Volume injected (uL)
M	21.201	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/Kgdrywt)	REVIEW COD
*	10 1,4-Dichlorobenzene-D4	152	6.940	6.940	(1.000)	56897	0.80000	(Q)	
*	26 Naphthalene-D8	136	8.601	8.591	(1.000)	186844	0.80000		
$	32 2-Methylnaphthalene-D10	152	9.508	9.508	(1.105)	109324	0.99454	41.2	
*	47 Acenaphthene-D10	164	10.926	10.926	(1.000)	83131	0.80000		
$	55 Fluorene-D10	174	11.623	11.623	(1.064)	105713	1.03237	42.8	
*	65 Phenanthrene-D10	188	12.906	12.906	(1.000)	130336	0.80000		
	70 Fluoranthene	202	14.537	14.527	(1.126)	11222	0.05928	2.46(a)	
$	71 Pyrene-D10	212	14.799	14.799	(0.894)	91095	0.91045	37.8	
	72 Pyrene	202	14.818	14.827	(0.895)	11635	0.06676	2.77(aM)	M6
*	76 Chrysene-D12	240	16.563	16.563	(1.000)	56653	0.80000		
*	83 Perylene-D12	264	19.400	19.422	(1.000)	34709	0.80000		

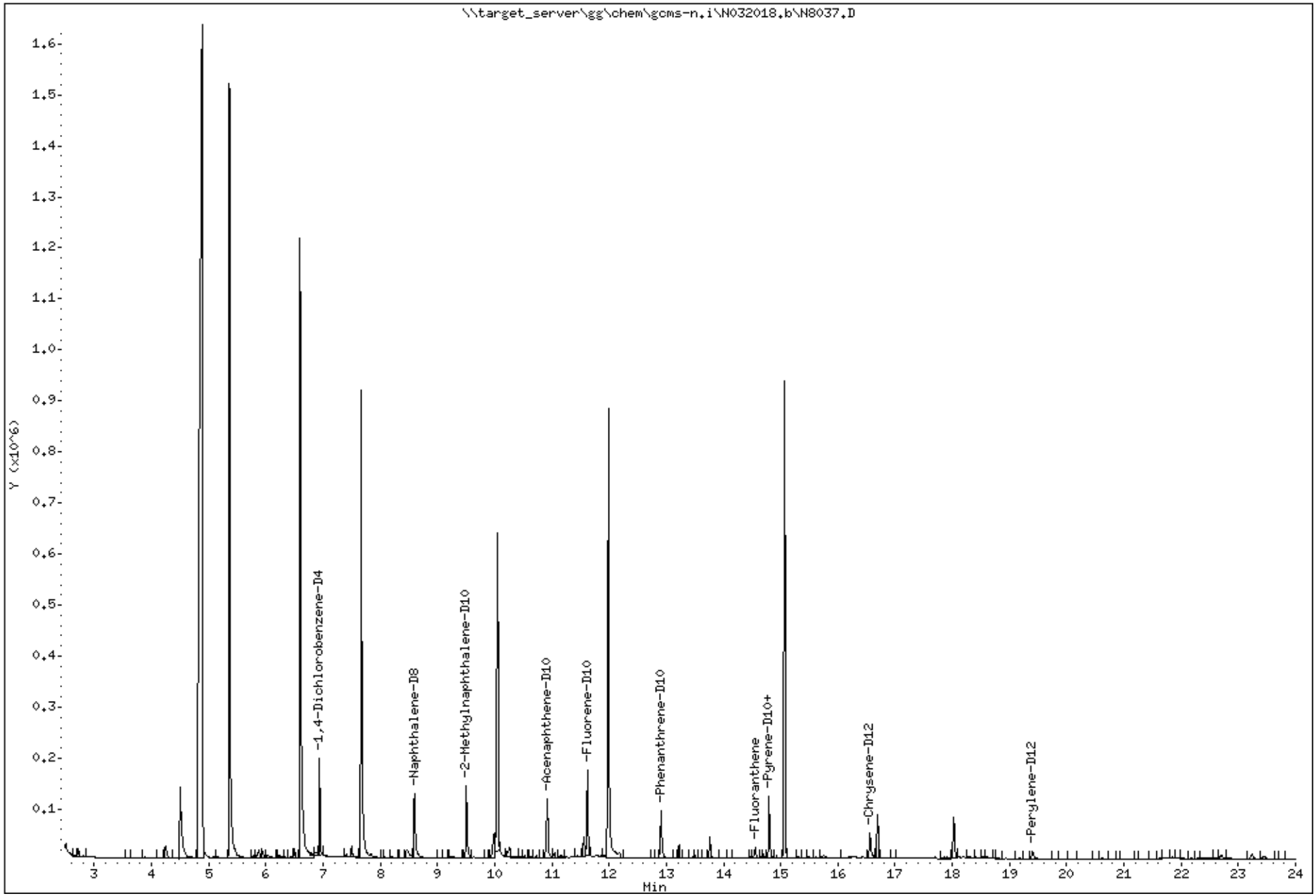
QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

JCG

1:24 pm, Mar 26, 2018

Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8037.D
Date : 20-MAR-2018 17:30
Client ID: CHAAP-BKRD-SS08 Instrument: gcms-n.i
Sample Info: SL2079-7



Katahdin Analytical Services 2000042

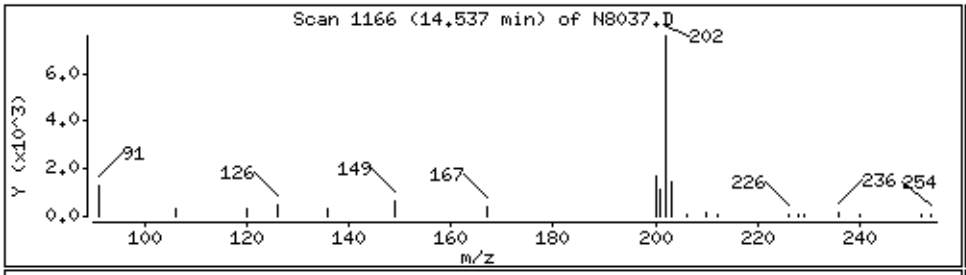
Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8037.D

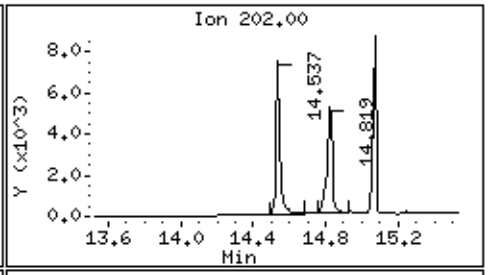
Date : 20-MAR-2018 17:30

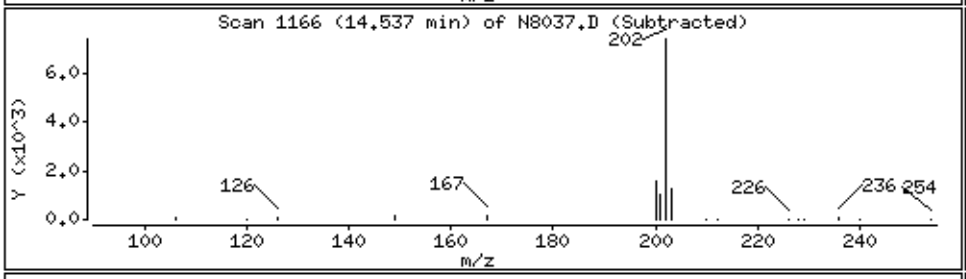
Client ID: CHAAP-BKRD-SS08 Instrument: gcms-n.i

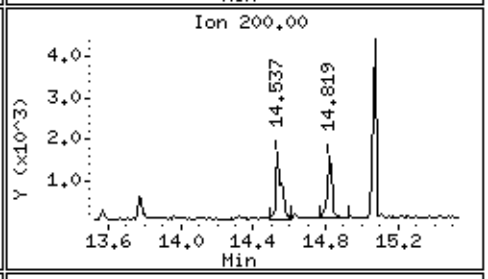
Sample Info: SL2079-7

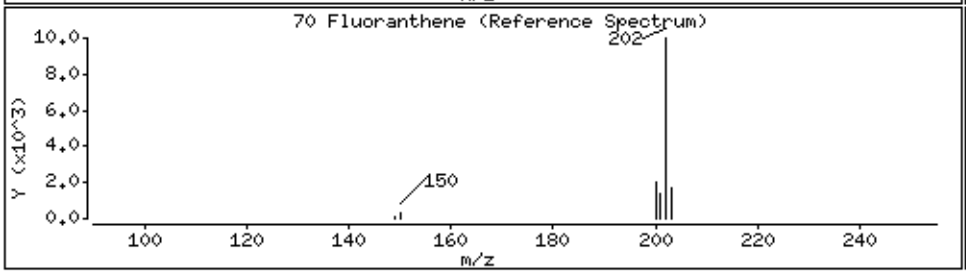
70 Fluoranthene Concentration: 2.46 ug/Kgdrywt

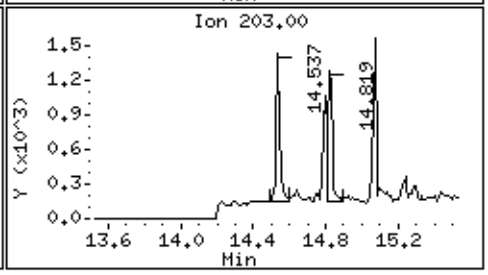




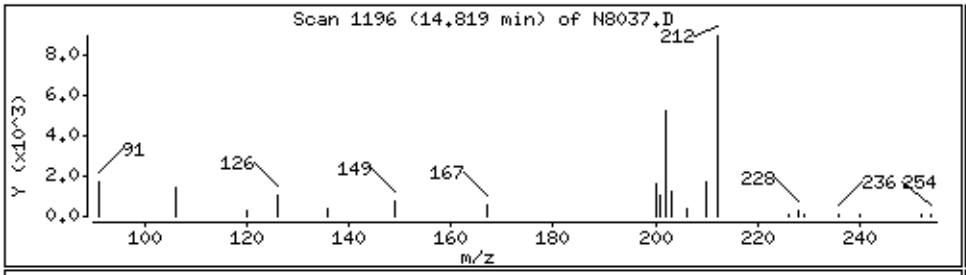


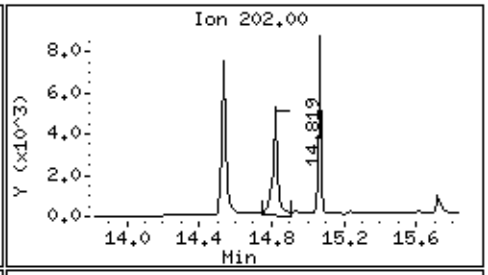


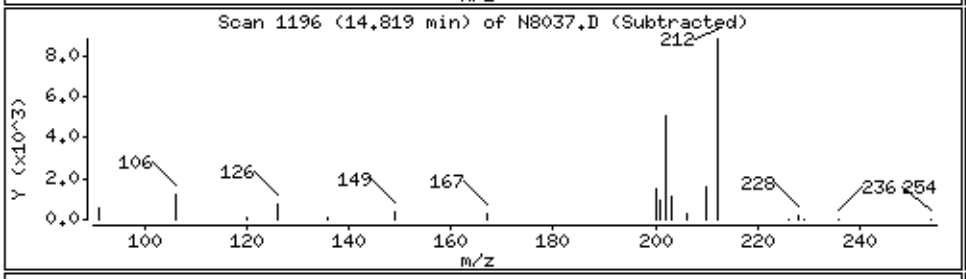


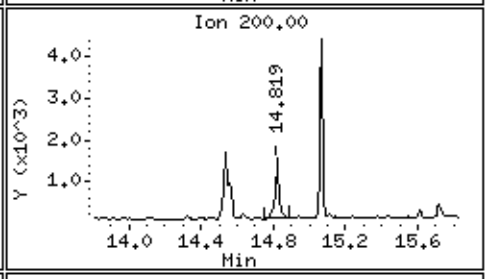


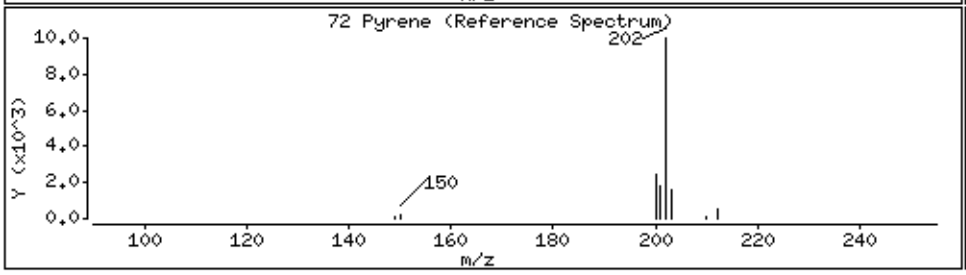
72 Pyrene Concentration: 2.77 ug/Kgdrywt

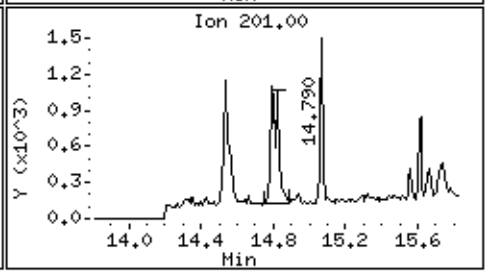








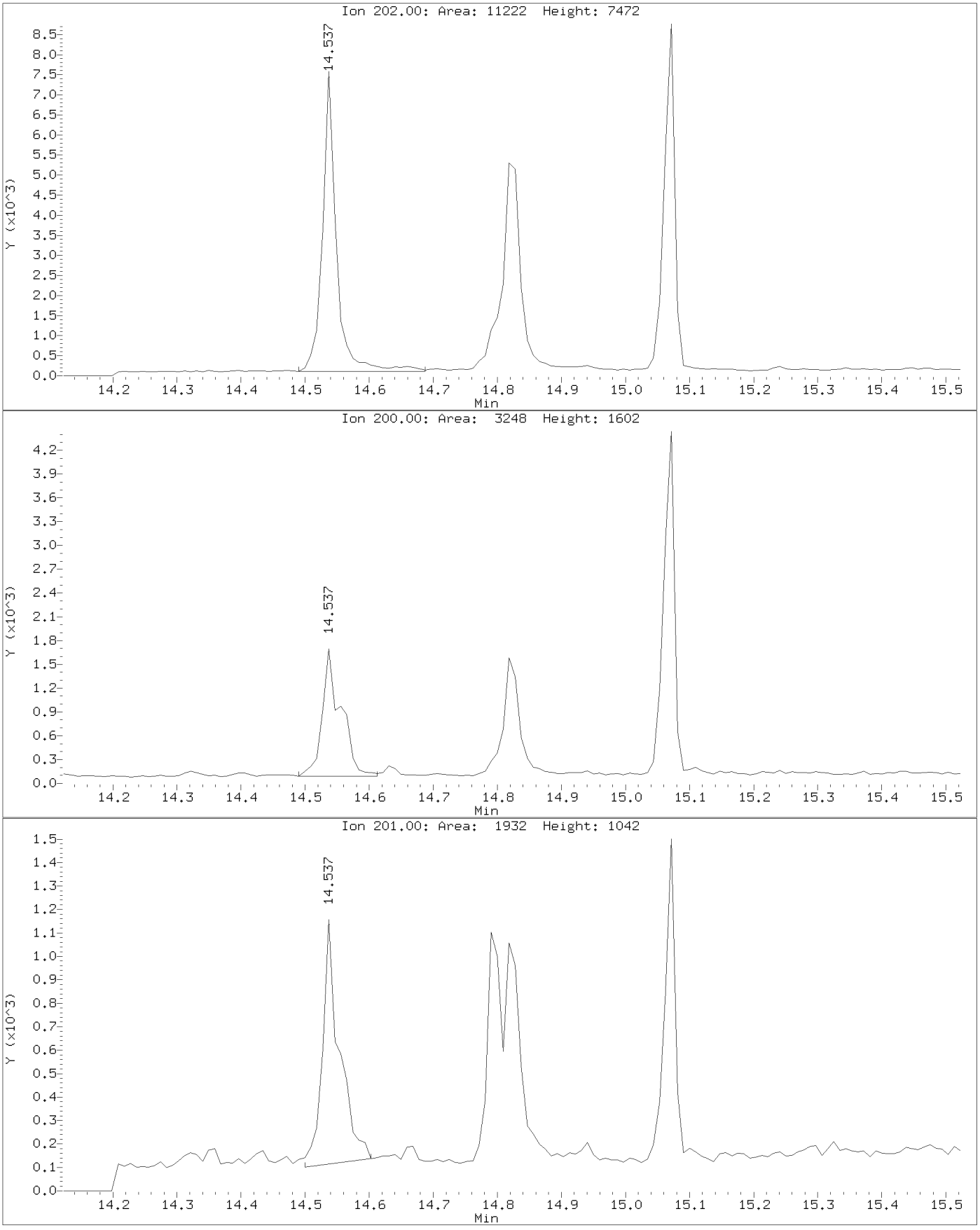




Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8037.D
Injection Date: 20-MAR-2018 17:30
Instrument: gcms-n.i
Client Sample ID: CHAAP-BKRD-SS08

Compound: Pyrene
CAS Number: 129-00-0

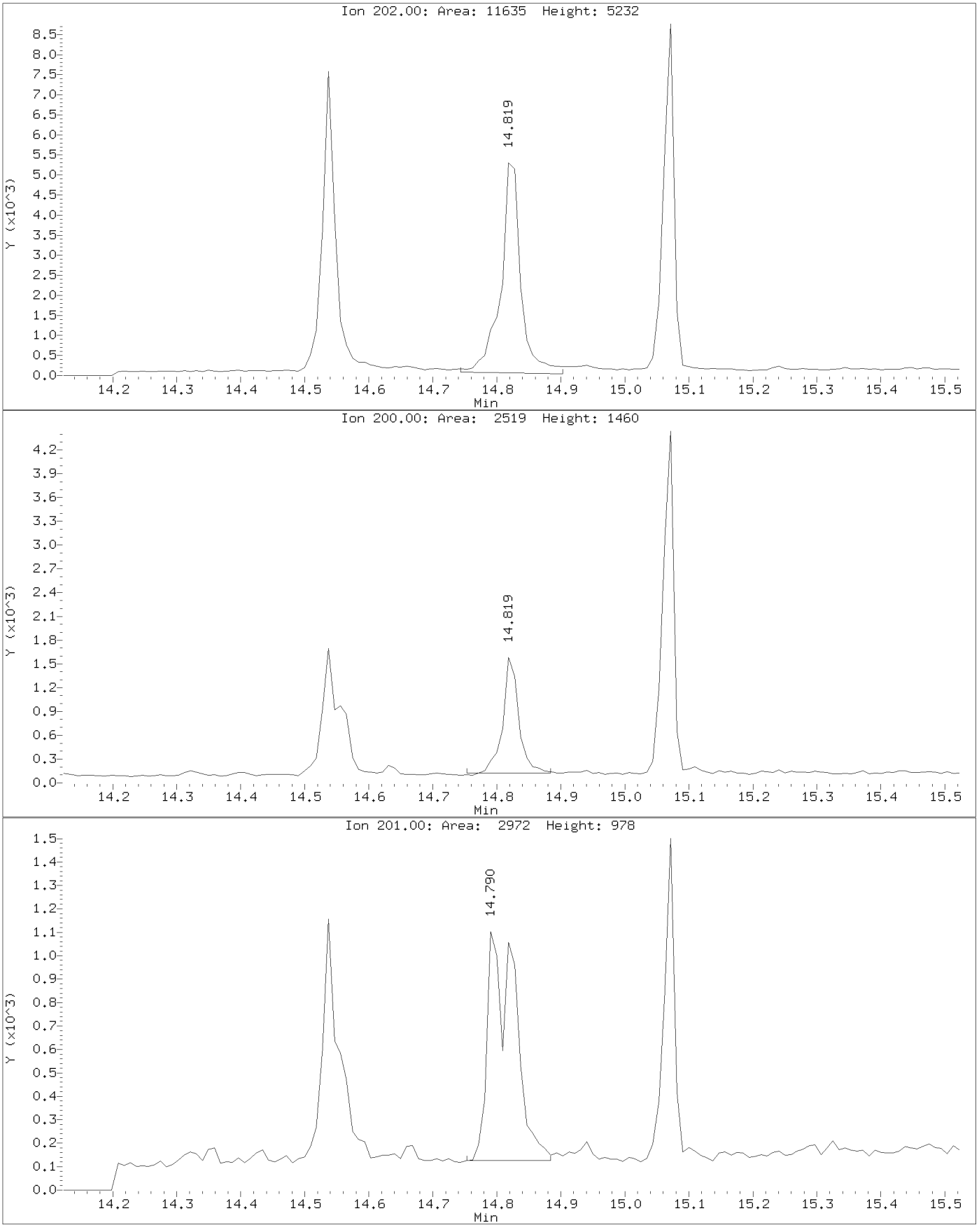
BEFORE MANUAL INTEGRATION



Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8037.D
Injection Date: 20-MAR-2018 17:30
Instrument: gcms-n.i
Client Sample ID: CHAAP-BKRD-SS08

Compound: Pyrene
CAS Number: 129-00-0

AFTER MANUAL INTEGRATION



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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-8
Client ID: CHAAP-BKRD-SS09
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: N8038.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: DP
Extraction Method: SW846 3550C
Lab Prep Batch: WG225021

Analysis Date: 20-MAR-18
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: SL
% Solids: 83.
Report Date: 26-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	12	ug/Kgdrywt	1	20	24.	3.1	12.
2-Methylnaphthalene	U	12	ug/Kgdrywt	1	20	24.	2.6	12.
Acenaphthylene	U	12	ug/Kgdrywt	1	20	24.	1.4	12.
Acenaphthene	U	12	ug/Kgdrywt	1	20	24.	1.8	12.
Fluorene	U	12	ug/Kgdrywt	1	20	24.	3.8	12.
Phenanthrene	U	12	ug/Kgdrywt	1	20	24.	2.1	12.
Anthracene	U	12	ug/Kgdrywt	1	20	24.	1.4	12.
Fluoranthene	J	2.2	ug/Kgdrywt	1	20	24.	2.1	12.
Pyrene	U	12	ug/Kgdrywt	1	20	24.	2.5	12.
Benzo(a)anthracene	U	12	ug/Kgdrywt	1	20	24.	2.2	12.
Chrysene	U	12	ug/Kgdrywt	1	20	24.	2.0	12.
Benzo(b)Fluoranthene	U	12	ug/Kgdrywt	1	20	24.	2.8	12.
Benzo(k)fluoranthene	U	12	ug/Kgdrywt	1	20	24.	3.7	12.
Benzo(a)pyrene	U	12	ug/Kgdrywt	1	20	24.	3.9	12.
Indeno(1,2,3-cd)pyrene	U	12	ug/Kgdrywt	1	20	24.	2.2	12.
Dibenzo(a,h)anthracene	U	12	ug/Kgdrywt	1	20	24.	2.1	12.
Benzo(g,h,i)perylene	U	12	ug/Kgdrywt	1	20	24.	2.4	12.
2-Methylnaphthalene-D10		58.0	%					
Fluorene-D10		54.0	%					
Pyrene-D10		36.2	%					

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Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8038.D
Report Date: 26-Mar-2018 13:04

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N032018.b\N8038.D
Lab Smp Id: SL2079-8 Client Smp ID: CHAAP-BKRD-SS09
Inj Date : 20-MAR-2018 18:02 MS Autotune Date: 25-OCT-2017 07:54
Operator : JCG Inst ID: gcms-n.i
Smp Info : SL2079-8
Misc Info : WG225084,WG225021,WG224895-4
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N032018.b\NSPSIM86.m
Meth Date : 21-Mar-2018 08:53 cgomez Quant Type: ISTD
Cal Date : 16-MAR-2018 14:38 Cal File: N7973.D
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ati-corn-aap.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/Ws*Vi)*(100/(100-M))*1000 * CpndVariable

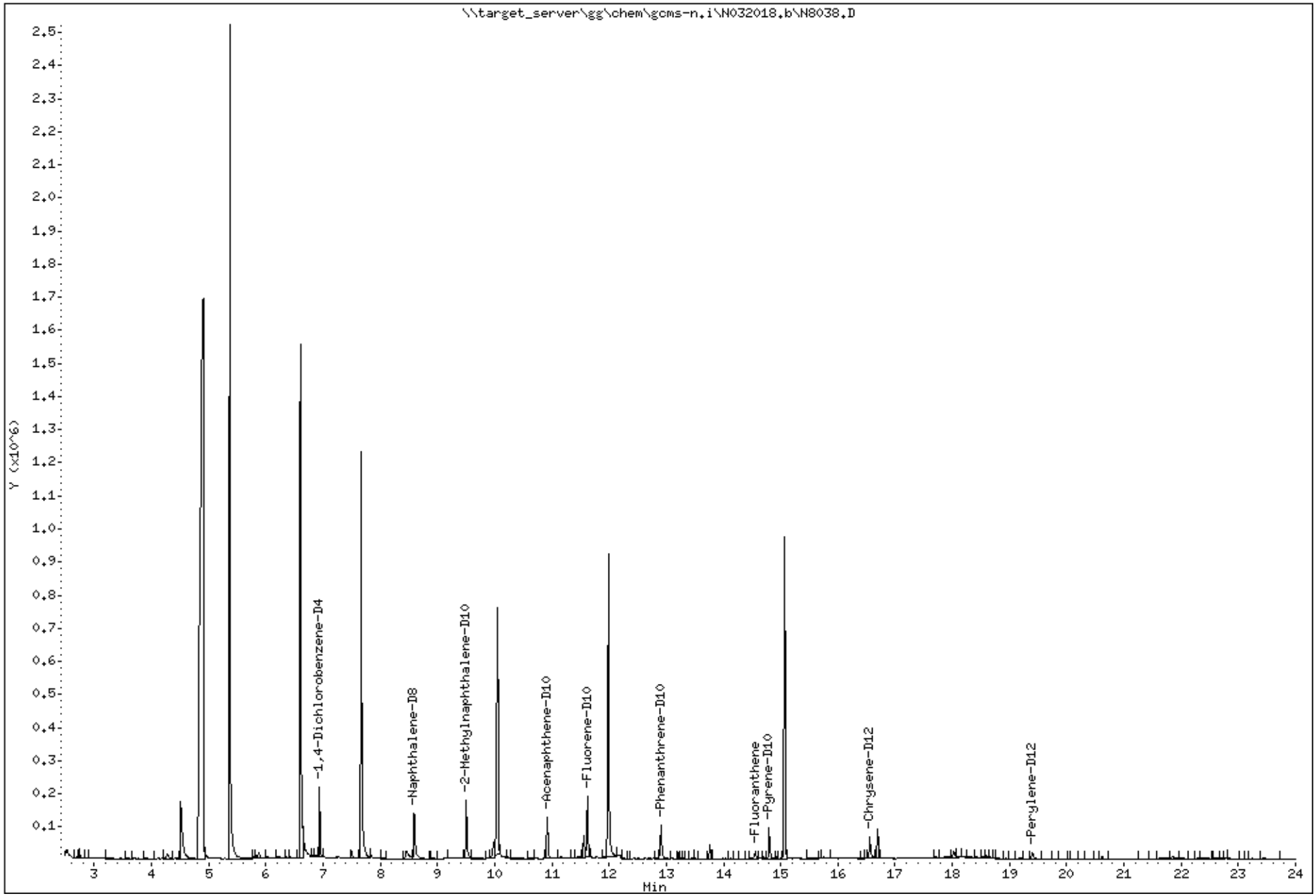
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Final Volume (L)
Ws	0.03050	Weight of Sample (Kg)
Vi	1.000	Volume injected (uL)
M	17.148	% Moisture
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/Kgdrywt)	REVIEW COD
* 10 1,4-Dichlorobenzene-D4	152	6.940	6.940	(1.000)	58589	0.80000	(Q)	
* 26 Naphthalene-D8	136	8.601	8.591	(1.000)	198936	0.80000		
$ 32 2-Methylnaphthalene-D10	152	9.508	9.508	(1.105)	135738	1.15977	45.9	
* 47 Acenaphthene-D10	164	10.926	10.926	(1.000)	88115	0.80000		
$ 55 Fluorene-D10	174	11.623	11.623	(1.064)	116946	1.07747	42.6	
* 65 Phenanthrene-D10	188	12.906	12.906	(1.000)	138073	0.80000		
70 Fluoranthene	202	14.537	14.527	(1.126)	11411	0.05690	2.25(a)	
$ 71 Pyrene-D10	212	14.799	14.799	(0.894)	82497	0.72348	28.6	
* 76 Chrysene-D12	240	16.563	16.563	(1.000)	64565	0.80000		
* 83 Perylene-D12	264	19.400	19.422	(1.000)	41299	0.80000		

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8038.D
Date : 20-MAR-2018 18:02
Client ID: CHAAP-BKRD-SS09 Instrument: gcms-n.i
Sample Info: SL2079-8



Katahdin Analytical Services 2000048

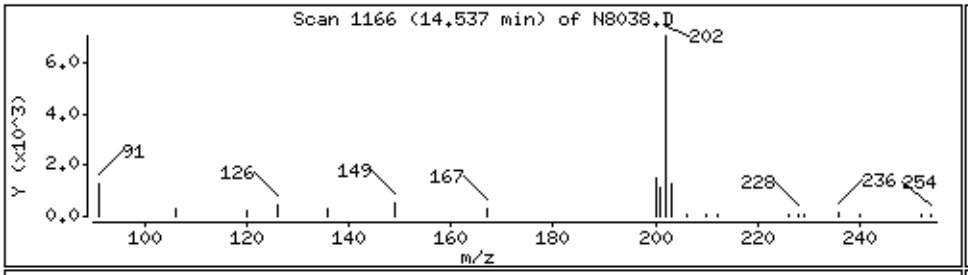
Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8038.D

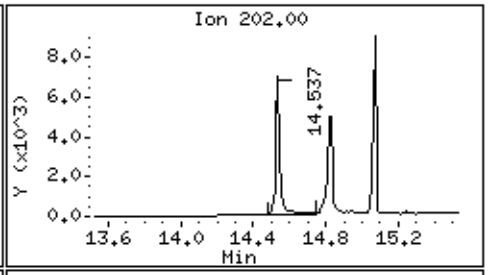
Date : 20-MAR-2018 18:02

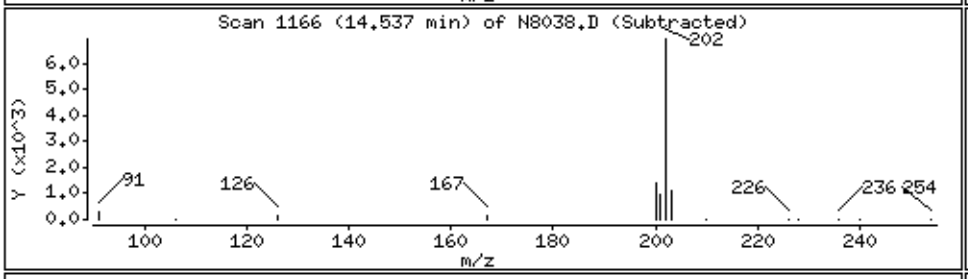
Client ID: CHAAP-BKRD-SS09 Instrument: gcms-n.i

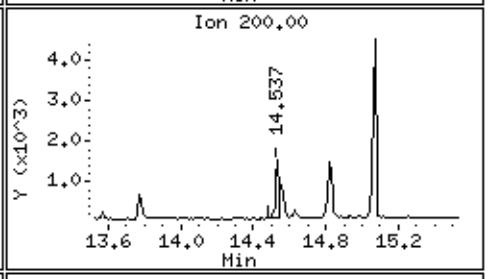
Sample Info: SL2079-8

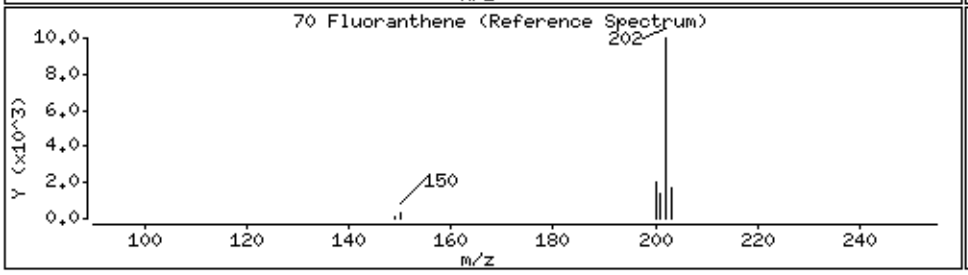
70 Fluoranthene Concentration: 2.25 ug/Kgdrywt

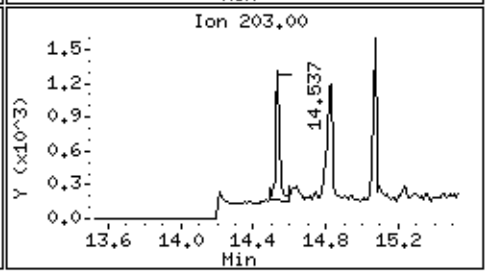












Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-9
Client ID: CHAAP-BKRD-SS10
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: N8039.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: DP
Extraction Method: SW846 3550C
Lab Prep Batch: WG225021

Analysis Date: 20-MAR-18
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: SL
% Solids: 75.
Report Date: 26-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	13	ug/Kgdrywt	1	20	26.	3.4	13.
2-Methylnaphthalene	U	13	ug/Kgdrywt	1	20	26.	2.9	13.
Acenaphthylene	U	13	ug/Kgdrywt	1	20	26.	1.6	13.
Acenaphthene	U	13	ug/Kgdrywt	1	20	26.	2.0	13.
Fluorene	U	13	ug/Kgdrywt	1	20	26.	4.2	13.
Phenanthrene	J	3.4	ug/Kgdrywt	1	20	26.	2.4	13.
Anthracene	U	13	ug/Kgdrywt	1	20	26.	1.6	13.
Fluoranthene	J	4.0	ug/Kgdrywt	1	20	26.	2.4	13.
Pyrene	J	3.4	ug/Kgdrywt	1	20	26.	2.8	13.
Benzo(a)anthracene	U	13	ug/Kgdrywt	1	20	26.	2.5	13.
Chrysene	UMM	13	ug/Kgdrywt	1	20	26.	2.2	13.
Benzo(b)Fluoranthene	U	13	ug/Kgdrywt	1	20	26.	3.2	13.
Benzo(k)fluoranthene	UMM	13	ug/Kgdrywt	1	20	26.	4.1	13.
Benzo(a)pyrene	UMM	13	ug/Kgdrywt	1	20	26.	4.4	13.
Indeno(1,2,3-cd)pyrene	UMM	13	ug/Kgdrywt	1	20	26.	2.5	13.
Dibenzo(a,h)anthracene	UMM	13	ug/Kgdrywt	1	20	26.	2.4	13.
Benzo(g,h,i)perylene	UMM	13	ug/Kgdrywt	1	20	26.	2.6	13.
2-Methylnaphthalene-D10		44.5	%					
Fluorene-D10		46.3	%					
Pyrene-D10		37.8	%					

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Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8039.D
Report Date: 26-Mar-2018 13:04

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N032018.b\N8039.D
Lab Smp Id: SL2079-9 Client Smp ID: CHAAP-BKRD-SS10
Inj Date : 20-MAR-2018 18:34 MS Autotune Date: 25-OCT-2017 07:54
Operator : JCG Inst ID: gcms-n.i
Smp Info : SL2079-9
Misc Info : WG225084,WG225021,WG224895-4
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N032018.b\NSPSIM86.m
Meth Date : 21-Mar-2018 08:53 cgomez Quant Type: ISTD
Cal Date : 16-MAR-2018 14:38 Cal File: N7973.D
Als bottle: 17
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ati-corn-aap.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/Ws*Vi)*(100/(100-M))*1000 * CpndVariable

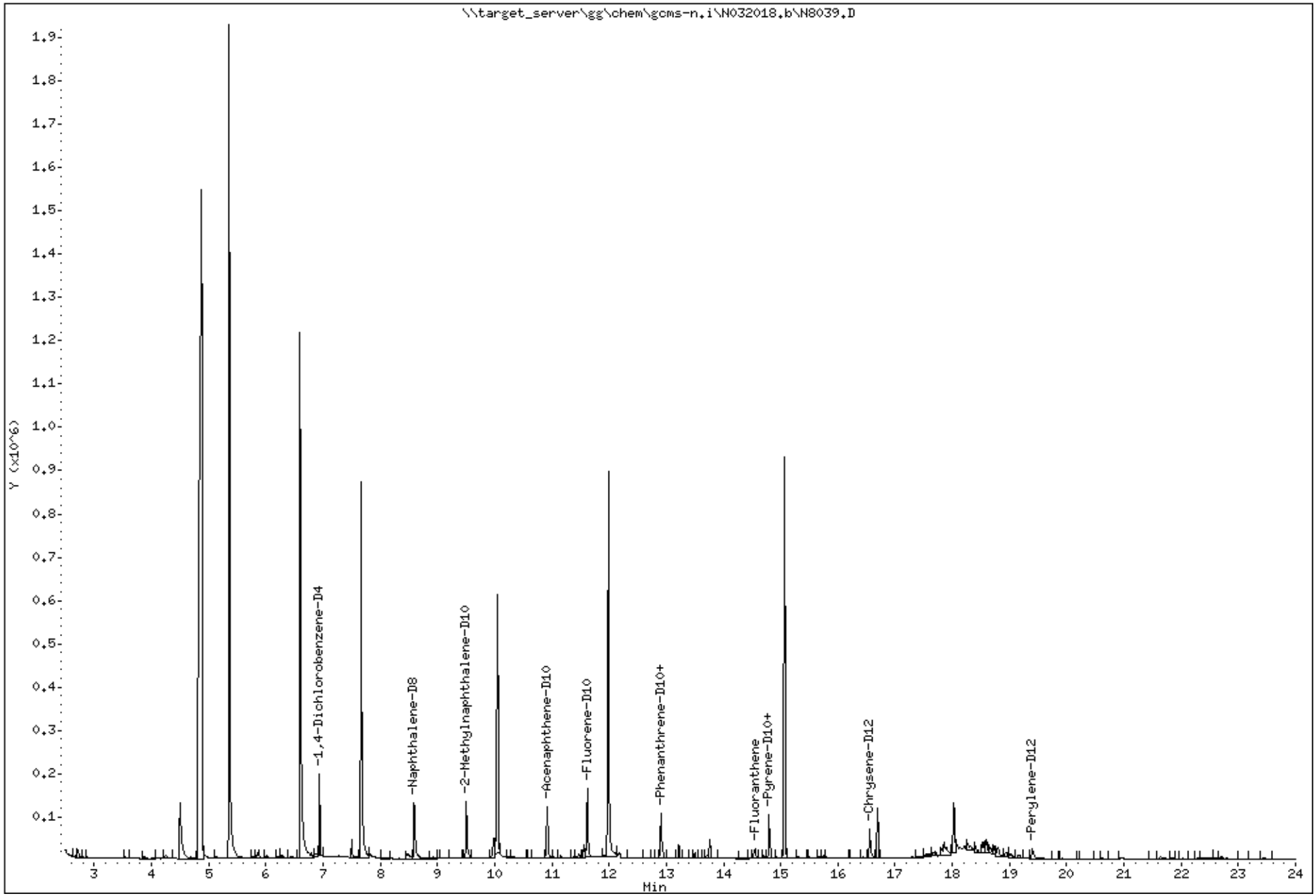
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Final Volume (L)
Ws	0.03050	Weight of Sample (Kg)
Vi	1.000	Volume injected (uL)
M	25.390	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/Kgdrywt)	REVIEW COD
*	10 1,4-Dichlorobenzene-D4	152	6.940	6.940	(1.000)	55286	0.80000	(Q)	
*	26 Naphthalene-D8	136	8.591	8.591	(1.000)	192013	0.80000		
$	32 2-Methylnaphthalene-D10	152	9.508	9.508	(1.107)	100504	0.88969	39.1	
*	47 Acenaphthene-D10	164	10.926	10.926	(1.000)	87094	0.80000		
$	55 Fluorene-D10	174	11.623	11.623	(1.064)	99334	0.92593	40.7	
*	65 Phenanthrene-D10	188	12.906	12.906	(1.000)	134867	0.80000		
	66 Phenanthrene	178	12.938	12.927	(1.002)	16076	0.07715	3.39(a)	
	70 Fluoranthene	202	14.537	14.527	(1.126)	17886	0.09131	4.01(a)	
$	71 Pyrene-D10	212	14.799	14.799	(0.894)	87875	0.75526	33.2	
	72 Pyrene	202	14.818	14.827	(0.895)	15899	0.07845	3.45(a)	
*	76 Chrysene-D12	240	16.554	16.563	(1.000)	65880	0.80000		
*	83 Perylene-D12	264	19.400	19.422	(1.000)	42838	0.80000		

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8039.D
Date : 20-MAR-2018 18:34
Client ID: CHAAP-BKRD-SS10 Instrument: gcms-n.i
Sample Info: SL2079-9



Katahdin Analytical Services 2000052

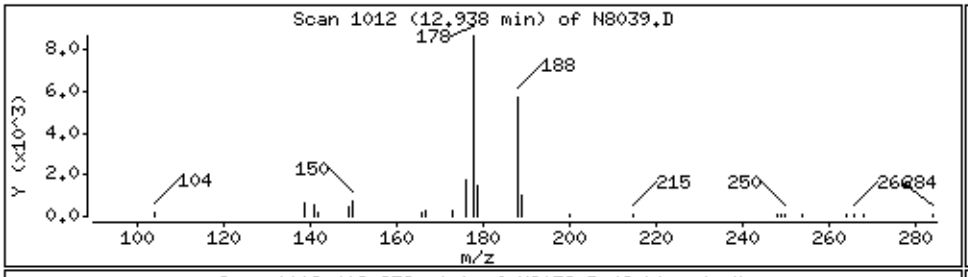
Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8039.D

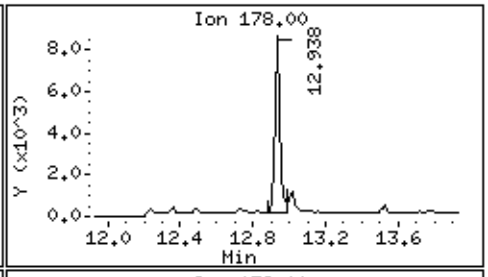
Date : 20-MAR-2018 18:34

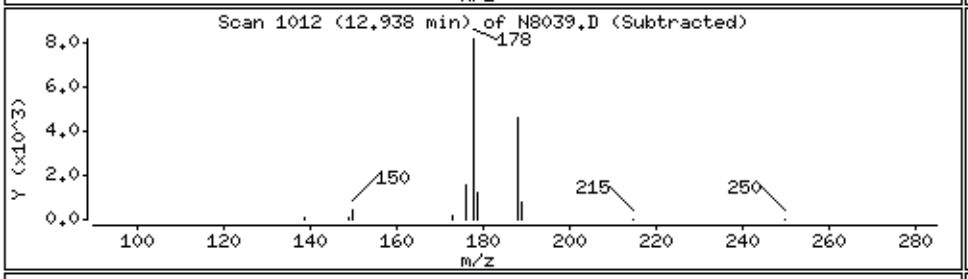
Client ID: CHAAP-BKRD-SS10 Instrument: gcms-n.i

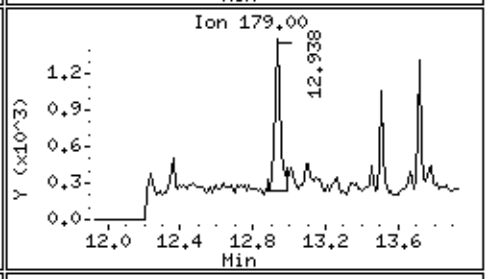
Sample Info: SL2079-9

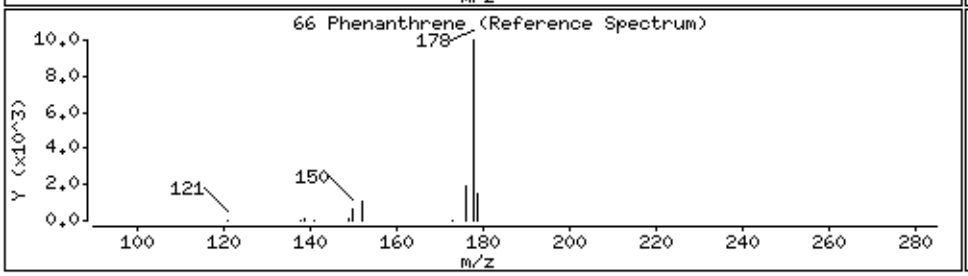
66 Phenanthrene Concentration: 3.39 ug/Kgdrywt

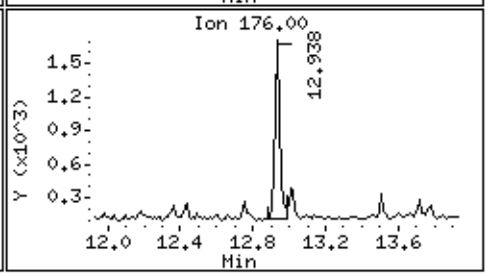




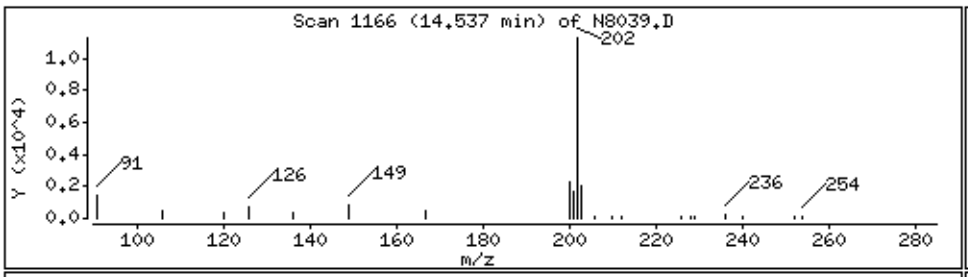


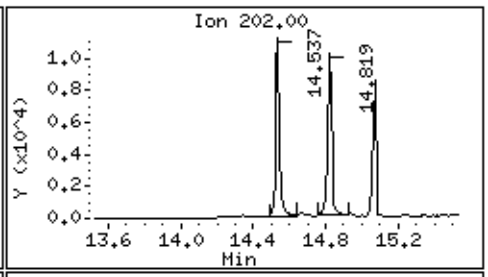


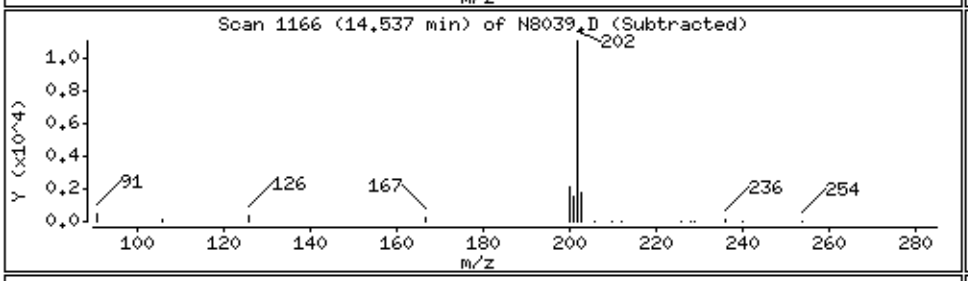


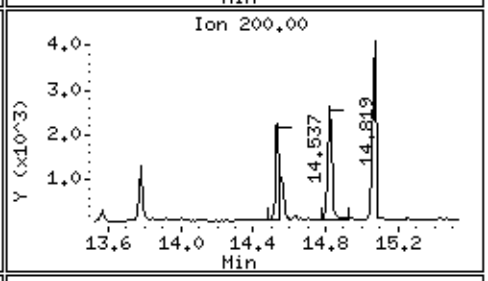


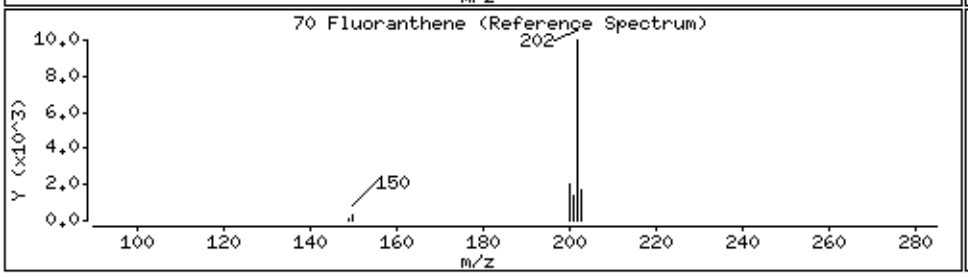
70 Fluoranthene Concentration: 4.01 ug/Kgdrywt

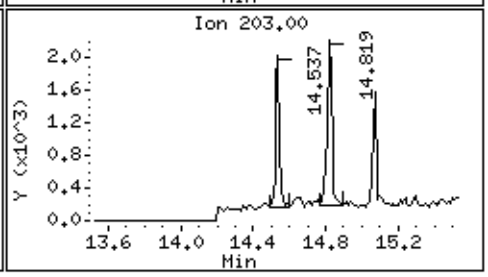












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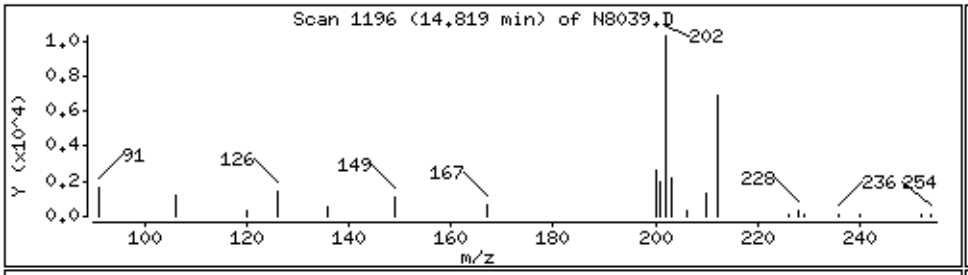
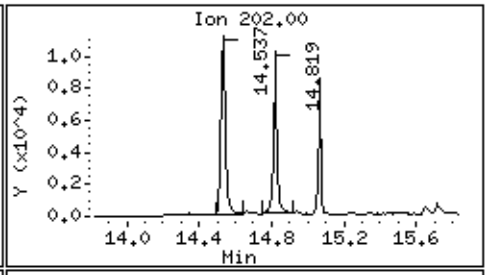
Date : 20-MAR-2018 18:34

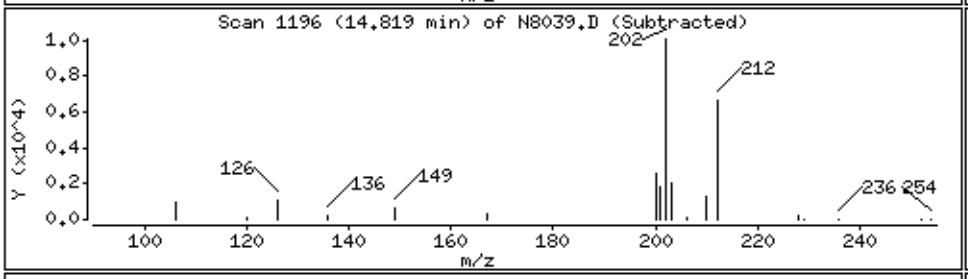
Client ID: CHAAP-BKRD-SS10 Instrument: gcms-n.i

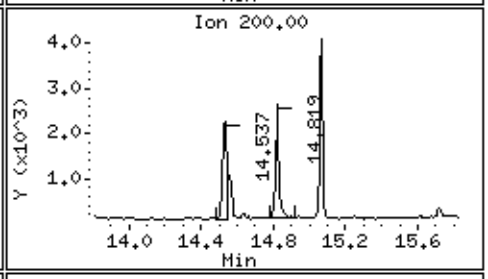
Sample Info: SL2079-9

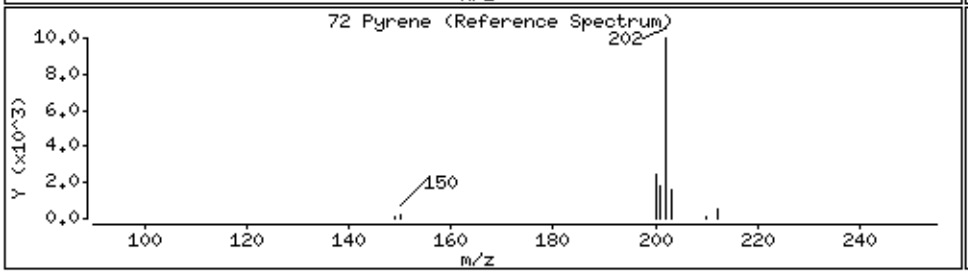
72 Pyrene Concentration: 3.45 ug/Kgdrywt

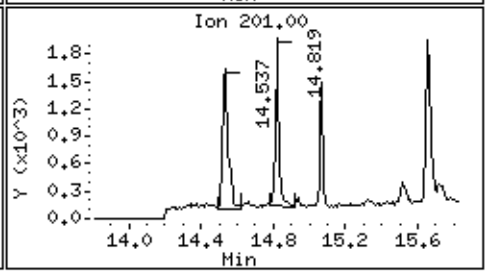












Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-10
Client ID: CHAAP-BKRD-SS11
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: N8060.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: DP
Extraction Method: SW846 3550C
Lab Prep Batch: WG225021

Analysis Date: 21-MAR-18
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: SL
% Solids: 81.
Report Date: 26-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	12	ug/Kgdrywt	1	20	24.	3.1	12.
2-Methylnaphthalene	U	12	ug/Kgdrywt	1	20	24.	2.6	12.
Acenaphthylene	U	12	ug/Kgdrywt	1	20	24.	1.4	12.
Acenaphthene	U	12	ug/Kgdrywt	1	20	24.	1.8	12.
Fluorene	U	12	ug/Kgdrywt	1	20	24.	3.8	12.
Phenanthrene	J	4.8	ug/Kgdrywt	1	20	24.	2.2	12.
Anthracene	U	12	ug/Kgdrywt	1	20	24.	1.4	12.
Fluoranthene	J	6.4	ug/Kgdrywt	1	20	24.	2.2	12.
Pyrene	J	7.0	ug/Kgdrywt	1	20	24.	2.5	12.
Benzo(a)anthracene	J	3.7	ug/Kgdrywt	1	20	24.	2.3	12.
Chrysene	U	12	ug/Kgdrywt	1	20	24.	2.0	12.
Benzo(b)Fluoranthene	J	4.8	ug/Kgdrywt	1	20	24.	2.9	12.
Benzo(k)fluoranthene	U	12	ug/Kgdrywt	1	20	24.	3.7	12.
Benzo(a)pyrene	U	12	ug/Kgdrywt	1	20	24.	4.0	12.
Indeno(1,2,3-cd)pyrene	J	2.5	ug/Kgdrywt	1	20	24.	2.3	12.
Dibenzo(a,h)anthracene	U	12	ug/Kgdrywt	1	20	24.	2.2	12.
Benzo(g,h,i)perylene	J	2.9	ug/Kgdrywt	1	20	24.	2.4	12.
2-Methylnaphthalene-D10		55.0	%					
Fluorene-D10		52.5	%					
Pyrene-D10		44.4	%					

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://www.katahdinlab.com

Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8060.D
Report Date: 26-Mar-2018 13:05

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N032118.b\N8060.D
Lab Smp Id: SL2079-10 Client Smp ID: CHAAP-BKRD-SS11
Inj Date : 21-MAR-2018 15:52 MS Autotune Date: 25-OCT-2017 07:54
Operator : JCG Inst ID: gcms-n.i
Smp Info : SL2079-10
Misc Info : WG225136,WG225021,WG225136-4
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N032118.b\NSPSIM87.m
Meth Date : 22-Mar-2018 09:08 cgomez Quant Type: ISTD
Cal Date : 21-MAR-2018 13:37 Cal File: N8056.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ati-corn-aap.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/Ws*Vi)*(100/(100-M))*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Final Volume (L)
Ws	0.03070	Weight of Sample (Kg)
Vi	1.000	Volume injected (uL)
M	18.664	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/Kgdrywt)	REVIEW COD
*	10 1,4-Dichlorobenzene-D4	152	6.940	6.930	(1.000)	59048	0.80000	(Q)	
*	26 Naphthalene-D8	136	8.591	8.581	(1.000)	189351	0.80000		
$	32 2-Methylnaphthalene-D10	152	9.508	9.498	(1.107)	125237	1.10577	44.3	
*	47 Acenaphthene-D10	164	10.915	10.915	(1.000)	84442	0.80000		
$	55 Fluorene-D10	174	11.623	11.612	(1.065)	108536	1.05115	42.1	
*	65 Phenanthrene-D10	188	12.906	12.895	(1.000)	122144	0.80000		
	66 Phenanthrene	178	12.938	12.916	(1.002)	23699	0.11927	4.78(a)	
	70 Fluoranthene	202	14.537	14.518	(1.126)	26989	0.15957	6.39(a)	
$	71 Pyrene-D10	212	14.799	14.790	(0.894)	70209	0.88853	35.6	
	72 Pyrene	202	14.827	14.809	(0.895)	25357	0.17569	7.04(a)	
	74 Benzo(a)anthracene	228	16.554	16.535	(0.999)	6648	0.09147	3.66(a)	
*	76 Chrysene-D12	240	16.563	16.544	(1.000)	39411	0.80000		
	80 Benzo(b)fluoranthene	252	18.605	18.571	(0.958)	5105	0.11859	4.75(aM)	M3
*	83 Perylene-D12	264	19.411	19.400	(1.000)	20544	0.80000		
	85 Indeno(1,2,3-cd)pyrene	276	21.512	21.467	(1.299)	1369	0.06149	2.46(aM)	M6
	87 Benzo(g,h,i)perylene	276	22.035	21.978	(1.135)	1561	0.07324	2.93(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

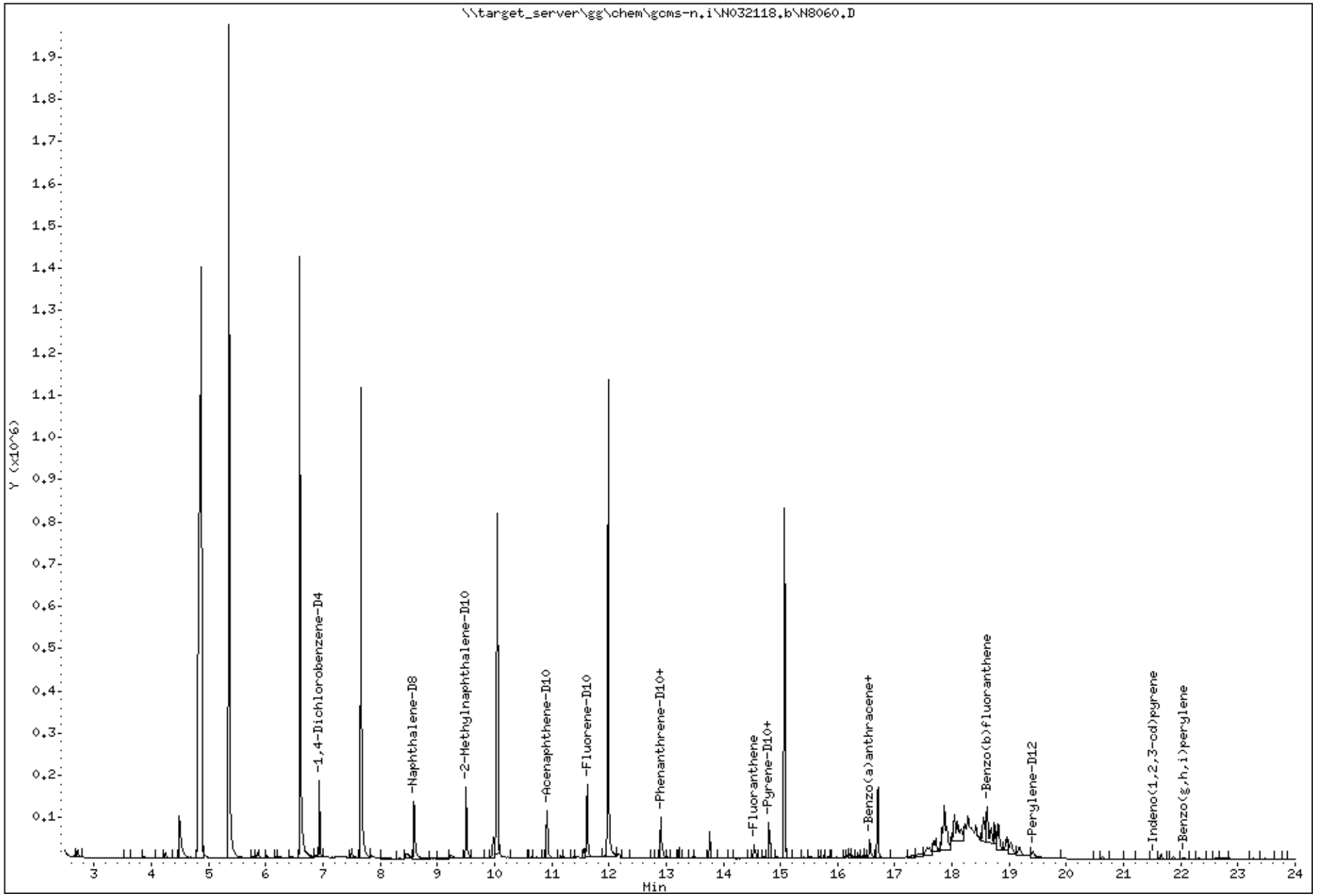
1:24 pm, Mar 26, 2018

Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8060.D
Report Date: 26-Mar-2018 13:05

QC Flag Legend

Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8060.D
Date : 21-MAR-2018 15:52
Client ID: CHAAP-BKRD-SS11 Instrument: gcms-n.i
Sample Info: SL2079-10



Katahdin Analytical Services 2000058

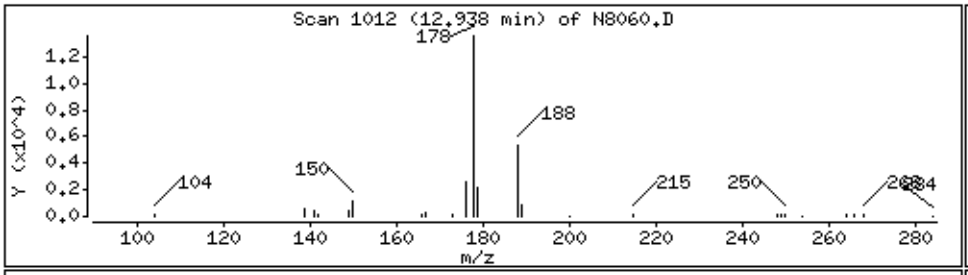
Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8060.D

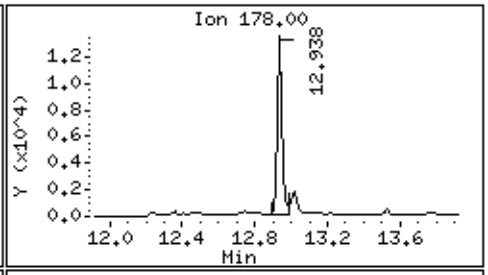
Date : 21-MAR-2018 15:52

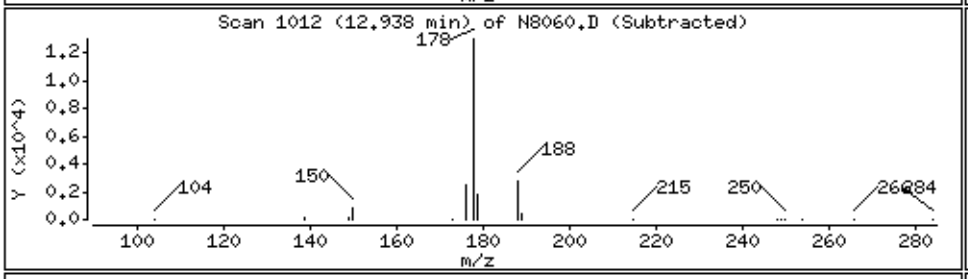
Client ID: CHAAP-BKRD-SS11 Instrument: gcms-n.i

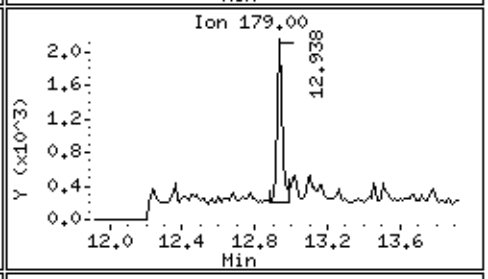
Sample Info: SL2079-10

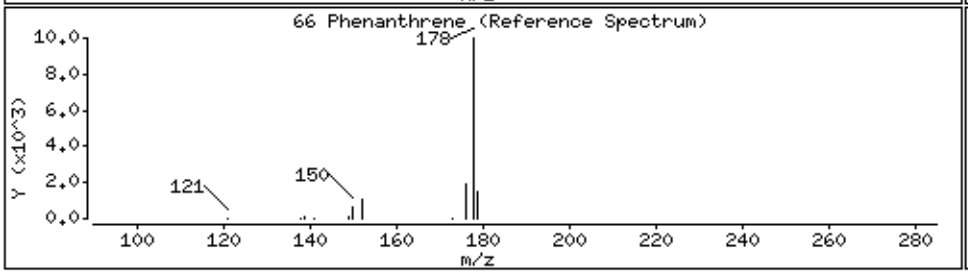
66 Phenanthrene Concentration: 4.78 ug/Kgdrywt

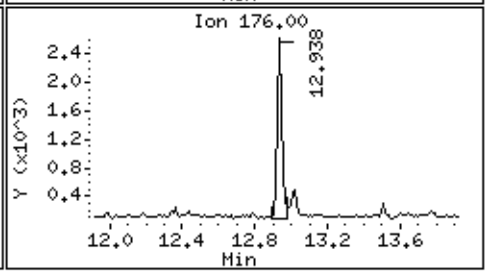




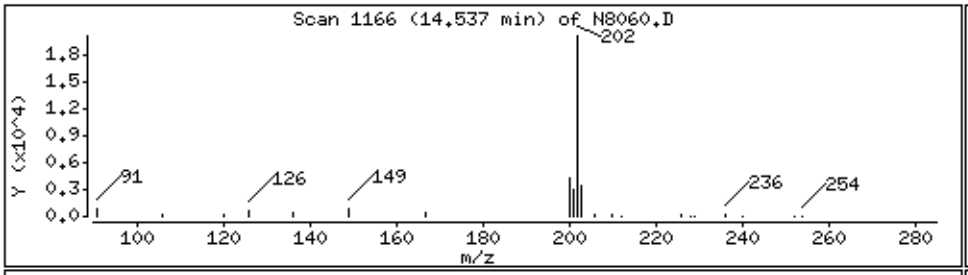


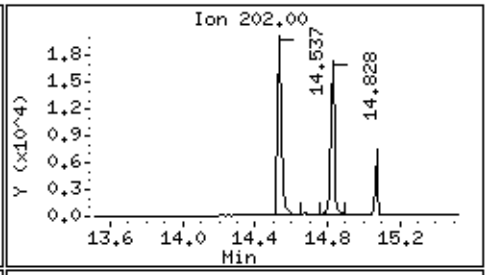


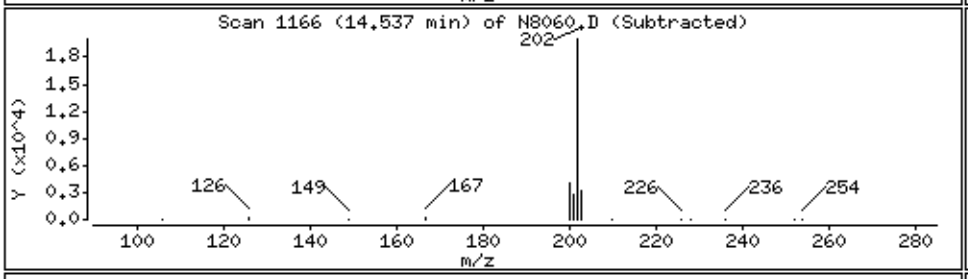


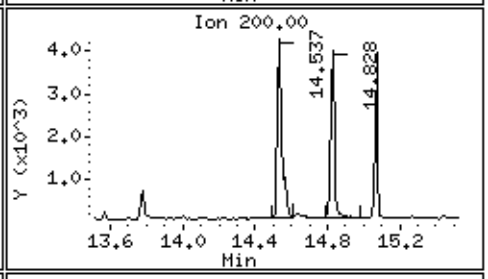


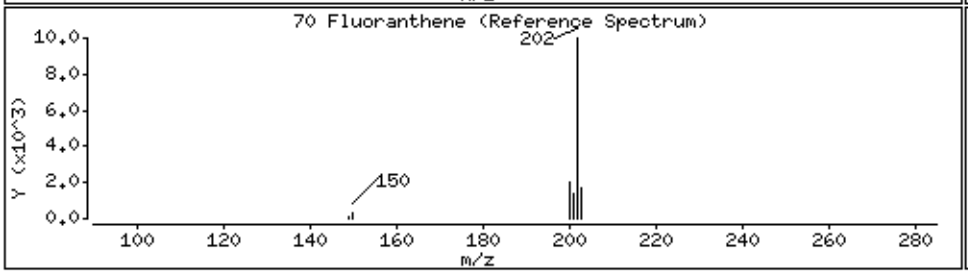
70 Fluoranthene Concentration: 6.39 ug/Kgdrywt

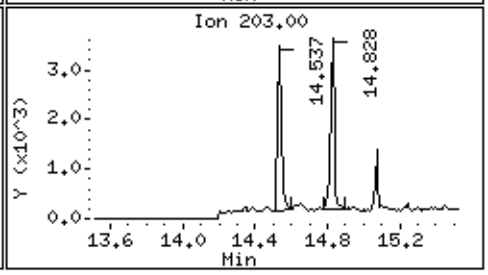












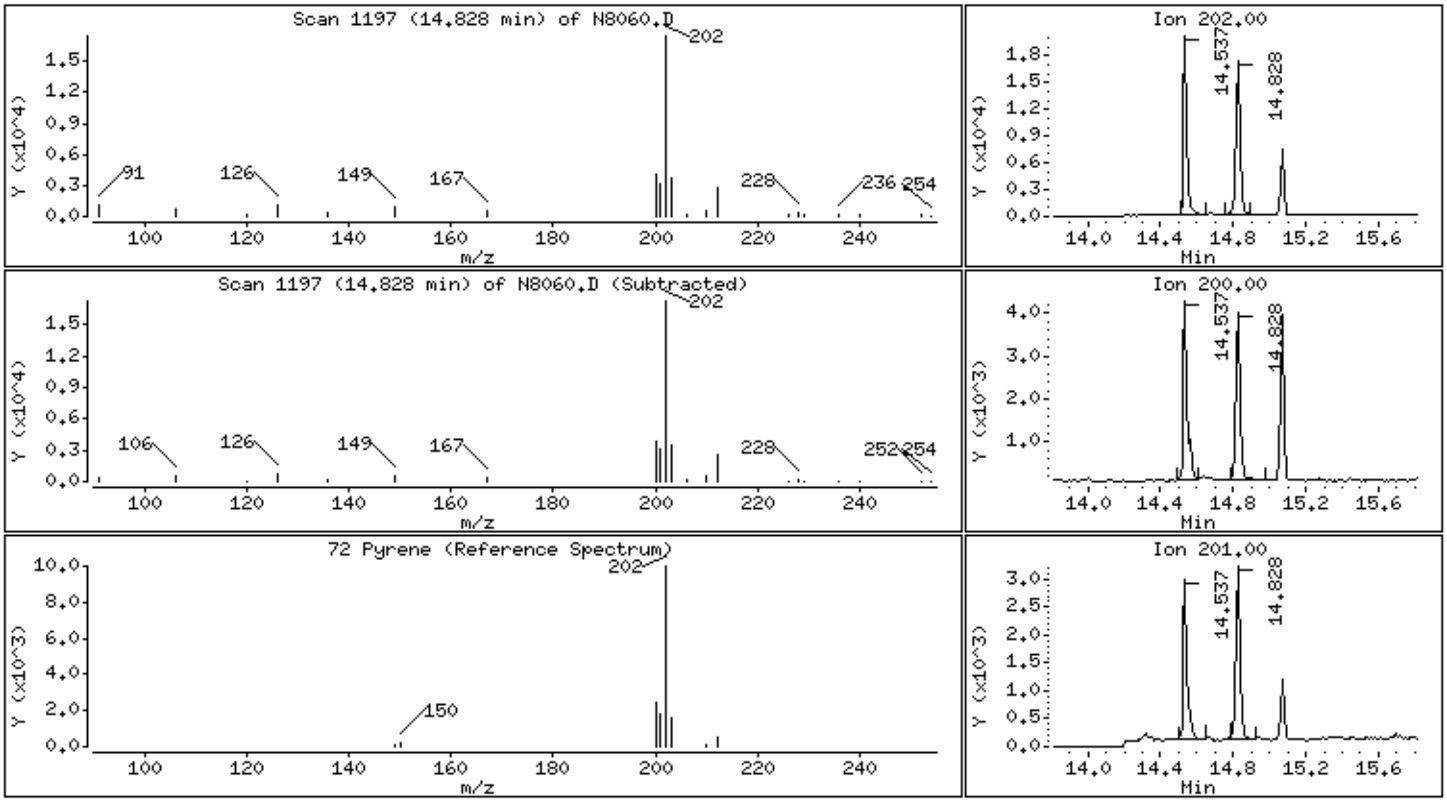
Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8060.D

Date : 21-MAR-2018 15:52

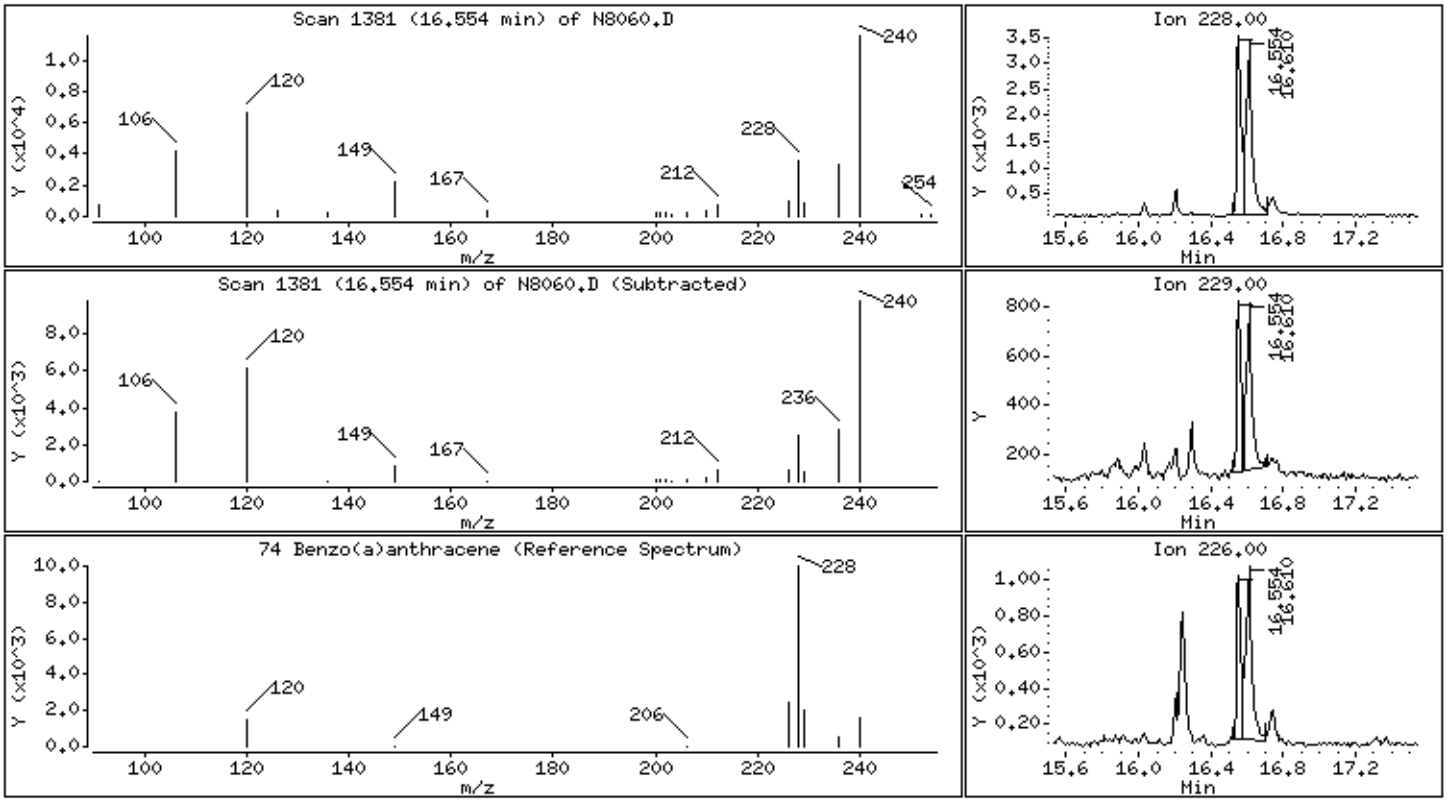
Client ID: CHAAP-BKRD-SS11 Instrument: gcms-n.i

Sample Info: SL2079-10

72 Pyrene Concentration: 7.04 ug/Kgdrywt



74 Benzo(a)anthracene Concentration: 3.66 ug/Kgdrywt



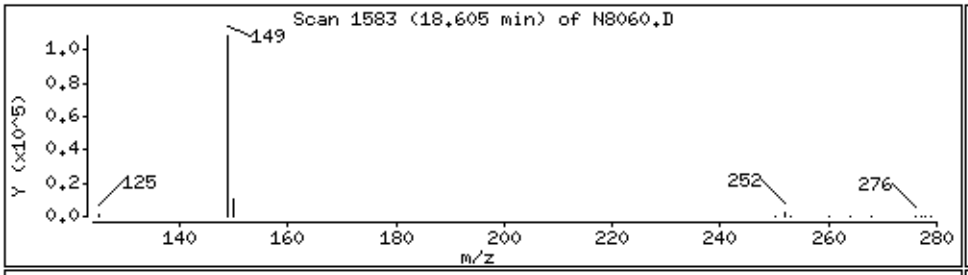
Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8060.D

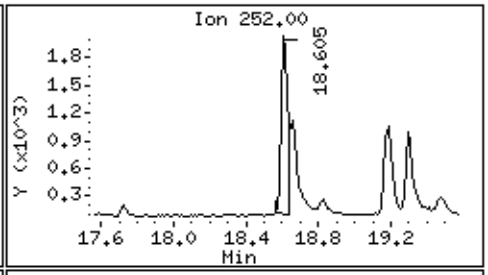
Date : 21-MAR-2018 15:52

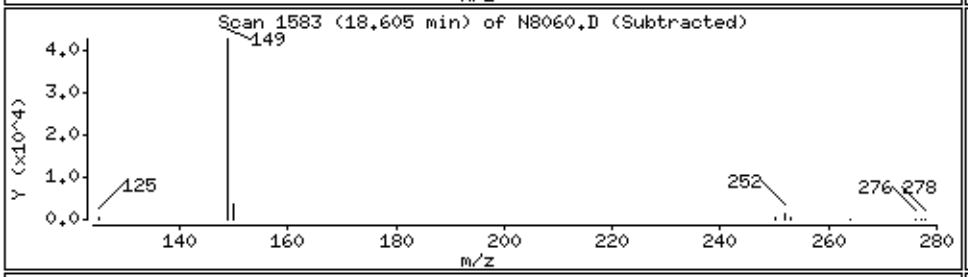
Client ID: CHAAP-BKRD-SS11 Instrument: gcms-n.i

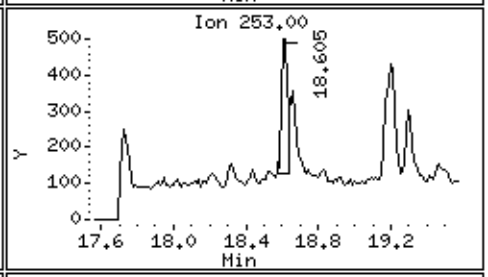
Sample Info: SL2079-10

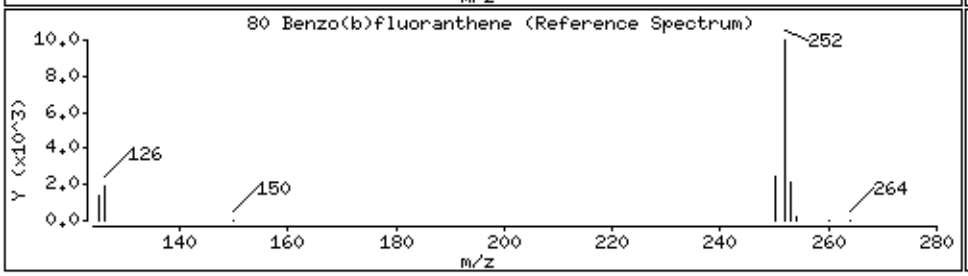
80 Benzo(b)fluoranthene Concentration: 4.75 ug/Kgdrywt

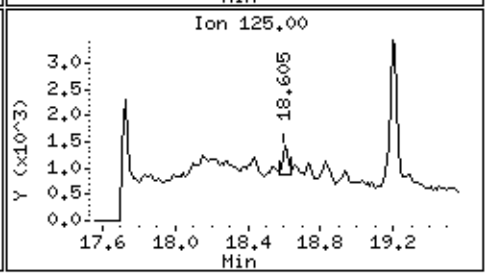




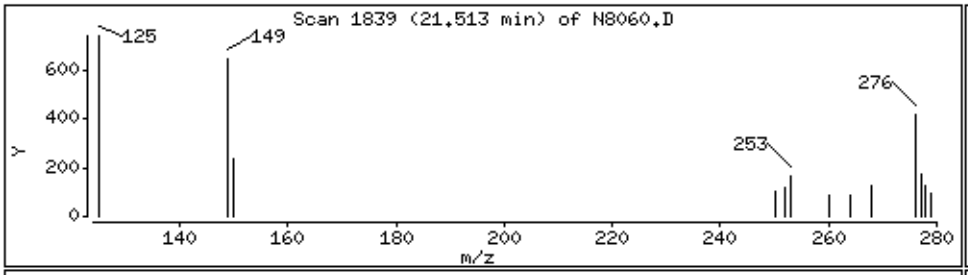


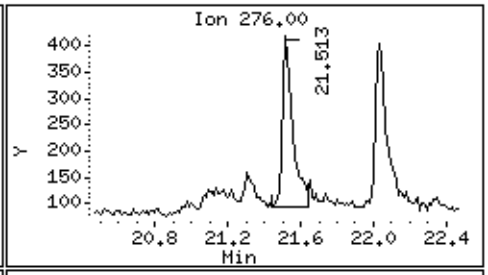


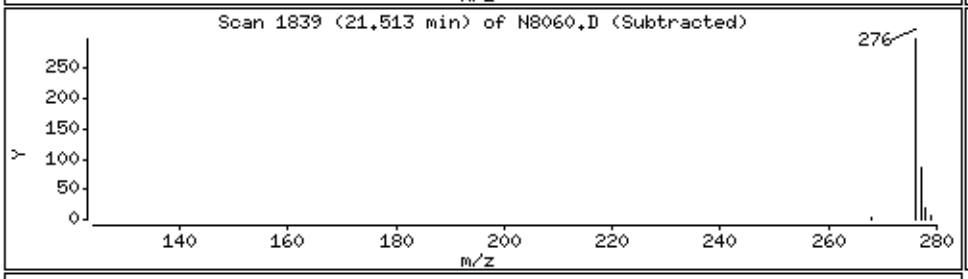


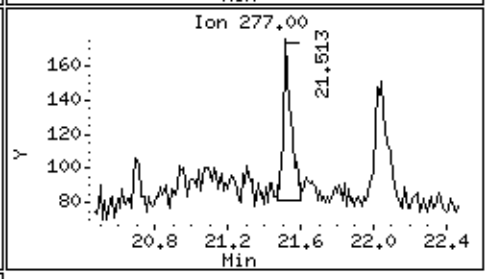


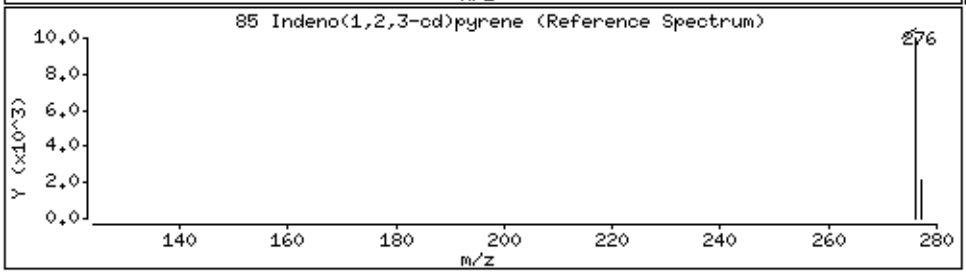
85 Indeno(1,2,3-cd)pyrene Concentration: 2.46 ug/Kgdrywt











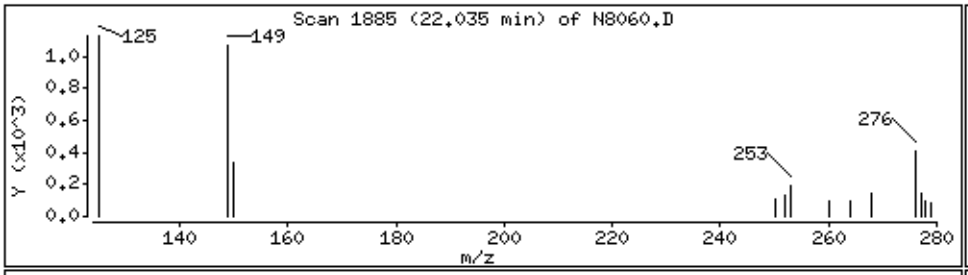
Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8060.D

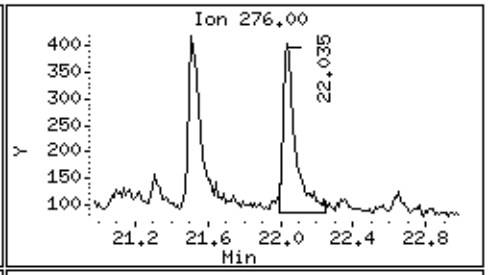
Date : 21-MAR-2018 15:52

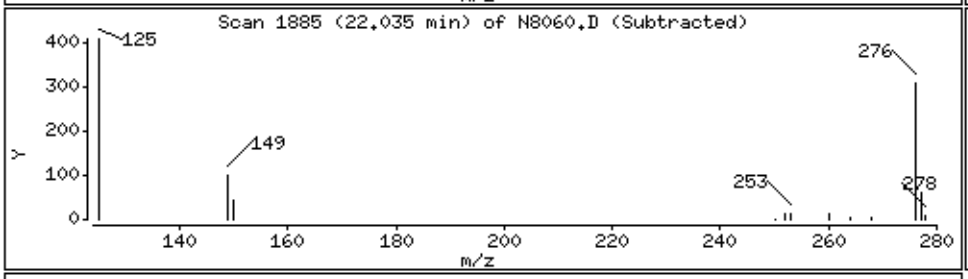
Client ID: CHAAP-BKRD-SS11 Instrument: gcms-n.i

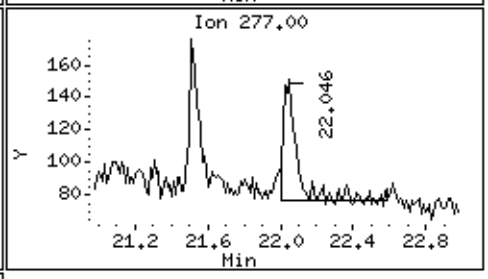
Sample Info: SL2079-10

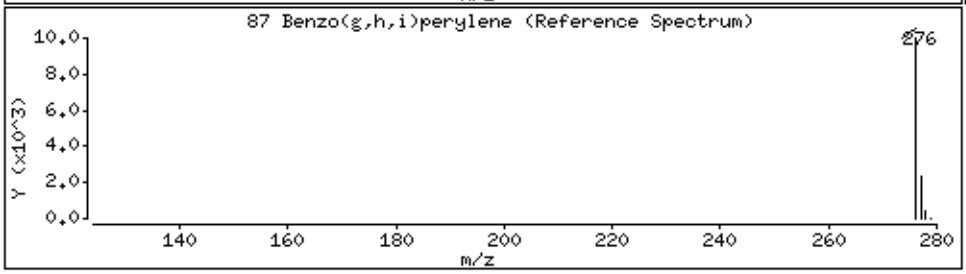
87 Benzo(g,h,i)perylene Concentration: 2.93 ug/Kgdrywt







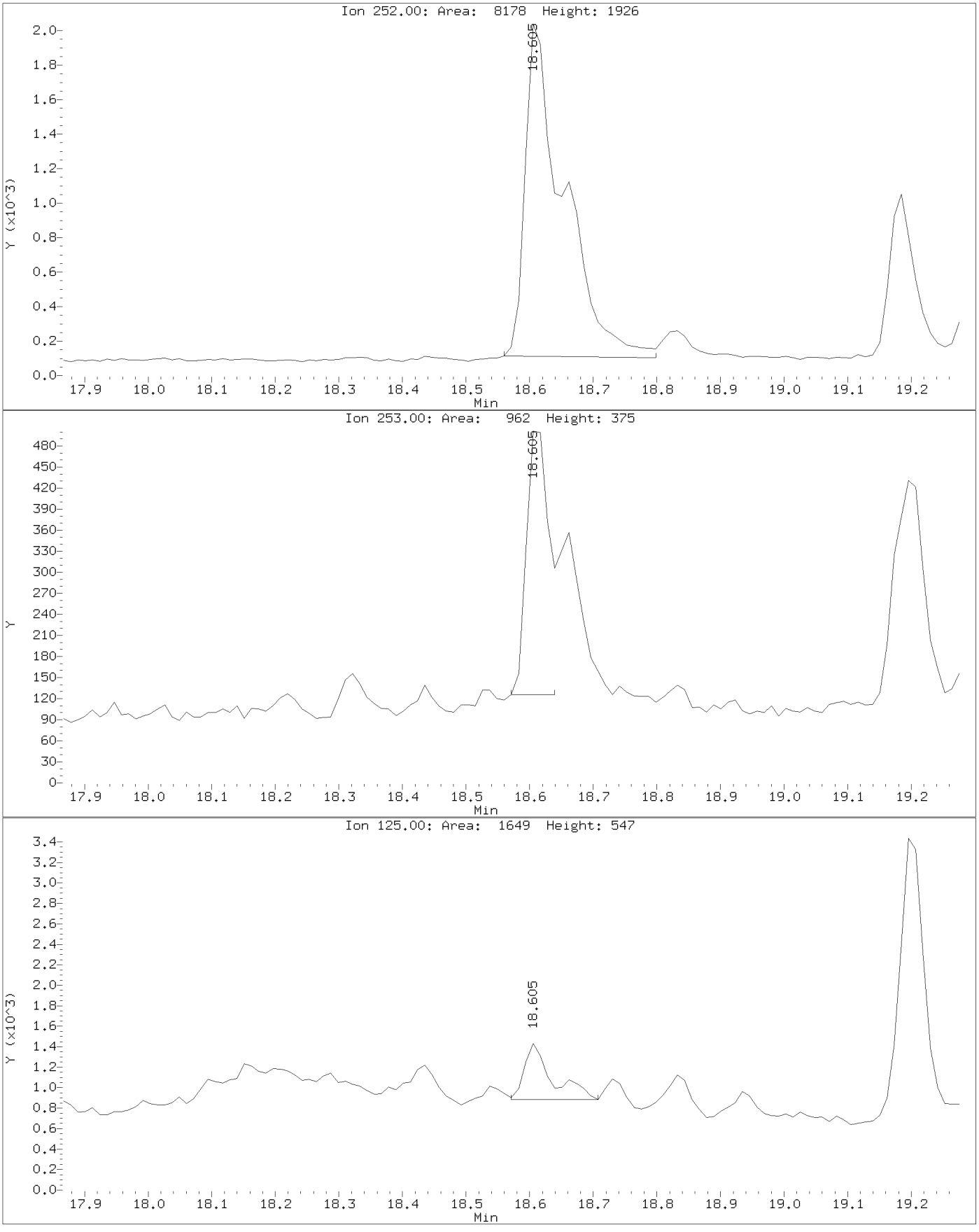




Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8060.D
Injection Date: 21-MAR-2018 15:52
Instrument: gcms-n.i
Client Sample ID: CHAAP-BKRD-SS11

Compound: Benzo(b)fluoranthene
CAS Number: 205-99-2

BEFORE MANUAL INTEGRATION



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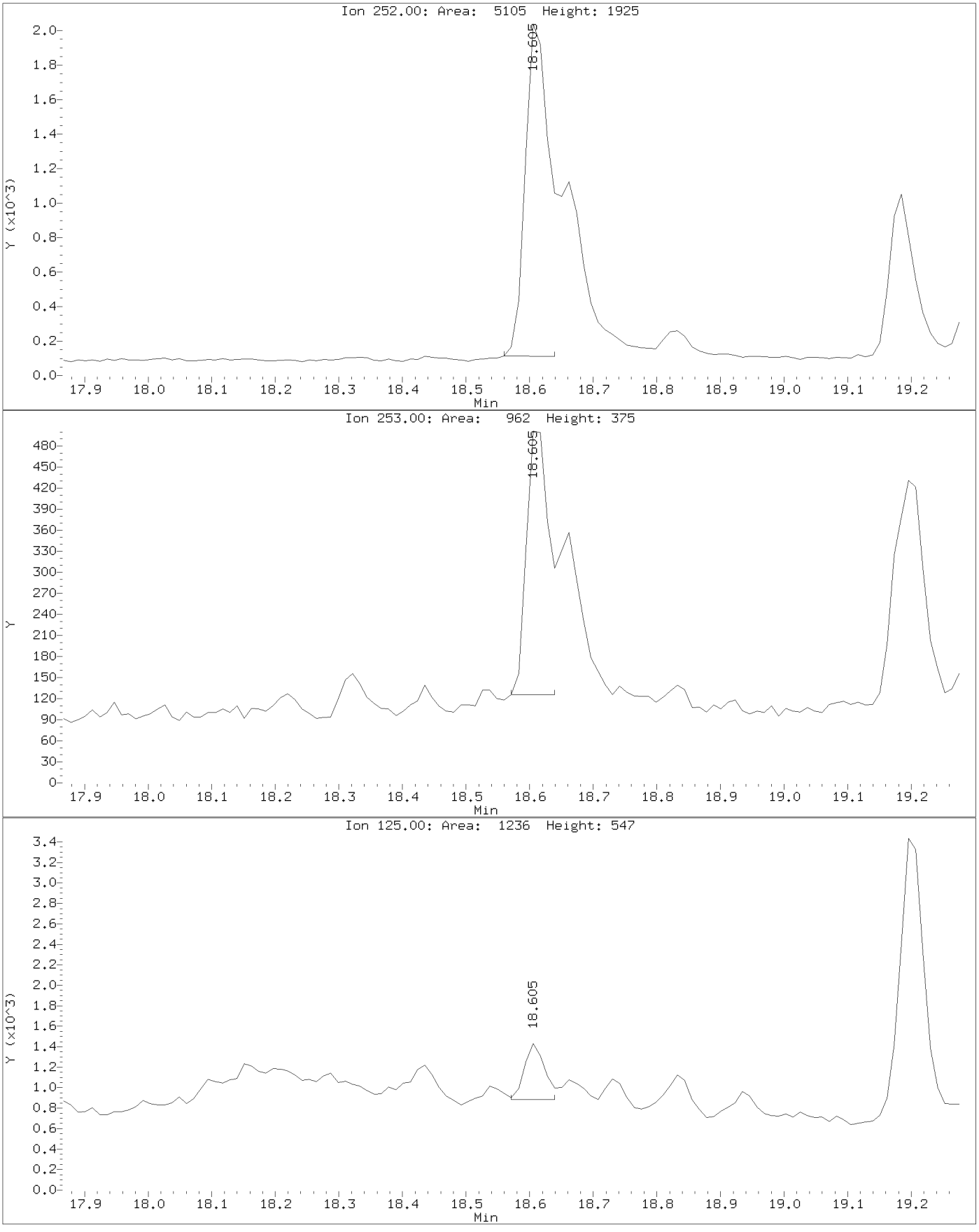
Injection Date: 21-MAR-2018 15:52
Instrument: gcms-n.i
Client Sample ID: CHAAP-BKRD-SS11

Compound: Benzo(b)fluoranthene
CAS Number: 205-99-2

AFTER MANUAL INTEGRATION



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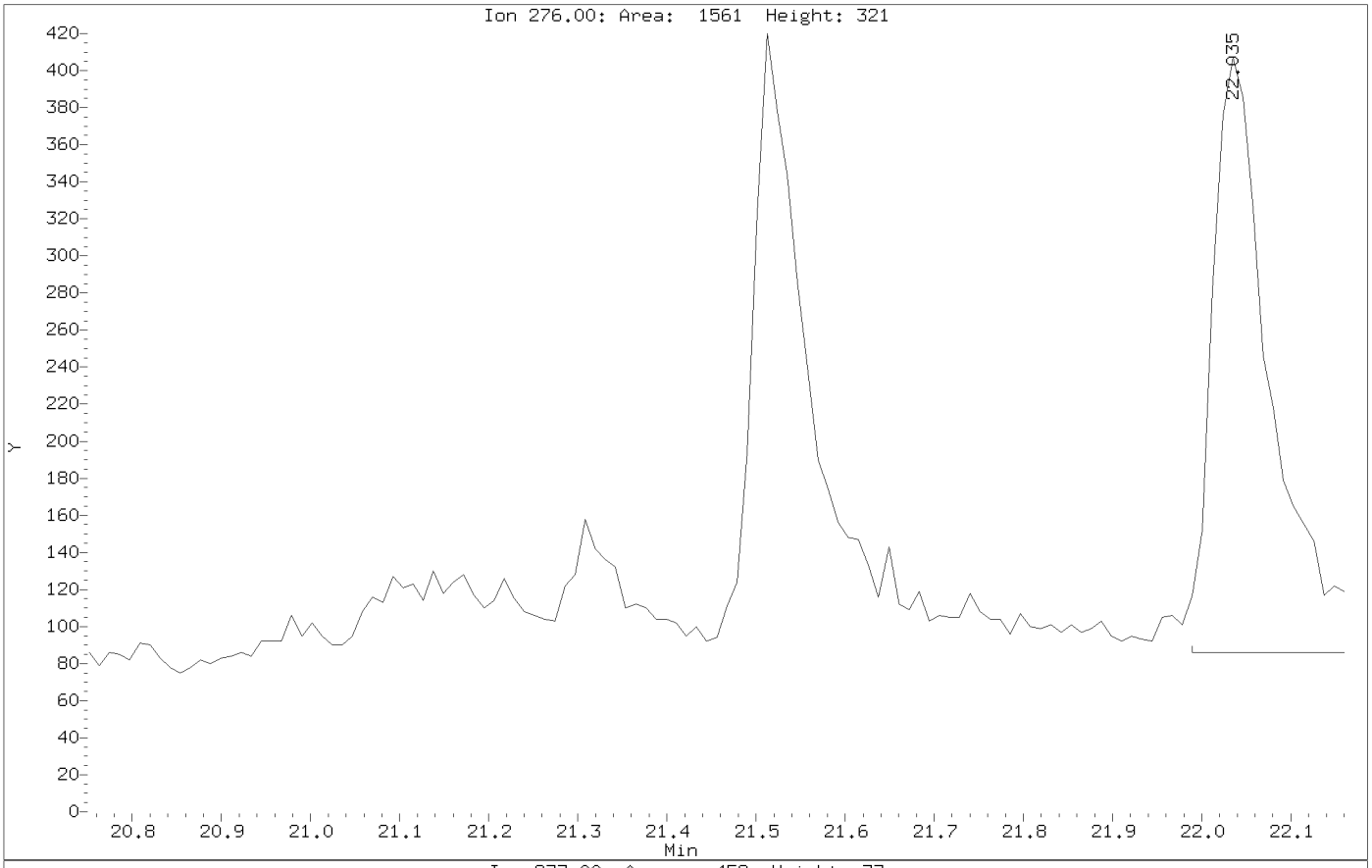
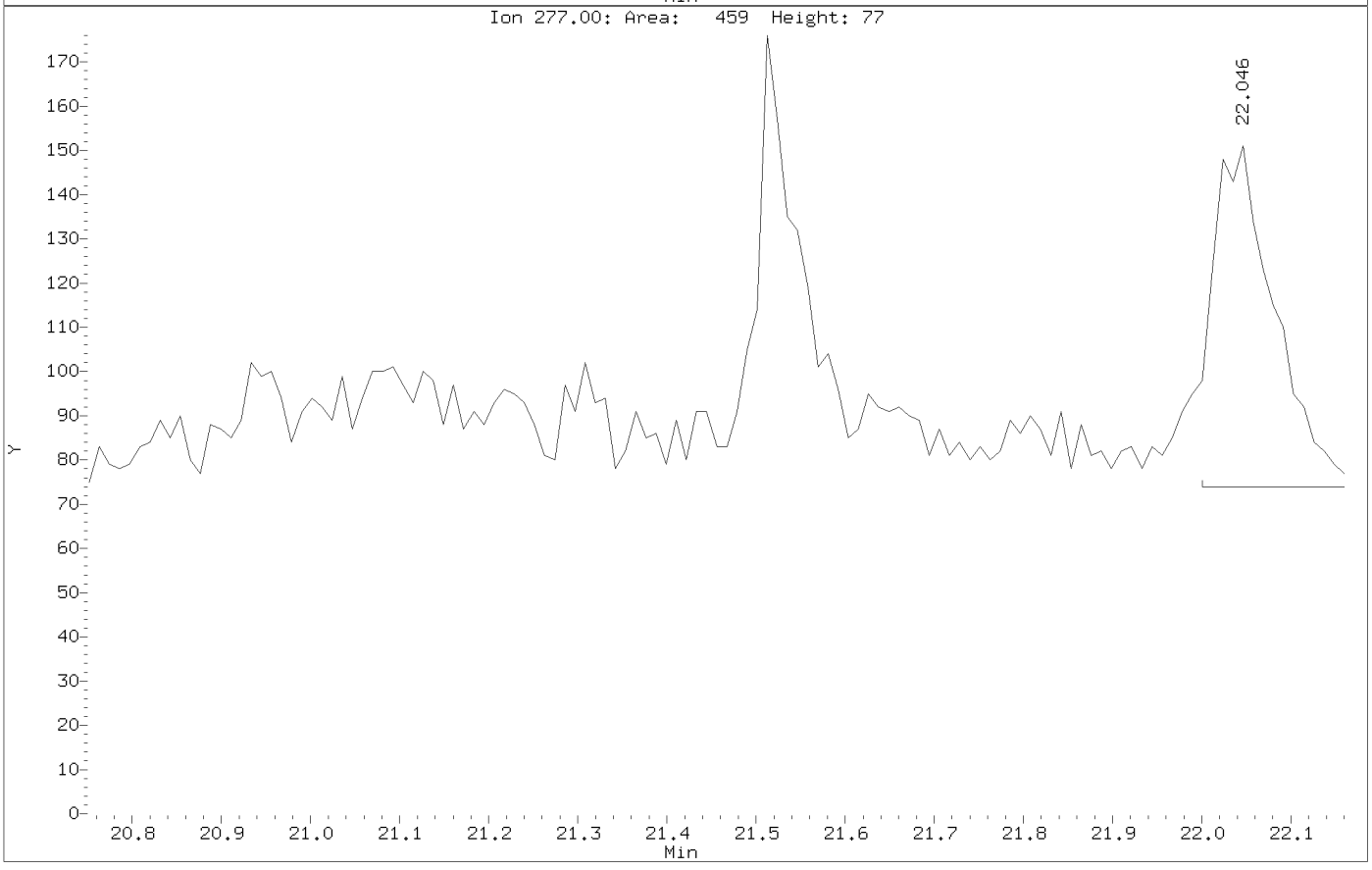
Injection Date: 21-MAR-2018 15:52
Instrument: gcms-n.i
Client Sample ID: CHAAP-BKRD-SS11

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5

BEFORE MANUAL INTEGRATION

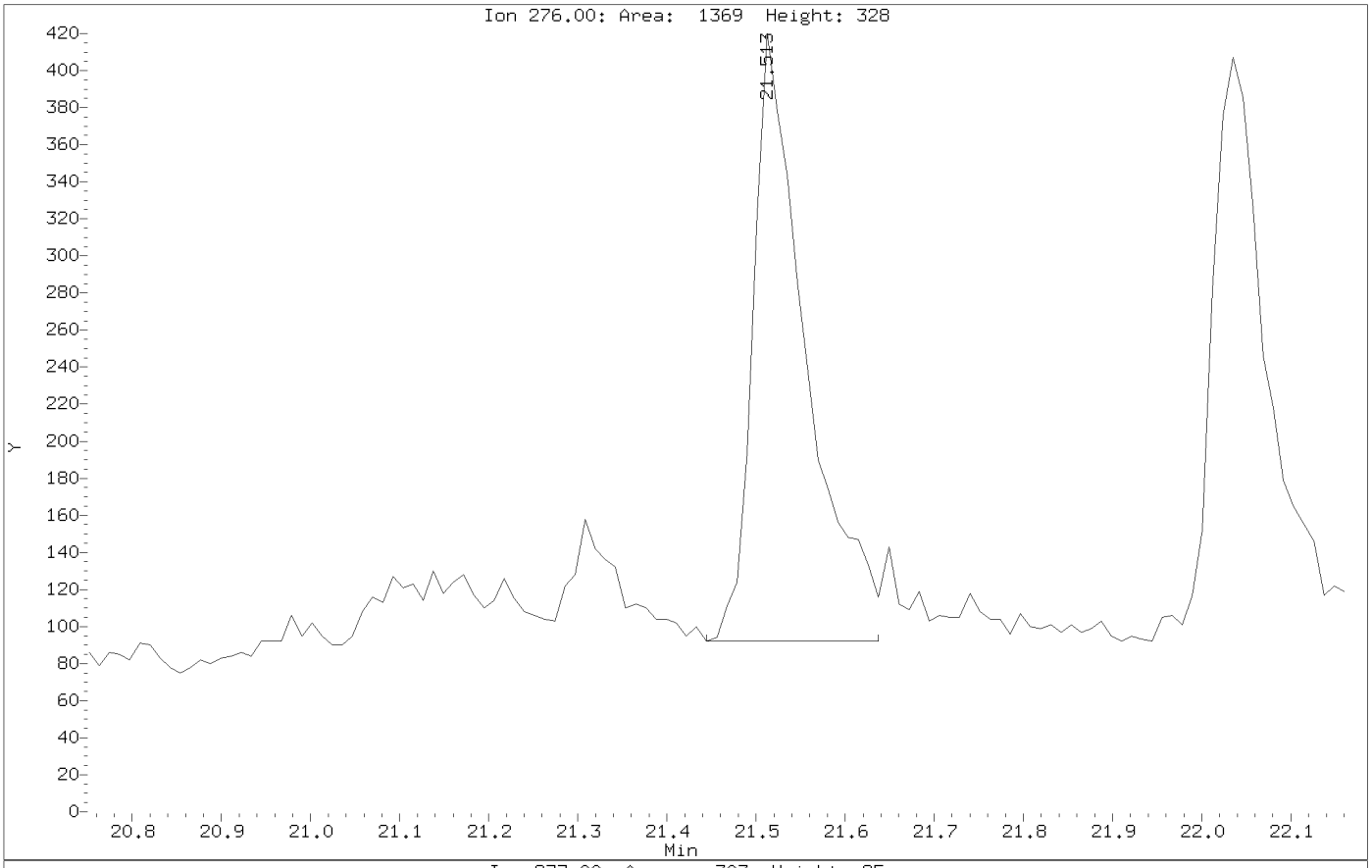


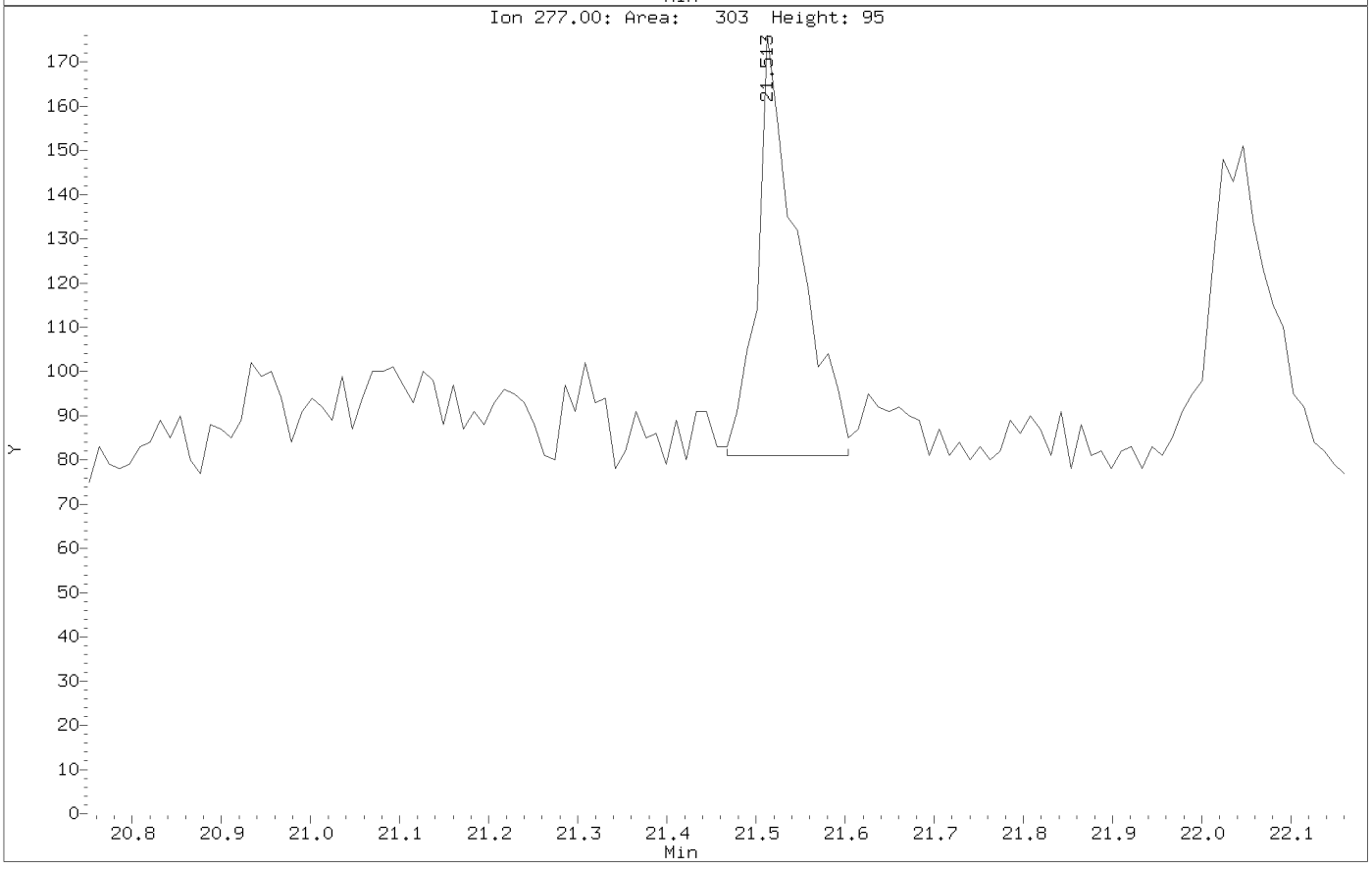


Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8060.D
Injection Date: 21-MAR-2018 15:52
Instrument: gcms-n.i
Client Sample ID: CHAAP-BKRD-SS11

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5

AFTER MANUAL INTEGRATION





Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-11
Client ID: CHAAP-BKRD-SS12
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: N8061.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: DP
Extraction Method: SW846 3550C
Lab Prep Batch: WG225021

Analysis Date: 21-MAR-18
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: SL
% Solids: 78.
Report Date: 26-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	13	ug/Kgdrywt	1	20	25.	3.3	13.
2-Methylnaphthalene	U	13	ug/Kgdrywt	1	20	25.	2.8	13.
Acenaphthylene	U	13	ug/Kgdrywt	1	20	25.	1.5	13.
Acenaphthene	U	13	ug/Kgdrywt	1	20	25.	1.9	13.
Fluorene	U	13	ug/Kgdrywt	1	20	25.	4.1	13.
Phenanthrene	U	13	ug/Kgdrywt	1	20	25.	2.3	13.
Anthracene	U	13	ug/Kgdrywt	1	20	25.	1.5	13.
Fluoranthene	J	2.3	ug/Kgdrywt	1	20	25.	2.3	13.
Pyrene	U	13	ug/Kgdrywt	1	20	25.	2.7	13.
Benzo(a)anthracene	U	13	ug/Kgdrywt	1	20	25.	2.4	13.
Chrysene	U	13	ug/Kgdrywt	1	20	25.	2.2	13.
Benzo(b)Fluoranthene	U	13	ug/Kgdrywt	1	20	25.	3.0	13.
Benzo(k)fluoranthene	U	13	ug/Kgdrywt	1	20	25.	3.9	13.
Benzo(a)pyrene	U	13	ug/Kgdrywt	1	20	25.	4.2	13.
Indeno(1,2,3-cd)pyrene	U	13	ug/Kgdrywt	1	20	25.	2.4	13.
Dibenzo(a,h)anthracene	U	13	ug/Kgdrywt	1	20	25.	2.3	13.
Benzo(g,h,i)perylene	U	13	ug/Kgdrywt	1	20	25.	2.5	13.
2-Methylnaphthalene-D10		46.4	%					
Fluorene-D10		47.8	%					
Pyrene-D10		44.8	%					

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

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Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8061.D
Report Date: 26-Mar-2018 13:05

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N032118.b\N8061.D
Lab Smp Id: SL2079-11 Client Smp ID: CHAAP-BKRD-SS12
Inj Date : 21-MAR-2018 16:24 MS Autotune Date: 25-OCT-2017 07:54
Operator : JCG Inst ID: gcms-n.i
Smp Info : SL2079-11
Misc Info : WG225136,WG225021,WG225136-4
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N032118.b\NSPSIM87.m
Meth Date : 22-Mar-2018 09:08 cgomez Quant Type: ISTD
Cal Date : 21-MAR-2018 13:37 Cal File: N8056.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ati-corn-aap.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/Ws*Vi)*(100/(100-M))*1000 * CpndVariable

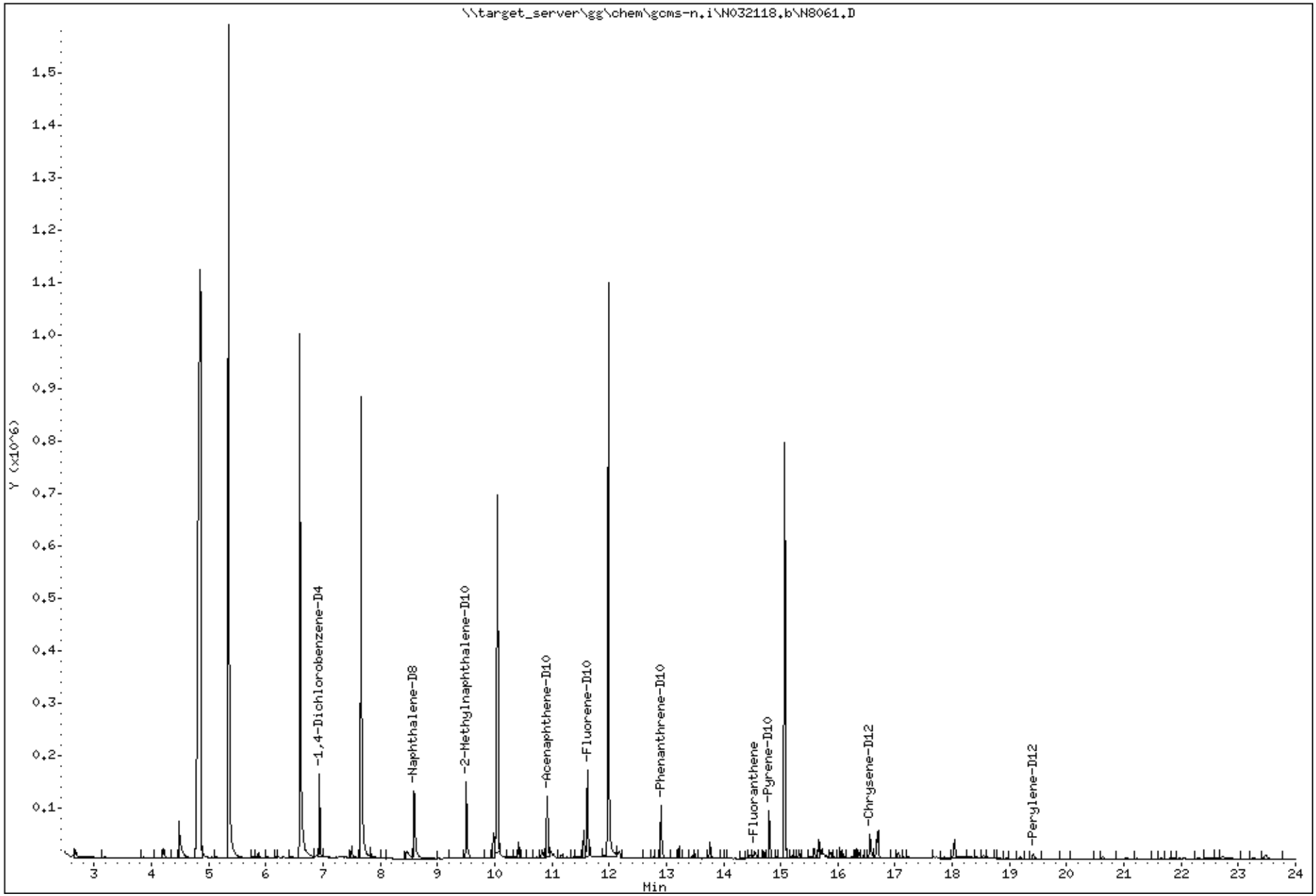
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Final Volume (L)
Ws	0.03010	Weight of Sample (Kg)
Vi	1.000	Volume injected (uL)
M	21.451	% Moisture
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/Kgdrywt)	REVIEW COD
* 10 1,4-Dichlorobenzene-D4	152	6.940	6.930	(1.000)	59426	0.80000	(Q)	
* 26 Naphthalene-D8	136	8.591	8.581	(1.000)	188849	0.80000		
$ 32 2-Methylnaphthalene-D10	152	9.508	9.498	(1.107)	104936	0.92899	39.3	
* 47 Acenaphthene-D10	164	10.926	10.915	(1.000)	85397	0.80000		
$ 55 Fluorene-D10	174	11.623	11.612	(1.064)	99958	0.95725	40.5	
* 65 Phenanthrene-D10	188	12.906	12.895	(1.000)	123043	0.80000		
70 Fluoranthene	202	14.536	14.518	(1.126)	9361	0.05494	2.32(a)	
$ 71 Pyrene-D10	212	14.799	14.790	(0.894)	71902	0.89550	37.9	
* 76 Chrysene-D12	240	16.563	16.544	(1.000)	40047	0.80000		
* 83 Perylene-D12	264	19.411	19.400	(1.000)	20577	0.80000		

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8061.D
Date : 21-MAR-2018 16:24
Client ID: CHAAP-BKRD-SS12 Instrument: gcms-n.i
Sample Info: SL2079-11



Katahdin Analytical Services 2000069

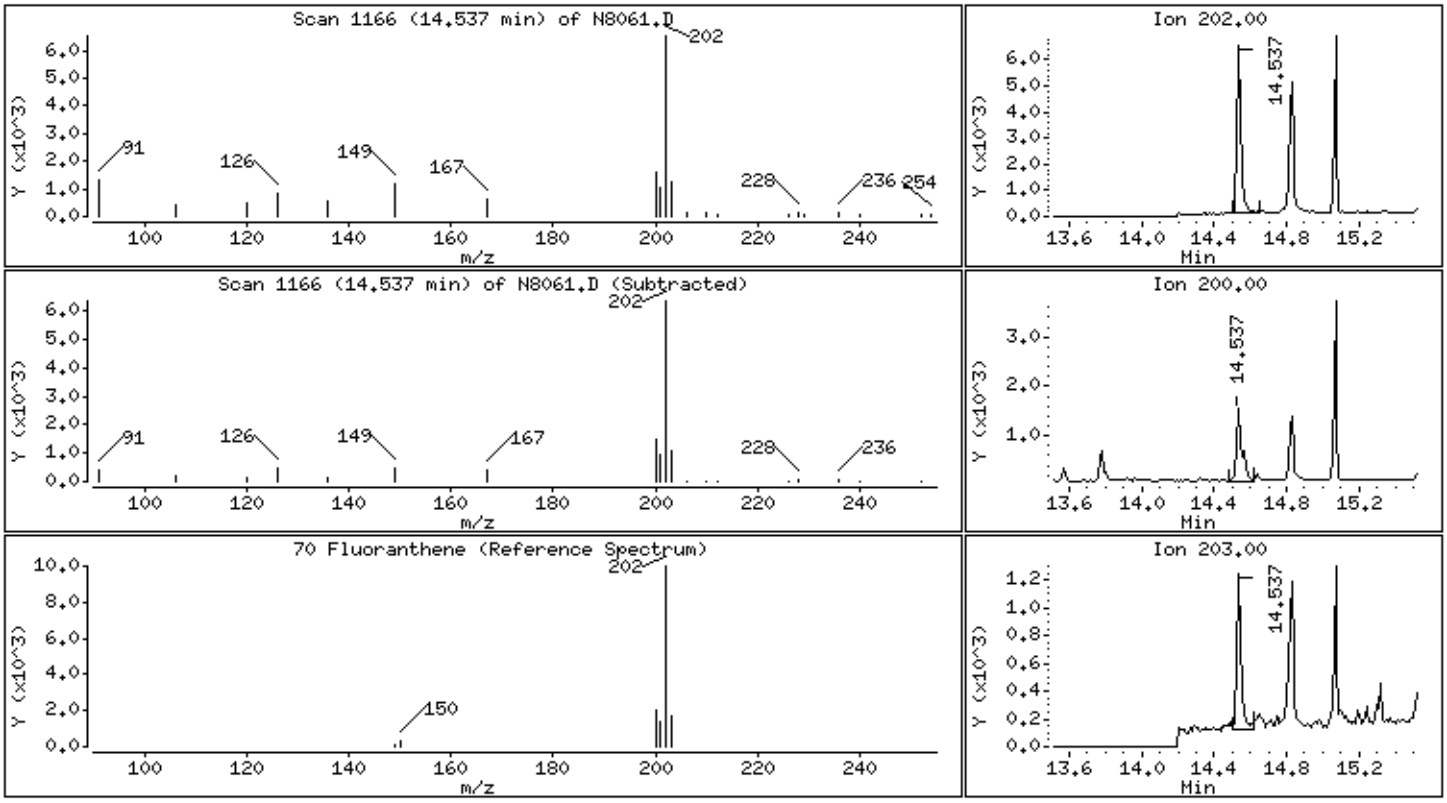
Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8061.D

Date : 21-MAR-2018 16:24

Client ID: CHAAP-BKRD-SS12 Instrument: gcms-n.i

Sample Info: SL2079-11

70 Fluoranthene Concentration: 2.32 ug/Kgdrywt



Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-12
Client ID: CHAAP-BKRD-SS13
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: N8062.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: DP
Extraction Method: SW846 3550C
Lab Prep Batch: WG225021

Analysis Date: 21-MAR-18
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: SL
% Solids: 78.
Report Date: 26-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	12	ug/Kgdrywt	1	20	24.	3.2	12.
2-Methylnaphthalene	U	12	ug/Kgdrywt	1	20	24.	2.7	12.
Acenaphthylene	U	12	ug/Kgdrywt	1	20	24.	1.4	12.
Acenaphthene	U	12	ug/Kgdrywt	1	20	24.	1.8	12.
Fluorene	U	12	ug/Kgdrywt	1	20	24.	3.9	12.
Phenanthrene	U	12	ug/Kgdrywt	1	20	24.	2.2	12.
Anthracene	U	12	ug/Kgdrywt	1	20	24.	1.4	12.
Fluoranthene	J	2.4	ug/Kgdrywt	1	20	24.	2.2	12.
Pyrene	U	12	ug/Kgdrywt	1	20	24.	2.5	12.
Benzo(a)anthracene	U	12	ug/Kgdrywt	1	20	24.	2.3	12.
Chrysene	U	12	ug/Kgdrywt	1	20	24.	2.1	12.
Benzo(b)Fluoranthene	U	12	ug/Kgdrywt	1	20	24.	2.9	12.
Benzo(k)fluoranthene	U	12	ug/Kgdrywt	1	20	24.	3.8	12.
Benzo(a)pyrene	U	12	ug/Kgdrywt	1	20	24.	4.0	12.
Indeno(1,2,3-cd)pyrene	U	12	ug/Kgdrywt	1	20	24.	2.3	12.
Dibenzo(a,h)anthracene	U	12	ug/Kgdrywt	1	20	24.	2.2	12.
Benzo(g,h,i)perylene	U	12	ug/Kgdrywt	1	20	24.	2.4	12.
2-Methylnaphthalene-D10		48.1	%					
Fluorene-D10		48.2	%					
Pyrene-D10		48.6	%					

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Tel:(207) 874-2400 Fax:(207) 775-4029

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Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8062.D
Report Date: 26-Mar-2018 13:05

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N032118.b\N8062.D
Lab Smp Id: SL2079-12 Client Smp ID: CHAAP-BKRD-SS13
Inj Date : 21-MAR-2018 16:55 MS Autotune Date: 25-OCT-2017 07:54
Operator : JCG Inst ID: gcms-n.i
Smp Info : SL2079-12
Misc Info : WG225136,WG225021,WG225136-4
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N032118.b\NSPSIM87.m
Meth Date : 22-Mar-2018 09:08 cgomez Quant Type: ISTD
Cal Date : 21-MAR-2018 13:37 Cal File: N8056.D
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ati-corn-aap.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/Ws*Vi)*(100/(100-M))*1000 * CpndVariable

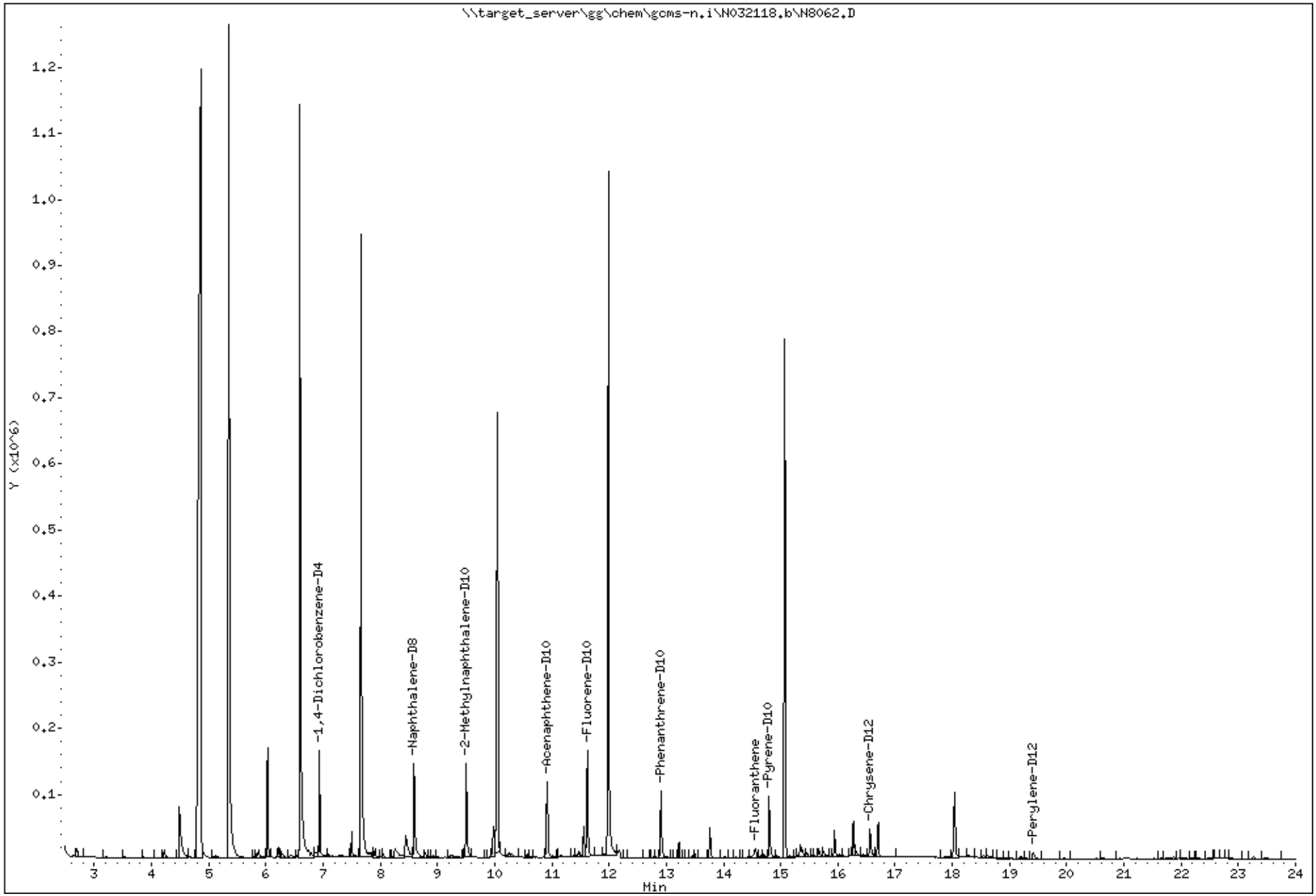
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Final Volume (L)
Ws	0.03170	Weight of Sample (Kg)
Vi	1.000	Volume injected (uL)
M	22.033	% Moisture
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/Kgdrywt)	REVIEW COD
* 10 1,4-Dichlorobenzene-D4	152	6.940	6.930	(1.000)	59115	0.80000	(Q)	
* 26 Naphthalene-D8	136	8.591	8.581	(1.000)	187132	0.80000		
$ 32 2-Methylnaphthalene-D10	152	9.508	9.498	(1.107)	107732	0.96249	38.9	
* 47 Acenaphthene-D10	164	10.915	10.915	(1.000)	83414	0.80000		
$ 55 Fluorene-D10	174	11.623	11.612	(1.065)	98220	0.96296	39.0	
* 65 Phenanthrene-D10	188	12.906	12.895	(1.000)	122241	0.80000		
70 Fluoranthene	202	14.536	14.518	(1.126)	9825	0.05804	2.35(a)	
$ 71 Pyrene-D10	212	14.799	14.790	(0.894)	74350	0.97160	39.3	
* 76 Chrysene-D12	240	16.563	16.544	(1.000)	38167	0.80000		
* 83 Perylene-D12	264	19.411	19.400	(1.000)	19393	0.80000		

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8062.D
Date : 21-MAR-2018 16:55
Client ID: CHAAP-BKRD-SS13 Instrument: gcms-n.i
Sample Info: SL2079-12



Katahdin Analytical Services 2000073

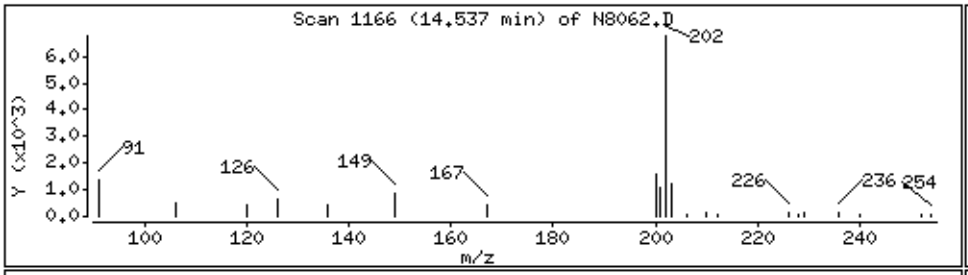
Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8062.D

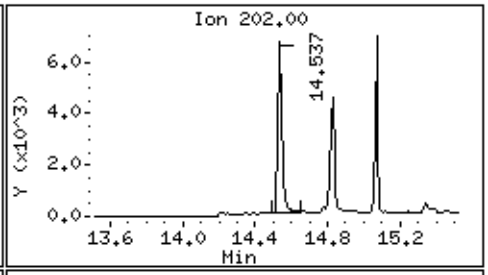
Date : 21-MAR-2018 16:55

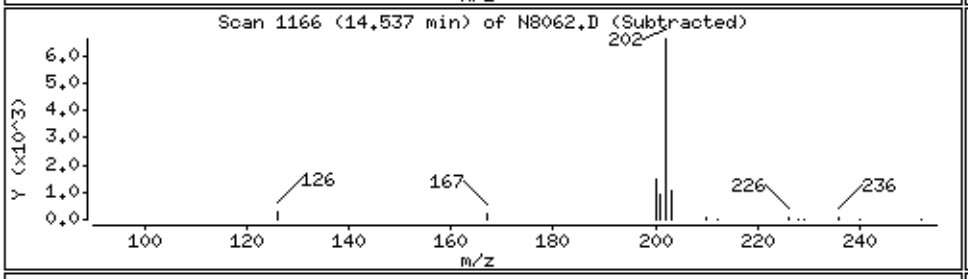
Client ID: CHAAP-BKRD-SS13 Instrument: gcms-n.i

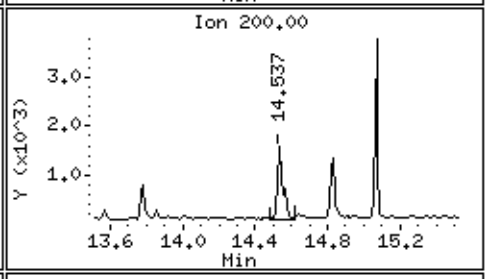
Sample Info: SL2079-12

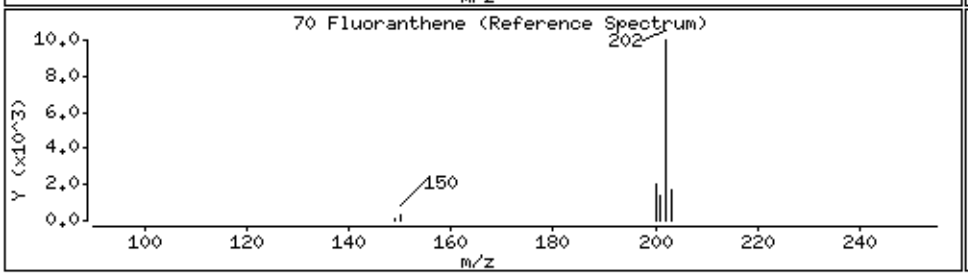
70 Fluoranthene Concentration: 2.35 ug/Kgdrywt

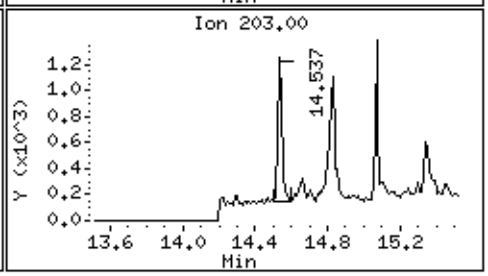












Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-13
Client ID: CHAAP-BKRD-SS109
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: N8063.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: DP
Extraction Method: SW846 3550C
Lab Prep Batch: WG225021

Analysis Date: 21-MAR-18
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: SL
% Solids: 83.
Report Date: 26-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	12	ug/Kgdrywt	1	20	24.	3.1	12.
2-Methylnaphthalene	U	12	ug/Kgdrywt	1	20	24.	2.6	12.
Acenaphthylene	U	12	ug/Kgdrywt	1	20	24.	1.4	12.
Acenaphthene	U	12	ug/Kgdrywt	1	20	24.	1.8	12.
Fluorene	U	12	ug/Kgdrywt	1	20	24.	3.8	12.
Phenanthrene	U	12	ug/Kgdrywt	1	20	24.	2.2	12.
Anthracene	U	12	ug/Kgdrywt	1	20	24.	1.4	12.
Fluoranthene	U	12	ug/Kgdrywt	1	20	24.	2.2	12.
Pyrene	U	12	ug/Kgdrywt	1	20	24.	2.5	12.
Benzo(a)anthracene	U	12	ug/Kgdrywt	1	20	24.	2.3	12.
Chrysene	U	12	ug/Kgdrywt	1	20	24.	2.0	12.
Benzo(b)Fluoranthene	U	12	ug/Kgdrywt	1	20	24.	2.9	12.
Benzo(k)fluoranthene	U	12	ug/Kgdrywt	1	20	24.	3.7	12.
Benzo(a)pyrene	U	12	ug/Kgdrywt	1	20	24.	4.0	12.
Indeno(1,2,3-cd)pyrene	U	12	ug/Kgdrywt	1	20	24.	2.3	12.
Dibenzo(a,h)anthracene	U	12	ug/Kgdrywt	1	20	24.	2.2	12.
Benzo(g,h,i)perylene	U	12	ug/Kgdrywt	1	20	24.	2.4	12.
2-Methylnaphthalene-D10		56.5	%					
Fluorene-D10		52.5	%					
Pyrene-D10		37.2	%					

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Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8063.D
Report Date: 26-Mar-2018 13:05

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N032118.b\N8063.D
Lab Smp Id: SL2079-13 Client Smp ID: CHAAP-BKRD-SS109
Inj Date : 21-MAR-2018 17:27 MS Autotune Date: 25-OCT-2017 07:54
Operator : JCG Inst ID: gcms-n.i
Smp Info : SL2079-13
Misc Info : WG225136,WG225021,WG225136-4
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N032118.b\NSPSIM87.m
Meth Date : 22-Mar-2018 09:08 cgomez Quant Type: ISTD
Cal Date : 21-MAR-2018 13:37 Cal File: N8056.D
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ati-corn-aap.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/Ws*Vi)*(100/(100-M))*1000 * CpndVariable

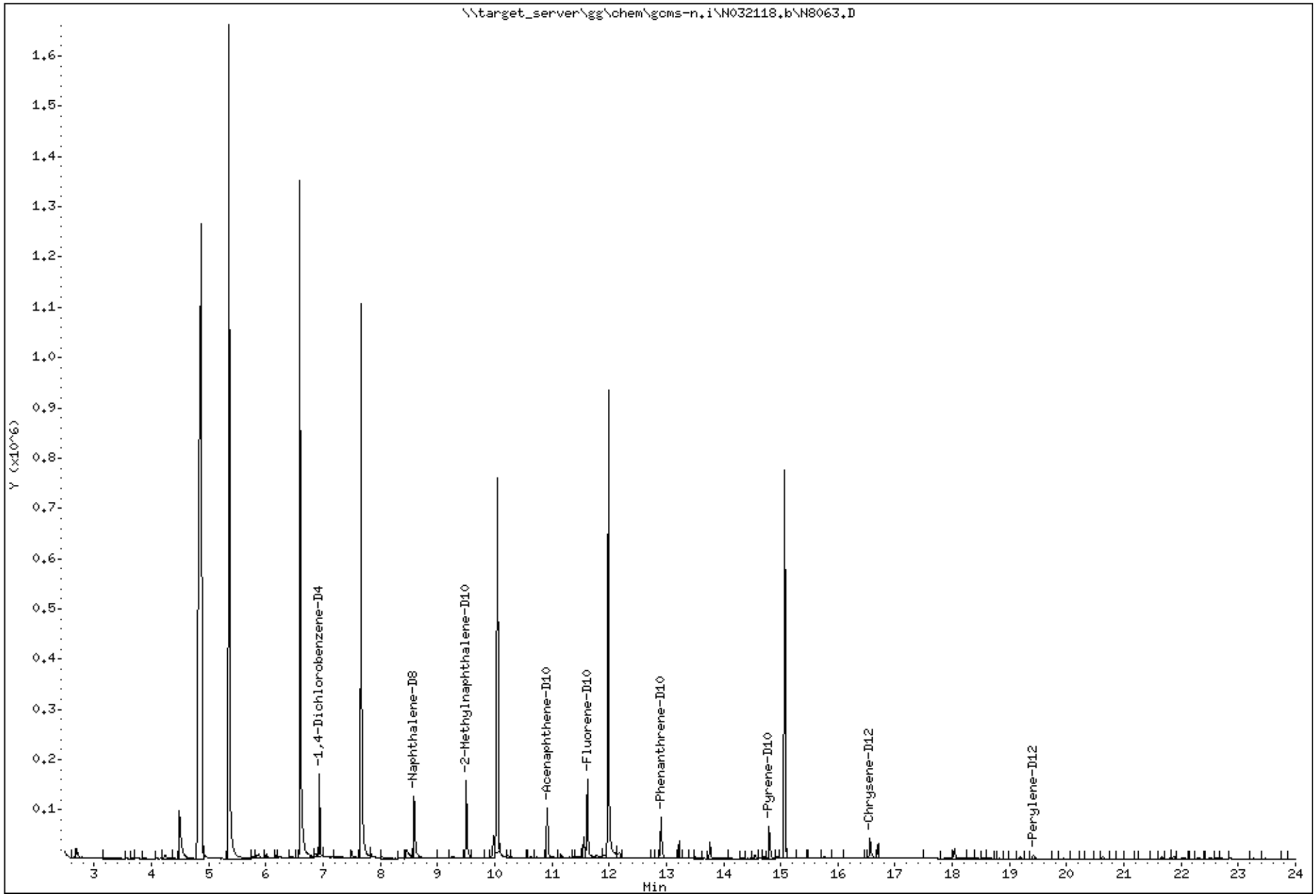
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Final Volume (L)
Ws	0.03000	Weight of Sample (Kg)
Vi	1.000	Volume injected (uL)
M	17.091	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/Kgdrywt)	REVIEW COD
*	10 1,4-Dichlorobenzene-D4	152	6.940	6.930	(1.000)	55890	0.80000	(Q)	
*	26 Naphthalene-D8	136	8.591	8.581	(1.000)	172649	0.80000		
$	32 2-Methylnaphthalene-D10	152	9.508	9.498	(1.107)	117086	1.13381	45.6	
*	47 Acenaphthene-D10	164	10.926	10.915	(1.000)	74018	0.80000		
$	55 Fluorene-D10	174	11.623	11.612	(1.064)	95308	1.05303	42.3	
*	65 Phenanthrene-D10	188	12.906	12.895	(1.000)	104844	0.80000		
$	71 Pyrene-D10	212	14.799	14.790	(0.894)	53125	0.74269	29.8	
*	76 Chrysene-D12	240	16.563	16.544	(1.000)	35677	0.80000		
*	83 Perylene-D12	264	19.411	19.400	(1.000)	19023	0.80000		

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8063.D
Date : 21-MAR-2018 17:27
Client ID: CHAAP-BKRD-SS109 Instrument: gcms-n.i
Sample Info: SL2079-13



Katahdin Analytical Services 2000077

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-14
Client ID: CHAAP-BKRD-EB-031418
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: N8027.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: KF
Extraction Method: SW846 3510C
Lab Prep Batch: WG225023

Analysis Date: 20-MAR-18
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: AQ
% Solids: NA
Report Date: 26-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	0.097	ug/L	1	.2	0.19	0.062	0.097
2-Methylnaphthalene	U	0.097	ug/L	1	.2	0.19	0.075	0.097
Acenaphthylene	U	0.097	ug/L	1	.2	0.19	0.052	0.097
Acenaphthene	U	0.097	ug/L	1	.2	0.19	0.062	0.097
Fluorene	U	0.097	ug/L	1	.2	0.19	0.059	0.097
Phenanthrene	U	0.097	ug/L	1	.2	0.19	0.050	0.097
Anthracene	U	0.097	ug/L	1	.2	0.19	0.043	0.097
Fluoranthene	U	0.097	ug/L	1	.2	0.19	0.071	0.097
Pyrene	U	0.097	ug/L	1	.2	0.19	0.057	0.097
Benzo(a)anthracene	U	0.097	ug/L	1	.2	0.19	0.045	0.097
Chrysene	U	0.097	ug/L	1	.2	0.19	0.035	0.097
Benzo(b)Fluoranthene	U	0.097	ug/L	1	.2	0.19	0.086	0.097
Benzo(k)fluoranthene	U	0.097	ug/L	1	.2	0.19	0.048	0.097
Benzo(a)pyrene	U	0.097	ug/L	1	.2	0.19	0.064	0.097
Indeno(1,2,3-cd)pyrene	U	0.097	ug/L	1	.2	0.19	0.050	0.097
Dibenzo(a,h)anthracene	U	0.097	ug/L	1	.2	0.19	0.068	0.097
Benzo(g,h,i)perylene	U	0.097	ug/L	1	.2	0.19	0.063	0.097
2-Methylnaphthalene-D10		75.6	%					
Fluorene-D10		70.0	%					
Pyrene-D10		78.1	%					

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Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8027.D
Report Date: 26-Mar-2018 13:04

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N032018.b\N8027.D
Lab Smp Id: SL2079-14 Client Smp ID: HAAP-BKRD-EB-031418
Inj Date : 20-MAR-2018 12:15
Operator : JCG Inst ID: gcms-n.i
Smp Info : SL2079-14
Misc Info : WG225084,WG225023,WG224895-4
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N032018.b\NSPSIM86.m
Meth Date : 21-Mar-2018 08:53 cgomez Quant Type: ISTD
Cal Date : 16-MAR-2018 14:38 Cal File: N7973.D
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ati-corn-aap.sub
Target Version: 4.12
Processing Host: V200T4

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

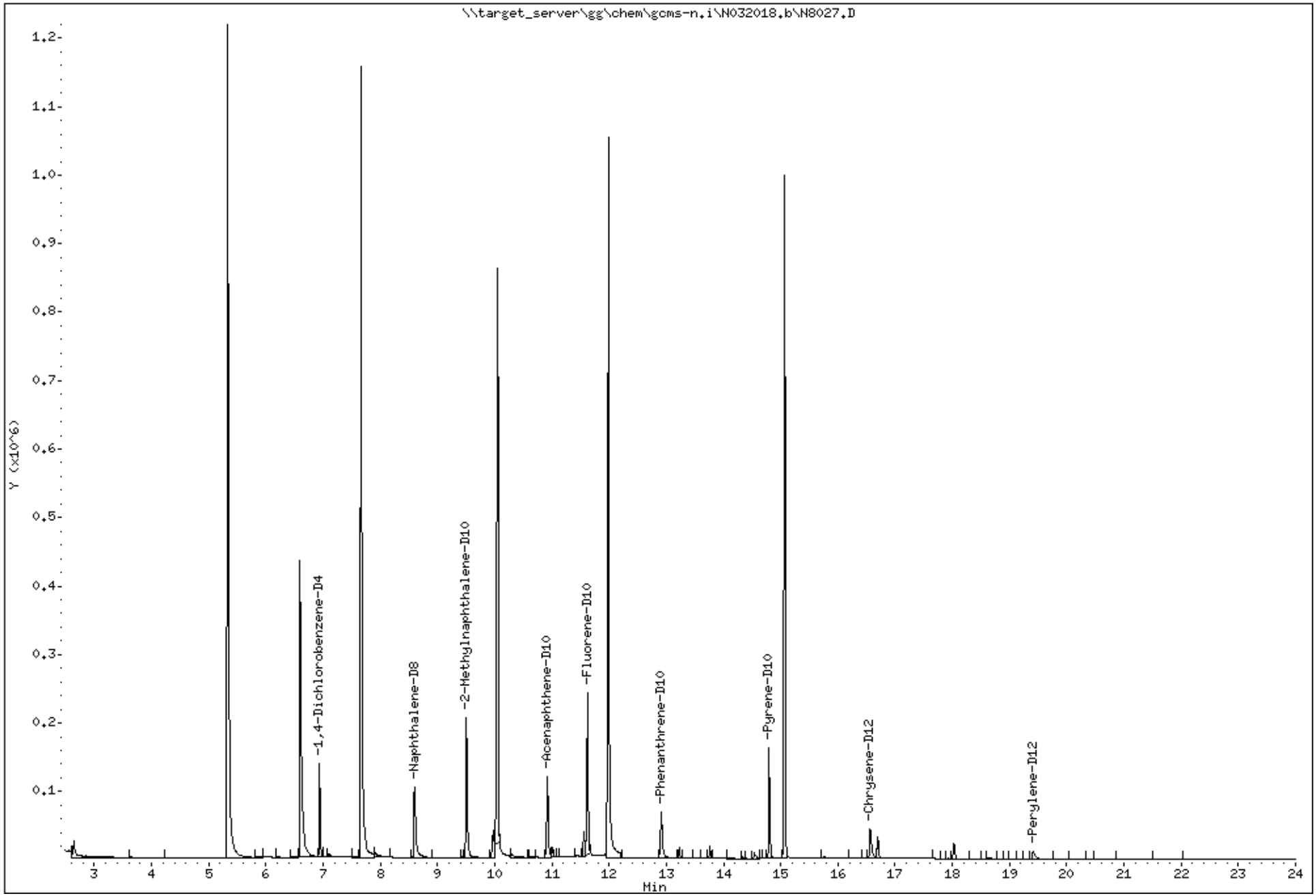
Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.030	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
* 10 1,4-Dichlorobenzene-D4	152	6.940	6.940	(1.000)	57514	0.80000	(aQ)	
* 26 Naphthalene-D8	136	8.601	8.591	(1.000)	192295	0.80000	(a)	
$ 32 2-Methylnaphthalene-D10	152	9.508	9.508	(1.105)	171171	1.51303	1.47	
* 47 Acenaphthene-D10	164	10.926	10.926	(1.000)	85455	0.80000	(a)	
$ 55 Fluorene-D10	174	11.623	11.623	(1.064)	147289	1.39927	1.36	
* 65 Phenanthrene-D10	188	12.916	12.906	(1.000)	124970	0.80000	(a)	
$ 71 Pyrene-D10	212	14.799	14.799	(0.893)	151545	1.56227	1.52	
* 76 Chrysene-D12	240	16.573	16.563	(1.000)	54925	0.80000	(a)	
* 83 Perylene-D12	264	19.411	19.422	(1.000)	35094	0.80000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8027.D
Date : 20-MAR-2018 12:15
Client ID: HAAP-BKRD-EB-031418 Instrument: gcms-n.i
Sample Info: SL2079-14



Katahdin Analytical Services 2000080

Standards Data Section

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL2079
Project : Cornhusker Army Ammunition Plant
Instrument ID: GCMS-N
Lab File IDs : N7969.D N7970.D N7968.D N7971.D N7972.D N7973.D
Column ID:
Calibration Date(s): 16-MAR-18 11:59, 16-MAR-18 14:38

	0.200000(Level 1	0.500000(Level 2	2.0000 Level 3	7.0000 Level 4	10.0000 Level 5	15.0000 Level 6	New Crv	b	m1	m2	%RSD	Max %RSD	
Naphthalene	0.97504	1.03233	1.03846	1.03803	1.02911	0.95367	AVG		1.01111		3.66004	15.00000	O
2-Methylnaphthalene	31023	95581	279076	1007066	1329374	1921570	QUA	0.02192	1.17017	0.04682	0.99957	0.99000	O
Acenaphthylene	2.14477	2.14249	2.17292	2.13421	2.10974	2.02953	AVG		2.12228		2.34472	15.00000	O
Acenaphthene	1.44416	1.39166	1.38360	1.41070	1.36407	1.32137	AVG		1.38593		3.00786	15.00000	O
Fluorene	1.39196	1.44565	1.45553	1.46294	1.41754	1.36236	AVG		1.42266		2.78271	15.00000	O
Phenanthrene	1.29271	1.18070	1.22471	1.30558	1.25036	1.16203	AVG		1.23601		4.70658	15.00000	O
Anthracene	1.52132	1.46329	1.35473	1.37719	1.33296	1.23689	AVG		1.38106		7.25837	15.00000	O
Fluoranthene	1.32716	1.14753	1.11558	1.18790	1.12285	1.07080	AVG		1.16197		7.71301	15.00000	O
Pyrene	2.87524	2.60439	2.42221	2.46431	2.29623	2.10394	AVG		2.46105		10.7245	15.00000	O
Benzo(a)anthracene	1.48692	1.33504	1.40172	1.43012	1.39107	1.35693	AVG		1.40030		3.86131	15.00000	O
Chrysene	19557	48948	172156	663405	905814	1488528	LNR	-0.29232	1.38021		0.99705	0.99000	O
Benzo(b)fluoranthene	1.25563	1.28568	1.24854	1.47525	1.35003	1.35597	AVG		1.32852		6.41284	15.00000	O
Benzo(k)fluoranthene	2.25189	2.02422	1.74268	1.65893	1.71797	1.62031	AVG		1.83600		13.5381	15.00000	O
Benzo(a)pyrene	1.42534	1.36882	1.27714	1.31388	1.30682	1.27236	AVG		1.32739		4.45304	15.00000	O
Indeno(1,2,3-cd)pyrene	1.04771	0.90444	1.02917	0.91849	0.94731	0.89685	AVG		0.95733		6.83281	15.00000	O
Dibenzo(a,h)anthracene	0.94345	0.86161	0.91134	0.93202	0.93797	0.92158	AVG		0.91800		3.26094	15.00000	O
Benzo(g,h,i)perylene	1.29008	1.16887	1.13206	1.13789	1.12038	1.07323	AVG		1.15375		6.38506	15.00000	O
2-Methylnaphthalene-D10	0.44559	0.48637	0.47880	0.48817	0.47912	0.44588	AVG		0.47066		4.17816	15.00000	
Fluorene-D10	0.97164	0.99020	1.00380	1.01015	0.97546	0.96127	AVG		0.98542		1.94911	15.00000	
Pyrene-D10	1.55752	1.50378	1.40995	1.45771	1.33847	1.20984	AVG		1.41288		8.83799	15.00000	

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

Data File: \\target_server\gg\chem\gcms-n.i\N031618.b\N7974.D
Report Date: 19-Mar-2018 08:08

Katahdin Analytical Services

RECOVERY REPORT

Client Name: Client SDG: WG224895
Sample Matrix: SOLID Fraction: SV
Lab Smp Id: WG224895-8 Client Smp ID: Independent Source
Level: LOW Operator: JCG
Data Type: MS DATA SampleType: INDCHECK
SpikeList File: SIM_IND_CHK5.spk Quant Type: ISTD
Sublist File: all.sub
Method File: \\target_server\gg\chem\gcms-n.i\N031618.b\NSPSIM86.m
Misc Info: WG224895,WG224895,WG224895-4

SPIKE	COMPOUND	CONC ADDED ug/Kgdrywt	CONC RECOVERED ug/Kgdrywt	% RECOVERED	LIMITS
2	1,4-Dioxane	167	167	100.07	80-120
3	N-Nitrosodimethyla	167	185	111.18	80-120
4	Pyridine	167	197	118.09	80-120
5	Benzaldehyde	167	196	117.46	80-120
7	Bis(2-Chloroethyl)	167	183	110.01	80-120
6	Phenol	167	170	101.80	80-120
8	2-Chlorophenol	167	164	98.65	80-120
9	1,3-Dichlorobenzen	167	171	102.49	80-120
11	1,4-Dichlorobenzen	167	170	102.13	80-120
12	1,2-Dichlorobenzen	167	167	99.97	80-120
13	2,2'-Oxybis(1-chlo	167	141	84.72	80-120
14	2-Methylphenol	167	180	108.13	80-120
15	Acetophenone	167	172	103.41	80-120
16	N-Nitroso-di-n-pro	167	156	93.46	80-120
18	Hexachloroethane	167	165	99.19	80-120
17	3&4-Methylphenol	167	172	103.03	80-120
19	Nitrobenzene	167	164	98.54	80-120
20	Isophorone	167	166	99.95	80-120
21	2-Nitrophenol	167	168	100.80	80-120
22	2,4-Dimethylphenol	167	165	98.80	80-120
23	bis(2-Chloroethoxy	167	170	102.26	80-120
24	2,4-Dichlorophenol	167	170	101.73	80-120
25	1,2,4-Trichloroben	167	171	102.47	80-120
27	Naphthalene	167	169	101.45	80-120
28	4-Chloroaniline	167	160	96.03	80-120
29	Hexachlorobutadien	167	170	102.15	80-120
30	Caprolactam	167	164	98.47	80-120
33	2-Methylnaphthalen	167	163	97.57	80-120
31	4-Chloro-3-Methylp	167	162	97.24	80-120
34	1-Methylnaphthalen	167	148	89.09	80-120
36	1,2,4,5-Tetrachlor	167	170	101.83	80-120
35	Hexachlorocyclopen	167	107	64.07*	80-120
38	2,4,6-Trichlorophe	167	162	97.02	80-120
39	2,4,5-Trichlorophe	167	163	97.62	80-120
41	2-Chloronaphthalen	167	165	99.23	80-120
40	1,1'-Biphenyl	167	169	101.35	80-120
42	2-Nitroaniline	167	176	105.60	80-120
43	Dimethyl Phthalate	167	164	98.45	80-120
45	Acenaphthylene	167	156	93.50	80-120
44	2,6-Dinitrotoluene	167	162	97.55	80-120

Data File: \\target_server\gg\chem\gcms-n.i\N031618.b\N7974.D
Report Date: 19-Mar-2018 08:08

SPIKE COMPOUND	CONC ADDED ug/Kgdrywt	CONC RECOVERED ug/Kgdrywt	% RECOVERED	LIMITS
48 Acenaphthene	167	165	99.10	80-120
46 3-Nitroaniline	167	176	105.65	80-120
49 2,4-Dinitrophenol	167	136	81.63	80-120
50 Dibenzofuran	167	165	99.07	80-120
51 2,4-Dinitrotoluene	167	163	98.10	80-120
53 2,3,4,6-Tetrachlor	167	131	78.55*	80-120
52 4-Nitrophenol	167	141	84.51	80-120
54 Diethylphthalate	167	164	98.23	80-120
56 Fluorene	167	164	98.26	80-120
57 4-Chlorophenyl-phe	167	161	96.90	80-120
59 4,6-Dinitro-2-Meth	167	142	85.43	80-120
58 4-Nitroaniline	167	174	104.45	80-120
60 N-Nitrosodiphenyla	167	135	81.06	80-120
61 4-Bromophenyl-phen	167	160	96.14	80-120
62 Hexachlorobenzene	167	156	93.93	80-120
63 Atrazine	167	78.9	47.36*	80-120
64 Pentachlorophenol	167	146	87.53	80-120
66 Phenanthrene	167	158	94.92	80-120
67 Anthracene	167	149	89.48	80-120
68 Carbazole	167	163	97.85	80-120
69 Di-n-butylphthalat	167	170	101.94	80-120
70 Fluoranthene	167	157	94.39	80-120
72 Pyrene	167	151	90.65	80-120
73 Butylbenzylphthala	167	165	99.24	80-120
74 Benzo(a)anthracene	167	156	93.38	80-120
77 Chrysene	167	175	104.84	80-120
75 3,3'-Dichlorobenzi	167	169	101.43	80-120
78 bis(2-Ethylhexyl)p	167	169	101.63	80-120
79 Di-n-octylphthalat	167	170	101.74	80-120
80 Benzo(b)fluoranthe	167	166	99.79	80-120
81 Benzo(k)fluoranthe	167	152	91.13	80-120
82 Benzo(a)pyrene	167	147	88.18	80-120
85 Indeno(1,2,3-cd)py	167	163	97.77	80-120
86 Dibenzo(a,h)anthra	167	162	97.17	80-120
87 Benzo(g,h,i)peryle	167	149	89.68	80-120

SURROGATE COMPOUND	CONC ADDED ug/Kgdrywt	CONC RECOVERED ug/Kgdrywt	% RECOVERED	LIMITS
$ 1 1,4-Dioxane-d8	66.7	0.000	*	30-150
$ 32 2-Methylnaphthale	66.7	0.000	*	19-94
$ 37 2,4-Dibromophenol	133	0.000	*	20-116
$ 55 Fluorene-D10	66.7	0.000	*	20-96
$ 71 Pyrene-D10	66.7	0.000	*	31-128

Data File: \\target_server\gg\chem\gcms-n.i\N031618.b\N7968.D
Report Date: 19-Mar-2018 09:22

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N031618.b\N7968.D
Lab Smp Id: WG224895-4
Inj Date : 16-MAR-2018 11:59 MS Autotune Date: 25-OCT-2017 07:54
Operator : JCG Inst ID: gcms-n.i
Smp Info : WG224895-4
Misc Info :
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N031618.b\NSPSIM86.m
Meth Date : 19-Mar-2018 08:27 cgomez Quant Type: ISTD
Cal Date : 13-MAR-2018 11:43 Cal File: N7889.D
Als bottle: 2 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
$	1 1,4-Dioxane-d8	96	2.628	2.639	(0.377)	65699	2.00000	2.08	
	2 1,4-Dioxane	88	2.670	2.660	(0.383)	69534	2.00000	1.94	
	3 N-Nitrosodimethylamine	74	3.247	3.216	(0.466)	83794	2.00000	2.08	
	4 Pyridine	79	3.289	3.247	(0.472)	137622	2.00000	2.04	
	5 Benzaldehyde	77	6.432	6.402	(0.922)	38696	2.00000	1.92	
	6 Phenol	94	6.684	6.663	(0.958)	429599	4.50000	4.42	
	7 Bis(2-Chloroethyl)ether	93	6.674	6.643	(0.957)	138975	2.00000	1.74	
	8 2-Chlorophenol	128	6.754	6.724	(0.968)	385886	4.50000	4.48	
	9 1,3-Dichlorobenzene	146	6.895	6.875	(0.988)	175213	2.00000	2.01	
*	10 1,4-Dichlorobenzene-D4	152	6.976	6.955	(1.000)	49167	0.80000	(aQ)	
	11 1,4-Dichlorobenzene	146	6.996	6.975	(1.003)	182776	2.00000	2.02	
	12 1,2-Dichlorobenzene	146	7.187	7.167	(1.030)	172965	2.00000	2.00	
	13 2,2'-Oxybis(1-chloropropane)	45	7.358	7.338	(1.055)	222465	2.00000	2.00	
	14 2-Methylphenol	108	7.418	7.398	(1.063)	323733	4.50000	4.47	
	15 Acetophenone	105	7.529	7.499	(0.873)	191757	2.00000	2.03	
	16 N-Nitroso-di-n-propylamine	70	7.539	7.519	(1.081)	105808	2.00000	1.99	
	17 3&4-Methylphenol	108	7.640	7.620	(1.095)	320072	4.50000	4.52	
	18 Hexachloroethane	117	7.610	7.589	(1.091)	62162	2.00000	1.95	
	19 Nitrobenzene	77	7.730	7.710	(0.896)	161279	2.00000	2.07	
	20 Isophorone	82	8.053	8.032	(0.933)	250356	2.00000	2.10	
	21 2-Nitrophenol	139	8.153	8.133	(0.945)	191076	4.50000	4.64	

Data File: \\target_server\gg\chem\gcms-n.i\N031618.b\N7968.D
Report Date: 19-Mar-2018 09:22

							AMOUNTS		
		QUANT SIG					CAL-AMT	ON-COL	
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/ml)	(ug/ml)	REVIEW CODE
	22 2,4-Dimethylphenol	107	8.294	8.274	(0.961)	310025	4.50000	4.61	
	23 bis(2-Chloroethoxy)methane	93	8.365	8.344	(0.970)	172623	2.00000	2.07	
	24 2,4-Dichlorophenol	162	8.546	8.515	(0.991)	267105	4.50000	4.70	
	25 1,2,4-Trichlorobenzene	180	8.576	8.556	(0.994)	121764	2.00000	2.06	
*	26 Naphthalene-D8	136	8.626	8.606	(1.000)	153512	0.80000	(a)	
	27 Naphthalene	128	8.657	8.636	(1.004)	398542	2.00000	2.05	
	28 4-Chloroaniline	127	8.787	8.767	(1.019)	161512	2.00000	2.09	
	29 Hexachlorobutadiene	225	8.848	8.828	(1.026)	63608	2.00000	2.01	
	30 Caprolactam	113	9.247	9.228	(1.072)	39343	2.00000	1.92	
	31 4-Chloro-3-Methylphenol	107	9.513	9.493	(1.103)	245444	4.50000	4.53	
$	32 2-Methylnaphthalene-D10	152	9.543	9.523	(1.106)	183753	2.00000	2.03	
	33 2-Methylnaphthalene	142	9.582	9.562	(1.111)	279076	2.00000	1.84	
	34 1-Methylnaphthalene	142	9.710	9.690	(1.126)	234553	2.00000	1.89	
	35 Hexachlorocyclopentadiene	237	9.808	9.789	(0.895)	20593	2.00000	1.53	
	36 1,2,4,5-Tetrachlorobenzene	216	9.828	9.798	(0.897)	105079	2.00000	2.03	
$	37 2,4-Dibromophenol	252	10.005	9.985	(0.913)	57773	2.00000	2.02	
	38 2,4,6-Trichlorophenol	196	10.015	9.995	(0.914)	151629	4.50000	4.67	
	39 2,4,5-Trichlorophenol	196	10.104	10.084	(0.922)	164776	4.50000	4.52	
	40 1,1'-Biphenyl	154	10.212	10.192	(0.932)	293837	2.00000	2.06	
	41 2-Chloronaphthalene	164	10.232	10.202	(0.934)	75397	2.00000	2.06	
	42 2-Nitroaniline	65	10.409	10.389	(0.950)	64640	2.00000	2.08	
	43 Dimethyl Phthalate	163	10.660	10.638	(0.973)	566126	4.50000	4.57	
	44 2,6-Dinitrotoluene	165	10.736	10.714	(0.980)	61333	2.00000	2.06	
	45 Acenaphthylene	152	10.769	10.747	(0.983)	329246	2.00000	2.05	
	46 3-Nitroaniline	138	10.987	10.954	(1.003)	50077	2.00000	2.00	
*	47 Acenaphthene-D10	164	10.954	10.943	(1.000)	60609	0.80000	(a)	
	48 Acenaphthene	153	10.998	10.976	(1.004)	209646	2.00000	2.00	
	49 2,4-Dinitrophenol	184	11.172	11.117	(1.020)	44361	4.50000	4.26	
	50 Dibenzofuran	168	11.248	11.226	(1.027)	285465	2.00000	2.04	
	51 2,4-Dinitrotoluene	165	11.292	11.270	(1.031)	70219	2.00000	2.08	
	52 4-Nitrophenol	139	11.401	11.357	(1.041)	69625	4.50000	4.40	
	53 2,3,4,6-Tetrachlorophenol	232	11.466	11.444	(1.047)	121023	4.50000	4.53	
	54 Diethylphthalate	149	11.597	11.586	(1.059)	553667	4.50000	4.55	
$	55 Fluorene-D10	174	11.662	11.640	(1.065)	152098	2.00000	2.04	
	56 Fluorene	166	11.695	11.673	(1.068)	220546	2.00000	2.05	
	57 4-Chlorophenyl-phenylether	204	11.717	11.695	(1.070)	115979	2.00000	2.05	
	58 4-Nitroaniline	138	11.815	11.782	(1.079)	44012	2.00000	1.96	
	59 4,6-Dinitro-2-Methylphenol	198	11.858	11.826	(0.916)	69520	4.50000	4.10	
	60 N-Nitrosodiphenylamine	169	11.891	11.869	(0.919)	182278	2.00000	2.00	
	61 4-Bromophenyl-phenylether	248	12.367	12.346	(0.955)	59375	2.00000	1.96	
	62 Hexachlorobenzene	284	12.453	12.431	(0.962)	50721	2.00000	1.98	
	63 Atrazine	200	12.645	12.623	(0.977)	38603	2.00000	1.99	
	64 Pentachlorophenol	266	12.773	12.741	(0.987)	45329	4.50000	4.17	
*	65 Phenanthrene-D10	188	12.944	12.922	(1.000)	88968	0.80000	(a)	
	66 Phenanthrene	178	12.976	12.954	(1.002)	272399	2.00000	1.98	
	67 Anthracene	178	13.050	13.018	(1.008)	301320	2.00000	1.96	
	68 Carbazole	167	13.307	13.275	(1.028)	223834	2.00000	1.93	
	69 Di-n-butylphthalate	149	13.798	13.776	(1.066)	848806	4.50000	4.39	
	70 Fluoranthene	202	14.579	14.551	(1.126)	248128	2.00000	1.92	
$	71 Pyrene-D10	212	14.851	14.813	(0.894)	150657	2.00000	2.00	
	72 Pyrene	202	14.870	14.841	(0.895)	258819	2.00000	1.97	
	73 Butylbenzylphthalate	149	15.808	15.780	(0.951)	322015	4.50000	4.50	
	74 Benzo(a)anthracene	228	16.605	16.624	(0.999)	149777	2.00000	2.00(H)	
	75 3,3'-Dichlorobenzidine	252	16.615	16.577	(1.000)	50529	2.00000	2.26	

Data File: \\target_server\gg\chem\gcms-n.i\N031618.b\N7968.D
Report Date: 19-Mar-2018 09:22

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
*	76 Chrysene-D12	240	16.615	16.577	(1.000)	42741	0.80000	(a)	
	77 Chrysene	228	16.662	16.624	(1.003)	172156	2.00000	2.10	
	78 bis(2-Ethylhexyl)phthalate	149	16.755	16.727	(1.008)	473973	4.50000	4.55	
	79 Di-n-octylphthalate	149	18.008	17.964	(1.084)	702244	4.50000	4.57	
	80 Benzo(b)fluoranthene	252	18.666	18.611	(0.957)	114472	2.00000	1.88	
	81 Benzo(k)fluoranthene	252	18.712	19.316	(0.959)	159778	2.00000	1.90(H)	
	82 Benzo(a)pyrene	252	19.370	19.316	(0.993)	117095	2.00000	1.92	
*	83 Perylene-D12	264	19.507	19.440	(1.000)	36674	0.80000	(a)	
	85 Indeno(1,2,3-cd)pyrene	276	21.574	21.507	(1.298)	109969	2.00000	2.15	
	86 Dibenzo(a,h)anthracene	278	21.619	21.541	(1.108)	83556	2.00000	1.98	
	87 Benzo(g,h,i)perylene	276	22.096	22.018	(1.133)	103793	2.00000	1.96	
M	88 Total PAHs	100				722565	36.0000	(a)	
M	324 Total Low PAHs	100				2010775	14.0000	(a)	
M	325 Total High PAHs	100				1029531	12.0000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
H - Operator selected an alternate compound hit.

Data File: \\target_server\gg\chem\gcms-n.i\N031618.b\N7968.D
Date : 16-MAR-2018 11:59
Client ID:
Sample Info: WG224895-4
Volume Injected (uL): 1.0
Column phase: ZB5-MS
Instrument: gcms-n.i
Operator: JCG
Column diameter: 0.25
\\target_server\gg\chem\gcms-n.i\N031618.b\N7968.D
Y (x10^5)
Min
-1,4-Dioxane-d8+
-Benzaldehyde
-Phenol+
-2-Chlorophenol
-1,3-Dichlorobenzene
-1,4-Dichlorobenzene-D4+
-1,2-Dichlorobenzene
-2,2'-Oxybis(1-chloropropa
-2-Methylphenol
-Acetophenone+
-3&4-Methylphenol+
-Nitrobenzene
-Isophorone
-2-Nitrophenol
-2,4-Dimethylphenol
-bis(2-Chloroethoxy)methan
-2,4-Dichlorophenol+
-Naphthalene D8+
-4-Chloroaniline+
-Caprolactam
-4-Chloro-3-Methylphenol+
-2-Methylnaphthalene
-1-Methylnaphthalene
-Hexachlorocyclopentadiene+
-2,4,6-Tribromophenol+
-2,4,5-Trichlorophenol
-1,1'-Biphenyl+
-2-Nitroaniline
-Dimethyl Phthalate
-2,6-Dinitrotoluene+
-3-Nitroaniline+
-2,4-Dinitrophenol
-4-Nitrophenol
-Dibenzofuran
-2,3,4,6-Tetrachlorophenol
-Diethylphthalate
-Fluorene-D10+
-4-Nitroaniline+
-4-Bromophenyl-phenylether
-Hexachlorobenzene
-Atrazine
-Pentachlorophenol
-Phenanthrene-D10+
-Anthracene
-Carbazole
Di-n-butylphthalate
-Fluoranthene
-Pyrene-D10+
-Butylbenzylphthalate
-3,3'-Dichlorobenzidine+
-Chrysene
-bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(b)fluoranthene+
-Benzo(a)pyrene
-Perylene-D12
-Indeno(1,2,3-cd)pyrene+
-Benzo(g,h,i)perylene

Data File: \\target_server\gg\chem\gcms-n.i\N031618.b\N7969.D
Report Date: 19-Mar-2018 09:22

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N031618.b\N7969.D
Lab Smp Id: WG224895-2
Inj Date : 16-MAR-2018 12:30 MS Autotune Date: 25-OCT-2017 07:54
Operator : JCG Inst ID: gcms-n.i
Smp Info : WG224895-2
Misc Info :
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N031618.b\NSPSIM86.m
Meth Date : 19-Mar-2018 08:27 cgomez Quant Type: ISTD
Cal Date : 16-MAR-2018 12:30 Cal File: N7969.D
Als bottle: 3 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
$	1 1,4-Dioxane-d8	96	2.660	2.639	(0.381)	5086	0.20000	0.183(a)	
	2 1,4-Dioxane	88	2.702	2.660	(0.387)	7578	0.20000	0.239(a)	
	3 N-Nitrosodimethylamine	74	3.447	3.216	(0.493)	6679	0.20000	0.188(aM)	M9
	4 Pyridine	79	3.604	3.247	(0.516)	11068	0.20000	0.186(aM)	M9
	5 Benzaldehyde	77	6.513	6.402	(0.932)	3523	0.20000	0.198(aQM)	M9
	6 Phenol	94	6.754	6.663	(0.967)	83784	1.00000	0.976(a)	
	7 Bis(2-Chloroethyl)ether	93	6.714	6.643	(0.961)	22303	0.20000	0.290(Q)	
	8 2-Chlorophenol	128	6.794	6.724	(0.973)	70753	1.00000	0.930(a)	
	9 1,3-Dichlorobenzene	146	6.915	6.875	(0.990)	13819	0.20000	0.179(a)	
*	10 1,4-Dichlorobenzene-D4	152	6.986	6.955	(1.000)	43434	0.80000	(aQ)	
	11 1,4-Dichlorobenzene	146	7.006	6.975	(1.003)	15211	0.20000	0.190(a)	
	12 1,2-Dichlorobenzene	146	7.207	7.167	(1.032)	14522	0.20000	0.190(a)	
	13 2,2'-Oxybis(1-chloropropane)	45	7.378	7.338	(1.056)	18642	0.20000	0.190(a)	
	14 2-Methylphenol	108	7.459	7.398	(1.068)	62575	1.00000	0.978(a)	
	15 Acetophenone	105	7.579	7.499	(0.878)	15936	0.20000	0.179(a)	
	16 N-Nitroso-di-n-propylamine	70	7.579	7.519	(1.085)	5571	0.20000	0.0640(aQ)	
	17 3&4-Methylphenol	108	7.700	7.620	(1.102)	52708	1.00000	0.843(a)	
	18 Hexachloroethane	117	7.610	7.589	(1.089)	5724	0.20000	0.203	
	19 Nitrobenzene	77	7.781	7.710	(0.901)	13503	0.20000	0.184(aM)	M6
	20 Isophorone	82	8.073	8.032	(0.935)	18322	0.20000	0.163(a)	
	21 2-Nitrophenol	139	8.193	8.133	(0.949)	34690	1.00000	0.898(a)	

JCG
1:28 pm, Mar 26, 2018

Data File: \\target_server\gg\chem\gcms-n.i\N031618.b\N7969.D
Report Date: 19-Mar-2018 09:22

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	22 2,4-Dimethylphenol	107	8.344	8.274	(0.966)	59008	1.00000	0.935(M)	M9
	23 bis(2-Chloroethoxy)methane	93	8.445	8.344	(0.978)	15234	0.20000	0.194(aQM)	M9
	24 2,4-Dichlorophenol	162	8.626	8.515	(0.999)	45920	1.00000	0.860	
	25 1,2,4-Trichlorobenzene	180	8.586	8.556	(0.994)	11025	0.20000	0.199(a)	
*	26 Naphthalene-D8	136	8.636	8.606	(1.000)	144158	0.80000	(a)	
	27 Naphthalene	128	8.667	8.636	(1.003)	35140	0.20000	0.193(a)	
	28 4-Chloroaniline	127	8.878	8.767	(1.028)	10822	0.20000	0.149(a)	
	29 Hexachlorobutadiene	225	8.848	8.828	(1.024)	5999	0.20000	0.202	
	30 Caprolactam	113	9.336	9.228	(1.081)	2554	0.20000	0.209(QM)	M9
	31 4-Chloro-3-Methylphenol	107	9.562	9.493	(1.107)	48890	1.00000	0.960(aQ)	
$	32 2-Methylnaphthalene-D10	152	9.572	9.523	(1.108)	16059	0.20000	0.189(a)	
	33 2-Methylnaphthalene	142	9.611	9.562	(1.113)	31023	0.20000	0.221(M)	M3
	34 1-Methylnaphthalene	142	9.730	9.690	(1.127)	28333	0.20000	0.243	
	35 Hexachlorocyclopentadiene	237	9.808	9.789	(0.895)	248	0.20000	0.344	
	36 1,2,4,5-Tetrachlorobenzene	216	9.848	9.798	(0.898)	9426	0.20000	0.209	
$	37 2,4-Dibromophenol	252	10.084	9.985	(0.920)	4926	0.20000	0.198(aM)	M6
	38 2,4,6-Trichlorophenol	196	10.054	9.995	(0.917)	24917	1.00000	0.881(a)	
	39 2,4,5-Trichlorophenol	196	10.172	10.084	(0.928)	34693	1.00000	1.09(H)	
	40 1,1'-Biphenyl	154	10.241	10.192	(0.934)	25454	0.20000	0.205	
	41 2-Chloronaphthalene	164	10.251	10.202	(0.935)	6240	0.20000	0.196(a)	
	42 2-Nitroaniline	65	10.497	10.389	(0.957)	4542	0.20000	0.168(a)	
	43 Dimethyl Phthalate	163	10.671	10.638	(0.973)	105994	1.00000	0.982(a)	
	44 2,6-Dinitrotoluene	165	10.769	10.714	(0.982)	4977	0.20000	0.192(a)	
	45 Acenaphthylene	152	10.780	10.747	(0.983)	28305	0.20000	0.202	
	46 3-Nitroaniline	138	11.085	10.954	(1.011)	3489	0.20000	0.160(a)	
*	47 Acenaphthene-D10	164	10.965	10.943	(1.000)	52789	0.80000	(a)	
	48 Acenaphthene	153	11.008	10.976	(1.004)	19059	0.20000	0.208	
	49 2,4-Dinitrophenol	184	11.313	11.117	(1.032)	2232	1.00000	0.772(a)	
	50 Dibenzofuran	168	11.270	11.226	(1.028)	23935	0.20000	0.197(a)	
	51 2,4-Dinitrotoluene	165	11.368	11.270	(1.037)	4531	0.20000	0.154(a)	
	52 4-Nitrophenol	139	11.542	11.357	(1.053)	7116	1.00000	0.821(aQ)	
	53 2,3,4,6-Tetrachlorophenol	232	11.510	11.444	(1.050)	19942	1.00000	0.857(a)	
	54 Diethylphthalate	149	11.619	11.586	(1.060)	104263	1.00000	0.984(a)	
$	55 Fluorene-D10	174	11.684	11.640	(1.066)	12823	0.20000	0.197(a)	
	56 Fluorene	166	11.717	11.673	(1.069)	18370	0.20000	0.196(a)	
	57 4-Chlorophenyl-phenylether	204	11.738	11.695	(1.071)	9581	0.20000	0.194(a)	
	58 4-Nitroaniline	138	11.913	11.782	(1.086)	5106	0.20000	0.262(Q)	
	59 4,6-Dinitro-2-Methylphenol	198	11.935	11.826	(0.921)	8347	1.00000	1.02	
	60 N-Nitrosodiphenylamine	169	11.924	11.869	(0.920)	15077	0.20000	0.208	
	61 4-Bromophenyl-phenylether	248	12.388	12.346	(0.956)	5225	0.20000	0.217	
	62 Hexachlorobenzene	284	12.463	12.431	(0.961)	4697	0.20000	0.231	
	63 Atrazine	200	12.677	12.623	(0.978)	3077	0.20000	0.199(a)	
	64 Pentachlorophenol	266	12.816	12.741	(0.988)	5134	1.00000	0.918(a)	
*	65 Phenanthrene-D10	188	12.965	12.922	(1.000)	70828	0.80000	(a)	
	66 Phenanthrene	178	12.997	12.954	(1.002)	22890	0.20000	0.209	
	67 Anthracene	178	13.072	13.018	(1.008)	26938	0.20000	0.220	
	68 Carbazole	167	13.349	13.275	(1.030)	19167	0.20000	0.207	
	69 Di-n-butylphthalate	149	13.808	13.776	(1.065)	160029	1.00000	1.04	
	70 Fluoranthene	202	14.597	14.551	(1.126)	23500	0.20000	0.228	
$	71 Pyrene-D10	212	14.860	14.813	(0.893)	13302	0.20000	0.220(a)	
	72 Pyrene	202	14.888	14.841	(0.895)	24556	0.20000	0.234	
	73 Butylbenzylphthalate	149	15.808	15.780	(0.950)	57318	1.00000	1.00	
	74 Benzo(a)anthracene	228	16.624	16.624	(0.999)	12699	0.20000	0.212(H)	
	75 3,3'-Dichlorobenzidine	252	16.652	16.577	(1.001)	3877	0.20000	0.217	

1:28 pm, Mar 26, 2018

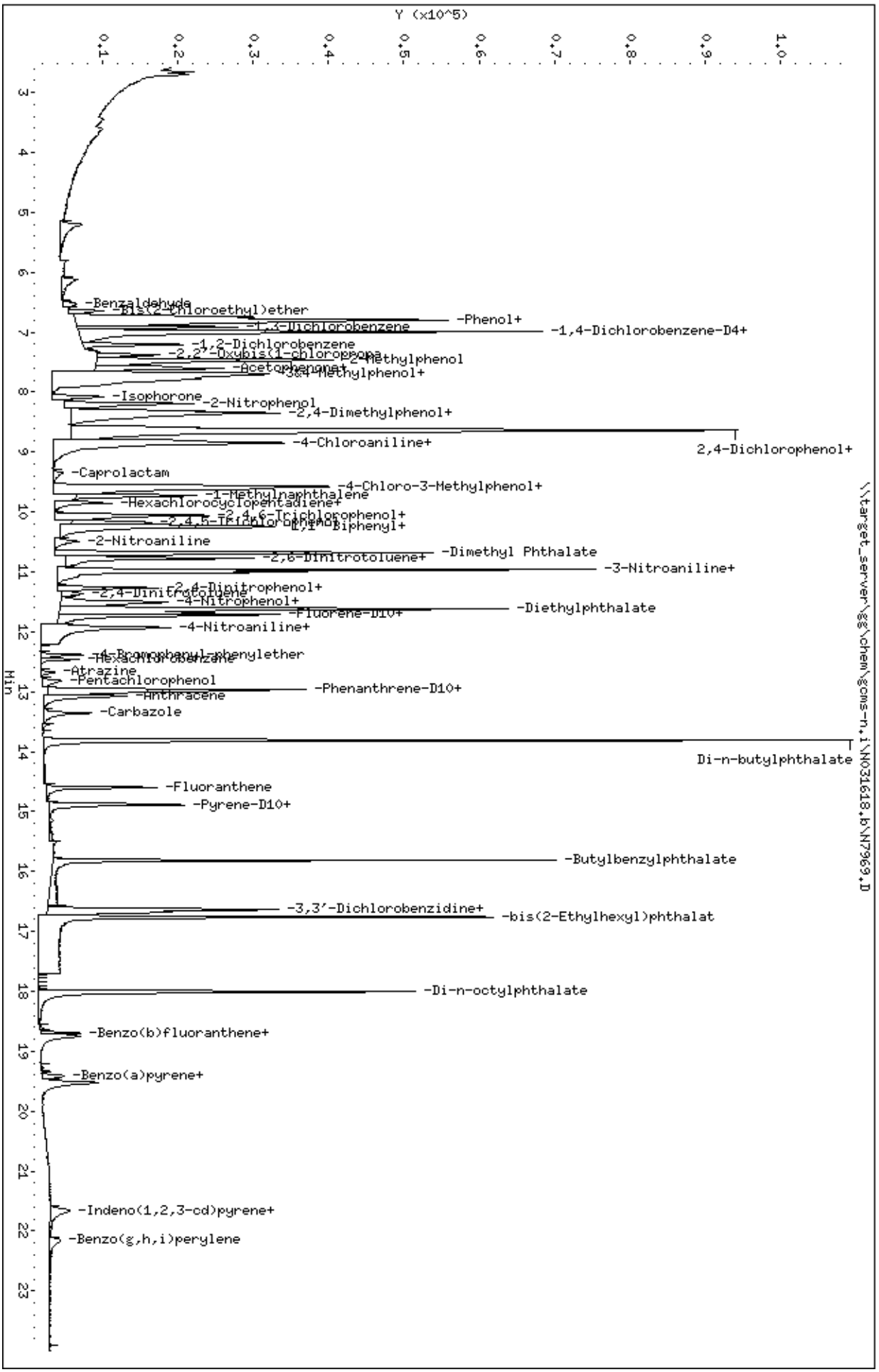
Data File: \\target_server\gg\chem\gcms-n.i\N031618.b\N7969.D
Report Date: 19-Mar-2018 09:22

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
*	76 Chrysene-D12	240	16.633	16.577	(1.000)	34162	0.80000	(a)	
	77 Chrysene	228	16.680	16.624	(1.003)	19557	0.20000	0.0980(a)	
	78 bis(2-Ethylhexyl)phthalate	149	16.765	16.727	(1.008)	83937	1.00000	1.01	
	79 Di-n-octylphthalate	149	18.010	17.964	(1.083)	118258	1.00000	0.963(a)	
	80 Benzo(b)fluoranthene	252	18.702	18.611	(0.958)	8893	0.20000	0.189(a)	
	81 Benzo(k)fluoranthene	252	18.748	19.316	(0.960)	15949	0.20000	0.245(M)	M6
	82 Benzo(a)pyrene	252	19.406	19.316	(0.994)	10095	0.20000	0.215	
*	83 Perylene-D12	264	19.520	19.440	(1.000)	28330	0.80000	(a)	
	85 Indeno(1,2,3-cd)pyrene	276	21.644	21.507	(1.301)	8948	0.20000	0.219	
	86 Dibenzo(a,h)anthracene	278	21.678	21.541	(1.111)	6682	0.20000	0.206	
	87 Benzo(g,h,i)perylene	276	22.155	22.018	(1.135)	9137	0.20000	0.224	
M	88 Total PAHs	100				71260	3.60000	(a)	
M	324 Total Low PAHs	100				181725	1.40000	(a)	
M	325 Total High PAHs	100				97089	1.20000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

1:29 pm, Mar 26, 2018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Date : 16-MAR-2018 12:30
Client ID:
Sample Info: WG224895-2
Volume Injected (uL): 1.0
Column phase: ZB5-MS
Instrument: gcms-n,i
Operator: JCG
Column diameter: 0.25
\\target_server\gg\chem\gcms-n,i\N031618,b\N7969,D
Y (x10^5)
Min
-Benzaldehyde
-bis(2-Chloroethyl)ether
-Phenol+
-1,3-Dichlorobenzene
-1,4-Dichlorobenzene-D4+
-1,2-Dichlorobenzene
-2,2'-Oxybis(1-chloropropa
-2-Methylphenol
-Acetophenone+
-3&4-Methylphenol+
-Isophorone
-2-Nitrophenol
-2,4-Dimethylphenol+
-4-Chloroaniline+
2,4-Dichlorophenol+
-Caprolactam
-4-Chloro-3-Methylphenol+
-1-Methylnaphthalene
-Hexachlorocyclopentadiene+
-2,4,6-Trichlorophenol+
-2,4,5-Trichlorophenol
D,1'-Biphenyl+
-2-Nitroaniline
-Dimethyl Phthalate
-2,6-Dinitrotoluene+
-3-Nitroaniline+
-2,4-Dinitrophenol+
-2,4-Dinitrotoluene
-4-Nitrophenol+
-Fluorene-D10+
-Diethylphthalate
-4-Nitroaniline+
-4-Bromophenyl-phenylether
-Hexachlorobenzene
-Atrazine
-Pentachlorophenol
-Phenanthrene-D10+
-Anthracene
-Carbazole
Di-n-butylphthalate
-Fluoranthene
-Pyrene-D10+
-Butylbenzylphthalate
-3,3'-Dichlorobenzidine+
-bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(b)fluoranthene+
-Benzo(a)pyrene+
-Indeno(1,2,3-cd)pyrene+
-Benzo(g,h,i)perylene

Data File: \\target_server\gg\chem\gcms-n.i\N031618.b\N7970.D
Report Date: 19-Mar-2018 09:22

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N031618.b\N7970.D
Lab Smp Id: WG224895-3
Inj Date : 16-MAR-2018 13:03 MS Autotune Date: 25-OCT-2017 07:54
Operator : JCG Inst ID: gcms-n.i
Smp Info : WG224895-3
Misc Info :
Comment   :
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Meth Date : 19-Mar-2018 08:27 cgomez Quant Type: ISTD
Cal Date : 16-MAR-2018 13:03 Cal File: N7970.D
Als bottle: 4 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
$	1 1,4-Dioxane-d8	96	2.649	2.639	(0.380)	14074	0.50000	0.446(a)	
	2 1,4-Dioxane	88	2.691	2.660	(0.386)	20052	0.50000	0.559(a)	
	3 N-Nitrosodimethylamine	74	3.342	3.216	(0.479)	15242	0.50000	0.378	
	4 Pyridine	79	3.436	3.247	(0.493)	26754	0.50000	0.396	
	5 Benzaldehyde	77	6.472	6.402	(0.928)	8802	0.50000	0.437(Q)	
	6 Phenol	94	6.704	6.663	(0.961)	196482	2.00000	2.02	
	7 Bis(2-Chloroethyl)ether	93	6.694	6.643	(0.960)	54038	0.50000	0.655	
	8 2-Chlorophenol	128	6.764	6.724	(0.970)	177505	2.00000	2.06	
	9 1,3-Dichlorobenzene	146	6.905	6.875	(0.990)	43262	0.50000	0.496	
*	10 1,4-Dichlorobenzene-D4	152	6.976	6.955	(1.000)	49220	0.80000	(a)	
	11 1,4-Dichlorobenzene	146	6.996	6.975	(1.003)	45020	0.50000	0.498	
	12 1,2-Dichlorobenzene	146	7.197	7.167	(1.032)	43055	0.50000	0.498	
	13 2,2'-Oxybis(1-chloropropane)	45	7.368	7.338	(1.056)	54878	0.50000	0.493	
	14 2-Methylphenol	108	7.429	7.398	(1.065)	145468	2.00000	2.01	
	15 Acetophenone	105	7.549	7.499	(0.875)	50491	0.50000	0.509	
	16 N-Nitroso-di-n-propylamine	70	7.559	7.519	(1.084)	28516	0.50000	0.493	
	17 3&4-Methylphenol	108	7.660	7.620	(1.098)	137940	2.00000	1.95	
	18 Hexachloroethane	117	7.610	7.589	(1.091)	15739	0.50000	0.493	
	19 Nitrobenzene	77	7.751	7.710	(0.898)	51216	0.50000	0.626(Q)	
	20 Isophorone	82	8.063	8.032	(0.935)	57793	0.50000	0.461	
	21 2-Nitrophenol	139	8.163	8.133	(0.946)	85358	2.00000	1.98	

Data File: \\target_server\gg\chem\gcms-n.i\N031618.b\N7970.D
Report Date: 19-Mar-2018 09:22

			QUANT SIG					AMOUNTS		
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	22	2,4-Dimethylphenol	107	8.304	8.274	(0.963)	140740	2.00000	2.00	
	23	bis(2-Chloroethoxy)methane	93	8.385	8.344	(0.972)	40490	0.50000	0.462(Q)	
	24	2,4-Dichlorophenol	162	8.576	8.515	(0.994)	117685	2.00000	1.97	
	25	1,2,4-Trichlorobenzene	180	8.576	8.556	(0.994)	30944	0.50000	0.500	
*	26	Naphthalene-D8	136	8.626	8.606	(1.000)	160989	0.80000	(a)	
	27	Naphthalene	128	8.657	8.636	(1.004)	103871	0.50000	0.510	
	28	4-Chloroaniline	127	8.828	8.767	(1.023)	37533	0.50000	0.463(a)	
	29	Hexachlorobutadiene	225	8.848	8.828	(1.026)	17004	0.50000	0.512	
	30	Caprolactam	113	9.297	9.228	(1.078)	7902	0.50000	0.433(Q)	
	31	4-Chloro-3-Methylphenol	107	9.533	9.493	(1.105)	113668	2.00000	2.00(Q)	
$	32	2-Methylnaphthalene-D10	152	9.553	9.523	(1.107)	48938	0.50000	0.517(a)	
	33	2-Methylnaphthalene	142	9.592	9.562	(1.112)	95581	0.50000	0.586	
	34	1-Methylnaphthalene	142	9.720	9.690	(1.127)	68576	0.50000	0.527	
	35	Hexachlorocyclopentadiene	237	9.808	9.789	(0.895)	2180	0.50000	0.448	
	36	1,2,4,5-Tetrachlorobenzene	216	9.838	9.798	(0.897)	27306	0.50000	0.497	
$	37	2,4-Dibromophenol	252	10.045	9.985	(0.916)	14493	0.50000	0.477(a)	
	38	2,4,6-Trichlorophenol	196	10.025	9.995	(0.914)	67435	2.00000	1.96	
	39	2,4,5-Trichlorophenol	196	10.133	10.084	(0.924)	78076	2.00000	2.02(H)	
	40	1,1'-Biphenyl	154	10.222	10.192	(0.932)	76424	0.50000	0.506	
	41	2-Chloronaphthalene	164	10.242	10.202	(0.934)	19396	0.50000	0.500(Q)	
	42	2-Nitroaniline	65	10.438	10.389	(0.952)	15684	0.50000	0.476	
	43	Dimethyl Phthalate	163	10.660	10.638	(0.972)	260335	2.00000	1.98	
	44	2,6-Dinitrotoluene	165	10.747	10.714	(0.980)	14524	0.50000	0.460	
	45	Acenaphthylene	152	10.769	10.747	(0.982)	86076	0.50000	0.505	
	46	3-Nitroaniline	138	11.030	10.954	(1.006)	12013	0.50000	0.453	
*	47	Acenaphthene-D10	164	10.965	10.943	(1.000)	64281	0.80000	(a)	
	48	Acenaphthene	153	10.998	10.976	(1.003)	55911	0.50000	0.502	
	49	2,4-Dinitrophenol	184	11.226	11.117	(1.024)	13810	2.00000	1.68	
	50	Dibenzofuran	168	11.248	11.226	(1.026)	74106	0.50000	0.501	
	51	2,4-Dinitrotoluene	165	11.324	11.270	(1.033)	16296	0.50000	0.454	
	52	4-Nitrophenol	139	11.466	11.357	(1.046)	25823	2.00000	1.79(Q)	
	53	2,3,4,6-Tetrachlorophenol	232	11.477	11.444	(1.047)	50559	2.00000	1.78	
	54	Diethylphthalate	149	11.608	11.586	(1.059)	257852	2.00000	2.00	
$	55	Fluorene-D10	174	11.662	11.640	(1.064)	39782	0.50000	0.502(a)	
	56	Fluorene	166	11.706	11.673	(1.068)	58080	0.50000	0.508	
	57	4-Chlorophenyl-phenylether	204	11.728	11.695	(1.070)	29839	0.50000	0.498	
	58	4-Nitroaniline	138	11.858	11.782	(1.081)	11126	0.50000	0.468	
	59	4,6-Dinitro-2-Methylphenol	198	11.891	11.826	(0.918)	24702	2.00000	1.73	
	60	N-Nitrosodiphenylamine	169	11.902	11.869	(0.919)	47184	0.50000	0.507	
	61	4-Bromophenyl-phenylether	248	12.378	12.346	(0.955)	15782	0.50000	0.511	
	62	Hexachlorobenzene	284	12.453	12.431	(0.961)	13146	0.50000	0.503	
	63	Atrazine	200	12.656	12.623	(0.977)	9674	0.50000	0.488	
	64	Pentachlorophenol	266	12.794	12.741	(0.988)	18700	2.00000	1.91	
*	65	Phenanthrene-D10	188	12.954	12.922	(1.000)	90879	0.80000	(a)	
	66	Phenanthrene	178	12.986	12.954	(1.002)	67063	0.50000	0.478	
	67	Anthracene	178	13.061	13.018	(1.008)	83114	0.50000	0.530	
	68	Carbazole	167	13.328	13.275	(1.029)	57461	0.50000	0.484	
	69	Di-n-butylphthalate	149	13.798	13.776	(1.065)	413760	2.00000	2.10	
	70	Fluoranthene	202	14.588	14.551	(1.126)	65179	0.50000	0.494	
$	71	Pyrene-D10	212	14.851	14.813	(0.893)	39417	0.50000	0.532(a)	
	72	Pyrene	202	14.879	14.841	(0.895)	68266	0.50000	0.529	
	73	Butylbenzylphthalate	149	15.808	15.780	(0.951)	148160	2.00000	2.11	
	74	Benzo(a)anthracene	228	16.615	16.624	(0.999)	34994	0.50000	0.477(H)	
	75	3,3'-Dichlorobenzidine	252	16.634	16.577	(1.001)	11180	0.50000	0.510	

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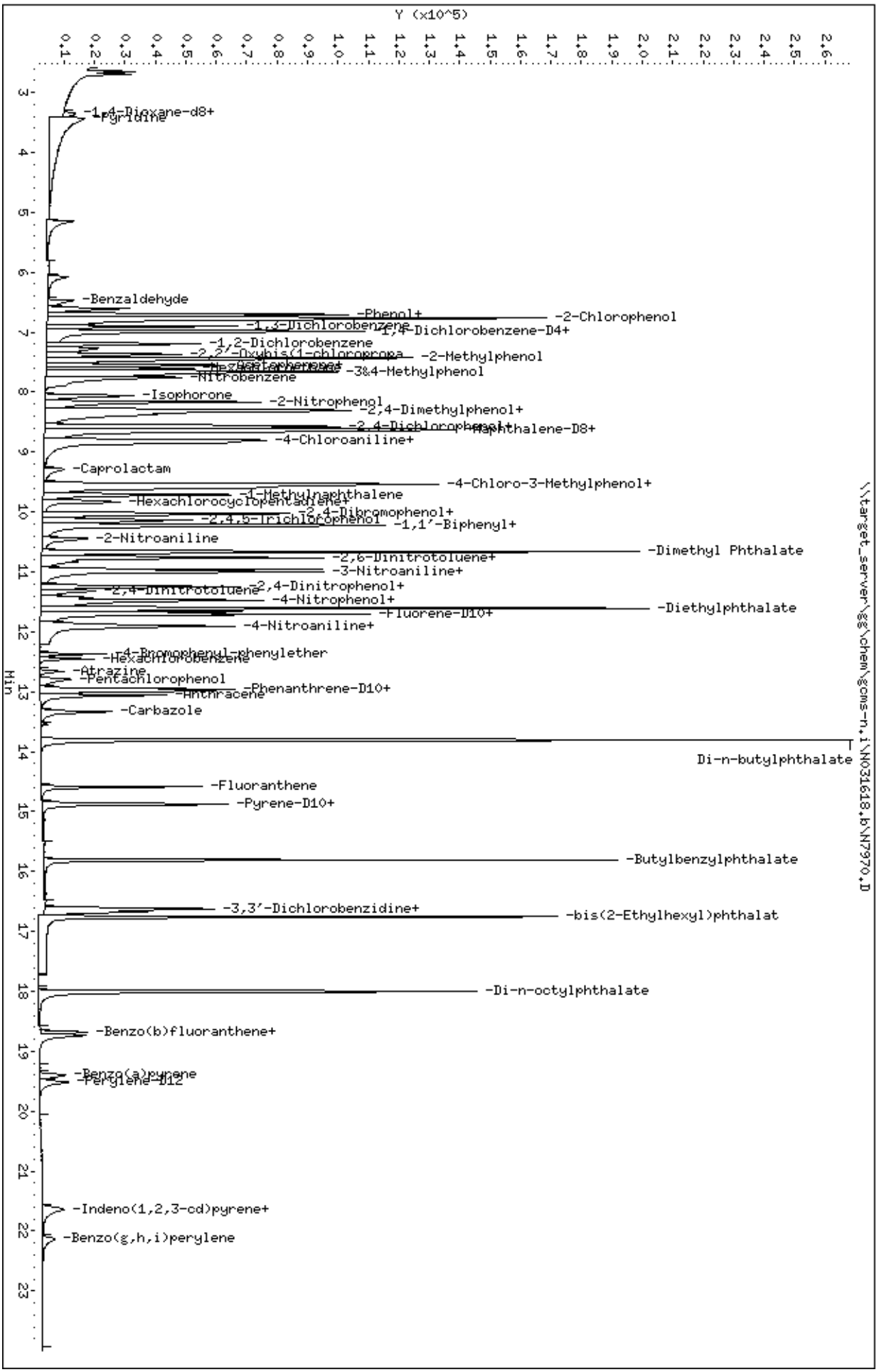
Report Date: 19-Mar-2018 09:22

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
*	76 Chrysene-D12	240	16.624	16.577	(1.000)	41939	0.80000	(a)	
	77 Chrysene	228	16.671	16.624	(1.003)	48948	0.50000	0.443	
	78 bis(2-Ethylhexyl)phthalate	149	16.756	16.727	(1.008)	223207	2.00000	2.18	
	79 Di-n-octylphthalate	149	18.010	17.964	(1.083)	321327	2.00000	2.13	
	80 Benzo(b)fluoranthene	252	18.680	18.611	(0.957)	25888	0.50000	0.484	
	81 Benzo(k)fluoranthene	252	18.737	19.316	(0.960)	40759	0.50000	0.551(H)	
	82 Benzo(a)pyrene	252	19.395	19.316	(0.994)	27562	0.50000	0.516	
*	83 Perylene-D12	264	19.520	19.440	(1.000)	32217	0.80000	(a)	
	85 Indeno(1,2,3-cd)pyrene	276	21.610	21.507	(1.300)	23707	0.50000	0.472	
	86 Dibenzo(a,h)anthracene	278	21.655	21.541	(1.109)	17349	0.50000	0.469	
	87 Benzo(g,h,i)perylene	276	22.132	22.018	(1.134)	23536	0.50000	0.506	
M	88 Total PAHs	100				182466	9.00000	(a)	
M	324 Total Low PAHs	100				549696	3.50000	(a)	
M	325 Total High PAHs	100				262298	3.00000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
H - Operator selected an alternate compound hit.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Instrument: gcms-n,i
Operator: JCG
Column diameter: 0.25
\\target_server\gg\chem\gcms-n,i\N031618.b\N7970.D
Y (x10^5)
Min
-1,4-Dioxane-d8+
-Pyridine
-Benzaldehyde
-Phenol+
-2-Chlorophenol
-1,3-Dichlorobenzene
-1,4-Dichlorobenzene-D4+
-1,2-Dichlorobenzene
-2,2'-Oxybis(1-chloropropa
-2-Methylphenol
-Nitrobenzene
-3&4-Methylphenol
-Isophorone
-2-Nitrophenol
-2,4-Dimethylphenol+
-Naphthalene-D8+
-4-Chloroaniline+
-Caprolactam
-4-Chloro-3-Methylphenol+
-1-Methylnaphthalene
-Hexachlorocyclopentadiene+
-2,4-Dibromophenol+
-2,4,5-Trichlorophenol
-1,1'-Biphenyl+
-2-Nitroaniline
-Dimethyl Phthalate
-2,6-Dinitrotoluene+
-3-Nitroaniline+
-2,4-Dinitrophenol+
-2,4-Dinitrotoluene
-4-Nitrophenol+
-Fluorene-D10+
-Diethylphthalate
-4-Nitroaniline+
-4-Bromophenyl-phenylether
-Hexachlorobenzene
-Atrazine
-Pentachlorophenol
-Phenanthrene-D10+
-Anthracene
-Carbazole
Di-n-butylphthalate
-Fluoranthene
-Pyrene-D10+
-Butylbenzylphthalate
-3,3'-Dichlorobenzidine+
-bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(b)fluoranthene+
-Benzo(a)pyrene
-Perylene-D12
-Indeno(1,2,3-cd)pyrene+
-Benzo(g,h,i)perylene

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Report Date: 19-Mar-2018 09:22

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N031618.b\N7971.D
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Method : \\target_server\gg\chem\gcms-n.i\N031618.b\NSPSIM86.m
Meth Date : 19-Mar-2018 08:27 cgomez Quant Type: ISTD
Cal Date : 16-MAR-2018 13:34 Cal File: N7971.D
Als bottle: 5 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
$	1 1,4-Dioxane-d8	96	2.618	2.639	(0.376)	237280	7.00000	7.14(M)	M6
	2 1,4-Dioxane	88	2.660	2.660	(0.382)	242156	7.00000	6.41	
	3 N-Nitrosodimethylamine	74	3.205	3.216	(0.460)	301149	7.00000	7.10	
	4 Pyridine	79	3.226	3.247	(0.463)	561257	7.00000	7.90	
	5 Benzaldehyde	77	6.412	6.402	(0.921)	163219	7.00000	7.70	
	6 Phenol	94	6.674	6.663	(0.958)	741809	7.00000	7.24	
	7 Bis(2-Chloroethyl)ether	93	6.664	6.643	(0.957)	566997	7.00000	6.81(Q)	
	8 2-Chlorophenol	128	6.744	6.724	(0.968)	657269	7.00000	7.24	
	9 1,3-Dichlorobenzene	146	6.895	6.875	(0.990)	679236	7.00000	7.39	
*	10 1,4-Dichlorobenzene-D4	152	6.965	6.955	(1.000)	51827	0.80000	(aQ)	
	11 1,4-Dichlorobenzene	146	6.986	6.975	(1.003)	699020	7.00000	7.34	
	12 1,2-Dichlorobenzene	146	7.187	7.167	(1.032)	663504	7.00000	7.29	
	13 2,2'-Oxybis(1-chloropropane)	45	7.358	7.338	(1.056)	864582	7.00000	7.38	
	14 2-Methylphenol	108	7.408	7.398	(1.064)	546429	7.00000	7.16	
	15 Acetophenone	105	7.519	7.499	(0.872)	761659	7.00000	7.30	
	16 N-Nitroso-di-n-propylamine	70	7.539	7.519	(1.082)	400683	7.00000	7.29	
	17 3&4-Methylphenol	108	7.630	7.620	(1.095)	554659	7.00000	7.44	
	18 Hexachloroethane	117	7.610	7.589	(1.092)	241099	7.00000	7.18	
	19 Nitrobenzene	77	7.720	7.710	(0.895)	567906	7.00000	6.60	
	20 Isophorone	82	8.042	8.032	(0.932)	1009374	7.00000	7.66	
	21 2-Nitrophenol	139	8.153	8.133	(0.945)	330625	7.00000	7.29	

1:29 pm, Mar 26, 2018

Data File: \\target_server\gg\chem\gcms-n.i\N031618.b\N7971.D
Report Date: 19-Mar-2018 09:22

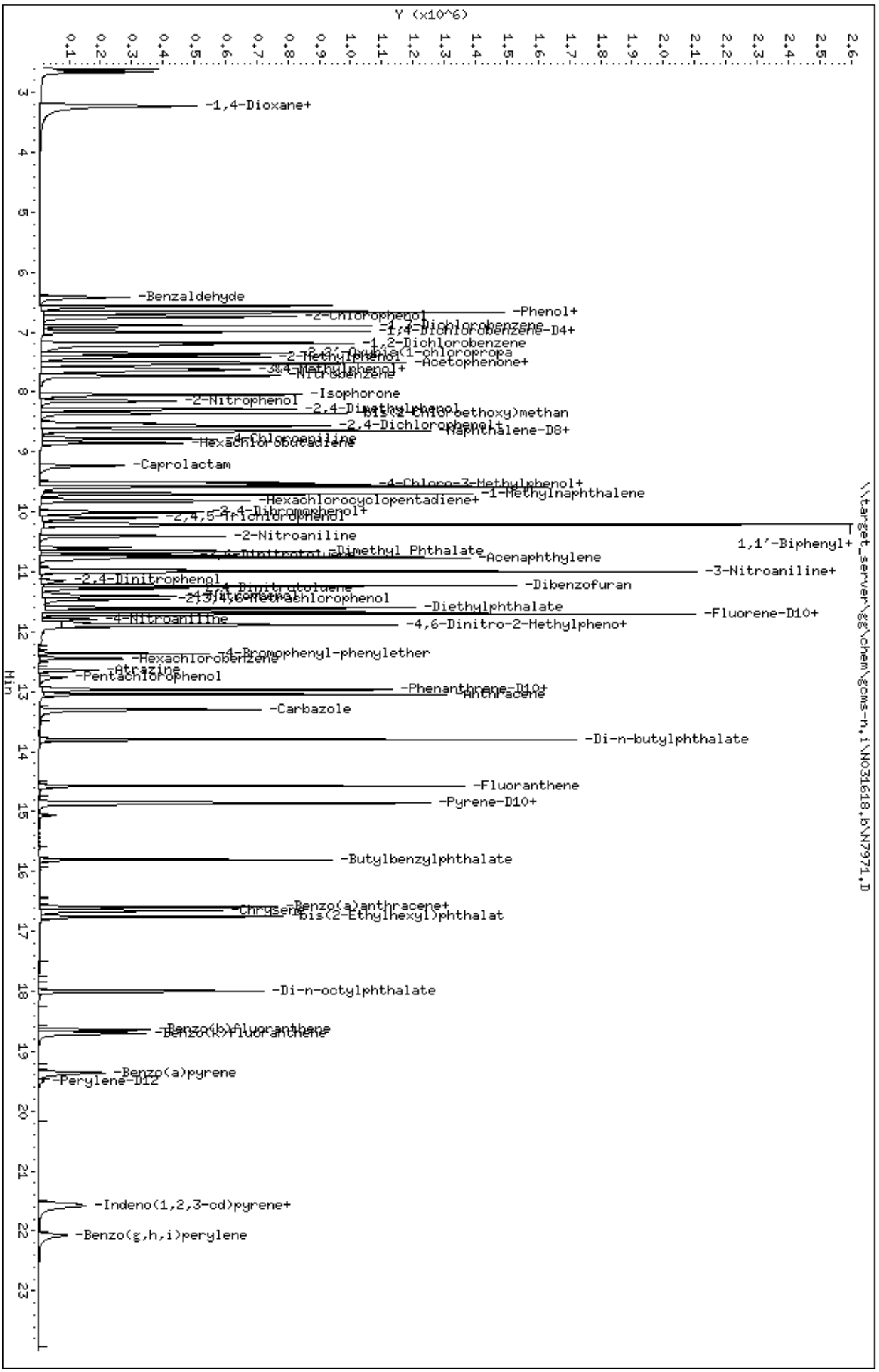
							AMOUNTS		
		QUANT SIG					CAL-AMT	ON-COL	
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/ml)	(ug/ml)	REVIEW CODE
	22 2,4-Dimethylphenol	107	8.284	8.274	(0.960)	535412	7.00000	7.22	
	23 bis(2-Chloroethoxy)methane	93	8.355	8.344	(0.968)	670970	7.00000	7.29	
	24 2,4-Dichlorophenol	162	8.526	8.515	(0.988)	461600	7.00000	7.36	
	25 1,2,4-Trichlorobenzene	180	8.566	8.556	(0.993)	463951	7.00000	7.12	
*	26 Naphthalene-D8	136	8.626	8.606	(1.000)	169319	0.80000	(a)	
	27 Naphthalene	128	8.646	8.636	(1.002)	1537883	7.00000	7.19	
	28 4-Chloroaniline	127	8.777	8.767	(1.018)	666761	7.00000	7.82	
	29 Hexachlorobutadiene	225	8.848	8.828	(1.026)	244313	7.00000	7.00	
	30 Caprolactam	113	9.228	9.228	(1.070)	165757	7.00000	7.09	
	31 4-Chloro-3-Methylphenol	107	9.503	9.493	(1.102)	428524	7.00000	7.17	
$	32 2-Methylnaphthalene-D10	152	9.543	9.523	(1.106)	723244	7.00000	7.26	
	33 2-Methylnaphthalene	142	9.582	9.562	(1.111)	1007066	7.00000	6.91	
	34 1-Methylnaphthalene	142	9.710	9.690	(1.126)	914872	7.00000	6.68	
	35 Hexachlorocyclopentadiene	237	9.808	9.789	(0.895)	136421	7.00000	6.88	
	36 1,2,4,5-Tetrachlorobenzene	216	9.818	9.798	(0.896)	415603	7.00000	7.02	
$	37 2,4-Dibromophenol	252	9.995	9.985	(0.912)	234924	7.00000	7.18(Q)	
	38 2,4,6-Trichlorophenol	196	10.015	9.995	(0.914)	271266	7.00000	7.31	
	39 2,4,5-Trichlorophenol	196	10.094	10.084	(0.921)	288552	7.00000	6.92	
	40 1,1'-Biphenyl	154	10.212	10.192	(0.932)	1147650	7.00000	7.06	
	41 2-Chloronaphthalene	164	10.222	10.202	(0.933)	302294	7.00000	7.23	
	42 2-Nitroaniline	65	10.399	10.389	(0.949)	263407	7.00000	7.42	
	43 Dimethyl Phthalate	163	10.660	10.638	(0.973)	1013304	7.00000	7.16	
	44 2,6-Dinitrotoluene	165	10.725	10.714	(0.979)	252046	7.00000	7.40(Q)	
	45 Acenaphthylene	152	10.769	10.747	(0.983)	1292901	7.00000	7.04	
	46 3-Nitroaniline	138	10.965	10.954	(1.001)	221889	7.00000	7.77	
*	47 Acenaphthene-D10	164	10.954	10.943	(1.000)	69234	0.80000	(a)	
	48 Acenaphthene	153	10.998	10.976	(1.004)	854598	7.00000	7.12	
	49 2,4-Dinitrophenol	184	11.139	11.117	(1.017)	97698	7.00000	7.34	
	50 Dibenzofuran	168	11.237	11.226	(1.026)	1148305	7.00000	7.20	
	51 2,4-Dinitrotoluene	165	11.281	11.270	(1.030)	299429	7.00000	7.75	
	52 4-Nitrophenol	139	11.368	11.357	(1.038)	140974	7.00000	7.30(Q)	
	53 2,3,4,6-Tetrachlorophenol	232	11.455	11.444	(1.046)	234541	7.00000	7.68	
	54 Diethylphthalate	149	11.597	11.586	(1.059)	1007470	7.00000	7.25	
$	55 Fluorene-D10	174	11.662	11.640	(1.065)	611948	7.00000	7.18	
	56 Fluorene	166	11.695	11.673	(1.068)	886245	7.00000	7.20	
	57 4-Chlorophenyl-phenylether	204	11.717	11.695	(1.070)	464135	7.00000	7.18	
	58 4-Nitroaniline	138	11.793	11.782	(1.077)	168801	7.00000	6.60(Q)	
	59 4,6-Dinitro-2-Methylphenol	198	11.847	11.826	(0.915)	143551	7.00000	7.11	
	60 N-Nitrosodiphenylamine	169	11.891	11.869	(0.919)	730401	7.00000	7.10	
	61 4-Bromophenyl-phenylether	248	12.357	12.346	(0.955)	240999	7.00000	7.06	
	62 Hexachlorobenzene	284	12.453	12.431	(0.962)	198790	7.00000	6.88	
	63 Atrazine	200	12.645	12.623	(0.977)	162820	7.00000	7.43	
	64 Pentachlorophenol	266	12.762	12.741	(0.986)	90449	7.00000	7.07	
*	65 Phenanthrene-D10	188	12.944	12.922	(1.000)	100469	0.80000	(a)	
	66 Phenanthrene	178	12.965	12.954	(1.002)	1147739	7.00000	7.39	
	67 Anthracene	178	13.040	13.018	(1.007)	1210689	7.00000	6.98	
	68 Carbazole	167	13.296	13.275	(1.027)	957038	7.00000	7.30	
	69 Di-n-butylphthalate	149	13.798	13.776	(1.066)	1591359	7.00000	7.29	
	70 Fluoranthene	202	14.569	14.551	(1.126)	1044283	7.00000	7.16	
$	71 Pyrene-D10	212	14.841	14.813	(0.893)	639828	7.00000	7.22	
	72 Pyrene	202	14.860	14.841	(0.894)	1081651	7.00000	7.01	
	73 Butylbenzylphthalate	149	15.798	15.780	(0.951)	630834	7.00000	7.51	
	74 Benzo(a)anthracene	228	16.596	16.624	(0.999)	627717	7.00000	7.15	
	75 3,3'-Dichlorobenzidine	252	16.605	16.577	(0.999)	180392	7.00000	6.88	

Data File: \\target_server\gg\chem\gcms-n.i\N031618.b\N7971.D
Report Date: 19-Mar-2018 09:22

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
*	76 Chrysene-D12	240	16.615	16.577	(1.000)	50163	0.80000	(a)	
	77 Chrysene	228	16.652	16.624	(1.002)	663405	7.00000	7.43	
	78 bis(2-Ethylhexyl)phthalate	149	16.755	16.727	(1.008)	888903	7.00000	7.27	
	79 Di-n-octylphthalate	149	17.998	17.964	(1.083)	1302408	7.00000	7.22	
	80 Benzo(b)fluoranthene	252	18.646	18.611	(0.956)	484544	7.00000	7.77	
	81 Benzo(k)fluoranthene	252	18.702	19.316	(0.959)	544873	7.00000	6.32(H)	
	82 Benzo(a)pyrene	252	19.361	19.316	(0.993)	431542	7.00000	6.93	
*	83 Perylene-D12	264	19.497	19.440	(1.000)	37537	0.80000	(a)	
	85 Indeno(1,2,3-cd)pyrene	276	21.542	21.507	(1.297)	403148	7.00000	6.72	
	86 Dibenzo(a,h)anthracene	278	21.587	21.541	(1.107)	306121	7.00000	7.11	
	87 Benzo(g,h,i)perylene	276	22.075	22.018	(1.132)	373740	7.00000	6.90	
M	88 Total PAHs	100				2721177	126.000	(a)	
M	324 Total Low PAHs	100				7937121	49.0000	(a)	
M	325 Total High PAHs	100				4154719	42.0000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.


Data File: \\target_server\gg\chem\gcms-n,i\N031618.b\N7971.D
Date : 16-MAR-2018 13:34
Client ID:
Sample Info: WG224895-5
Volume Injected (uL): 1.0
Column phase: ZB5-MS
Instrument: gcms-n,i
Operator: JCG
Column diameter: 0.25
\\target_server\gg\chem\gcms-n,i\N031618.b\N7971.D
Y (x10^6)
Min
-1,4-Dioxane+
-Benzaldehyde
-Phenol+
-2-Chlorophenol
-1,3-Dichlorobenzene
-1,4-Dichlorobenzene-D4+
-1,2-Dichlorobenzene
-Acetophenone+
-Nitrobenzene
-Isophorone
-2-Nitrophenol
-Naphthalene-D8+
-Caprolactam
-4-Chloro-3-Methylphenol+
-1-Methylnaphthalene
-Hexachlorocyclopentadiene+
-2,4,5-Trichlorophenol
1,1'-Biphenyl+
-2-Nitroaniline
-Dimethyl Phthalate
-Acenaphthylene
-3-Nitroaniline+
-2,4-Dinitrophenol
-Dibenzofuran
-Diethylphthalate
-Fluorene-D10+
-4-Nitroaniline
-4,6-Dinitro-2-Methylpheno+
-4-Bromophenyl-phenylether
-Hexachlorobenzene
-Atrazine
-Pentachlorophenol
-Phenanthrene-D10+
-Anthracene
-Carbazole
-Di-n-butylphthalate
-Fluoranthene
-Pyrene-D10+
-Butylbenzylphthalate
-Benzo(a)anthracene+
-Chrysene
-bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(b)fluoranthene
-Benzo(k)fluoranthene
-Benzo(a)pyrene
-Perylene-D12
-Indeno(1,2,3-cd)pyrene+
-Benzo(g,h,i)perylene

Data File: \\target_server\gg\chem\gcms-n.i\N031618.b\N7972.D
Report Date: 19-Mar-2018 09:22

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N031618.b\N7972.D
Lab Smp Id: WG224895-6
Inj Date : 16-MAR-2018 14:06
Operator : JCG   Inst ID: gcms-n.i
Smp Info : WG224895-6
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gcms-n.i\N031618.b\NSPSIM86.m
Meth Date : 19-Mar-2018 08:27 cgomez   Quant Type: ISTD
Cal Date : 16-MAR-2018 14:06   Cal File: N7972.D
Als bottle: 6   Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
$	1 1,4-Dioxane-d8	96	2.607	2.639	(0.374)	342510	10.0000	10.6(M)	M6
	2 1,4-Dioxane	88	2.660	2.660	(0.382)	334998	10.0000	9.14	
	3 N-Nitrosodimethylamine	74	3.195	3.216	(0.459)	448036	10.0000	10.9	
	4 Pyridine	79	3.216	3.247	(0.462)	755157	10.0000	11.0	
	5 Benzaldehyde	77	6.412	6.402	(0.921)	221751	10.0000	10.8	
	6 Phenol	94	6.664	6.663	(0.957)	1024036	10.0000	10.3	
	7 Bis(2-Chloroethyl)ether	93	6.664	6.643	(0.957)	842435	10.0000	10.4	
	8 2-Chlorophenol	128	6.744	6.724	(0.968)	913913	10.0000	10.4	
	9 1,3-Dichlorobenzene	146	6.895	6.875	(0.990)	947378	10.0000	10.6	
*	10 1,4-Dichlorobenzene-D4	152	6.965	6.955	(1.000)	50235	0.80000	(aQ)	
	11 1,4-Dichlorobenzene	146	6.986	6.975	(1.003)	963655	10.0000	10.4	
	12 1,2-Dichlorobenzene	146	7.187	7.167	(1.032)	916596	10.0000	10.4	
	13 2,2'-Oxybis(1-chloropropane)	45	7.358	7.338	(1.056)	1184741	10.0000	10.4	
	14 2-Methylphenol	108	7.408	7.398	(1.064)	757567	10.0000	10.2	
	15 Acetophenone	105	7.519	7.499	(0.872)	1034709	10.0000	10.4	
	16 N-Nitroso-di-n-propylamine	70	7.539	7.519	(1.082)	542388	10.0000	10.2	
	17 3&4-Methylphenol	108	7.630	7.620	(1.095)	796680	10.0000	11.0	
	18 Hexachloroethane	117	7.610	7.589	(1.092)	335339	10.0000	10.3	
	19 Nitrobenzene	77	7.720	7.710	(0.895)	790193	10.0000	9.59	
	20 Isophorone	82	8.042	8.032	(0.932)	1376783	10.0000	10.9	
	21 2-Nitrophenol	139	8.153	8.133	(0.945)	454389	10.0000	10.4	

JCG

1:29 pm, Mar 26, 2018

Data File: \\target_server\gg\chem\gcms-n.i\N031618.b\N7972.D
Report Date: 19-Mar-2018 09:22

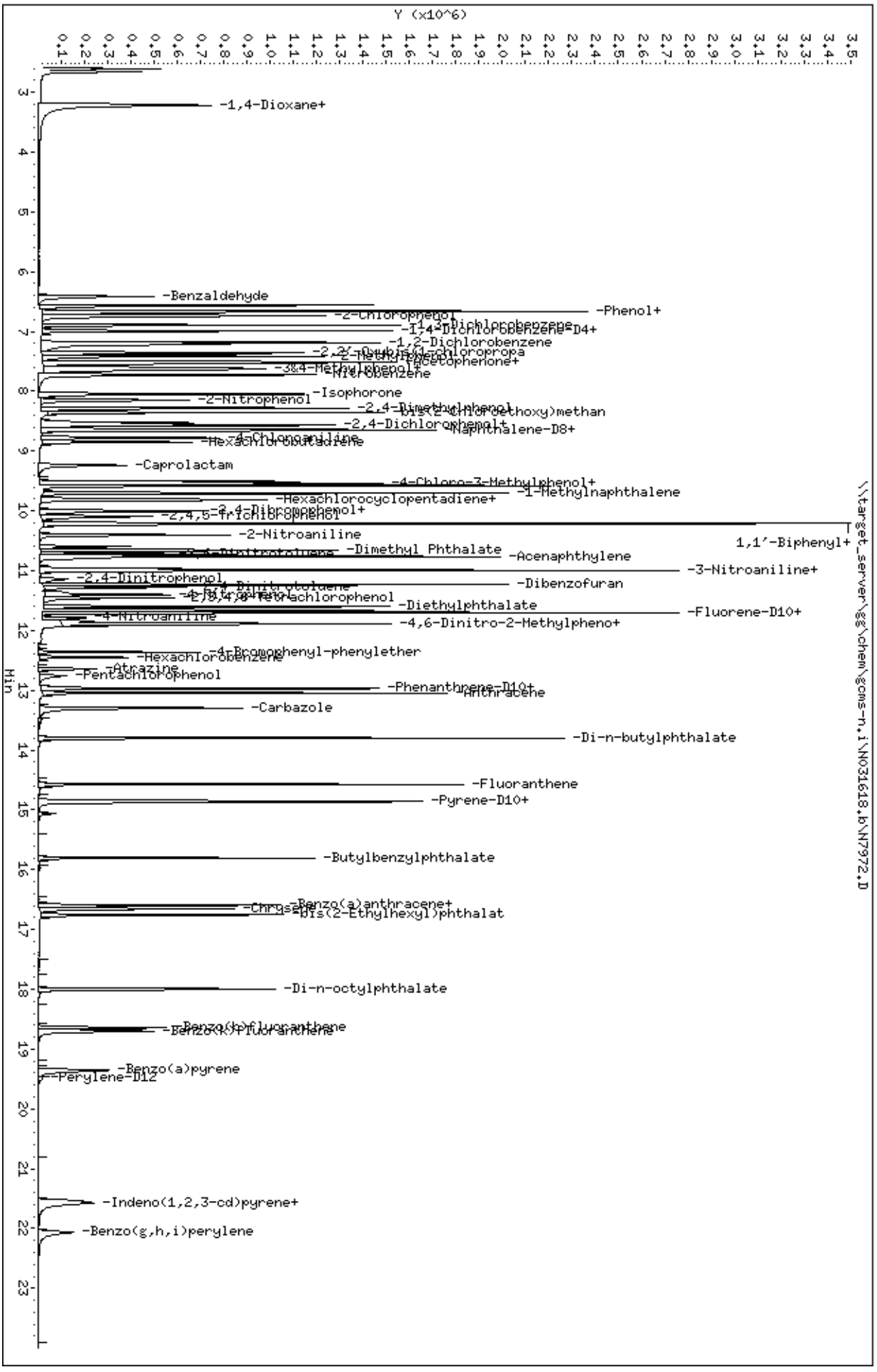
							AMOUNTS		
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	22 2,4-Dimethylphenol	107	8.284	8.274	(0.960)	735749	10.0000	10.4	
	23 bis(2-Chloroethoxy)methane	93	8.355	8.344	(0.968)	934781	10.0000	10.6	
	24 2,4-Dichlorophenol	162	8.526	8.515	(0.988)	629203	10.0000	10.5	
	25 1,2,4-Trichlorobenzene	180	8.566	8.556	(0.993)	627676	10.0000	10.0	
*	26 Naphthalene-D8	136	8.626	8.606	(1.000)	162226	0.80000	(a)	
	27 Naphthalene	128	8.646	8.636	(1.002)	2086855	10.0000	10.2	
	28 4-Chloroaniline	127	8.777	8.767	(1.018)	898454	10.0000	11.0	
	29 Hexachlorobutadiene	225	8.848	8.828	(1.026)	340619	10.0000	10.2	
	30 Caprolactam	113	9.237	9.228	(1.071)	225055	10.0000	10.0	
	31 4-Chloro-3-Methylphenol	107	9.503	9.493	(1.102)	588188	10.0000	10.3	
$	32 2-Methylnaphthalene-D10	152	9.543	9.523	(1.106)	971577	10.0000	10.2	
	33 2-Methylnaphthalene	142	9.582	9.562	(1.111)	1329374	10.0000	10.2	
	34 1-Methylnaphthalene	142	9.710	9.690	(1.126)	1236584	10.0000	9.42	
	35 Hexachlorocyclopentadiene	237	9.808	9.789	(0.895)	203810	10.0000	10.2	
	36 1,2,4,5-Tetrachlorobenzene	216	9.818	9.798	(0.896)	562132	10.0000	10.0	
$	37 2,4-Dibromophenol	252	9.995	9.985	(0.912)	313790	10.0000	10.2	
	38 2,4,6-Trichlorophenol	196	10.005	9.995	(0.913)	366176	10.0000	10.4	
	39 2,4,5-Trichlorophenol	196	10.094	10.084	(0.921)	389419	10.0000	9.89	
	40 1,1'-Biphenyl	154	10.212	10.192	(0.932)	1503125	10.0000	9.79	
	41 2-Chloronaphthalene	164	10.222	10.202	(0.933)	395040	10.0000	10.0	
	42 2-Nitroaniline	65	10.399	10.389	(0.949)	354189	10.0000	10.6	
	43 Dimethyl Phthalate	163	10.660	10.638	(0.973)	1347085	10.0000	10.1	
	44 2,6-Dinitrotoluene	165	10.725	10.714	(0.979)	330535	10.0000	10.3	
	45 Acenaphthylene	152	10.769	10.747	(0.983)	1725268	10.0000	9.94	
	46 3-Nitroaniline	138	10.965	10.954	(1.001)	291797	10.0000	10.8	
*	47 Acenaphthene-D10	164	10.954	10.943	(1.000)	65421	0.80000	(a)	
	48 Acenaphthene	153	10.998	10.976	(1.004)	1115485	10.0000	9.84	
	49 2,4-Dinitrophenol	184	11.139	11.117	(1.017)	134026	10.0000	9.91	
	50 Dibenzofuran	168	11.237	11.226	(1.026)	1519614	10.0000	10.1	
	51 2,4-Dinitrotoluene	165	11.281	11.270	(1.030)	396026	10.0000	10.8	
	52 4-Nitrophenol	139	11.357	11.357	(1.037)	188194	10.0000	9.85(Q)	
	53 2,3,4,6-Tetrachlorophenol	232	11.455	11.444	(1.046)	313001	10.0000	10.8	
	54 Diethylphthalate	149	11.597	11.586	(1.059)	1315639	10.0000	10.0	
$	55 Fluorene-D10	174	11.662	11.640	(1.065)	797698	10.0000	9.90	
	56 Fluorene	166	11.695	11.673	(1.068)	1159211	10.0000	9.96	
	57 4-Chlorophenyl-phenylether	204	11.717	11.695	(1.070)	613239	10.0000	10.0	
	58 4-Nitroaniline	138	11.793	11.782	(1.077)	221935	10.0000	9.18	
	59 4,6-Dinitro-2-Methylphenol	198	11.847	11.826	(0.915)	197030	10.0000	10.0	
	60 N-Nitrosodiphenylamine	169	11.891	11.869	(0.919)	963428	10.0000	9.81	
	61 4-Bromophenyl-phenylether	248	12.367	12.346	(0.955)	317856	10.0000	9.76	
	62 Hexachlorobenzene	284	12.453	12.431	(0.962)	265617	10.0000	9.64	
	63 Atrazine	200	12.645	12.623	(0.977)	207694	10.0000	9.93	
	64 Pentachlorophenol	266	12.762	12.741	(0.986)	123795	10.0000	9.97	
*	65 Phenanthrene-D10	188	12.944	12.922	(1.000)	95916	0.80000	(a)	
	66 Phenanthrene	178	12.965	12.954	(1.002)	1499124	10.0000	10.1	
	67 Anthracene	178	13.040	13.018	(1.007)	1598149	10.0000	9.65	
	68 Carbazole	167	13.296	13.275	(1.027)	1246686	10.0000	9.96	
	69 Di-n-butylphthalate	149	13.798	13.776	(1.066)	2052849	10.0000	9.86	
	70 Fluoranthene	202	14.569	14.551	(1.126)	1346246	10.0000	9.66	
$	71 Pyrene-D10	212	14.841	14.813	(0.894)	830841	10.0000	9.47	
	72 Pyrene	202	14.860	14.841	(0.895)	1425356	10.0000	9.33	
	73 Butylbenzylphthalate	149	15.798	15.780	(0.951)	809418	10.0000	9.74	
	74 Benzo(a)anthracene	228	16.596	16.624	(0.999)	863491	10.0000	9.93	
	75 3,3'-Dichlorobenzidine	252	16.605	16.577	(1.000)	245710	10.0000	9.46	

Data File: \\target_server\gg\chem\gcms-n.i\N031618.b\N7972.D
Report Date: 19-Mar-2018 09:22

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
*	76 Chrysene-D12	240	16.605	16.577	(1.000)	49659	0.80000	(a)	
	77 Chrysene	228	16.652	16.624	(1.003)	905814	10.0000	10.3	
	78 bis(2-Ethylhexyl)phthalate	149	16.755	16.727	(1.009)	1173681	10.0000	9.70	
	79 Di-n-octylphthalate	149	17.998	17.964	(1.084)	1752547	10.0000	9.82	
	80 Benzo(b)fluoranthene	252	18.646	18.611	(0.956)	647962	10.0000	10.2	
	81 Benzo(k)fluoranthene	252	18.702	19.316	(0.959)	824559	10.0000	9.36(H)	
	82 Benzo(a)pyrene	252	19.350	19.316	(0.992)	627223	10.0000	9.84	
*	83 Perylene-D12	264	19.497	19.440	(1.000)	38397	0.80000	(a)	
	85 Indeno(1,2,3-cd)pyrene	276	21.542	21.507	(1.297)	588033	10.0000	9.90	
	86 Dibenzo(a,h)anthracene	278	21.576	21.541	(1.107)	450191	10.0000	10.2	
	87 Benzo(g,h,i)perylene	276	22.064	22.018	(1.132)	537739	10.0000	9.71	
M	88 Total PAHs	100				3834877	180.000	(a)	
M	324 Total Low PAHs	100				10513466	70.0000	(a)	
M	325 Total High PAHs	100				5618321	60.0000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.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Date : 16-MAR-2018 14:06
Client ID:
Sample Info: WG224895-6
Volume Injected (uL): 1.0
Column phase: ZB5-MS
Instrument: gcms-n,i
Operator: JCG
Column diameter: 0.25
\\target_server\gg\chem\gcms-n,i\N031618.b\N7972.D
Y (x10^6)
Min
-1,4-Dioxane+
-Benzaldehyde
-Phenol+
-2-Chlorophenol
-1,3-Dichlorobenzene
-1,4-Dichlorobenzene-D4+
-1,2-Dichlorobenzene
-2,2'-Oxybis(1-chloropropa
-2-Methylphenol
-Acetophenone+
-3&4-Methylphenol+
-Nitrobenzene
-Isophorone
-2-Nitrophenol
-2,4-Dimethylphenol
-bis(2-Chloroethoxy)methan
-2,4-Dichlorophenol+
-Naphthalene-D8+
-4-Chloroaniline
-Hexachlorobutadiene
-Caprolactam
-4-Chloro-3-Methylphenol+
-1-Methylnaphthalene
-Hexachlorocyclopentadiene+
-2,4-Dibromophenol+
-2,4,5-Trichlorophenol
-2-Nitroaniline
1,1'-Biphenyl+
-Dimethyl Phthalate
-Acenaphthylene
-3-Nitroaniline+
-2,4-Dinitrophenol
-4-Nitrophenol
-Dibenzofuran
-2,3,4,6-Tetrachlorophenol
-Diethylphthalate
-Fluorene-D10+
-4-Nitroaniline
-4,6-Dinitro-2-Methylpheno+
-4-Bromophenyl-phenylether
-Hexachlorobenzene
-Atrazine
-Pentachlorophenol
-Phenanthrene-D10+
-Anthracene
-Carbazole
-Di-n-butylphthalate
-Fluoranthene
-Pyrene-D10+
-Butylbenzylphthalate
-Benzo(a)anthracene+
-Chrysene
-bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(b)fluoranthene
-Benzo(k)fluoranthene
-Benzo(a)pyrene
-Perylene-D12
-Indeno(1,2,3-cd)pyrene+
-Benzo(g,h,i)perylene

Data File: \\target_server\gg\chem\gcms-n.i\N031618.b\N7973.D
Report Date: 19-Mar-2018 09:22

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N031618.b\N7973.D
Lab Smp Id: WG224895-7
Inj Date : 16-MAR-2018 14:38 MS Autotune Date: 25-OCT-2017 07:54
Operator : JCG Inst ID: gcms-n.i
Smp Info : WG224895-7
Misc Info :
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N031618.b\NSPSIM86.m
Meth Date : 19-Mar-2018 08:27 cgomez Quant Type: ISTD
Cal Date : 16-MAR-2018 14:38 Cal File: N7973.D
Als bottle: 7 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
$	1 1,4-Dioxane-d8	96	2.607	2.639	(0.374)	549785	15.0000	16.0(AM)	M6
	2 1,4-Dioxane	88	2.649	2.660	(0.380)	519722	15.0000	13.3	
	3 N-Nitrosodimethylamine	74	3.184	3.216	(0.457)	764290	15.0000	17.4(A)	
	4 Pyridine	79	3.205	3.247	(0.460)	1136126	15.0000	15.5(A)	
	5 Benzaldehyde	77	6.412	6.402	(0.919)	325627	15.0000	14.8	
	6 Phenol	94	6.663	6.663	(0.955)	1529957	15.0000	14.4	
	7 Bis(2-Chloroethyl)ether	93	6.663	6.643	(0.955)	1271107	15.0000	14.8	
	8 2-Chlorophenol	128	6.734	6.724	(0.965)	1372992	15.0000	14.6	
	9 1,3-Dichlorobenzene	146	6.895	6.875	(0.988)	1405047	15.0000	14.8	
*	10 1,4-Dichlorobenzene-D4	152	6.975	6.955	(1.000)	53605	0.80000	(aQ)	
	11 1,4-Dichlorobenzene	146	6.996	6.975	(1.003)	1403496	15.0000	14.2	
	12 1,2-Dichlorobenzene	146	7.187	7.167	(1.030)	1368805	15.0000	14.5	
	13 2,2'-Oxybis(1-chloropropane)	45	7.358	7.338	(1.055)	1761148	15.0000	14.5	
	14 2-Methylphenol	108	7.408	7.398	(1.062)	1157791	15.0000	14.7	
	15 Acetophenone	105	7.519	7.499	(0.872)	1595725	15.0000	14.9	
	16 N-Nitroso-di-n-propylamine	70	7.539	7.519	(1.081)	832905	15.0000	14.7	
	17 3&4-Methylphenol	108	7.630	7.620	(1.094)	1172750	15.0000	15.2(A)	
	18 Hexachloroethane	117	7.610	7.589	(1.091)	503447	15.0000	14.5	
	19 Nitrobenzene	77	7.720	7.710	(0.895)	1179991	15.0000	13.3	
	20 Isophorone	82	8.052	8.032	(0.933)	2090678	15.0000	15.4(A)	
	21 2-Nitrophenol	139	8.153	8.133	(0.945)	694820	15.0000	14.9	



1:29 pm, Mar 26, 2018

Data File: \\target_server\gg\chem\gcms-n.i\N031618.b\N7973.D
Report Date: 19-Mar-2018 09:22

							AMOUNTS		
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	22 2,4-Dimethylphenol	107	8.284	8.274	(0.960)	1110700	15.0000	14.6	
	23 bis(2-Chloroethoxy)methane	93	8.354	8.344	(0.968)	1374198	15.0000	14.5	
	24 2,4-Dichlorophenol	162	8.516	8.515	(0.987)	973555	15.0000	15.1(A)	
	25 1,2,4-Trichlorobenzene	180	8.576	8.556	(0.994)	956187	15.0000	14.3	
*	26 Naphthalene-D8	136	8.626	8.606	(1.000)	174056	0.80000	(a)	
	27 Naphthalene	128	8.656	8.636	(1.004)	3112347	15.0000	14.1	
	28 4-Chloroaniline	127	8.777	8.767	(1.018)	1398139	15.0000	16.0(A)	
	29 Hexachlorobutadiene	225	8.848	8.828	(1.026)	507886	15.0000	14.2	
	30 Caprolactam	113	9.257	9.228	(1.073)	362056	15.0000	15.0	
	31 4-Chloro-3-Methylphenol	107	9.503	9.493	(1.102)	905618	15.0000	14.7	
$	32 2-Methylnaphthalene-D10	152	9.543	9.523	(1.106)	1455163	15.0000	14.2	
	33 2-Methylnaphthalene	142	9.582	9.562	(1.111)	1921570	15.0000	14.9	
	34 1-Methylnaphthalene	142	9.710	9.690	(1.126)	1881289	15.0000	13.4	
	35 Hexachlorocyclopentadiene	237	9.808	9.789	(1.000)	343236	15.0000	14.9	
	36 1,2,4,5-Tetrachlorobenzene	216	9.818	9.798	(1.000)	836442	15.0000	14.0	
$	37 2,4-Dibromophenol	252	9.985	9.985	(1.000)	495974	15.0000	15.1	
	38 2,4,6-Trichlorophenol	196	10.005	9.995	(1.000)	566779	15.0000	15.2(A)	
	39 2,4,5-Trichlorophenol	196	10.084	10.084	(1.000)	578007	15.0000	13.8	
	40 1,1'-Biphenyl	154	10.212	10.192	(1.000)	2303020	15.0000	14.1	
	41 2-Chloronaphthalene	164	10.222	10.202	(1.000)	605746	15.0000	14.4	
	42 2-Nitroaniline	65	10.399	10.389	(1.000)	562167	15.0000	15.8(A)	
	43 Dimethyl Phthalate	163	10.660	10.638	(1.000)	2104749	15.0000	14.8	
	44 2,6-Dinitrotoluene	165	10.725	10.714	(1.000)	517071	15.0000	15.1(A)	
	45 Acenaphthylene	152	10.769	10.747	(1.000)	2650474	15.0000	14.3	
	46 3-Nitroaniline	138	10.954	10.954	(1.000)	474825	15.0000	16.5(A)	
*	47 Acenaphthene-D10	164	10.954	10.943	(1.000)	69651	0.80000	(aM)	M6
	48 Acenaphthene	153	10.997	10.976	(1.000)	1725652	15.0000	14.3	
	49 2,4-Dinitrophenol	184	11.128	11.117	(1.000)	254810	15.0000	15.0	
	50 Dibenzofuran	168	11.237	11.226	(1.000)	2291082	15.0000	14.3	
	51 2,4-Dinitrotoluene	165	11.281	11.270	(1.000)	638599	15.0000	16.4(A)	
	52 4-Nitrophenol	139	11.335	11.357	(1.000)	336531	15.0000	15.0(A)	
	53 2,3,4,6-Tetrachlorophenol	232	11.455	11.444	(1.000)	489040	15.0000	15.9(A)	
	54 Diethylphthalate	149	11.608	11.586	(1.000)	2031695	15.0000	14.5	
$	55 Fluorene-D10	174	11.662	11.640	(1.000)	1255376	15.0000	14.6(A)	
	56 Fluorene	166	11.695	11.673	(1.000)	1779187	15.0000	14.4	
	57 4-Chlorophenyl-phenylether	204	11.717	11.695	(1.000)	951365	15.0000	14.6	
	58 4-Nitroaniline	138	11.782	11.782	(1.000)	350909	15.0000	13.6	
	59 4,6-Dinitro-2-Methylphenol	198	11.836	11.826	(0.914)	334890	15.0000	15.1(A)	
	60 N-Nitrosodiphenylamine	169	11.891	11.869	(0.919)	1555715	15.0000	14.2	
	61 4-Bromophenyl-phenylether	248	12.356	12.346	(0.955)	501309	15.0000	13.8	
	62 Hexachlorobenzene	284	12.453	12.431	(0.962)	413700	15.0000	13.5	
	63 Atrazine	200	12.645	12.623	(0.977)	340283	15.0000	14.6	
	64 Pentachlorophenol	266	12.751	12.741	(0.985)	210901	15.0000	15.1(A)	
*	65 Phenanthrene-D10	188	12.944	12.922	(1.000)	106583	0.80000	(a)	
	66 Phenanthrene	178	12.976	12.954	(1.002)	2322232	15.0000	14.1	
	67 Anthracene	178	13.040	13.018	(1.007)	2471830	15.0000	13.4	
	68 Carbazole	167	13.285	13.275	(1.026)	2069133	15.0000	14.9	
	69 Di-n-butylphthalate	149	13.798	13.776	(1.066)	3149170	15.0000	13.6	
	70 Fluoranthene	202	14.569	14.551	(1.126)	2139924	15.0000	13.8	
$	71 Pyrene-D10	212	14.841	14.813	(0.894)	1326389	15.0000	12.8(A)	
	72 Pyrene	202	14.860	14.841	(0.895)	2306612	15.0000	12.8	
	73 Butylbenzylphthalate	149	15.798	15.780	(0.951)	1312589	15.0000	13.4	
	74 Benzo(a)anthracene	228	16.596	16.624	(0.999)	1487646	15.0000	14.5	
	75 3,3'-Dichlorobenzidine	252	16.596	16.577	(0.999)	382746	15.0000	12.5	



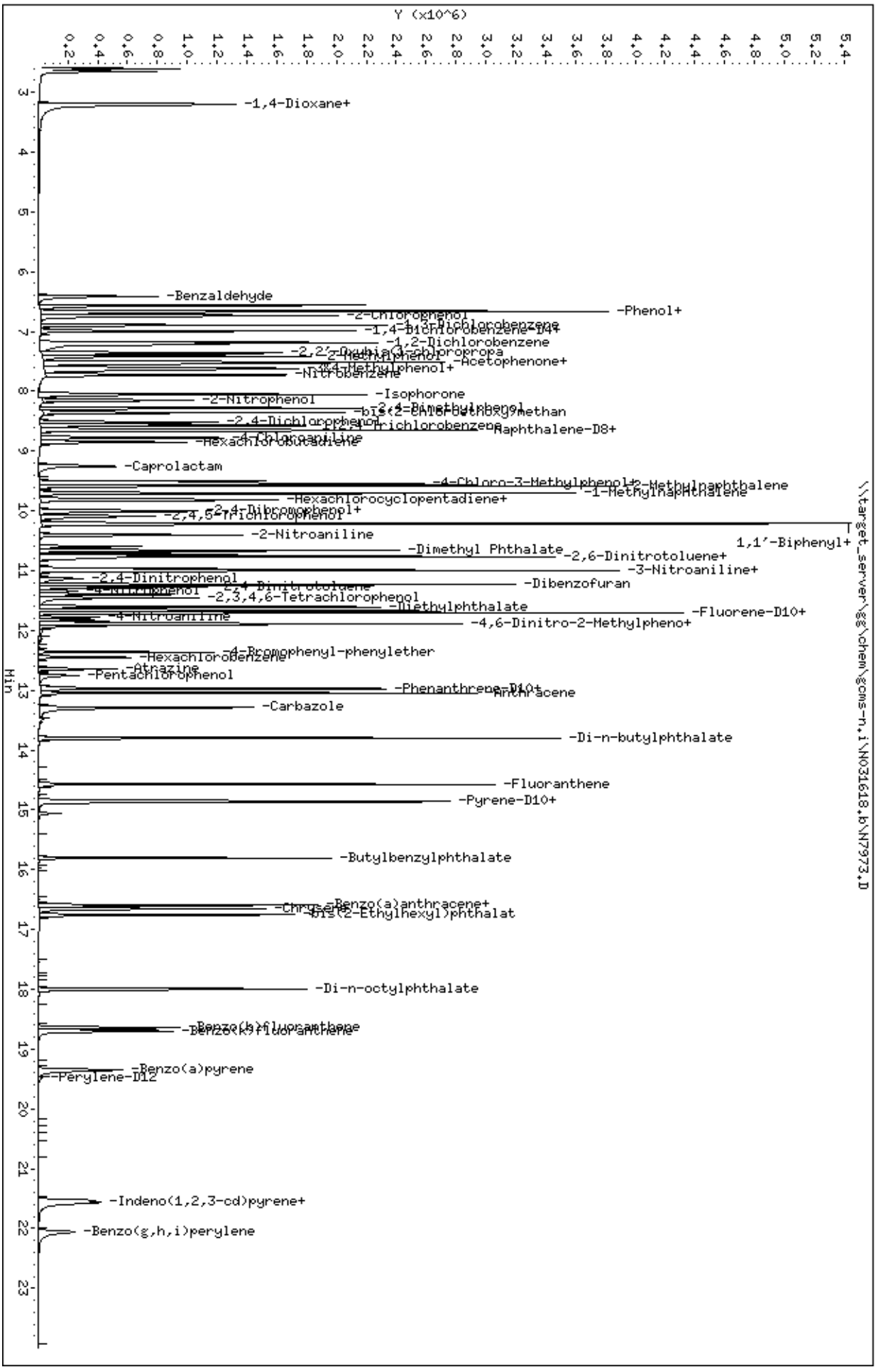
1:29 pm, Mar 26, 2018

Data File: \\target_server\gg\chem\gcms-n.i\N031618.b\N7973.D
Report Date: 19-Mar-2018 09:22

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
*	76 Chrysene-D12	240	16.605	16.577	(1.000)	58471	0.80000	(a)	
	77 Chrysene	228	16.652	16.624	(1.003)	1488528	15.0000	14.5	
	78 bis(2-Ethylhexyl)phthalate	149	16.755	16.727	(1.009)	1882123	15.0000	13.2	
	79 Di-n-octylphthalate	149	17.998	17.964	(1.084)	2962602	15.0000	14.1	
	80 Benzo(b)fluoranthene	252	18.646	18.611	(0.957)	1113696	15.0000	15.3(A)	
	81 Benzo(k)fluoranthene	252	18.702	19.316	(0.960)	1330798	15.0000	13.2(H)	
	82 Benzo(a)pyrene	252	19.350	19.316	(0.993)	1045024	15.0000	14.4	
*	83 Perylene-D12	264	19.486	19.440	(1.000)	43804	0.80000	(a)	
	85 Indeno(1,2,3-cd)pyrene	276	21.530	21.507	(1.297)	983248	15.0000	14.0	
	86 Dibenzo(a,h)anthracene	278	21.576	21.541	(1.107)	756920	15.0000	15.0(A)	
	87 Benzo(g,h,i)perylene	276	22.053	22.018	(1.132)	881467	15.0000	14.0	
M	88 Total PAHs	100				6190498	270.000	(a)	
M	324 Total Low PAHs	100				15983292	105.000	(a)	
M	325 Total High PAHs	100				9224654	90.0000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount
exceeded maximum amount.
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.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Date : 16-MAR-2018 14:38
Client ID:
Sample Info: WG224895-7
Volume Injected (uL): 1.0
Column phase: ZB5-MS
Instrument: gcms-n,i
Operator: JCG
Column diameter: 0.25
\\target_server\gg\chem\gcms-n,i\N031618.b\N7973.D
Y (x10^6)
Min
-1,4-Dioxane+
-Benzaldehyde
-Phenol+
-2-Chlorophenol
-1,4-Dichlorobenzene-D4+
-1,2-Dichlorobenzene
-Acetophenone+
-Nitrobenzene
-Isophorone
-2-Nitrophenol
-2,4-Dichlorophenol
-Naphthalene-D8+
-Hexachlorobutadiene
-Caprolactam
-2-Methylnaphthalene
-1-Methylnaphthalene
-Hexachlorocyclopentadiene+
-2,4,5-Trichlorophenol
-2-Nitroaniline
1,1'-Biphenyl+
-Dimethyl Phthalate
-2,6-Dinitrotoluene+
-3-Nitroaniline+
-2,4-Dinitrophenol
-Dibenzofuran
-2,3,4,6-Tetrachlorophenol
-Diethylphthalate
-Fluorene-D10+
-4-Nitroaniline
-4,6-Dinitro-2-Methylpheno+
-Hexachlorobenzene
-Atrazine
-Pentachlorophenol
-Phenanthrene-D10+
-Carbazole
-Di-n-butylphthalate
-Fluoranthene
-Pyrene-D10+
-Butylbenzylphthalate
-Chrysene
-Benzo(a)anthracene+
-Bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(b)fluoranthene
-Benzo(k)fluoranthene
-Benzo(a)pyrene
-Perylene-D12
-Indeno(1,2,3-cd)pyrene+
-Benzo(g,h,i)perylene

Data File: \\target_server\gg\chem\gcms-n.i\N031618.b\N7974.D
Report Date: 19-Mar-2018 08:08

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N031618.b\N7974.D
Lab Smp Id: WG224895-8 Client Smp ID: Independent Source
Inj Date : 16-MAR-2018 15:10 MS Autotune Date: 25-OCT-2017 07:54
Operator : JCG Inst ID: gcms-n.i
Smp Info : WG224895-8
Misc Info : WG224895,WG224895,WG224895-4
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N031618.b\NSPSIM86.m
Meth Date : 16-Mar-2018 15:07 gcms-n.i Quant Type: ISTD
Cal Date : 16-MAR-2018 14:38 Cal File: N7973.D
Als bottle: 8 QC Sample: INDCHECK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: V200T4

Concentration Formula: Amt * DF * (Vt/Ws*Vi)*(100/(100-M))*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Final Volume (L)
Ws	0.03000	Weight of Sample (Kg)
Vi	1.000	Volume injected (uL)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/Kgdrywt)	REVIEW COD
2	1,4-Dioxane	88	2.654	2.649	(0.381)	162380	5.00346	167	
3	N-Nitrosodimethylamine	74	3.210	3.184	(0.461)	202589	5.55900	185	
4	Pyridine	79	3.231	3.205	(0.464)	360200	5.90434	197	
5	Benzaldehyde	77	6.427	6.412	(0.922)	106871	5.87313	196	
6	Phenol	94	6.689	6.663	(0.960)	447519	5.08991	170	
7	Bis(2-Chloroethyl)ether	93	6.668	6.663	(0.957)	393868	5.50056	183	
8	2-Chlorophenol	128	6.749	6.734	(0.968)	384723	4.93243	164	
9	1,3-Dichlorobenzene	146	6.900	6.895	(0.990)	404298	5.12428	171	
* 10	1,4-Dichlorobenzene-D4	152	6.970	6.975	(1.000)	44508	0.80000	(Q)	
11	1,4-Dichlorobenzene	146	6.991	6.996	(1.003)	417803	5.10648	170	
12	1,2-Dichlorobenzene	146	7.192	7.187	(1.032)	390656	4.99840	167	
13	2,2'-Oxybis(1-chloropropane)	45	7.363	7.358	(1.056)	426426	4.23618	141	
14	2-Methylphenol	108	7.423	7.408	(1.065)	354361	5.40649	180	
15	Acetophenone	105	7.524	7.519	(0.872)	440759	5.17067	172	
16	N-Nitroso-di-n-propylamine	70	7.534	7.539	(1.081)	221472	4.67280	156	
17	3&4-Methylphenol	108	7.635	7.630	(1.095)	329969	5.15156	172	
18	Hexachloroethane	117	7.604	7.610	(1.091)	143073	4.95963	165	
19	Nitrobenzene	77	7.725	7.720	(0.895)	346332	4.92677	164	
20	Isophorone	82	8.047	8.052	(0.932)	538207	4.99731	166	
21	2-Nitrophenol	139	8.158	8.153	(0.945)	186844	5.03990	168	

Data File: \\target_server\gg\chem\gcms-n.i\N031618.b\N7974.D
Report Date: 19-Mar-2018 08:08

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/Kgdrywt)	REVIEW COD
22	2,4-Dimethylphenol	107	8.289	8.284	(0.960)	299159	4.93993	165	
23	bis(2-Chloroethoxy)methane	93	8.359	8.354	(0.969)	384689	5.11310	170	
24	2,4-Dichlorophenol	162	8.541	8.516	(0.990)	260524	5.08648	170	
25	1,2,4-Trichlorobenzene	180	8.571	8.576	(0.993)	272704	5.12336	171	
* 26	Naphthalene-D8	136	8.631	8.626	(1.000)	138373	0.80000		
27	Naphthalene	128	8.651	8.656	(1.002)	887150	5.07269	169	
28	4-Chloroaniline	127	8.782	8.777	(1.017)	334368	4.80150	160	
29	Hexachlorobutadiene	225	8.843	8.848	(1.024)	145716	5.10736	170	
30	Caprolactam	113	9.232	9.257	(1.070)	93633	4.92366	164	
31	4-Chloro-3-Methylphenol	107	9.518	9.503	(1.103)	237552	4.86224	162	
33	2-Methylnaphthalene	142	9.587	9.582	(1.111)	610661	4.87833	163	
34	1-Methylnaphthalene	142	9.705	9.710	(1.124)	498608	4.45472	148	
35	Hexachlorocyclopentadiene	237	9.803	9.808	(0.895)	46159	3.20373	107(R)	
36	1,2,4,5-Tetrachlorobenzene	216	9.823	9.818	(0.896)	242130	5.09141	170	
38	2,4,6-Trichlorophenol	196	10.020	10.005	(0.914)	144645	4.85090	162	
39	2,4,5-Trichlorophenol	196	10.108	10.084	(0.922)	163570	4.88106	163	
40	1,1'-Biphenyl	154	10.217	10.212	(0.932)	662000	5.06749	169	
41	2-Chloronaphthalene	164	10.226	10.222	(0.933)	166790	4.96157	165	
42	2-Nitroaniline	65	10.404	10.399	(0.949)	150583	5.28001	176	
43	Dimethyl Phthalate	163	10.654	10.660	(0.972)	560426	4.92253	164	
44	2,6-Dinitrotoluene	165	10.730	10.725	(0.979)	133455	4.87765	162	
45	Acenaphthylene	152	10.763	10.769	(0.982)	690264	4.67494	156	
46	3-Nitroaniline	138	10.970	10.954	(1.001)	121320	5.28272	176	
* 47	Acenaphthene-D10	164	10.959	10.954	(1.000)	55658	0.80000		
48	Acenaphthene	153	11.002	10.997	(1.004)	477771	4.95498	165	
49	2,4-Dinitrophenol	184	11.177	11.128	(1.020)	38637	4.08149	136	
50	Dibenzofuran	168	11.242	11.237	(1.026)	634685	4.95334	165	
51	2,4-Dinitrotoluene	165	11.296	11.281	(1.031)	152421	4.90499	163	
52	4-Nitrophenol	139	11.416	11.335	(1.042)	61017	4.22569	141	
53	2,3,4,6-Tetrachlorophenol	232	11.471	11.455	(1.047)	96372	3.92744	131(R)	
54	Diethylphthalate	149	11.602	11.608	(1.059)	548795	4.91154	164	
56	Fluorene	166	11.700	11.695	(1.068)	486281	4.91301	164	
57	4-Chlorophenyl-phenylether	204	11.721	11.717	(1.070)	251602	4.84484	161	
58	4-Nitroaniline	138	11.809	11.782	(1.078)	107370	5.22252	174	
59	4,6-Dinitro-2-Methylphenol	198	11.863	11.836	(0.917)	64127	4.27152	142	
60	N-Nitrosodiphenylamine	169	11.885	11.891	(0.919)	325090	4.05288	135	
61	4-Bromophenyl-phenylether	248	12.361	12.356	(0.955)	127880	4.80689	160	
62	Hexachlorobenzene	284	12.447	12.453	(0.962)	105733	4.69631	156	
63	Atrazine	200	12.649	12.645	(0.978)	40438	2.36784	78.9(R)	
64	Pentachlorophenol	266	12.767	12.751	(0.987)	42130	4.37625	146	
* 65	Phenanthrene-D10	188	12.938	12.944	(1.000)	78342	0.80000		
66	Phenanthrene	178	12.970	12.976	(1.002)	574439	4.74587	158	
67	Anthracene	178	13.044	13.040	(1.008)	605062	4.47386	149	
68	Carbazole	167	13.301	13.285	(1.028)	500239	4.89273	163	
69	Di-n-butylphthalate	149	13.802	13.798	(1.067)	867082	5.09699	170	
70	Fluoranthene	202	14.574	14.569	(1.126)	537052	4.71972	157	
72	Pyrene	202	14.865	14.860	(0.895)	545947	4.53244	151	
73	Butylbenzylphthalate	149	15.803	15.798	(0.951)	325153	4.96196	165	
74	Benzo(a)anthracene	228	16.601	16.596	(0.999)	319997	4.66904	156	
75	3,3'-Dichlorobenzidine	252	16.610	16.596	(1.000)	103812	5.07165	169	
* 76	Chrysene-D12	240	16.610	16.605	(1.000)	39155	0.80000		
77	Chrysene	228	16.657	16.652	(1.003)	369918	5.24215	175	
78	bis(2-Ethylhexyl)phthalate	149	16.751	16.755	(1.008)	484939	5.08165	169	
79	Di-n-octylphthalate	149	18.003	17.998	(1.084)	715690	5.08679	170	

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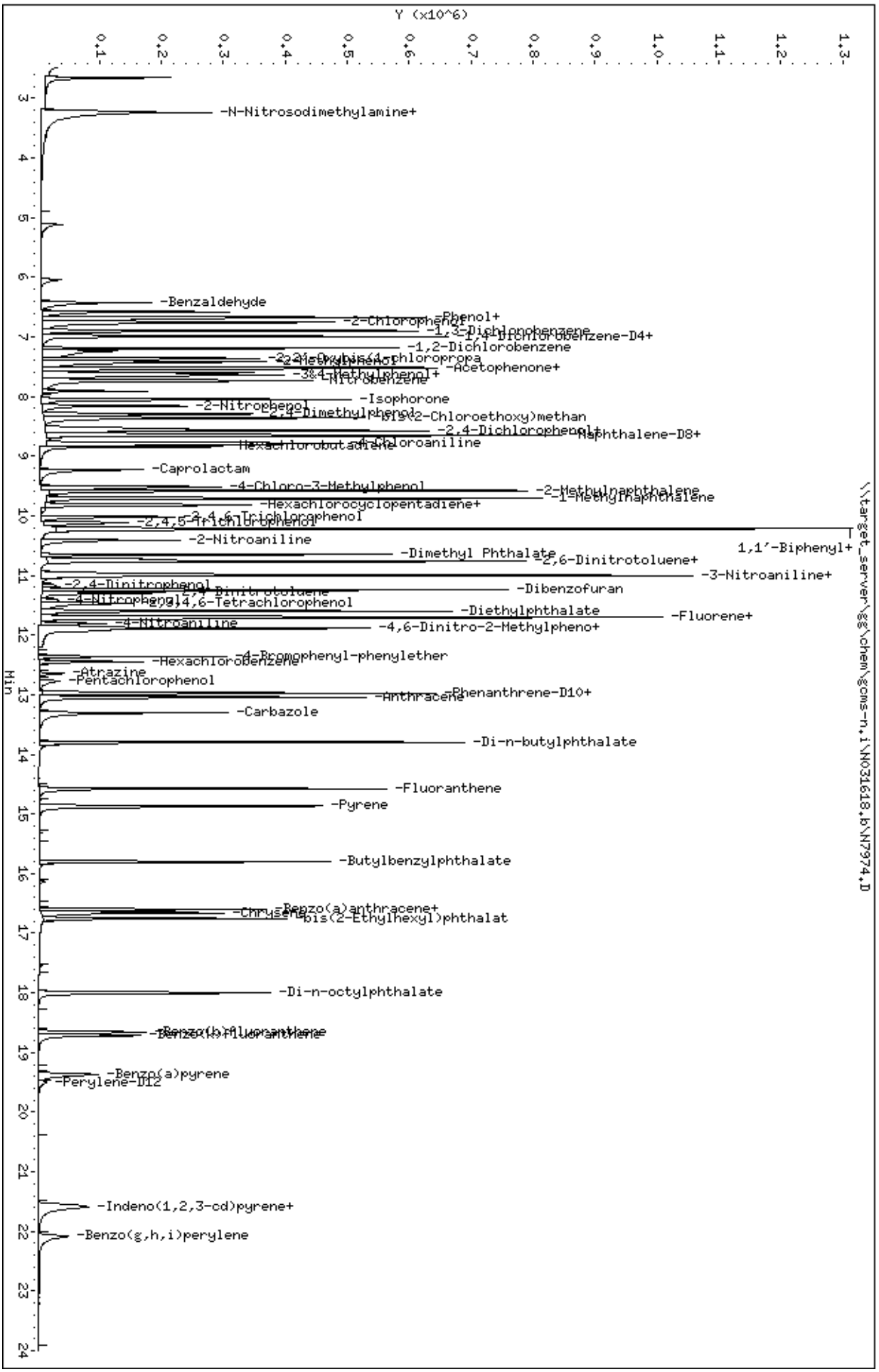
Report Date: 19-Mar-2018 08:08

			QUANT SIG					CONCENTRATIONS		
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/ml)	FINAL (ug/Kgdrywt)	REVIEW COD
	80	Benzo(b)fluoranthene	252	18.650	18.646	(0.956)	255066	4.98943	166	
	81	Benzo(k)fluoranthene	252	18.707	18.702	(0.959)	321919	4.55658	152(H)	
	82	Benzo(a)pyrene	252	19.366	19.350	(0.993)	225200	4.40893	147	
*	83	Perylene-D12	264	19.502	19.486	(1.000)	30784	0.80000		
	85	Indeno(1,2,3-cd)pyrene	276	21.558	21.530	(1.298)	229042	4.88829	163	
	86	Dibenzo(a,h)anthracene	278	21.603	21.576	(1.108)	171616	4.85828	162	
	87	Benzo(g,h,i)perylene	276	22.080	22.053	(1.132)	199076	4.48406	149	
M	88	Total PAHs	100				1503711	23.3731	779	
M	324	Total Low PAHs	100				4331628	33.7137	1120	
M	325	Total High PAHs	100				2169730	28.4306	948	

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
H - Operator selected an alternate compound hit.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Client ID: Independent Source
Sample Info: WG224895-8
Volume Injected (uL): 1.0
Column phase: ZB5-MS
Instrument: gcms-n,i
Operator: JCG
Column diameter: 0.25
\\target_server\gg\chem\gcms-n,i\N031618.b\N7974.D
Y (x10^6)
Min
-N-Nitrosodimethylamine+
-Benzaldehyde
-2-Chlorophenol+
-1,3-Dichlorobenzene
-1,4-Dichlorobenzene-D4+
-1,2-Dichlorobenzene
-Acetophenone+
-Nitrobenzene
-Isophorone
-2-Nitrophenol
-2,4-Dichlorophenol+
-Naphthalene-D8+
-Caprolactam
-4-Chloro-3-Methylphenol
-2-Methylnaphthalene
-Hexachlorocyclopentadiene+
-2,4,6-Trichlorophenol
-2,4,5-Trichlorophenol
-2-Nitroaniline
1,1'-Biphenyl+
-Dimethyl Phthalate
-2,6-Dinitrotoluene+
-3-Nitroaniline+
-2,4-Dinitrophenol
-Dibenzofuran
-4-Nitrophenol
-2,4,6-Tetrachlorophenol
-Diethylphthalate
-Fluorene+
-4-Nitroaniline
-4,6-Dinitro-2-Methylpheno+
-4-Bromophenyl-phenylether
-Hexachlorobenzene
-Atrazine
-Pentachlorophenol
-Phenanthrene-D10+
-Anthracene
-Carbazole
-Di-n-butylphthalate
-Fluoranthene
-Pyrene
-Butylbenzylphthalate
-Benzo(a)anthracene+
-Chrysene
-bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(b)fluoranthene
-Benzo(k)fluoranthene
-Benzo(a)pyrene
-Perylene-D12
-Indeno(1,2,3-cd)pyrene+
-Benzo(g,h,i)perylene

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Injection Date: 16-MAR-2018 12:30
Instrument: gcms-n.i
Client Sample ID:

Compound: N-Nitrosodimethylamine
CAS Number: 62-75-9

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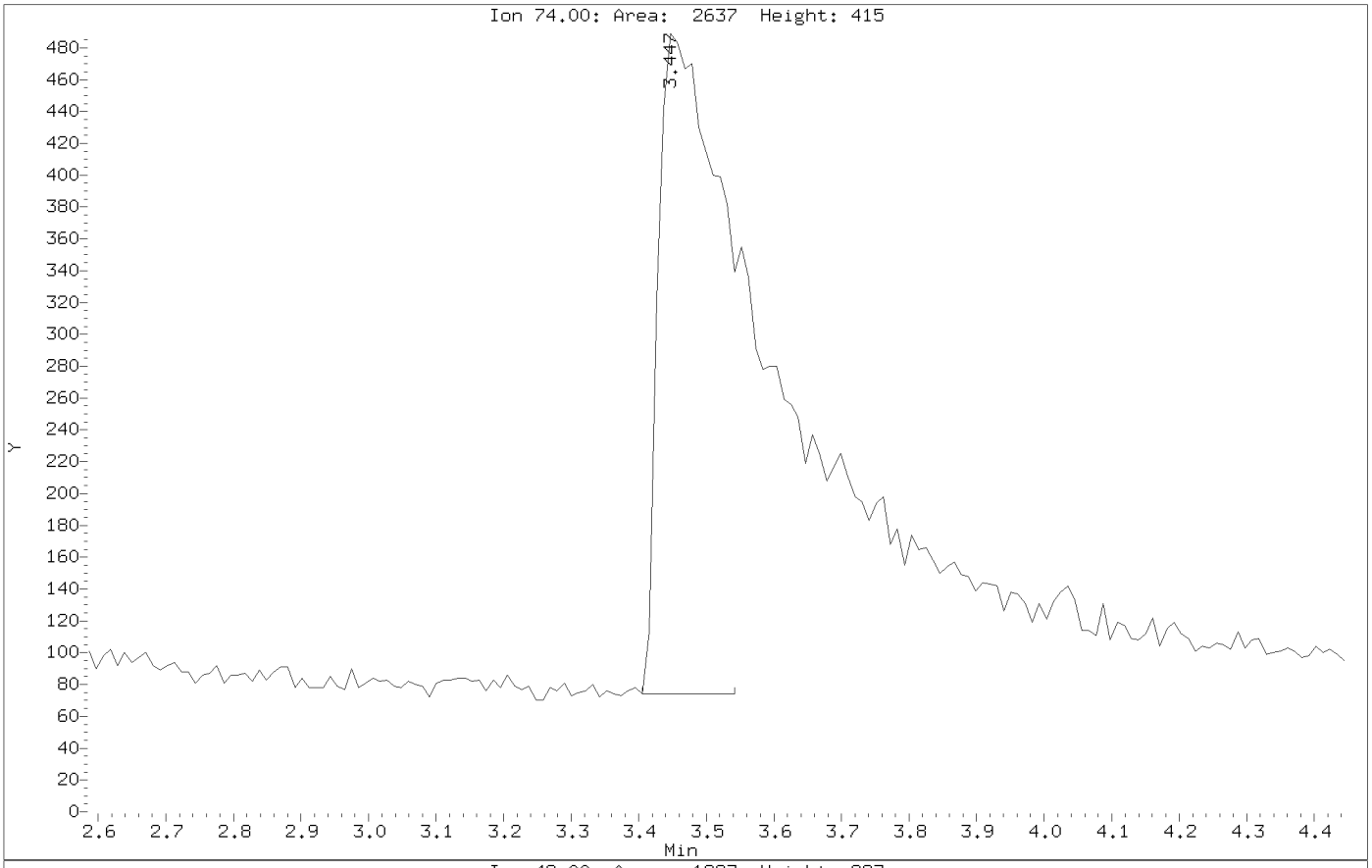

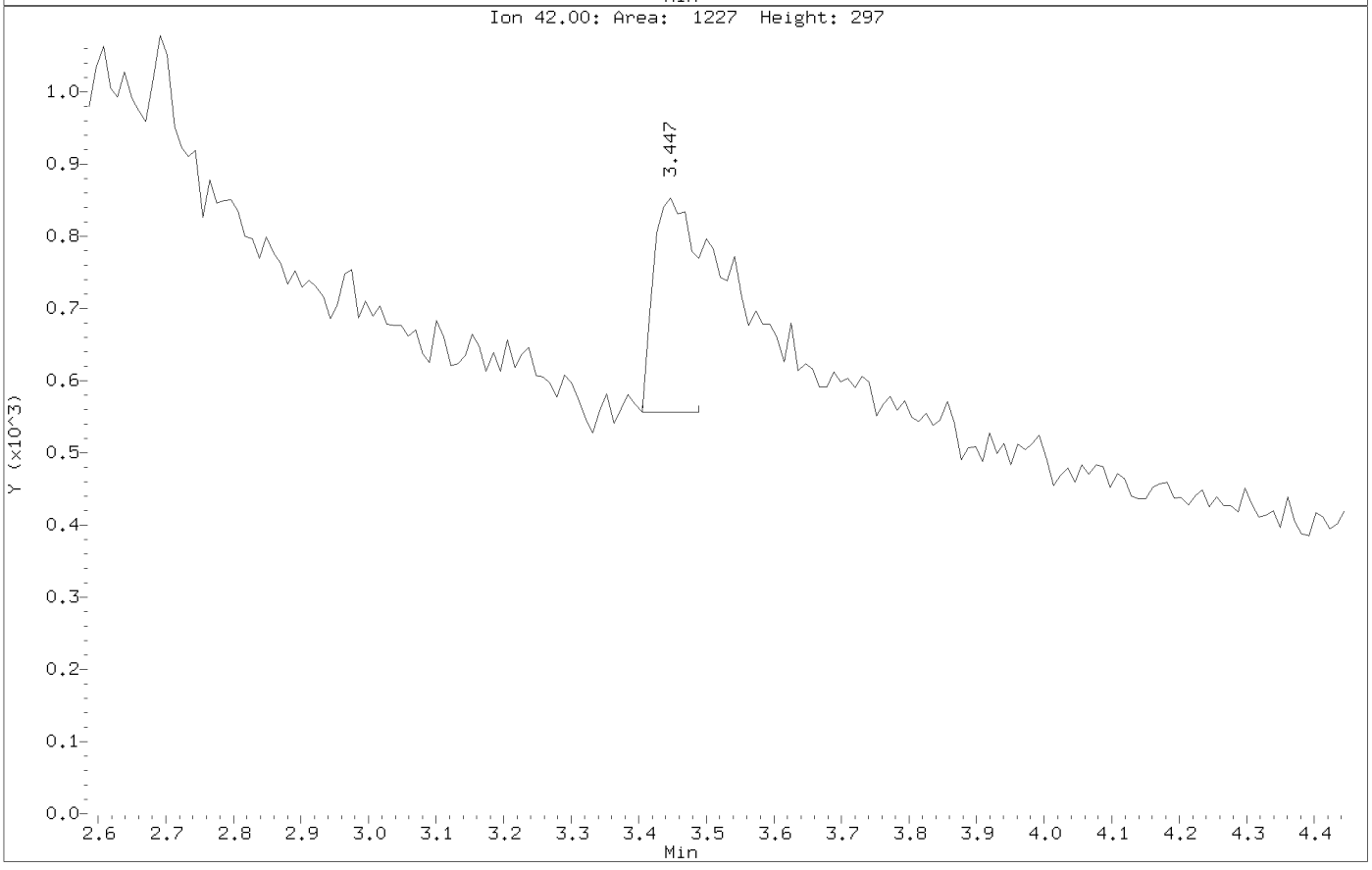

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Compound: N-Nitrosodimethylamine
CAS Number: 62-75-9

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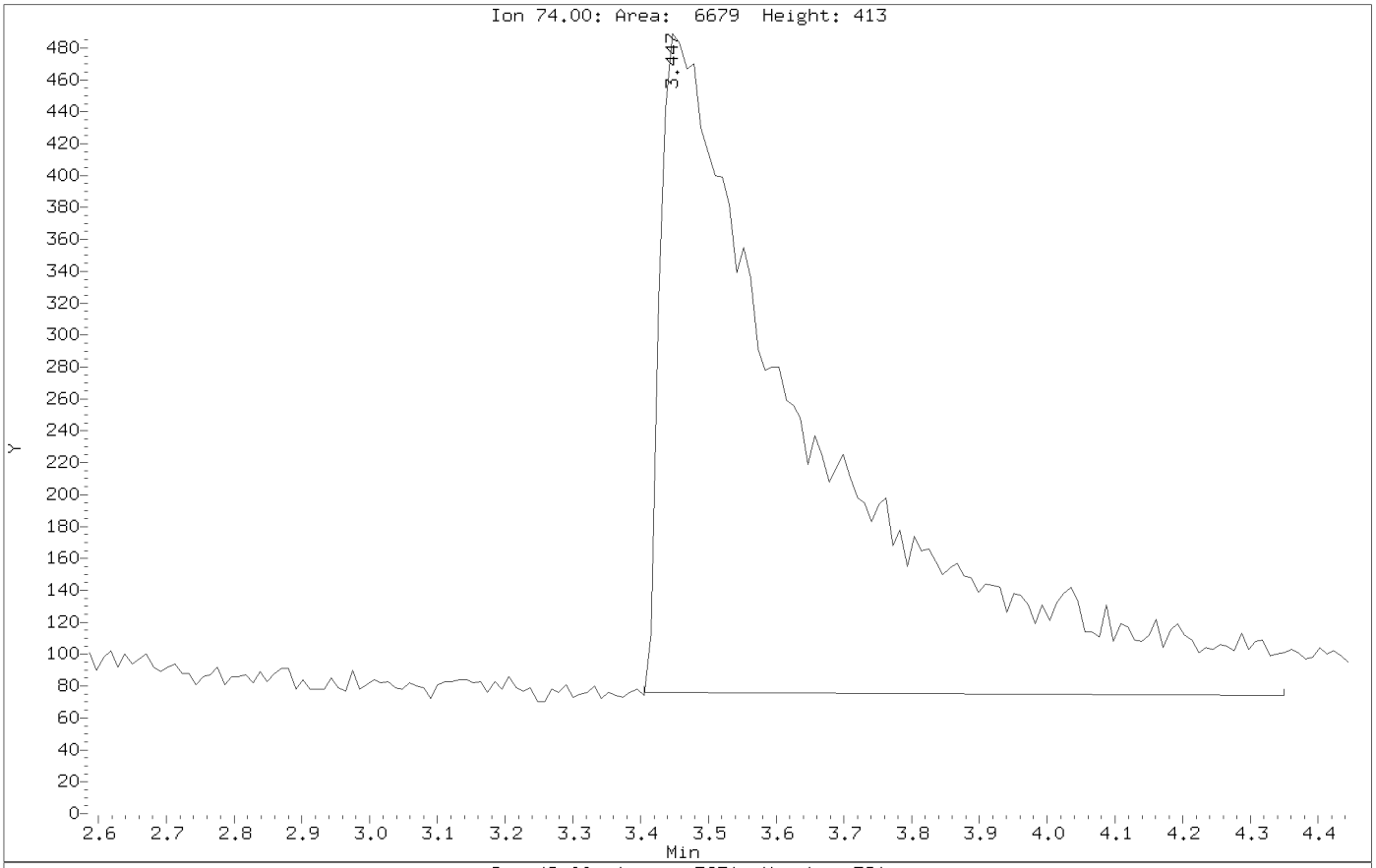

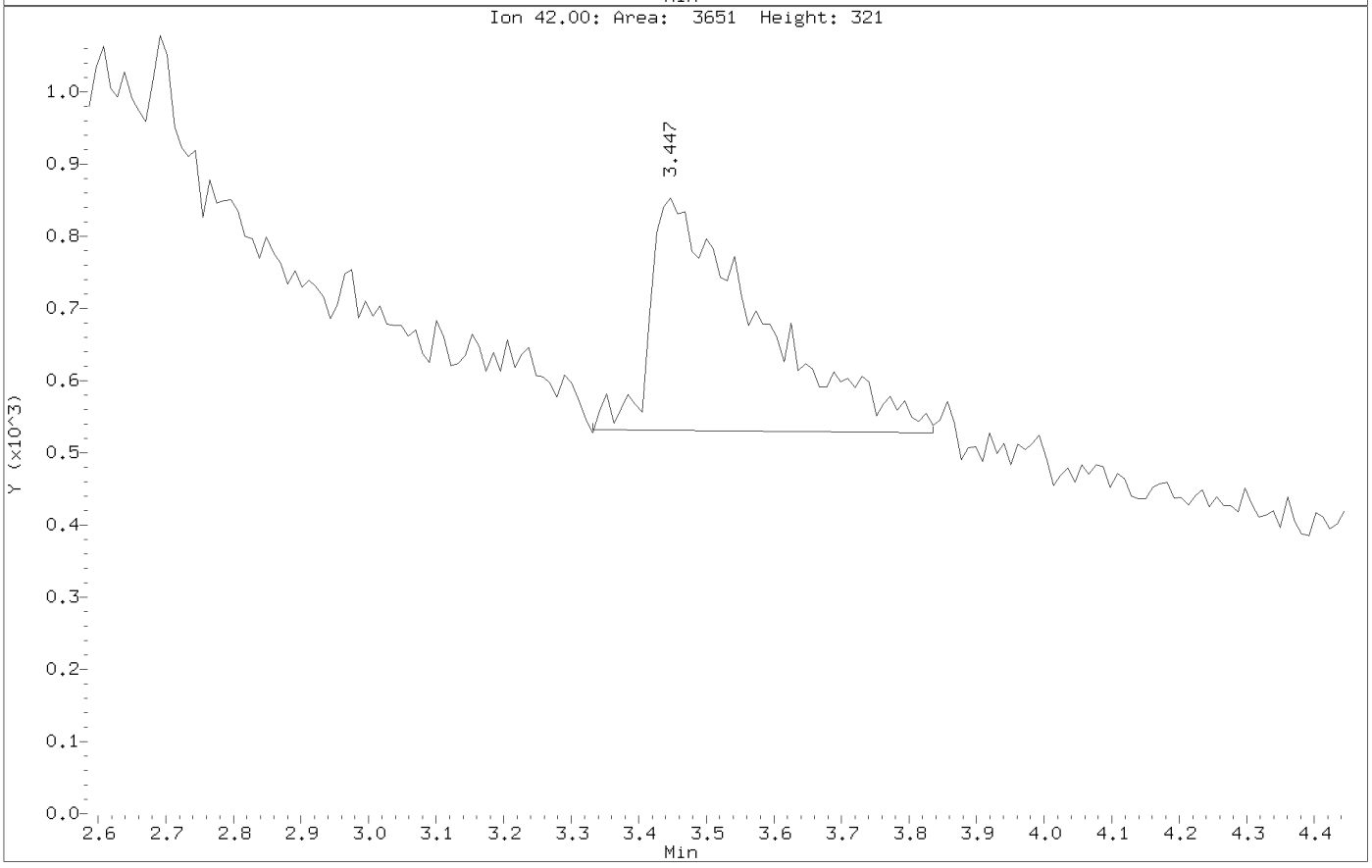

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Instrument: gcms-n.i
Client Sample ID:

Compound: Pyridine
CAS Number: 110-86-1

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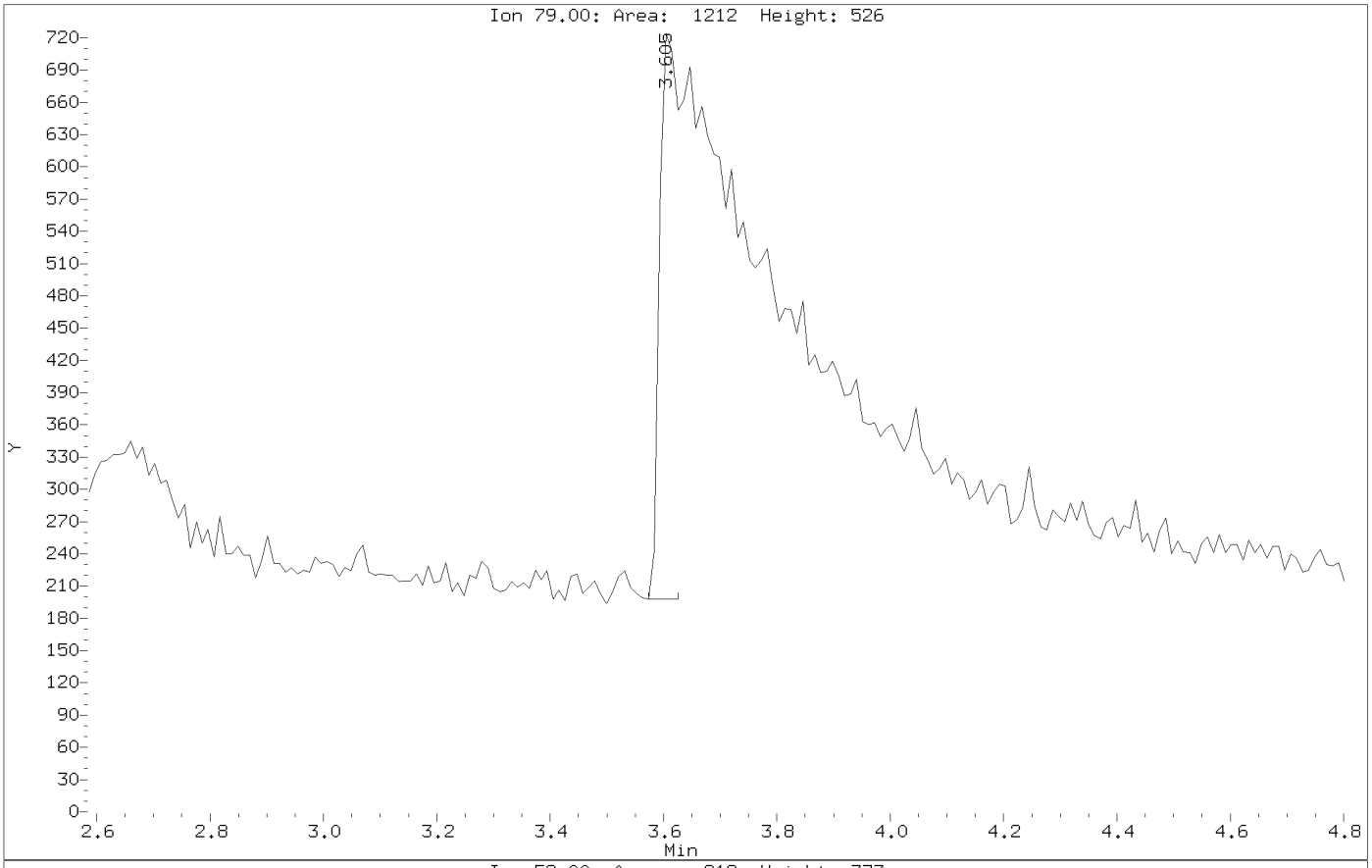

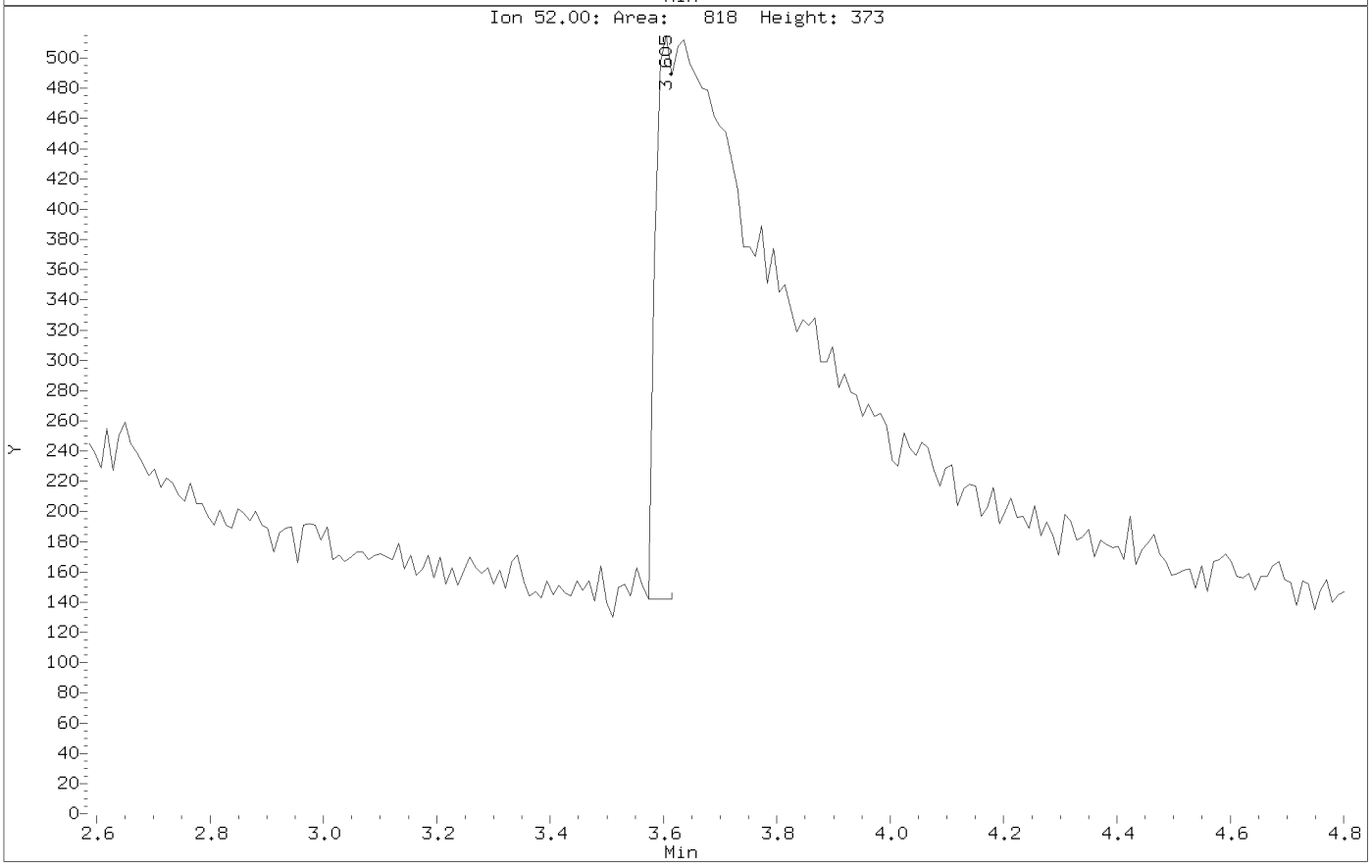

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Compound: Pyridine
CAS Number: 110-86-1

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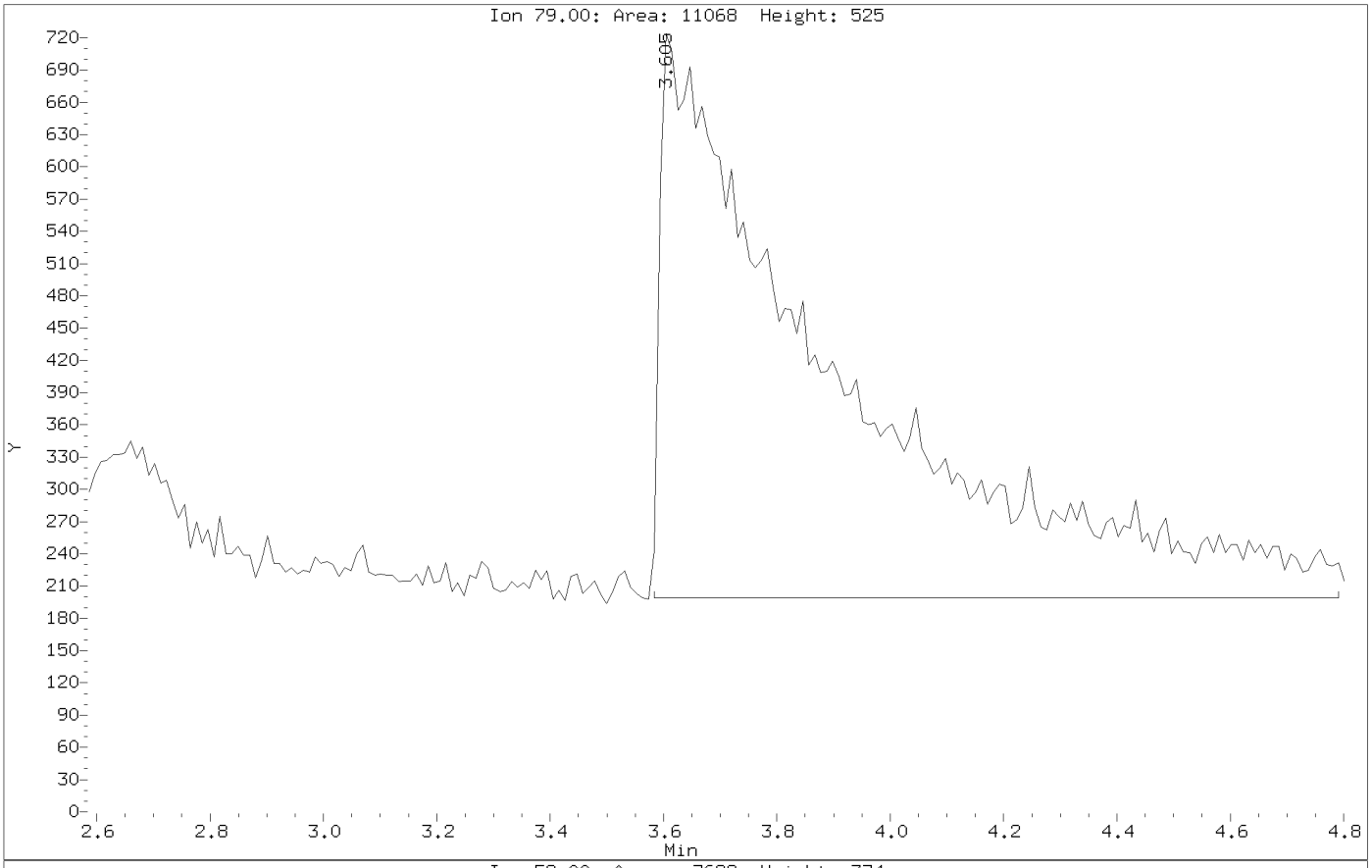

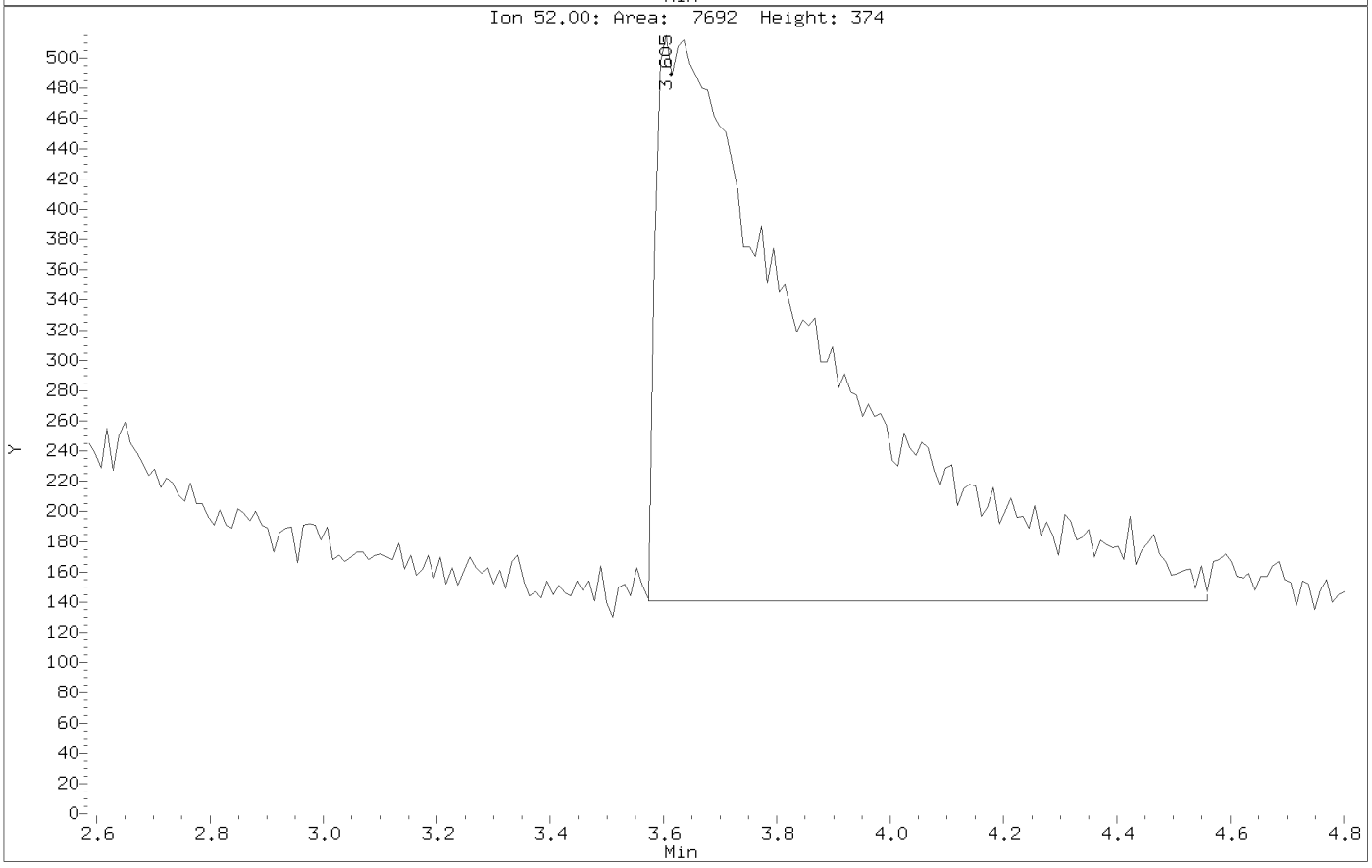

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Injection Date: 16-MAR-2018 12:30
Instrument: gcms-n.i
Client Sample ID:

Compound: Benzaldehyde
CAS Number: 100-52-7

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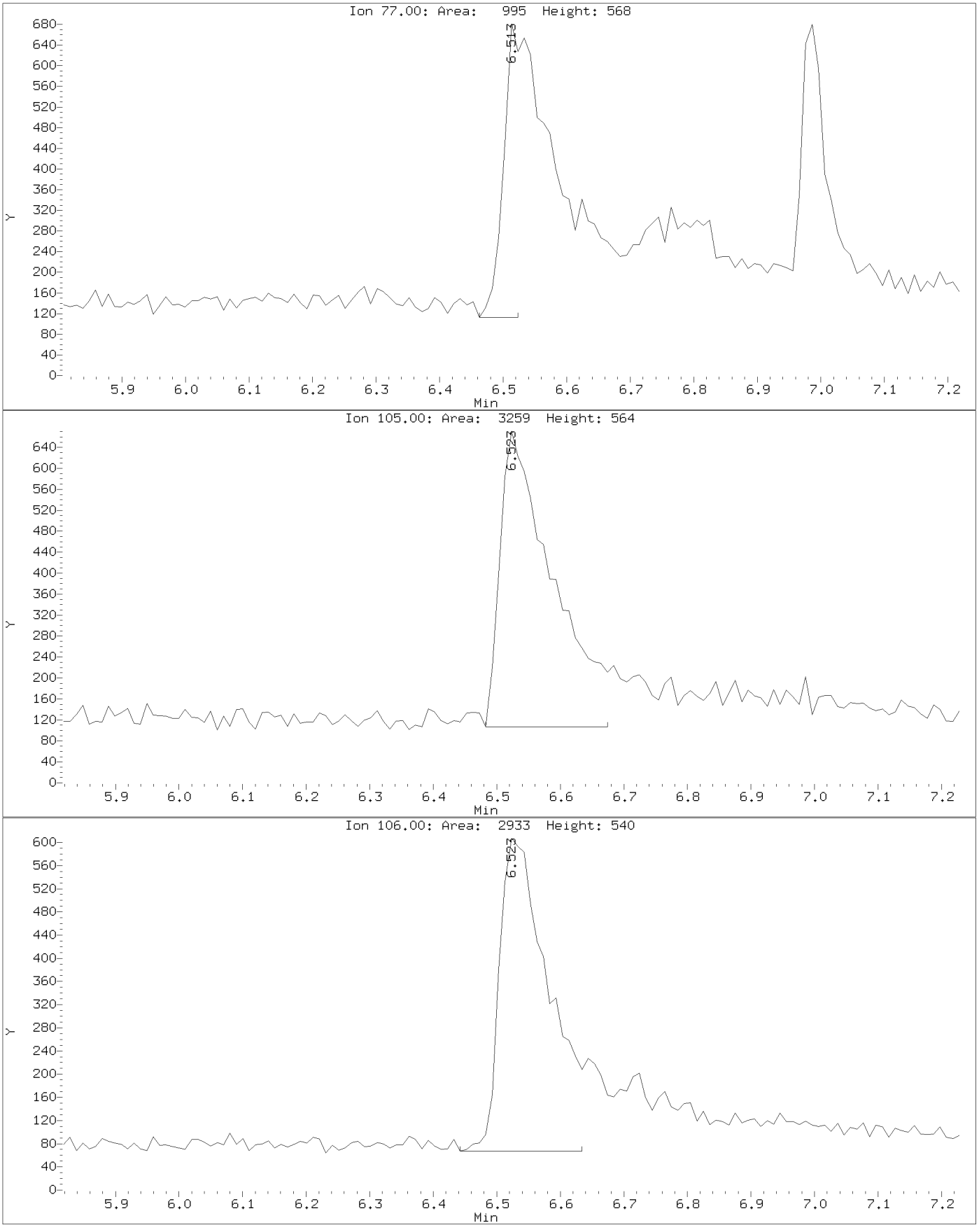

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Client Sample ID:

Compound: Benzaldehyde
CAS Number: 100-52-7

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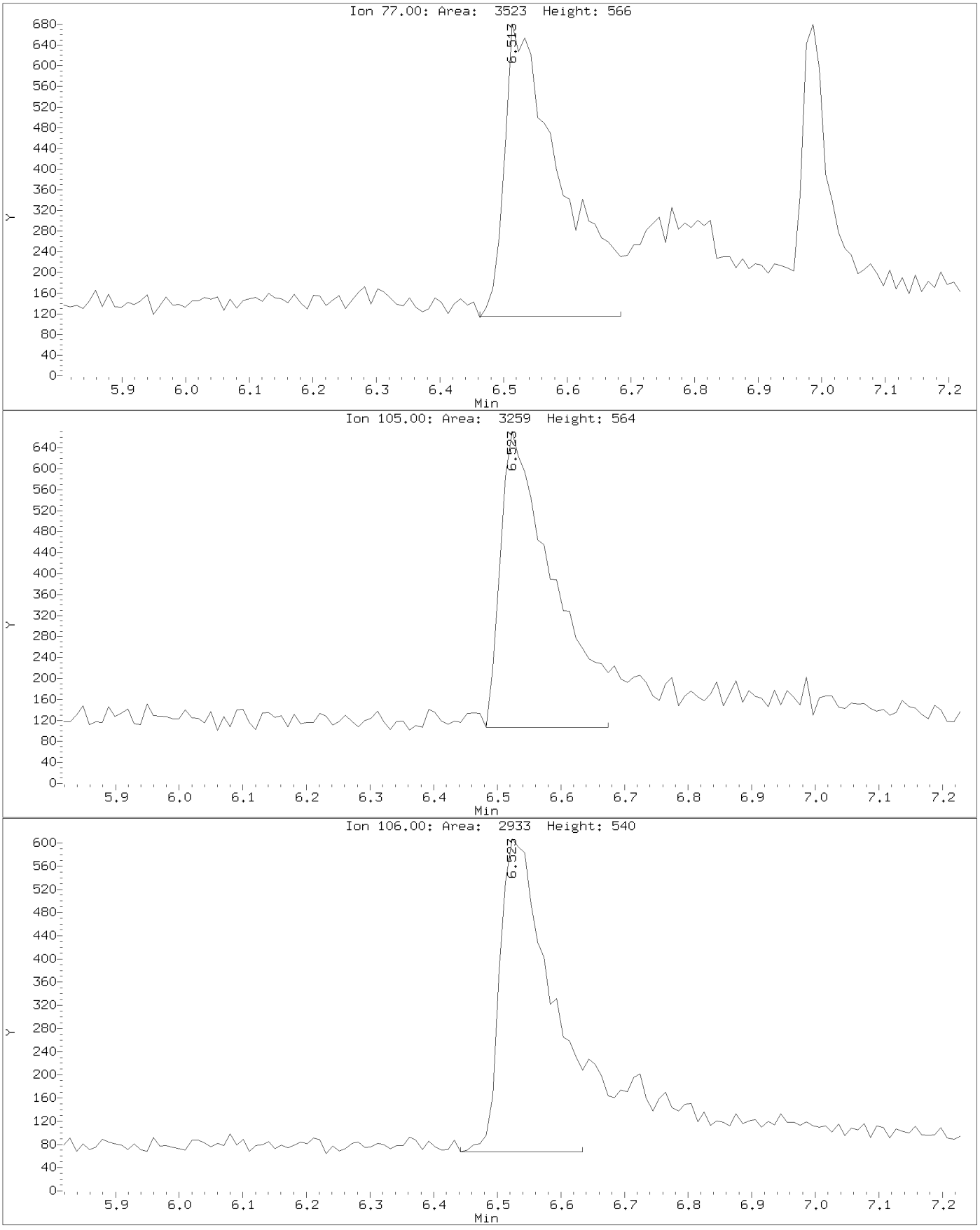

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Client Sample ID:

Compound: Nitrobenzene
CAS Number: 98-95-3

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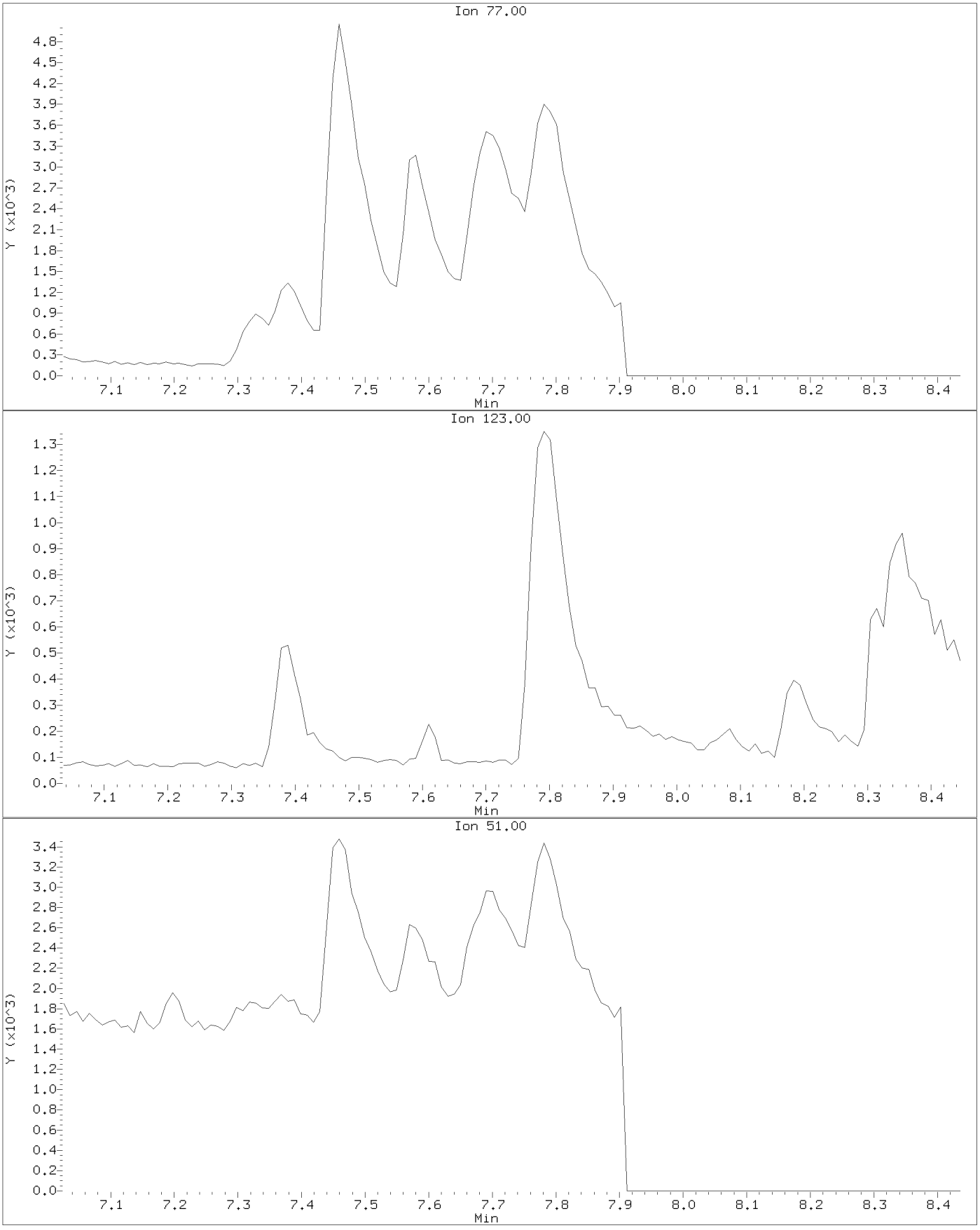

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Client Sample ID:

Compound: Nitrobenzene
CAS Number: 98-95-3

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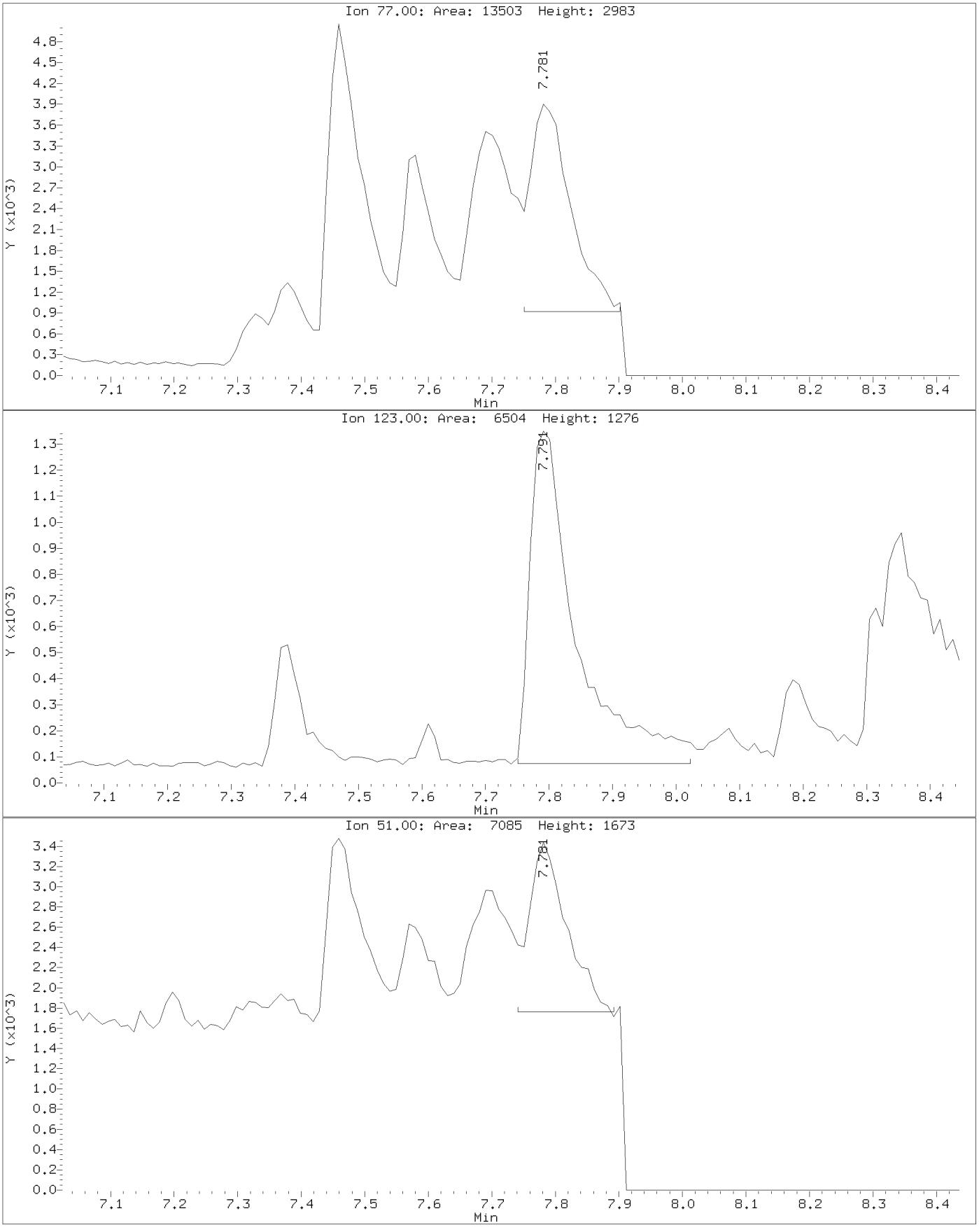

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Injection Date: 16-MAR-2018 12:30
Instrument: gcms-n.i
Client Sample ID:

Compound: 2,4-Dimethylphenol
CAS Number: 105-67-9

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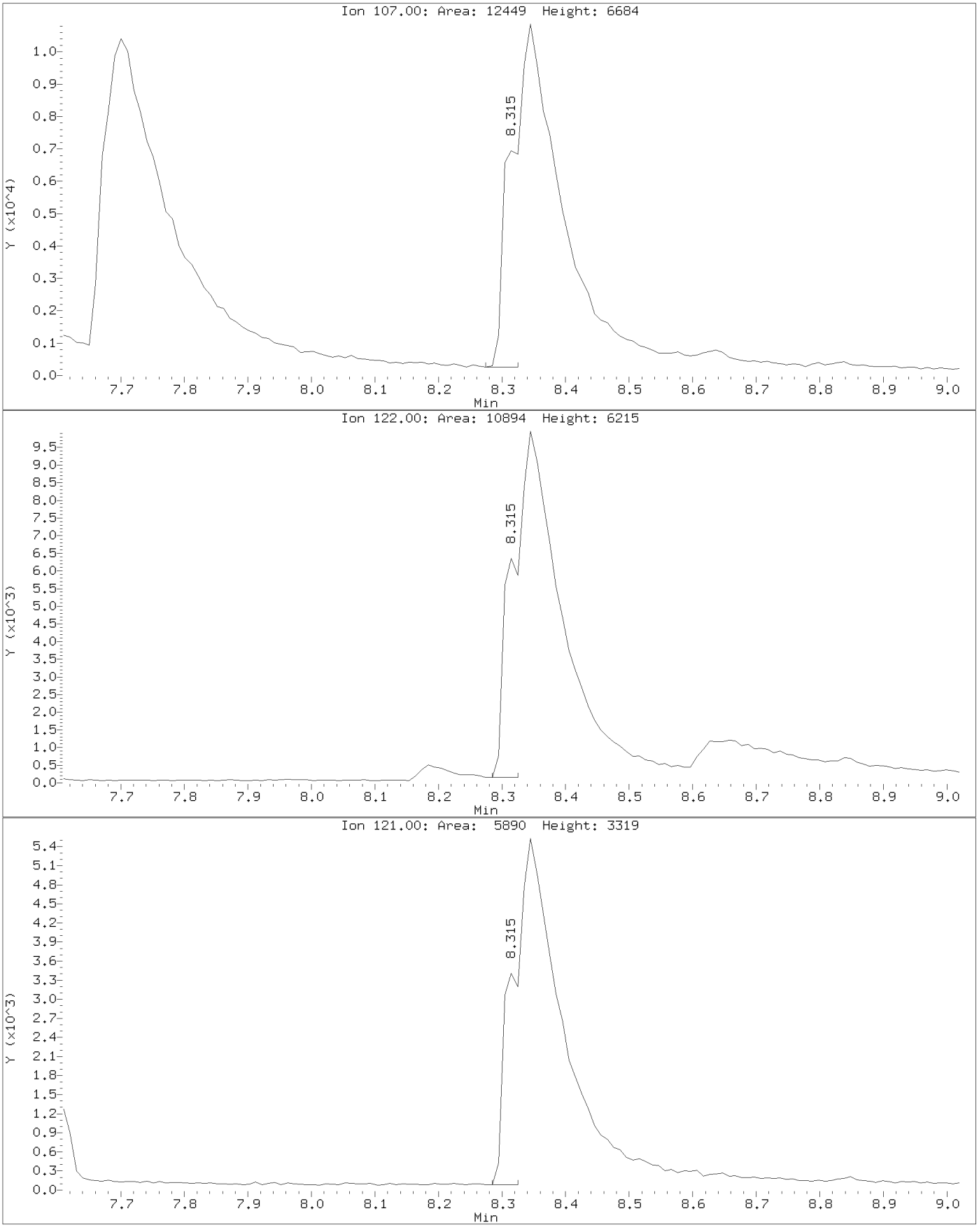

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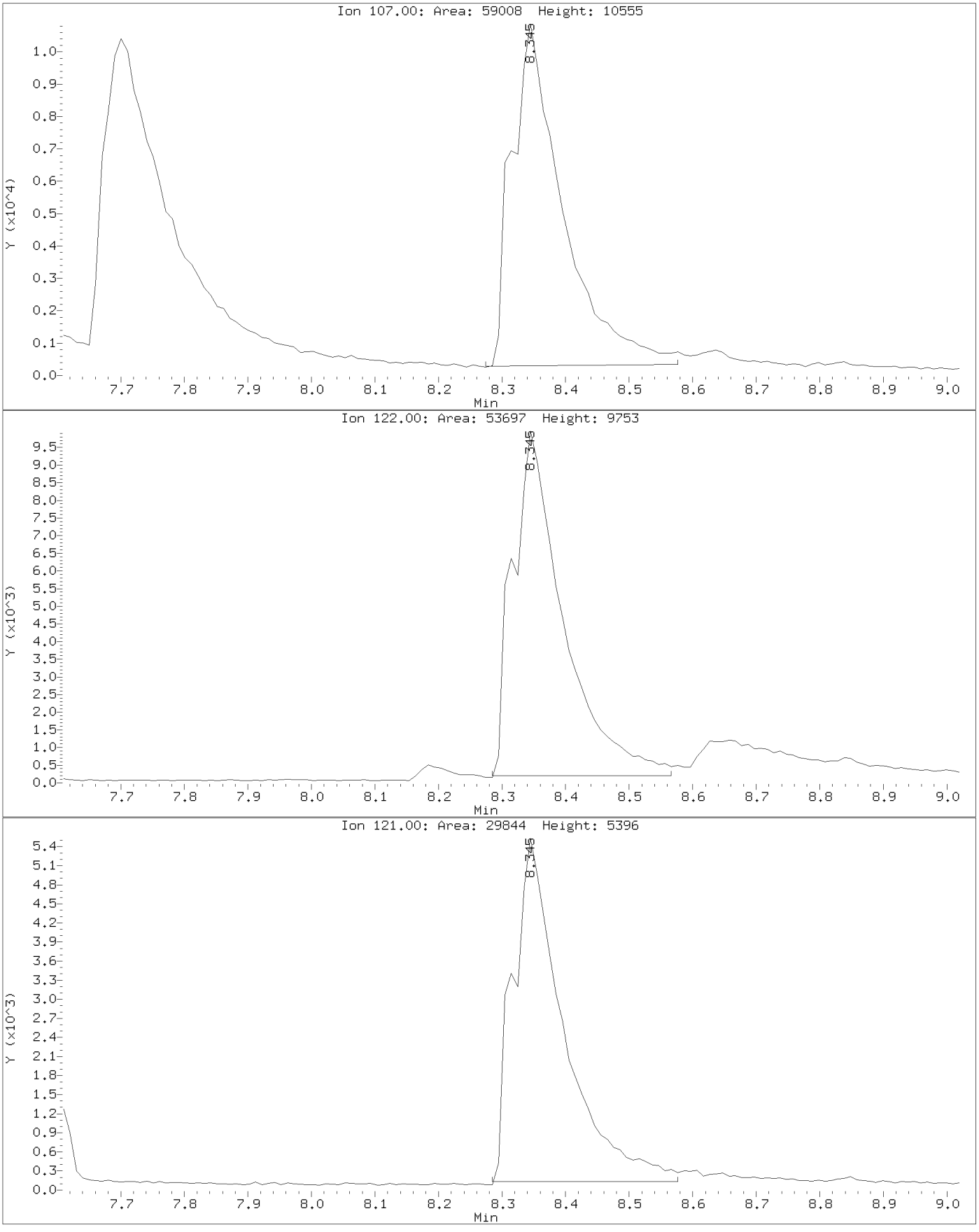
Client Sample ID:

Compound: 2,4-Dimethylphenol
CAS Number: 105-67-9

AFTER MANUAL INTEGRATION



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Injection Date: 16-MAR-2018 12:30
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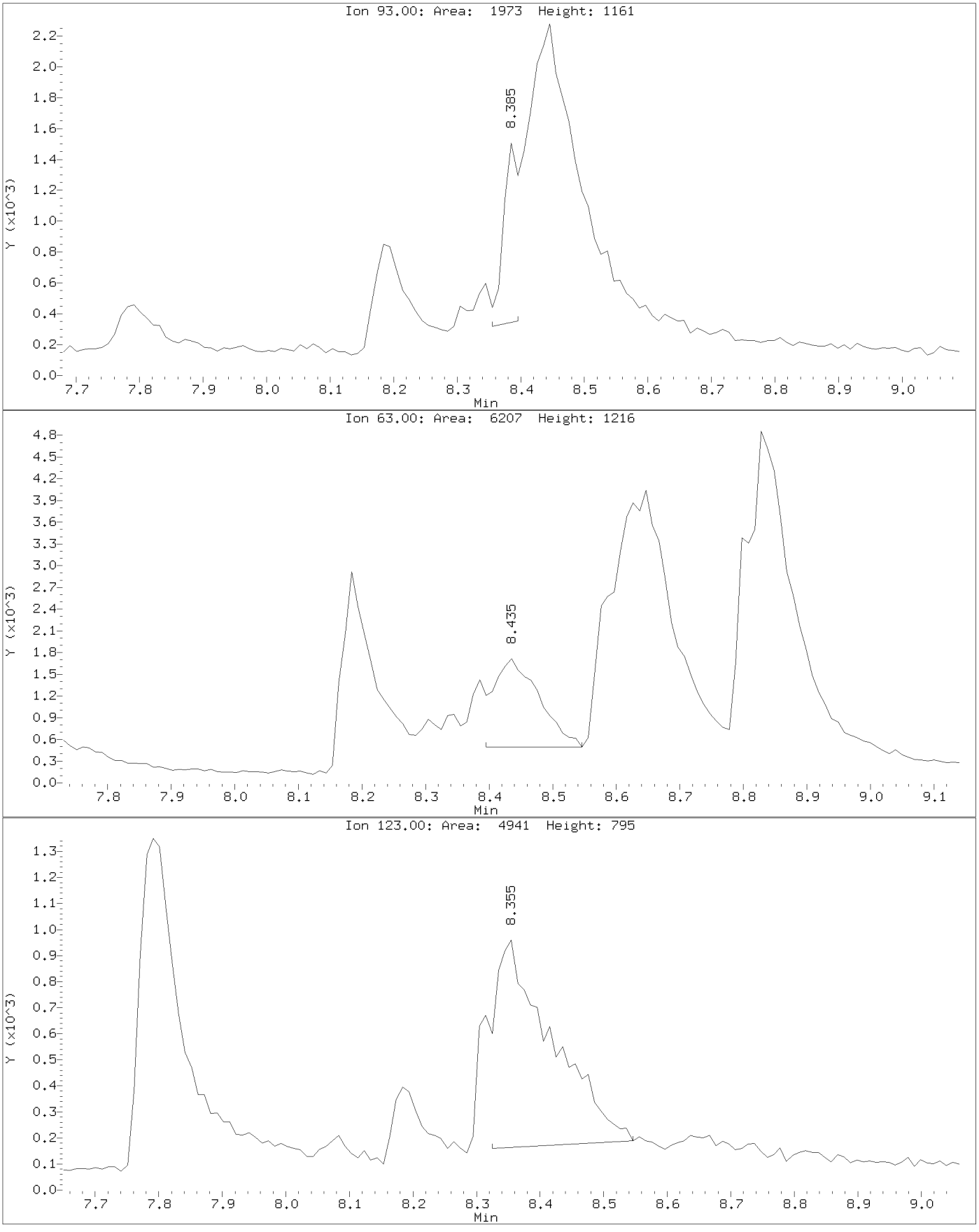
Client Sample ID:

Compound: bis(2-Chloroethoxy)methane
CAS Number: 111-91-1

BEFORE MANUAL INTEGRATION



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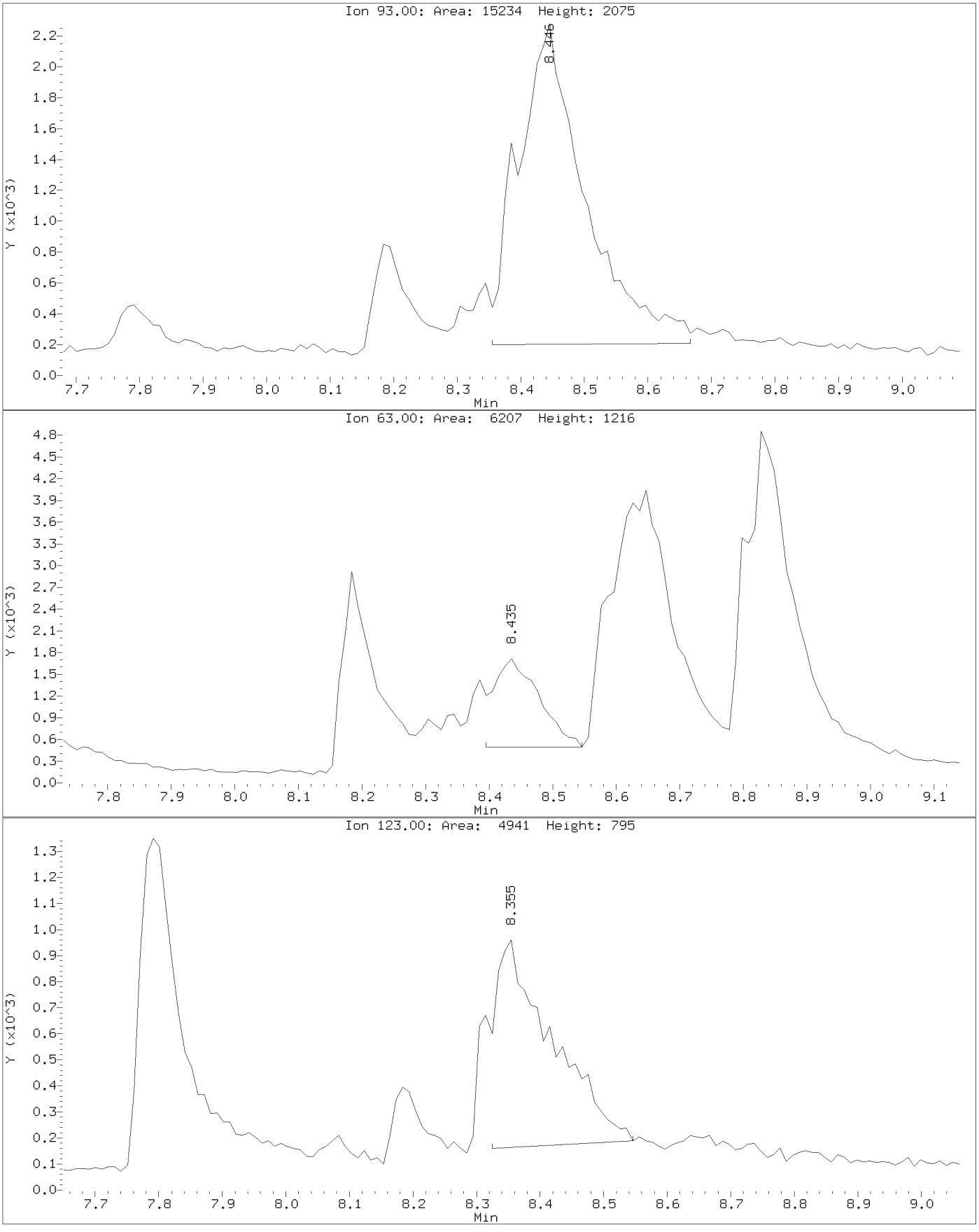
Client Sample ID:

Compound: bis(2-Chloroethoxy)methane
CAS Number: 111-91-1

AFTER MANUAL INTEGRATION



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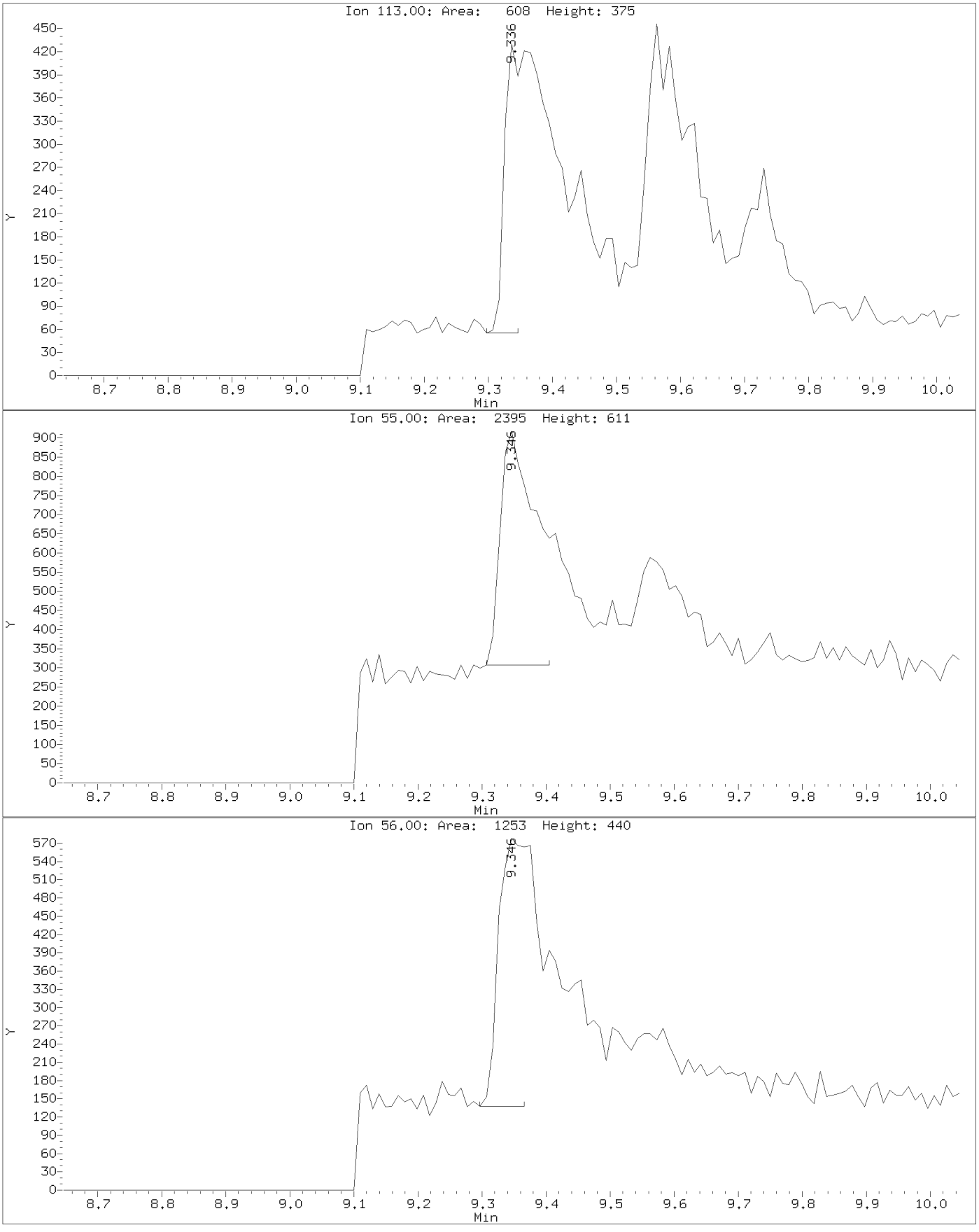
Injection Date: 16-MAR-2018 12:30
Instrument: gcms-n.i
Client Sample ID:

Compound: Caprolactam
CAS Number: 105-60-2

BEFORE MANUAL INTEGRATION



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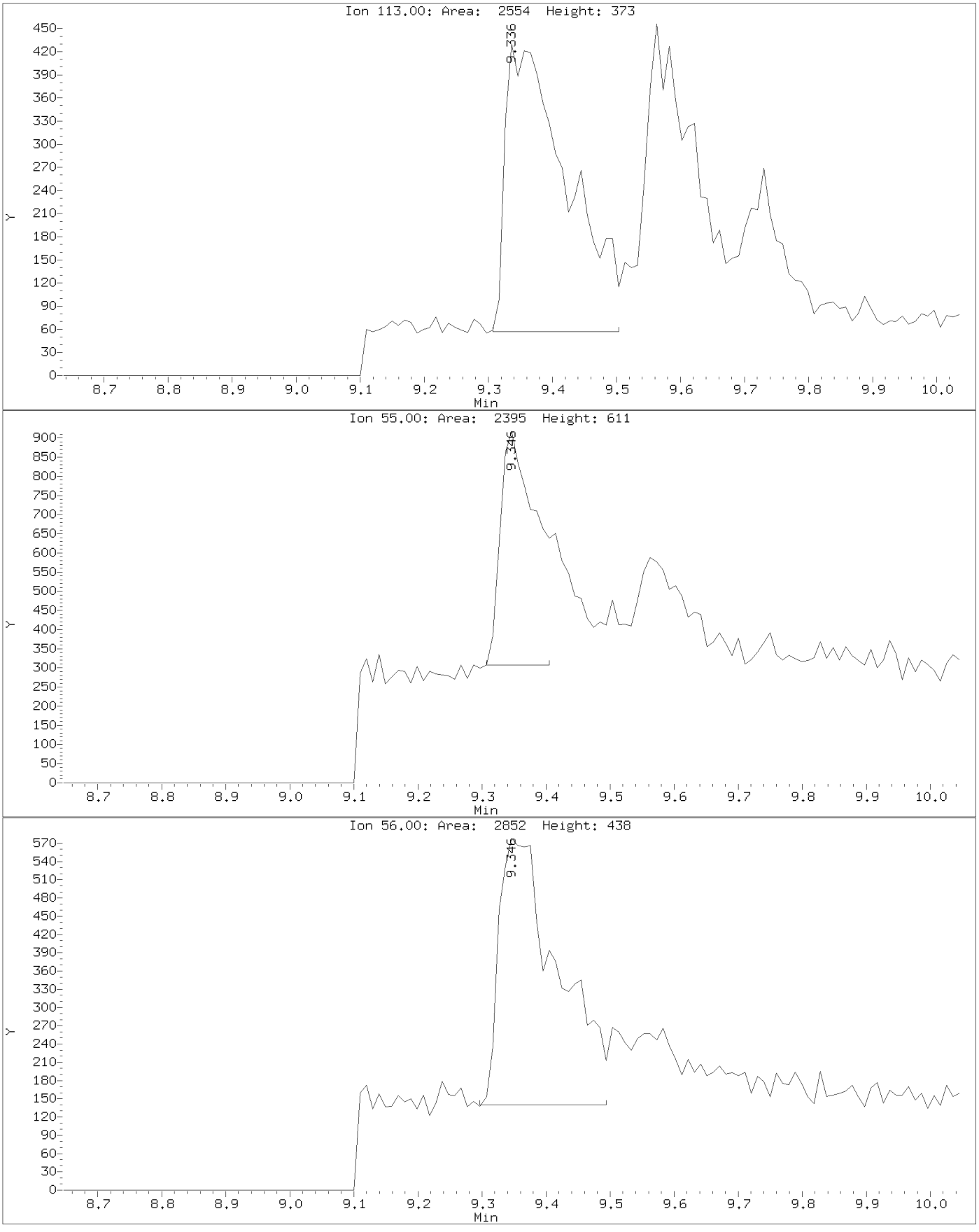
Client Sample ID:

Compound: Caprolactam
CAS Number: 105-60-2

AFTER MANUAL INTEGRATION



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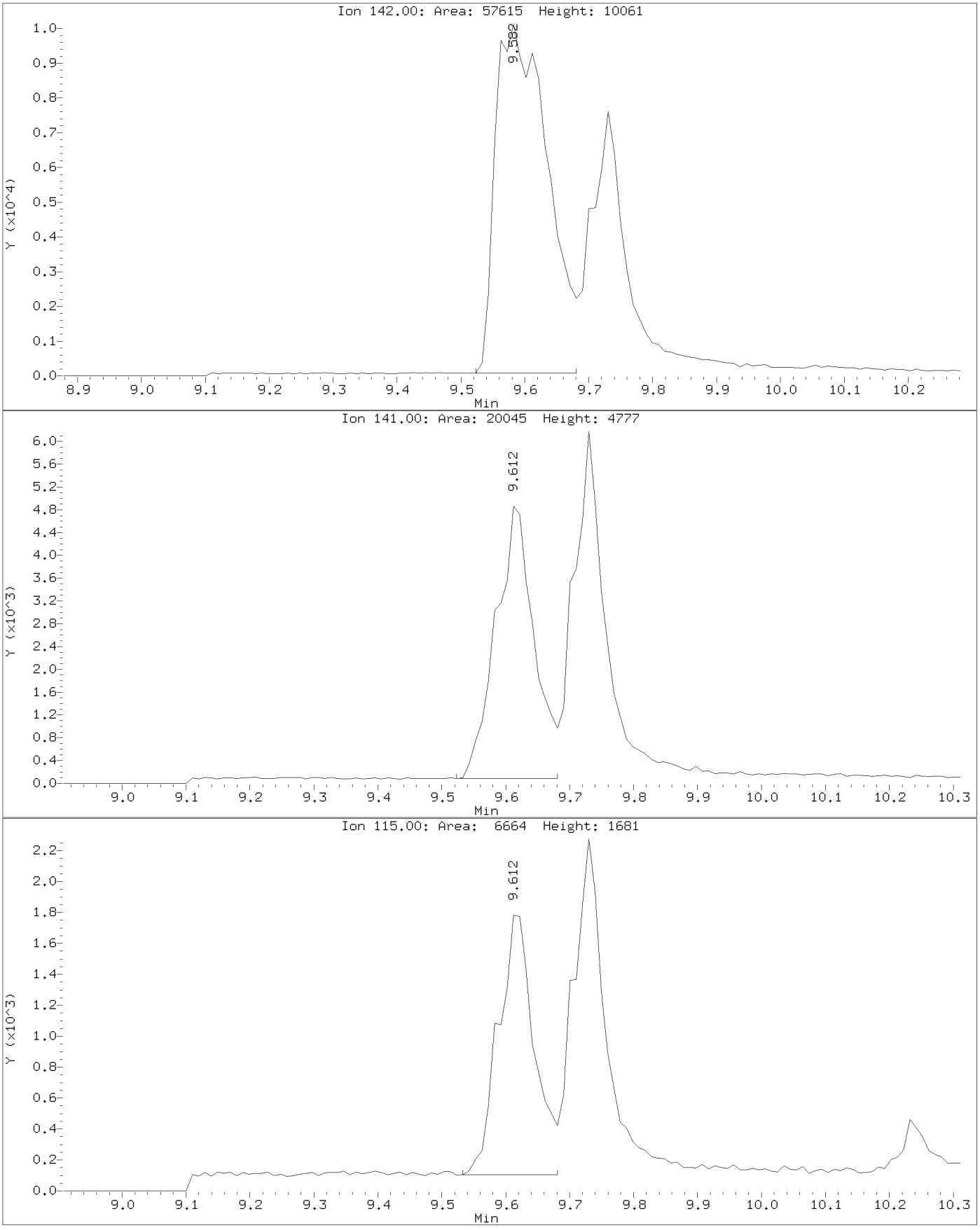
Injection Date: 16-MAR-2018 12:30
Instrument: gcms-n.i
Client Sample ID:

Compound: 2-Methylnaphthalene
CAS Number: 91-57-6

BEFORE MANUAL INTEGRATION



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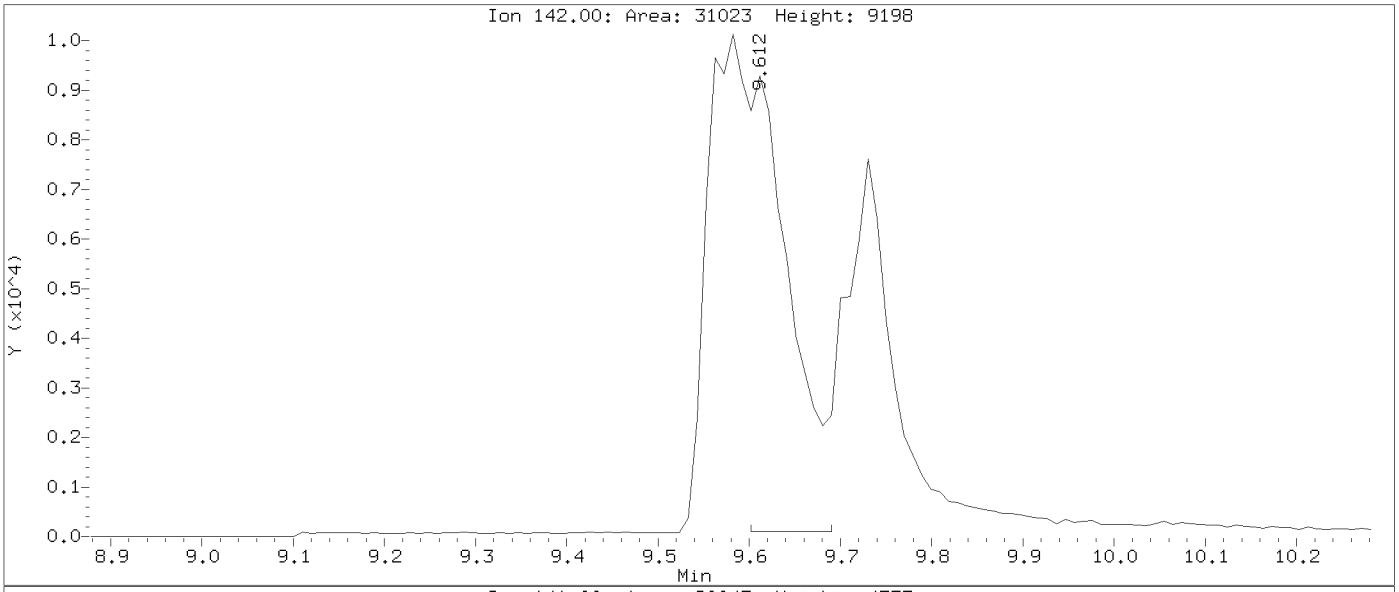
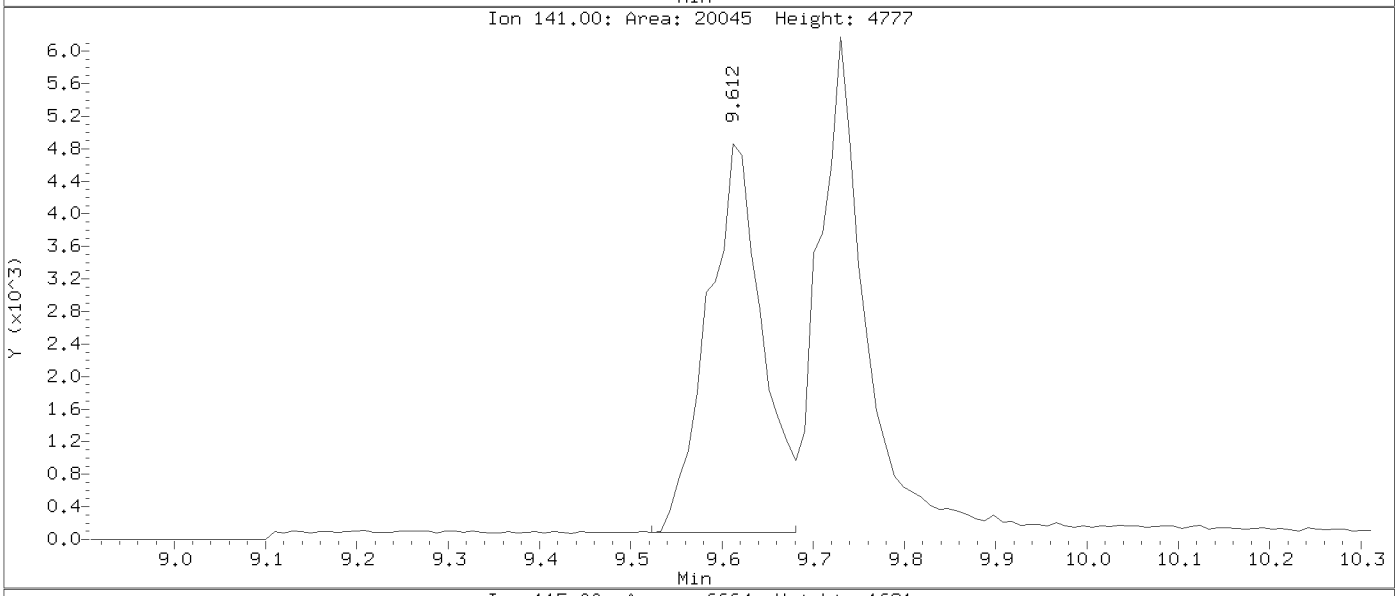
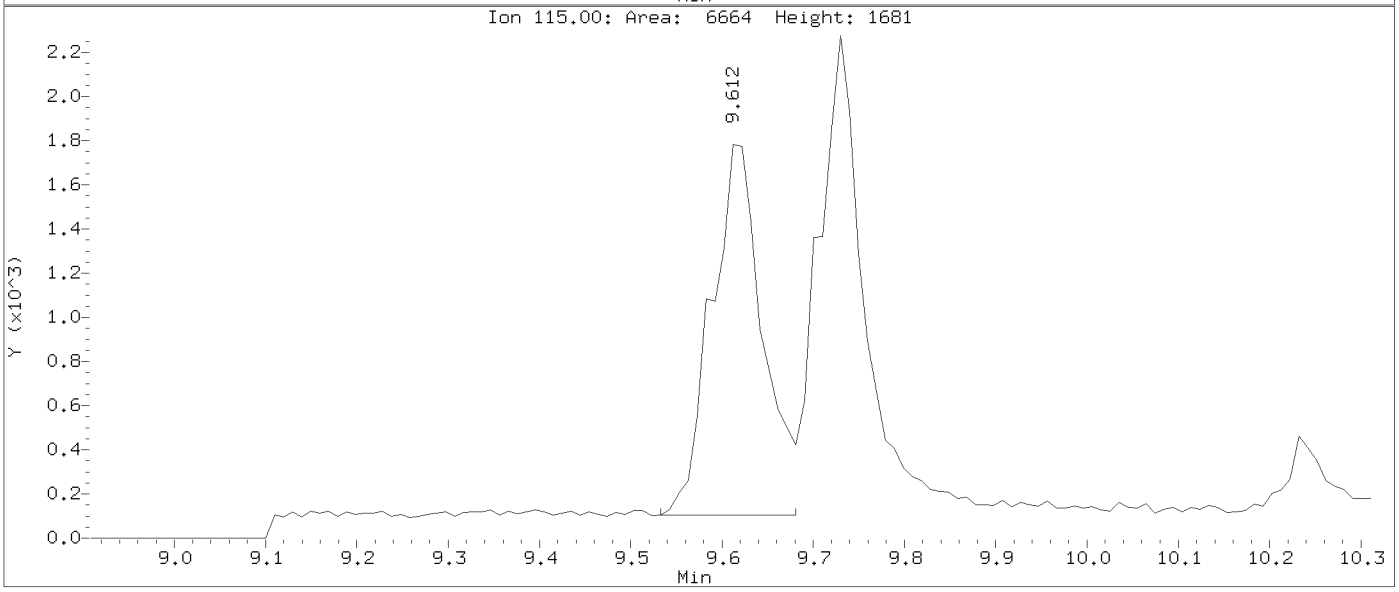
Instrument: gcms-n.i
Client Sample ID:

Compound: 2-Methylnaphthalene
CAS Number: 91-57-6

AFTER MANUAL INTEGRATION



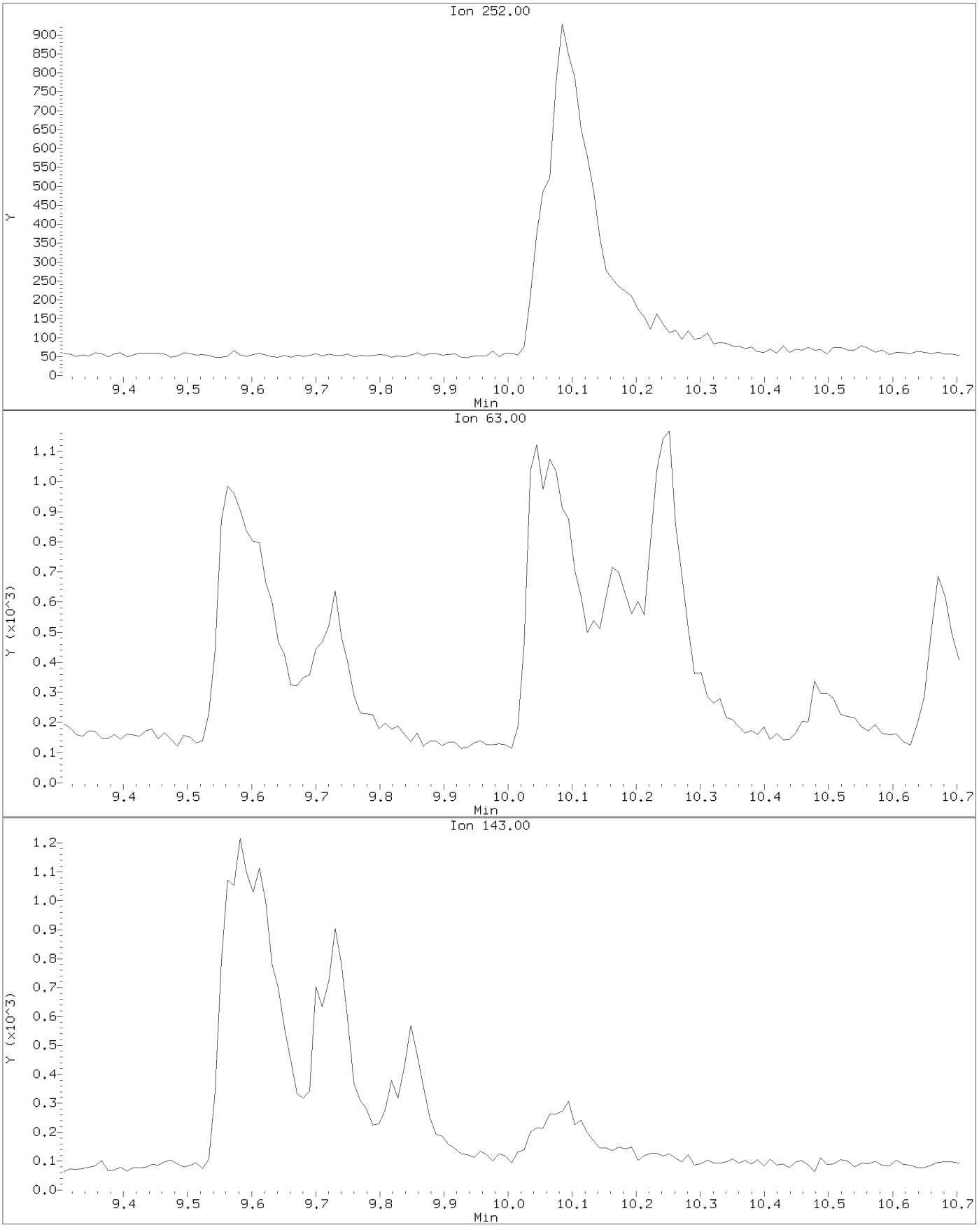




Data File: \\target_server\gg\chem\gcms-n.i\N031618.b\N7969.D
Injection Date: 16-MAR-2018 12:30
Instrument: gcms-n.i
Client Sample ID:

Compound: 2,4-Dibromophenol
CAS Number: 367-12-4

BEFORE MANUAL INTEGRATION



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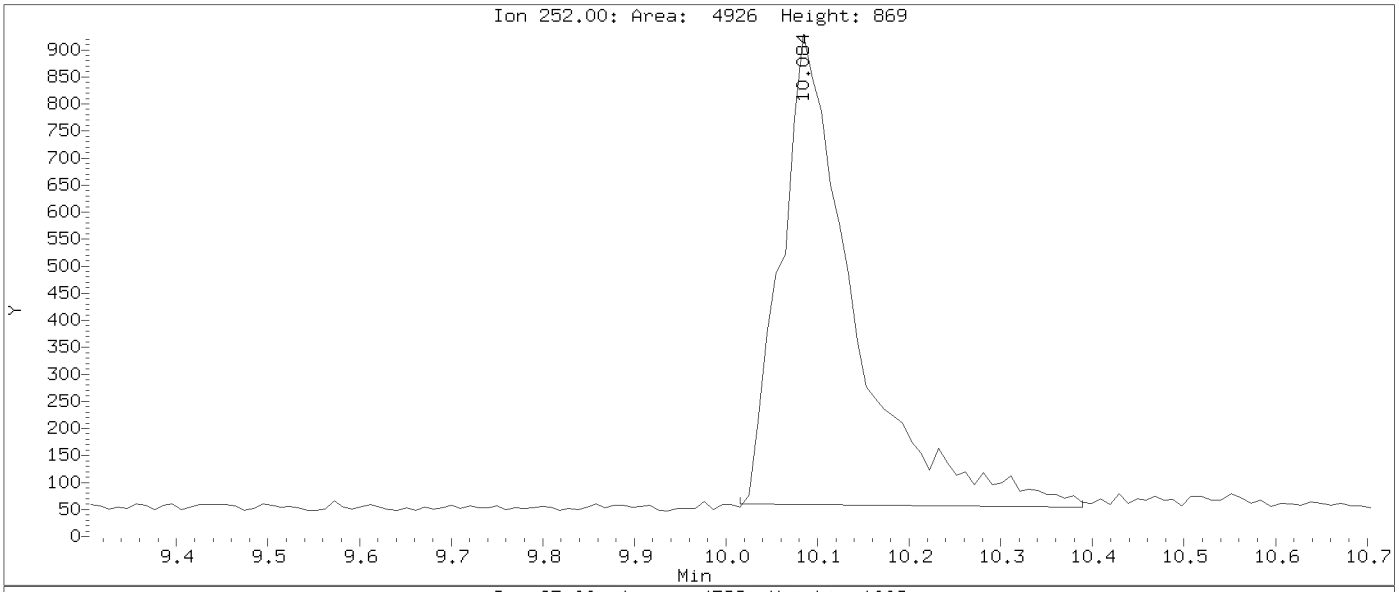
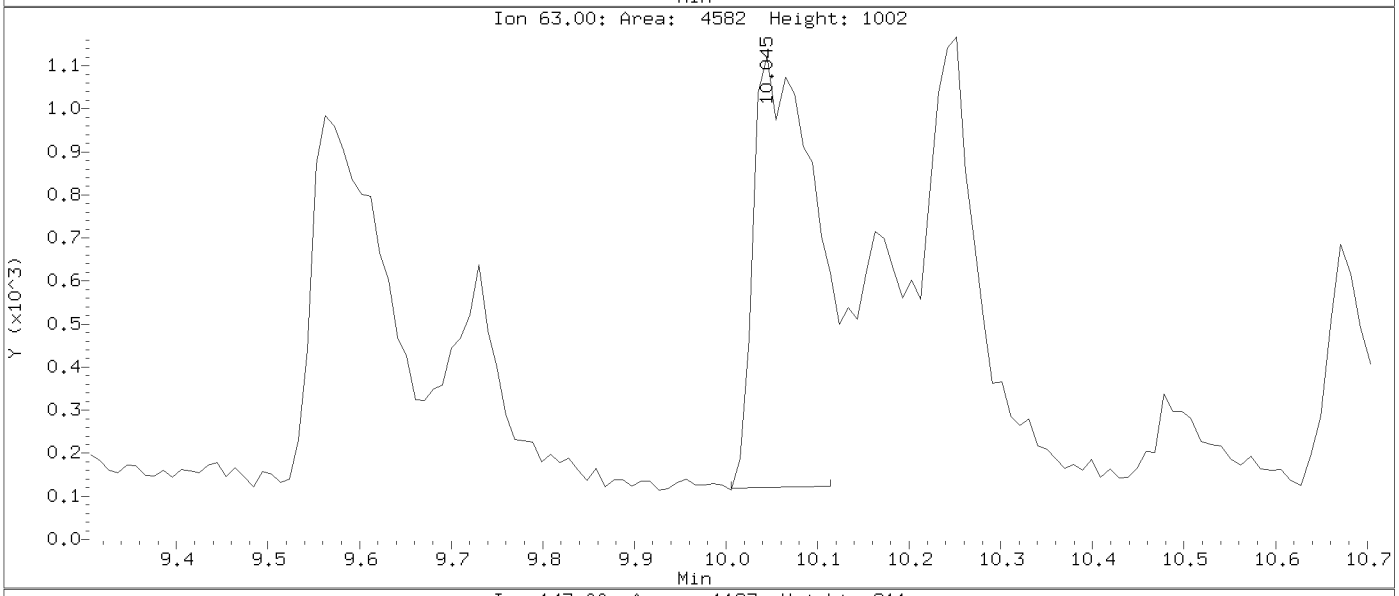
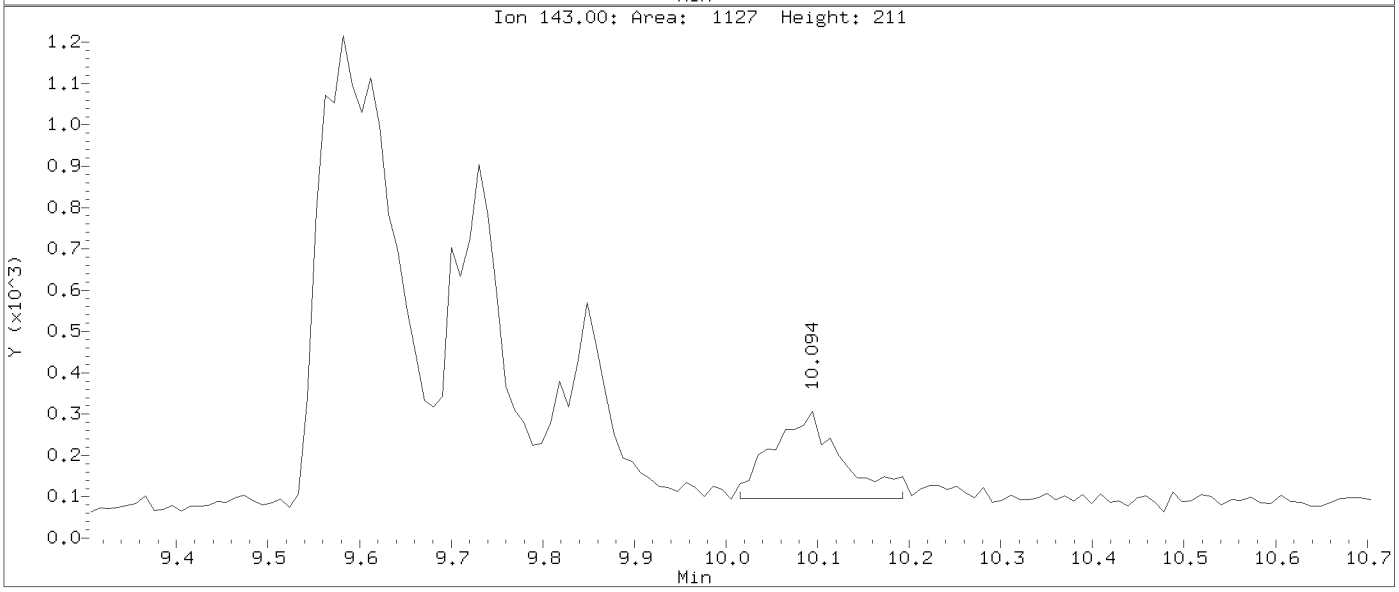
Injection Date: 16-MAR-2018 12:30
Instrument: gcms-n.i
Client Sample ID:

Compound: 2,4-Dibromophenol
CAS Number: 367-12-4

AFTER MANUAL INTEGRATION







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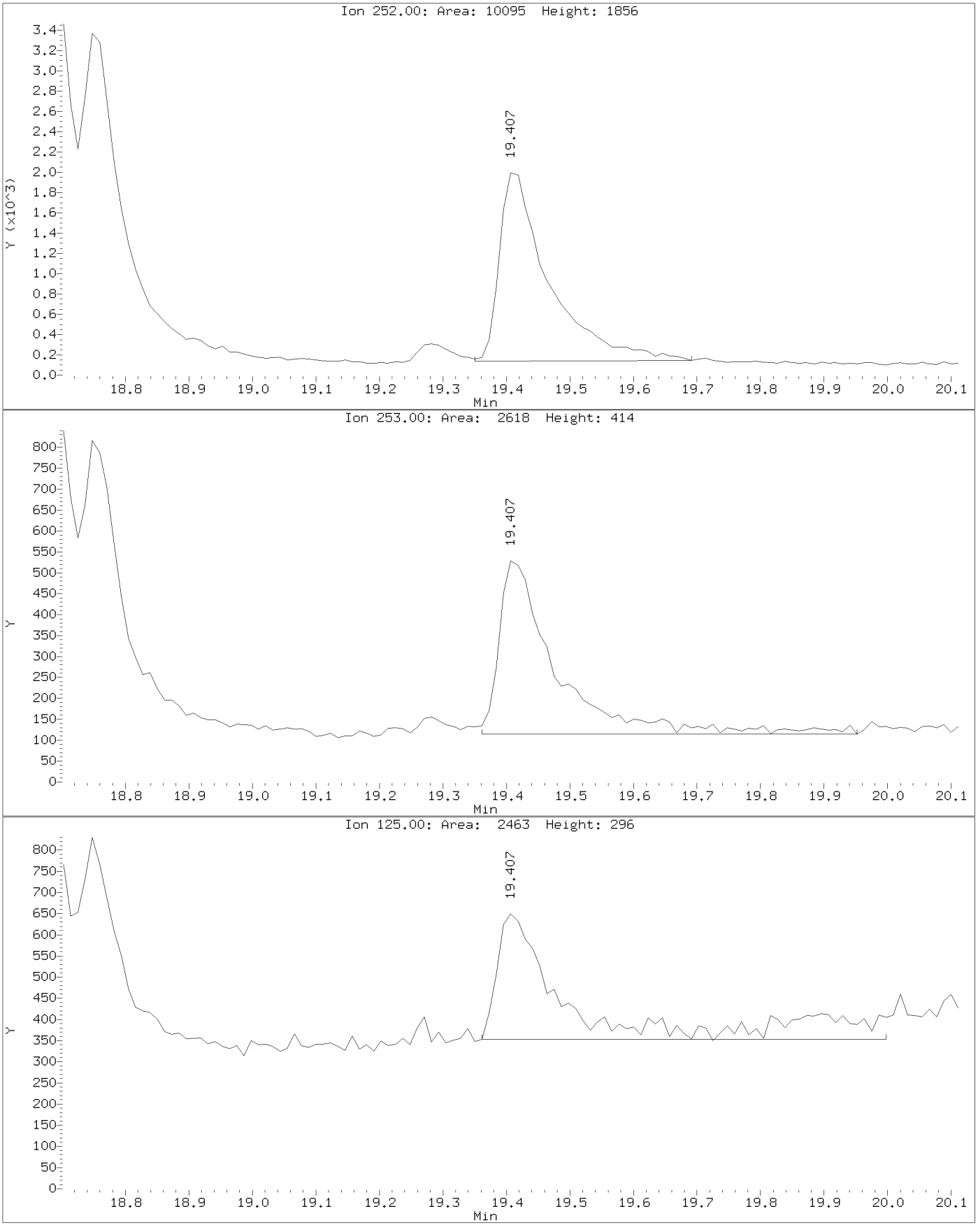
Injection Date: 16-MAR-2018 12:30
Instrument: gcms-n.i
Client Sample ID:

Compound: Benzo(k)fluoranthene
CAS Number: 207-08-9

BEFORE MANUAL INTEGRATION



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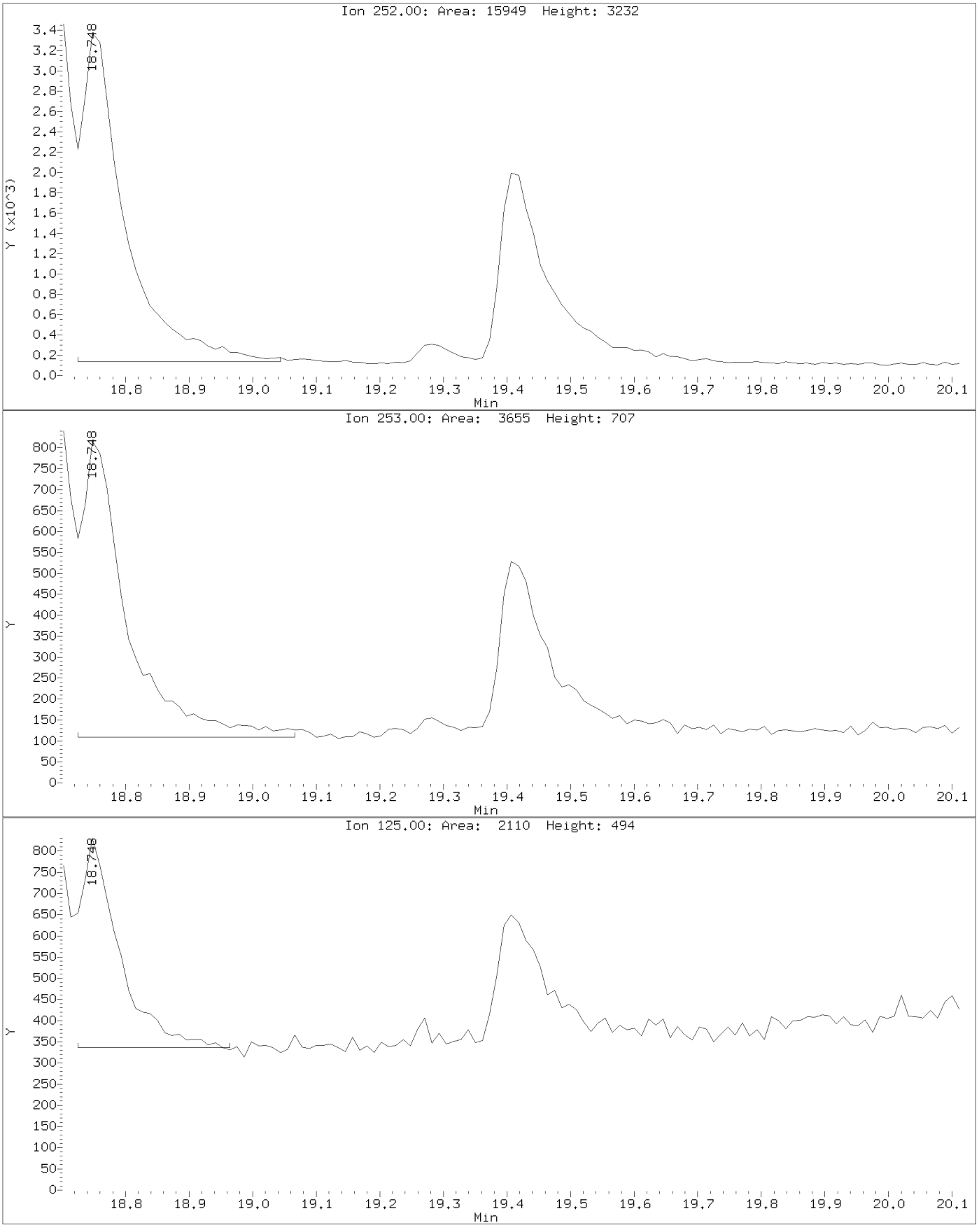
Injection Date: 16-MAR-2018 12:30
Instrument: gcms-n.i
Client Sample ID:

Compound: Benzo(k)fluoranthene
CAS Number: 207-08-9

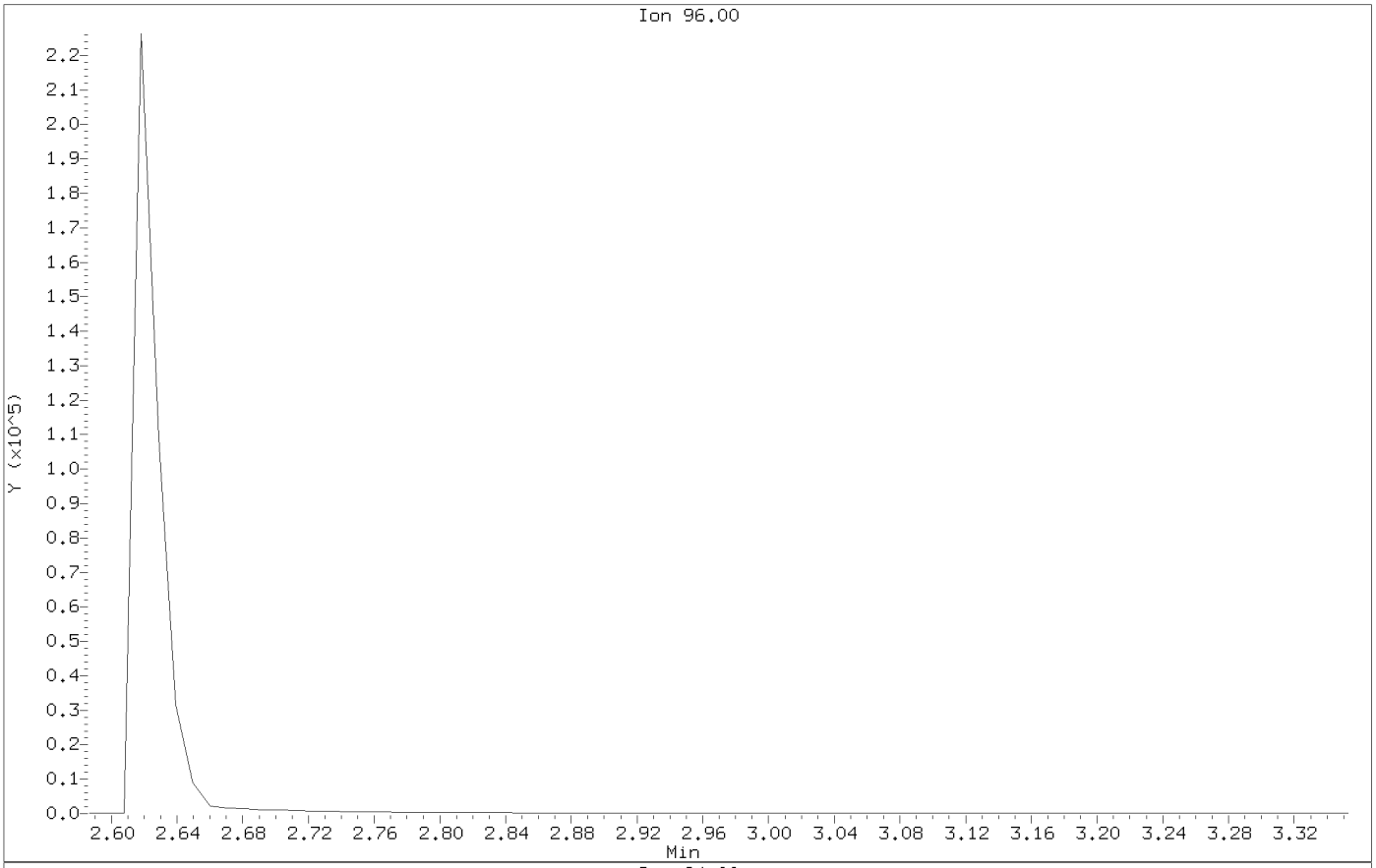
AFTER MANUAL INTEGRATION

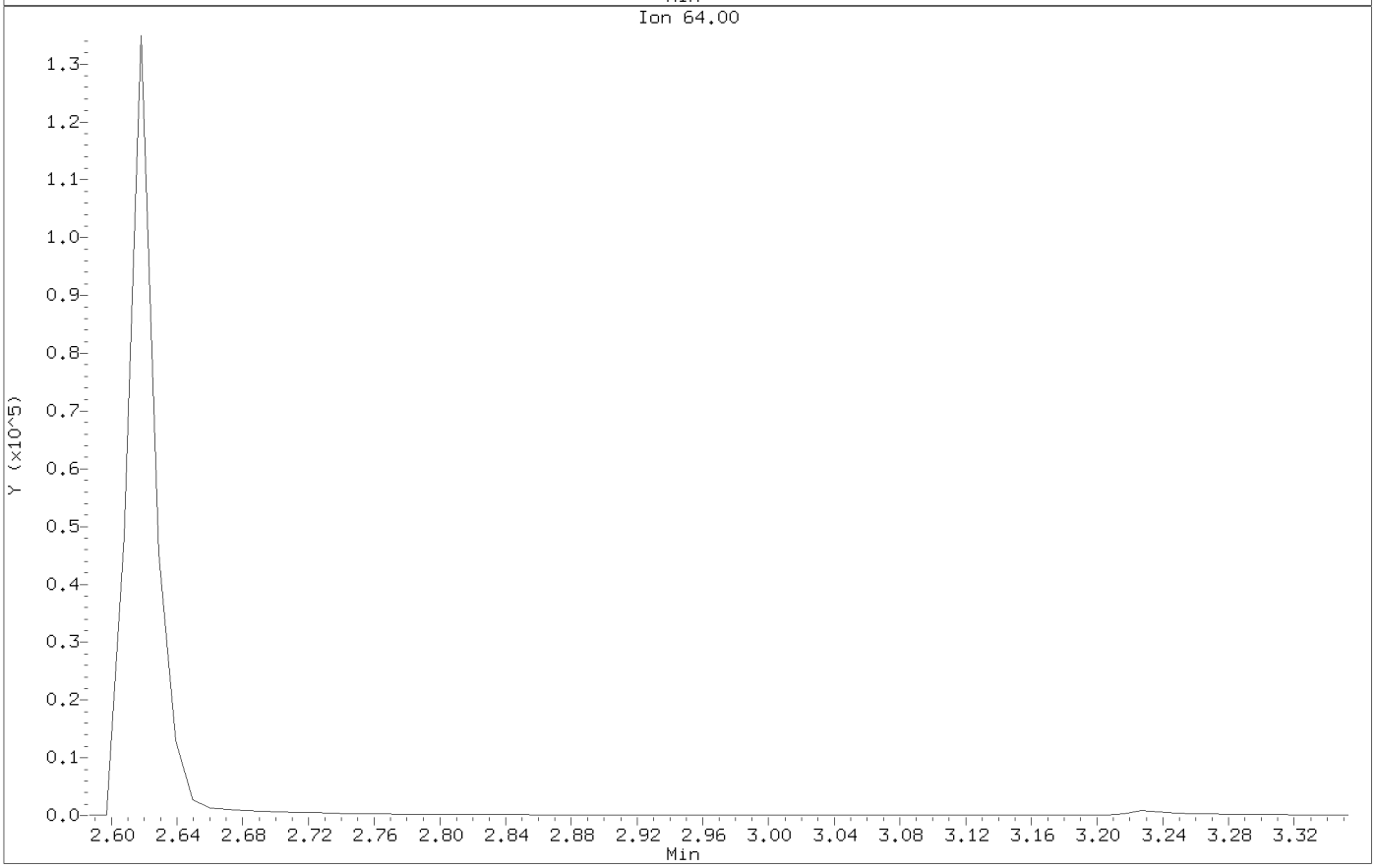


BEFORE MANUAL INTEGRATION

Data File: \\target_server\gg\chem\gcms-n.i\N031618.b\N7971.D
Injection Date: 16-MAR-2018 13:34
Instrument: gcms-n.i
Client Sample ID:

Compound: 1,4-Dioxane-d8
CAS Number: 534-52-1

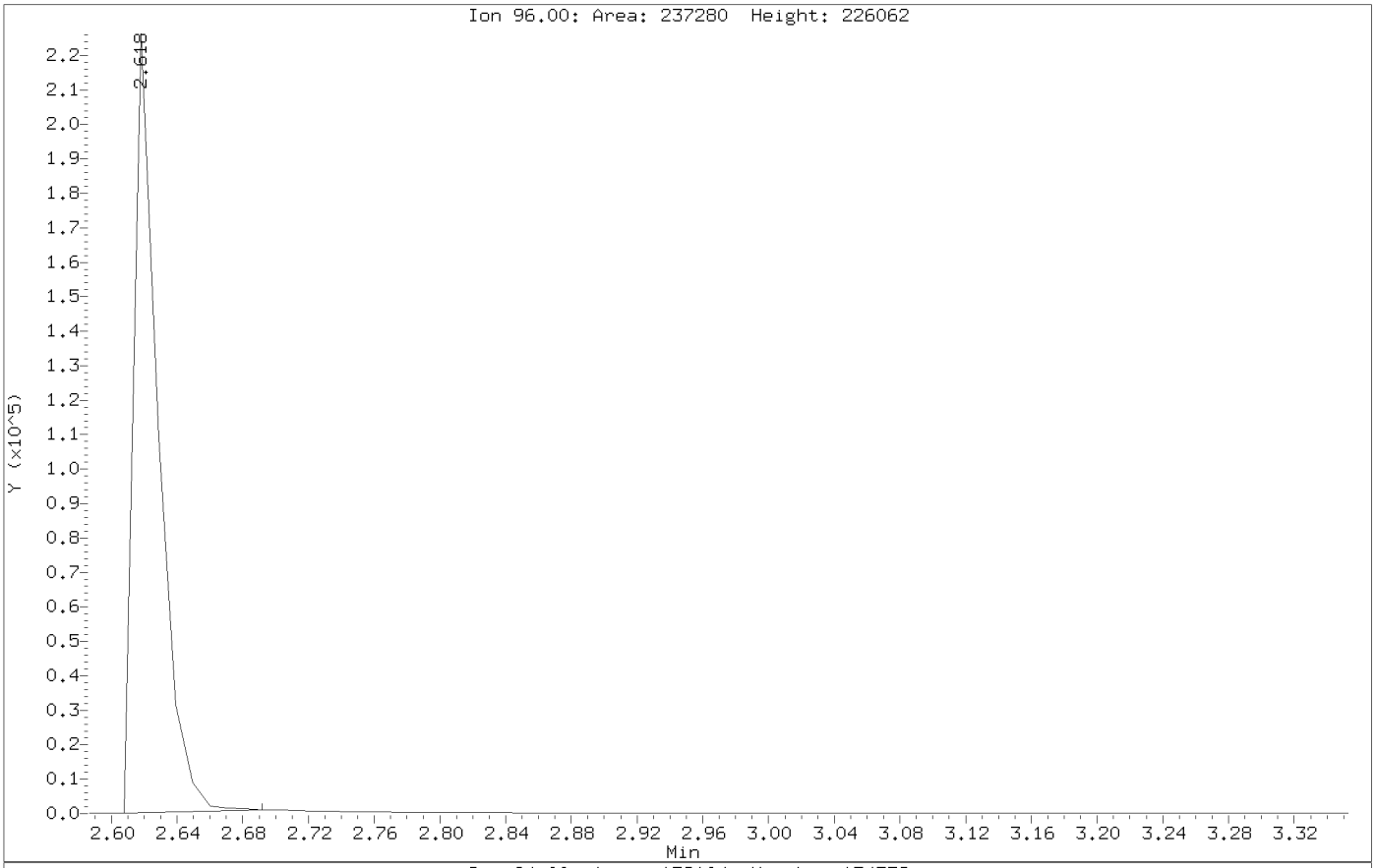


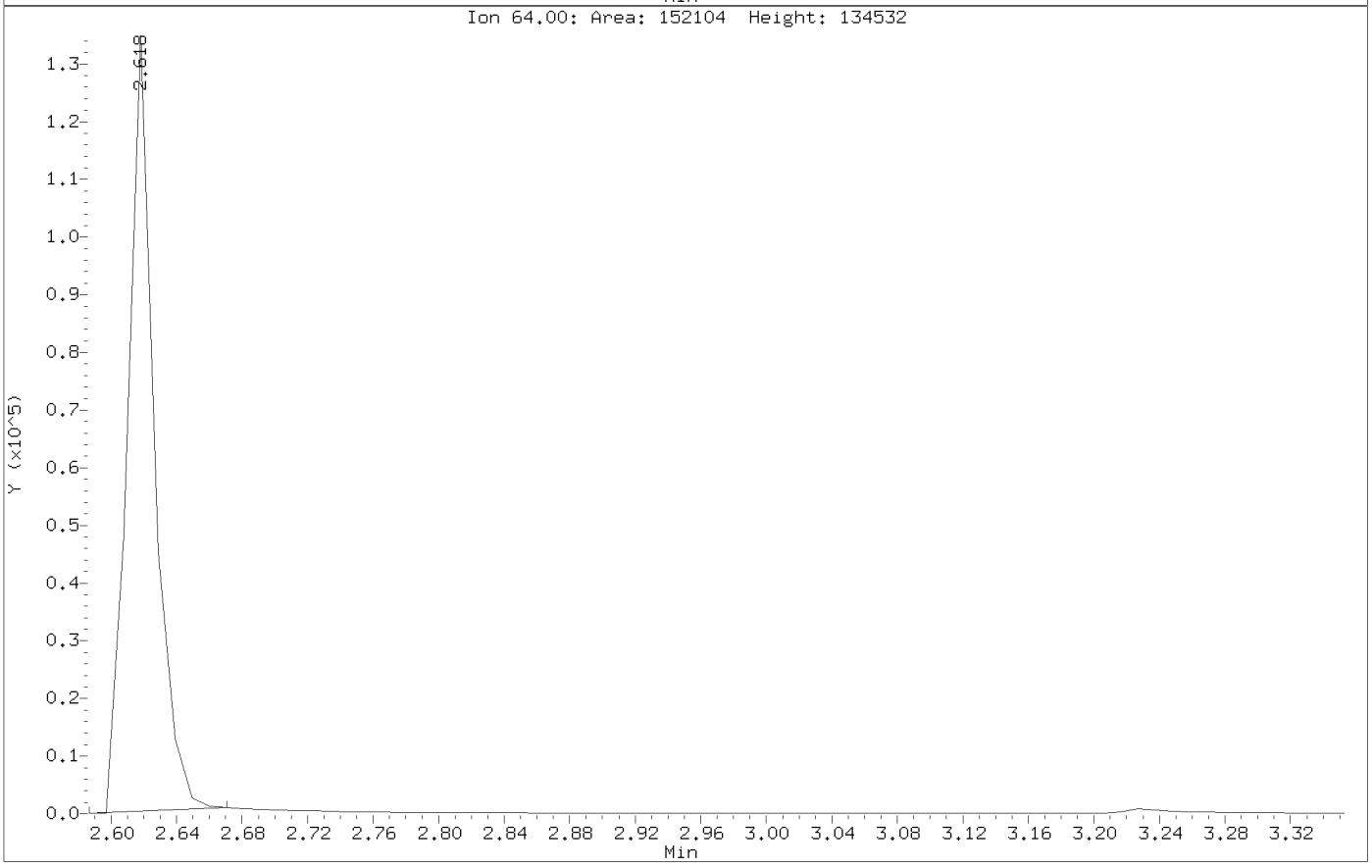


Data File: \\target_server\gg\chem\gcms-n.i\N031618.b\N7971.D
Injection Date: 16-MAR-2018 13:34
Instrument: gcms-n.i
Client Sample ID:

Compound: 1,4-Dioxane-d8
CAS Number: 534-52-1

AFTER MANUAL INTEGRATION

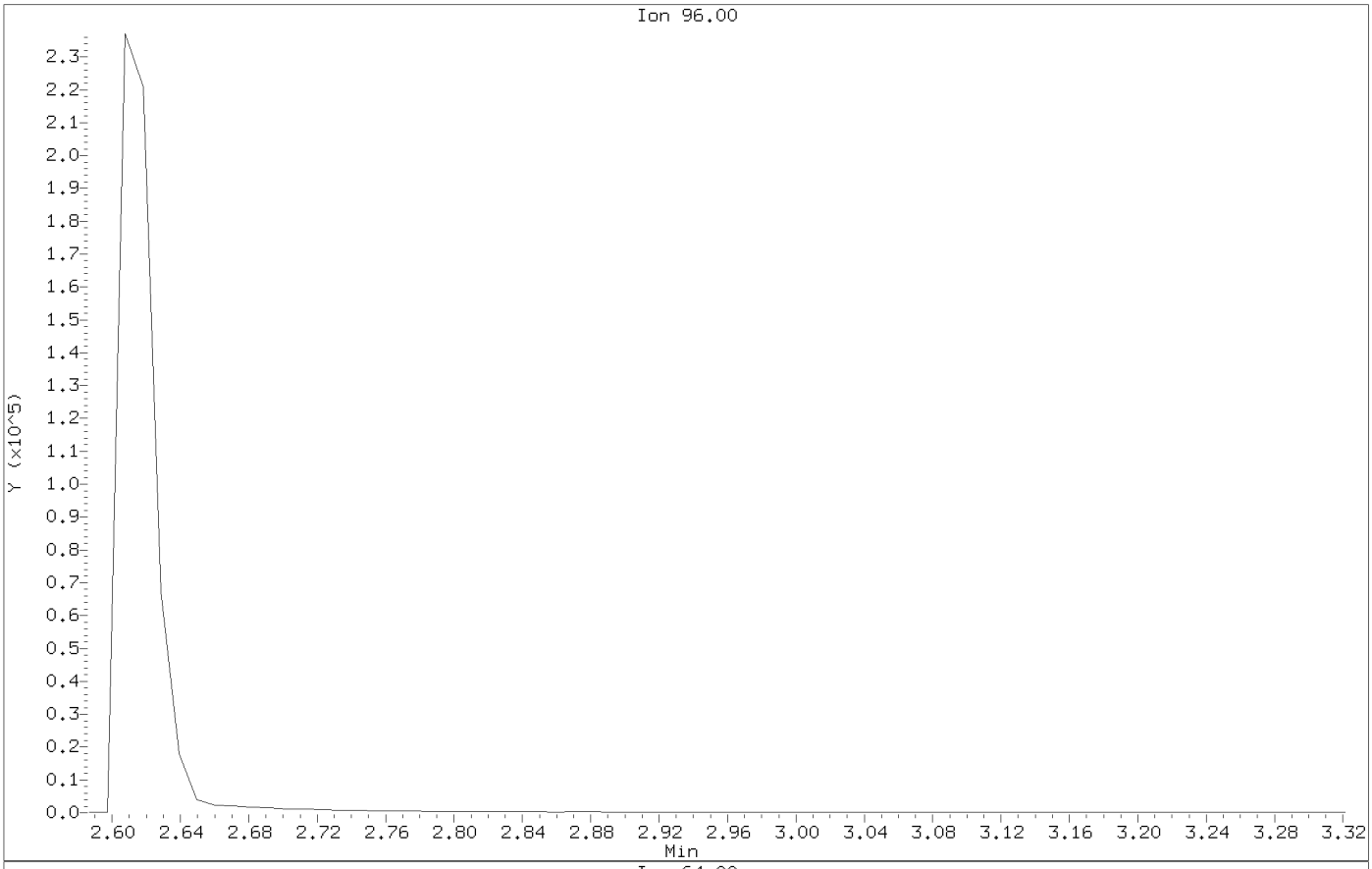


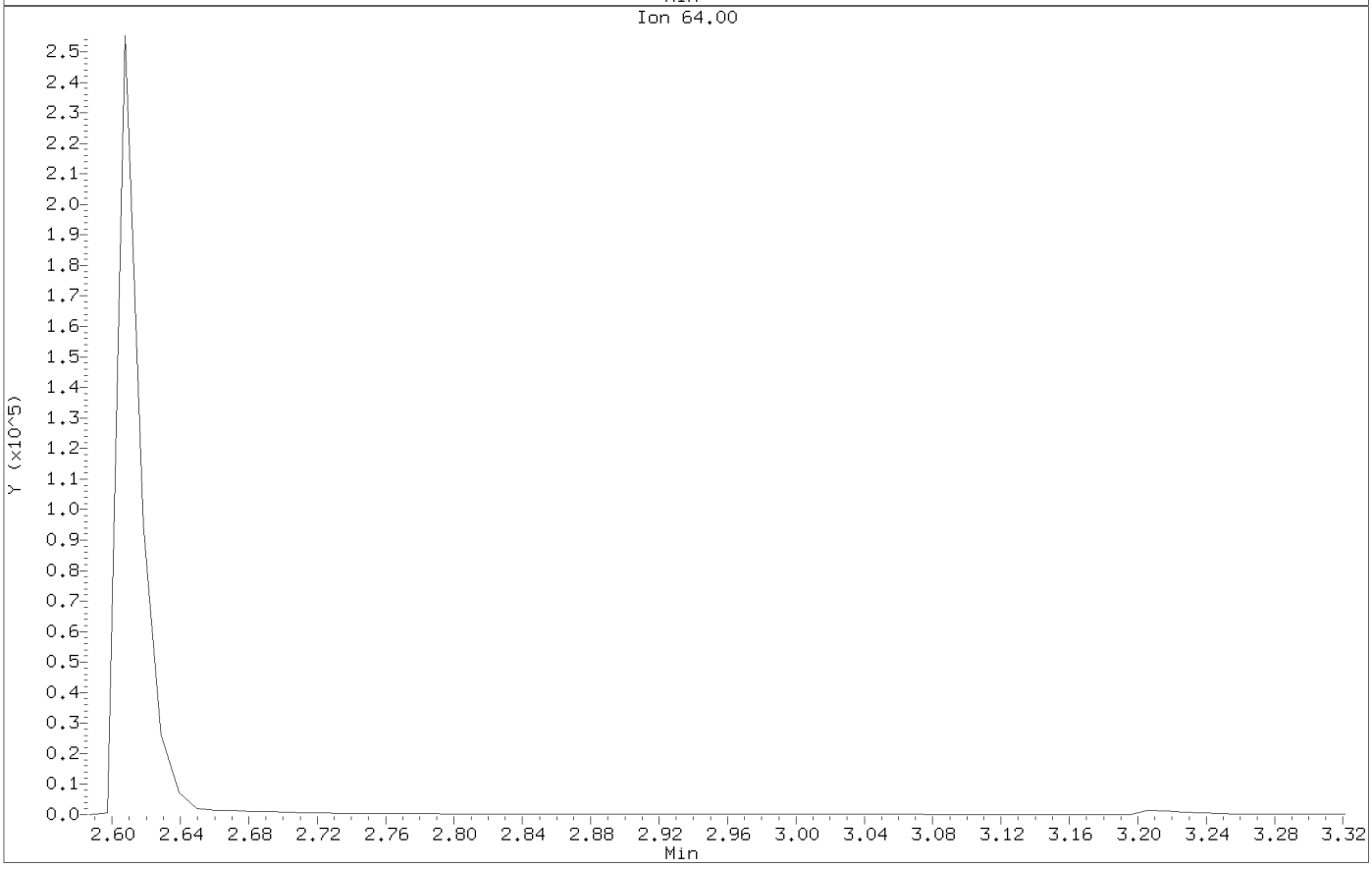


Data File: \\target_server\gg\chem\gcms-n.i\N031618.b\N7972.D
Injection Date: 16-MAR-2018 14:06
Instrument: gcms-n.i
Client Sample ID:

Compound: 1,4-Dioxane-d8
CAS Number: 534-52-1

BEFORE MANUAL INTEGRATION

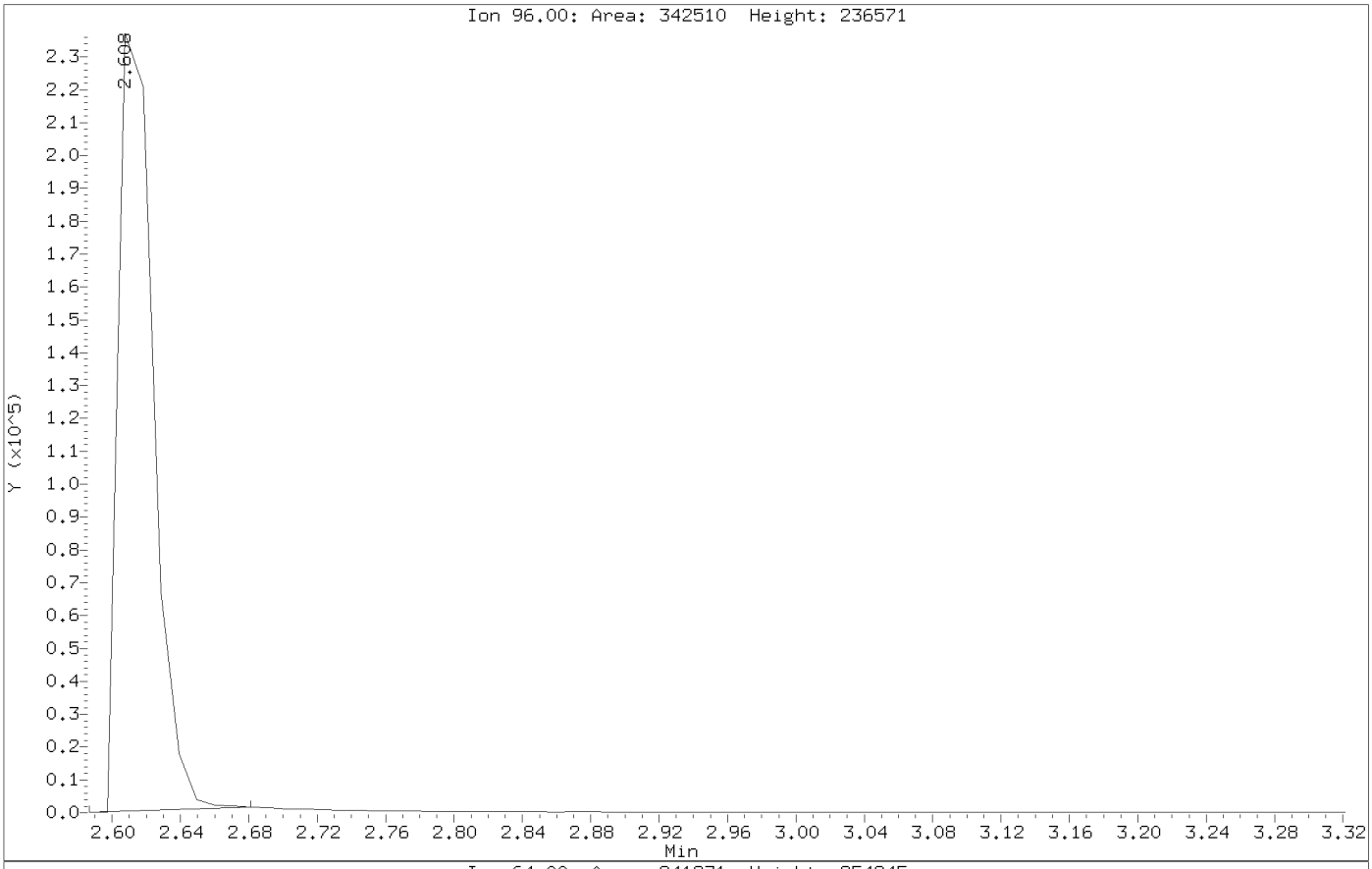


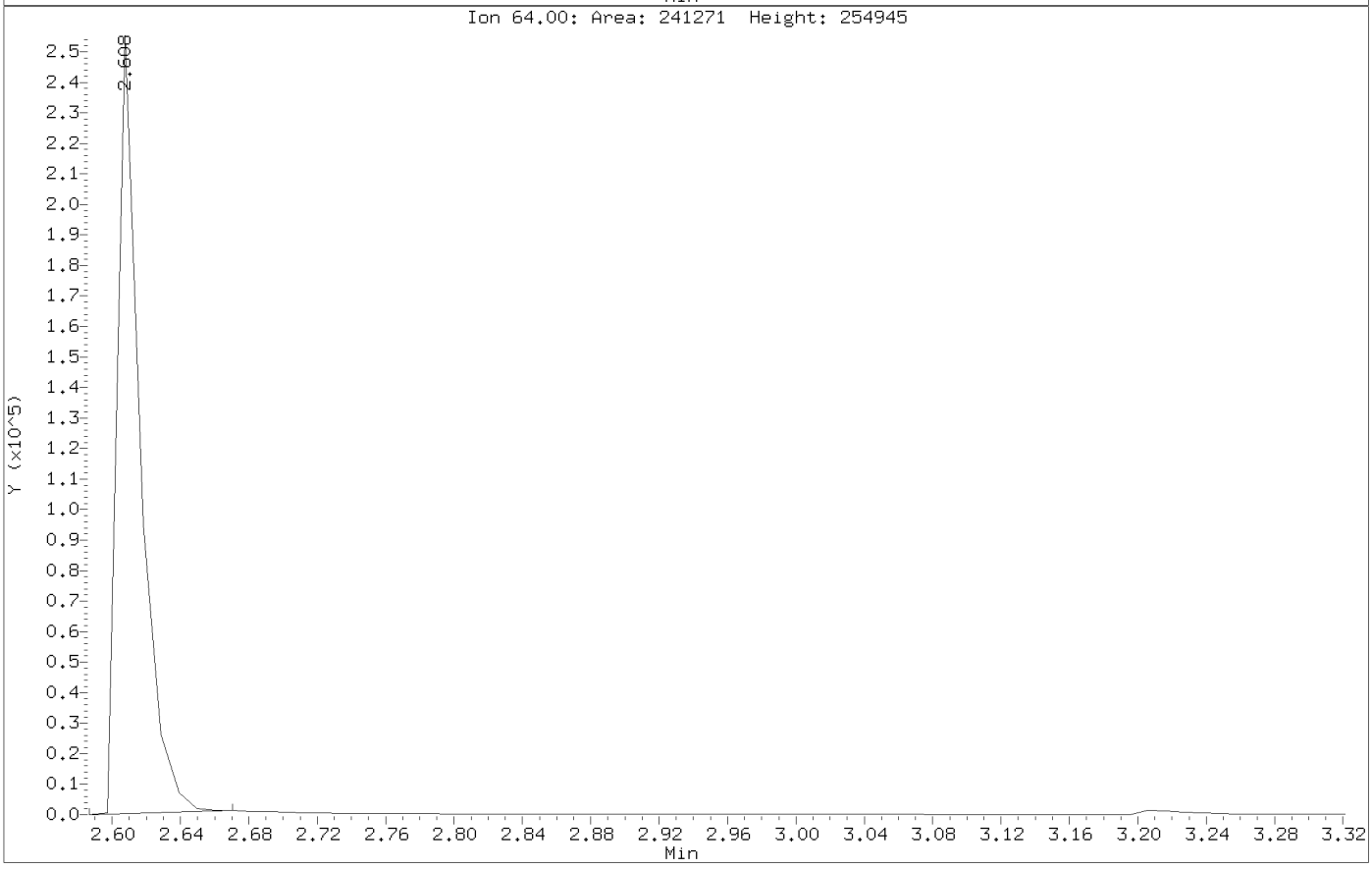


Data File: \\target_server\gg\chem\gcms-n.i\N031618.b\N7972.D
Injection Date: 16-MAR-2018 14:06
Instrument: gcms-n.i
Client Sample ID:

Compound: 1,4-Dioxane-d8
CAS Number: 534-52-1

AFTER MANUAL INTEGRATION





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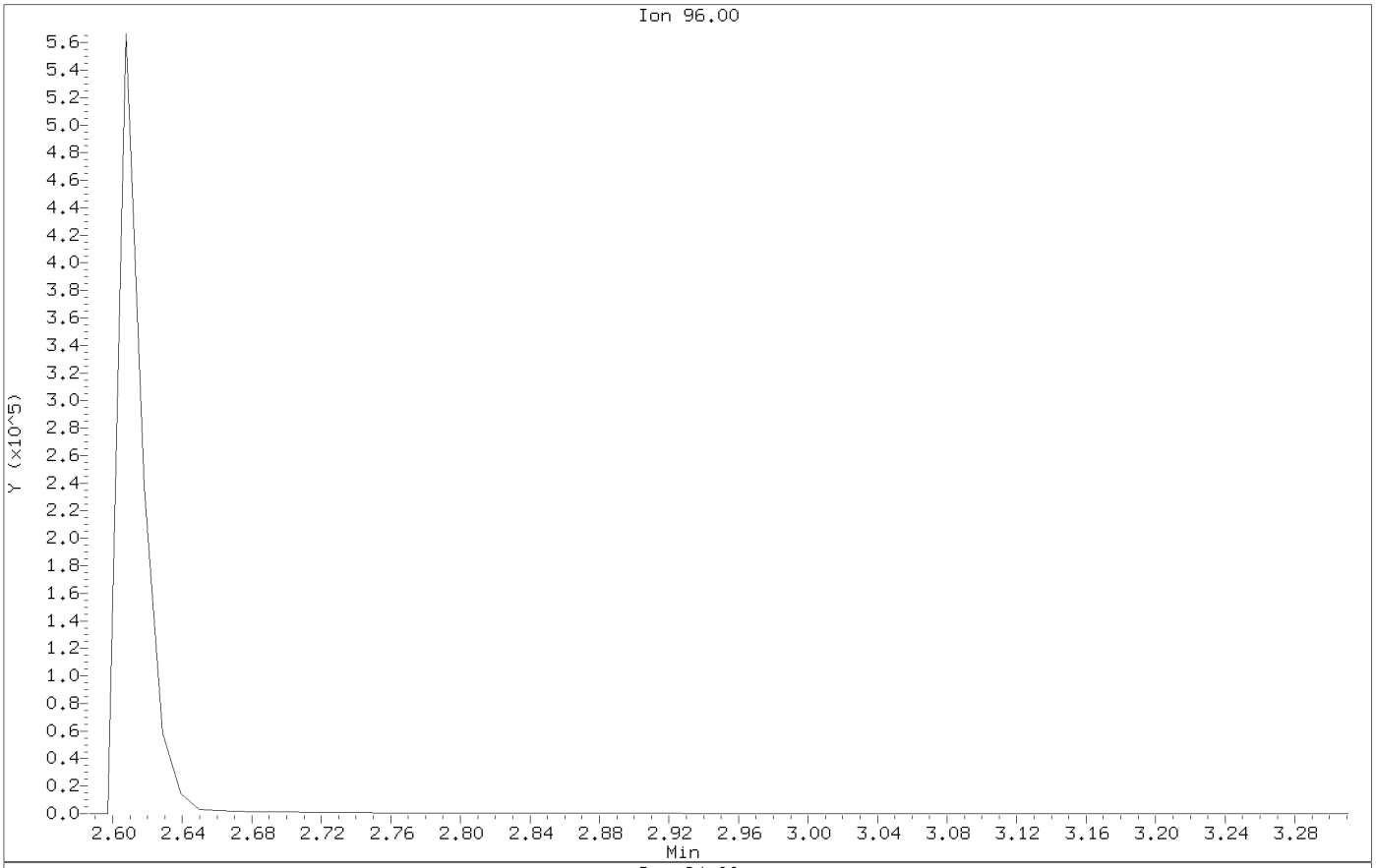
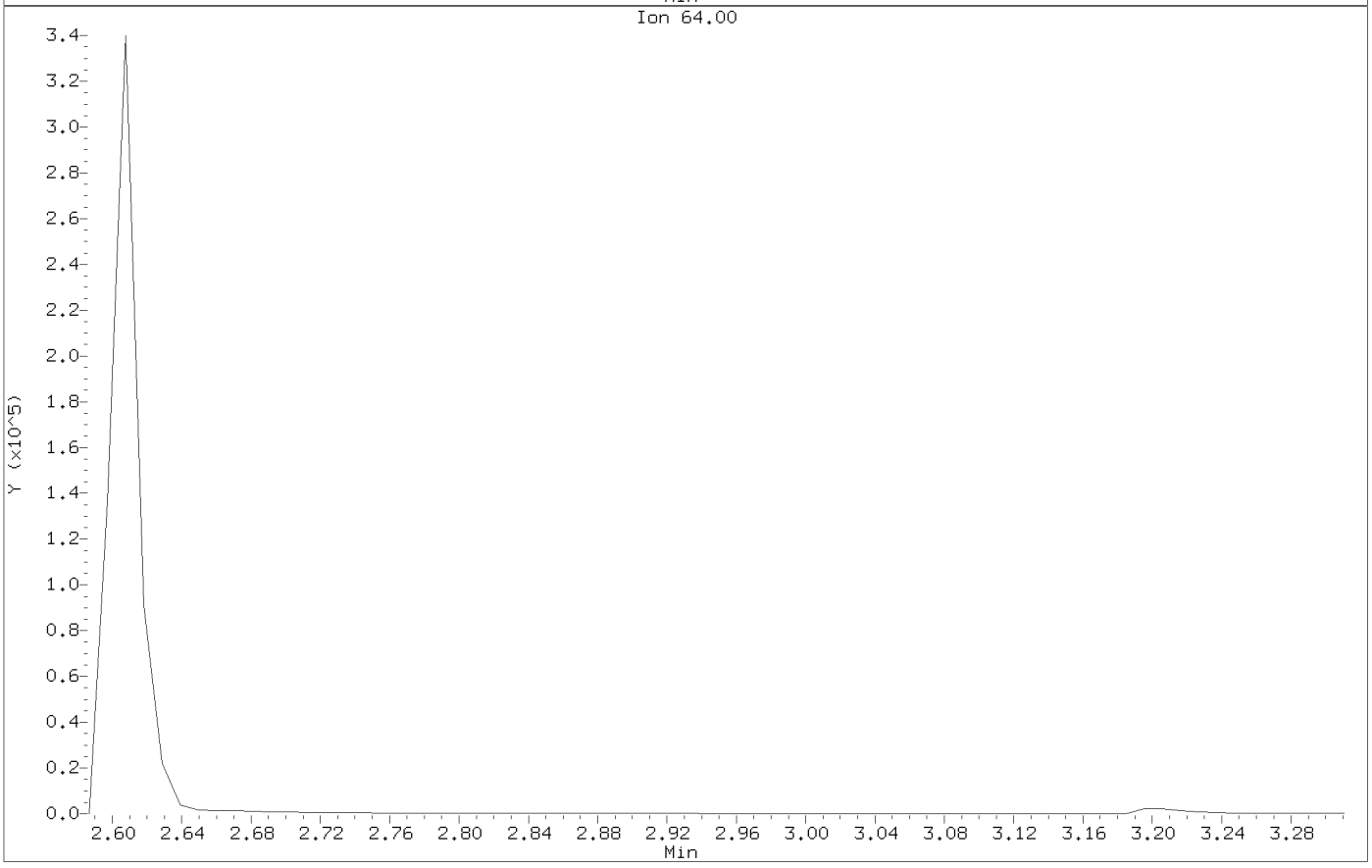
Injection Date: 16-MAR-2018 14:38
Instrument: gcms-n.i
Client Sample ID:

Compound: 1,4-Dioxane-d8
CAS Number: 534-52-1

BEFORE MANUAL INTEGRATION





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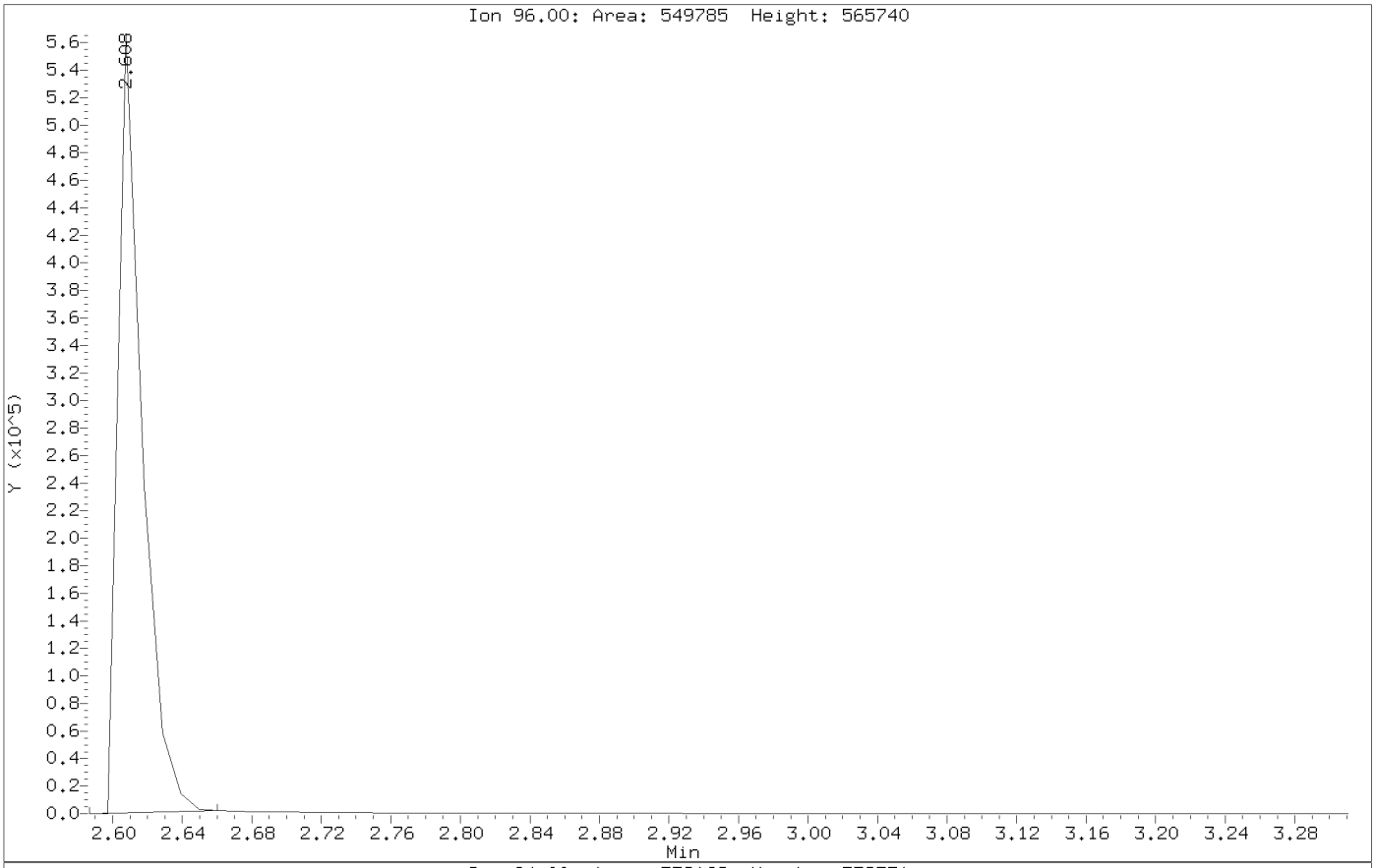
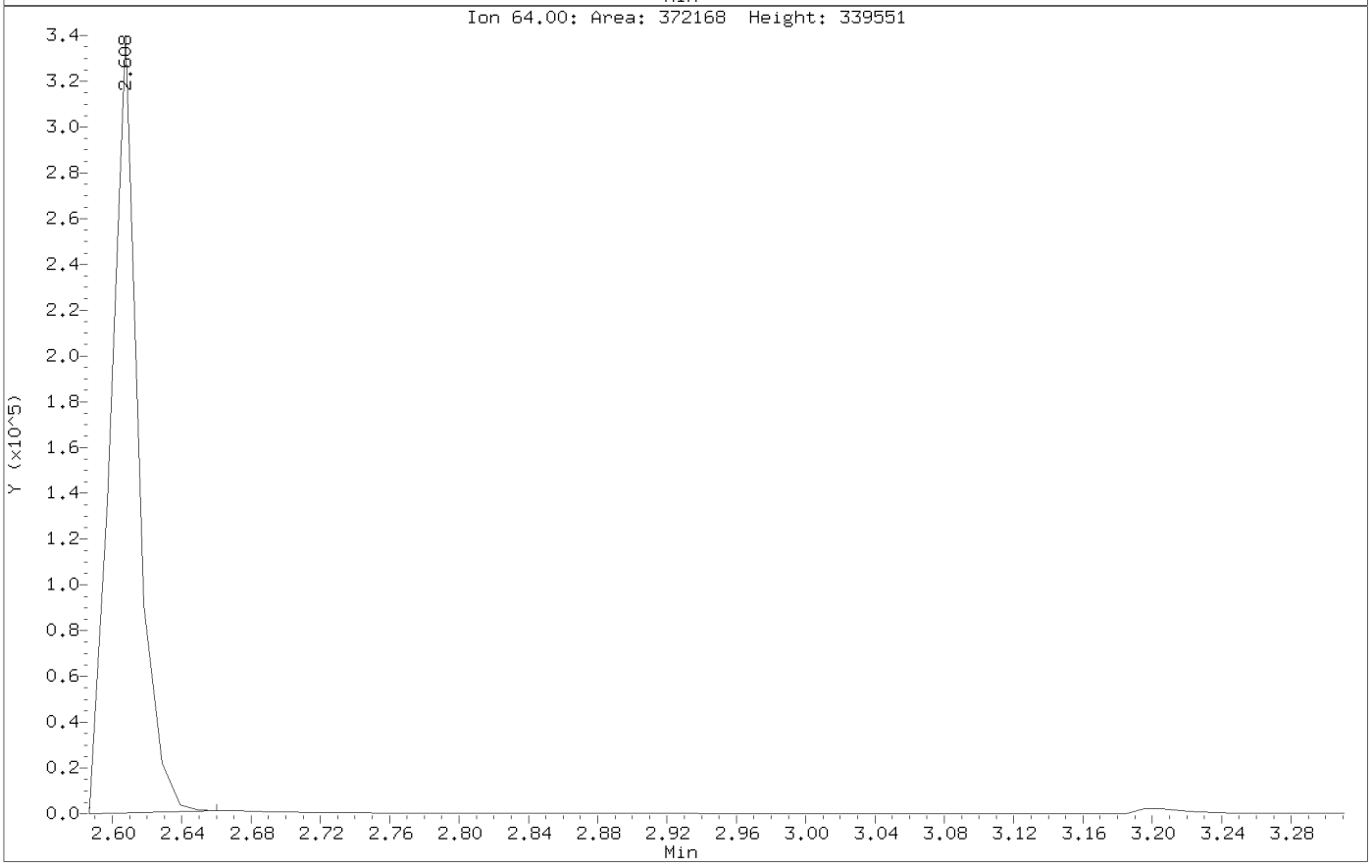
Injection Date: 16-MAR-2018 14:38
Instrument: gcms-n.i
Client Sample ID:

Compound: 1,4-Dioxane-d8
CAS Number: 534-52-1

AFTER MANUAL INTEGRATION

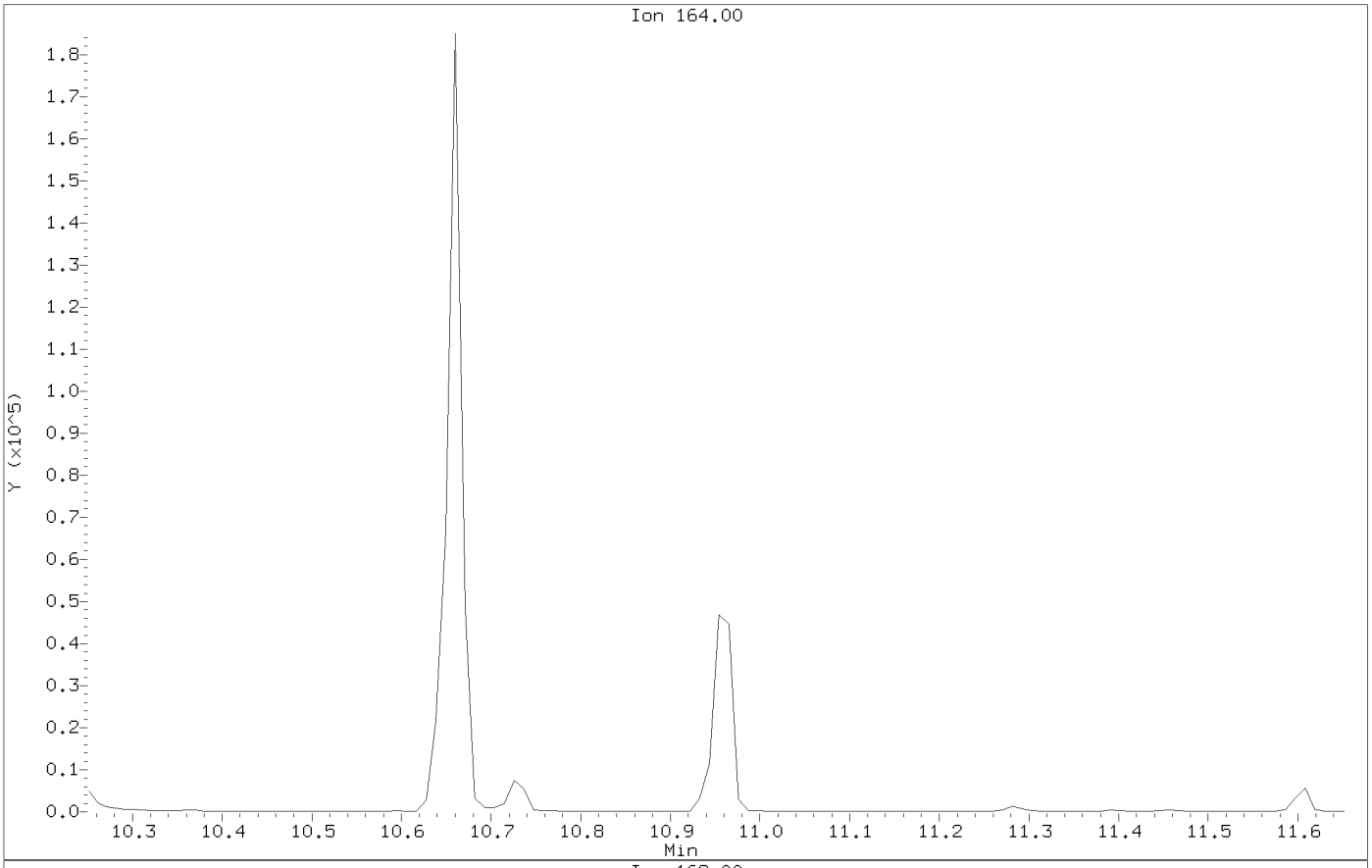


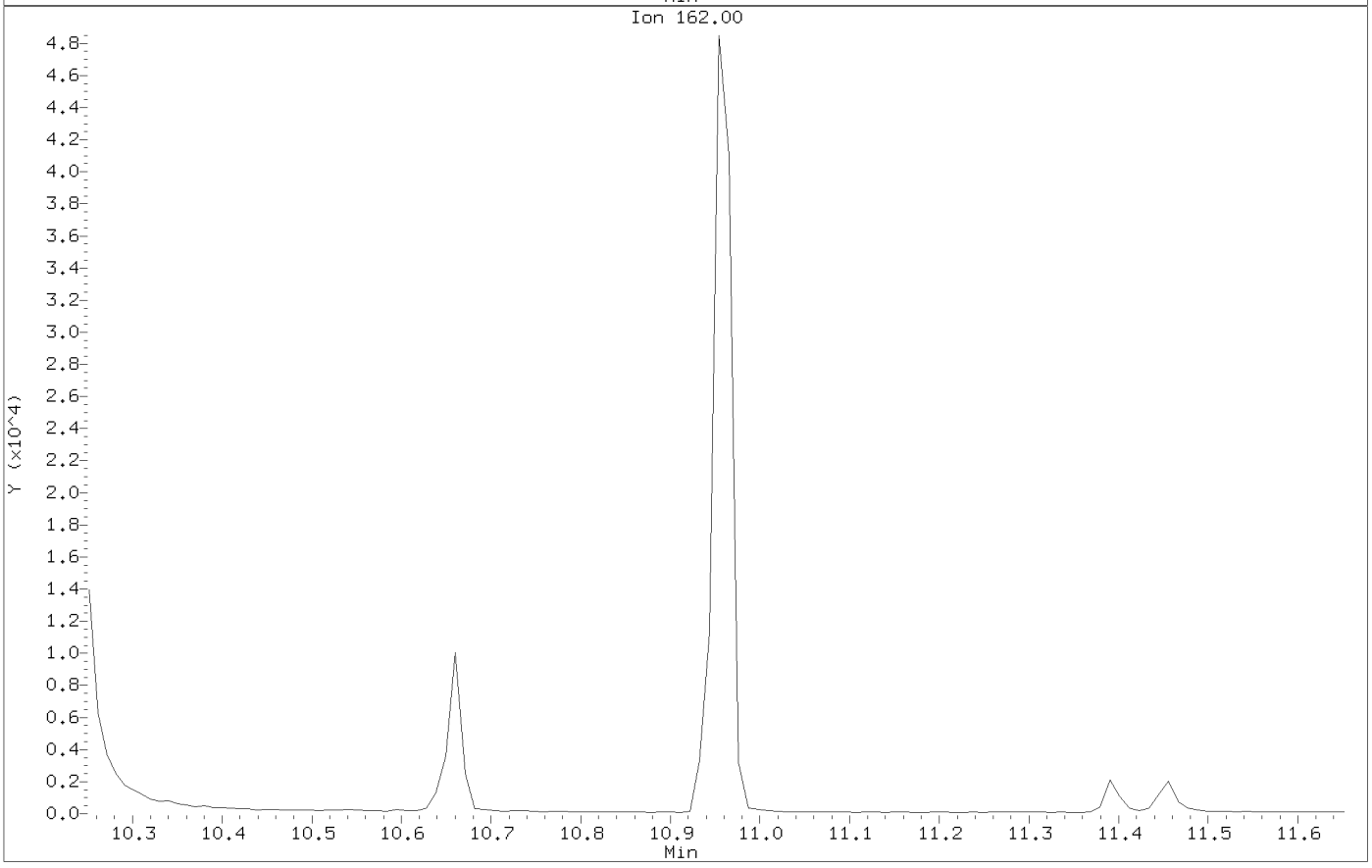


Data File: \\target_server\gg\chem\gcms-n.i\N031618.b\N7973.D
Injection Date: 16-MAR-2018 14:38
Instrument: gcms-n.i
Client Sample ID:

Compound: Acenaphthene-D10
CAS Number: 15067-26-2

BEFORE MANUAL INTEGRATION

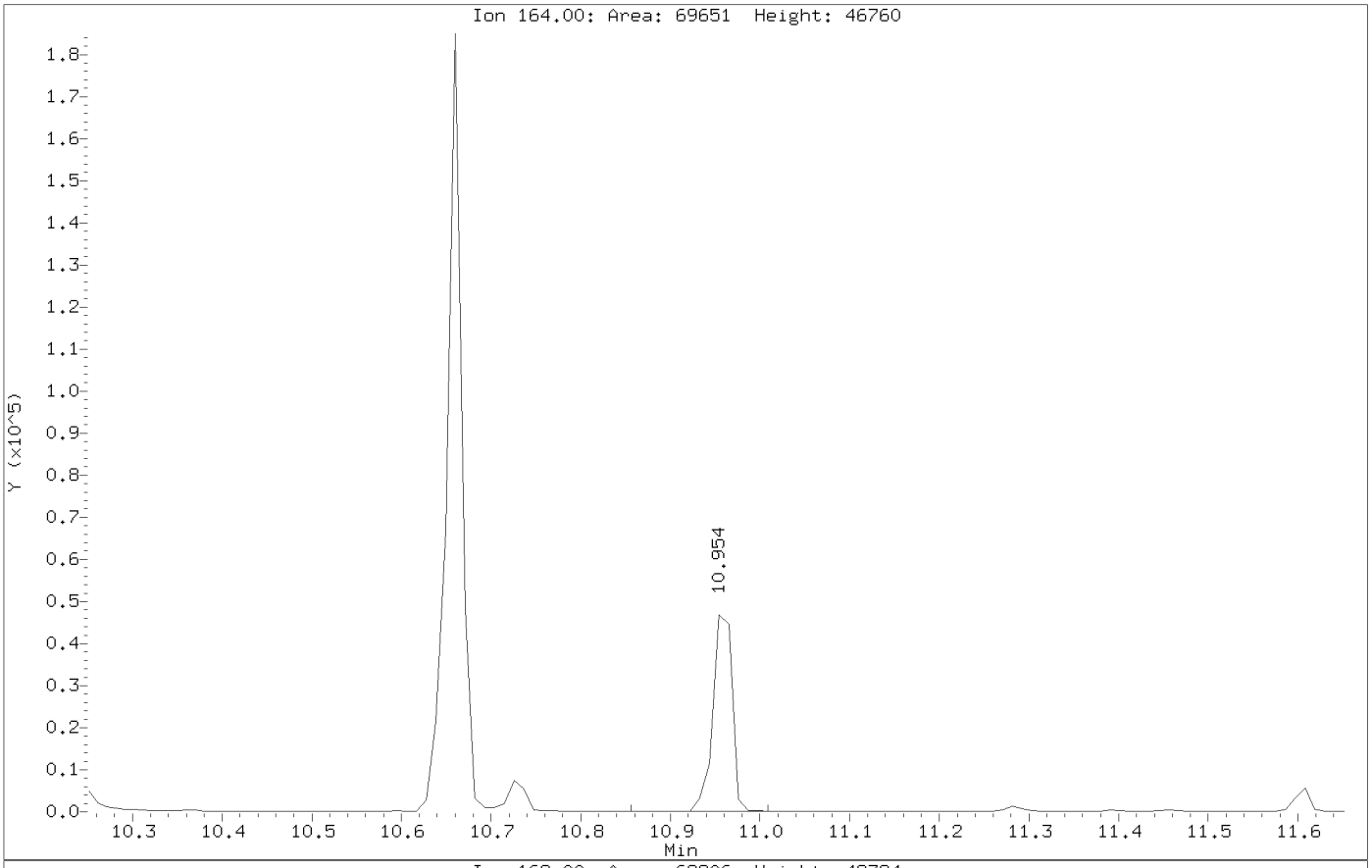


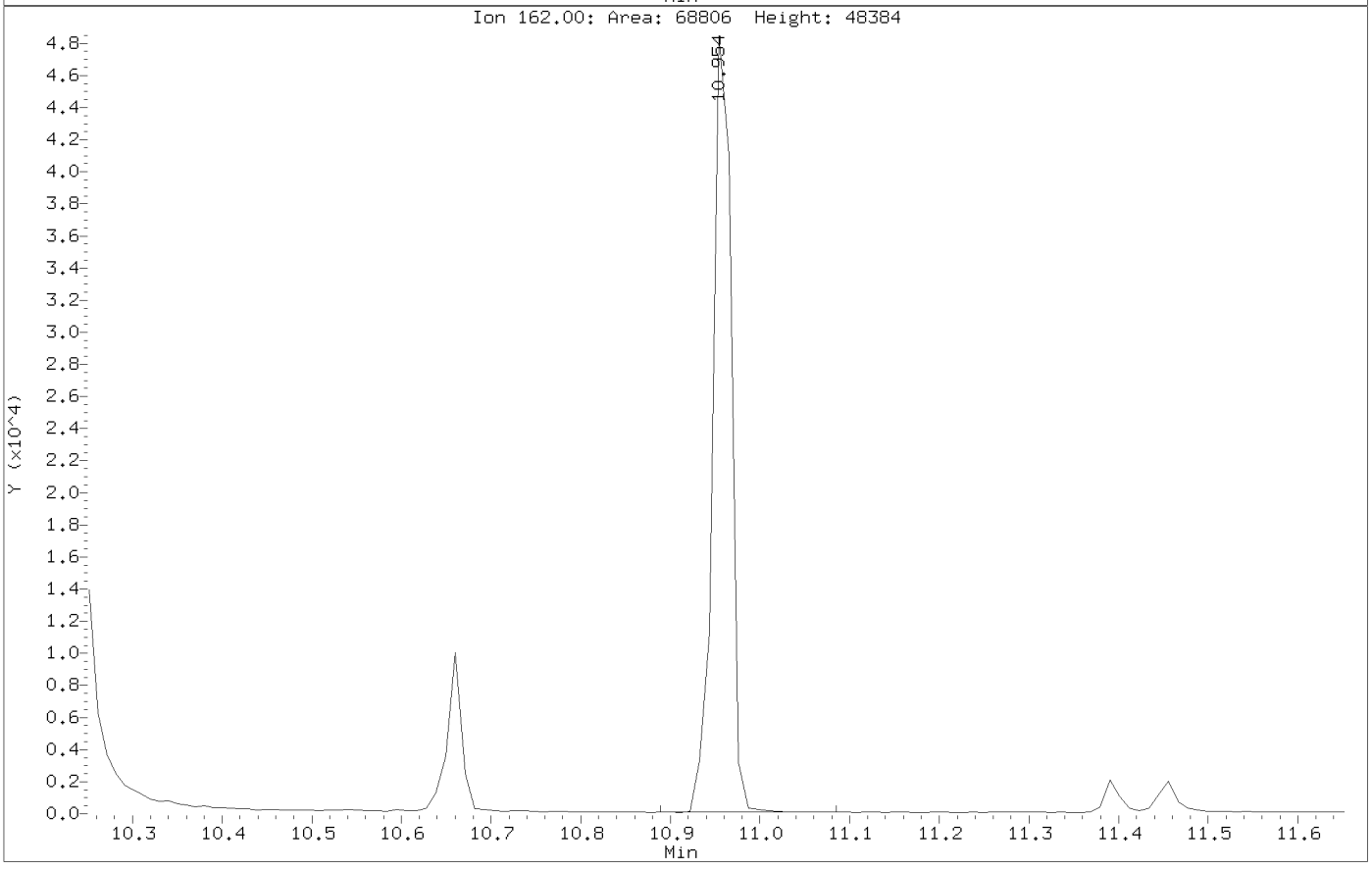


Data File: \\target_server\gg\chem\gcms-n.i\N031618.b\N7973.D
Injection Date: 16-MAR-2018 14:38
Instrument: gcms-n.i
Client Sample ID:

Compound: Acenaphthene-D10
CAS Number: 15067-26-2

AFTER MANUAL INTEGRATION





Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL2079
Project : Cornhusker Army Ammunition Plant
Instrument ID: GCMS-N
Lab File IDs : N8052.D N8053.D N8051.D N8054.D N8055.D N8056.D
Column ID:
Calibration Date(s): 21-MAR-18 10:57, 21-MAR-18 13:37

	0.200000(Level 1	0.500000(Level 2	2.0000 Level 3	7.0000 Level 4	10.0000 Level 5	15.0000 Level 6	New Crv	b	m1	m2	%RSD	Max %RSD	
Naphthalene	1.07500	1.08809	1.08006	1.08046	1.02883	0.99033	AVG		1.05713		3.69084	15.00000	O
2-Methylnaphthalene	62784	127645	406993	1328962	1786939	2509398	LNR	-0.32954	0.66509		0.99754	0.99000	O
Acenaphthylene	2.14734	2.23269	2.21135	2.26887	2.20245	2.14783	AVG		2.20175		2.17084	15.00000	O
Acenaphthene	1.39097	1.45017	1.43918	1.44802	1.41120	1.39751	AVG		1.42284		1.84372	15.00000	O
Fluorene	1.43282	1.50237	1.52141	1.55025	1.49286	1.48198	AVG		1.49695		2.64226	15.00000	O
Phenanthrene	1.29909	1.34791	1.34635	1.31942	1.25634	1.23968	AVG		1.30146		3.49647	15.00000	O
Anthracene	1.38780	1.37167	1.34449	1.36824	1.29536	1.22030	AVG		1.33131		4.74736	15.00000	O
Fluoranthene	1.26884	1.12264	1.11165	1.11296	1.04463	0.98606	AVG		1.10779		8.56423	15.00000	O
Pyrene	3.57506	3.27478	2.70179	2.86930	2.59192	2.56522	AVG		2.92968		13.97471	15.00000	O
Benzo(a)anthracene	1.58480	1.45129	1.45286	1.50547	1.42271	1.43442	AVG		1.47526		4.11399	15.00000	O
Chrysene	21037	48235	209861	657070	925951	1376317	LNR	-0.21498	1.38870		0.99903	0.99000	O
Benzo(b)fluoranthene	1.72701	1.68584	1.50350	1.79097	1.59462	1.75597	AVG		1.67632		6.46305	15.00000	O
Benzo(k)fluoranthene	13260	30578	158536	426654	662441	914672	LNR	-0.19550	1.77535		0.99769	0.99000	O
Benzo(a)pyrene	1.63149	1.37503	1.19172	1.33643	1.30233	1.32662	AVG		1.36060		10.76393	15.00000	O
Indeno(1,2,3-cd)pyrene	0.45065	0.42296	0.41093	0.46231	0.48893	0.47588	AVG		0.45194		6.69049	15.00000	O
Dibenzo(a,h)anthracene	0.64512	0.52229	0.47258	0.62856	0.63949	0.64329	AVG		0.59189		12.68007	15.00000	O
Benzo(g,h,i)perylene	0.97029	0.73788	0.71442	0.86780	0.84904	0.84054	AVG		0.82999		11.22883	15.00000	O
2-Methylnaphthalene-D10	0.47358	0.48234	0.49802	0.49397	0.46813	0.45500	AVG		0.47851		3.39470	15.00000	
Fluorene-D10	0.93562	0.98822	0.97844	0.99807	0.97596	0.99308	AVG		0.97823		2.30173	15.00000	
Pyrene-D10	1.73104	1.73596	1.53113	1.63794	1.49717	1.49055	AVG		1.60397		7.06995	15.00000	

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8057.D
Report Date: 21-Mar-2018 15:10

Katahdin Analytical Services

RECOVERY REPORT

Client Name: Client SDG: 021497
Sample Matrix: LIQUID Fraction: SV
Lab Smp Id: WG225136-8
Level: LOW Operator: JCG
Data Type: MS DATA SampleType: INDCHECK
SpikeList File: SIM_IND_CHK5.spk Quant Type: ISTD
Sublist File: all.sub
Method File: \\target_server\gg\chem\gcms-n.i\N032118.b\NSPSIM87.m
Misc Info: WG225136,WG225136,WG225136-4

SPIKE	COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
2	1,4-Dioxane	5.00	4.70	94.11	80-120
3	N-Nitrosodimethyla	5.00	5.03	100.58	80-120
4	Pyridine	5.00	5.91	118.29	80-120
5	Benzaldehyde	5.00	5.30	106.06	80-120
7	Bis(2-Chloroethyl)	5.00	4.72	94.39	80-120
6	Phenol	5.00	5.20	104.10	80-120
8	2-Chlorophenol	5.00	4.95	98.99	80-120
9	1,3-Dichlorobenzen	5.00	5.09	101.78	80-120
11	1,4-Dichlorobenzen	5.00	5.06	101.24	80-120
12	1,2-Dichlorobenzen	5.00	5.07	101.43	80-120
13	2,2'-Oxybis(1-chlo	5.00	3.85	77.06*	80-120
14	2-Methylphenol	5.00	5.32	106.40	80-120
15	Acetophenone	5.00	5.40	108.01	80-120
16	N-Nitroso-di-n-pro	5.00	4.72	94.40	80-120
18	Hexachloroethane	5.00	4.98	99.53	80-120
17	3&4-Methylphenol	5.00	5.12	102.37	80-120
19	Nitrobenzene	5.00	5.40	107.94	80-120
20	Isophorone	5.00	5.01	100.28	80-120
21	2-Nitrophenol	5.00	5.20	103.99	80-120
22	2,4-Dimethylphenol	5.00	4.94	98.89	80-120
23	bis(2-Chloroethoxy	5.00	5.28	105.57	80-120
24	2,4-Dichlorophenol	5.00	5.21	104.12	80-120
25	1,2,4-Trichloroben	5.00	5.29	105.79	80-120
27	Naphthalene	5.00	5.16	103.11	80-120
28	4-Chloroaniline	5.00	4.79	95.87	80-120
29	Hexachlorobutadien	5.00	5.20	104.07	80-120
30	Caprolactam	5.00	5.17	103.50	80-120
33	2-Methylnaphthalen	5.00	5.57	111.49	80-120
31	4-Chloro-3-Methylp	5.00	5.01	100.24	80-120
34	1-Methylnaphthalen	5.00	4.78	95.58	80-120
36	1,2,4,5-Tetrachlor	5.00	5.21	104.21	80-120
35	Hexachlorocyclopen	5.00	3.68	73.72*	80-120
38	2,4,6-Trichlorophe	5.00	4.87	97.32	80-120
39	2,4,5-Trichlorophe	5.00	5.29	105.76	80-120
41	2-Chloronaphthalen	5.00	5.01	100.22	80-120
40	1,1'-Biphenyl	5.00	5.18	103.56	80-120
42	2-Nitroaniline	5.00	5.47	109.34	80-120
43	Dimethyl Phthalate	5.00	5.07	101.44	80-120
45	Acenaphthylene	5.00	4.90	98.03	80-120
44	2,6-Dinitrotoluene	5.00	5.18	103.52	80-120

Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8057.D
Report Date: 21-Mar-2018 15:10

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
48 Acenaphthene	5.00	5.06	101.13	80-120
46 3-Nitroaniline	5.00	5.07	101.44	80-120
49 2,4-Dinitrophenol	5.00	4.60	92.01	80-120
50 Dibenzofuran	5.00	5.26	105.26	80-120
51 2,4-Dinitrotoluene	5.00	5.26	105.31	80-120
53 2,3,4,6-Tetrachlor	5.00	4.29	85.74	80-120
52 4-Nitrophenol	5.00	4.53	90.58	80-120
54 Diethylphthalate	5.00	5.16	103.30	80-120
56 Fluorene	5.00	5.03	100.70	80-120
57 4-Chlorophenyl-phe	5.00	4.96	99.31	80-120
59 4,6-Dinitro-2-Meth	5.00	4.72	94.42	80-120
58 4-Nitroaniline	5.00	6.09	121.79*	80-120
60 N-Nitrosodiphenyla	5.00	4.15	83.03	80-120
61 4-Bromophenyl-phen	5.00	4.76	95.25	80-120
62 Hexachlorobenzene	5.00	4.88	97.53	80-120
63 Atrazine	5.00	2.43	48.59*	80-120
64 Pentachlorophenol	5.00	4.92	98.43	80-120
66 Phenanthrene	5.00	4.90	98.11	80-120
67 Anthracene	5.00	4.81	96.27	80-120
68 Carbazole	5.00	5.06	101.25	80-120
69 Di-n-butylphthalat	5.00	5.14	102.75	80-120
70 Fluoranthene	5.00	4.74	94.86	80-120
72 Pyrene	5.00	4.39	87.90	80-120
73 Butylbenzylphthala	5.00	4.76	95.16	80-120
74 Benzo(a)anthracene	5.00	4.87	97.36	80-120
77 Chrysene	5.00	5.17	103.38	80-120
75 3,3'-Dichlorobenzi	5.00	5.15	103.10	80-120
78 bis(2-Ethylhexyl)p	5.00	4.77	95.36	80-120
79 Di-n-octylphthalat	5.00	4.98	99.54	80-120
80 Benzo(b)fluoranthe	5.00	4.99	99.79	80-120
81 Benzo(k)fluoranthe	5.00	5.34	106.81	80-120
82 Benzo(a)pyrene	5.00	4.28	85.60	80-120
85 Indeno(1,2,3-cd)py	5.00	4.51	90.20	80-120
86 Dibenzo(a,h)anthra	5.00	4.26	85.18	80-120
87 Benzo(g,h,i)peryle	5.00	4.14	82.92	80-120

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 1,4-Dioxane-d8	2.00	0.000	*	30-150
$ 32 2-Methylnaphthale	2.00	0.000	*	43-92
$ 37 2,4-Dibromophenol	4.00	0.000	*	10-130
$ 55 Fluorene-D10	2.00	0.000	*	29-101
$ 71 Pyrene-D10	2.00	0.000	*	53-166

Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8051.D
Report Date: 22-Mar-2018 10:54

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N032118.b\N8051.D
Lab Smp Id: WG225136-4
Inj Date : 21-MAR-2018 10:57 MS Autotune Date: 25-OCT-2017 07:54
Operator : JCG Inst ID: gcms-n.i
Smp Info : WG225136-4
Misc Info :
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N032118.b\NSPSIM87.m
Meth Date : 22-Mar-2018 09:08 cgomez Quant Type: ISTD
Cal Date : 16-MAR-2018 14:38 Cal File: N7973.D
Als bottle: 2 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
$	1 1,4-Dioxane-d8	96	2.612	2.591	(0.376)	84957	2.00000	2.14	
	2 1,4-Dioxane	88	2.654	2.633	(0.382)	74730	2.00000	1.96	
	3 N-Nitrosodimethylamine	74	3.221	3.158	(0.464)	95897	2.00000	1.99	
	4 Pyridine	79	3.252	3.168	(0.469)	170731	2.00000	2.08	
	5 Benzaldehyde	77	6.397	6.376	(0.922)	53320	2.00000	2.09	
	6 Phenol	94	6.628	6.618	(0.955)	521503	4.50000	4.45	
	7 Bis(2-Chloroethyl)ether	93	6.628	6.628	(0.955)	209987	2.00000	1.98	
	8 2-Chlorophenol	128	6.709	6.699	(0.967)	526056	4.50000	4.54	
	9 1,3-Dichlorobenzene	146	6.860	6.860	(0.988)	249136	2.00000	2.02	
*	10 1,4-Dichlorobenzene-D4	152	6.940	6.930	(1.000)	67704	0.80000	(aQ)	
	11 1,4-Dichlorobenzene	146	6.960	6.950	(1.003)	255313	2.00000	2.01	
	12 1,2-Dichlorobenzene	146	7.152	7.151	(1.030)	240162	2.00000	2.00	
	13 2,2'-Oxybis(1-chloropropane)	45	7.323	7.323	(1.055)	205323	2.00000	2.02	
	14 2-Methylphenol	108	7.373	7.373	(1.062)	403202	4.50000	4.38	
	15 Acetophenone	105	7.484	7.484	(0.872)	263791	2.00000	2.06	
	16 N-Nitroso-di-n-propylamine	70	7.504	7.504	(1.081)	126903	2.00000	2.05	
	17 3&4-Methylphenol	108	7.584	7.584	(1.093)	412650	4.50000	4.47	
	18 Hexachloroethane	117	7.564	7.574	(1.090)	82282	2.00000	1.95	
	19 Nitrobenzene	77	7.695	7.685	(0.897)	183523	2.00000	1.92	
	20 Isophorone	82	8.007	8.017	(0.933)	322004	2.00000	2.06	
	21 2-Nitrophenol	139	8.118	8.118	(0.946)	259561	4.50000	4.60	

Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8051.D
Report Date: 22-Mar-2018 10:54

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	22	2,4-Dimethylphenol	107	8.249	8.239	(0.961)	405805	4.50000	4.60	
	23	bis(2-Chloroethoxy)methane	93	8.319	8.319	(0.970)	235003	2.00000	2.10	
	24	2,4-Dichlorophenol	162	8.490	8.470	(0.989)	374980	4.50000	4.63	
	25	1,2,4-Trichlorobenzene	180	8.531	8.530	(0.994)	165763	2.00000	2.05	
*	26	Naphthalene-D8	136	8.581	8.581	(1.000)	211188	0.80000	(a)	
	27	Naphthalene	128	8.611	8.611	(1.004)	570241	2.00000	2.04	
	28	4-Chloroaniline	127	8.752	8.732	(1.020)	229913	2.00000	2.12	
	29	Hexachlorobutadiene	225	8.802	8.812	(1.026)	81617	2.00000	2.02	
	30	Caprolactam	113	9.193	9.222	(1.071)	53715	2.00000	1.97	
	31	4-Chloro-3-Methylphenol	107	9.459	9.459	(1.102)	332566	4.50000	4.60	
$	32	2-Methylnaphthalene-D10	152	9.498	9.498	(1.107)	262941	2.00000	2.08	
	33	2-Methylnaphthalene	142	9.547	9.537	(1.113)	406993	2.00000	2.05	
	34	1-Methylnaphthalene	142	9.665	9.675	(1.126)	354519	2.00000	1.98	
	35	Hexachlorocyclopentadiene	237	9.764	9.774	(0.895)	38676	2.00000	1.75	
	36	1,2,4,5-Tetrachlorobenzene	216	9.784	9.783	(0.896)	137988	2.00000	2.00	
$	37	2,4-Dibromophenol	252	9.961	9.951	(0.913)	78528	2.00000	2.01	
	38	2,4,6-Trichlorophenol	196	9.971	9.970	(0.913)	221159	4.50000	4.66	
	39	2,4,5-Trichlorophenol	196	10.059	10.039	(0.922)	236449	4.50000	4.63	
	40	1,1'-Biphenyl	154	10.177	10.177	(0.932)	423128	2.00000	2.04	
	41	2-Chloronaphthalene	164	10.187	10.187	(0.933)	116090	2.00000	2.04	
	42	2-Nitroaniline	65	10.364	10.364	(0.950)	74141	2.00000	2.03	
	43	Dimethyl Phthalate	163	10.621	10.621	(0.973)	852829	4.50000	4.47	
	44	2,6-Dinitrotoluene	165	10.686	10.697	(0.979)	90982	2.00000	2.07	
	45	Acenaphthylene	152	10.730	10.719	(0.983)	500423	2.00000	2.01	
	46	3-Nitroaniline	138	10.937	10.915	(1.002)	70314	2.00000	1.91	
*	47	Acenaphthene-D10	164	10.915	10.915	(1.000)	90519	0.80000	(a)	
	48	Acenaphthene	153	10.959	10.948	(1.004)	325683	2.00000	2.02	
	49	2,4-Dinitrophenol	184	11.100	11.089	(1.017)	67855	4.50000	4.44	
	50	Dibenzofuran	168	11.198	11.198	(1.026)	429310	2.00000	2.05	
	51	2,4-Dinitrotoluene	165	11.253	11.242	(1.031)	109193	2.00000	2.06	
	52	4-Nitrophenol	139	11.329	11.275	(1.038)	120737	4.50000	4.71	
	53	2,3,4,6-Tetrachlorophenol	232	11.416	11.416	(1.046)	166251	4.50000	4.62	
	54	Diethylphthalate	149	11.558	11.569	(1.059)	889974	4.50000	4.44	
$	55	Fluorene-D10	174	11.612	11.612	(1.064)	221419	2.00000	2.00	
	56	Fluorene	166	11.656	11.645	(1.068)	344291	2.00000	2.03	
	57	4-Chlorophenyl-phenylether	204	11.678	11.678	(1.070)	151458	2.00000	2.02	
	58	4-Nitroaniline	138	11.754	11.743	(1.077)	57787	2.00000	2.00	
	59	4,6-Dinitro-2-Methylphenol	198	11.809	11.798	(0.916)	104516	4.50000	4.30	
	60	N-Nitrosodiphenylamine	169	11.852	11.852	(0.919)	264834	2.00000	2.00	
	61	4-Bromophenyl-phenylether	248	12.319	12.318	(0.955)	80414	2.00000	1.93	
	62	Hexachlorobenzene	284	12.404	12.414	(0.962)	82498	2.00000	1.92	
	63	Atrazine	200	12.596	12.607	(0.977)	56821	2.00000	2.08	
	64	Pentachlorophenol	266	12.714	12.703	(0.986)	93022	4.50000	4.73	
*	65	Phenanthrene-D10	188	12.895	12.895	(1.000)	128283	0.80000	(a)	
	66	Phenanthrene	178	12.927	12.916	(1.002)	431785	2.00000	2.07	
	67	Anthracene	178	13.002	12.991	(1.008)	431187	2.00000	2.02	
	68	Carbazole	167	13.258	13.247	(1.028)	340521	2.00000	2.02	
	69	Di-n-butylphthalate	149	13.760	13.760	(1.067)	1473734	4.50000	4.55	
	70	Fluoranthene	202	14.527	14.518	(1.127)	356514	2.00000	2.01	
$	71	Pyrene-D10	212	14.799	14.790	(0.894)	212846	2.00000	1.91	
	72	Pyrene	202	14.818	14.809	(0.895)	375582	2.00000	1.84	
	73	Butylbenzylphthalate	149	15.756	15.756	(0.952)	587664	4.50000	4.33	
	74	Benzo(a)anthracene	228	16.544	16.535	(0.999)	201966	2.00000	1.97(H)	
	75	3,3'-Dichlorobenzidine	252	16.554	16.544	(1.000)	52498	2.00000	2.35	

Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8051.D
Report Date: 22-Mar-2018 10:54

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
*	76 Chrysene-D12	240	16.554	16.544	(1.000)	55605	0.80000	(a)	
	77 Chrysene	228	16.601	16.591	(1.003)	209861	2.00000	2.00	
	78 bis(2-Ethylhexyl)phthalate	149	16.704	16.704	(1.009)	873021	4.50000	4.36	
	79 Di-n-octylphthalate	149	17.935	17.935	(1.083)	1273623	4.50000	4.59	
	80 Benzo(b)fluoranthene	252	18.582	18.571	(0.957)	122588	2.00000	1.79	
	81 Benzo(k)fluoranthene	252	18.639	18.616	(0.960)	158536	2.00000	2.03(H)	
	82 Benzo(a)pyrene	252	19.286	19.263	(0.993)	97167	2.00000	1.75	
*	83 Perylene-D12	264	19.423	19.400	(1.000)	32614	0.80000	(a)	
	85 Indeno(1,2,3-cd)pyrene	276	21.501	21.467	(1.299)	57125	2.00000	1.82	
	86 Dibenzo(a,h)anthracene	278	21.535	21.501	(1.109)	38532	2.00000	1.60	
	87 Benzo(g,h,i)perylene	276	22.012	21.978	(1.133)	58250	2.00000	1.72	
M	88 Total PAHs	100				751018	36.0000	(a)	
M	324 Total Low PAHs	100				3010603	14.0000	(a)	
M	325 Total High PAHs	100				1279622	12.0000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
H - Operator selected an alternate compound hit.

Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8051.D
Date : 21-MAR-2018 10:57
Client ID:
Sample Info: WG225136-4
Volume Injected (uL): 1.0
Column phase: ZB5-MS
Instrument: gcms-n.i
Operator: JCG
Column diameter: 0.25
Y (x10^6)
Min
\\target_server\gg\chem\gcms-n.i\N032118.b\N8051.D
-N-Nitrosodimethylamine+
-Benzaldehyde
-Phenol+
-2-Chlorophenol
-1,3-Dichlorobenzene
-1,4-Dichlorobenzene-D4+
-1,2-Dichlorobenzene
-2,2'-Oxybis(1-chloropropane
-Acetophenone
-2-Methylphenol
-3&4-Methylphenol+
-Nitrobenzene
-Isophorone
-2-Nitrophenol
-2,4-Dimethylphenol
-bis(2-Chloroethoxy)methan
-2,4-Dichlorophenol
-Naphthalene-D8+
-4-Chloroaniline+
-Caprolactam
-4-Chloro-3-Methylphenol+
-1-Methylnaphthalene
-Hexachlorocyclopentadiene+
-2,4,5-Trichlorophenol
-2,4-Dibromophenol+
-1,1'-Biphenyl+
-2-Nitroaniline
-Dimethyl Phthalate
-2,6-Dinitrotoluene+
-3-Nitroaniline+
-2,4-Dinitrophenol
-2,4-Dinitrotoluene
-Dibenzofuran
-2,3,4,6-Tetrachlorophenol
-Fluorene-D10+
-Diethylphthalate
-4-Nitroaniline+
-4-Bromophenyl-phenylether
-Hexachlorobenzene
-Atrazine
-Pentachlorophenol
-Phenanthrene-D10+
-Anthracene
-Carbazole
Di-n-butylphthalate
-Fluoranthene
-Pyrene-D10+
-Butylbenzylphthalate
-3,3'-Dichlorobenzidine+
-Chrysene
-bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(b)fluoranthene
-Benzo(k)fluoranthene
-Benzo(a)pyrene
-Perylene-D12
-Indeno(1,2,3-cd)pyrene+
-Benzo(g,h,i)perylene

Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8052.D
Report Date: 22-Mar-2018 10:54

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N032118.b\N8052.D
Lab Smp Id: WG225136-2
Inj Date : 21-MAR-2018 11:30
Operator : JCG   Inst ID: gcms-n.i
Smp Info : WG225136-2
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gcms-n.i\N032118.b\NSPSIM87.m
Meth Date : 22-Mar-2018 09:08 cgomez   Quant Type: ISTD
Cal Date : 21-MAR-2018 11:30   Cal File: N8052.D
Als bottle: 3   Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)	REVIEW CODE
$	1 1,4-Dioxane-d8	96	2.644	2.591	(0.381)	6260	0.20000	0.173(a)	
	2 1,4-Dioxane	88	2.686	2.633	(0.387)	6471	0.20000	0.186(a)	
	3 N-Nitrosodimethylamine	74	3.420	3.158	(0.493)	8507	0.20000	0.194(aM)	M9
	4 Pyridine	79	3.620	3.168	(0.522)	13838	0.20000	0.184(aM)	M9
	5 Benzaldehyde	77	6.467	6.376	(0.932)	3879	0.20000	0.166(a)	
	6 Phenol	94	6.689	6.618	(0.964)	103245	1.00000	0.966(a)	
	7 Bis(2-Chloroethyl)ether	93	6.669	6.628	(0.961)	25466	0.20000	0.154(aQ)	
	8 2-Chlorophenol	128	6.739	6.699	(0.971)	100788	1.00000	0.953(a)	
	9 1,3-Dichlorobenzene	146	6.870	6.860	(0.990)	21428	0.20000	0.190(a)	
*	10 1,4-Dichlorobenzene-D4	152	6.940	6.930	(1.000)	61769	0.80000	(aQ)	
	11 1,4-Dichlorobenzene	146	6.960	6.950	(1.003)	21785	0.20000	0.188(a)	
	12 1,2-Dichlorobenzene	146	7.162	7.151	(1.032)	20775	0.20000	0.190(a)	
	13 2,2'-Oxybis(1-chloropropane)	45	7.343	7.323	(1.058)	17228	0.20000	0.185(a)	
	14 2-Methylphenol	108	7.403	7.373	(1.067)	79019	1.00000	0.942(a)	
	15 Acetophenone	105	7.524	7.484	(0.876)	22262	0.20000	0.189(a)	
	16 N-Nitroso-di-n-propylamine	70	7.524	7.504	(1.084)	10004	0.20000	0.177(a)	
	17 3&4-Methylphenol	108	7.625	7.584	(1.099)	74572	1.00000	0.885(a)	
	18 Hexachloroethane	117	7.564	7.574	(1.090)	7579	0.20000	0.197(a)	
	19 Nitrobenzene	77	7.735	7.685	(0.900)	24585	0.20000	0.132(a)	
	20 Isophorone	82	8.027	8.017	(0.934)	24844	0.20000	0.172(a)	
	21 2-Nitrophenol	139	8.138	8.118	(0.947)	47143	1.00000	0.908(a)	

JCG
1:29 pm, Mar 26, 2018

Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8052.D
Report Date: 22-Mar-2018 10:54

							AMOUNTS		
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	22 2,4-Dimethylphenol	107	8.279	8.239	(0.964)	76316	1.00000	0.940	
	23 bis(2-Chloroethoxy)methane	93	8.349	8.319	(0.972)	17636	0.20000	0.171(a)	
	24 2,4-Dichlorophenol	162	8.551	8.470	(0.995)	67391	1.00000	0.903	
	25 1,2,4-Trichlorobenzene	180	8.541	8.530	(0.994)	14561	0.20000	0.196(a)	
*	26 Naphthalene-D8	136	8.591	8.581	(1.000)	194567	0.80000	(a)	
	27 Naphthalene	128	8.621	8.611	(1.004)	52290	0.20000	0.203	
	28 4-Chloroaniline	127	8.823	8.732	(1.027)	16387	0.20000	0.164(aM)	M9
	29 Hexachlorobutadiene	225	8.812	8.812	(1.026)	7406	0.20000	0.199(a)	
	30 Caprolactam	113	9.291	9.222	(1.082)	3509	0.20000	0.175(aM)	M6
	31 4-Chloro-3-Methylphenol	107	9.508	9.459	(1.107)	60900	1.00000	0.913(aQ)	
$	32 2-Methylnaphthalene-D10	152	9.518	9.498	(1.108)	23036	0.20000	0.198(a)	
	33 2-Methylnaphthalene	142	9.557	9.537	(1.112)	62784	0.20000	0.124(aQ)	
	34 1-Methylnaphthalene	142	9.685	9.675	(1.127)	35988	0.20000	0.218	
	35 Hexachlorocyclopentadiene	237	9.764	9.774	(0.894)	666	0.20000	0.248	
	36 1,2,4,5-Tetrachlorobenzene	216	9.803	9.783	(0.897)	12129	0.20000	0.203	
$	37 2,4-Dibromophenol	252	10.020	9.951	(0.917)	6145	0.20000	0.182(a)	
	38 2,4,6-Trichlorophenol	196	10.000	9.970	(0.915)	36872	1.00000	0.899(a)	
	39 2,4,5-Trichlorophenol	196	10.108	10.039	(0.925)	43730	1.00000	0.991(a)	
	40 1,1'-Biphenyl	154	10.187	10.177	(0.932)	36140	0.20000	0.202	
	41 2-Chloronaphthalene	164	10.207	10.187	(0.934)	9658	0.20000	0.196(a)	
	42 2-Nitroaniline	65	10.433	10.364	(0.955)	5229	0.20000	0.166(a)	
	43 Dimethyl Phthalate	163	10.632	10.621	(0.973)	159747	1.00000	0.970(a)	
	44 2,6-Dinitrotoluene	165	10.719	10.697	(0.981)	6040	0.20000	0.159(aQ)	
	45 Acenaphthylene	152	10.741	10.719	(0.983)	41966	0.20000	0.195(a)	
	46 3-Nitroaniline	138	11.024	10.915	(1.009)	4266	0.20000	0.239	
*	47 Acenaphthene-D10	164	10.926	10.915	(1.000)	78173	0.80000	(a)	
	48 Acenaphthene	153	10.970	10.948	(1.004)	27184	0.20000	0.196(a)	
	49 2,4-Dinitrophenol	184	11.231	11.089	(1.028)	2654	1.00000	0.766(a)	
	50 Dibenzofuran	168	11.220	11.198	(1.027)	34743	0.20000	0.192(a)	
	51 2,4-Dinitrotoluene	165	11.296	11.242	(1.034)	6853	0.20000	0.150(a)	
	52 4-Nitrophenol	139	11.471	11.275	(1.050)	12219	1.00000	0.784(aQ)	
	53 2,3,4,6-Tetrachlorophenol	232	11.449	11.416	(1.048)	23997	1.00000	0.772(aH)	
	54 Diethylphthalate	149	11.569	11.569	(1.059)	165759	1.00000	0.957(a)	
$	55 Fluorene-D10	174	11.634	11.612	(1.065)	18285	0.20000	0.191(a)	
	56 Fluorene	166	11.667	11.645	(1.068)	28002	0.20000	0.191(a)	
	57 4-Chlorophenyl-phenylether	204	11.689	11.678	(1.070)	12391	0.20000	0.191(a)	
	58 4-Nitroaniline	138	11.863	11.743	(1.086)	3863	0.20000	0.155(aQ)	
	59 4,6-Dinitro-2-Methylphenol	198	11.863	11.798	(0.918)	11158	1.00000	0.988(a)	
	60 N-Nitrosodiphenylamine	169	11.874	11.852	(0.919)	20794	0.20000	0.203	
	61 4-Bromophenyl-phenylether	248	12.340	12.318	(0.955)	8150	0.20000	0.252	
	62 Hexachlorobenzene	284	12.415	12.414	(0.961)	7856	0.20000	0.236	
	63 Atrazine	200	12.617	12.607	(0.977)	4028	0.20000	0.190(a)	
	64 Pentachlorophenol	266	12.756	12.703	(0.988)	10069	1.00000	0.981(a)	
*	65 Phenanthrene-D10	188	12.916	12.895	(1.000)	99559	0.80000	(a)	
	66 Phenanthrene	178	12.938	12.916	(1.002)	32334	0.20000	0.200	
	67 Anthracene	178	13.023	12.991	(1.008)	34542	0.20000	0.208	
	68 Carbazole	167	13.301	13.247	(1.030)	25074	0.20000	0.192(a)	
	69 Di-n-butylphthalate	149	13.760	13.760	(1.065)	268214	1.00000	1.07	
	70 Fluoranthene	202	14.546	14.518	(1.126)	31581	0.20000	0.229	
$	71 Pyrene-D10	212	14.818	14.790	(0.894)	15553	0.20000	0.216(a)	
	72 Pyrene	202	14.837	14.809	(0.895)	32121	0.20000	0.244	
	73 Butylbenzylphthalate	149	15.756	15.756	(0.951)	97602	1.00000	1.11	
	74 Benzo(a)anthracene	228	16.563	16.535	(0.999)	14239	0.20000	0.215(H)	
	75 3,3'-Dichlorobenzidine	252	16.591	16.544	(1.001)	2529	0.20000	0.175(a)	



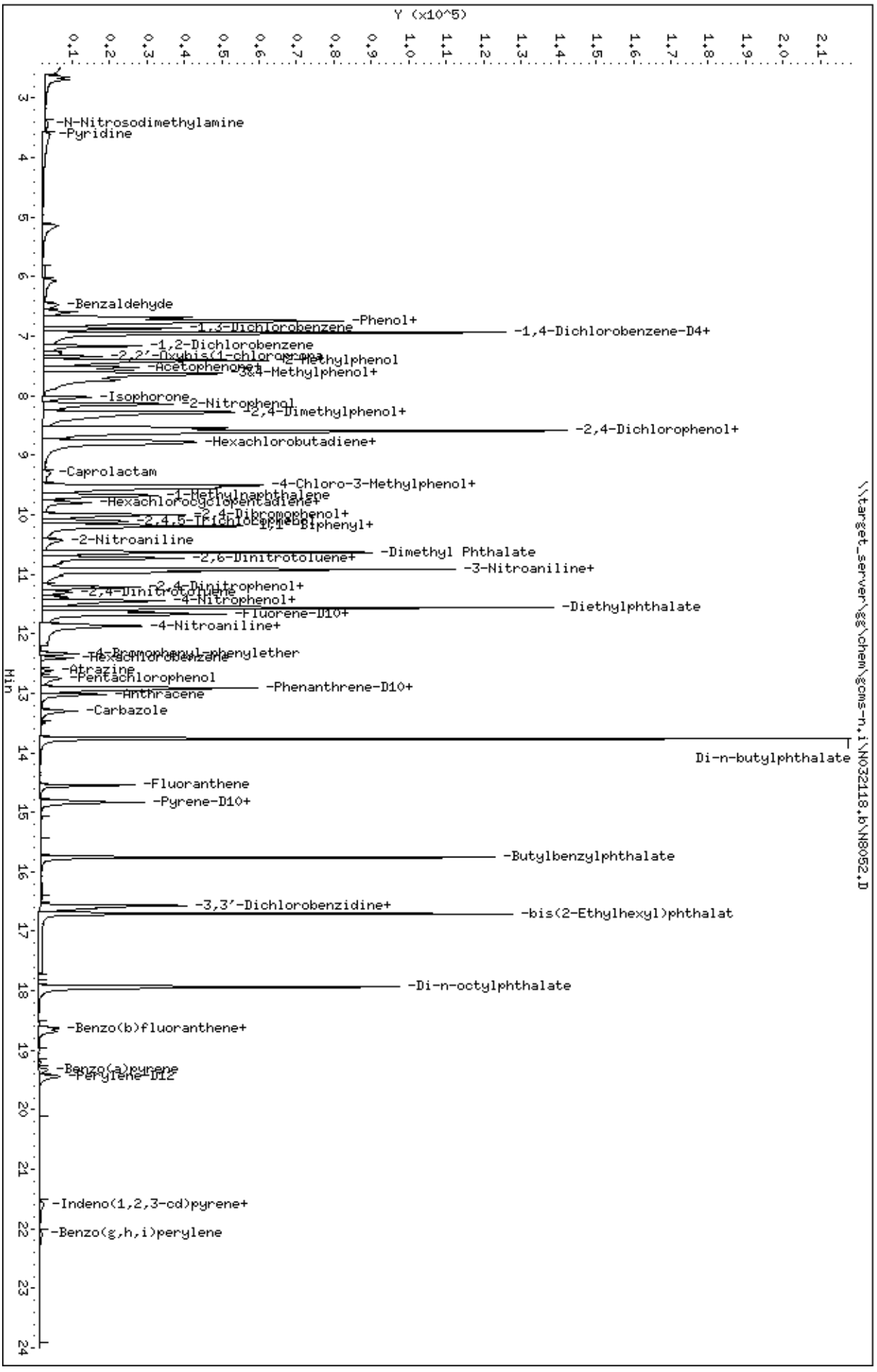
1:30 pm, Mar 26, 2018

Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8052.D
Report Date: 22-Mar-2018 10:54

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
*	76 Chrysene-D12	240	16.573	16.544	(1.000)	35939	0.80000	(a)	
	77 Chrysene	228	16.619	16.591	(1.003)	21037	0.20000	0.165(a)	
	78 bis(2-Ethylhexyl)phthalate	149	16.704	16.704	(1.008)	154258	1.00000	1.19	
	79 Di-n-octylphthalate	149	17.935	17.935	(1.082)	203737	1.00000	1.14	
	80 Benzo(b)fluoranthene	252	18.628	18.571	(0.959)	8588	0.20000	0.206	
	81 Benzo(k)fluoranthene	252	18.673	18.616	(0.961)	13260	0.20000	0.144(aH)	
	82 Benzo(a)pyrene	252	19.332	19.263	(0.995)	8113	0.20000	0.240	
*	83 Perylene-D12	264	19.434	19.400	(1.000)	19891	0.80000	(a)	
	85 Indeno(1,2,3-cd)pyrene	276	21.580	21.467	(1.302)	4049	0.20000	0.199(a)	
	86 Dibenzo(a,h)anthracene	278	21.592	21.501	(1.111)	3208	0.20000	0.218	
	87 Benzo(g,h,i)perylene	276	22.080	21.978	(1.136)	4825	0.20000	0.234	
M	88 Total PAHs	100				66710	3.60000	(a)	
M	324 Total Low PAHs	100				279102	1.40000	(a)	
M	325 Total High PAHs	100				110299	1.20000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.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Date : 21-MAR-2018 11:30
Client ID:
Sample Info: WG225136-2
Volume Injected (uL): 1.0
Column phase: ZB5-MS
Instrument: gcms-n,i
Operator: JCG
Column diameter: 0.25
\\target_server\gg\chem\gcms-n,i\N032118,b\N8052,D
Y (x10^5)
Min
-N-Nitrosodimethylamine
-Pyridine
-Benzaldehyde
-Phenol+
-1,3-Dichlorobenzene
-1,4-Dichlorobenzene-D4+
-1,2-Dichlorobenzene
-2-Methylphenol
-Acetophenone+
-3&4-Methylphenol+
-Isophorone
-2-Nitrophenol
-2,4-Dimethylphenol+
-2,4-Dichlorophenol+
-Hexachlorobutadiene+
-Caprolactam
-4-Chloro-3-Methylphenol+
-1-Methylnaphthalene
-Hexachlorocyclopentadiene+
-2,4-Dibromophenol+
-1,1'-Biphenyl+
-2-Nitroaniline
-Dimethyl Phthalate
-2,6-Dinitrotoluene+
-3-Nitroaniline+
-2,4-Dinitrophenol+
-2,4-Dinitrotoluene
-4-Nitrophenol+
-Diethylphthalate
-Fluorene-D10+
-4-Nitroaniline+
-4-Bromophenyl-phenylether
-Hexachlorobenzene
-Atrazine
-Pentachlorophenol
-Phenanthrene-D10+
-Anthracene
-Carbazole
Di-n-butylphthalate
-Fluoranthene
-Pyrene-D10+
-Butylbenzylphthalate
-3,3'-Dichlorobenzidine+
-bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(b)fluoranthene+
-Benzo(a)pyrene
-Perylene-D12
-Indeno(1,2,3-cd)pyrene+
-Benzo(g,h,i)perylene

Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8053.D
Report Date: 22-Mar-2018 10:54

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N032118.b\N8053.D
Lab Smp Id: WG225136-3
Inj Date : 21-MAR-2018 12:02 MS Autotune Date: 25-OCT-2017 07:54
Operator : JCG Inst ID: gcms-n.i
Smp Info : WG225136-3
Misc Info :
Comment :
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Meth Date : 22-Mar-2018 09:08 cgomez Quant Type: ISTD
Cal Date : 21-MAR-2018 12:02 Cal File: N8053.D
Als bottle: 4 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
$	1 1,4-Dioxane-d8	96	2.633	2.591	(0.379)	14834	0.50000	0.399(a)	
	2 1,4-Dioxane	88	2.675	2.633	(0.386)	17845	0.50000	0.499(a)	
	3 N-Nitrosodimethylamine	74	3.315	3.158	(0.478)	17120	0.50000	0.380	
	4 Pyridine	79	3.420	3.168	(0.493)	30228	0.50000	0.392	
	5 Benzaldehyde	77	6.437	6.376	(0.927)	11633	0.50000	0.486	
	6 Phenol	94	6.659	6.618	(0.959)	220541	2.00000	2.01	
	7 Bis(2-Chloroethyl)ether	93	6.648	6.628	(0.958)	63140	0.50000	0.551	
	8 2-Chlorophenol	128	6.719	6.699	(0.968)	219917	2.00000	2.02	
	9 1,3-Dichlorobenzene	146	6.870	6.860	(0.990)	56890	0.50000	0.492	
*	10 1,4-Dichlorobenzene-D4	152	6.940	6.930	(1.000)	63446	0.80000	(a)	
	11 1,4-Dichlorobenzene	146	6.960	6.950	(1.003)	60422	0.50000	0.508	
	12 1,2-Dichlorobenzene	146	7.162	7.151	(1.032)	56310	0.50000	0.501	
	13 2,2'-Oxybis(1-chloropropane)	45	7.333	7.323	(1.057)	46972	0.50000	0.492	
	14 2-Methylphenol	108	7.383	7.373	(1.064)	167751	2.00000	1.95	
	15 Acetophenone	105	7.504	7.484	(0.873)	56499	0.50000	0.465	
	16 N-Nitroso-di-n-propylamine	70	7.514	7.504	(1.083)	30403	0.50000	0.524	
	17 3&4-Methylphenol	108	7.605	7.584	(1.096)	181535	2.00000	2.10	
	18 Hexachloroethane	117	7.564	7.574	(1.090)	19467	0.50000	0.493	
	19 Nitrobenzene	77	7.715	7.685	(0.898)	54082	0.50000	0.479(Q)	
	20 Isophorone	82	8.017	8.017	(0.933)	71538	0.50000	0.482	
	21 2-Nitrophenol	139	8.128	8.118	(0.946)	106504	2.00000	1.99	

Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8053.D
Report Date: 22-Mar-2018 10:54

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
22	2,4-Dimethylphenol	107	8.259	8.239	(0.961)	168850	2.00000	2.02	
23	bis(2-Chloroethoxy)methane	93	8.339	8.319	(0.971)	53271	0.50000	0.502	
24	2,4-Dichlorophenol	162	8.521	8.470	(0.992)	151750	2.00000	1.97	
25	1,2,4-Trichlorobenzene	180	8.541	8.530	(0.994)	38631	0.50000	0.504	
* 26	Naphthalene-D8	136	8.591	8.581	(1.000)	200290	0.80000	(a)	
27	Naphthalene	128	8.611	8.611	(1.002)	136209	0.50000	0.515	
28	4-Chloroaniline	127	8.792	8.732	(1.023)	46224	0.50000	0.449(a)	
29	Hexachlorobutadiene	225	8.813	8.812	(1.026)	18999	0.50000	0.497	
30	Caprolactam	113	9.242	9.222	(1.076)	10336	0.50000	0.430	
31	4-Chloro-3-Methylphenol	107	9.479	9.459	(1.103)	137998	2.00000	2.01	
$ 32	2-Methylnaphthalene-D10	152	9.508	9.498	(1.107)	60380	0.50000	0.504(a)	
33	2-Methylnaphthalene	142	9.547	9.537	(1.111)	127645	0.50000	0.503	
34	1-Methylnaphthalene	142	9.675	9.675	(1.126)	89387	0.50000	0.527	
35	Hexachlorocyclopentadiene	237	9.764	9.774	(0.894)	4182	0.50000	0.402	
36	1,2,4,5-Tetrachlorobenzene	216	9.794	9.783	(0.896)	31473	0.50000	0.501	
$ 37	2,4-Dibromophenol	252	9.981	9.951	(0.913)	17513	0.50000	0.493(a)	
38	2,4,6-Trichlorophenol	196	9.981	9.970	(0.913)	84709	2.00000	1.96	
39	2,4,5-Trichlorophenol	196	10.079	10.039	(0.922)	89088	2.00000	1.92	
40	1,1'-Biphenyl	154	10.177	10.177	(0.931)	97056	0.50000	0.514	
41	2-Chloronaphthalene	164	10.197	10.187	(0.933)	25702	0.50000	0.496	
42	2-Nitroaniline	65	10.394	10.364	(0.951)	15376	0.50000	0.463	
43	Dimethyl Phthalate	163	10.621	10.621	(0.972)	343791	2.00000	1.98	
44	2,6-Dinitrotoluene	165	10.708	10.697	(0.980)	19163	0.50000	0.480	
45	Acenaphthylene	152	10.730	10.719	(0.982)	114802	0.50000	0.507	
46	3-Nitroaniline	138	10.981	10.915	(1.005)	13683	0.50000	0.498	
* 47	Acenaphthene-D10	164	10.926	10.915	(1.000)	82270	0.80000	(a)	
48	Acenaphthene	153	10.959	10.948	(1.003)	74566	0.50000	0.510	
49	2,4-Dinitrophenol	184	11.155	11.089	(1.021)	14547	2.00000	1.53	
50	Dibenzofuran	168	11.209	11.198	(1.026)	95005	0.50000	0.499	
51	2,4-Dinitrotoluene	165	11.275	11.242	(1.032)	21359	0.50000	0.444	
52	4-Nitrophenol	139	11.395	11.275	(1.043)	36280	2.00000	1.77	
53	2,3,4,6-Tetrachlorophenol	232	11.427	11.416	(1.046)	57569	2.00000	1.76(H)	
54	Diethylphthalate	149	11.558	11.569	(1.058)	360081	2.00000	1.98	
$ 55	Fluorene-D10	174	11.623	11.612	(1.064)	50813	0.50000	0.505(a)	
56	Fluorene	166	11.656	11.645	(1.067)	77250	0.50000	0.502	
57	4-Chlorophenyl-phenylether	204	11.678	11.678	(1.069)	34442	0.50000	0.505	
58	4-Nitroaniline	138	11.798	11.743	(1.080)	12729	0.50000	0.485(QM)	M6
59	4,6-Dinitro-2-Methylphenol	198	11.830	11.798	(0.917)	29916	2.00000	1.75	
60	N-Nitrosodiphenylamine	169	11.852	11.852	(0.918)	58843	0.50000	0.524	
61	4-Bromophenyl-phenylether	248	12.329	12.318	(0.955)	17292	0.50000	0.488	
62	Hexachlorobenzene	284	12.415	12.414	(0.962)	19138	0.50000	0.525	
63	Atrazine	200	12.607	12.607	(0.977)	11324	0.50000	0.489	
64	Pentachlorophenol	266	12.735	12.703	(0.987)	26369	2.00000	1.83	
* 65	Phenanthrene-D10	188	12.906	12.895	(1.000)	109026	0.80000	(a)	
66	Phenanthrene	178	12.938	12.916	(1.002)	91848	0.50000	0.518	
67	Anthracene	178	13.013	12.991	(1.008)	93467	0.50000	0.515	
68	Carbazole	167	13.279	13.247	(1.029)	69199	0.50000	0.483	
69	Di-n-butylphthalate	149	13.760	13.760	(1.066)	577314	2.00000	2.10	
70	Fluoranthene	202	14.537	14.518	(1.126)	76498	0.50000	0.507	
$ 71	Pyrene-D10	212	14.809	14.790	(0.894)	43272	0.50000	0.541(a)	
72	Pyrene	202	14.828	14.809	(0.895)	81630	0.50000	0.559	
73	Butylbenzylphthalate	149	15.756	15.756	(0.951)	212529	2.00000	2.18	
74	Benzo(a)anthracene	228	16.554	16.535	(0.999)	36176	0.50000	0.492(H)	
75	3,3'-Dichlorobenzidine	252	16.582	16.544	(1.001)	8093	0.50000	0.504	



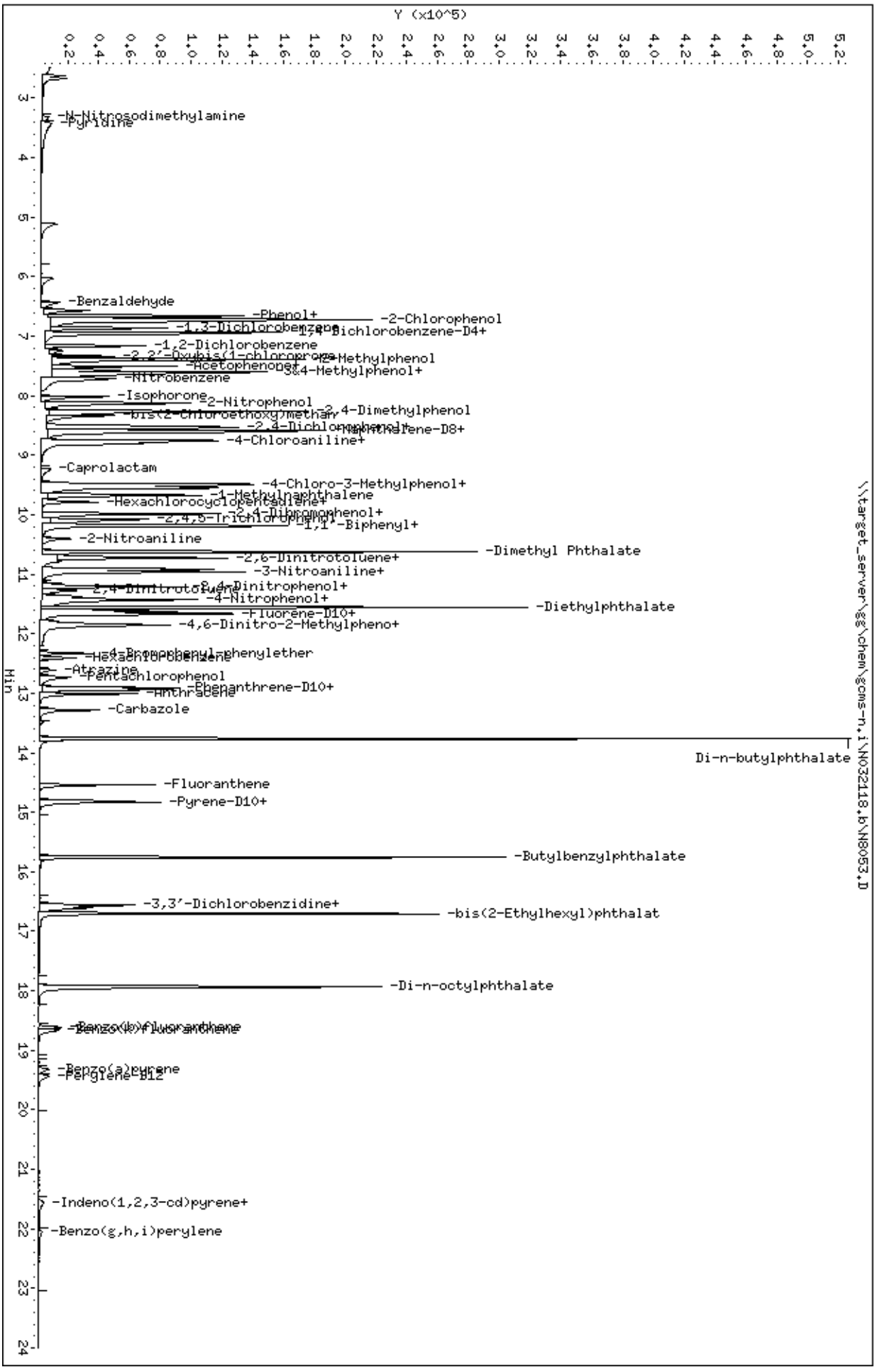
1:30 pm, Mar 26, 2018

Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8053.D
Report Date: 22-Mar-2018 10:54

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
*	76 Chrysene-D12	240	16.563	16.544	(1.000)	39883	0.80000	(a)	
	77 Chrysene	228	16.610	16.591	(1.003)	48235	0.50000	0.525	
	78 bis(2-Ethylhexyl)phthalate	149	16.704	16.704	(1.008)	318659	2.00000	2.22	
	79 Di-n-octylphthalate	149	17.935	17.935	(1.083)	437642	2.00000	2.20	
	80 Benzo(b)fluoranthene	252	18.605	18.571	(0.957)	22998	0.50000	0.503	
	81 Benzo(k)fluoranthene	252	18.662	18.616	(0.960)	30578	0.50000	0.475(H)	
	82 Benzo(a)pyrene	252	19.320	19.263	(0.994)	18758	0.50000	0.505	
*	83 Perylene-D12	264	19.434	19.400	(1.000)	21827	0.80000	(a)	
	85 Indeno(1,2,3-cd)pyrene	276	21.546	21.467	(1.301)	10543	0.50000	0.468	
	86 Dibenzo(a,h)anthracene	278	21.569	21.501	(1.110)	7125	0.50000	0.441	
	87 Benzo(g,h,i)perylene	276	22.057	21.978	(1.135)	10066	0.50000	0.444	
M	88 Total PAHs	100				163572	9.00000	(a)	
M	324 Total Low PAHs	100				715787	3.50000	(a)	
M	325 Total High PAHs	100				268422	3.00000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.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Sample Info: WG225136-3
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Instrument: gcms-n,i
Operator: JCG
Column diameter: 0.25
\\target_server\gg\chem\gcms-n,i\N032118,b\N8053,D
Y (x10^5)
Min
-N-Nitrosodimethylamine
-Pyridine
-Benzaldehyde
-Phenol+
-2-Chlorophenol
-1,3-Dichlorobenzene
-1,4-Dichlorobenzene-D4+
-1,2-Dichlorobenzene
-Acetophenone
-2-Methylphenol
-3&4-Methylphenol+
-Nitrobenzene
-Isophorone
-2-Nitrophenol
-2,4-Dimethylphenol
-bis(2-Chloroethoxy)methane
-2,4-Dichlorophenol
-Naphthalene-D8+
-4-Chloroaniline+
-Caprolactam
-4-Chloro-3-Methylphenol+
-1-Methylnaphthalene
-Hexachlorocyclopentadiene+
-2,4,5-Trichlorophenol
-2,4-Dibromophenol+
-1,1'-Biphenyl+
-2-Nitroaniline
-Dimethyl Phthalate
-2,6-Dinitrotoluene+
-3-Nitroaniline+
-2,4-Dinitrophenol+
-4-Nitrophenol+
-Fluorene-D10+
-Diethylphthalate
-4,6-Dinitro-2-Methylpheno+
-4-Bromophenyl-phenylether
-Hexachlorobenzene
-Atrazine
-Pentachlorophenol
-Phenanthrene-D10+
-Anthracene
-Carbazole
Di-n-butylphthalate
-Fluoranthene
-Pyrene-D10+
-Butylbenzylphthalate
-3,3'-Dichlorobenzidine+
-bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(b)fluoranthene
-Benzo(k)fluoranthene
-Benzo(a)pyrene
-Perylene-D12
-Indeno(1,2,3-cd)pyrene+
-Benzo(g,h,i)perylene

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Report Date: 22-Mar-2018 10:54

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N032118.b\N8054.D
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Smp Info : WG225136-5
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Cal Date : 21-MAR-2018 12:34 Cal File: N8054.D
Als bottle: 5 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
$	1 1,4-Dioxane-d8	96	2.602	2.591	(0.375)	294925	7.00000	7.68	
	2 1,4-Dioxane	88	2.644	2.633	(0.382)	278084	7.00000	7.54	
	3 N-Nitrosodimethylamine	74	3.168	3.158	(0.457)	391194	7.00000	8.41	
	4 Pyridine	79	3.189	3.168	(0.460)	604783	7.00000	7.60	
	5 Benzaldehyde	77	6.377	6.376	(0.920)	189262	7.00000	7.67	
	6 Phenol	94	6.628	6.618	(0.956)	819618	7.00000	7.24	
	7 Bis(2-Chloroethyl)ether	93	6.628	6.628	(0.956)	687555	7.00000	7.02	
	8 2-Chlorophenol	128	6.699	6.699	(0.967)	804923	7.00000	7.18	
	9 1,3-Dichlorobenzene	146	6.860	6.860	(0.990)	866755	7.00000	7.27	
*	10 1,4-Dichlorobenzene-D4	152	6.930	6.930	(1.000)	65457	0.80000	(aQ)	
	11 1,4-Dichlorobenzene	146	6.950	6.950	(1.003)	892178	7.00000	7.27	
	12 1,2-Dichlorobenzene	146	7.152	7.151	(1.032)	846568	7.00000	7.30	
	13 2,2'-Oxybis(1-chloropropane)	45	7.323	7.323	(1.057)	722362	7.00000	7.34	
	14 2-Methylphenol	108	7.373	7.373	(1.064)	661100	7.00000	7.43	
	15 Acetophenone	105	7.474	7.484	(0.870)	937437	7.00000	7.48	
	16 N-Nitroso-di-n-propylamine	70	7.494	7.504	(1.081)	435797	7.00000	7.28	
	17 3&4-Methylphenol	108	7.594	7.584	(1.096)	652347	7.00000	7.31	
	18 Hexachloroethane	117	7.564	7.574	(1.091)	293945	7.00000	7.22	
	19 Nitrobenzene	77	7.685	7.685	(0.895)	660156	7.00000	7.52	
	20 Isophorone	82	8.007	8.017	(0.932)	1167432	7.00000	7.62	
	21 2-Nitrophenol	139	8.118	8.118	(0.945)	403817	7.00000	7.32	

Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8054.D
Report Date: 22-Mar-2018 10:54

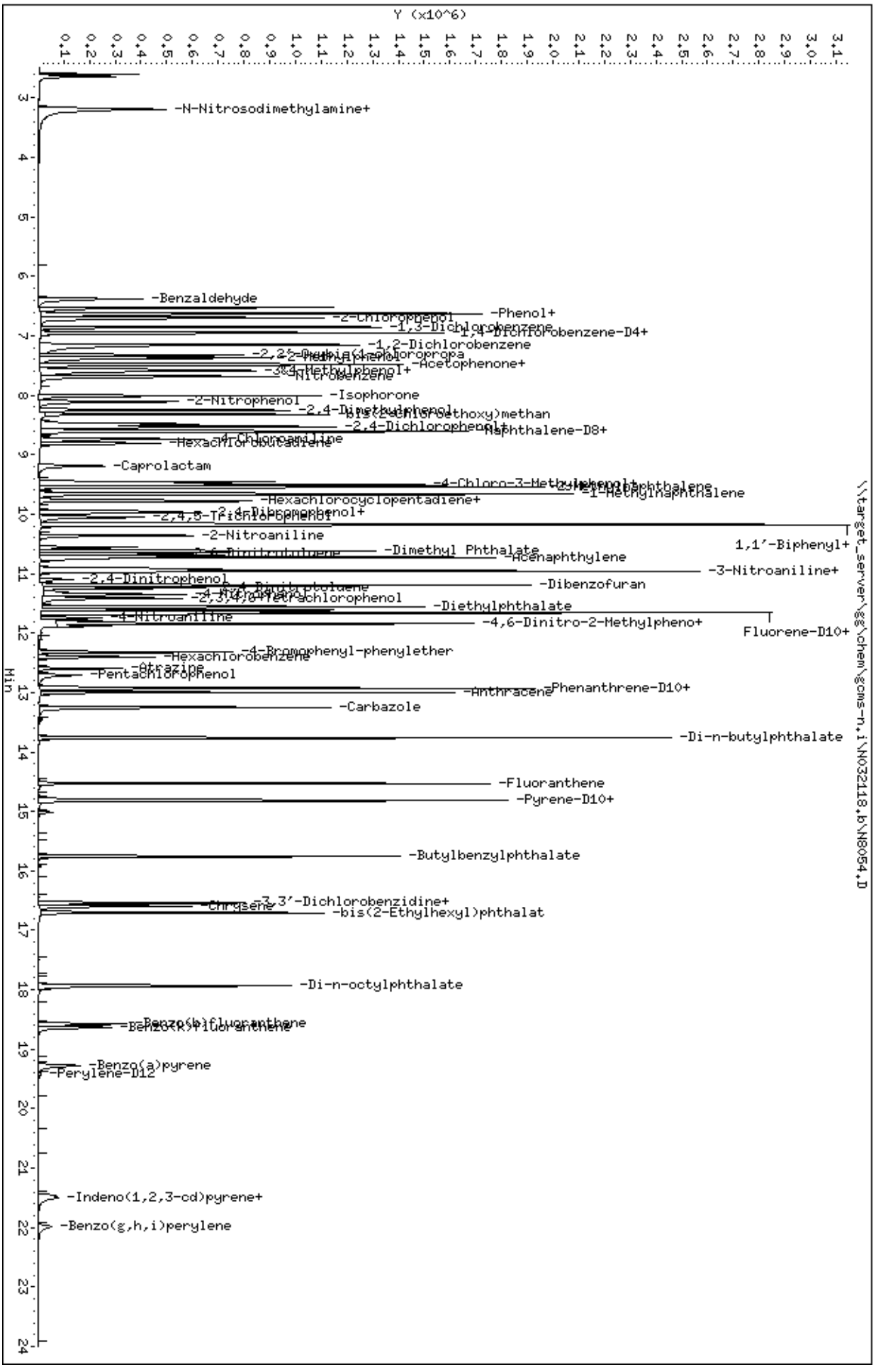
							AMOUNTS		
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	22 2,4-Dimethylphenol	107	8.249	8.239	(0.960)	629798	7.00000	7.30	
	23 bis(2-Chloroethoxy)methane	93	8.319	8.319	(0.968)	822978	7.00000	7.51	
	24 2,4-Dichlorophenol	162	8.480	8.470	(0.987)	585632	7.00000	7.38	
	25 1,2,4-Trichlorobenzene	180	8.531	8.530	(0.993)	567131	7.00000	7.17	
*	26 Naphthalene-D8	136	8.591	8.581	(1.000)	206735	0.80000	(a)	
	27 Naphthalene	128	8.611	8.611	(1.002)	1954477	7.00000	7.15	
	28 4-Chloroaniline	127	8.742	8.732	(1.018)	831160	7.00000	7.83	
	29 Hexachlorobutadiene	225	8.813	8.812	(1.026)	283007	7.00000	7.17	
	30 Caprolactam	113	9.193	9.222	(1.070)	195265	7.00000	7.20	
	31 4-Chloro-3-Methylphenol	107	9.459	9.459	(1.101)	518942	7.00000	7.32	
$	32 2-Methylnaphthalene-D10	152	9.498	9.498	(1.106)	893561	7.00000	7.23	
	33 2-Methylnaphthalene	142	9.538	9.537	(1.110)	1328962	7.00000	7.47	
	34 1-Methylnaphthalene	142	9.665	9.675	(1.125)	1218070	7.00000	6.95	
	35 Hexachlorocyclopentadiene	237	9.764	9.774	(0.895)	183870	7.00000	7.15	
	36 1,2,4,5-Tetrachlorobenzene	216	9.784	9.783	(0.896)	477789	7.00000	7.07	
$	37 2,4-Dibromophenol	252	9.951	9.951	(0.912)	278560	7.00000	7.29(Q)	
	38 2,4,6-Trichlorophenol	196	9.971	9.970	(0.913)	335598	7.00000	7.23	
	39 2,4,5-Trichlorophenol	196	10.049	10.039	(0.921)	359796	7.00000	7.20	
	40 1,1'-Biphenyl	154	10.177	10.177	(0.932)	1433961	7.00000	7.06	
	41 2-Chloronaphthalene	164	10.187	10.187	(0.933)	399257	7.00000	7.17	
	42 2-Nitroaniline	65	10.354	10.364	(0.949)	271613	7.00000	7.61	
	43 Dimethyl Phthalate	163	10.621	10.621	(0.973)	1355296	7.00000	7.27	
	44 2,6-Dinitrotoluene	165	10.686	10.697	(0.979)	319638	7.00000	7.45	
	45 Acenaphthylene	152	10.730	10.719	(0.983)	1756558	7.00000	7.21	
	46 3-Nitroaniline	138	10.915	10.915	(1.000)	273483	7.00000	7.28	
*	47 Acenaphthene-D10	164	10.915	10.915	(1.000)	88480	0.80000	(a)	
	48 Acenaphthene	153	10.959	10.948	(1.004)	1121056	7.00000	7.12	
	49 2,4-Dinitrophenol	184	11.089	11.089	(1.016)	124575	7.00000	7.46	
	50 Dibenzofuran	168	11.198	11.198	(1.026)	1472046	7.00000	7.18	
	51 2,4-Dinitrotoluene	165	11.242	11.242	(1.030)	409052	7.00000	7.92	
	52 4-Nitrophenol	139	11.307	11.275	(1.036)	195294	7.00000	7.40(Q)	
	53 2,3,4,6-Tetrachlorophenol	232	11.416	11.416	(1.046)	272854	7.00000	7.76(H)	
	54 Diethylphthalate	149	11.558	11.569	(1.059)	1420204	7.00000	7.25	
$	55 Fluorene-D10	174	11.612	11.612	(1.064)	772706	7.00000	7.14	
	56 Fluorene	166	11.656	11.645	(1.068)	1200207	7.00000	7.25	
	57 4-Chlorophenyl-phenylether	204	11.678	11.678	(1.070)	529522	7.00000	7.22	
	58 4-Nitroaniline	138	11.743	11.743	(1.076)	220536	7.00000	7.82(Q)	
	59 4,6-Dinitro-2-Methylphenol	198	11.798	11.798	(0.915)	178924	7.00000	7.04	
	60 N-Nitrosodiphenylamine	169	11.841	11.852	(0.918)	931796	7.00000	7.05	
	61 4-Bromophenyl-phenylether	248	12.319	12.318	(0.955)	279868	7.00000	6.71	
	62 Hexachlorobenzene	284	12.415	12.414	(0.963)	284450	7.00000	6.63	
	63 Atrazine	200	12.596	12.607	(0.977)	196877	7.00000	7.22	
	64 Pentachlorophenol	266	12.714	12.703	(0.986)	133904	7.00000	6.65	
*	65 Phenanthrene-D10	188	12.895	12.895	(1.000)	128335	0.80000	(a)	
	66 Phenanthrene	178	12.927	12.916	(1.002)	1481614	7.00000	7.10	
	67 Anthracene	178	13.002	12.991	(1.008)	1536436	7.00000	7.19	
	68 Carbazole	167	13.247	13.247	(1.027)	1248322	7.00000	7.41	
	69 Di-n-butylphthalate	149	13.760	13.760	(1.067)	2282574	7.00000	7.05	
	70 Fluoranthene	202	14.527	14.518	(1.127)	1249776	7.00000	7.03	
$	71 Pyrene-D10	212	14.799	14.790	(0.894)	732950	7.00000	7.15	
	72 Pyrene	202	14.818	14.809	(0.895)	1283966	7.00000	6.86	
	73 Butylbenzylphthalate	149	15.756	15.756	(0.952)	875324	7.00000	7.02	
	74 Benzo(a)anthracene	228	16.535	16.535	(0.999)	673675	7.00000	7.14(H)	
	75 3,3'-Dichlorobenzidine	252	16.544	16.544	(0.999)	149138	7.00000	7.25	

Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8054.D
Report Date: 22-Mar-2018 10:54

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
*	76 Chrysene-D12	240	16.554	16.544	(1.000)	51141	0.80000	(a)	
	77 Chrysene	228	16.591	16.591	(1.002)	657070	7.00000	7.23	
	78 bis(2-Ethylhexyl)phthalate	149	16.704	16.704	(1.009)	1233326	7.00000	6.69	
	79 Di-n-octylphthalate	149	17.935	17.935	(1.083)	1678341	7.00000	6.58	
	80 Benzo(b)fluoranthene	252	18.571	18.571	(0.956)	413071	7.00000	7.48	
	81 Benzo(k)fluoranthene	252	18.628	18.616	(0.959)	426654	7.00000	7.14(H)	
	82 Benzo(a)pyrene	252	19.275	19.263	(0.992)	308235	7.00000	6.88	
*	83 Perylene-D12	264	19.423	19.400	(1.000)	26359	0.80000	(a)	
	85 Indeno(1,2,3-cd)pyrene	276	21.467	21.467	(1.297)	206875	7.00000	7.16	
	86 Dibenzo(a,h)anthracene	278	21.501	21.501	(1.107)	144973	7.00000	7.43	
	87 Benzo(g,h,i)perylene	276	21.978	21.978	(1.132)	200151	7.00000	7.32	
M	88 Total PAHs	100				2464821	126.000	(a)	
M	324 Total Low PAHs	100				10379310	49.0000	(a)	
M	325 Total High PAHs	100				4317695	42.0000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
H - Operator selected an alternate compound hit.


Data File: \\target_server\gg\chem\gcms-n,i\N032118,b\N8054,D
Date : 21-MAR-2018 12:34
Client ID:
Sample Info: WG225136-5
Volume Injected (uL): 1.0
Column phase: ZB5-MS
Instrument: gcms-n,i
Operator: JCG
Column diameter: 0.25
\\target_server\gg\chem\gcms-n,i\N032118,b\N8054,D
Y (x10^6)
Min
-N-Nitrosodimethylamine+
-Benzaldehyde
-Phenol+
-2-Chlorophenol
-1,3-Dichlorobenzene
1,4-Dichlorobenzene-D4+
-1,2-Dichlorobenzene
-Acetophenone+
-Isophorone
-2-Nitrophenol
-2,4-Dichlorophenol+
Naphthalene-D8+
-Caprolactam
-Hexachlorocyclopentadiene+
-2-Nitroaniline
-Dimethyl Phthalate
-Acenaphthylene
-3-Nitroaniline+
-2,4-Dinitrophenol
-Dibenzofuran
-Diethylphthalate
-4-Nitroaniline
-4,6-Dinitro-2-Methylpheno+
Fluorene-D10+
-4-Bromophenyl-phenylether
-Hexachlorobenzene
-Pentachlorophenol
-Phenanthrene-D10+
-Anthracene
-Carbazole
-Di-n-butylphthalate
-Fluoranthene
-Pyrene-D10+
-Butylbenzylphthalate
-3,3'-Dichlorobenzidine+
-Chrysene
-bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(a)pyrene
-Perylene-D12
-Indeno(1,2,3-cd)pyrene+
-Benzo(g,h,i)perylene

Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8055.D
Report Date: 22-Mar-2018 10:54

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N032118.b\N8055.D
Lab Smp Id: WG225136-6
Inj Date : 21-MAR-2018 13:06 MS Autotune Date: 25-OCT-2017 07:54
Operator : JCG Inst ID: gcms-n.i
Smp Info : WG225136-6
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gcms-n.i\N032118.b\NSPSIM87.m
Meth Date : 22-Mar-2018 09:08 cgomez Quant Type: ISTD
Cal Date : 21-MAR-2018 13:06 Cal File: N8055.D
Als bottle: 6 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
$	1 1,4-Dioxane-d8	96	2.602	2.591	(0.375)	415993	10.0000	11.2	
	2 1,4-Dioxane	88	2.644	2.633	(0.382)	360006	10.0000	10.1	
	3 N-Nitrosodimethylamine	74	3.168	3.158	(0.457)	463204	10.0000	10.2	
	4 Pyridine	79	3.179	3.168	(0.459)	878370	10.0000	11.4	
	5 Benzaldehyde	77	6.377	6.376	(0.920)	253783	10.0000	10.6	
	6 Phenol	94	6.628	6.618	(0.956)	1124886	10.0000	10.2	
	7 Bis(2-Chloroethyl)ether	93	6.628	6.628	(0.956)	986062	10.0000	10.4	
	8 2-Chlorophenol	128	6.699	6.699	(0.967)	1099593	10.0000	10.1	
	9 1,3-Dichlorobenzene	146	6.860	6.860	(0.990)	1182945	10.0000	10.2	
*	10 1,4-Dichlorobenzene-D4	152	6.930	6.930	(1.000)	63530	0.80000	(aQ)	
	11 1,4-Dichlorobenzene	146	6.950	6.950	(1.003)	1204210	10.0000	10.1	
	12 1,2-Dichlorobenzene	146	7.152	7.151	(1.032)	1144389	10.0000	10.2	
	13 2,2'-Oxybis(1-chloropropane)	45	7.323	7.323	(1.057)	986487	10.0000	10.3	
	14 2-Methylphenol	108	7.373	7.373	(1.064)	892160	10.0000	10.3	
	15 Acetophenone	105	7.474	7.484	(0.870)	1270647	10.0000	10.2	
	16 N-Nitroso-di-n-propylamine	70	7.504	7.504	(1.083)	595010	10.0000	10.2	
	17 3&4-Methylphenol	108	7.584	7.584	(1.094)	884209	10.0000	10.2	
	18 Hexachloroethane	117	7.574	7.574	(1.093)	403303	10.0000	10.2	
	19 Nitrobenzene	77	7.685	7.685	(0.895)	887227	10.0000	10.2	
	20 Isophorone	82	8.007	8.017	(0.932)	1577487	10.0000	10.4	
	21 2-Nitrophenol	139	8.118	8.118	(0.945)	558104	10.0000	10.2	

Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8055.D
Report Date: 22-Mar-2018 10:54

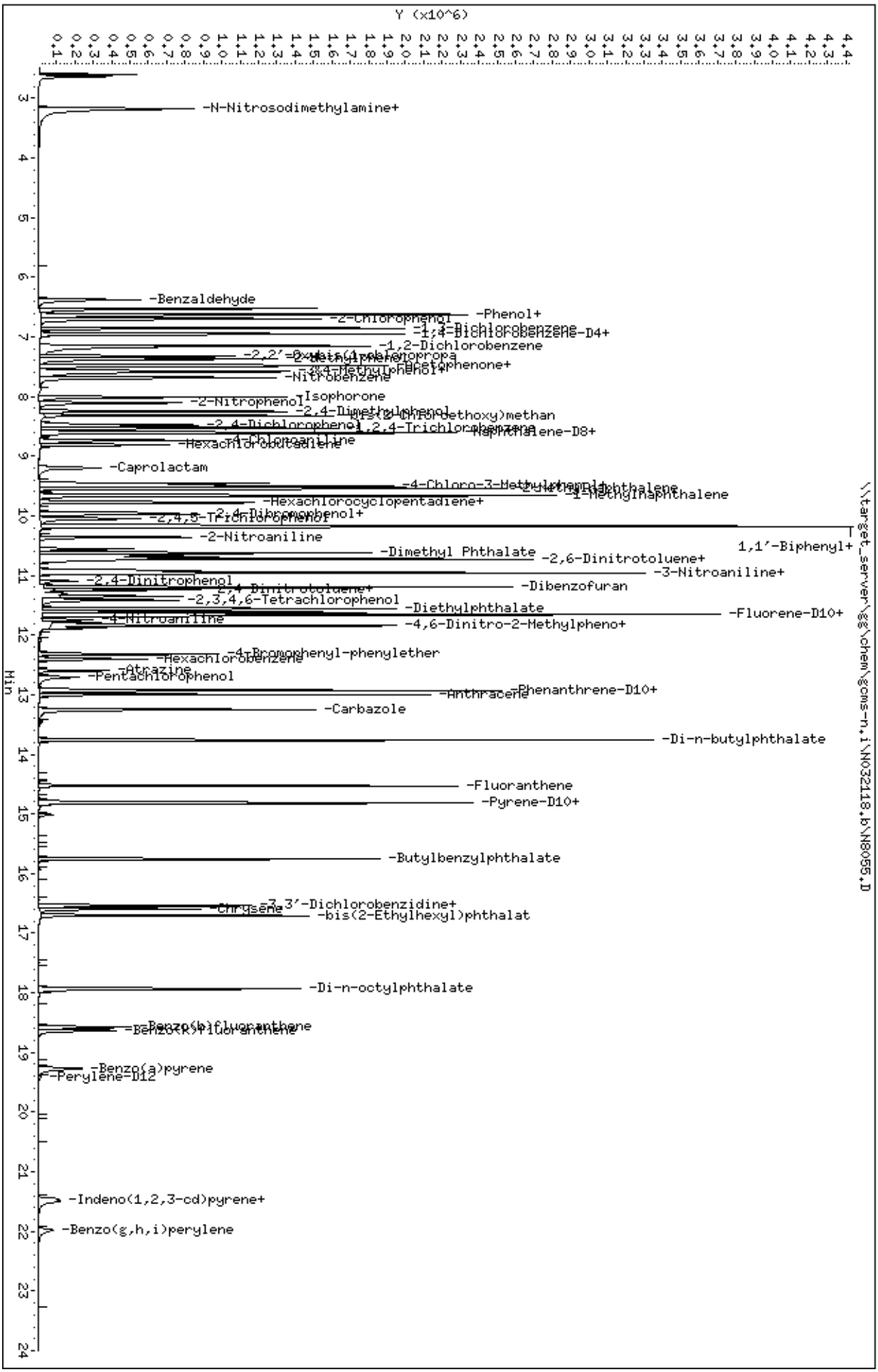
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	22 2,4-Dimethylphenol	107	8.249	8.239	(0.960)	858259	10.0000	10.0	
	23 bis(2-Chloroethoxy)methane	93	8.319	8.319	(0.968)	1115568	10.0000	10.2	
	24 2,4-Dichlorophenol	162	8.480	8.470	(0.987)	800095	10.0000	10.2	
	25 1,2,4-Trichlorobenzene	180	8.531	8.530	(0.993)	773578	10.0000	9.86	
*	26 Naphthalene-D8	136	8.591	8.581	(1.000)	205108	0.80000	(a)	
	27 Naphthalene	128	8.611	8.611	(1.002)	2637771	10.0000	9.73	
	28 4-Chloroaniline	127	8.732	8.732	(1.016)	1112323	10.0000	10.6	
	29 Hexachlorobutadiene	225	8.813	8.812	(1.026)	393334	10.0000	10.0	
	30 Caprolactam	113	9.203	9.222	(1.071)	267527	10.0000	9.93	
	31 4-Chloro-3-Methylphenol	107	9.459	9.459	(1.101)	707914	10.0000	10.1	
$	32 2-Methylnaphthalene-D10	152	9.498	9.498	(1.106)	1200208	10.0000	9.78	
	33 2-Methylnaphthalene	142	9.547	9.537	(1.111)	1786939	10.0000	10.2	
	34 1-Methylnaphthalene	142	9.665	9.675	(1.125)	1638528	10.0000	9.43	
	35 Hexachlorocyclopentadiene	237	9.764	9.774	(0.895)	261473	10.0000	9.93	
	36 1,2,4,5-Tetrachlorobenzene	216	9.784	9.783	(0.896)	646561	10.0000	9.87	
$	37 2,4-Dibromophenol	252	9.951	9.951	(0.912)	377802	10.0000	10.2	
	38 2,4,6-Trichlorophenol	196	9.971	9.970	(0.913)	460087	10.0000	10.2	
	39 2,4,5-Trichlorophenol	196	10.049	10.039	(0.921)	491194	10.0000	10.1	
	40 1,1'-Biphenyl	154	10.177	10.177	(0.932)	1926158	10.0000	9.78	
	41 2-Chloronaphthalene	164	10.187	10.187	(0.933)	537360	10.0000	9.94	
	42 2-Nitroaniline	65	10.354	10.364	(0.949)	360435	10.0000	10.4	
	43 Dimethyl Phthalate	163	10.621	10.621	(0.973)	1824238	10.0000	10.1	
	44 2,6-Dinitrotoluene	165	10.686	10.697	(0.979)	436598	10.0000	10.5	
	45 Acenaphthylene	152	10.730	10.719	(0.983)	2362600	10.0000	10.0	
	46 3-Nitroaniline	138	10.915	10.915	(1.000)	344289	10.0000	9.42	
*	47 Acenaphthene-D10	164	10.915	10.915	(1.000)	85817	0.80000	(a)	
	48 Acenaphthene	153	10.959	10.948	(1.004)	1513813	10.0000	9.92	
	49 2,4-Dinitrophenol	184	11.089	11.089	(1.016)	167232	10.0000	9.69	
	50 Dibenzofuran	168	11.198	11.198	(1.026)	1973467	10.0000	9.93	
	51 2,4-Dinitrotoluene	165	11.242	11.242	(1.030)	542086	10.0000	10.8	
	52 4-Nitrophenol	139	11.296	11.275	(1.035)	253457	10.0000	9.54	
	53 2,3,4,6-Tetrachlorophenol	232	11.416	11.416	(1.046)	366322	10.0000	10.7(H)	
	54 Diethylphthalate	149	11.569	11.569	(1.060)	1950245	10.0000	10.2	
$	55 Fluorene-D10	174	11.623	11.612	(1.065)	1046926	10.0000	9.98	
	56 Fluorene	166	11.656	11.645	(1.068)	1601409	10.0000	9.97	
	57 4-Chlorophenyl-phenylether	204	11.678	11.678	(1.070)	707239	10.0000	9.94	
	58 4-Nitroaniline	138	11.743	11.743	(1.076)	274059	10.0000	10.0	
	59 4,6-Dinitro-2-Methylphenol	198	11.798	11.798	(0.915)	243058	10.0000	9.73	
	60 N-Nitrosodiphenylamine	169	11.852	11.852	(0.919)	1249447	10.0000	9.80	
	61 4-Bromophenyl-phenylether	248	12.319	12.318	(0.955)	374703	10.0000	9.31	
	62 Hexachlorobenzene	284	12.415	12.414	(0.963)	389949	10.0000	9.42	
	63 Atrazine	200	12.596	12.607	(0.977)	263060	10.0000	10.0	
	64 Pentachlorophenol	266	12.714	12.703	(0.986)	189656	10.0000	9.58	
*	65 Phenanthrene-D10	188	12.895	12.895	(1.000)	123828	0.80000	(a)	
	66 Phenanthrene	178	12.927	12.916	(1.002)	1944626	10.0000	9.65	
	67 Anthracene	178	13.002	12.991	(1.008)	2005029	10.0000	9.73	
	68 Carbazole	167	13.247	13.247	(1.027)	1626783	10.0000	10.0	
	69 Di-n-butylphthalate	149	13.760	13.760	(1.067)	3047999	10.0000	9.76	
	70 Fluoranthene	202	14.527	14.518	(1.127)	1616929	10.0000	9.43	
$	71 Pyrene-D10	212	14.799	14.790	(0.894)	961184	10.0000	9.33	
	72 Pyrene	202	14.818	14.809	(0.895)	1664015	10.0000	8.85	
	73 Butylbenzylphthalate	149	15.756	15.756	(0.952)	1152200	10.0000	9.20	
	74 Benzo(a)anthracene	228	16.535	16.535	(0.999)	913377	10.0000	9.64(H)	
	75 3,3'-Dichlorobenzidine	252	16.544	16.544	(0.999)	209864	10.0000	10.2	

Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8055.D
Report Date: 22-Mar-2018 10:54

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
*	76 Chrysene-D12	240	16.554	16.544	(1.000)	51360	0.80000	(a)	
	77 Chrysene	228	16.591	16.591	(1.002)	925951	10.0000	10.2	
	78 bis(2-Ethylhexyl)phthalate	149	16.704	16.704	(1.009)	1670180	10.0000	9.03	
	79 Di-n-octylphthalate	149	17.935	17.935	(1.083)	2366758	10.0000	9.24	
	80 Benzo(b)fluoranthene	252	18.571	18.571	(0.957)	558617	10.0000	9.51	
	81 Benzo(k)fluoranthene	252	18.628	18.616	(0.960)	662441	10.0000	10.5(H)	
	82 Benzo(a)pyrene	252	19.275	19.263	(0.993)	456224	10.0000	9.57	
*	83 Perylene-D12	264	19.411	19.400	(1.000)	28025	0.80000	(a)	
	85 Indeno(1,2,3-cd)pyrene	276	21.455	21.467	(1.296)	313890	10.0000	10.8	
	86 Dibenzo(a,h)anthracene	278	21.501	21.501	(1.108)	224021	10.0000	10.8	
	87 Benzo(g,h,i)perylene	276	21.978	21.978	(1.132)	297431	10.0000	10.2	
M	88 Total PAHs	100				3470907	180.000	(a)	
M	324 Total Low PAHs	100				13852187	70.0000	(a)	
M	325 Total High PAHs	100				5800517	60.0000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
H - Operator selected an alternate compound hit.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Date : 21-MAR-2018 13:06
Client ID:
Sample Info: WG225136-6
Volume Injected (uL): 1.0
Column phase: ZB5-MS
Instrument: gcms-n,i
Operator: JCG
Column diameter: 0.25
\\target_server\gg\chem\gcms-n,i\N032118,b\N8055,D
Y (x10^6)
Min
-N-Nitrosodimethylamine+
-Benzaldehyde
-2-Chlorophenol
-Phenol+
-1,4-Dichlorobenzene
-1,4-Dichlorobenzene-D4+
-1,2-Dichlorobenzene
-Nitrobenzene
-2-Nitrophenol
-Isophorone
-2,4-Dimethylphenol
-2,4-Dichlorophenol
-1,2,4-Trichlorobenzene
-Naphthalene-D8+
-Hexachlorobutadiene
-Caprolactam
-Hexachlorocyclopentadiene+
-1-Methylnaphthalene
-2,4-Dibromophenol+
-2,4,5-Trichlorophenol
-2-Nitroaniline
1,1'-Biphenyl+
-Dimethyl Phthalate
-2,6-Dinitrotoluene+
-3-Nitroaniline+
-2,4-Dinitrophenol
-Dibenzofuran
-2,3,4,6-Tetrachlorophenol
-Diethylphthalate
-Fluorene-D10+
-4-Nitroaniline
-4,6-Dinitro-2-Methylpheno+
-4-Bromophenyl-phenylether
-Hexachlorobenzene
-Atrazine
-Pentachlorophenol
-Phenanthrene-D10+
-Anthracene
-Carbazole
-Di-n-butylphthalate
-Fluoranthene
-Pyrene-D10+
-Butylbenzylphthalate
-3,3'-Dichlorobenzidine+
-Chrysene
-bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(b)fluoranthene
-Benzo(k)fluoranthene
-Benzo(a)pyrene
-Perylene-D12
-Indeno(1,2,3-cd)pyrene+
-Benzo(g,h,i)perylene

Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8056.D
Report Date: 22-Mar-2018 10:54

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N032118.b\N8056.D
Lab Smp Id: WG225136-7
Inj Date : 21-MAR-2018 13:37 MS Autotune Date: 25-OCT-2017 07:54
Operator : JCG Inst ID: gcms-n.i
Smp Info : WG225136-7
Misc Info :
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N032118.b\NSPSIM87.m
Meth Date : 22-Mar-2018 09:08 cgomez Quant Type: ISTD
Cal Date : 21-MAR-2018 13:37 Cal File: N8056.D
Als bottle: 7 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
$	1 1,4-Dioxane-d8	96	2.591	2.591	(0.374)	580476	15.0000	15.8(A)	
	2 1,4-Dioxane	88	2.633	2.633	(0.380)	532911	15.0000	15.1(A)	
	3 N-Nitrosodimethylamine	74	3.158	3.158	(0.456)	699937	15.0000	15.7(A)	
	4 Pyridine	79	3.168	3.168	(0.457)	1178284	15.0000	15.5(A)	
	5 Benzaldehyde	77	6.376	6.376	(0.920)	352990	15.0000	15.0	
	6 Phenol	94	6.618	6.618	(0.955)	1593899	15.0000	14.7	
	7 Bis(2-Chloroethyl)ether	93	6.628	6.628	(0.956)	1362092	15.0000	14.7	
	8 2-Chlorophenol	128	6.699	6.699	(0.967)	1592512	15.0000	14.8	
	9 1,3-Dichlorobenzene	146	6.860	6.860	(0.990)	1692604	15.0000	14.8	
*	10 1,4-Dichlorobenzene-D4	152	6.930	6.930	(1.000)	62586	0.80000	(aQ)	
	11 1,4-Dichlorobenzene	146	6.950	6.950	(1.003)	1734321	15.0000	14.8	
	12 1,2-Dichlorobenzene	146	7.151	7.151	(1.032)	1639874	15.0000	14.8	
	13 2,2'-Oxybis(1-chloropropane)	45	7.323	7.323	(1.057)	1411786	15.0000	15.0	
	14 2-Methylphenol	108	7.373	7.373	(1.064)	1294958	15.0000	15.2(A)	
	15 Acetophenone	105	7.484	7.484	(0.871)	1855629	15.0000	15.1(A)	
	16 N-Nitroso-di-n-propylamine	70	7.504	7.504	(1.083)	841312	15.0000	14.7	
	17 3&4-Methylphenol	108	7.584	7.584	(1.094)	1290224	15.0000	15.1(A)	
	18 Hexachloroethane	117	7.574	7.574	(1.093)	583426	15.0000	15.0	
	19 Nitrobenzene	77	7.685	7.685	(0.895)	1241158	15.0000	14.6	
	20 Isophorone	82	8.017	8.017	(0.933)	2306818	15.0000	15.3(A)	
	21 2-Nitrophenol	139	8.118	8.118	(0.945)	819602	15.0000	15.1(A)	

Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8056.D
Report Date: 22-Mar-2018 10:54

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	22 2,4-Dimethylphenol	107	8.239	8.239	(0.959)	1246092	15.0000	14.7	
	23 bis(2-Chloroethoxy)methane	93	8.319	8.319	(0.968)	1608026	15.0000	14.9	
	24 2,4-Dichlorophenol	162	8.470	8.470	(0.986)	1180735	15.0000	15.2(A)	
	25 1,2,4-Trichlorobenzene	180	8.530	8.530	(0.993)	1140557	15.0000	14.7	
*	26 Naphthalene-D8	136	8.591	8.581	(1.000)	203110	0.80000	(a)	
	27 Naphthalene	128	8.611	8.611	(1.002)	3771481	15.0000	14.0	
	28 4-Chloroaniline	127	8.732	8.732	(1.016)	1640631	15.0000	15.7(A)	
	29 Hexachlorobutadiene	225	8.812	8.812	(1.026)	563469	15.0000	14.5	
	30 Caprolactam	113	9.222	9.222	(1.074)	399285	15.0000	15.0	
	31 4-Chloro-3-Methylphenol	107	9.459	9.459	(1.101)	1051159	15.0000	15.1(A)	
$	32 2-Methylnaphthalene-D10	152	9.498	9.498	(1.106)	1732777	15.0000	14.3	
	33 2-Methylnaphthalene	142	9.547	9.537	(1.111)	2509398	15.0000	14.6	
	34 1-Methylnaphthalene	142	9.675	9.675	(1.126)	2398092	15.0000	13.9	
	35 Hexachlorocyclopentadiene	237	9.774	9.774	(1.000)	432270	15.0000	15.0(A)	
	36 1,2,4,5-Tetrachlorobenzene	216	9.783	9.783	(1.000)	947673	15.0000	14.8	
$	37 2,4-Dibromophenol	252	9.951	9.951	(1.000)	564205	15.0000	15.6	
	38 2,4,6-Trichlorophenol	196	9.970	9.970	(1.000)	679032	15.0000	15.4(A)	
	39 2,4,5-Trichlorophenol	196	10.039	10.039	(1.000)	695449	15.0000	14.7	
	40 1,1'-Biphenyl	154	10.177	10.177	(1.000)	2760268	15.0000	14.3	
	41 2-Chloronaphthalene	164	10.187	10.187	(1.000)	783563	15.0000	14.8	
	42 2-Nitroaniline	65	10.364	10.364	(1.000)	559111	15.0000	16.5(A)	
	43 Dimethyl Phthalate	163	10.621	10.621	(1.000)	2648820	15.0000	15.0	
	44 2,6-Dinitrotoluene	165	10.697	10.697	(1.000)	666942	15.0000	16.4(A)	
	45 Acenaphthylene	152	10.730	10.719	(1.000)	3377435	15.0000	14.6	
	46 3-Nitroaniline	138	10.915	10.915	(1.000)	546495	15.0000	15.2(A)	
*	47 Acenaphthene-D10	164	10.926	10.915	(1.000)	83866	0.80000	(aM)	M6
	48 Acenaphthene	153	10.969	10.948	(1.000)	2197570	15.0000	14.7	
	49 2,4-Dinitrophenol	184	11.089	11.089	(1.000)	301889	15.0000	15.0(A)	
	50 Dibenzofuran	168	11.198	11.198	(1.000)	2909524	15.0000	15.0	
	51 2,4-Dinitrotoluene	165	11.242	11.242	(1.000)	819623	15.0000	16.7(A)	
	52 4-Nitrophenol	139	11.275	11.275	(1.000)	433937	15.0000	15.1(A)	
	53 2,3,4,6-Tetrachlorophenol	232	11.416	11.416	(1.000)	569401	15.0000	17.1(A)	
	54 Diethylphthalate	149	11.569	11.569	(1.000)	2806213	15.0000	15.1(A)	
$	55 Fluorene-D10	174	11.623	11.612	(1.000)	1561602	15.0000	15.2(A)	
	56 Fluorene	166	11.656	11.645	(1.000)	2330390	15.0000	14.8	
	57 4-Chlorophenyl-phenylether	204	11.678	11.678	(1.000)	1042511	15.0000	15.0	
	58 4-Nitroaniline	138	11.743	11.743	(1.000)	454502	15.0000	17.0(A)	
	59 4,6-Dinitro-2-Methylphenol	198	11.798	11.798	(0.915)	400339	15.0000	15.2(A)	
	60 N-Nitrosodiphenylamine	169	11.852	11.852	(0.919)	1872177	15.0000	14.2	
	61 4-Bromophenyl-phenylether	248	12.318	12.318	(0.955)	567020	15.0000	13.6	
	62 Hexachlorobenzene	284	12.414	12.414	(0.963)	588376	15.0000	13.8	
	63 Atrazine	200	12.607	12.607	(0.978)	407256	15.0000	15.0	
	64 Pentachlorophenol	266	12.703	12.703	(0.985)	318803	15.0000	15.4(A)	
*	65 Phenanthrene-D10	188	12.895	12.895	(1.000)	128004	0.80000	(a)	
	66 Phenanthrene	178	12.927	12.916	(1.002)	2975314	15.0000	14.3	
	67 Anthracene	178	13.002	12.991	(1.008)	2928809	15.0000	13.7	
	68 Carbazole	167	13.247	13.247	(1.027)	2534791	15.0000	15.1(A)	
	69 Di-n-butylphthalate	149	13.760	13.760	(1.067)	4302756	15.0000	13.3	
	70 Fluoranthene	202	14.527	14.518	(1.127)	2366616	15.0000	13.4	
$	71 Pyrene-D10	212	14.799	14.790	(0.894)	1486353	15.0000	13.9(A)	
	72 Pyrene	202	14.827	14.809	(0.896)	2557987	15.0000	13.1	
	73 Butylbenzylphthalate	149	15.756	15.756	(0.952)	1769524	15.0000	13.6	
	74 Benzo(a)anthracene	228	16.544	16.535	(0.999)	1430375	15.0000	14.6	
	75 3,3'-Dichlorobenzidine	252	16.544	16.544	(0.999)	285776	15.0000	13.4	



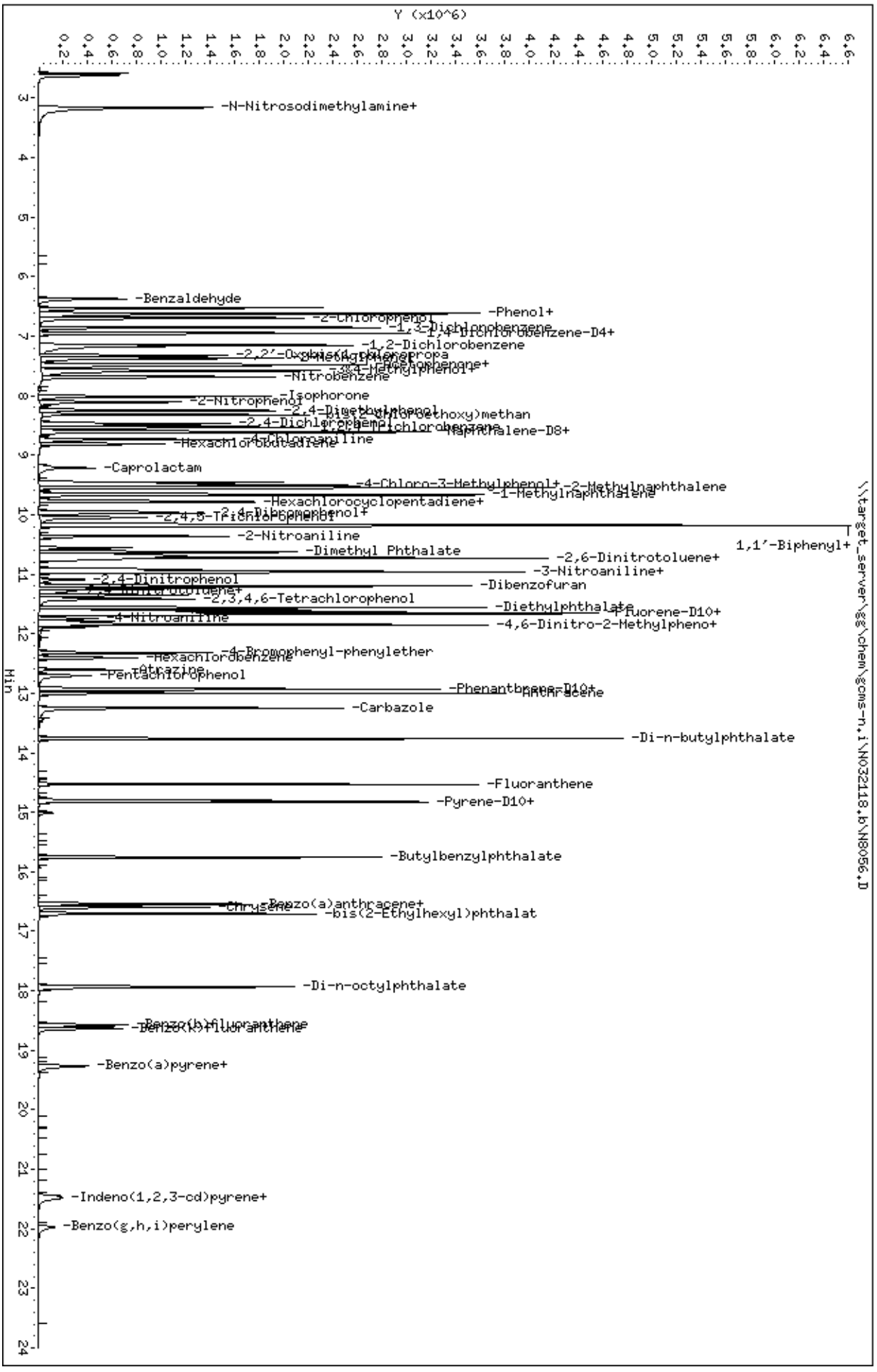
1:30 pm, Mar 26, 2018

Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8056.D
Report Date: 22-Mar-2018 10:54

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
*	76 Chrysene-D12	240	16.554	16.544	(1.000)	53183	0.80000	(a)	
	77 Chrysene	228	16.601	16.591	(1.003)	1376317	15.0000	14.7	
	78 bis(2-Ethylhexyl)phthalate	149	16.704	16.704	(1.009)	2507455	15.0000	13.1	
	79 Di-n-octylphthalate	149	17.935	17.935	(1.083)	3491770	15.0000	13.2	
	80 Benzo(b)fluoranthene	252	18.571	18.571	(0.957)	921425	15.0000	15.7(A)	
	81 Benzo(k)fluoranthene	252	18.628	18.616	(0.960)	914672	15.0000	14.6(H)	
	82 Benzo(a)pyrene	252	19.263	19.263	(0.992)	696127	15.0000	14.6	
*	83 Perylene-D12	264	19.411	19.400	(1.000)	27986	0.80000	(a)	
	85 Indeno(1,2,3-cd)pyrene	276	21.455	21.467	(1.296)	474534	15.0000	15.8(A)	
	86 Dibenzo(a,h)anthracene	278	21.489	21.501	(1.107)	337556	15.0000	16.3(A)	
	87 Benzo(g,h,i)perylene	276	21.966	21.978	(1.132)	441061	15.0000	15.2(A)	
M	88 Total PAHs	100				5149784	270.000	(a)	
M	324 Total Low PAHs	100				20090397	105.000	(a)	
M	325 Total High PAHs	100				8764978	90.0000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount
exceeded maximum amount.
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.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Column phase: ZB5-MS
Instrument: gcms-n,i
Operator: JCG
Column diameter: 0.25
\\target_server\gg\chem\gcms-n,i\N032118,b\N8056,D
Y (x10^6)
Min
-N-Nitrosodimethylamine+
-Benzaldehyde
-Phenol+
-2-Chlorophenol
-1,3-Dichlorobenzene
-1,4-Dichlorobenzene-D4+
-1,2-Dichlorobenzene
-Nitrobenzene
-Isophorone
-2-Nitrophenol
-2,4-Dimethylphenol
-2,4-Dichlorophenol
-Naphthalene-D8+
-Hexachlorobutadiene
-Caprolactam
-4-Chloro-3-Methylphenol+
-2-Methylnaphthalene
-1-Methylnaphthalene
-Hexachlorocyclopentadiene+
-2,4,5-Trichlorophenol
-2-Nitroaniline
1,1'-Biphenyl+
-Dimethyl Phthalate
-2,6-Dinitrotoluene+
-3-Nitroaniline+
-2,4-Dinitrophenol
-Dibenzofuran
-2,3,4,6-Tetrachlorophenol
-Diethylphthalate
-Fluorene-D10+
-4-Nitroaniline
-4,6-Dinitro-2-Methylpheno+
-4-Bromophenyl-phenylether
-Hexachlorobenzene
-Pentachlorophenol
-Phenanthrene-D10+
-Carbazole
-Di-n-butylphthalate
-Fluoranthene
-Pyrene-D10+
-Butylbenzylphthalate
-Chrysene
-bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(a)pyrene+
-Indeno(1,2,3-cd)pyrene+
-Benzo(g,h,i)perylene

Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8057.D
Report Date: 21-Mar-2018 15:10

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N032118.b\N8057.D
Lab Smp Id: WG225136-8
Inj Date : 21-MAR-2018 14:08 MS Autotune Date: 25-OCT-2017 07:54
Operator : JCG Inst ID: gcms-n.i
Smp Info : WG225136-8
Misc Info : WG225136,WG225136,WG225136-4
Comment :
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Meth Date : 21-Mar-2018 14:04 gcms-n.i Quant Type: ISTD
Cal Date : 21-MAR-2018 13:37 Cal File: N8056.D
Als bottle: 8 QC Sample: INDCHECK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)	REVIEW CODE
2	1,4-Dioxane	88	2.654	2.633	(0.382)	162348	4.70532	4.70	
3	N-Nitrosodimethylamine	74	3.189	3.158	(0.460)	218981	5.02900	5.03	
4	Pyridine	79	3.200	3.168	(0.461)	440290	5.91439	5.91	
5	Benzaldehyde	77	6.387	6.376	(0.920)	122518	5.30278	5.30	
6	Phenol	94	6.638	6.618	(0.956)	551541	5.20516	5.20	
7	Bis(2-Chloroethyl)ether	93	6.628	6.628	(0.955)	436290	4.71975	4.72	
8	2-Chlorophenol	128	6.709	6.699	(0.967)	519255	4.94964	4.95	
9	1,3-Dichlorobenzene	146	6.860	6.860	(0.988)	567588	5.08890	5.09	
* 10	1,4-Dichlorobenzene-D4	152	6.940	6.930	(1.000)	61258	0.80000	(aQ)	
11	1,4-Dichlorobenzene	146	6.960	6.950	(1.003)	581100	5.06212	5.06	
12	1,2-Dichlorobenzene	146	7.152	7.151	(1.030)	550204	5.07154	5.07	
13	2,2'-Oxybis(1-chloropropane)	45	7.323	7.323	(1.055)	355023	3.85311	3.85(R)	
14	2-Methylphenol	108	7.373	7.373	(1.062)	442745	5.32011	5.32	
15	Acetophenone	105	7.484	7.484	(0.871)	615194	5.40068	5.40	
16	N-Nitroso-di-n-propylamine	70	7.494	7.504	(1.080)	264510	4.71975	4.72	
17	3&4-Methylphenol	108	7.594	7.584	(1.094)	427587	5.11851	5.12	
18	Hexachloroethane	117	7.564	7.574	(1.090)	189647	4.97646	4.98	
19	Nitrobenzene	77	7.685	7.685	(0.895)	434151	5.39718	5.40	
20	Isophorone	82	8.007	8.017	(0.932)	698481	5.01390	5.01	
21	2-Nitrophenol	139	8.118	8.118	(0.945)	260777	5.19939	5.20	
22	2,4-Dimethylphenol	107	8.249	8.239	(0.960)	387658	4.94444	4.94	

Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8057.D
Report Date: 21-Mar-2018 15:10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
	23 bis(2-Chloroethoxy)methane	93	8.319	8.319	(0.968)	526004	5.27836	5.28	
	24 2,4-Dichlorophenol	162	8.490	8.470	(0.988)	375348	5.20610	5.21	
	25 1,2,4-Trichlorobenzene	180	8.531	8.530	(0.993)	380310	5.28933	5.29	
*	26 Naphthalene-D8	136	8.591	8.591	(1.000)	187911	0.80000	(a)	
	27 Naphthalene	128	8.611	8.611	(1.002)	1280162	5.15554	5.16	
	28 4-Chloroaniline	127	8.742	8.732	(1.018)	462725	4.79363	4.79	
	29 Hexachlorobutadiene	225	8.812	8.812	(1.026)	186680	5.20336	5.20	
	30 Caprolactam	113	9.193	9.222	(1.070)	127230	5.17482	5.17	
	31 4-Chloro-3-Methylphenol	107	9.469	9.459	(1.102)	322747	5.01182	5.01	
	33 2-Methylnaphthalene	142	9.547	9.547	(1.111)	912067	5.57463	5.57	
	34 1-Methylnaphthalene	142	9.665	9.675	(1.125)	761026	4.77921	4.78	
	35 Hexachlorocyclopentadiene	237	9.764	9.774	(0.895)	79764	3.68577	3.68(R)	
	36 1,2,4,5-Tetrachlorobenzene	216	9.784	9.783	(0.896)	320323	5.21028	5.21	
	38 2,4,6-Trichlorophenol	196	9.971	9.970	(0.913)	205512	4.86601	4.87	
	39 2,4,5-Trichlorophenol	196	10.059	10.039	(0.922)	240391	5.28818	5.29	
	40 1,1'-Biphenyl	154	10.177	10.177	(0.932)	956306	5.17809	5.18	
	41 2-Chloronaphthalene	164	10.187	10.187	(0.933)	254008	5.01078	5.01	
	42 2-Nitroaniline	65	10.364	10.364	(0.950)	177606	5.46717	5.47	
	43 Dimethyl Phthalate	163	10.621	10.621	(0.973)	860763	5.07206	5.07	
	44 2,6-Dinitrotoluene	165	10.686	10.697	(0.979)	202116	5.17614	5.18	
	45 Acenaphthylene	152	10.730	10.730	(0.983)	1086166	4.90145	4.90	
	46 3-Nitroaniline	138	10.926	10.915	(1.001)	172121	5.07214	5.07	
*	47 Acenaphthene-D10	164	10.915	10.926	(1.000)	80518	0.80000	(a)	
	48 Acenaphthene	153	10.959	10.969	(1.004)	724094	5.05633	5.06	
	49 2,4-Dinitrophenol	184	11.111	11.089	(1.018)	62966	4.60067	4.60	
	50 Dibenzofuran	168	11.198	11.198	(1.026)	981158	5.26286	5.26	
	51 2,4-Dinitrotoluene	165	11.242	11.242	(1.030)	247618	5.26539	5.26	
	52 4-Nitrophenol	139	11.340	11.275	(1.039)	102769	4.52875	4.53	
	53 2,3,4,6-Tetrachlorophenol	232	11.427	11.416	(1.047)	137209	4.28694	4.29	
	54 Diethylphthalate	149	11.558	11.569	(1.059)	921207	5.16525	5.16	
	56 Fluorene	166	11.656	11.656	(1.068)	758590	5.03497	5.03	
	57 4-Chlorophenyl-phenylether	204	11.678	11.678	(1.070)	331452	4.96539	4.96	
	58 4-Nitroaniline	138	11.754	11.743	(1.077)	156279	6.08936	6.09(R)	
	59 4,6-Dinitro-2-Methylphenol	198	11.809	11.798	(0.916)	99990	4.72099	4.72	
	60 N-Nitrosodiphenylamine	169	11.841	11.852	(0.918)	473442	4.15166	4.15	
	61 4-Bromophenyl-phenylether	248	12.319	12.318	(0.955)	171393	4.76263	4.76	
	62 Hexachlorobenzene	284	12.415	12.414	(0.963)	180513	4.87658	4.88	
	63 Atrazine	200	12.596	12.607	(0.977)	57187	2.42926	2.43(R)	
	64 Pentachlorophenol	266	12.714	12.703	(0.986)	83773	4.92158	4.92	
*	65 Phenanthrene-D10	188	12.895	12.895	(1.000)	110764	0.80000	(a)	
	66 Phenanthrene	178	12.927	12.927	(1.002)	883904	4.90529	4.90	
	67 Anthracene	178	13.002	13.002	(1.008)	887216	4.81329	4.81	
	68 Carbazole	167	13.247	13.247	(1.027)	736386	5.06252	5.06	
	69 Di-n-butylphthalate	149	13.760	13.760	(1.067)	1435735	5.13763	5.14	
	70 Fluoranthene	202	14.527	14.527	(1.127)	727511	4.74320	4.74	
	72 Pyrene	202	14.818	14.827	(0.895)	732656	4.39480	4.39	
	73 Butylbenzylphthalate	149	15.756	15.756	(0.952)	528362	4.75825	4.76	
	74 Benzo(a)anthracene	228	16.544	16.544	(0.999)	408638	4.86777	4.87	
	75 3,3'-Dichlorobenzidine	252	16.554	16.544	(1.000)	94380	5.15476	5.15	
*	76 Chrysene-D12	240	16.554	16.554	(1.000)	45523	0.80000	(a)	
	77 Chrysene	228	16.601	16.601	(1.003)	422058	5.16902	5.17	
	78 bis(2-Ethylhexyl)phthalate	149	16.704	16.704	(1.009)	781961	4.76785	4.77	
	79 Di-n-octylphthalate	149	17.935	17.935	(1.083)	1129782	4.97700	4.98	
	80 Benzo(b)fluoranthene	252	18.571	18.571	(0.956)	261375	4.98930	4.99	

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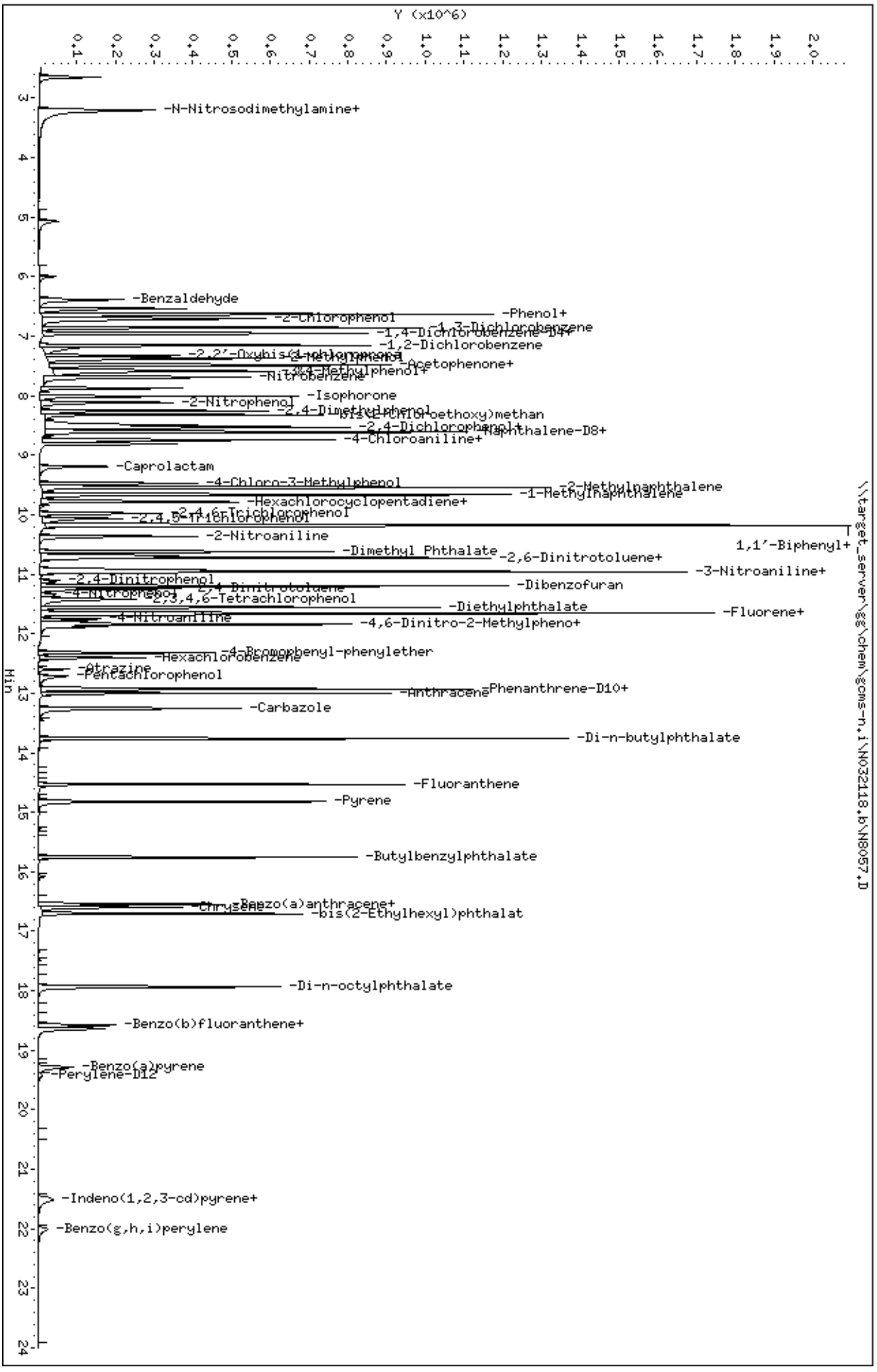
Report Date: 21-Mar-2018 15:10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
	81 Benzo(k)fluoranthene	252	18.628	18.628	(0.959)	304982	5.34055	5.34(H)	
	82 Benzo(a)pyrene	252	19.286	19.263	(0.993)	181981	4.27983	4.28	
*	83 Perylene-D12	264	19.423	19.411	(1.000)	25001	0.80000	(a)	
	85 Indeno(1,2,3-cd)pyrene	276	21.478	21.455	(1.297)	115982	4.50990	4.51	
	86 Dibenzo(a,h)anthracene	278	21.524	21.489	(1.108)	78777	4.25885	4.26	
	87 Benzo(g,h,i)perylene	276	22.001	21.966	(1.133)	107538	4.14591	4.14	
M	88 Total PAHs	100				1550903	23.7649	23.8	
M	324 Total Low PAHs	100				6532199	35.4415	35.4	
M	325 Total High PAHs	100				2551621	27.7135	27.7	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
H - Operator selected an alternate compound hit.



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Client ID:
Sample Info: WG225136-8
Volume Injected (uL): 1.0
Column phase: ZB5-MS

Instrument: gcms-n,i
Operator: JCG
Column diameter: 0.25

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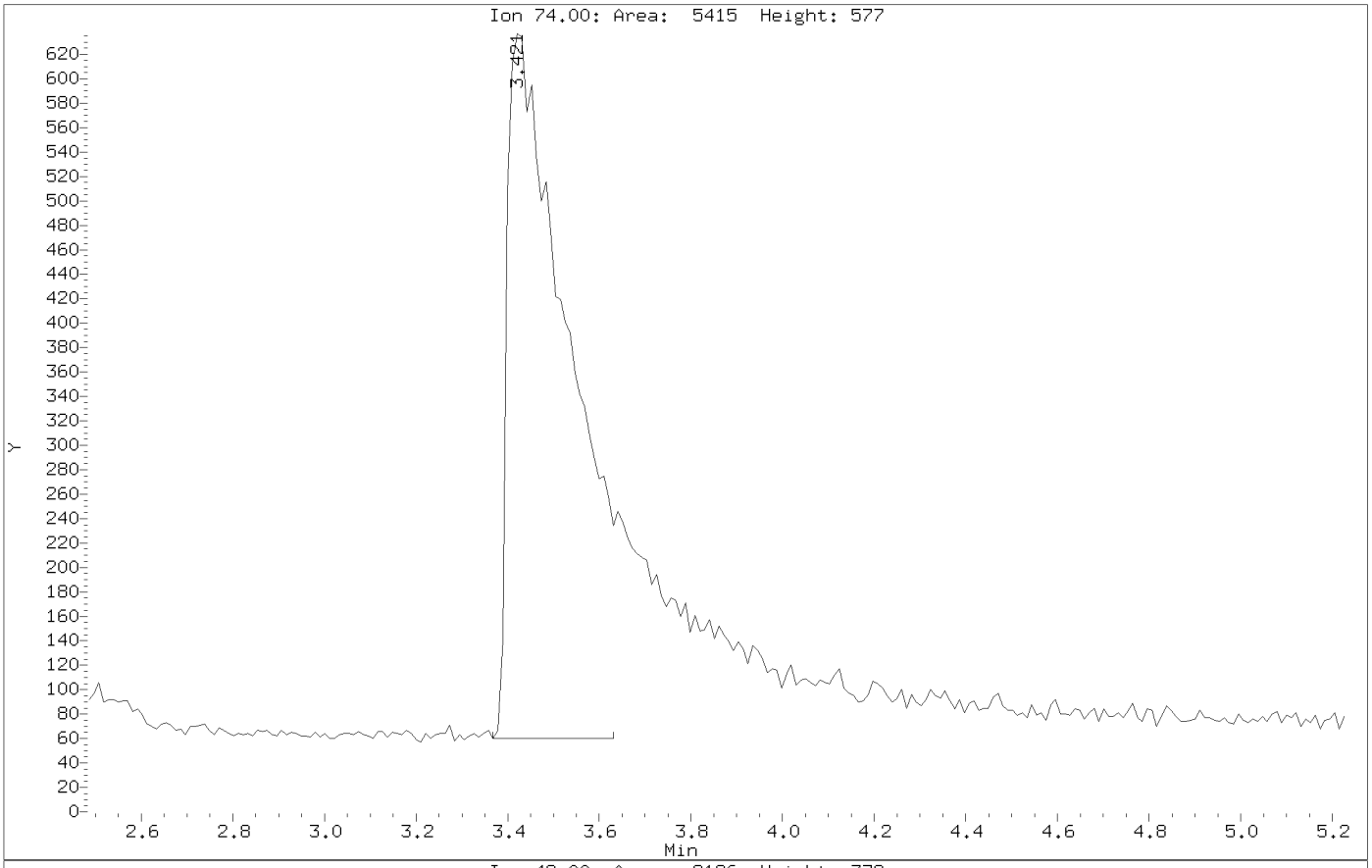
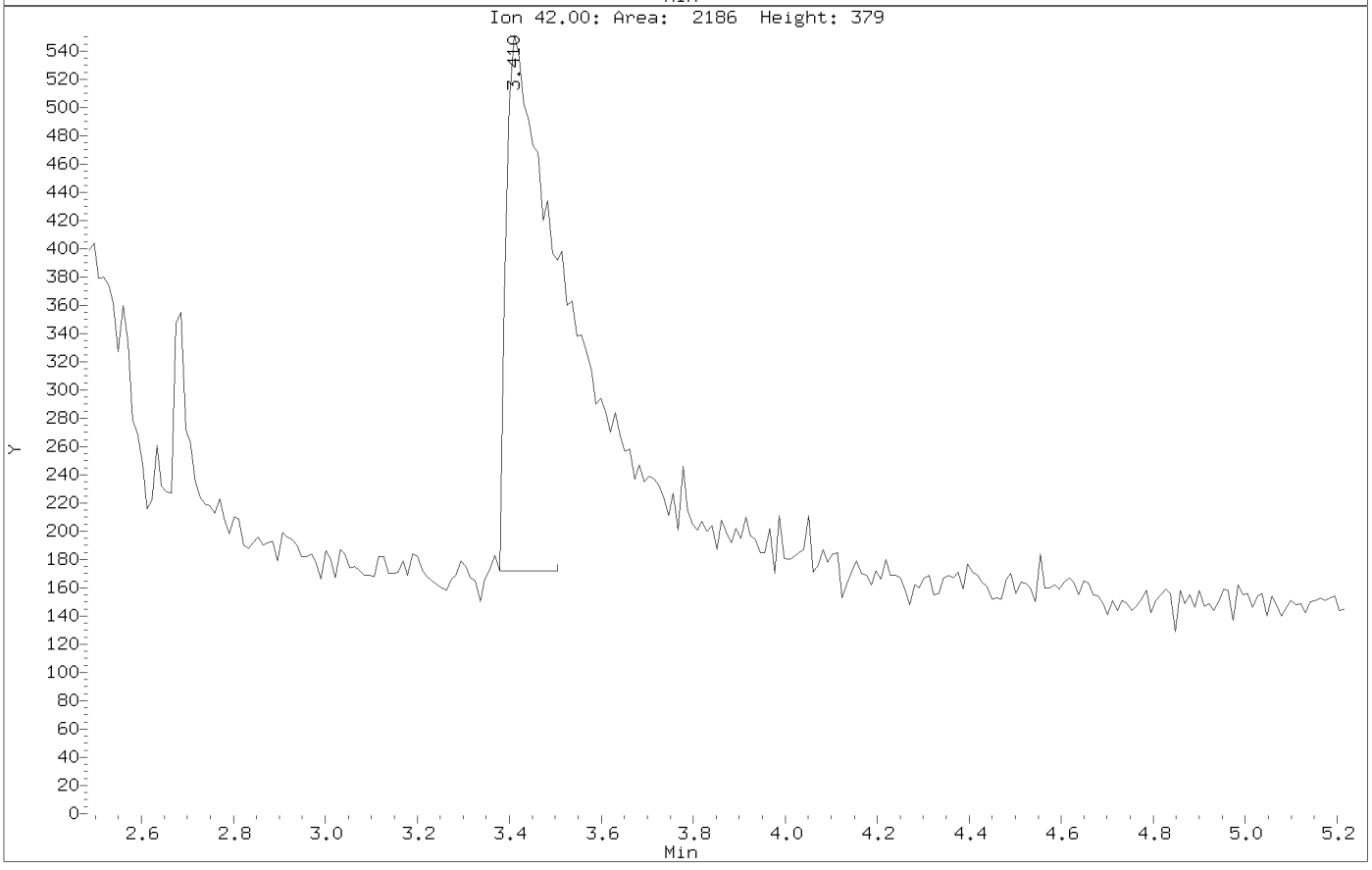
Injection Date: 21-MAR-2018 11:30
Instrument: gcms-n.i
Client Sample ID:

Compound: N-Nitrosodimethylamine
CAS Number: 62-75-9

BEFORE MANUAL INTEGRATION





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Compound: N-Nitrosodimethylamine
CAS Number: 62-75-9

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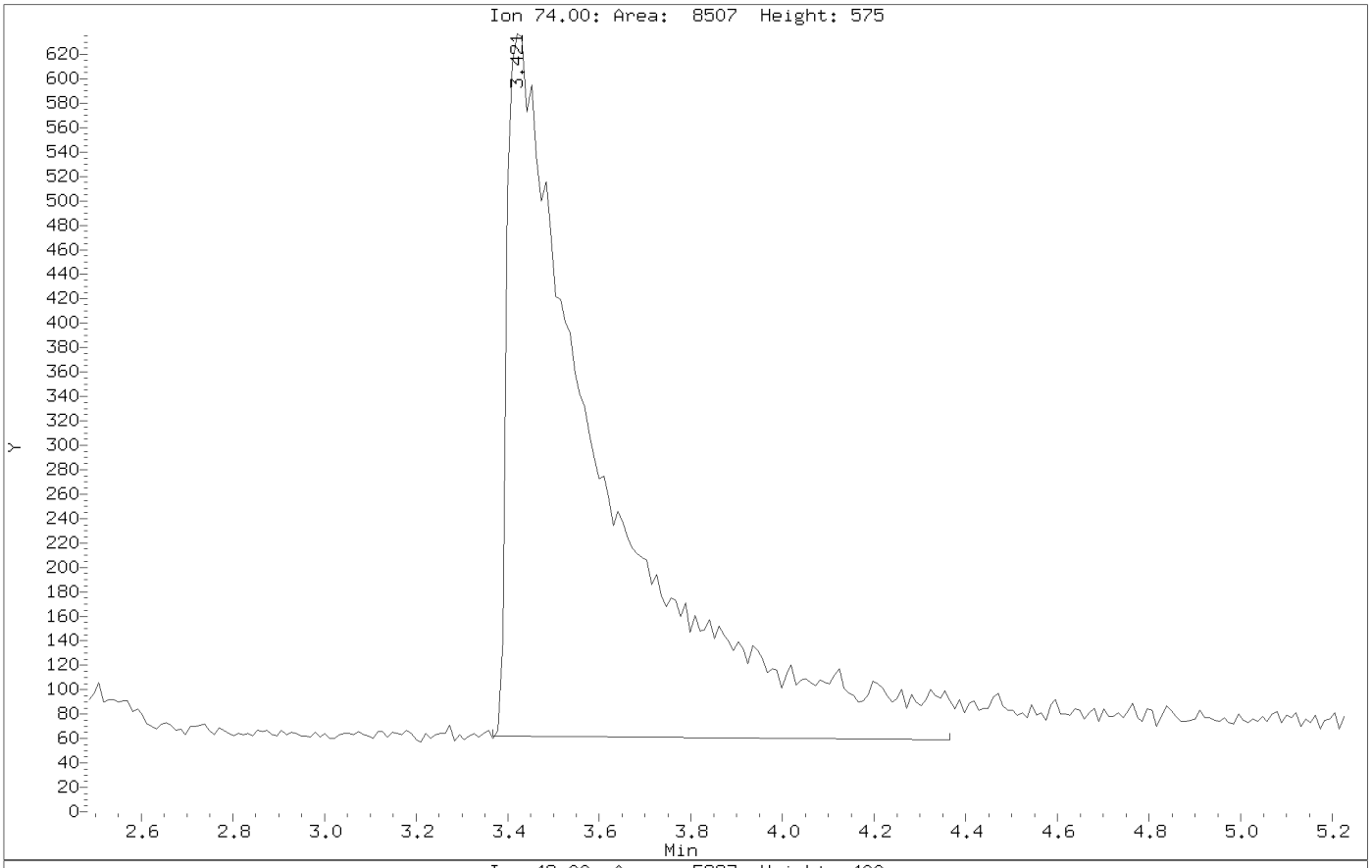

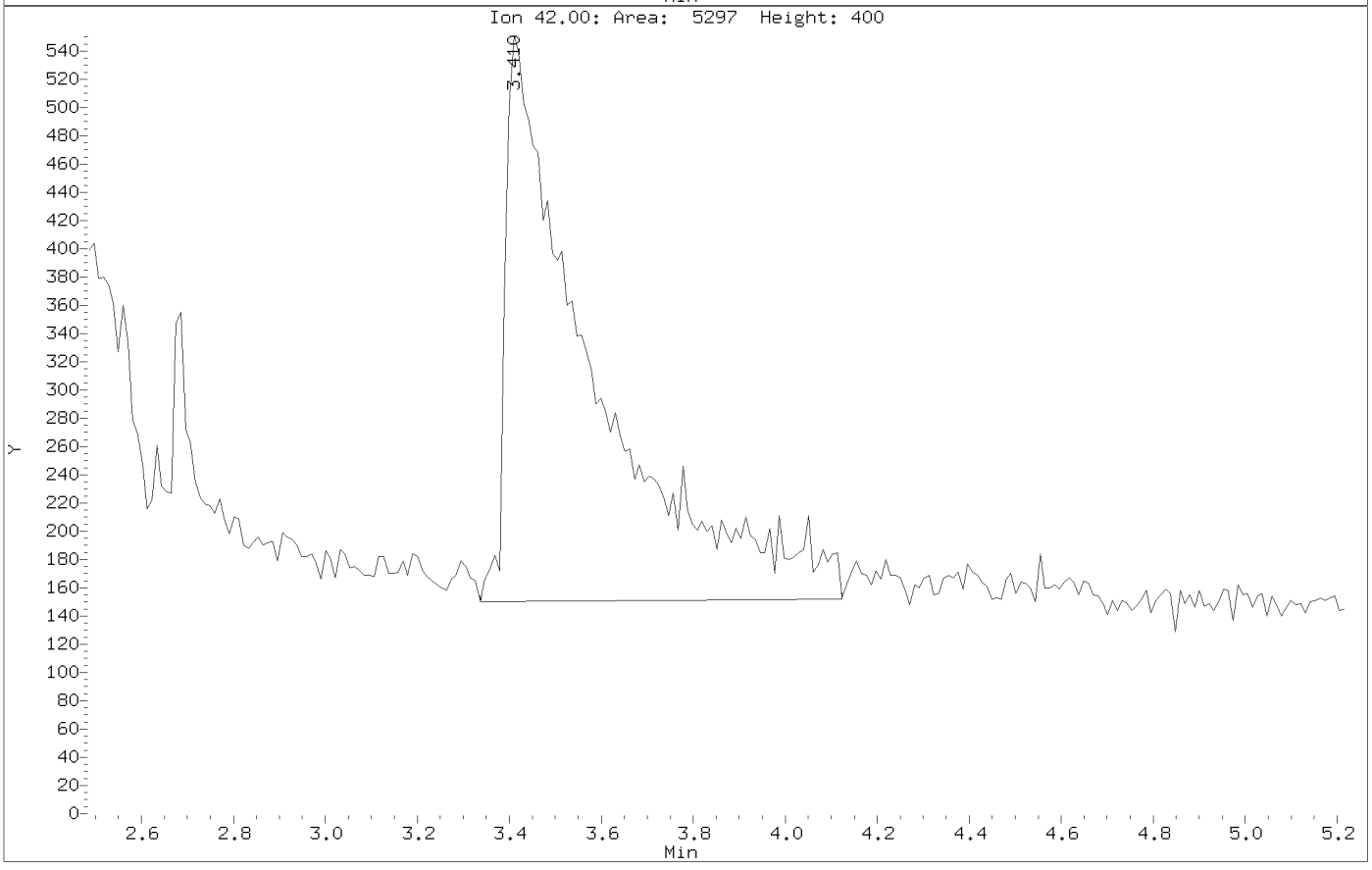

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Instrument: gcms-n.i
Client Sample ID:

Compound: Pyridine
CAS Number: 110-86-1

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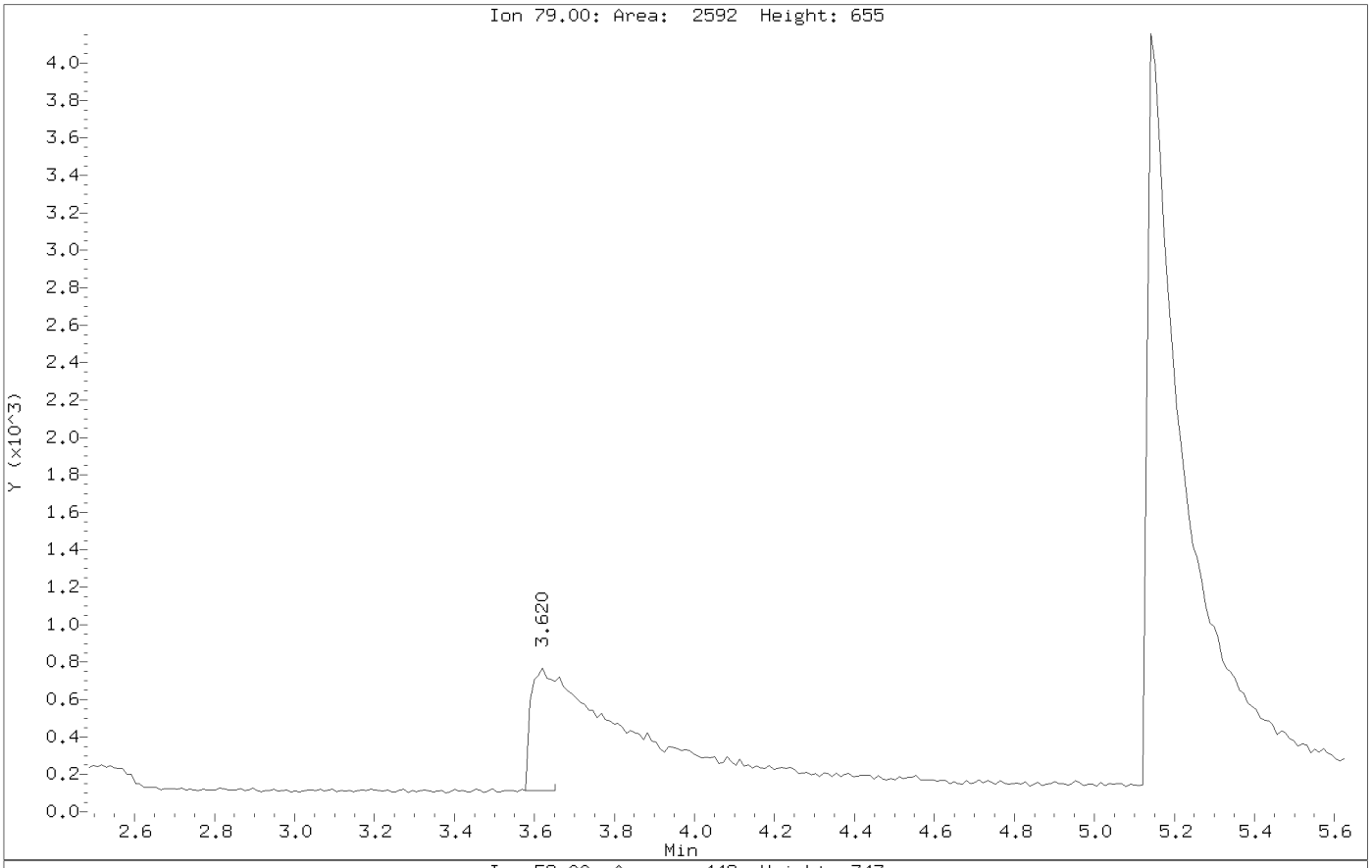

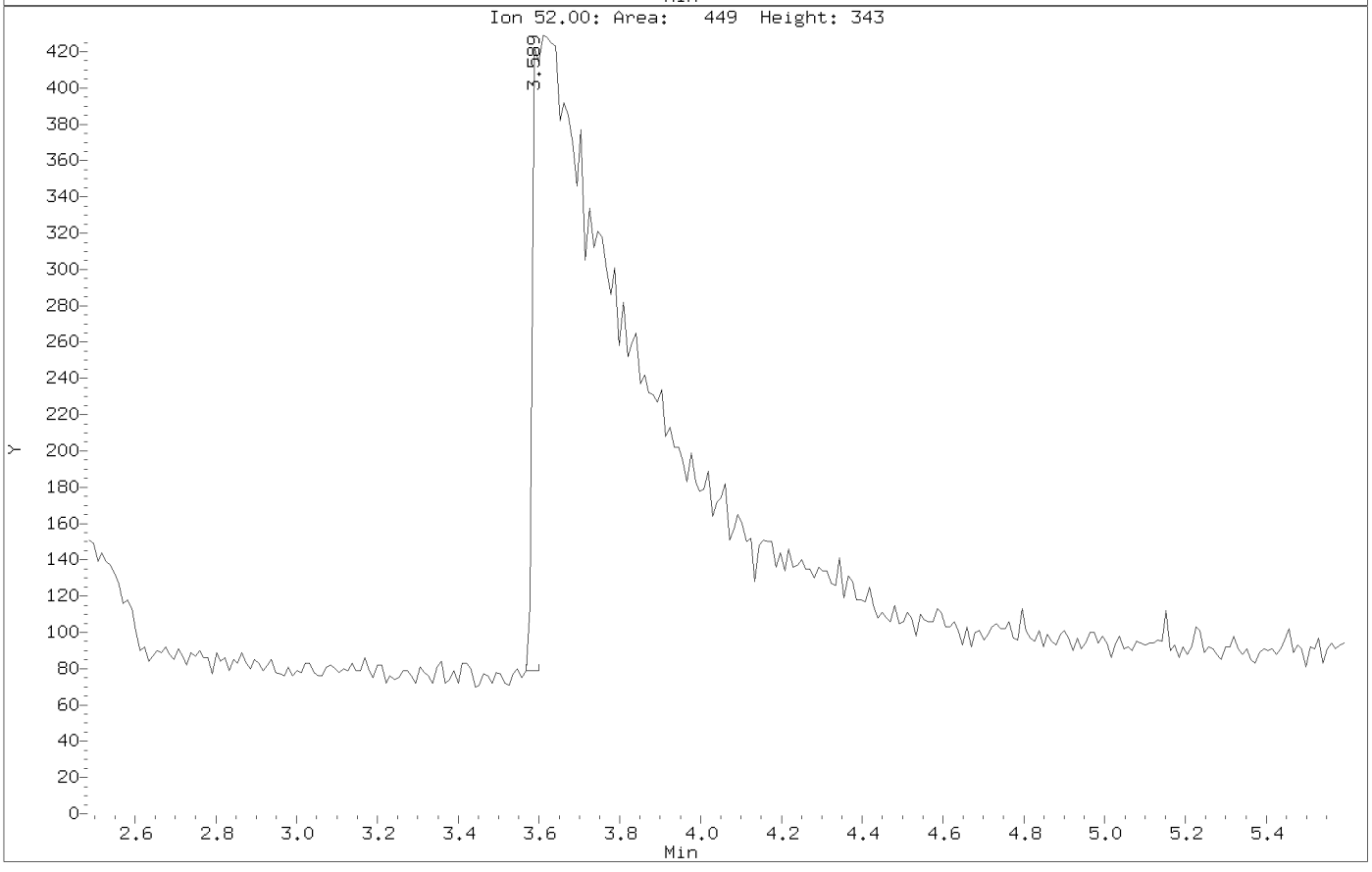

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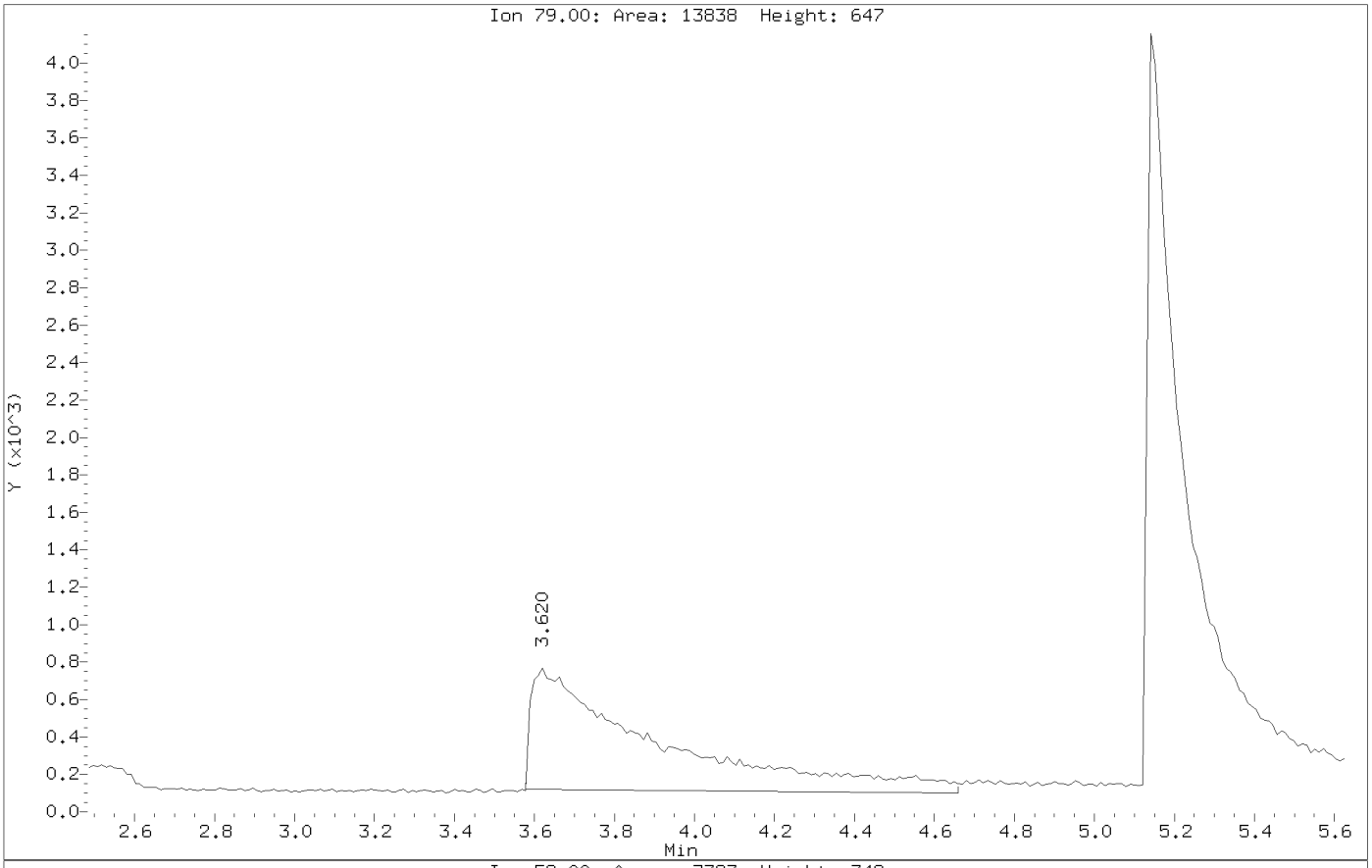
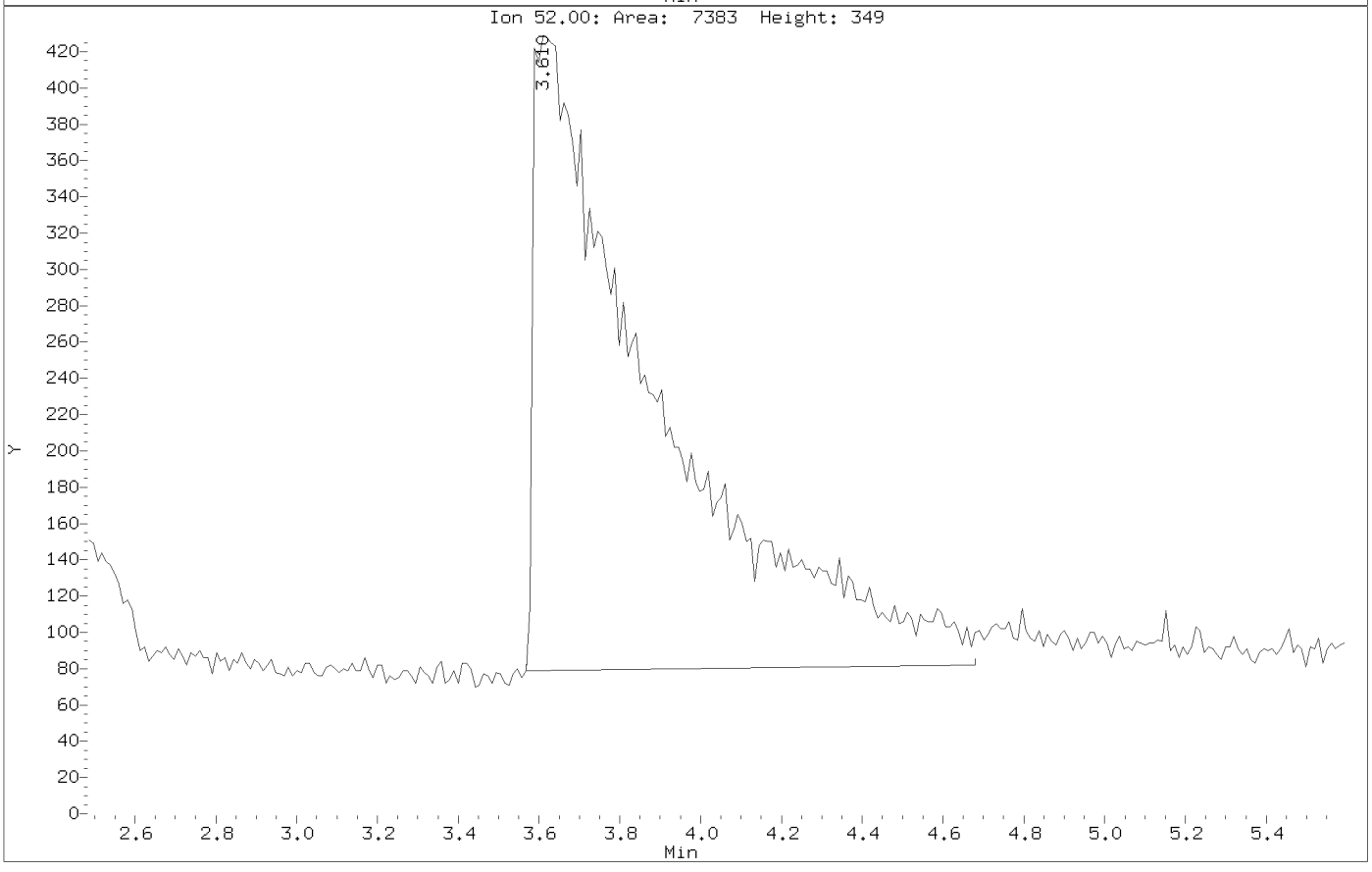
Instrument: gcms-n.i
Client Sample ID:

Compound: Pyridine
CAS Number: 110-86-1

AFTER MANUAL INTEGRATION





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Instrument: gcms-n.i
Client Sample ID:

Compound: 4-Chloroaniline
CAS Number: 106-47-8

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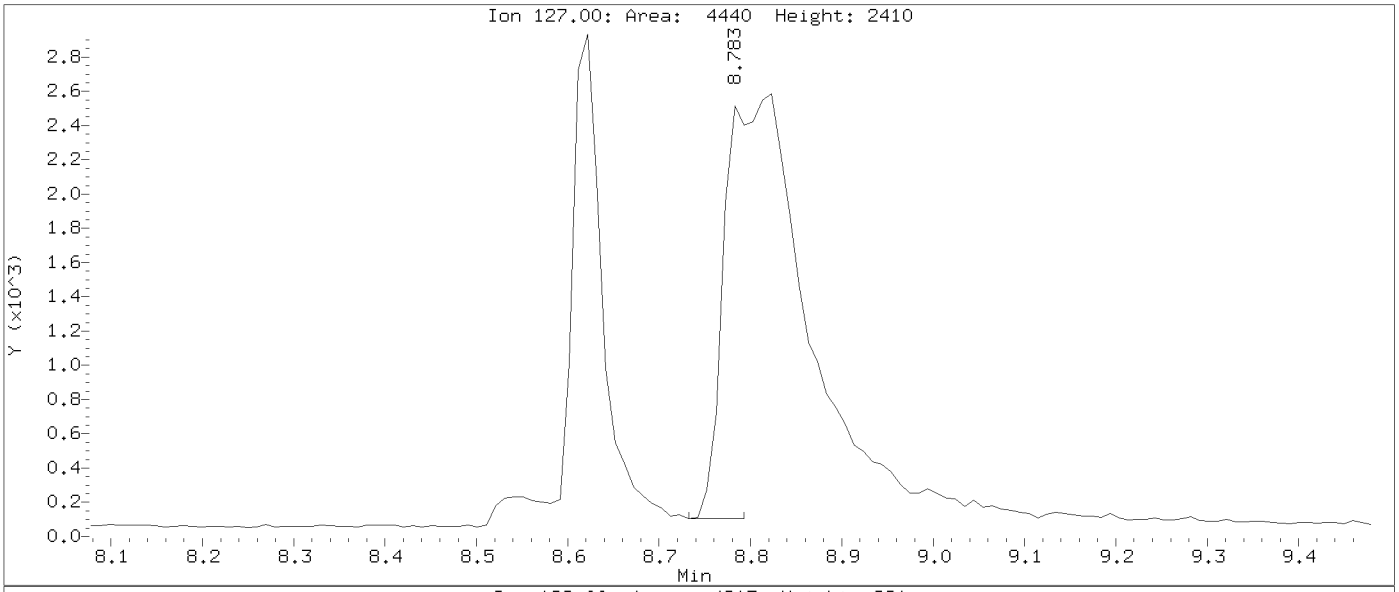

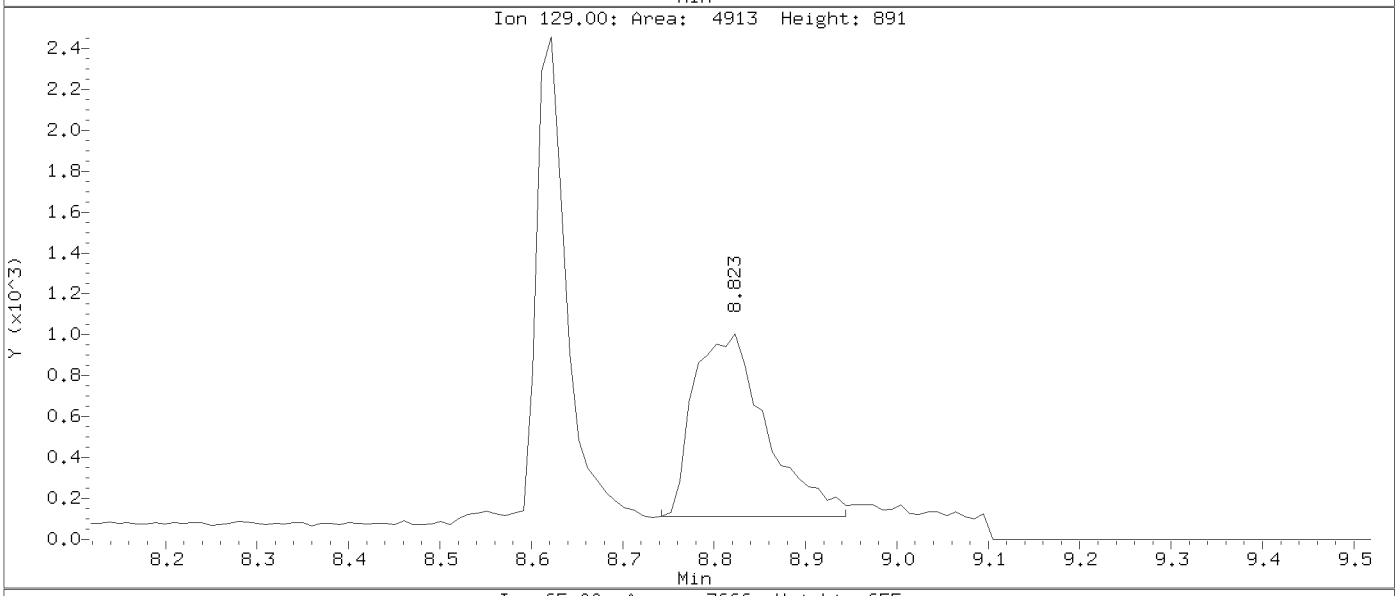

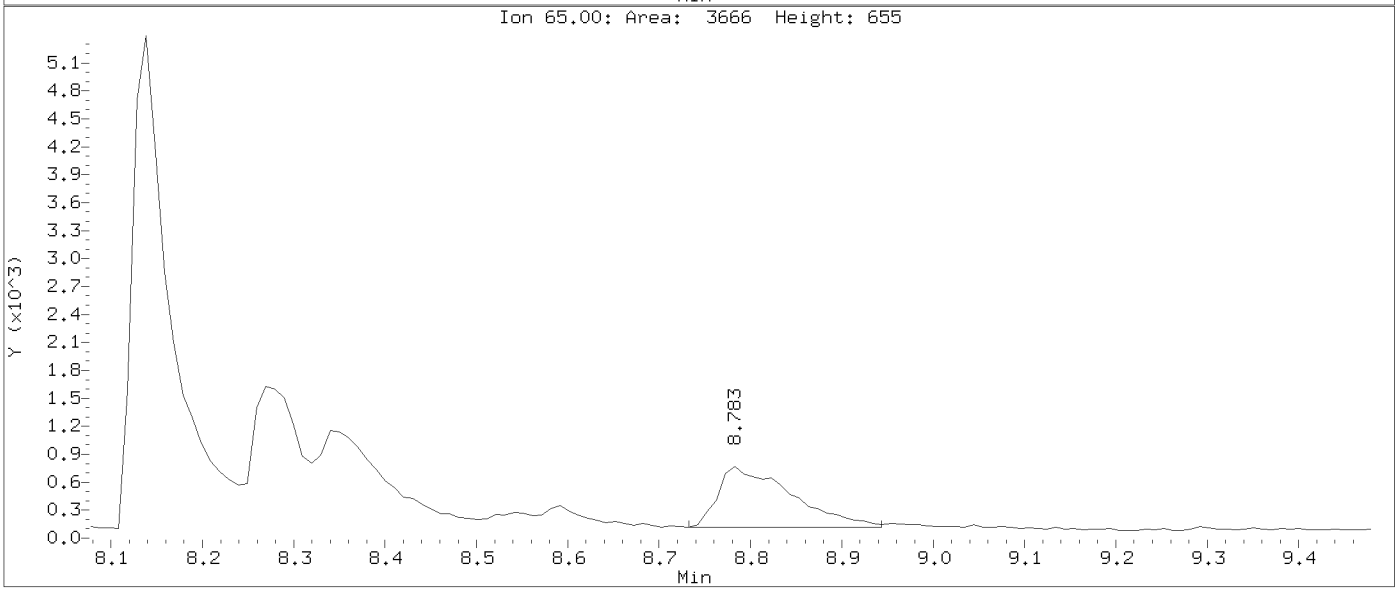

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Instrument: gcms-n.i
Client Sample ID:

Compound: 4-Chloroaniline
CAS Number: 106-47-8

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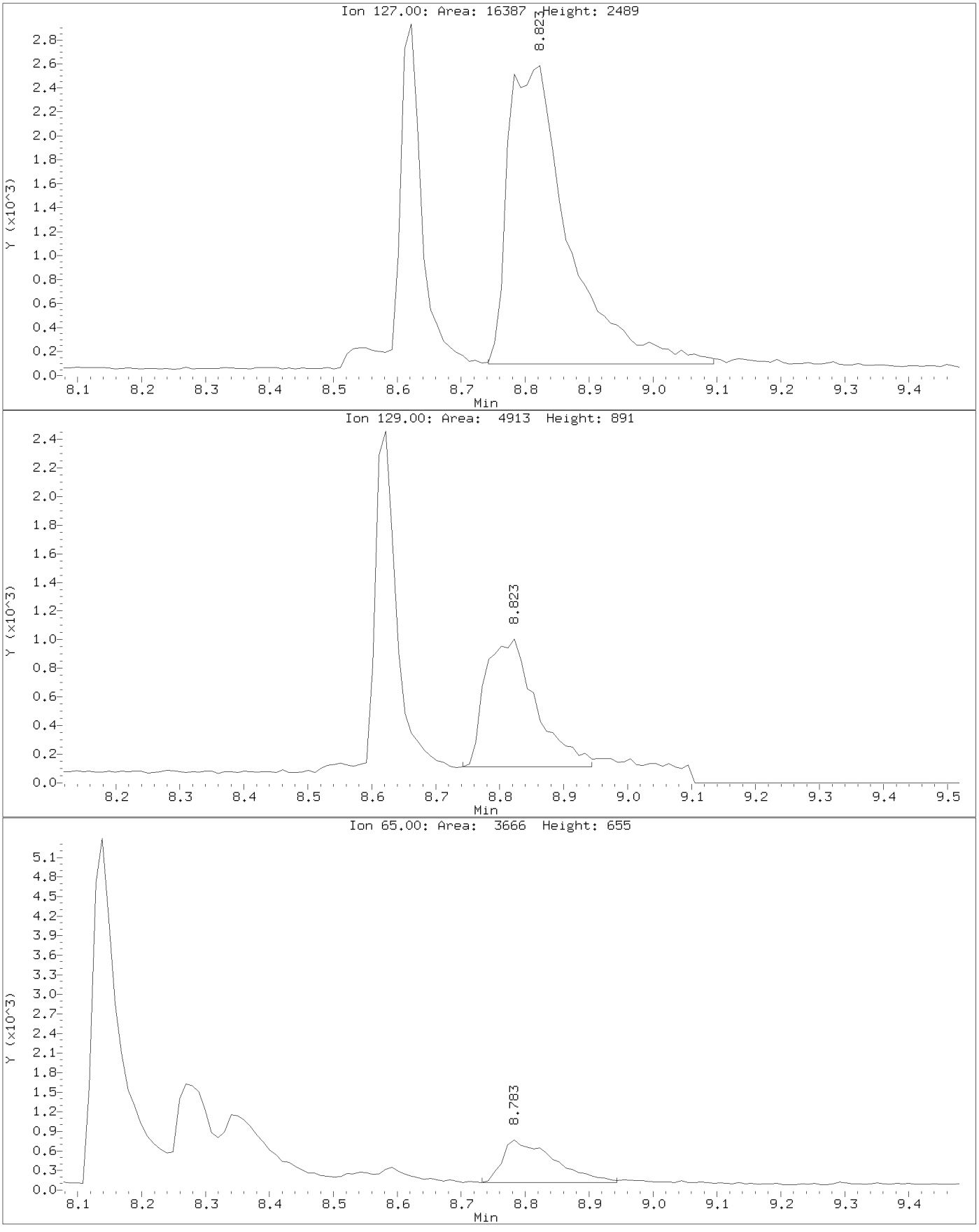

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Instrument: gcms-n.i
Client Sample ID:

Compound: Caprolactam
CAS Number: 105-60-2

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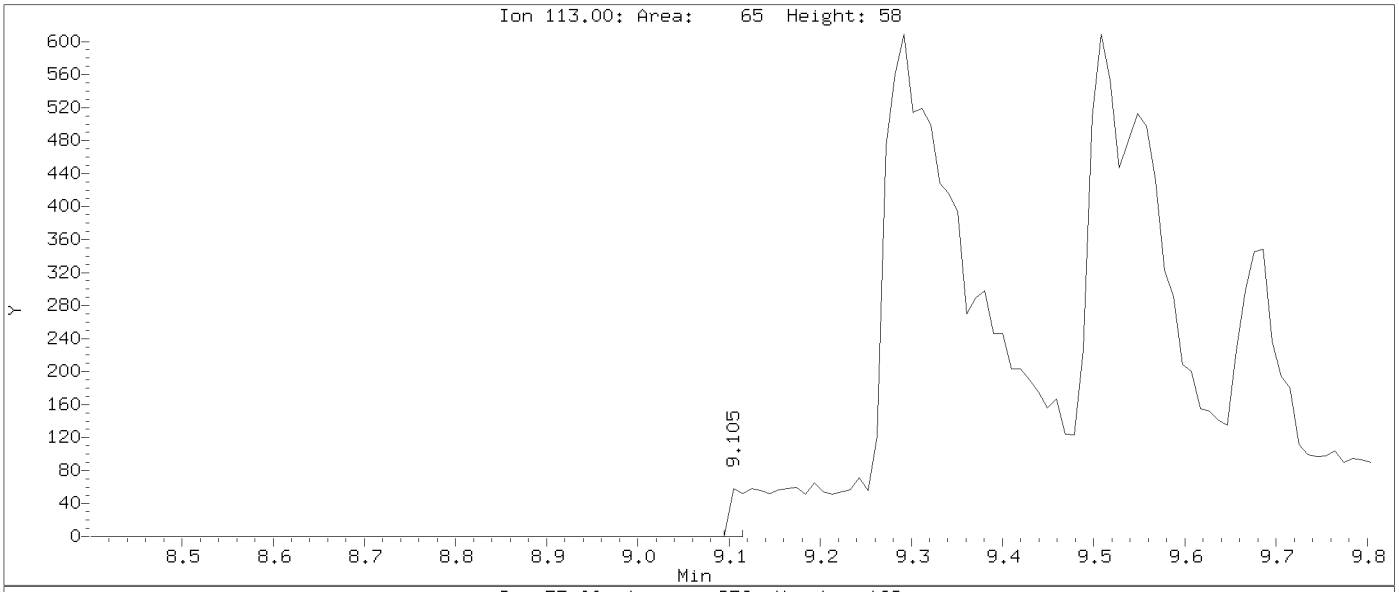

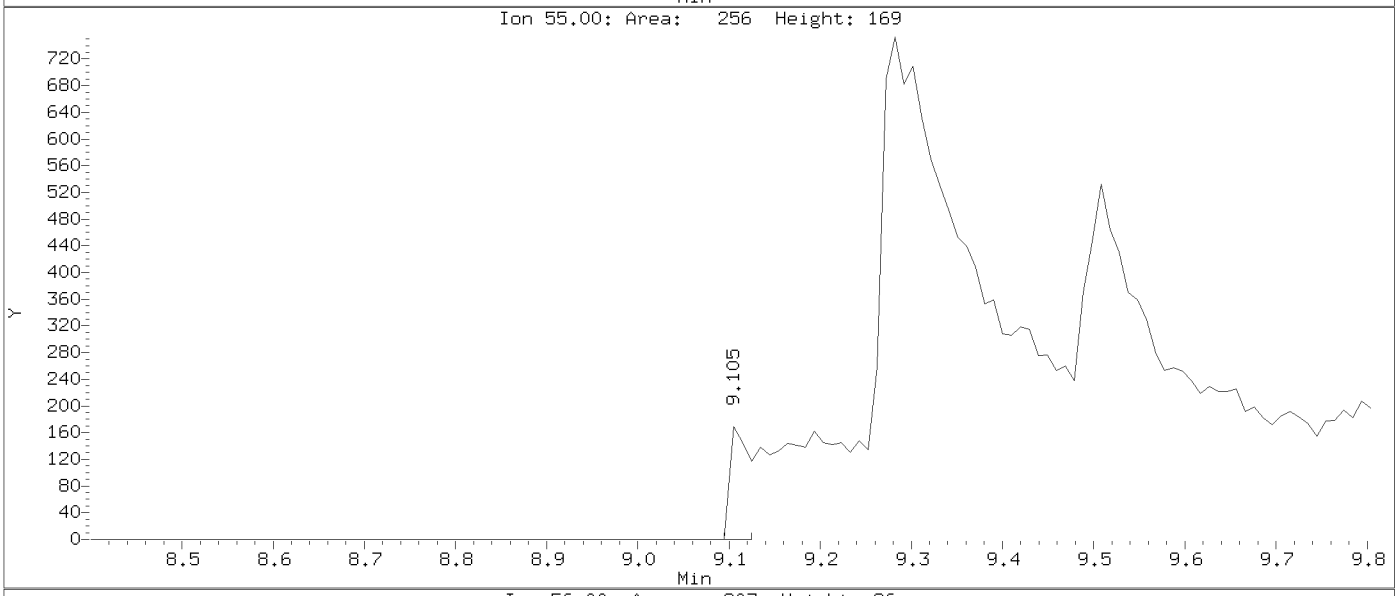

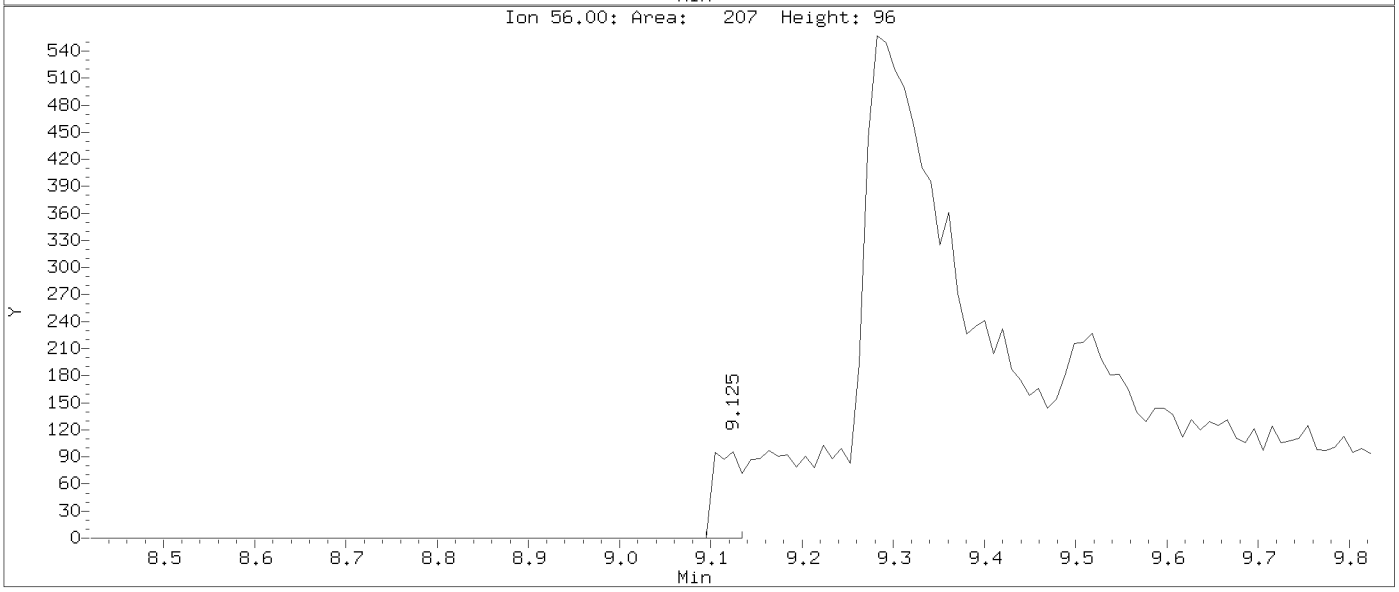

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Client Sample ID:

Compound: Caprolactam
CAS Number: 105-60-2

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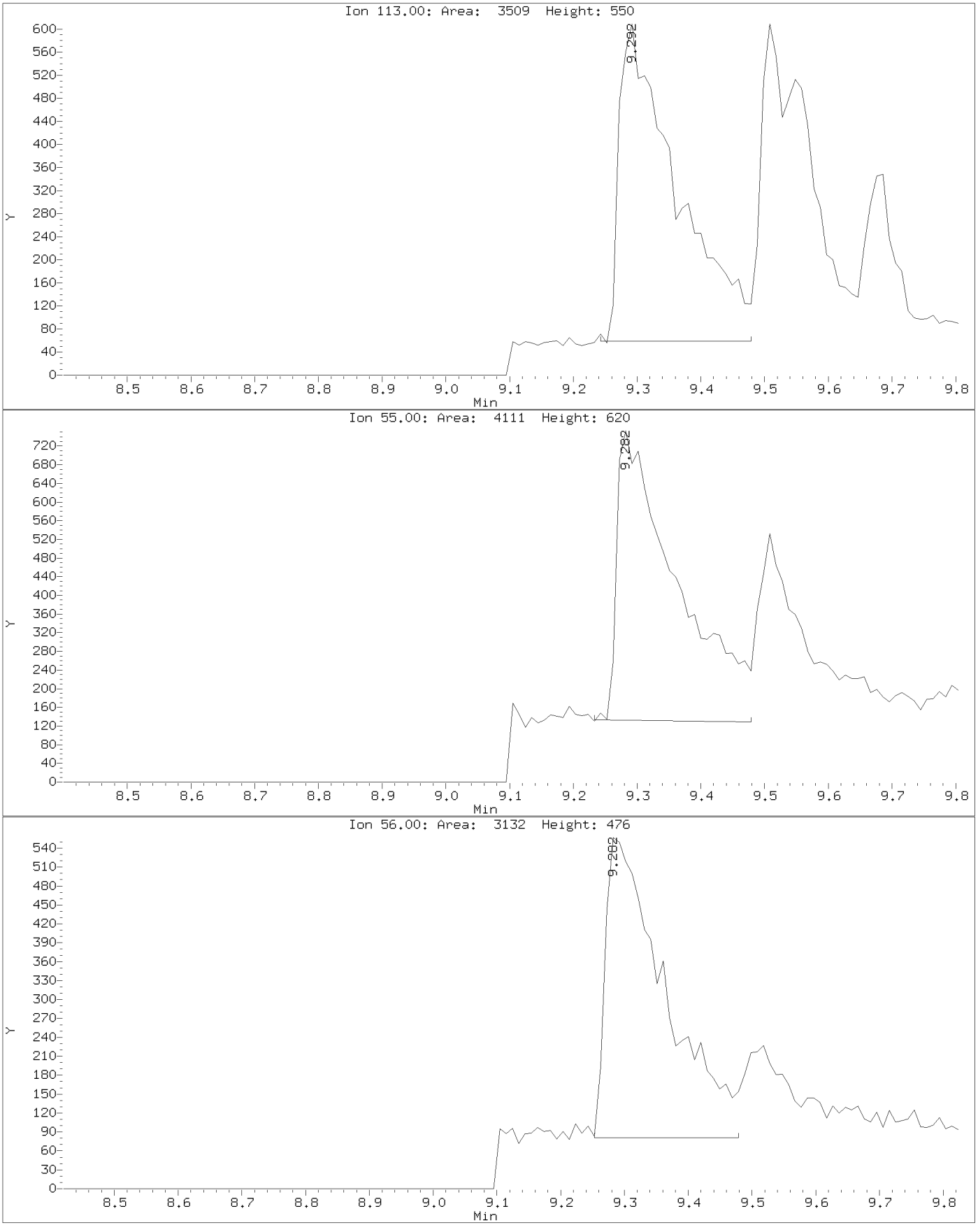

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Injection Date: 21-MAR-2018 12:02
Instrument: gcms-n.i
Client Sample ID:

Compound: 4-Nitroaniline
CAS Number: 100-01-6

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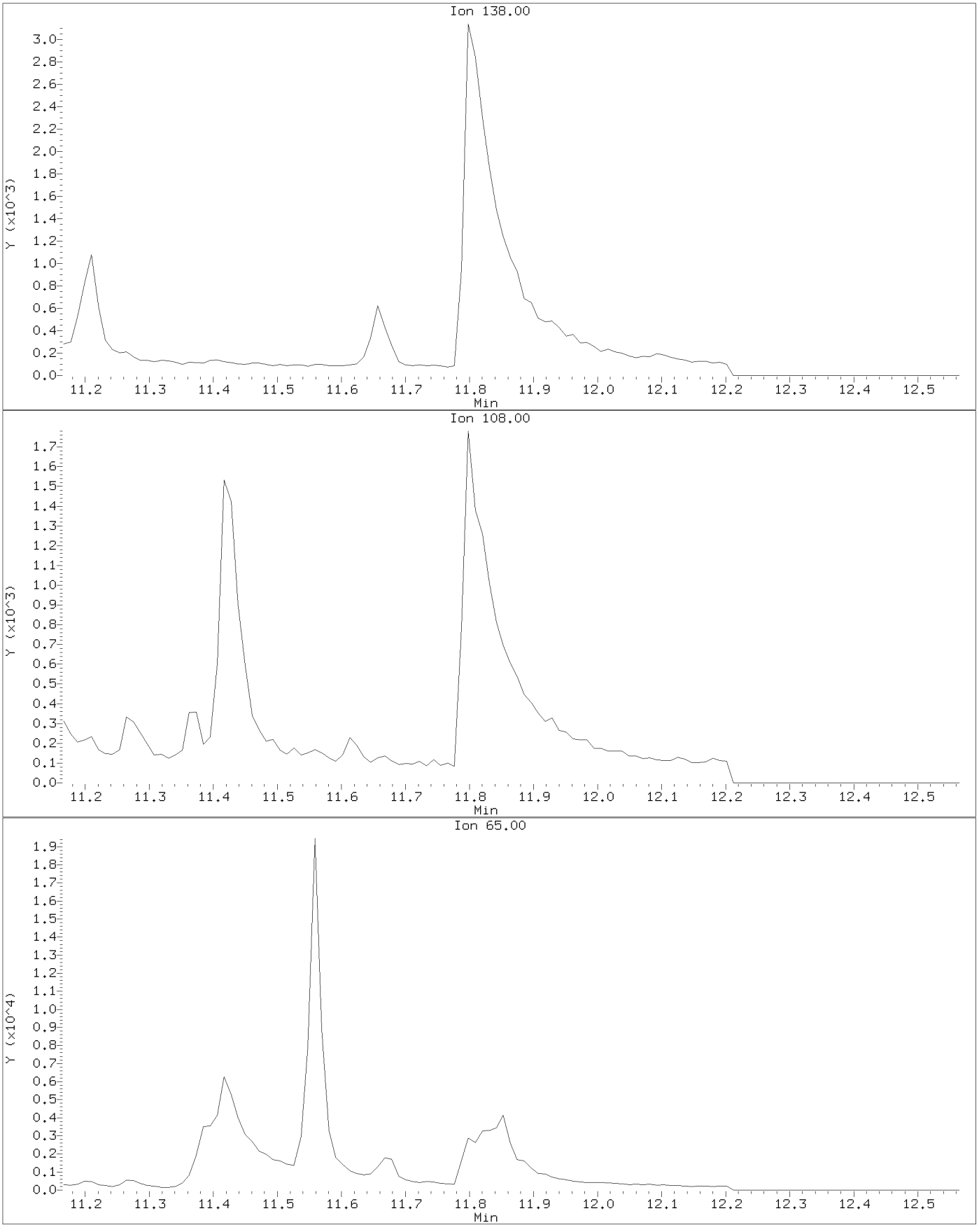

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Client Sample ID:

Compound: 4-Nitroaniline
CAS Number: 100-01-6

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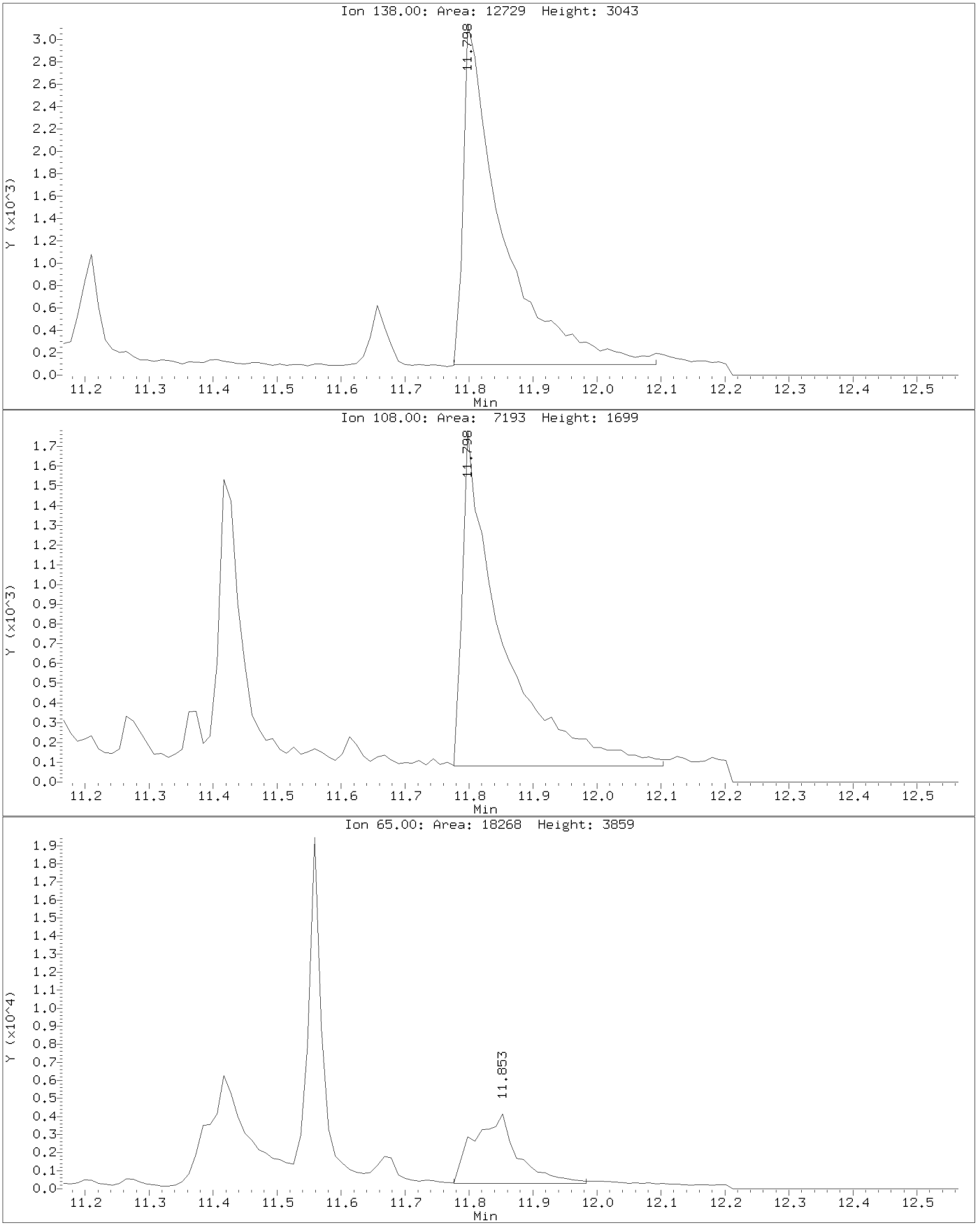

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Injection Date: 21-MAR-2018 13:37
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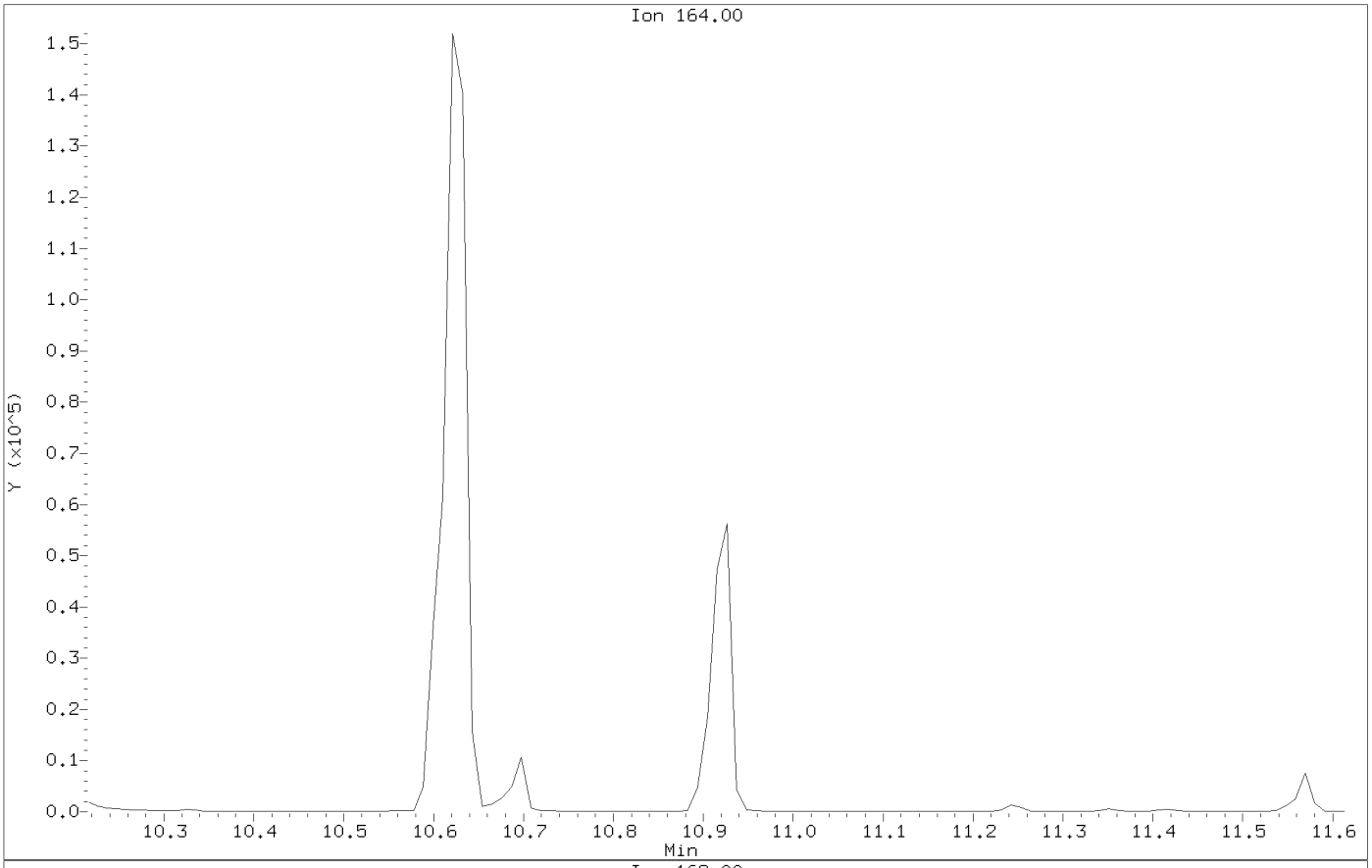
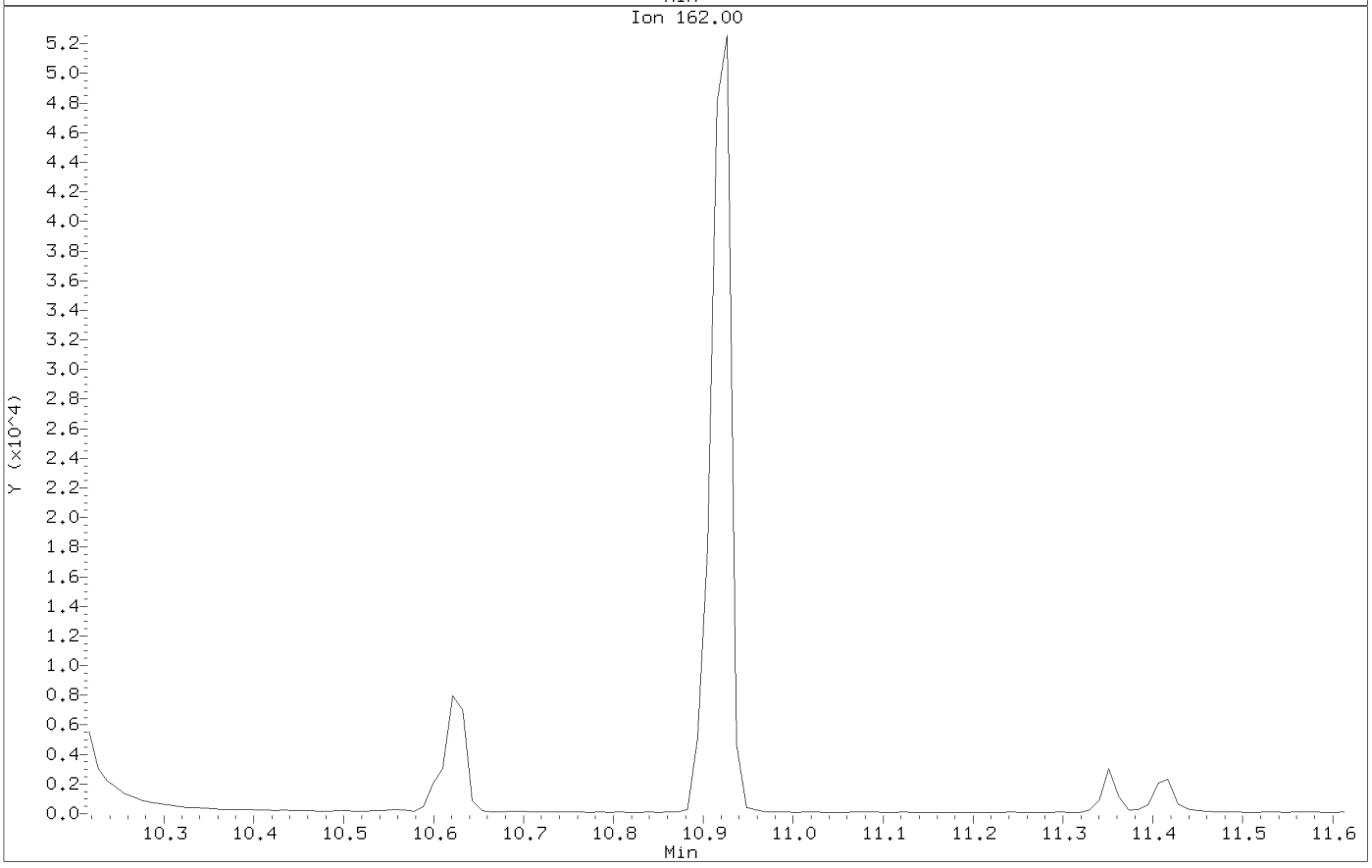
Client Sample ID:

Compound: Acenaphthene-D10
CAS Number: 15067-26-2

BEFORE MANUAL INTEGRATION





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Client Sample ID:

Compound: Acenaphthene-D10
CAS Number: 15067-26-2

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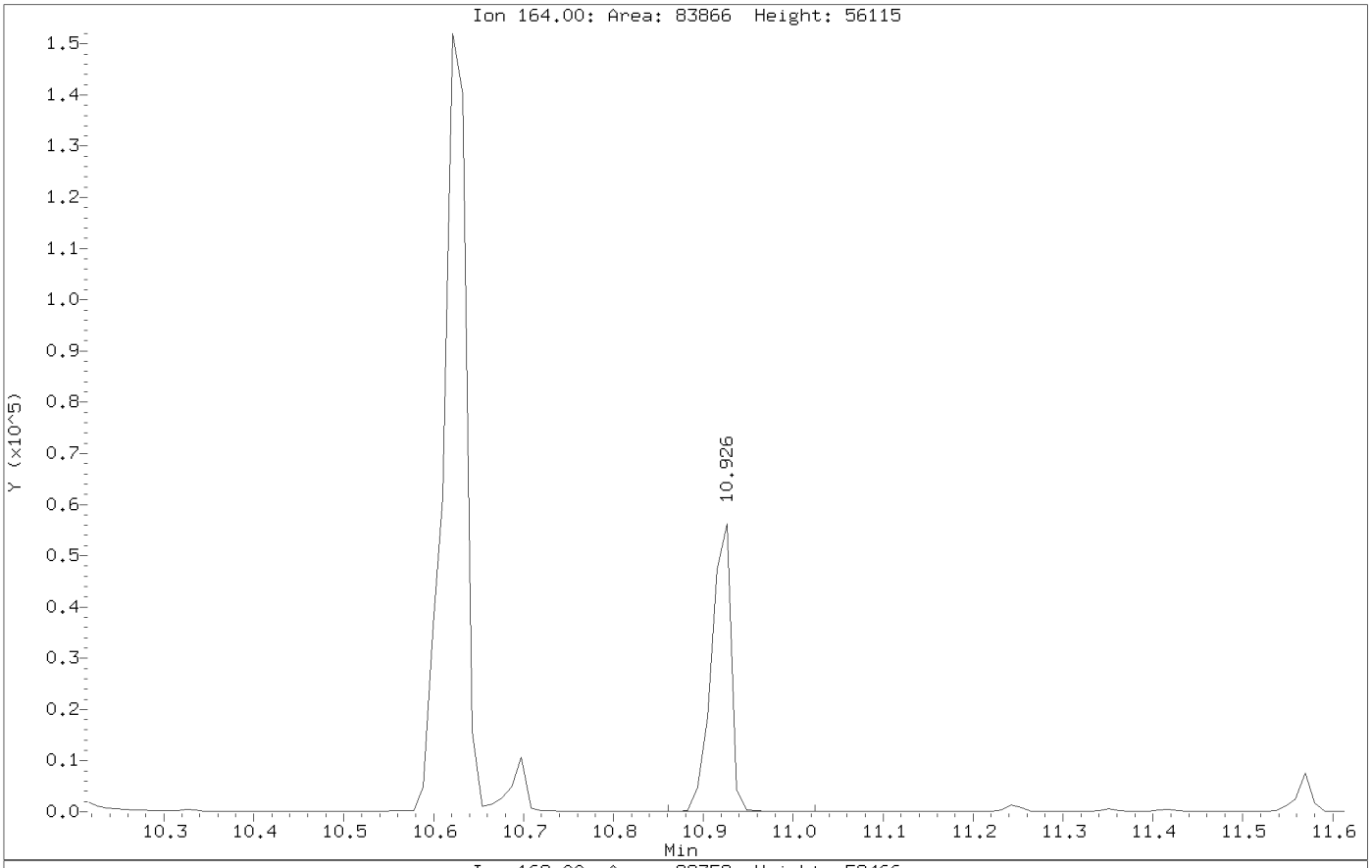
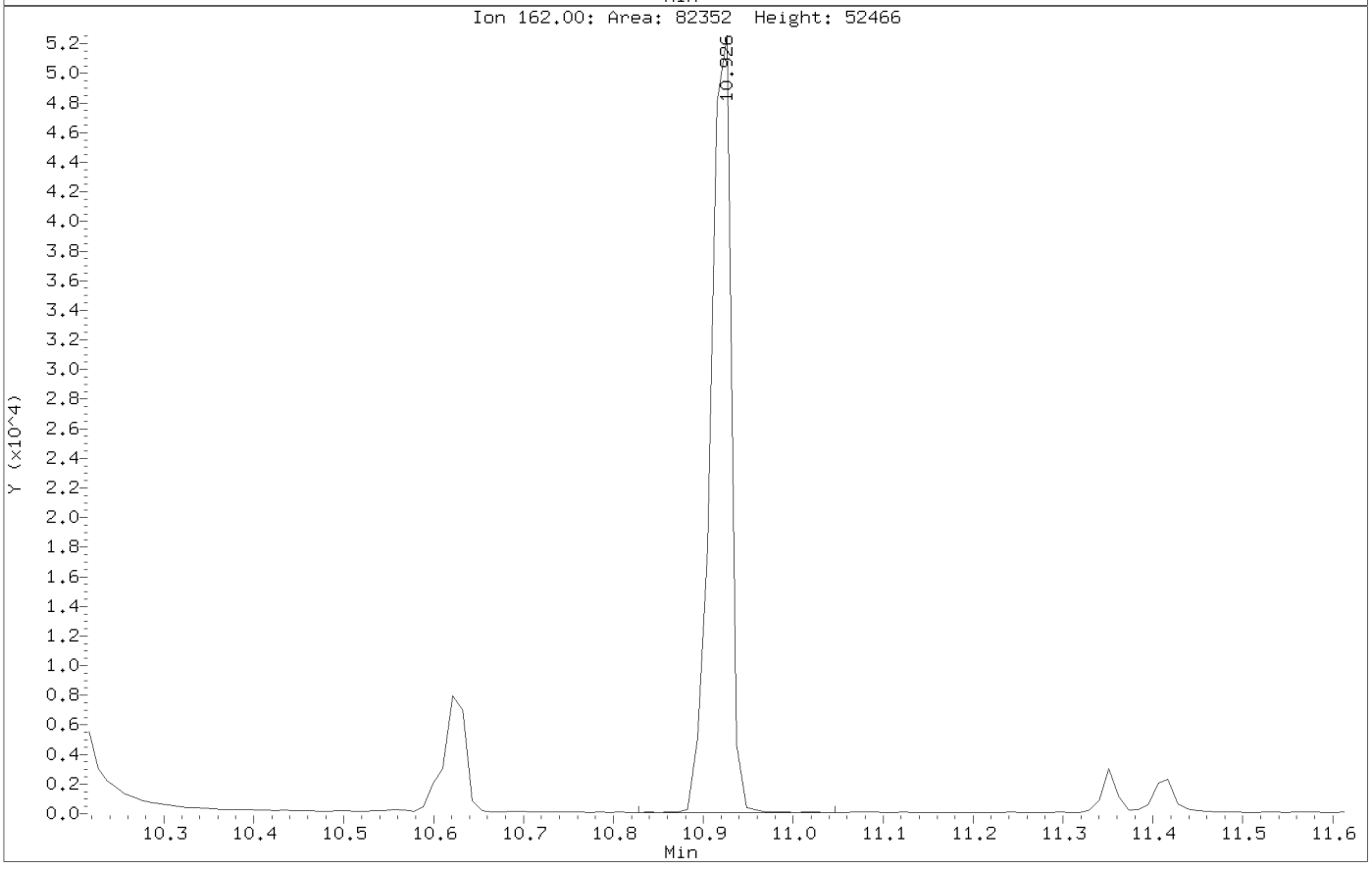




Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG225084-2
Lab File ID : N8024.D
Initial Calibration Date(s): 03/16/18 11:59 03/16/18 14:38

SDG: SL2079
Analytical Date: 03/20/18 10:39
Instrument ID: GCMS-N
Column ID:

	Compound	RRF/Amount	RF2	CCAL RRF2	Min	%D/ %Drift	Max %D/ %Drift	Curve Type	
27	Naphthalene	1.01111	1.05504	1.05504	0.010	4.34479	20.00000	Averaged	
33	2-Methylnaphthalene	2.00000	1.97382	0.77571	0.010	-1.30877	20.00000	Quadratic	
45	Acenaphthylene	2.12228	2.18126	2.18126	0.010	2.77927	20.00000	Averaged	
48	Acenaphthene	1.38593	1.43086	1.43086	0.010	3.24239	20.01000	Averaged	
56	Fluorene	1.42266	1.46328	1.46328	0.010	2.85503	20.00000	Averaged	
66	Phenanthrene	1.23601	1.26094	1.26094	0.010	2.01643	20.00000	Averaged	
67	Anthracene	1.38106	1.27576	1.27576	0.010	-7.62492	20.00000	Averaged	
70	Fluoranthene	1.16197	1.01015	1.01015	0.010	-13.06537	20.01000	Averaged	
72	Pyrene	2.46105	3.01423	3.01423	0.010	22.47727	20.00000	Averaged	*
74	Benzo(a)anthracene	1.40030	1.38082	1.38082	0.010	-1.39104	20.00000	Averaged	
77	Chrysene	2.00000	2.08563	1.60069	0.010	4.28174	20.00000	Linear	
80	Benzo(b)fluoranthene	1.32852	1.19689	1.19689	0.010	-9.90765	20.00000	Averaged	
81	Benzo(k)fluoranthene	1.83600	1.87498	1.87498	0.010	2.12335	20.00000	Averaged	
82	Benzo(a)pyrene	1.32739	1.23064	1.23064	0.010	-7.28886	20.01000	Averaged	
85	Indeno(1,2,3-cd)pyrene	0.95733	0.77153	0.77153	0.010	-19.40853	20.00000	Averaged	
86	Dibenzo(a,h)anthracene	0.91800	0.74483	0.74483	0.010	-18.86344	20.00000	Averaged	
87	Benzo(g,h,i)perylene	1.15375	1.01361	1.01361	0.010	-12.14628	20.00000	Averaged	
32	2-Methylnaphthalene-D10	0.47066	0.49864	0.49864	0.010	5.94516	20.00000	Averaged	
55	Fluorene-D10	0.98542	0.98633	0.98633	0.010	0.09207	20.00000	Averaged	
71	Pyrene-D10	1.41288	1.71770	1.71770	0.010	21.57425	20.00000	Averaged	*

*** = Compound out of QC criteria**

Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8024.D
Report Date: 26-Mar-2018 13:03

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N032018.b\N8024.D
Lab Smp Id: WG225084-2
Inj Date : 20-MAR-2018 10:39
Operator : JCG   Inst ID: gcms-n.i
Smp Info : WG225084-2,SL2079
Misc Info : WG225084,WG225084,WG224895-4,SL2079-2
Comment   :
Method   : \\target_server\gg\chem\gcms-n.i\N032018.b\NSPSIM86.m
Meth Date : 21-Mar-2018 08:53 cgomez   Quant Type: ISTD
Cal Date : 16-MAR-2018 14:38   Cal File: N7973.D
Als bottle: 2   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: ati-corn-aap.sub
Target Version: 4.12
Processing Host: V200T4

Concentration Formula: Amt * DF * (Vt/Ws*Vi)*(100/(100-M))*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Final Volume (L)
Ws	0.03000	Weight of Sample (Kg)
Vi	1.000	Volume injected (uL)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

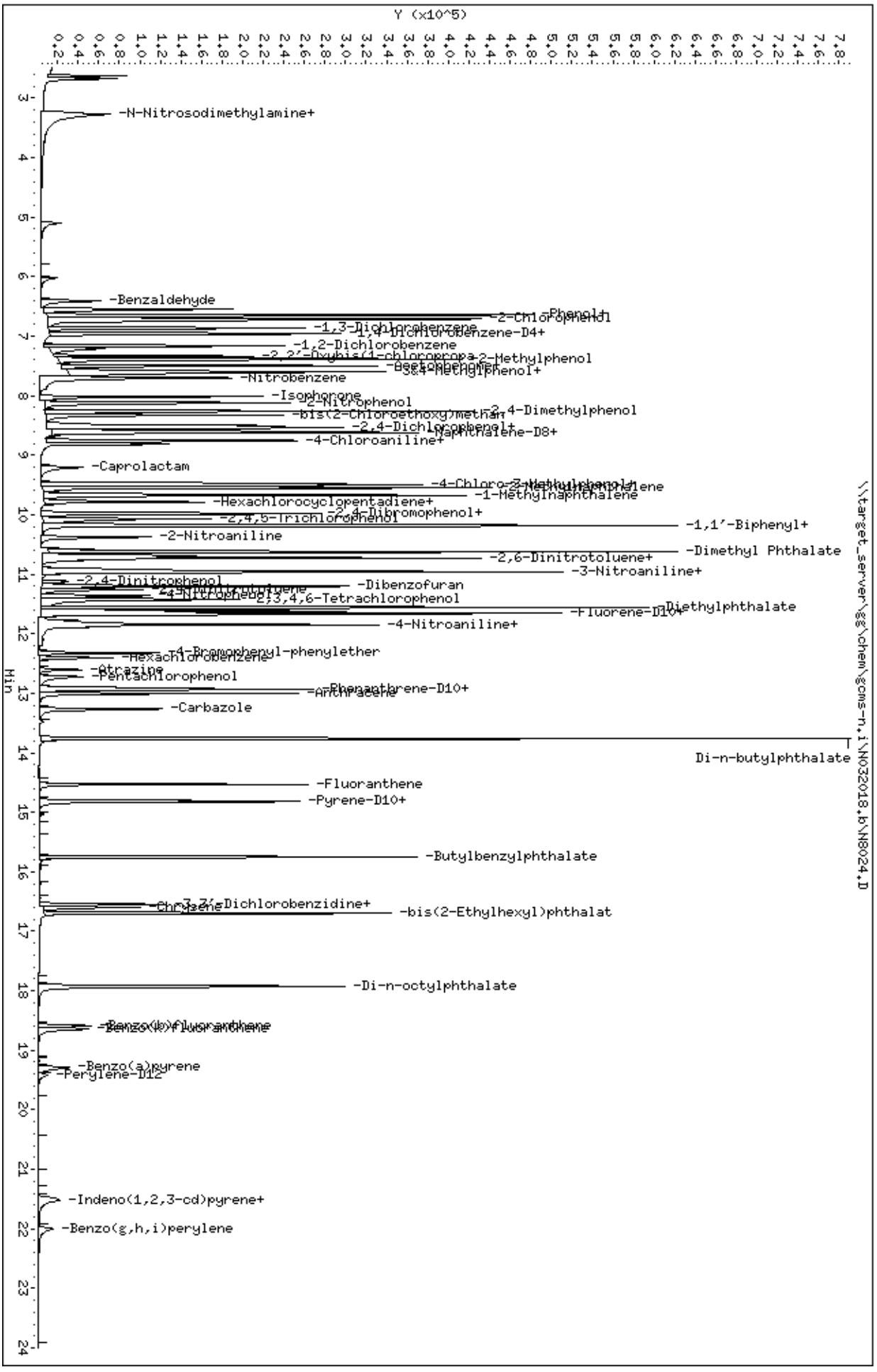
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
* 10 1,4-Dichlorobenzene-D4	152	6.940	6.940	(1.000)	49920	0.80000	(a)	
* 26 Naphthalene-D8	136	8.591	8.591	(1.000)	161126	0.80000	(a)	
27 Naphthalene	128	8.621	8.611	(1.004)	424985	2.00000	2.09	
$ 32 2-Methylnaphthalene-D10	152	9.508	9.508	(1.107)	200859	2.00000	2.12	
33 2-Methylnaphthalene	142	9.547	9.547	(1.111)	312468	2.00000	1.97	
45 Acenaphthylene	152	10.730	10.730	(0.982)	365372	2.00000	2.06	
* 47 Acenaphthene-D10	164	10.926	10.926	(1.000)	67002	0.80000	(a)	
48 Acenaphthene	153	10.959	10.959	(1.003)	239677	2.00000	2.06	
$ 55 Fluorene-D10	174	11.623	11.623	(1.064)	165215	2.00000	2.00	
56 Fluorene	166	11.656	11.656	(1.067)	245107	2.00000	2.06	
* 65 Phenanthrene-D10	188	12.906	12.906	(1.000)	93335	0.80000	(a)	
66 Phenanthrene	178	12.927	12.927	(1.002)	294224	2.00000	2.04	
67 Anthracene	178	13.002	13.002	(1.007)	297682	2.00000	1.85	
70 Fluoranthene	202	14.527	14.527	(1.126)	235707	2.00000	1.74	
$ 71 Pyrene-D10	212	14.799	14.799	(0.894)	134702	2.00000	2.43	
72 Pyrene	202	14.818	14.827	(0.895)	236376	2.00000	2.45	
74 Benzo(a)anthracene	228	16.544	16.544	(0.999)	108284	2.00000	1.97(H)	
* 76 Chrysene-D12	240	16.554	16.563	(1.000)	31368	0.80000	(a)	
77 Chrysene	228	16.601	16.601	(1.003)	125526	2.00000	2.08	
80 Benzo(b)fluoranthene	252	18.582	18.582	(0.957)	70464	2.00000	1.80	

Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8024.D
Report Date: 26-Mar-2018 13:03

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
81	Benzo(k)fluoranthene	252	18.639	18.639	(0.960)	110385	2.00000	2.04(H)	
82	Benzo(a)pyrene	252	19.286	19.286	(0.993)	72451	2.00000	1.85	
* 83	Perylene-D12	264	19.423	19.422	(1.000)	23549	0.80000	(a)	
85	Indeno(1,2,3-cd)pyrene	276	21.490	21.489	(1.298)	60503	2.00000	1.61	
86	Dibenzo(a,h)anthracene	278	21.524	21.523	(1.108)	43850	2.00000	1.62	
87	Benzo(g,h,i)perylene	276	22.001	22.012	(1.133)	59674	2.00000	1.76	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
H - Operator selected an alternate compound hit.


Data File: \\target_server\gg\chem\gcms-n,i\N032018,b\N8024.D
Date : 20-MAR-2018 10:39
Client ID:
Sample Info: WG225084-2,SL2079
Volume Injected (uL): 1.0
Column phase: ZB5-MS
Instrument: gcms-n,i
Operator: JCG
Column diameter: 0.25
\\target_server\gg\chem\gcms-n,i\N032018,b\N8024.D
Y (x10^5)
Min
-N-Nitrosodimethylamine+
-Benzaldehyde
-Phenol
-2-Chlorophenol
-1,3-Dichlorobenzene
-1,4-Dichlorobenzene-D4+
-1,2-Dichlorobenzene
-2,2'-Oxybis(1-chloropropa
-2-Methylphenol
-Acetophenone
-3&4-Methylphenol+
-Nitrobenzene
-Isophorone
-2-Nitrophenol
-bis(2-Chloroethoxy)methan
-2,4-Dimethylphenol
-2,4-Dichlorophenol+
-Naphthalene-D8+
-4-Chloroaniline+
-Caprolactam
-4-Chloro-3-Methylphenol
-2-Methylnaphthalene
-1-Methylnaphthalene
-Hexachlorocyclopentadiene+
-2,4-Dibromophenol+
-2,4,5-Trichlorophenol
-1,1'-Biphenyl+
-2-Nitroaniline
-Dimethyl Phthalate
-2,6-Dinitrotoluene+
-3-Nitroaniline+
-2,4-Dinitrophenol
-Dibenzofuran
-4-Nitrophenol
-2,3,4,6-Tetrachlorophenol
-Diethylphthalate
-Fluorene-D10+
-4-Nitroaniline+
-4-Bromophenyl-phenylether
-Hexachlorobenzene
-Atrazine
-Pentachlorophenol
-Phenanthrene-D10+
-Anthracene
-Carbazole
Di-n-butylphthalate
-Fluoranthene
-Pyrene-D10+
-Butylbenzylphthalate
-3,3'-Dichlorobenzidine+
-Chrysene
-bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(b)fluoranthene
-Benzo(k)fluoranthene
-Benzo(a)pyrene
-Perylene-D12
-Indeno(1,2,3-cd)pyrene+
-Benzo(g,h,i)perylene

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL2079
Lab ID : WG225084-3
Analytical Date: 03/20/18 21:48
Lab File ID : N8045.D
Instrument ID: GCMS-N
Initial Calibration Date(s): 03/16/18 11:59 03/16/18 14:38
Column ID:

Compound	RRF/Amount	RF2	CCAL RRF2	Min	%D/ %Drift	Max %D/ %Drift	Curve Type	
27 Naphthalene	1.01111	1.03905	1.03905	0.010	2.76404	20.00000	Averaged	
33 2-Methylnaphthalene	2.00000	2.02083	0.79307	0.010	1.04169	20.00000	Quadratic	
45 Acenaphthylene	2.12228	2.18736	2.18736	0.010	3.06664	20.00000	Averaged	
48 Acenaphthene	1.38593	1.41466	1.41466	0.010	2.07331	20.01000	Averaged	
56 Fluorene	1.42266	1.43869	1.43869	0.010	1.12658	20.00000	Averaged	
66 Phenanthrene	1.23601	1.24024	1.24024	0.010	0.34174	20.00000	Averaged	
67 Anthracene	1.38106	1.29799	1.29799	0.010	-6.01497	20.00000	Averaged	
70 Fluoranthene	1.16197	1.11911	1.11911	0.010	-3.68900	20.01000	Averaged	
72 Pyrene	2.46105	2.26121	2.26121	0.010	-8.12019	20.00000	Averaged	
74 Benzo(a)anthracene	1.40030	1.37260	1.37260	0.010	-1.97789	20.00000	Averaged	
77 Chrysene	2.00000	1.96806	1.51955	0.010	-1.59708	20.00000	Linear	
80 Benzo(b)fluoranthene	1.32852	1.40539	1.40539	0.010	5.78610	20.00000	Averaged	
81 Benzo(k)fluoranthene	1.83600	1.81215	1.81215	0.010	-1.29924	20.00000	Averaged	
82 Benzo(a)pyrene	1.32739	1.24622	1.24622	0.010	-6.11523	20.01000	Averaged	
85 Indeno(1,2,3-cd)pyrene	0.95733	0.66387	0.66387	0.010	-30.65431	20.00000	Averaged	*
86 Dibenzo(a,h)anthracene	0.91800	0.70540	0.70540	0.010	-23.15902	20.00000	Averaged	*
87 Benzo(g,h,i)perylene	1.15375	0.90710	0.90710	0.010	-21.37798	20.00000	Averaged	*
32 2-Methylnaphthalene-D10	0.47066	0.49469	0.49469	0.010	5.10662	20.00000	Averaged	
55 Fluorene-D10	0.98542	0.97017	0.97017	0.010	-1.54739	20.00000	Averaged	
71 Pyrene-D10	1.41288	1.29109	1.29109	0.010	-8.62034	20.00000	Averaged	

*** = Compound out of QC criteria**

Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8045.D
Report Date: 26-Mar-2018 13:04

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N032018.b\N8045.D
Lab Smp Id: WG225084-3
Inj Date : 20-MAR-2018 21:48 MS Autotune Date: 25-OCT-2017 07:54
Operator : JCG Inst ID: gcms-n.i
Smp Info : WG225084-3,SL2079
Misc Info : WG225084,WG225084,WG224895-4,SL2079-2
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N032018.b\NSPSIM86.m
Meth Date : 21-Mar-2018 08:53 cgomez Quant Type: ISTD
Cal Date : 16-MAR-2018 14:38 Cal File: N7973.D
Als bottle: 23 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ati-corn-aap.sub
Target Version: 4.12
Processing Host: V200T4

Concentration Formula: Amt * DF * (Vt/Ws*Vi)*(100/(100-M))*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Final Volume (L)
Ws	0.03000	Weight of Sample (Kg)
Vi	1.000	Volume injected (uL)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

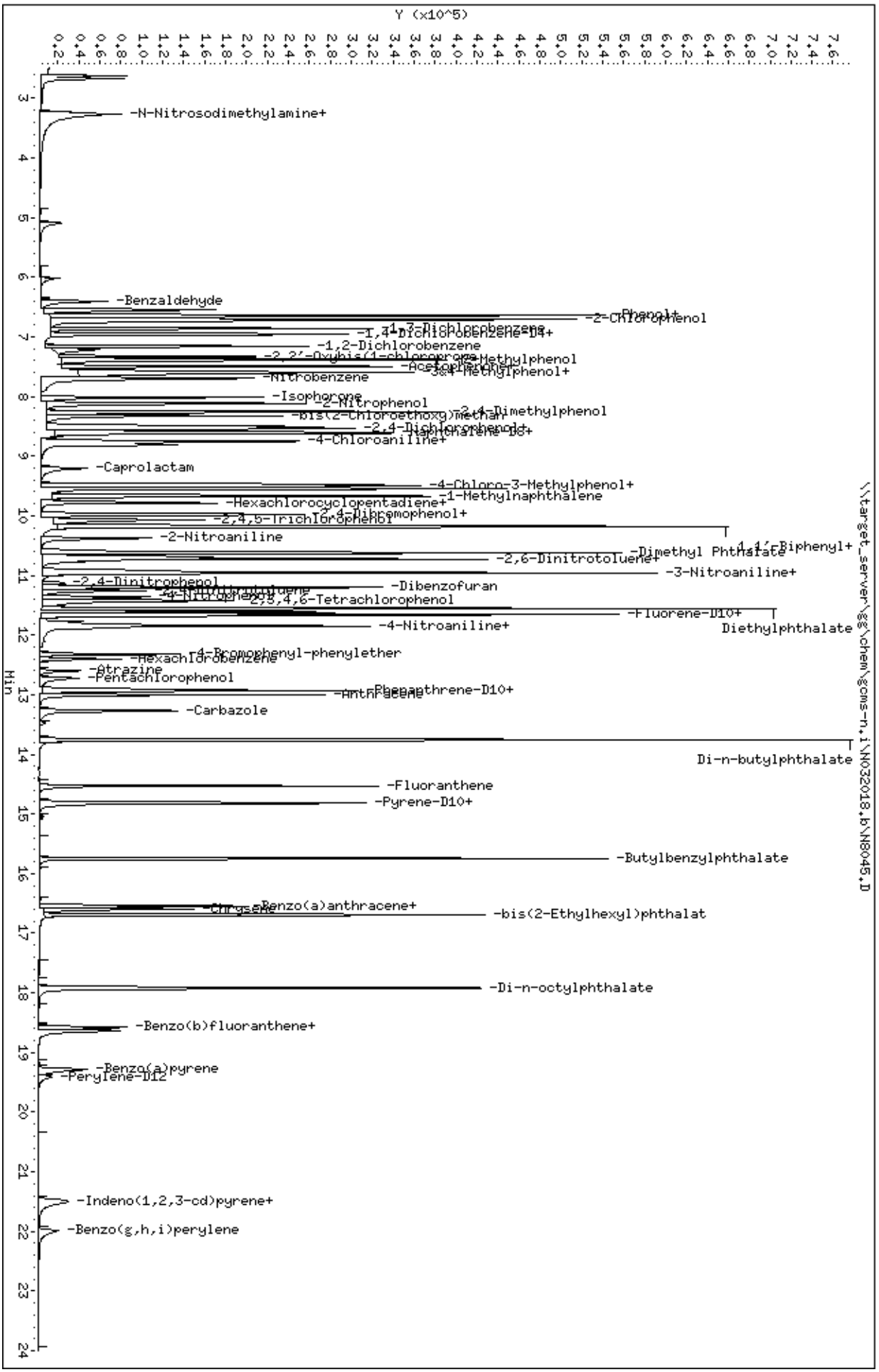
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
*	10 1,4-Dichlorobenzene-D4	152	6.940	6.940	(1.000)	53555	0.80000	(a)	
*	26 Naphthalene-D8	136	8.591	8.591	(1.000)	178719	0.80000	(a)	
	27 Naphthalene	128	8.621	8.611	(1.004)	464247	2.00000	2.06	
$	32 2-Methylnaphthalene-D10	152	9.508	9.508	(1.107)	221027	2.00000	2.10	
	33 2-Methylnaphthalene	142	9.547	9.547	(1.111)	354343	2.00000	2.02	
	45 Acenaphthylene	152	10.730	10.730	(0.983)	398247	2.00000	2.06	
*	47 Acenaphthene-D10	164	10.915	10.926	(1.000)	72827	0.80000	(a)	
	48 Acenaphthene	153	10.959	10.959	(1.004)	257564	2.00000	2.04	
$	55 Fluorene-D10	174	11.623	11.623	(1.065)	176637	2.00000	1.97	
	56 Fluorene	166	11.656	11.656	(1.068)	261939	2.00000	2.02	
*	65 Phenanthrene-D10	188	12.895	12.906	(1.000)	101327	0.80000	(a)	
	66 Phenanthrene	178	12.927	12.927	(1.002)	314174	2.00000	2.01	
	67 Anthracene	178	13.002	13.002	(1.008)	328804	2.00000	1.88	
	70 Fluoranthene	202	14.527	14.527	(1.127)	283489	2.00000	1.93	
$	71 Pyrene-D10	212	14.799	14.799	(0.894)	168264	2.00000	1.83	
	72 Pyrene	202	14.818	14.827	(0.895)	294698	2.00000	1.84	
	74 Benzo(a)anthracene	228	16.535	16.544	(0.999)	178888	2.00000	1.96	
*	76 Chrysene-D12	240	16.554	16.563	(1.000)	52131	0.80000	(a)	
	77 Chrysene	228	16.591	16.601	(1.002)	198039	2.00000	1.97	
	80 Benzo(b)fluoranthene	252	18.571	18.582	(0.957)	126822	2.00000	2.12	

Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8045.D
Report Date: 26-Mar-2018 13:04

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
81	Benzo(k)fluoranthene	252	18.628	18.639	(0.960)	163528	2.00000	1.97(H)	
82	Benzo(a)pyrene	252	19.286	19.286	(0.994)	112459	2.00000	1.88	
* 83	Perylene-D12	264	19.411	19.422	(1.000)	36096	0.80000	(a)	
85	Indeno(1,2,3-cd)pyrene	276	21.478	21.489	(1.297)	86520	2.00000	1.39	
86	Dibenzo(a,h)anthracene	278	21.512	21.523	(1.108)	63655	2.00000	1.54	
87	Benzo(g,h,i)perylene	276	21.989	22.012	(1.133)	81857	2.00000	1.57	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
H - Operator selected an alternate compound hit.


Data File: \\target_server\gg\chem\gcms-n,i\N032018,b\N8045.D
Date : 20-MAR-2018 21:48
Client ID:
Sample Info: WG225084-3,SL2079
Volume Injected (uL): 1.0
Column phase: ZB5-MS
Instrument: gcms-n,i
Operator: JCG
Column diameter: 0.25
\\target_server\gg\chem\gcms-n,i\N032018,b\N8045.D
Y (x10^5)
Min
-N-Nitrosodimethylamine+
-Benzaldehyde
-Phenol+
-2-Chlorophenol
-1,3-Dichlorobenzene
-1,4-Dichlorobenzene-D4+
-1,2-Dichlorobenzene
-2,2'-Oxybis(1-chloropropane
-Acetophenone
-2-Methylphenol
-3&4-Methylphenol+
-Nitrobenzene
-Isophorone
-2-Nitrophenol
-2,4-Dimethylphenol
-bis(2-Chloroethoxy)methan
-2,4-Dichlorophenol+
-Naphthalene-D8+
-4-Chloroaniline+
-Caprolactam
-4-Chloro-3-Methylphenol+
-1-Methylnaphthalene
-Hexachlorocyclopentadiene+
-2,4-Dibromophenol+
-2,4,5-Trichlorophenol
-2-Nitroaniline
-4,4'-Biphenyl+
-Dimethyl Phthalate
-2,6-Dinitrotoluene+
-3-Nitroaniline+
-2,4-Dinitrophenol
-Dibenzofuran
-4-Nitrophenol
-2,3,4,6-Tetrachlorophenol
-Fluorene-D10+
-4-Nitroaniline+
Diethylphthalate
-4-Bromophenyl-phenylether
-Hexachlorobenzene
-Atrazine
-Pentachlorophenol
-Phenanthrene-D10+
-Anthracene
-Carbazole
Di-n-butylphthalate
-Fluoranthene
-Pyrene-D10+
-Butylbenzylphthalate
-Benzo(a)anthracene+
-Chrysene
-bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(b)fluoranthene+
-Benzo(a)pyrene
-Perylene-D12
-Indeno(1,2,3-cd)pyrene+
-Benzo(g,h,i)perylene

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL2079
Lab ID : WG225136-9
Analytical Date: 03/21/18 22:17
Lab File ID : N8072.D
Instrument ID: GCMS-N
Initial Calibration Date(s): 03/21/18 10:57 03/21/18 13:37
Column ID:

Compound	RRF/Amount	RF2	CCAL RRF2	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
27 Naphthalene	1.05713	1.04946	1.04946	0.010	-0.72594	20.00000	Averaged
33 2-Methylnaphthalene	2.00000	2.09184	0.78330	0.010	4.59221	20.00000	Linear
45 Acenaphthylene	2.20175	2.28897	2.28897	0.010	3.96098	20.00000	Averaged
48 Acenaphthene	1.42284	1.43003	1.43003	0.010	0.50502	20.01000	Averaged
56 Fluorene	1.49695	1.55321	1.55321	0.010	3.75856	20.00000	Averaged
66 Phenanthrene	1.30146	1.27634	1.27634	0.010	-1.93004	20.00000	Averaged
67 Anthracene	1.33131	1.35260	1.35260	0.010	1.59943	20.00000	Averaged
70 Fluoranthene	1.10779	1.07148	1.07148	0.010	-3.27817	20.01000	Averaged
72 Pyrene	2.92968	3.19478	3.19478	0.010	9.04894	20.00000	Averaged
74 Benzo(a)anthracene	1.47526	1.39977	1.39977	0.010	-5.11707	20.00000	Averaged
77 Chrysene	2.00000	2.13570	1.60234	0.010	6.78503	20.00000	Linear
80 Benzo(b)fluoranthene	1.67632	1.55912	1.55912	0.010	-6.99136	20.00000	Averaged
81 Benzo(k)fluoranthene	2.00000	2.13220	2.03153	0.010	6.60989	20.00000	Linear
82 Benzo(a)pyrene	1.36060	1.25297	1.25297	0.010	-7.91104	20.01000	Averaged
85 Indeno(1,2,3-cd)pyrene	0.45194	0.38971	0.38971	0.010	-13.77030	20.00000	Averaged
86 Dibenzo(a,h)anthracene	0.59189	0.58650	0.58650	0.010	-0.91017	20.00000	Averaged
87 Benzo(g,h,i)perylene	0.82999	0.84592	0.84592	0.010	1.91875	20.00000	Averaged
32 2-Methylnaphthalene-D10	0.47851	0.48981	0.48981	0.010	2.36097	20.00000	Averaged
55 Fluorene-D10	0.97823	1.00001	1.00001	0.010	2.22602	20.00000	Averaged
71 Pyrene-D10	1.60397	1.83090	1.83090	0.010	14.14849	20.00000	Averaged

*** = Compound out of QC criteria**

Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8072.D
Report Date: 26-Mar-2018 13:05

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N032118.b\N8072.D
Lab Smp Id: WG225136-9
Inj Date : 21-MAR-2018 22:17 MS Autotune Date: 25-OCT-2017 07:54
Operator : JCG Inst ID: gcms-n.i
Smp Info : WG225136-9,SL2079
Misc Info : WG225136,WG225136,WG225136-4,SL2079-10
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N032118.b\NSPSIM87.m
Meth Date : 22-Mar-2018 09:08 cgomez Quant Type: ISTD
Cal Date : 21-MAR-2018 13:37 Cal File: N8056.D
Als bottle: 23 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ati-corn-aap.sub
Target Version: 4.12
Processing Host: V200T4

Concentration Formula: Amt * DF * (Vt/Ws*Vi)*(100/(100-M))*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Final Volume (L)
Ws	0.03000	Weight of Sample (Kg)
Vi	1.000	Volume injected (uL)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

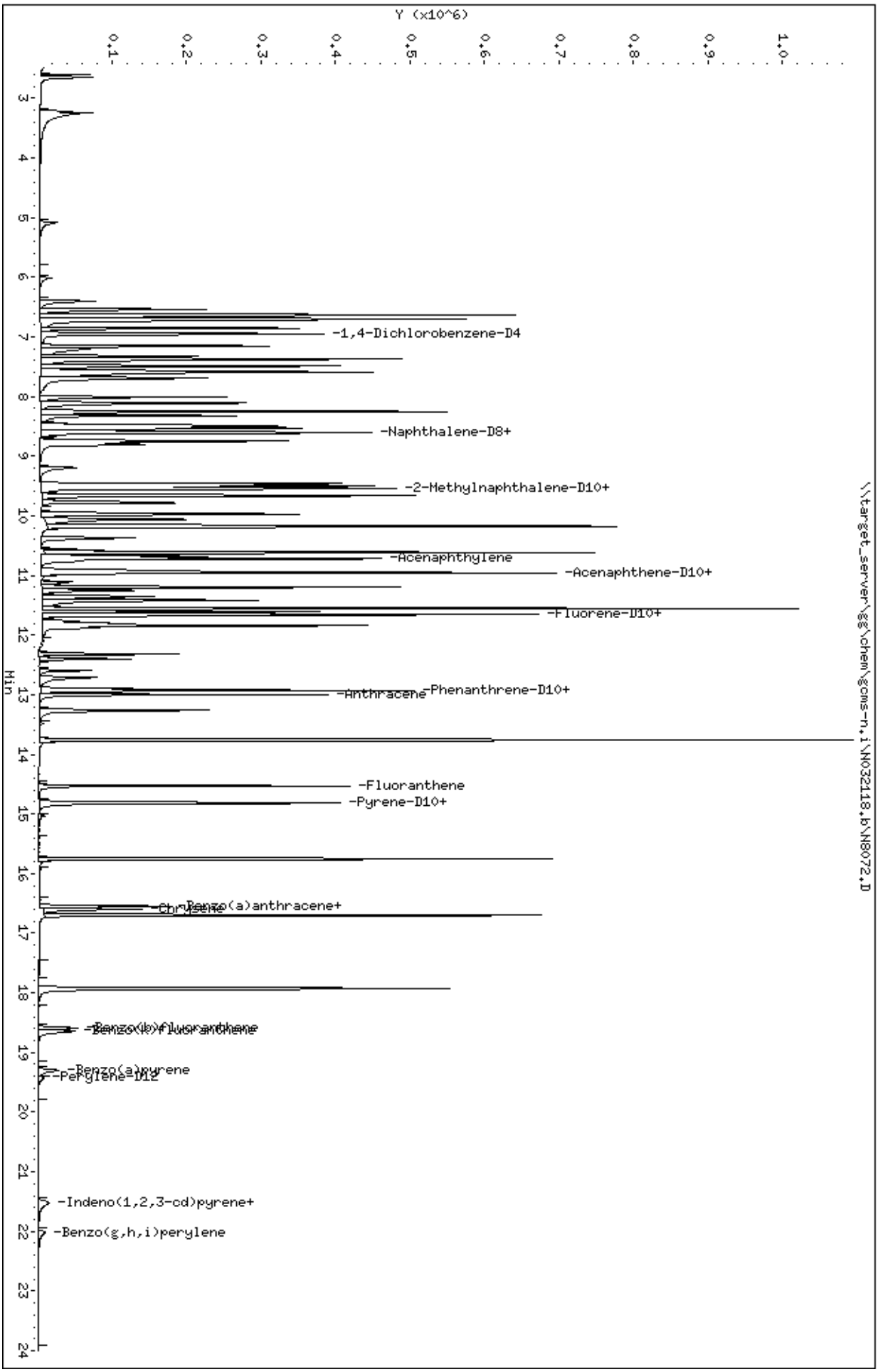
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
*	10 1,4-Dichlorobenzene-D4	152	6.930	6.930	(1.000)	63632	0.80000	(a)	
*	26 Naphthalene-D8	136	8.591	8.581	(1.000)	206220	0.80000	(a)	
	27 Naphthalene	128	8.611	8.611	(1.002)	541047	2.00000	1.98(a)	
$	32 2-Methylnaphthalene-D10	152	9.498	9.498	(1.106)	252519	2.00000	2.05	
	33 2-Methylnaphthalene	142	9.547	9.537	(1.111)	403832	2.00000	2.09(a)	
	45 Acenaphthylene	152	10.719	10.719	(0.982)	496368	2.00000	2.08(a)	
*	47 Acenaphthene-D10	164	10.915	10.915	(1.000)	86741	0.80000	(a)	
	48 Acenaphthene	153	10.959	10.948	(1.004)	310105	2.00000	2.01(a)	
$	55 Fluorene-D10	174	11.612	11.612	(1.064)	216854	2.00000	2.04	
	56 Fluorene	166	11.656	11.645	(1.068)	336818	2.00000	2.08(a)	
*	65 Phenanthrene-D10	188	12.895	12.895	(1.000)	129377	0.80000	(a)	
	66 Phenanthrene	178	12.927	12.916	(1.002)	412824	2.00000	1.96(a)	
	67 Anthracene	178	13.002	12.991	(1.008)	437489	2.00000	2.03(a)	
	70 Fluoranthene	202	14.527	14.518	(1.127)	346562	2.00000	1.93(a)	
$	71 Pyrene-D10	212	14.799	14.790	(0.894)	204228	2.00000	2.28	
	72 Pyrene	202	14.818	14.809	(0.895)	356362	2.00000	2.18(a)	
	74 Benzo(a)anthracene	228	16.544	16.535	(0.999)	156137	2.00000	1.90(a)	
*	76 Chrysene-D12	240	16.554	16.544	(1.000)	44618	0.80000	(a)	
	77 Chrysene	228	16.601	16.591	(1.003)	178733	2.00000	2.14(a)	
	80 Benzo(b)fluoranthene	252	18.582	18.571	(0.957)	80096	2.00000	1.86(a)	

Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\N8072.D
Report Date: 26-Mar-2018 13:05

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	81 Benzo(k)fluoranthene	252	18.639	18.616	(0.960)	104365	2.00000	2.13(aH)	
	82 Benzo(a)pyrene	252	19.298	19.263	(0.994)	64368	2.00000	1.84(a)	
*	83 Perylene-D12	264	19.423	19.400	(1.000)	20549	0.80000	(a)	
	85 Indeno(1,2,3-cd)pyrene	276	21.512	21.467	(1.300)	43470	2.00000	1.72(a)	
	86 Dibenzo(a,h)anthracene	278	21.546	21.501	(1.109)	30130	2.00000	1.98(a)	
	87 Benzo(g,h,i)perylene	276	22.023	21.978	(1.134)	43457	2.00000	2.04(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
H - Operator selected an alternate compound hit.


Data File: \\target_server\gg\chem\gcms-n,i\N032118,b\N8072,D
Date : 21-MAR-2018 22:17
Client ID:
Sample Info: WG225136-9,SL2079
Volume Injected (uL): 1.0
Column phase: ZB5-MS
Instrument: gcms-n,i
Operator: JCG
Column diameter: 0.25
\\target_server\gg\chem\gcms-n,i\N032118,b\N8072,D
Y (x10^6)
Min
-1,4-Dichlorobenzene-D4
-Naphthalene-D8+
-2-Methylnaphthalene-D10+
-Acenaphthylene
-Acenaphthene-D10+
-Fluorene-D10+
-Anthracene
-Phenanthrene-D10+
-Fluoranthene
-Pyrene-D10+
-Benzo(a)anthracene+
-Benzo(a)pyrene
-Perylene-D12
-Indeno(1,2,3-cd)pyrene+
-Benzo(g,h,i)perylene

Data File: \\target_server\gg\chem\gcms-n.i\N031618.b\ND493.D

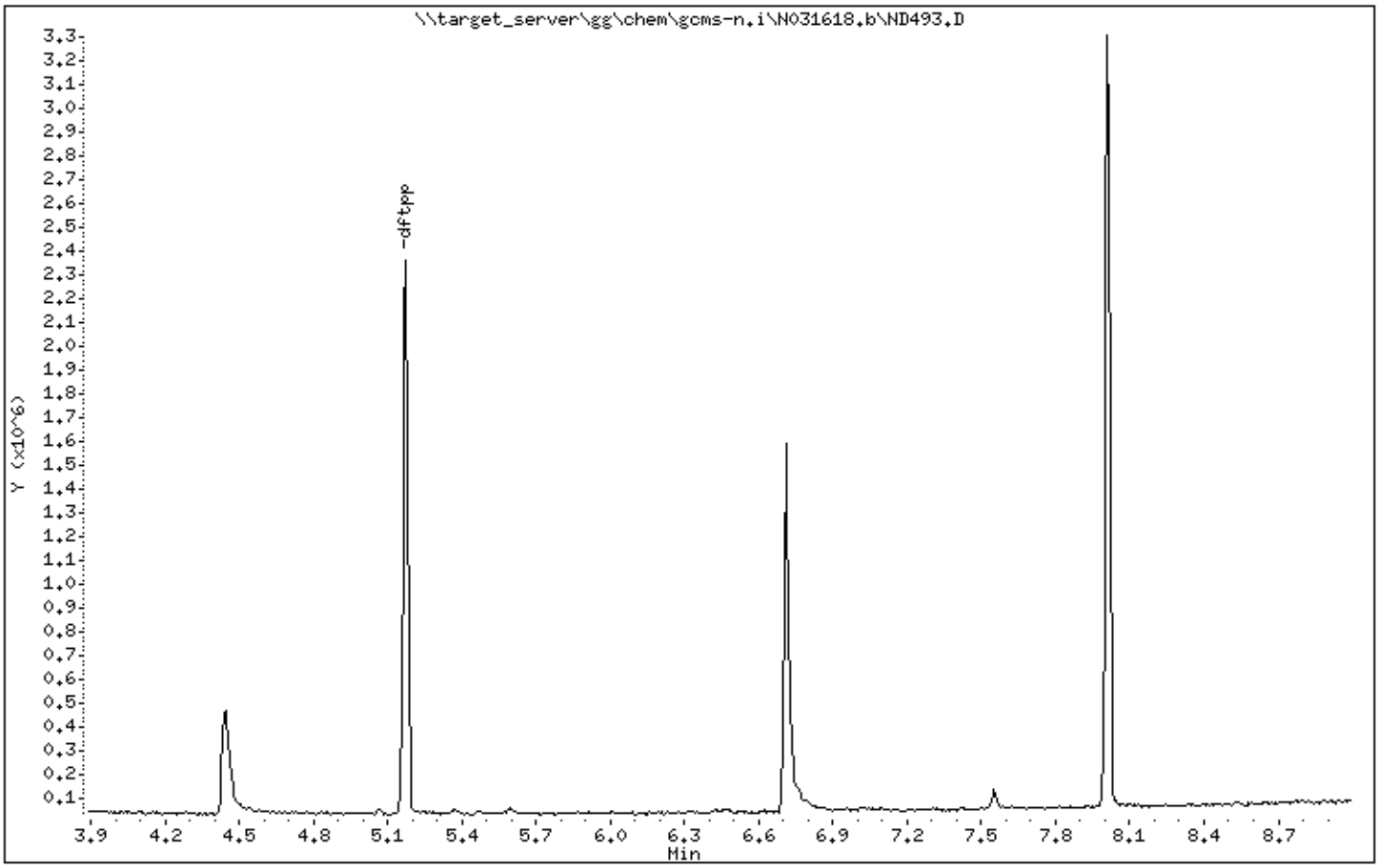
Date : 16-MAR-2018 11:43

Client ID: DFTPP02 Instrument: gcms-n.i

Sample Info: WG224895-1,SL2079

Operator: JCG

Column phase: RTX-5SILMS Column diameter: 0.25



Data File: \\target_server\gg\chem\gcms-n.i\N031618.b\ND493.D

Date : 16-MAR-2018 11:43

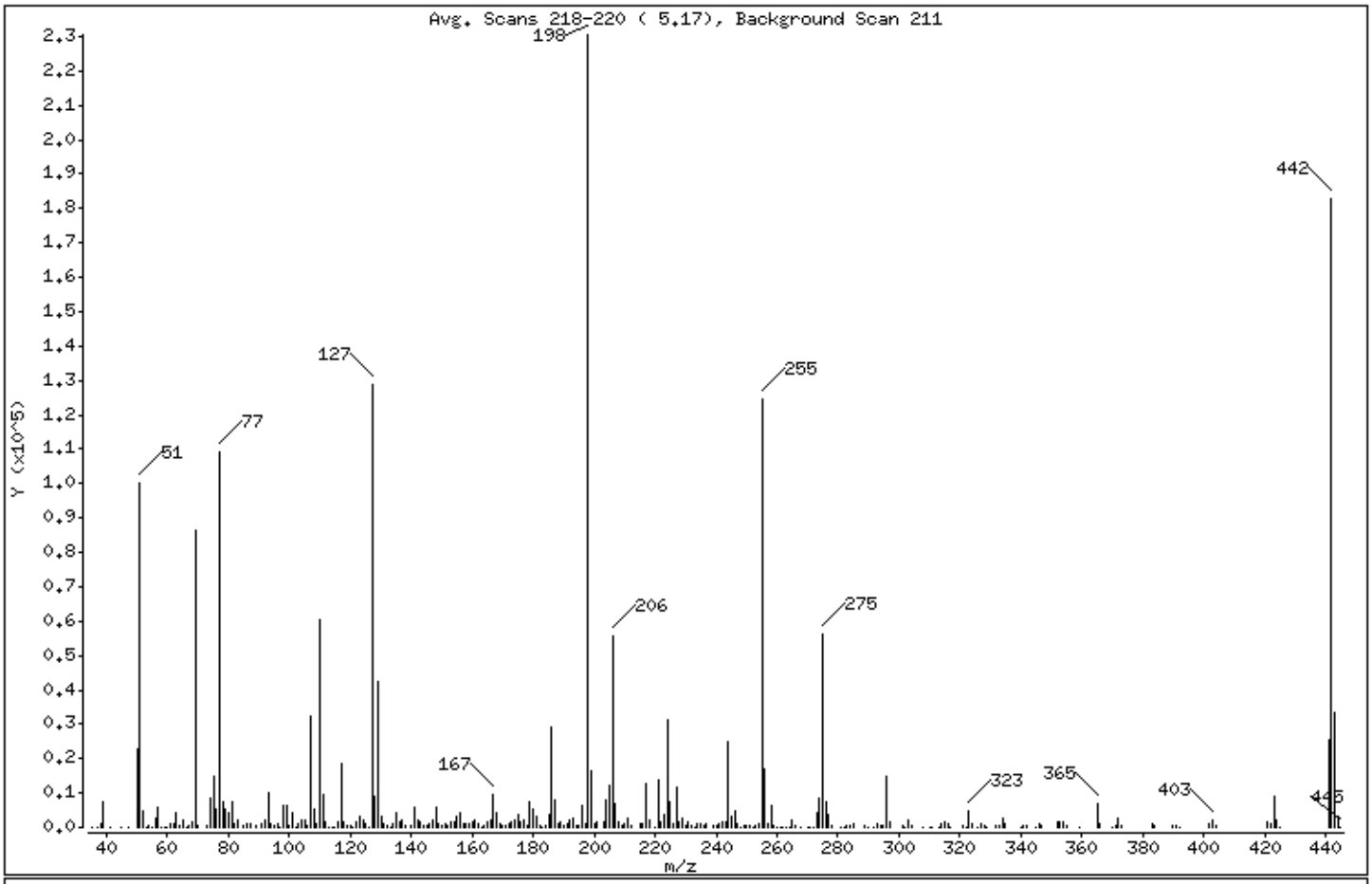
Client ID: DFTPP02 Instrument: gcms-n.i

Sample Info: WG224895-1,SL2079

Operator: JCG

Column phase: RTX-5SILMS Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	43.45
68	Less than 2.00% of mass 69	0.62 (1.66)
69	Less than 100.00% of mass 198	37.48
70	Less than 2.00% of mass 69	0.17 (0.44)
127	40.00 - 60.00% of mass 198	55.86
197	Less than 1.00% of mass 198	0.49
199	5.00 - 9.00% of mass 198	7.13
275	10.00 - 30.00% of mass 198	24.33
365	1.00 - 100.00% of mass 198	2.99
441	0.01 - 100.00% of mass 443	11.04 (76.73)
442	40.00 - 100.00% of mass 198	79.34
443	17.00 - 23.00% of mass 442	14.38 (18.13)

Data File: \\target_server\gg\chem\gcms-n.i\N031618.b\ND493.D

Date : 16-MAR-2018 11:43

Client ID: DFTPP02 Instrument: gcms-n.i

Sample Info: WG224895-1,SL2079

Operator: JCG

Column phase: RTX-5SILMS Column diameter: 0.25

Data File: ND493.D
Spectrum: Avg. Scans 218-220 (5.17), Background Scan 211
Location of Maximum: 198.00
Number of points: 295

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	60	122.00	1839	197.00	1118	278.00	459
37.00	222	123.00	3138	198.00	230464	281.00	63
38.00	1226	124.00	2146	199.00	16440	282.00	67
39.00	7161	125.00	1140	200.00	1223	283.00	667
41.00	46	126.00	74	201.00	1391	284.00	470
45.00	107	127.00	128728	203.00	1452	285.00	1025
47.00	34	128.00	8779	204.00	7761	289.00	292
50.00	22912	129.00	42304	205.00	12322	290.00	255
51.00	100144	130.00	3350	206.00	55792	292.00	130
52.00	4784	131.00	1122	207.00	6970	293.00	916
53.00	219	132.00	384	208.00	1522	294.00	369
54.00	266	133.00	87	209.00	643	295.00	266
55.00	232	134.00	1257	210.00	1289	296.00	14588
56.00	2503	135.00	4102	211.00	2820	297.00	1511
57.00	6071	136.00	1748	212.00	332	301.00	313
58.00	180	137.00	1863	215.00	881	302.00	215
59.00	182	138.00	635	216.00	1161	303.00	2215
60.00	36	140.00	747	217.00	12741	304.00	401
61.00	938	141.00	5659	218.00	1876	308.00	140
62.00	1021	142.00	2203	220.00	257	310.00	119
63.00	4364	143.00	1494	221.00	13919	311.00	52
64.00	636	144.00	349	222.00	1377	313.00	62
65.00	2101	145.00	483	223.00	3484	314.00	947
66.00	171	146.00	1039	224.00	31304	315.00	1510
67.00	329	147.00	1954	225.00	7217	316.00	924
68.00	1432	148.00	5839	226.00	986	317.00	148
69.00	86368	149.00	1248	227.00	11870	321.00	676
70.00	381	150.00	482	228.00	1781	322.00	193
73.00	436	151.00	849	229.00	2782	323.00	4678
74.00	8406	152.00	540	230.00	604	324.00	1136
75.00	14743	153.00	1792	231.00	1393	326.00	99
76.00	5121	154.00	1490	232.00	320	327.00	1007
77.00	109336	155.00	3370	233.00	195	328.00	572
78.00	7445	156.00	4327	234.00	834	329.00	163
79.00	5534	157.00	1078	235.00	1143	332.00	409

Data File: \\target_server\gg\chem\gcms-n.i\N031618.b\ND493.D

Date : 16-MAR-2018 11:43

Client ID: DFTPP02 Instrument: gcms-n.i

Sample Info: WG224895-1,SL2079

Operator: JCG

Column phase: RTX-5SILMS Column diameter: 0.25

Data File: ND493.D
Spectrum: Avg. Scans 218-220 (5.17), Background Scan 211
Location of Maximum: 198.00
Number of points: 295

m/z	Y	m/z	Y	m/z	Y	m/z	Y
80.00	4488	158.00	960	236.00	519	333.00	685
81.00	7442	159.00	1161	237.00	926	334.00	2763
82.00	1313	160.00	1822	239.00	521	335.00	931
83.00	2044	161.00	2141	240.00	435	340.00	187
85.00	785	162.00	951	241.00	837	341.00	553
86.00	1040	163.00	213	242.00	1686	342.00	266
87.00	1054	164.00	558	243.00	1737	345.00	88
89.00	418	165.00	1644	244.00	24904	346.00	1049
91.00	1291	166.00	2210	245.00	3009	347.00	311
92.00	2107	167.00	9382	246.00	4801	352.00	1492
93.00	9977	168.00	4063	247.00	918	353.00	1326
94.00	812	169.00	803	248.00	159	354.00	1327
95.00	291	170.00	373	249.00	644	355.00	477
96.00	956	171.00	556	250.00	282	359.00	103
97.00	38	172.00	1001	251.00	348	365.00	6902
98.00	6448	173.00	1329	252.00	179	366.00	841
99.00	6448	174.00	2253	253.00	702	370.00	203
100.00	694	175.00	3755	254.00	1135	371.00	388
101.00	4026	176.00	1483	255.00	124296	372.00	2782
102.00	234	177.00	1881	256.00	17144	373.00	550
103.00	1062	178.00	556	257.00	1052	383.00	958
104.00	2362	179.00	7662	258.00	6121	384.00	325
105.00	2073	180.00	5095	259.00	582	390.00	425
106.00	434	181.00	3265	260.00	66	391.00	397
107.00	32296	182.00	646	261.00	224	392.00	225
108.00	5164	183.00	224	262.00	51	402.00	1151
109.00	1320	184.00	731	263.00	50	403.00	1924
110.00	60216	185.00	3775	264.00	137	404.00	610
111.00	9369	186.00	29088	265.00	2253	421.00	1769
112.00	1467	187.00	8054	266.00	683	422.00	1007
113.00	259	188.00	936	268.00	139	423.00	9247
114.00	141	189.00	1712	270.00	151	424.00	2017
115.00	119	190.00	381	271.00	72	425.00	81
116.00	1585	191.00	967	272.00	153	441.00	25432
117.00	18568	192.00	2100	273.00	4028	442.00	182848

Data File: \\target_server\gg\chem\gcms-n.i\N031618.b\ND493.D

Date : 16-MAR-2018 11:43

Client ID: DFTPP02 Instrument: gcms-n.i

Sample Info: WG224895-1,SL2079

Operator: JCG

Column phase: RTX-5SILMS Column diameter: 0.25

Data File: ND493.D
Spectrum: Avg. Scans 218-220 (5.17), Background Scan 211
Location of Maximum: 198.00
Number of points: 295

m/z	Y	m/z	Y	m/z	Y	m/z	Y
118.00	1644	193.00	2481	274.00	8676	443.00	33144
119.00	266	194.00	589	275.00	56072	444.00	3244
120.00	573	195.00	344	276.00	7522	445.00	114
121.00	168	196.00	6142	277.00	3557		

Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\ND495.D

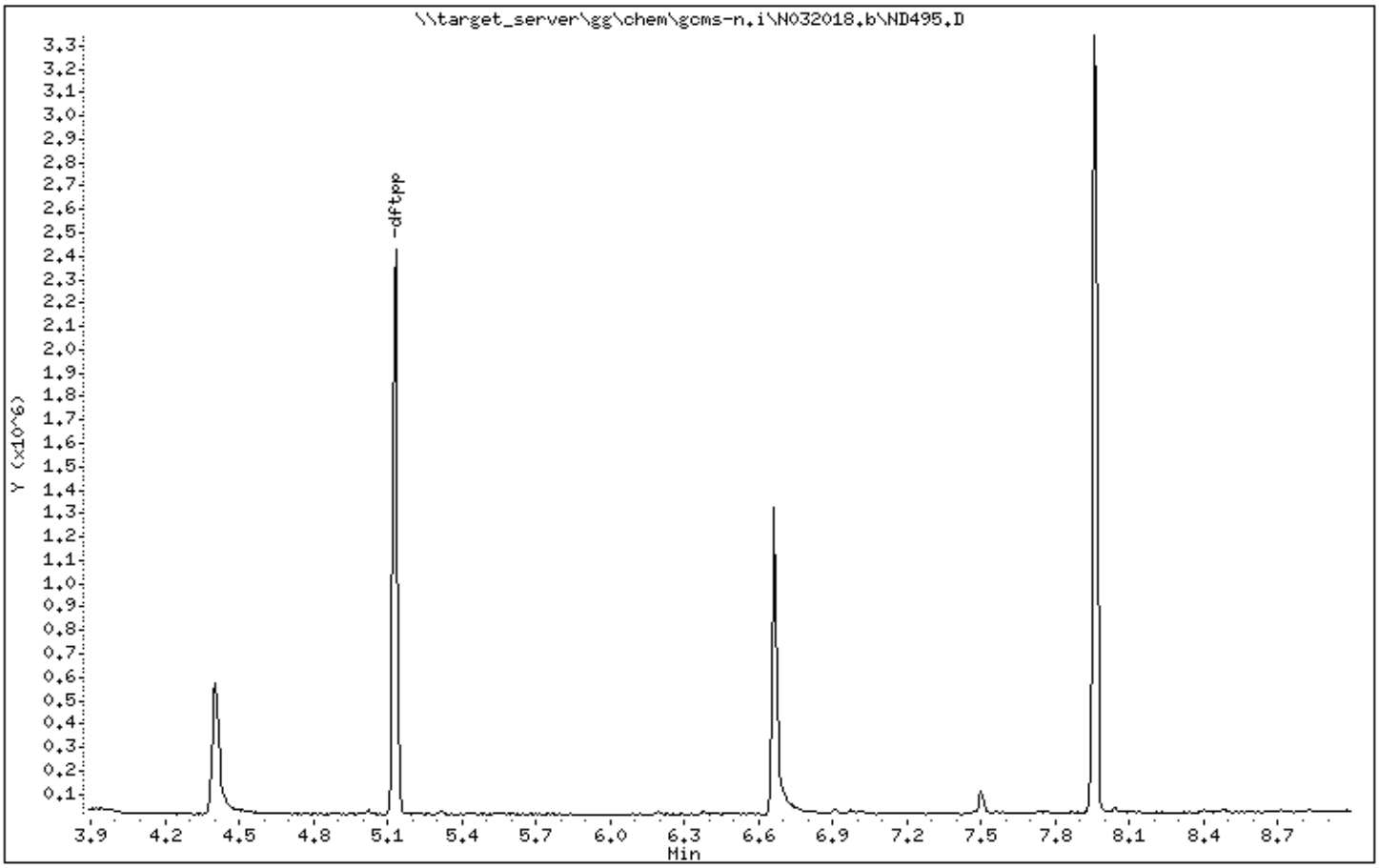
Date : 20-MAR-2018 10:23

Client ID: DFTPP02 Instrument: gcms-n.i

Sample Info: WG225084-1,SL2079

Operator: JCG

Column phase: RTX-5SILMS Column diameter: 0.25



Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\ND495.D

Date : 20-MAR-2018 10:23

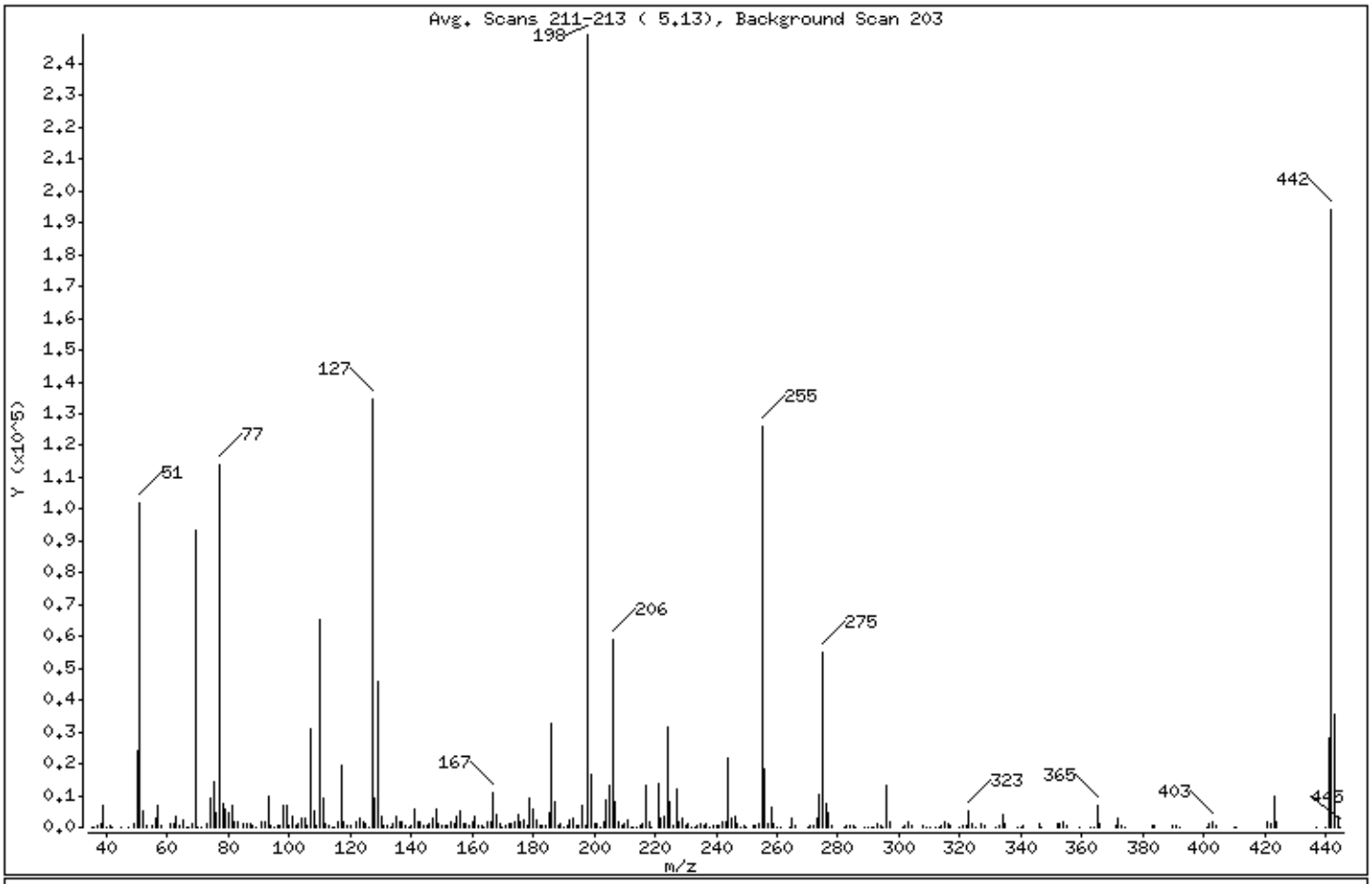
Client ID: DFTPP02 Instrument: gcms-n.i

Sample Info: WG225084-1,SL2079

Operator: JCG

Column phase: RTX-5SILMS Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	40.95
68	Less than 2.00% of mass 69	0.51 (1.35)
69	Less than 100.00% of mass 198	37.54
70	Less than 2.00% of mass 69	0.08 (0.21)
127	40.00 - 60.00% of mass 198	53.92
197	Less than 1.00% of mass 198	0.30
199	5.00 - 9.00% of mass 198	6.69
275	10.00 - 30.00% of mass 198	22.00
365	1.00 - 100.00% of mass 198	2.68
441	0.01 - 100.00% of mass 443	11.36 (80.16)
442	40.00 - 100.00% of mass 198	77.86
443	17.00 - 23.00% of mass 442	14.18 (18.21)

Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\ND495.D

Date : 20-MAR-2018 10:23

Client ID: DFTPP02 Instrument: gcms-n.i

Sample Info: WG225084-1,SL2079

Operator: JCG

Column phase: RTX-5SILMS Column diameter: 0.25

Data File: ND495.D
Spectrum: Avg. Scans 211-213 (5.13), Background Scan 203
Location of Maximum: 198.00
Number of points: 305

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	117	123.00	3092	200.00	1411	289.00	134
36.00	133	124.00	1506	201.00	1276	290.00	227
37.00	398	125.00	1303	202.00	247	291.00	81
38.00	1152	126.00	193	203.00	1673	292.00	233
39.00	6996	127.00	134336	204.00	8745	293.00	1074
40.00	19	128.00	9203	205.00	13289	294.00	346
41.00	499	129.00	45880	206.00	58792	295.00	213
42.00	51	130.00	3571	207.00	8057	296.00	13075
45.00	264	131.00	789	208.00	1439	297.00	1797
47.00	101	132.00	400	209.00	534	301.00	182
49.00	899	133.00	217	210.00	1204	302.00	378
50.00	24336	134.00	1100	211.00	2197	303.00	1563
51.00	102040	135.00	3631	212.00	208	304.00	472
52.00	5429	136.00	1729	213.00	120	308.00	376
53.00	391	137.00	1728	214.00	205	309.00	66
55.00	301	138.00	448	215.00	699	310.00	112
56.00	3054	139.00	227	216.00	1419	312.00	129
57.00	6960	140.00	515	217.00	12938	313.00	72
58.00	317	141.00	5457	218.00	1810	314.00	488
61.00	1039	142.00	1954	219.00	207	315.00	1678
62.00	1143	143.00	1506	221.00	13534	316.00	1026
63.00	3525	144.00	340	222.00	2952	317.00	382
64.00	623	145.00	480	223.00	3211	320.00	64
65.00	2284	146.00	920	224.00	31768	321.00	551
66.00	66	147.00	2906	225.00	8274	322.00	486
67.00	153	148.00	5729	226.00	761	323.00	4948
68.00	1265	149.00	1068	227.00	11861	324.00	1162
69.00	93528	150.00	491	228.00	1927	325.00	59
70.00	194	151.00	579	229.00	2964	327.00	1011
71.00	74	152.00	419	230.00	435	328.00	546
73.00	948	153.00	1900	231.00	1337	332.00	273
74.00	9333	154.00	1382	232.00	276	333.00	704
75.00	14437	155.00	3167	233.00	164	334.00	3817
76.00	4813	156.00	5163	234.00	506	335.00	871
77.00	114024	157.00	1184	235.00	996	339.00	61

Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\ND495.D

Date : 20-MAR-2018 10:23

Client ID: DFTPP02 Instrument: gcms-n.i

Sample Info: WG225084-1,SL2079

Operator: JCG

Column phase: RTX-5SILMS Column diameter: 0.25

Data File: ND495.D
Spectrum: Avg. Scans 211-213 (5.13), Background Scan 203
Location of Maximum: 198.00
Number of points: 305

m/z	Y	m/z	Y	m/z	Y	m/z	Y
78.00	7599	158.00	1118	236.00	402	340.00	63
79.00	5546	159.00	846	237.00	942	341.00	546
80.00	4357	160.00	1544	238.00	243	346.00	1259
81.00	7114	161.00	3430	239.00	343	347.00	180
82.00	1643	162.00	797	240.00	322	352.00	1396
83.00	1770	163.00	628	241.00	762	353.00	1358
85.00	1233	164.00	123	242.00	1458	354.00	1661
86.00	899	165.00	1730	243.00	1573	355.00	291
87.00	1164	166.00	1498	244.00	21728	359.00	192
88.00	373	167.00	10647	245.00	2767	363.00	55
89.00	208	168.00	4295	246.00	3705	364.00	224
91.00	1633	169.00	958	247.00	982	365.00	6666
92.00	1701	170.00	219	248.00	213	366.00	904
93.00	9943	171.00	472	249.00	846	371.00	508
94.00	660	172.00	1300	250.00	184	372.00	2985
95.00	7	173.00	1165	252.00	466	373.00	698
96.00	778	174.00	1842	253.00	429	374.00	69
97.00	425	175.00	3920	254.00	1033	383.00	852
98.00	6658	176.00	1790	255.00	126088	384.00	383
99.00	6941	177.00	2064	256.00	18608	390.00	449
100.00	795	178.00	468	257.00	1312	391.00	345
101.00	3686	179.00	9165	258.00	6465	392.00	264
102.00	291	180.00	6008	259.00	1140	401.00	144
103.00	1221	181.00	2199	260.00	56	402.00	1207
104.00	2818	182.00	602	261.00	187	403.00	1728
105.00	2673	183.00	316	264.00	210	404.00	492
106.00	737	184.00	490	265.00	2904	410.00	102
107.00	30768	185.00	4378	266.00	453	411.00	53
108.00	4935	186.00	32776	270.00	157	421.00	1485
109.00	784	187.00	7888	271.00	417	422.00	1377
110.00	65312	188.00	788	272.00	374	423.00	9496
111.00	8895	189.00	1394	273.00	2929	424.00	1927
112.00	996	190.00	59	274.00	10031	437.00	85
113.00	432	191.00	676	275.00	54824	440.00	63
114.00	60	192.00	2248	276.00	7195	441.00	28312

Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\ND495.D

Date : 20-MAR-2018 10:23

Client ID: DFTPP02 Instrument: gcms-n.i

Sample Info: WG225084-1,SL2079

Operator: JCG

Column phase: RTX-5SILMS Column diameter: 0.25

Data File: ND495.D
Spectrum: Avg. Scans 211-213 (5.13), Background Scan 203
Location of Maximum: 198.00
Number of points: 305

m/z	Y	m/z	Y	m/z	Y	m/z	Y
115.00	275	193.00	2831	277.00	4479	442.00	193984
116.00	1524	194.00	657	278.00	531	443.00	35320
117.00	19712	195.00	325	282.00	61	444.00	3059
118.00	1763	196.00	7079	283.00	654	445.00	253
119.00	368	197.00	748	284.00	571		
120.00	500	198.00	249152	285.00	846		
122.00	1776	199.00	16664	286.00	183		

Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\ND496.D

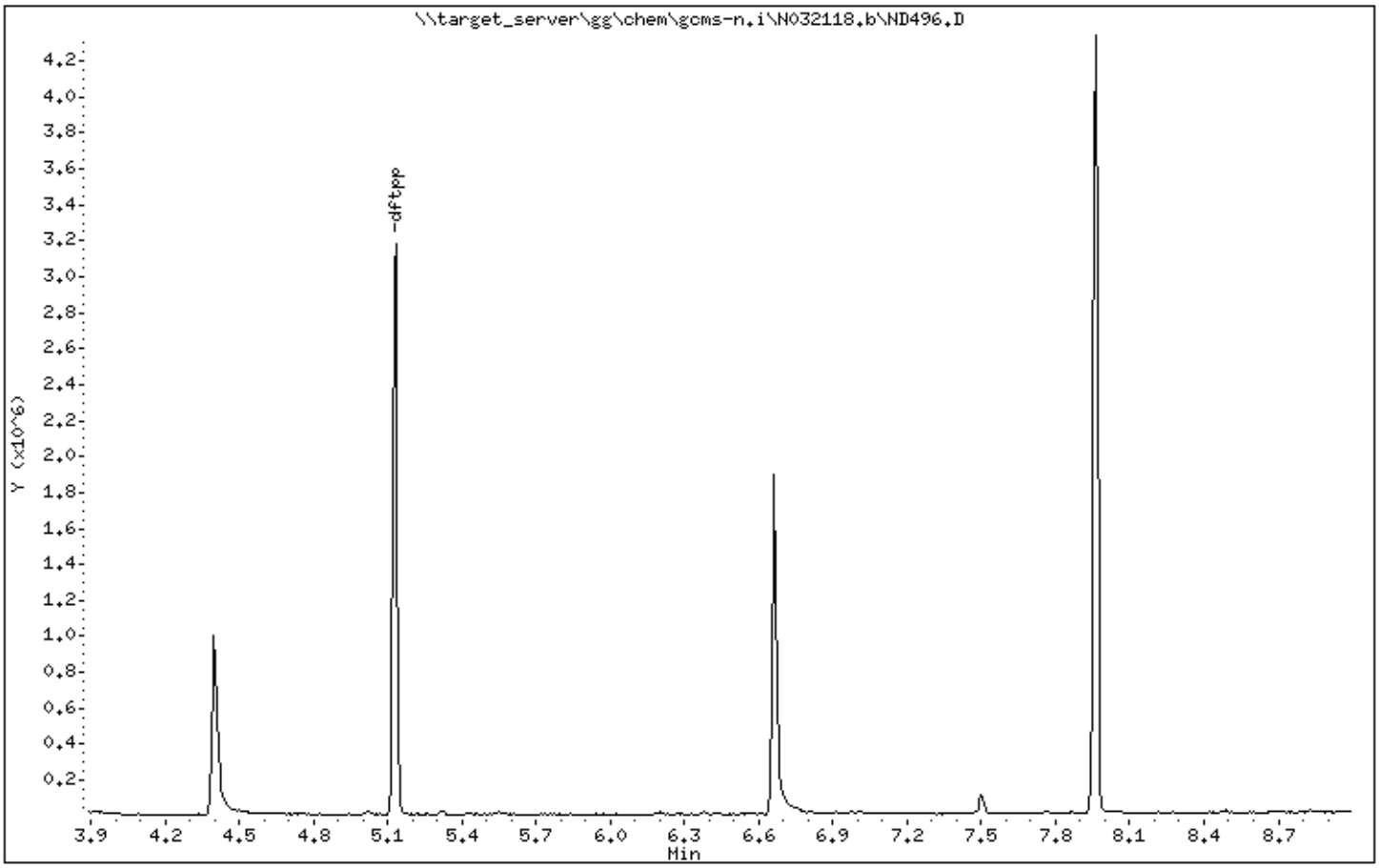
Date : 21-MAR-2018 10:41

Client ID: DFTPP02 Instrument: gcms-n.i

Sample Info: WG225136-1,SL2079

Operator: JCG

Column phase: RTX-5SILMS Column diameter: 0.25



Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\ND496.D

Date : 21-MAR-2018 10:41

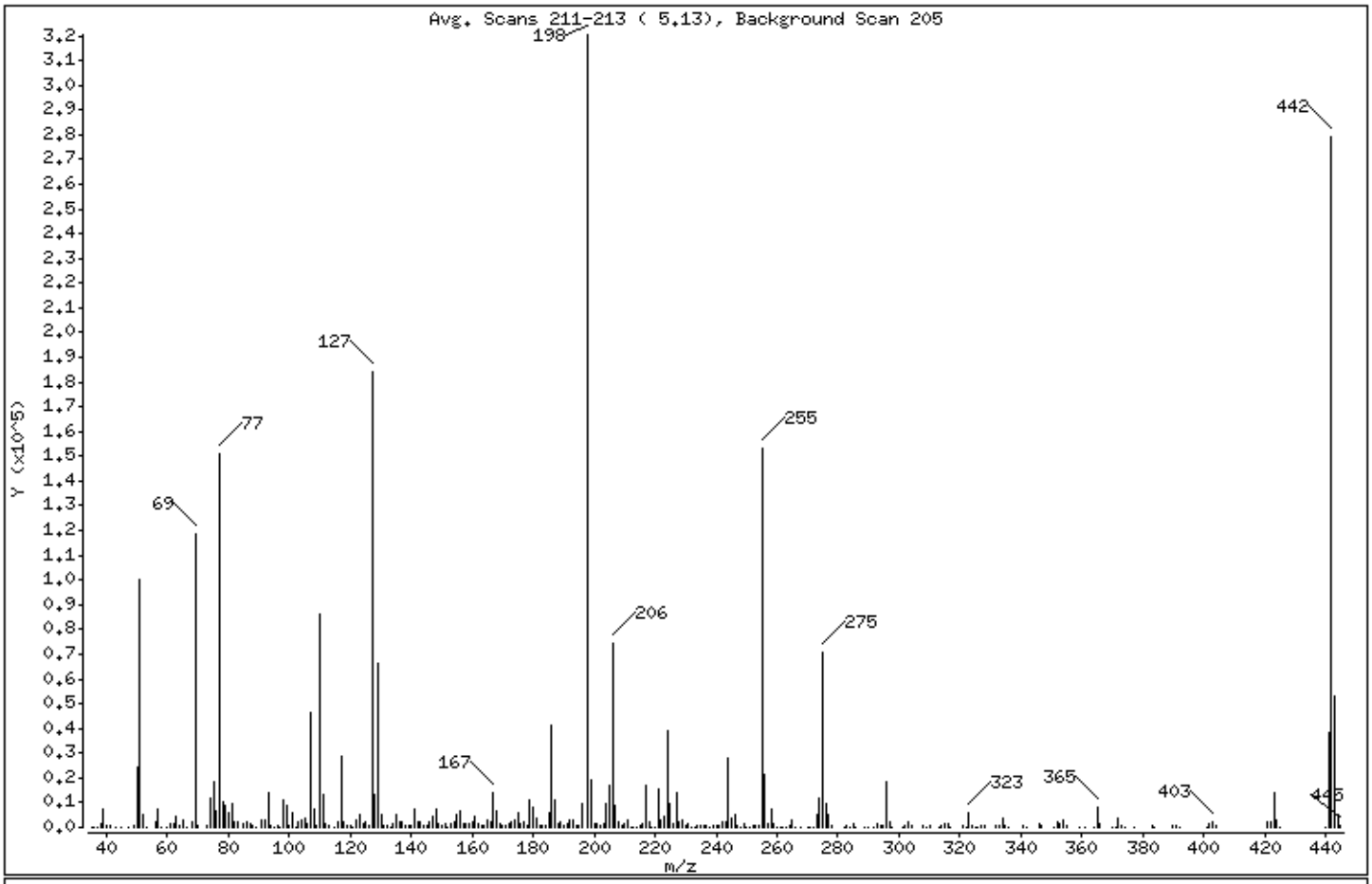
Client ID: DFTPP02 Instrument: gcms-n.i

Sample Info: WG225136-1,SL2079

Operator: JCG

Column phase: RTX-5SILMS Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	31.15
68	Less than 2.00% of mass 69	0.63 (1.70)
69	Less than 100.00% of mass 198	36.97
70	Less than 2.00% of mass 69	0.22 (0.61)
127	40.00 - 60.00% of mass 198	57.47
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.06
275	10.00 - 30.00% of mass 198	21.98
365	1.00 - 100.00% of mass 198	2.56
441	0.01 - 100.00% of mass 443	12.06 (72.78)
442	40.00 - 100.00% of mass 198	87.20
443	17.00 - 23.00% of mass 442	16.57 (19.00)

Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\ND496.D

Date : 21-MAR-2018 10:41

Client ID: DFTPP02 Instrument: gcms-n.i

Sample Info: WG225136-1,SL2079

Operator: JCG

Column phase: RTX-5SILMS Column diameter: 0.25

Data File: ND496.D
Spectrum: Avg. Scans 211-213 (5.13), Background Scan 205
Location of Maximum: 198.00
Number of points: 307

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	59	125.00	2525	203.00	1735	285.00	1275
36.00	146	126.00	563	204.00	9924	286.00	325
37.00	337	127.00	184128	205.00	16736	289.00	233
38.00	1153	128.00	13265	206.00	74336	290.00	205
39.00	7665	129.00	66008	207.00	8957	292.00	156
40.00	547	130.00	5303	208.00	2484	293.00	1449
41.00	492	131.00	779	209.00	780	294.00	385
43.00	168	132.00	913	210.00	1465	295.00	559
45.00	190	133.00	362	211.00	2885	296.00	18744
47.00	131	134.00	1540	212.00	180	297.00	2396
49.00	445	135.00	4987	213.00	150	298.00	136
50.00	24032	136.00	2038	214.00	52	301.00	178
51.00	99808	137.00	2451	215.00	937	302.00	418
52.00	5171	138.00	824	216.00	1528	303.00	2386
53.00	350	139.00	498	217.00	17176	304.00	694
56.00	2104	140.00	941	218.00	1959	308.00	648
57.00	7334	141.00	7599	219.00	189	309.00	196
58.00	228	142.00	2264	220.00	277	310.00	401
60.00	86	143.00	1908	221.00	15788	313.00	246
61.00	1587	144.00	592	222.00	2811	314.00	977
62.00	1509	145.00	510	223.00	4215	315.00	1719
63.00	4069	146.00	1924	224.00	39024	316.00	1195
64.00	593	147.00	4060	225.00	9703	317.00	226
65.00	2610	148.00	7413	226.00	1141	321.00	667
66.00	183	149.00	1694	227.00	13744	322.00	246
68.00	2008	150.00	701	228.00	2045	323.00	6031
69.00	118432	151.00	1352	229.00	3301	324.00	997
70.00	719	152.00	331	230.00	479	325.00	67
73.00	925	153.00	1833	231.00	1378	326.00	190
74.00	11545	154.00	1870	232.00	319	327.00	1081
75.00	18744	155.00	4813	233.00	281	328.00	630
76.00	6403	156.00	6672	234.00	851	332.00	456
77.00	150656	157.00	1466	235.00	955	333.00	503
78.00	10274	158.00	1368	236.00	950	334.00	3940
79.00	8827	159.00	1115	237.00	1062	335.00	989

Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\ND496.D

Date : 21-MAR-2018 10:41

Client ID: DFTPP02 Instrument: gcms-n.i

Sample Info: WG225136-1,SL2079

Operator: JCG

Column phase: RTX-5SILMS Column diameter: 0.25

Data File: ND496.D
Spectrum: Avg. Scans 211-213 (5.13), Background Scan 205
Location of Maximum: 198.00
Number of points: 307

m/z	Y	m/z	Y	m/z	Y	m/z	Y
80.00	6155	160.00	2396	238.00	233	336.00	267
81.00	9453	161.00	4183	239.00	458	341.00	1046
82.00	2049	162.00	1109	240.00	370	342.00	176
83.00	2124	163.00	459	241.00	780	346.00	1368
85.00	1422	164.00	576	242.00	1902	347.00	456
86.00	2512	165.00	2771	243.00	2035	351.00	90
87.00	1137	166.00	2488	244.00	28136	352.00	2186
88.00	528	167.00	13917	245.00	4027	353.00	1230
89.00	317	168.00	6303	246.00	4907	354.00	2625
91.00	2588	169.00	1117	247.00	890	355.00	482
92.00	2669	170.00	756	248.00	104	359.00	120
93.00	13962	171.00	872	249.00	1474	361.00	164
94.00	921	172.00	1261	250.00	139	364.00	57
95.00	115	173.00	2142	251.00	260	365.00	8212
96.00	1047	174.00	2973	252.00	395	366.00	1297
97.00	54	175.00	5602	253.00	739	370.00	200
98.00	11144	176.00	1809	254.00	671	371.00	323
99.00	8640	177.00	2244	255.00	152896	372.00	3966
100.00	862	178.00	991	256.00	21096	373.00	799
101.00	6109	179.00	10716	257.00	1285	374.00	264
102.00	360	180.00	8180	258.00	7670	377.00	129
103.00	1842	181.00	3610	259.00	1118	383.00	913
104.00	3178	182.00	820	260.00	122	384.00	317
105.00	3547	183.00	459	261.00	198	390.00	572
106.00	1113	184.00	896	262.00	80	391.00	484
107.00	46712	185.00	5673	263.00	125	392.00	192
108.00	7046	186.00	41560	264.00	381	401.00	255
109.00	721	187.00	11148	265.00	2760	402.00	1322
110.00	86536	188.00	1161	266.00	266	403.00	2196
111.00	13106	189.00	2383	268.00	26	404.00	879
112.00	1523	190.00	461	270.00	252	421.00	1865
113.00	574	191.00	1431	271.00	279	422.00	1849
115.00	281	192.00	3219	272.00	168	423.00	14267
116.00	2387	193.00	3098	273.00	4869	424.00	2780
117.00	28672	194.00	562	274.00	11794	425.00	213

Data File: \\target_server\gg\chem\gcms-n.i\N032118.b\ND496.D

Date : 21-MAR-2018 10:41

Client ID: DFTPP02 Instrument: gcms-n.i

Sample Info: WG225136-1,SL2079

Operator: JCG

Column phase: RTX-5SILMS Column diameter: 0.25

Data File: ND496.D
Spectrum: Avg. Scans 211-213 (5.13), Background Scan 205
Location of Maximum: 198.00
Number of points: 307

m/z	Y	m/z	Y	m/z	Y	m/z	Y
118.00	2049	195.00	372	275.00	70432	440.00	210
119.00	491	196.00	9461	276.00	9286	441.00	38632
120.00	675	198.00	320384	277.00	5268	442.00	279360
121.00	116	199.00	19416	278.00	1056	443.00	53080
122.00	3155	200.00	1691	282.00	299	444.00	4281
123.00	4827	201.00	1335	283.00	1060	445.00	468
124.00	1794	202.00	644	284.00	253		

Raw QC Data Section

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG225023-1
Client ID: Method Blank Sample
Project:
SDG: SL2079
Lab File ID: N8025.D

Sample Date:
Received Date:
Extract Date: 19-MAR-18
Extracted By: KF
Extraction Method: SW846 3510C
Lab Prep Batch: WG225023

Analysis Date: 20-MAR-18
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: AQ
% Solids: NA
Report Date: 26-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	0.10	ug/L	1	.2	0.20	0.064	0.10
2-Methylnaphthalene	U	0.10	ug/L	1	.2	0.20	0.077	0.10
Acenaphthylene	U	0.10	ug/L	1	.2	0.20	0.054	0.10
Acenaphthene	U	0.10	ug/L	1	.2	0.20	0.064	0.10
Fluorene	U	0.10	ug/L	1	.2	0.20	0.061	0.10
Phenanthrene	U	0.10	ug/L	1	.2	0.20	0.051	0.10
Anthracene	U	0.10	ug/L	1	.2	0.20	0.044	0.10
Fluoranthene	U	0.10	ug/L	1	.2	0.20	0.073	0.10
Pyrene	J	0.091	ug/L	1	.2	0.20	0.059	0.10
Benzo(a)anthracene	J	0.069	ug/L	1	.2	0.20	0.046	0.10
Chrysene	U	0.10	ug/L	1	.2	0.20	0.036	0.10
Benzo(b)Fluoranthene	U	0.10	ug/L	1	.2	0.20	0.089	0.10
Benzo(k)fluoranthene	U	0.10	ug/L	1	.2	0.20	0.049	0.10
Benzo(a)pyrene	U	0.10	ug/L	1	.2	0.20	0.066	0.10
Indeno(1,2,3-cd)pyrene	U	0.10	ug/L	1	.2	0.20	0.052	0.10
Dibenzo(a,h)anthracene	U	0.10	ug/L	1	.2	0.20	0.070	0.10
Benzo(g,h,i)perylene	U	0.10	ug/L	1	.2	0.20	0.065	0.10
2-Methylnaphthalene-D10		82.6	%					
Fluorene-D10		78.7	%					
Pyrene-D10		106.	%					

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://www.katahdinlab.com

Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8025.D
Report Date: 26-Mar-2018 13:03

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N032018.b\N8025.D
Lab Smp Id: WG225023-1 Client Smp ID: WG225023-Blank
Inj Date : 20-MAR-2018 11:11
Operator : JCG Inst ID: gcms-n.i
Smp Info : WG225023-1,SL2079
Misc Info : WG225084,WG225023,WG224895-4,SL2079-14
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N032018.b\NSPSIM86.m
Meth Date : 21-Mar-2018 08:53 cgomez Quant Type: ISTD
Cal Date : 16-MAR-2018 14:38 Cal File: N7973.D
Als bottle: 3 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ati-corn-aap.sub
Target Version: 4.12
Processing Host: V200T4

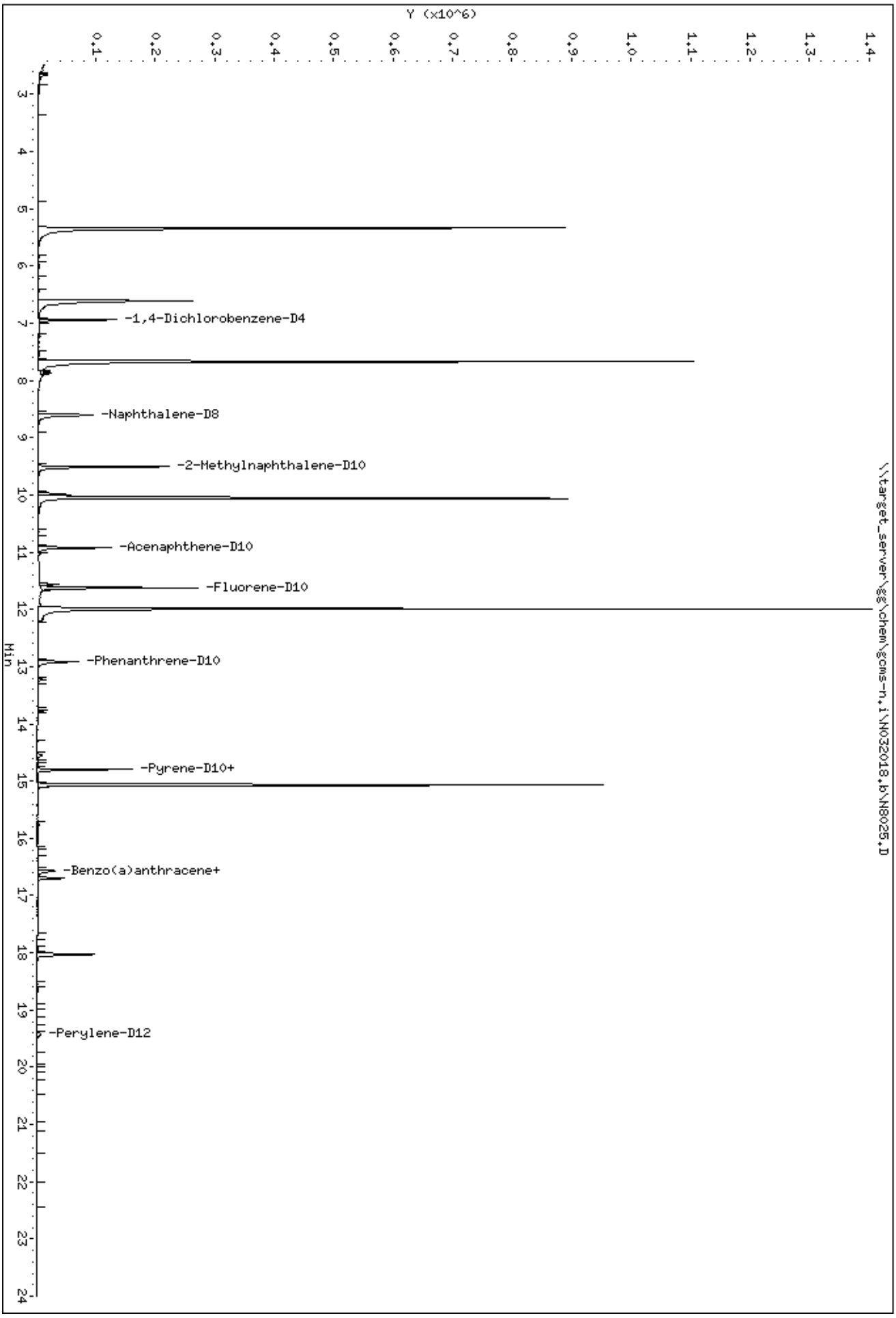
Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)	REVIEW CODE
*	10 1,4-Dichlorobenzene-D4	152	6.940	6.940	(1.000)	51696	0.80000	(aQ)	
*	26 Naphthalene-D8	136	8.611	8.591	(1.000)	175691	0.80000	(a)	
$	32 2-Methylnaphthalene-D10	152	9.508	9.508	(1.104)	170718	1.65164	1.65	
*	47 Acenaphthene-D10	164	10.926	10.926	(1.000)	78341	0.80000	(a)	
$	55 Fluorene-D10	174	11.623	11.623	(1.064)	151876	1.57387	1.57	
*	65 Phenanthrene-D10	188	12.916	12.906	(1.000)	114343	0.80000	(a)	
$	71 Pyrene-D10	212	14.799	14.799	(0.893)	142349	2.11851	2.12	
	72 Pyrene	202	14.827	14.827	(0.895)	10687	0.09131	0.0913(a)	
	74 Benzo(a)anthracene	228	16.563	16.544	(0.999)	4614	0.06928	0.0693(a)	
*	76 Chrysene-D12	240	16.572	16.563	(1.000)	38046	0.80000	(a)	
*	83 Perylene-D12	264	19.422	19.422	(1.000)	23785	0.80000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.


Data File: \\target_server\gg\chem\gcms-n,i\NO32018,b\N8025.D
Date : 20-MAR-2018 11:11
Client ID: WG225023-Blank
Sample Info: WG225023-1,SL2079
Instrument: gcms-n,i
Y (x10^6)
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
Min
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
-1,4-Dichlorobenzene-D4
-Naphthalene-D8
-2-Methylnaphthalene-D10
-Acenaphthene-D10
-Fluorene-D10
-Phenanthrene-D10
-Pyrene-D10+
-Benzo(a)anthracene+
-Perylene-D12
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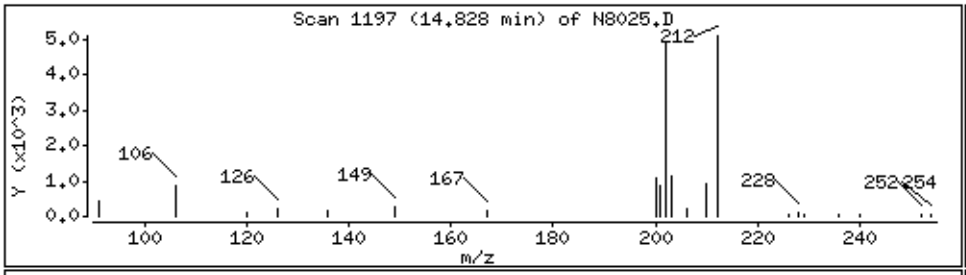
Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8025.D

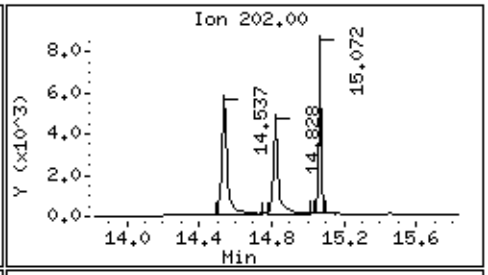
Date : 20-MAR-2018 11:11

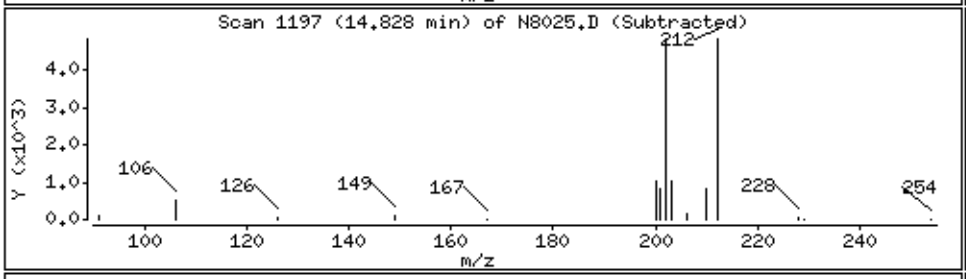
Client ID: WG225023-Blank Instrument: gcms-n.i

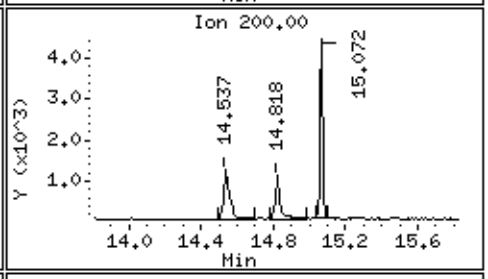
Sample Info: WG225023-1,SL2079

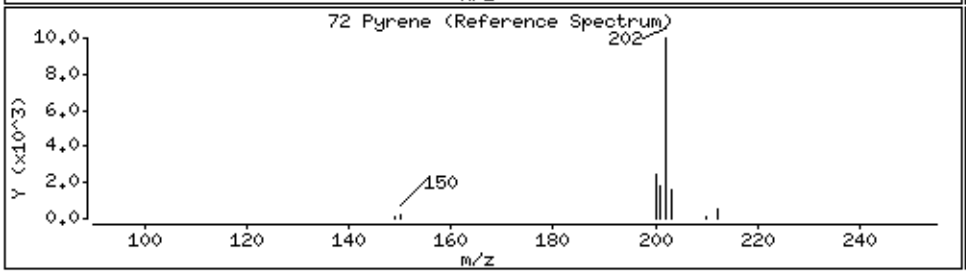
72 Pyrene Concentration: 0.0913 ug/L

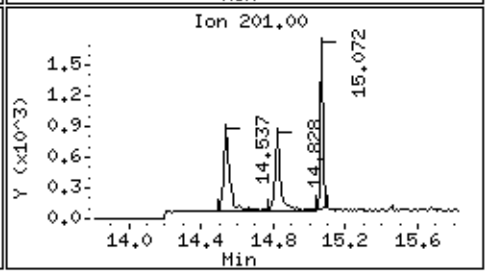




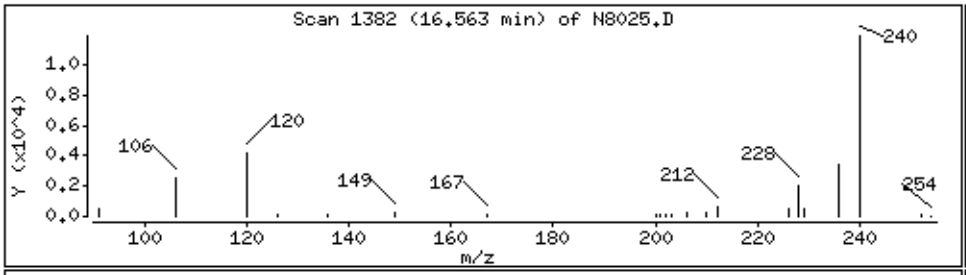


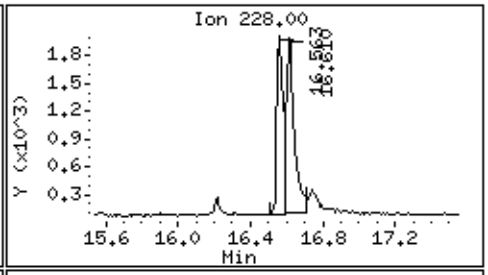


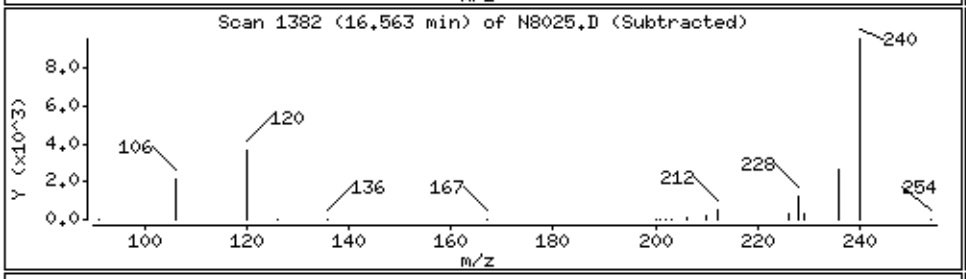


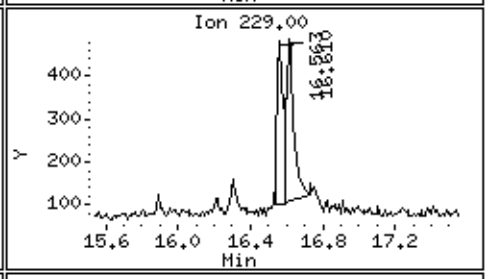


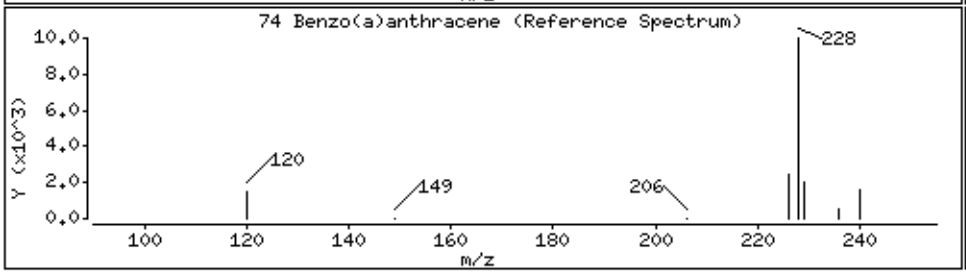
74 Benzo(a)anthracene Concentration: 0.0693 ug/L

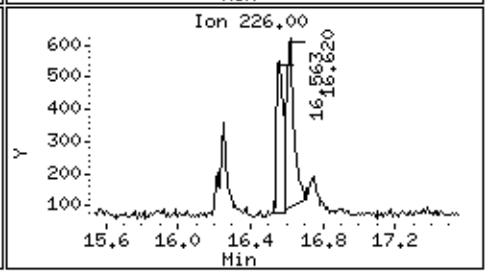












Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG225021-1
Client ID: Method Blank Sample
Project:
SDG: SL2079
Lab File ID: N8029.D

Sample Date:
Received Date:
Extract Date: 19-MAR-18
Extracted By: DP
Extraction Method: SW846 3550C
Lab Prep Batch: WG225021

Analysis Date: 20-MAR-18
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: SL
% Solids: NA
Report Date: 27-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	10	ug/Kgdrywt	1	20	20.	2.6	10.
2-Methylnaphthalene	U	10	ug/Kgdrywt	1	20	20.	2.2	10.
Acenaphthylene	U	10	ug/Kgdrywt	1	20	20.	1.2	10.
Acenaphthene	U	10	ug/Kgdrywt	1	20	20.	1.5	10.
Fluorene	U	10	ug/Kgdrywt	1	20	20.	3.2	10.
Phenanthrene	U	10	ug/Kgdrywt	1	20	20.	1.8	10.
Anthracene	U	10	ug/Kgdrywt	1	20	20.	1.2	10.
Fluoranthene	U	10	ug/Kgdrywt	1	20	20.	1.8	10.
Pyrene	U	10	ug/Kgdrywt	1	20	20.	2.1	10.
Benzo(a)anthracene	U	10	ug/Kgdrywt	1	20	20.	1.9	10.
Chrysene	U	10	ug/Kgdrywt	1	20	20.	1.7	10.
Benzo(b)Fluoranthene	U	10	ug/Kgdrywt	1	20	20.	2.4	10.
Benzo(k)fluoranthene	U	10	ug/Kgdrywt	1	20	20.	3.1	10.
Benzo(a)pyrene	U	10	ug/Kgdrywt	1	20	20.	3.3	10.
Indeno(1,2,3-cd)pyrene	U	10	ug/Kgdrywt	1	20	20.	1.9	10.
Dibenzo(a,h)anthracene	U	10	ug/Kgdrywt	1	20	20.	1.8	10.
Benzo(g,h,i)perylene	U	10	ug/Kgdrywt	1	20	20.	2.0	10.
2-Methylnaphthalene-D10		77.4	%					
Fluorene-D10		67.6	%					
Pyrene-D10		83.8	%					

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Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8029.D
Report Date: 26-Mar-2018 13:04

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N032018.b\N8029.D
Lab Smp Id: WG225021-1 Client Smp ID: WG225021-Blank
Inj Date : 20-MAR-2018 13:18
Operator : JCG Inst ID: gcms-n.i
Smp Info : WG225021-1,SL2079
Misc Info : WG225084,WG225021,WG224895-4,SL2079-2
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N032018.b\NSPSIM86.m
Meth Date : 21-Mar-2018 08:53 cgomez Quant Type: ISTD
Cal Date : 16-MAR-2018 14:38 Cal File: N7973.D
Als bottle: 7 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ati-corn-aap.sub
Target Version: 4.12
Processing Host: V200T4

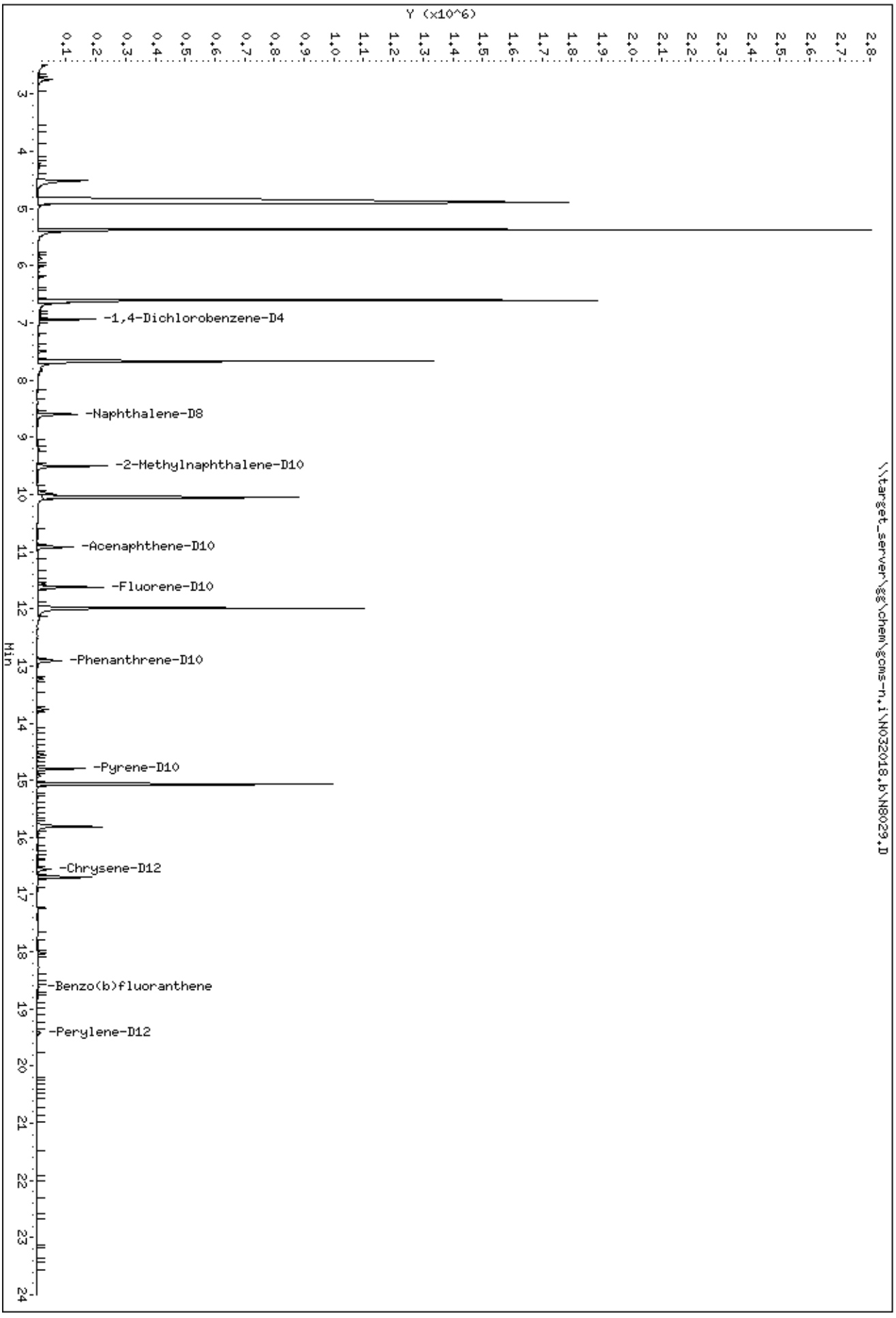
Concentration Formula: Amt * DF * (Vt/Ws*Vi)*(100/(100-M))*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Final Volume (L)
Ws	0.03000	Weight of Sample (Kg)
Vi	1.000	Volume injected (uL)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/Kgdrywt)	REVIEW COD
* 10 1,4-Dichlorobenzene-D4	152	6.940	6.940	(1.000)	55702	0.80000	(Q)	
* 26 Naphthalene-D8	136	8.601	8.591	(1.000)	188335	0.80000		
$ 32 2-Methylnaphthalene-D10	152	9.508	9.508	(1.105)	171608	1.54879	51.6	
* 47 Acenaphthene-D10	164	10.926	10.926	(1.000)	83863	0.80000		
$ 55 Fluorene-D10	174	11.623	11.623	(1.064)	139785	1.35319	45.1	
* 65 Phenanthrene-D10	188	12.906	12.906	(1.000)	123576	0.80000		
$ 71 Pyrene-D10	212	14.799	14.799	(0.894)	143631	1.67521	55.8	
* 76 Chrysene-D12	240	16.554	16.563	(1.000)	48547	0.80000		
* 83 Perylene-D12	264	19.411	19.422	(1.000)	31056	0.80000		

QC Flag Legend

Q - Qualifier signal failed the ratio test.


Data File: \\target_server\gg\chem\gcms-n,i\N032018,b\N8029.D
Date : 20-MAR-2018 13:18
Client ID: WG225021-Blank
Sample Info: WG225021-1,SL2079
Instrument: gcms-n,i
\\target_server\gg\chem\gcms-n,i\N032018,b\N8029.D
Y (x10^6)
Min
-1,4-Dichlorobenzene-D4
-Naphthalene-D8
-2-Methylnaphthalene-D10
-Acenaphthene-D10
-Fluorene-D10
-Phenanthrene-D10
-Pyrene-D10
-Chrysene-D12
-Benzo(b)fluoranthene
-Perylene-D12

Katahdin
ANALYTICAL SERVICES

Cert No E87604

LCS Recovery Report

Client:
Lab ID: WG225023-2
Client ID: LCS
Project:
SDG: SL2079
LCS File ID: N8026.D

Sample Date:
Received Date:
Extract Date: 19-MAR-18
Extracted By: KF
Extraction Method: SW846 3510C
Lab Prep Batch: WG225023

Analysis Date: 20-MAR-18
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: AQ
% Solids: NA
Report Date: 26-MAR-18

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
Naphthalene	81.5	2.00	1.63	ug/L	43-120
2-Methylnaphthalene	76.0	2.00	1.52	ug/L	39-120
Acenaphthylene	79.5	2.00	1.59	ug/L	35-121
Acenaphthene	83.5	2.00	1.67	ug/L	48-120
Fluorene	86.5	2.00	1.73	ug/L	50-120
Phenanthrene	84.5	2.00	1.69	ug/L	53-120
Anthracene	80.5	2.00	1.61	ug/L	53-120
Fluoranthene	88.0	2.00	1.76	ug/L	58-120
Pyrene	90.5	2.00	1.81	ug/L	53-121
Benzo(a)anthracene	93.0	2.00	1.86	ug/L	59-120
Chrysene	85.5	2.00	1.71	ug/L	57-120
Benzo(b)Fluoranthene	102.	2.00	2.04	ug/L	53-126
Benzo(k)fluoranthene	91.0	2.00	1.82	ug/L	54-125
Benzo(a)pyrene	80.5	2.00	1.61	ug/L	53-120
Indeno(1,2,3-cd)pyrene	54.0	2.00	1.08	ug/L	48-130
Dibenzo(a,h)anthracene	65.0	2.00	1.30	ug/L	44-131
Benzo(g,h,i)perylene	67.5	2.00	1.35	ug/L	44-128
2-Methylnaphthalene-D10	86.8				43-120
Fluorene-D10	83.6				29-120
Pyrene-D10	86.8				53-166

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Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8026.D
Report Date: 26-Mar-2018 13:03

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N032018.b\N8026.D
Lab Smp Id: WG225023-2 Client Smp ID: WG225023-LCS
Inj Date : 20-MAR-2018 11:44
Operator : JCG Inst ID: gcms-n.i
Smp Info : WG225023-2,SL2079
Misc Info : WG225084,WG225023,WG224895-4,SL2079-14
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N032018.b\NSPSIM86.m
Meth Date : 21-Mar-2018 08:53 cgomez Quant Type: ISTD
Cal Date : 16-MAR-2018 14:38 Cal File: N7973.D
Als bottle: 4 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ati-corn-aap.sub
Target Version: 4.12
Processing Host: V200T4

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)	REVIEW CODE
*	10 1,4-Dichlorobenzene-D4	152	6.940	6.940	(1.000)	51394	0.80000	(a)	
*	26 Naphthalene-D8	136	8.591	8.591	(1.000)	177263	0.80000	(a)	
	27 Naphthalene	128	8.621	8.611	(1.004)	366042	1.63383	1.63	
$	32 2-Methylnaphthalene-D10	152	9.508	9.508	(1.107)	181043	1.73600	1.74	
	33 2-Methylnaphthalene	142	9.547	9.547	(1.111)	268482	1.52133	1.52	
	45 Acenaphthylene	152	10.730	10.730	(0.982)	329016	1.59250	1.59	
*	47 Acenaphthene-D10	164	10.926	10.926	(1.000)	77880	0.80000	(a)	
	48 Acenaphthene	153	10.959	10.959	(1.003)	225525	1.67155	1.67	
$	55 Fluorene-D10	174	11.623	11.623	(1.064)	160336	1.67137	1.67	
	56 Fluorene	166	11.656	11.656	(1.067)	239746	1.73106	1.73	
*	65 Phenanthrene-D10	188	12.906	12.906	(1.000)	119760	0.80000	(a)	
	66 Phenanthrene	178	12.927	12.927	(1.002)	312353	1.68811	1.69	
	67 Anthracene	178	13.002	13.002	(1.007)	333350	1.61237	1.61	
	70 Fluoranthene	202	14.527	14.527	(1.126)	305341	1.75537	1.76	
$	71 Pyrene-D10	212	14.799	14.799	(0.894)	173566	1.73514	1.74	
	72 Pyrene	202	14.818	14.827	(0.895)	315001	1.80786	1.81	
	74 Benzo(a)anthracene	228	16.535	16.544	(0.999)	184166	1.85765	1.86	
*	76 Chrysene-D12	240	16.554	16.563	(1.000)	56639	0.80000	(a)	
	77 Chrysene	228	16.601	16.601	(1.003)	190339	1.71401	1.71	
	80 Benzo(b)fluoranthene	252	18.571	18.582	(0.957)	117815	2.03550	2.04	

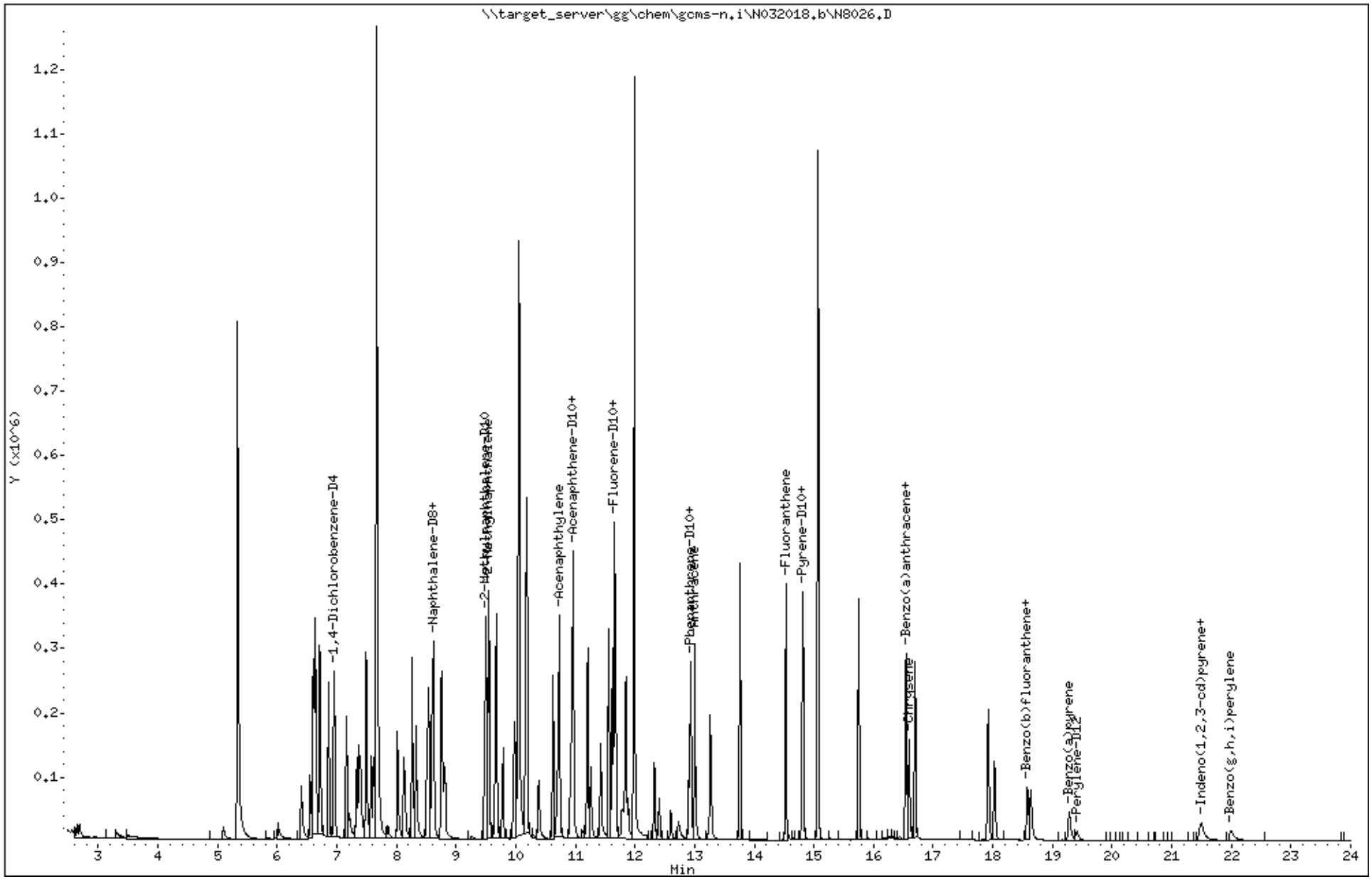
Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8026.D
Report Date: 26-Mar-2018 13:03

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
	81 Benzo(k)fluoranthene	252	18.628	18.639	(0.960)	145417	1.81794	1.82(H)	
	82 Benzo(a)pyrene	252	19.275	19.286	(0.993)	93292	1.61318	1.61	
*	83 Perylene-D12	264	19.411	19.422	(1.000)	34854	0.80000	(a)	
	85 Indeno(1,2,3-cd)pyrene	276	21.478	21.489	(1.297)	73206	1.08009	1.08	
	86 Dibenzo(a,h)anthracene	278	21.512	21.523	(1.108)	52223	1.30575	1.30	
	87 Benzo(g,h,i)perylene	276	21.989	22.012	(1.133)	67917	1.35115	1.35	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
H - Operator selected an alternate compound hit.

Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8026.D
Date : 20-MAR-2018 11:44
Client ID: WG225023-LCS
Instrument: gcms-n.i
Sample Info: WG225023-2,SL2079
Volume Injected (uL): 1.0
Operator: JCG
Column phase: ZB5-MS
Column diameter: 0.25



Katahdin Analytical Services 2000222

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ANALYTICAL SERVICES

Cert No E87604

LCS Recovery Report

Client:
Lab ID: WG225021-2
Client ID: LCS
Project:
SDG: SL2079
LCS File ID: N8030.D

Sample Date:
Received Date:
Extract Date: 19-MAR-18
Extracted By: DP
Extraction Method: SW846 3550C
Lab Prep Batch: WG225021

Analysis Date: 20-MAR-18
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: SL
% Solids: NA
Report Date: 26-MAR-18

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
Naphthalene	71.5	66.7	47.7	ug/Kgdrywt	38-125
2-Methylnaphthalene	65.7	66.7	43.8	ug/Kgdrywt	39-125
Acenaphthylene	64.0	66.7	42.7	ug/Kgdrywt	39-125
Acenaphthene	67.9	66.7	45.3	ug/Kgdrywt	44-125
Fluorene	70.3	66.7	46.9	ug/Kgdrywt	47-125
Phenanthrene	70.0	66.7	46.7	ug/Kgdrywt	49-125
Anthracene	64.2	66.7	42.8	ug/Kgdrywt	50-125
Fluoranthene	77.2	66.7	51.5	ug/Kgdrywt	55-125
Pyrene	69.1	66.7	46.1	ug/Kgdrywt	55-125
Benzo(a)anthracene	77.8	66.7	51.9	ug/Kgdrywt	54-125
Chrysene	72.0	66.7	48.0	ug/Kgdrywt	57-125
Benzo(b)Fluoranthene	91.0	66.7	60.7	ug/Kgdrywt	53-128
Benzo(k)fluoranthene	73.0	66.7	48.7	ug/Kgdrywt	56-125
Benzo(a)pyrene	64.5	66.7	43.0	ug/Kgdrywt	50-125
Indeno(1,2,3-cd)pyrene	51.3	66.7	34.2	ug/Kgdrywt	49-130
Dibenzo(a,h)anthracene	58.5	66.7	39.0	ug/Kgdrywt	50-129
Benzo(g,h,i)perylene	59.4	66.7	39.6	ug/Kgdrywt	49-127
2-Methylnaphthalene-D10	91.3				19-125
Fluorene-D10	66.6				20-125
Pyrene-D10	66.2				31-128

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Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8030.D
Report Date: 26-Mar-2018 13:04

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N032018.b\N8030.D
Lab Smp Id: WG225021-2 Client Smp ID: WG225021-LCS
Inj Date : 20-MAR-2018 13:50
Operator : JCG Inst ID: gcms-n.i
Smp Info : WG225021-2,SL2079
Misc Info : WG225084,WG225021,WG224895-4,SL2079-2
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N032018.b\NSPSIM86.m
Meth Date : 21-Mar-2018 08:53 cgomez Quant Type: ISTD
Cal Date : 16-MAR-2018 14:38 Cal File: N7973.D
Als bottle: 8 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ati-corn-aap.sub
Target Version: 4.12
Processing Host: V200T4

Concentration Formula: Amt * DF * (Vt/Ws*Vi)*(100/(100-M))*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Final Volume (L)
Ws	0.03000	Weight of Sample (Kg)
Vi	1.000	Volume injected (uL)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/Kgdrywt)	REVIEW COD
*	10 1,4-Dichlorobenzene-D4	152	6.940	6.940	(1.000)	58278	0.80000		
*	26 Naphthalene-D8	136	8.591	8.591	(1.000)	197151	0.80000		
	27 Naphthalene	128	8.621	8.611	(1.004)	356638	1.43127	47.7	
$	32 2-Methylnaphthalene-D10	152	9.508	9.508	(1.107)	211875	1.82670	60.9	
	33 2-Methylnaphthalene	142	9.547	9.547	(1.111)	259572	1.31499	43.8	
	45 Acenaphthylene	152	10.730	10.730	(0.982)	307274	1.28052	42.7	
*	47 Acenaphthene-D10	164	10.926	10.926	(1.000)	90454	0.80000		
	48 Acenaphthene	153	10.959	10.959	(1.003)	212792	1.35793	45.3	
$	55 Fluorene-D10	174	11.623	11.623	(1.064)	148500	1.33281	44.4	
	56 Fluorene	166	11.656	11.656	(1.067)	226369	1.40727	46.9	
*	65 Phenanthrene-D10	188	12.906	12.906	(1.000)	139517	0.80000		
	66 Phenanthrene	178	12.927	12.927	(1.002)	301944	1.40077	46.7	
	67 Anthracene	178	13.002	13.002	(1.007)	309245	1.28396	42.8	
	70 Fluoranthene	202	14.527	14.527	(1.126)	312986	1.54452	51.5	
$	71 Pyrene-D10	212	14.799	14.799	(0.894)	173199	1.32505	44.2	
	72 Pyrene	202	14.818	14.827	(0.895)	315045	1.38371	46.1	
	74 Benzo(a)anthracene	228	16.535	16.544	(0.999)	201586	1.55608	51.9	
*	76 Chrysene-D12	240	16.554	16.563	(1.000)	74011	0.80000		
	77 Chrysene	228	16.591	16.601	(1.002)	213781	1.44039	48.0	
	80 Benzo(b)fluoranthene	252	18.571	18.582	(0.957)	148020	1.81980	60.7	

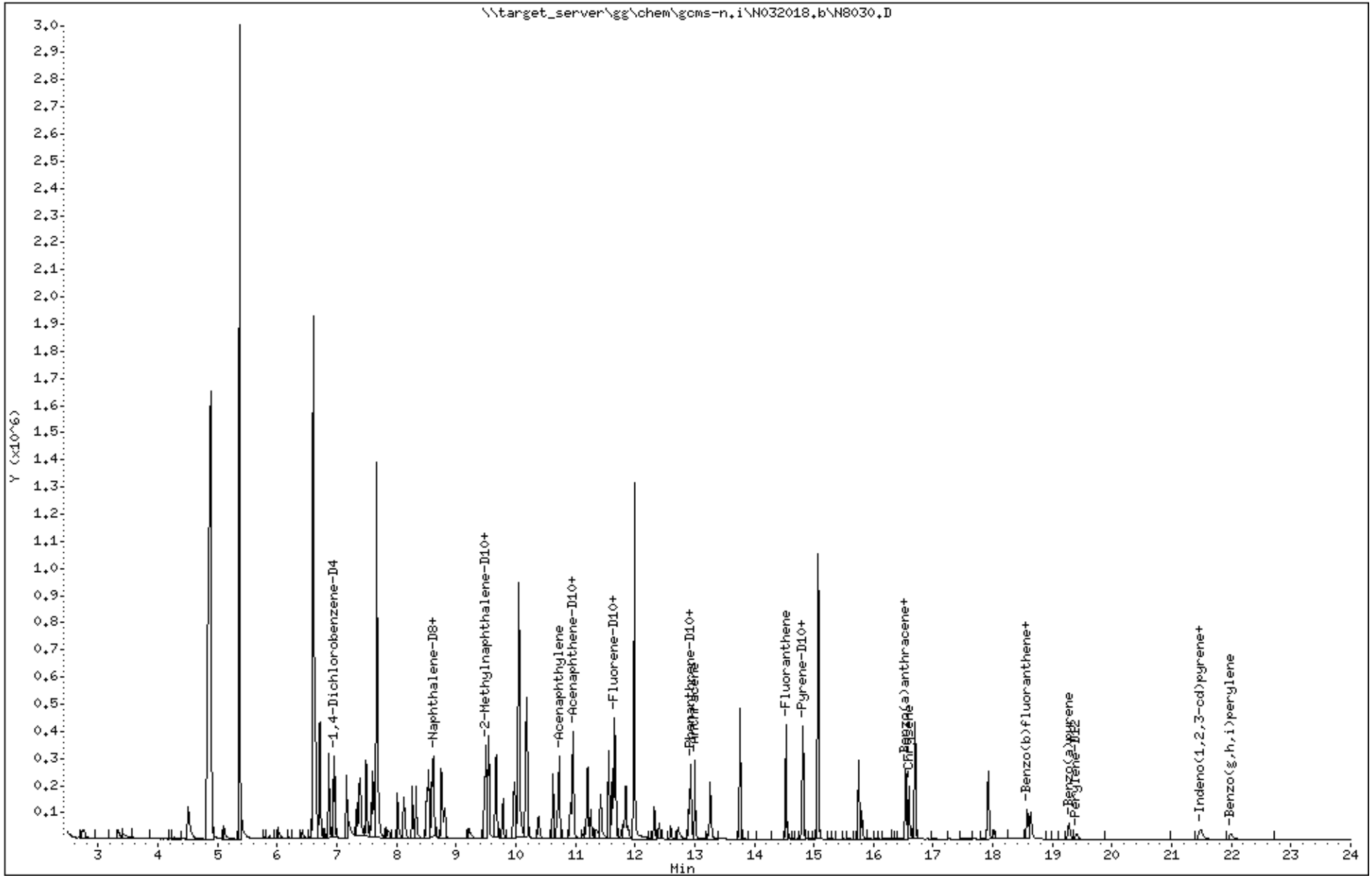
Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8030.D
Report Date: 26-Mar-2018 13:04

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/Kgdrywt)	REVIEW COD
81	Benzo(k)fluoranthene	252	18.628	18.639	(0.960)	164378	1.46232	48.7(H)	
82	Benzo(a)pyrene	252	19.275	19.286	(0.994)	104949	1.29137	43.0	
* 83	Perylene-D12	264	19.400	19.422	(1.000)	48980	0.80000		
85	Indeno(1,2,3-cd)pyrene	276	21.467	21.489	(1.297)	90821	1.02546	34.2	
86	Dibenzo(a,h)anthracene	278	21.501	21.523	(1.108)	65825	1.17117	39.0	
87	Benzo(g,h,i)perylene	276	21.978	22.012	(1.133)	83923	1.18806	39.6	

QC Flag Legend

H - Operator selected an alternate compound hit.

Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8030.D
Date : 20-MAR-2018 13:50
Client ID: WG225021-LCS
Instrument: gcms-n.i
Sample Info: WG225021-2,SL2079
Volume Injected (uL): 1.0
Operator: JCG
Column phase: ZB5-MS
Column diameter: 0.25



Katahdin Analytical Services 2000226

MS/MSD Recovery Report

MS ID: WG225021-3
MSD ID: WG225021-4
Sample ID: SL2079-9
Client ID: CHAAP-BKRD-SS10
Project:
SDG: SL2079
MS File ID: N8040.D

Received Date:
Extract Date: 19-MAR-18
Extracted By: DP
Extraction Method: SW846 3550C
Lab Prep Batch: WG225021
Report Date: 26-MAR-18
MSD File ID: N8041.D

Analysis Date: 20-MAR-18
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: SL
% Solids: 75.

Compound	MS Spike	MSD Spike	Conc Units	Samp Conc	MS Conc	MSD Conc	MS Rec (%)	MSD Rec (%)	RPD (%)	RPD Limit	Limits
Naphthalene	88.2	89.0	ug/Kgdrywt	U13	55.	53.	61.9	60.0	2	20	38-125
2-Methylnaphthalene	88.2	89.0	ug/Kgdrywt	U13	52.	50.	58.5	55.7	4	20	39-125
Acenaphthylene	88.2	89.0	ug/Kgdrywt	U13	53.	52.	59.9	57.9	2	20	39-125
Acenaphthene	88.2	89.0	ug/Kgdrywt	U13	57.	56.	64.6	62.4	2	20	44-125
Fluorene	88.2	89.0	ug/Kgdrywt	U13	59.	58.	66.9	65.4	1	20	47-125
Phenanthrene	88.2	89.0	ug/Kgdrywt	J3.4	58.	56.	62.5	59.5	4	20	49-125
Anthracene	88.2	89.0	ug/Kgdrywt	U13	51.	50.	57.7	55.7	2	20	50-125
Fluoranthene	88.2	89.0	ug/Kgdrywt	J4.0	59.	56.	62.0	58.6	4	20	55-125
Pyrene	88.2	89.0	ug/Kgdrywt	J3.4	57.	54.	60.4	56.3	6	20	55-125
Benzo(a)anthracene	88.2	89.0	ug/Kgdrywt	U13	55.	51.	62.5	57.4	8	20	54-125
Chrysene	88.2	89.0	ug/Kgdrywt	UMM13	49.	46.	55.1*	51.2*	6	20	57-125
Benzo(b)Fluoranthene	88.2	89.0	ug/Kgdrywt	U13	64.	62.	72.7	69.2	4	20	53-128
Benzo(k)fluoranthene	88.2	89.0	ug/Kgdrywt	UMM13	47.	47.	53.2*	52.9*	0	20	56-125
Benzo(a)pyrene	88.2	89.0	ug/Kgdrywt	UMM13	43.	40.	48.8*	45.4*	6	20	50-125
Indeno(1,2,3-cd)pyrene	88.2	89.0	ug/Kgdrywt	UMM13	35.	31.	39.4*	35.0*	11	20	49-130
Dibenzo(a,h)anthracene	88.2	89.0	ug/Kgdrywt	UMM13	41.	38.	46.5*	42.6*	8	20	50-129
Benzo(g,h,i)perylene	88.2	89.0	ug/Kgdrywt	UMM13	36.	37.	41.2*	41.3*	1	20	49-127
2-Methylnaphthalene-D10							82.6	80.0			19-125
Fluorene-D10							62.2	60.6			20-125
Pyrene-D10							57.2	55.6			31-128

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

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Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8040.D
Report Date: 26-Mar-2018 13:04

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N032018.b\N8040.D
Lab Smp Id: WG225021-3 Client Smp ID: CHAAP-BKRD-SS10MS
Inj Date : 20-MAR-2018 19:06 MS Autotune Date: 25-OCT-2017 07:54
Operator : JCG Inst ID: gcms-n.i
Smp Info : WG225021-3,SL2079
Misc Info : WG225084,WG225021,WG224895-4,SL2079-9
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N032018.b\NSPSIM86.m
Meth Date : 21-Mar-2018 08:53 cgomez Quant Type: ISTD
Cal Date : 16-MAR-2018 14:38 Cal File: N7973.D
Als bottle: 18 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ati-corn-aap.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/Ws*Vi)*(100/(100-M))*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Final Volume (L)
Ws	0.03040	Weight of Sample (Kg)
Vi	1.000	Volume injected (uL)
M	25.390	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/Kgdrywt)	REVIEW COD
*	10 1,4-Dichlorobenzene-D4	152	6.940	6.940	(1.000)	53752	0.80000		
*	26 Naphthalene-D8	136	8.591	8.591	(1.000)	182165	0.80000		
	27 Naphthalene	128	8.621	8.611	(1.004)	285214	1.23879	54.6	
$	32 2-Methylnaphthalene-D10	152	9.508	9.508	(1.107)	177117	1.65265	72.9	
	33 2-Methylnaphthalene	142	9.547	9.547	(1.111)	214146	1.16978	51.6	
	45 Acenaphthylene	152	10.730	10.730	(0.983)	262040	1.19778	52.8	
*	47 Acenaphthene-D10	164	10.915	10.926	(1.000)	82467	0.80000		
	48 Acenaphthene	153	10.959	10.959	(1.004)	184750	1.29316	57.0	
$	55 Fluorene-D10	174	11.623	11.623	(1.065)	126491	1.24522	54.9	
	56 Fluorene	166	11.656	11.656	(1.068)	196389	1.33914	59.0	
*	65 Phenanthrene-D10	188	12.895	12.906	(1.000)	128069	0.80000		
	66 Phenanthrene	178	12.927	12.927	(1.002)	262699	1.32764	58.5	
	67 Anthracene	178	13.002	13.002	(1.008)	255051	1.15361	50.9	
	70 Fluoranthene	202	14.527	14.527	(1.127)	247698	1.33160	58.7	
$	71 Pyrene-D10	212	14.790	14.799	(0.893)	128465	1.14507	50.5	
	72 Pyrene	202	14.818	14.827	(0.895)	251325	1.28608	56.7	
	74 Benzo(a)anthracene	228	16.535	16.544	(0.999)	139032	1.25039	55.1	
*	76 Chrysene-D12	240	16.554	16.563	(1.000)	63524	0.80000		
	77 Chrysene	228	16.591	16.601	(1.002)	146416	1.10211	48.6(R)	
	80 Benzo(b)fluoranthene	252	18.571	18.582	(0.957)	102673	1.45411	64.1	
	81 Benzo(k)fluoranthene	252	18.628	18.639	(0.960)	103913	1.06489	46.9(RH)	

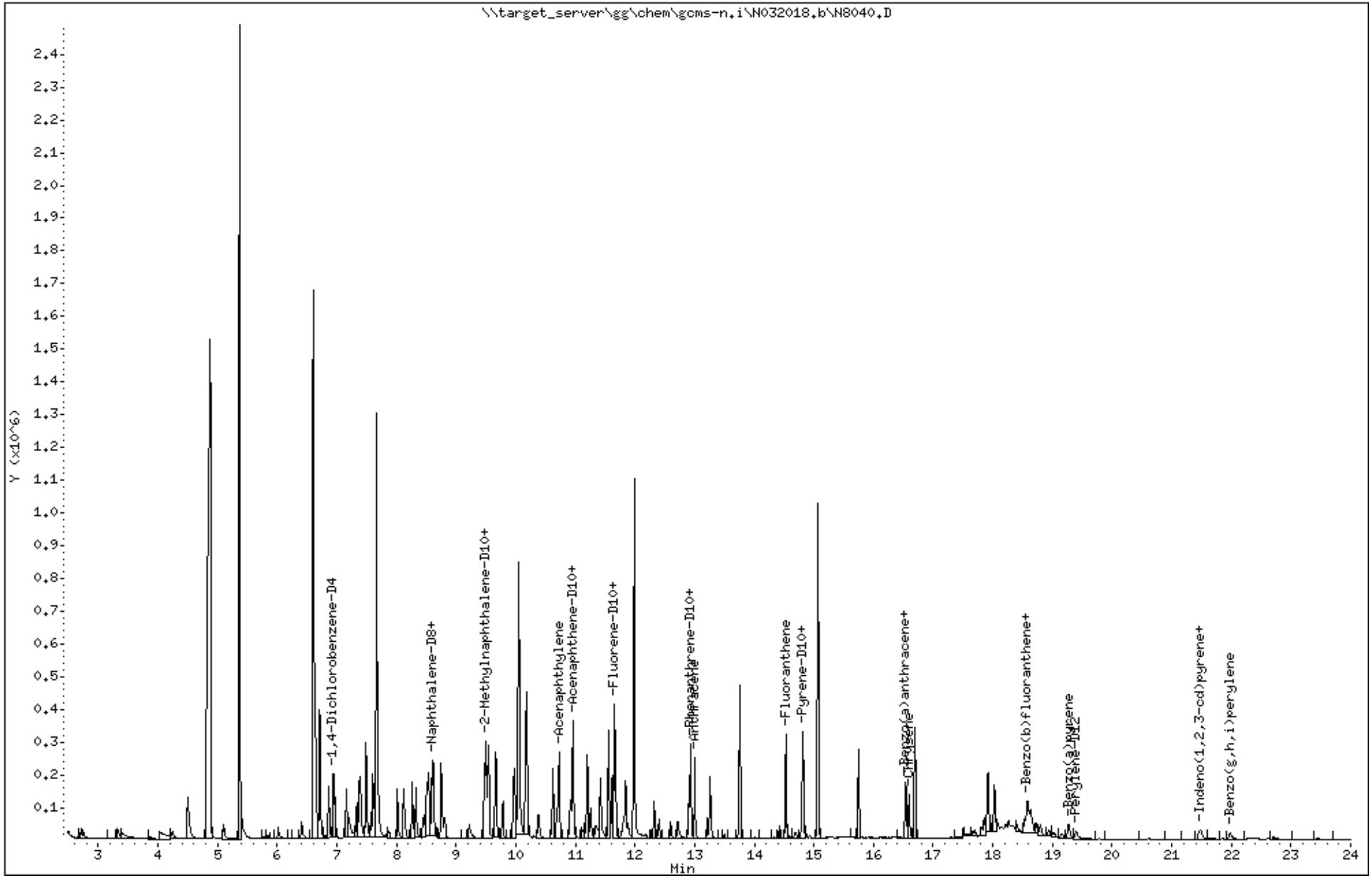
Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8040.D
Report Date: 26-Mar-2018 13:04

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/Kgdrywt)	REVIEW COD
82	Benzo(a)pyrene	252	19.275	19.286	(0.994)	68889	0.97647	43.0(R)	
* 83	Perylene-D12	264	19.400	19.422	(1.000)	42519	0.80000		
85	Indeno(1,2,3-cd)pyrene	276	21.456	21.489	(1.296)	59810	0.78680	34.7(R)	
86	Dibenzo(a,h)anthracene	278	21.490	21.523	(1.108)	45398	0.93047	41.0(R)	
87	Benzo(g,h,i)perylene	276	21.978	22.012	(1.133)	50475	0.82313	36.3(R)	

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
H - Operator selected an alternate compound hit.

Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8040.D
Date : 20-MAR-2018 19:06
Client ID: CHAAP-BKRD-SS10MS
Instrument: gcms-n.i
Sample Info: WG225021-3,SL2079
Volume Injected (uL): 1.0
Operator: JCG
Column phase: ZB5-MS
Column diameter: 0.25



Katahdin Analytical Services 2000230

Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8041.D
Report Date: 26-Mar-2018 13:04

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N032018.b\N8041.D
Lab Smp Id: WG225021-4 Client Smp ID: CHAAP-BKRD-SS10MSD
Inj Date : 20-MAR-2018 19:38 MS Autotune Date: 25-OCT-2017 07:54
Operator : JCG Inst ID: gcms-n.i
Smp Info : WG225021-4,SL2079
Misc Info : WG225084,WG225021,WG224895-4,SL2079-9
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N032018.b\NSPSIM86.m
Meth Date : 21-Mar-2018 08:53 cgomez Quant Type: ISTD
Cal Date : 16-MAR-2018 14:38 Cal File: N7973.D
Als bottle: 19 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ati-corn-aap.sub
Target Version: 4.12

Concentration Formula: Amt * DF * (Vt/Ws*Vi)*(100/(100-M))*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00100	Final Volume (L)
Ws	0.03010	Weight of Sample (Kg)
Vi	1.000	Volume injected (uL)
M	25.390	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/Kgdrywt)	REVIEW COD
*	10 1,4-Dichlorobenzene-D4	152	6.940	6.940	(1.000)	53922	0.80000		
*	26 Naphthalene-D8	136	8.591	8.591	(1.000)	184680	0.80000		
	27 Naphthalene	128	8.611	8.611	(1.002)	279964	1.19943	53.4	
$	32 2-Methylnaphthalene-D10	152	9.498	9.508	(1.106)	173772	1.59936	71.2	
	33 2-Methylnaphthalene	142	9.547	9.547	(1.111)	207035	1.11406	49.6	
	45 Acenaphthylene	152	10.730	10.730	(0.983)	251417	1.15828	51.6	
*	47 Acenaphthene-D10	164	10.915	10.926	(1.000)	81822	0.80000		
	48 Acenaphthene	153	10.959	10.959	(1.004)	177179	1.24995	55.6	
$	55 Fluorene-D10	174	11.623	11.623	(1.065)	121937	1.20986	53.9	
	56 Fluorene	166	11.656	11.656	(1.068)	190163	1.30690	58.2	
*	65 Phenanthrene-D10	188	12.895	12.906	(1.000)	123931	0.80000		
	66 Phenanthrene	178	12.927	12.927	(1.002)	242774	1.26791	56.4	
	67 Anthracene	178	13.002	13.002	(1.008)	238552	1.11501	49.6	
	70 Fluoranthene	202	14.527	14.527	(1.127)	227089	1.26157	56.2	
$	71 Pyrene-D10	212	14.790	14.799	(0.893)	119691	1.11186	49.5	
	72 Pyrene	202	14.818	14.827	(0.895)	225859	1.20451	53.6	
	74 Benzo(a)anthracene	228	16.535	16.544	(0.999)	122450	1.14771	51.1	
*	76 Chrysene-D12	240	16.554	16.563	(1.000)	60953	0.80000		
	77 Chrysene	228	16.591	16.601	(1.002)	132179	1.02308	45.6(R)	
	80 Benzo(b)fluoranthene	252	18.571	18.582	(0.957)	90830	1.38375	61.6	
	81 Benzo(k)fluoranthene	252	18.628	18.639	(0.960)	95935	1.05755	47.1(RH)	

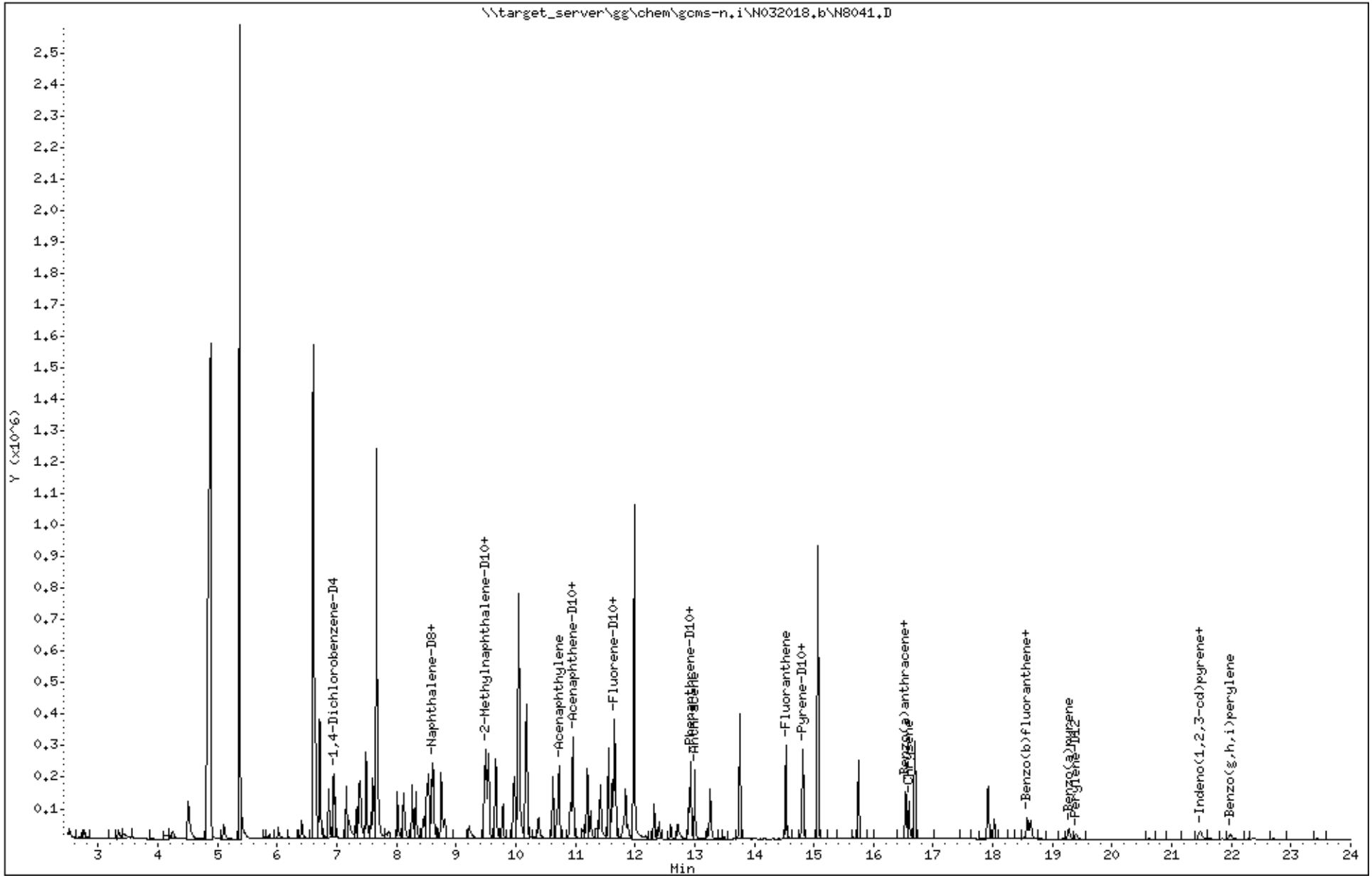
Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8041.D
Report Date: 26-Mar-2018 13:04

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/Kgdrywt)	REVIEW COD
82	Benzo(a)pyrene	252	19.275	19.286	(0.994)	59546	0.90792	40.4(R)	
* 83	Perylene-D12	264	19.400	19.422	(1.000)	39527	0.80000		
85	Indeno(1,2,3-cd)pyrene	276	21.467	21.489	(1.297)	51085	0.70037	31.2(R)	
86	Dibenzo(a,h)anthracene	278	21.490	21.523	(1.108)	38593	0.85087	37.9(R)	
87	Benzo(g,h,i)perylene	276	21.978	22.012	(1.133)	47141	0.82696	36.8(R)	

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
H - Operator selected an alternate compound hit.

Data File: \\target_server\gg\chem\gcms-n.i\N032018.b\N8041.D
Date : 20-MAR-2018 19:38
Client ID: CHAAP-BKRD-SS10MSD
Instrument: gcms-n.i
Sample Info: WG225021-4,SL2079
Volume Injected (uL): 1.0
Operator: JCG
Column phase: ZB5-MS
Column diameter: 0.25



Katahdin Analytical Services 2000233

Logbooks and Supporting Documents

625/SIM SEP

KATAHDIN ANALYTICAL SERVICES, LLC.
ORGANIC EXTRACTIONS LOG - AQUEOUS SEMI-VOLATILES

Extraction Method: (check one)	SW846 3510 (SEP) ✓	SW846 3520 (CLLE)	SW846 3535 (SPE)
Analytical Method:(check one)	SW846 8270 ✓	SW846 8270 SIM ✓	EPA 625 (mark meniscus w/ marker to determine IV) ✓
Surrogate ID: SV2841	Surrogate ID: SV2833	Spike ID: SIM SV2843	Spike ID:
Methylene Chloride Lot #: DT306	pH Paper Lot # NK613365	KI Starch Paper ID: 022017	Note samples requiring TRC neutralization in comments section.
pH (1st Extraction) 5-2	H_2SO_4 Lot # 177543	pH (2nd Extraction) 2/1	NaOH Lot # 190393
$NaSO_4$ Lot # 279670B3	Filter Paper Lot #: 9851692	Boiling Stones ID: 3-27-2014	Vial Lot #: 373232
Nitrogen Bath Temperature: 30°C	—	—	—
Prep Start Time: 1110	Prep End Time: 1310	CLLE Start Time: —	CLLE End Date & Time: —

Date Extracted	Ext. Init.	Sample ID	Initial Vol. mL	Surr. Vol.	Spike Vol.	Fraction SV	Fraction SIM	Final Vol. mL	Date Conc.	Tray Location	Initials	Comments
3-19-18	KF	W6225023-1 (SIM) W6225024-1 (625)	1000	1mL	NR	✓	✓	1mL	3-19-18	SV2833 B7	JMS	SM-R465354 ~~SV2833-R465355~~ 625
↓	↓	W6225023-2	1000	↓	1mL		✓	↓	↓	B3	↓	
↓	↓	W6225024-2	1000	↓	↓	✓				B4		
↓	↓	-3	500	↓	↓	↓				B5		MS SL2141-1E
↓	↓	-4	~~MS~~ 550	↓	↓	↓		↓	↓	B6	↓	MSD ↓ -1E
									KF	3-19-18		

Date Extracted	Ext. Init.	Sample ID	Initial Vol. mL	Surr. Vol.	Spike Vol.	Fraction SV	Fraction SIM	Final Vol. mL	Date Conc.	Tray Location	Initials	Comments
3-19-18	KF	SL2079-1MS	1030	1mL	NR		✓	1mL	3-19-18	B7	JMS	
↓	↓	SL2133-10E	1030	↓			↓	↓	↓	B8	↓	
↓	↓	SL2041-10ct1B	1050	↓	↓	✓				B9		625
↓	↓	SL2141-1E	1030	↓	↓	↓				B10		↓ MS10
↓	↓	SL2053-1G	1060	↓	↓	↓		↓	↓	C1	↓	625 pm-5.5-cut
									KF	3-19-18		

Reviewed By_____ Date_____

Katahdin Analytical Services 2000235

SON - SIM

KATAHDIN ANALYTICAL SERVICES, LLC

ORGANIC EXTRACTIONS LOG - SOIL SEMIVOLATILE

Extraction Method:	SW846 3550:	SW846 3540:	SW846 3545:	SW846 3546:	SW846 3580:
Analytical Method:	SW846 8270:	OTHER:			
Standards	Surrogate ID (1): SV2841	Spike ID (1): SV2843	Spike ID (3): —		
	Surrogate ID (2): —	Spike ID (2): —			
Solvents / Chemicals / Consumables	Solvent Lot # (MeCl2): DT306	Solvent Lot # (Acetone): DT350	Sodium Sulfate (granular) Lot #: 27967003		
	Filter Paper Lot # (SON): 9837925	Filter Paper Lot # (KD): 9851692	Sodium Sulfate (powder) Lot #: 27977004		
Misc.	Nitrogen Bath Temperature: 36°	Sonicator Horns Tuned: 4/0%	Balance ID: METTLER PJ400	Vial Lot ID: 462478 ; 393232	
Prep Start Time: 09:30	Prep Stop Time: 12:00	Sox Start Time: —	Sox End Date: —	Sox End Time: —	

Ext. Date	Ext. Init.	Sample ID	Initial Weight (g)	Surr. Vol. (mL)	Spk. Vol. (mL)	Fraction SCN	Fraction MS	Pre-GPC Date Conc.	Pre-GPC Conc. Init.	Pre-GPC Final Vol. (mL)	Post-GPC Date Conc.	Post-GPC Conc. Init.	Post-GPC Final Vol. (mL)	Tray Loc.	Comments
03-19-18	PP	WG225021-1	30.00	1.00	NR		X	3.19.18	JMS	5mL	03.20-18	WAS	1.00	SV292 C2	2465393
		-2	30.04		1.00									C3	
		-3	30.41											C4	MS: SL2079-9N
		-4	30.06											C5	MSD: SL2079-9N
		GPC Blk # 23-A												C6	
															PP 03-19-18

EX-008 – Revision 3 – 01/25/2016

QAEX331

0000182

Ext. Date	Ext. Init.	Sample ID	Initial Weight (g)	Surr. Vol. (mL)	Spk. Vol. (mL)	Fraction SCN	Fraction MS	Pre-GPC Date Conc.	Pre-GPC Conc. Init.	Pre-GPC Final Vol. (mL)	Post-GPC Date Conc.	Post-GPC Conc. Init.	Post-GPC Final Vol. (mL)	Tray Loc.	Comments
03-19-18	PP	SL2079-1E	30.14	1mL	NR		X	3-19-18	JMS	5mL	03.20-18	WAS	1.00	C7	
		-2E	31.42											C8	
		-3E	30.99											C9	
		-4E	30.06											C10	
		-5E	30.96											D1	
		-6E	30.51											D2	
		-7E	30.62											D3	
		-8E	30.52											D4	
		-9N	30.57											D5	MS/MSD
		-10E	30.70											D6	
		-11E	30.14											D7	
		-12E	31.66											D8	
		-13E	30.04											D9	
		SL2133-1A	30.13											D10	
		-2A	30.98											E1	
		-3A	30.73											E2	
		-4A	30.93											E3	
															PP 03-19-18

Reviewed By_____ Date_____

EX-008 – Revision 3 – 01/25/2016

QAEX331

0000183

Katahdin Analytical Services
GPC02 Logbook

Analytical Method: (check one)	SW846 8081 ✓	SW846 8082 ✓		SW846 8270 ✓	
MeCl2 Lot #: DT306	Filter Lot #: —	Room Temperature (beginning):	19.8	Room Temperature (ending):	20.2
Flow Rate: 5.0 mL/min	Flow Rate Set at: 4.75 mL/min	GPC Dump Time:	45 min	GPC Collect Time:	—
Time to fill 50 mL: 9.58 min	Column Pressure: 16				

Tray Pos. No.	Sample Identification	Date Extracted	Extract Volume	GPC Analyst	Date GPC Started	GPC Initial Volume	S V	P P	Comments
1	Dry Run	—	—	KF	3/19/18	5mL	✓	✓	
2	GPC Calib STD	—	—	↓	↓	↓	✓	✓	
3	SD7580 lot#60124918								
4	0.5mL → 10 mL in								
5	MeCl2 lot # DT306								
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21					KF	3/19/18			
22									

Katahdin Analytical Services
GPC02 Logbook

Tray Pos. No.	Sample Identification	Date Extracted	Extract Volume	GPC Analyst	Date GPC Started	GPC Initial Volume	S V	P P	Comments
23									
24									
25									
26									
27									
28									
29									
30									
31									
32									
33									
34									
35									
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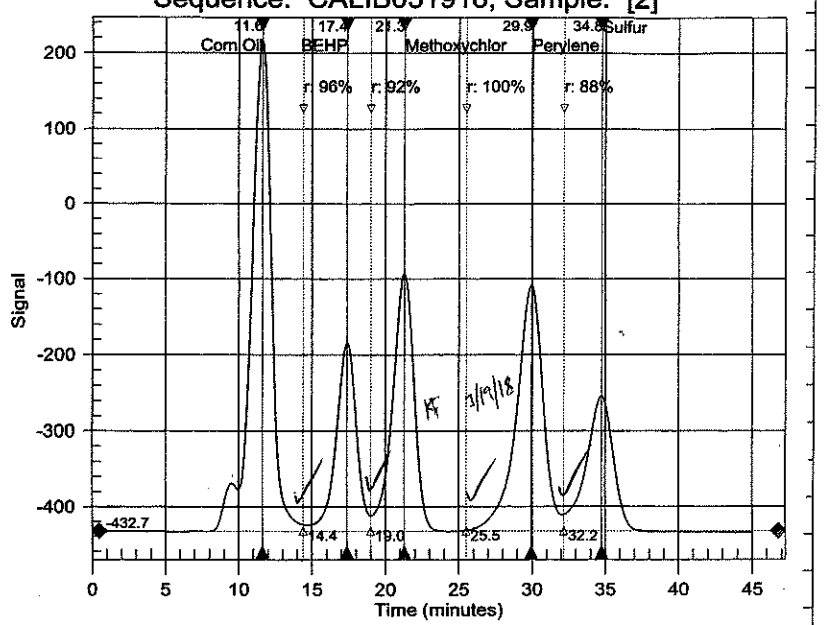
41									
42									
43									
44									
45									



P/P Dump: 19.0 Collect: 13.2

S/S Dump: 14.4 Collect: 21.6

Katahdin Analytical Services 2000237

Katahdin Analytical Services
GPC02 Logbook

Analytical Method: (check one)	SW846 8081	SW846 8082		SW846 8270 ✓	
MeCl2 Lot #: DT306	Filter Lot #: TD407171425	Room Temperature (beginning):	20.1	Room Temperature (ending):	22.6
Flow Rate: 5.0 mL/min	Flow Rate Set at: 4.75 mL/min	GPC Dump Time:	55 14.4	GPC Collect Time:	55 21.6
Time to fill 50 mL: 9.58 min	Column Pressure: 3				

Tray Pos. No.	Sample Identification	Date Extracted	Extract Volume	GPC Analyst	Date GPC Started	GPC Initial Volume	S V	P P	Comments
1	GPC Blank SM	–	–	KF	3-19-18	5mL	✓		Expected 10mL Actual:
2	WG225021-1	3-19-18	5mL						SM SDM
3	-2								
4	-3								
5	-4								
6	SL2079-1								
7	-2								
8	-3								
9	-4								
10	-5								
11	-6								
12	-7								
13	-8								
14	-9								
15	-10								
16	-11								
17	-12								
18	-13								
19	SL2133-1								
20	-2								
21	-3								
22	-4								

Katahdin Analytical Services
GPC02 Logbook

Tray Pos. No.	Sample Identification	Date Extracted	Extract Volume	GPC Analyst	Date GPC Started	GPC Initial Volume	S V	P P	Comments
23	Dry Run	–	–	KF	3-19-18	5mL			
24	Dry Run	–	–	↓	↓	↓			
25									
26									
27									
28									
29									
30									
31									
32									
33									
34									
35									
36									
37									
38									
39									
40									
41									
42									
43									
44						KF			3-20-18
45									

Katahdin Analytical Services 2000238

KATAHDIN ANALYTICAL SERVICES
GC/MS SVOA INJ LOG INSTRUMENT: 5975B - N

DATE OF DFTPP INJECTION: 031618

JOB	SAMPLE	DATAFILE	DF	VIAL #	METHOD	UL INJ	CHEMIST	COMMENTS
WG224895-1	50 ug DFTPP	ND493	1	1	DFTPP SLM	2.0	[illegible]	OK
-4	SSTD 2.0 N 0316	N7968		2	NSP SLM 86			✓
-2	0.2	69		3				✓
-3	0.5	70		4				✓
-5	7.0	71		5				✓
-6	10.	72		6				✓
-7	15.	73		7				✓
-8	IND	74		8				OK
	WG224151-1	75		9				OK
	-2	76		10				OK
	SL0779-27RA	77		11				~~SS3~~ SLM OK
	-31	78		12				OK
	-37	79		13				OK
	-38	80		14				OK
	-39	81		15				OK
	-40	82		16				OK
	-41	83		17				OK
	SL1734-1	84		18				SS2↑ DL1:100
	-2	85		19				SS2↑ DL1:40
	-3	86		20				OK DL1:6
	-4	87		21				OK DL1:8
	-5	88		22				OK DL1:2
-9	SSTD 2.0 N0316	89		23				OK
-10		90						–
-11		91						–
	SL1734-6	92		24				– DL1:500 Screen
	-7	93		25				– DL1:5
	-8	94		26				–
		95-97		23				

STANDARD	CODE TEST 1,2,3
DFTPP	53055
CAL. STD.	53039 53058
ICV. STD.	53054
IS MIX	53056

REVIEWED AND APPROVED BY:
DATE:

KATAHDIN ANALYTICAL SERVICES
GC/MS SVOA INJ LOG INSTRUMENT: 5975B - N

DATE OF DFTPP INJECTION: 032018

JOB	SAMPLE	DATAFILE	DF	VIAL #	METHOD	UL INJ	CHEMIST	COMMENTS
WG225084-1	50 ng DFTPP	ND 495	1	1	DFTPP SIM	2.0	JLT	OK
-2	SSTD 2.0 NO 320	N 8024		2	NSP SIM 86			OK
	WG225023-1	25		3				OK
	-2	26		4				OK
	SL 2079-14	27		5				OK
	SL2133-20	28		6				OK
	WG225021-1	29		7				OK
	-2	30		8				OK
	SL2079-1	31		9				OK
	-2	32		10				OK
	-3	33		11				OK
	-4	34		12				OK
	-5	35		13				OK
	-6	36		14				OK
	-7	37		15				OK
	-8	38		16				OK
	-9	39		17				OK
	WG225021-3	40		18				OK LOW RUNS
	-4	41		19				OK
	SL 2133-1	42		20				OK
	-2	43		21				OK
	-3	44		22				OK
-3	SSTD 2.0 NO 320	45		23				OK
-4		46						✓
-5		47						✓
	TEST 1,2,3	48-50	1	23				✓

STANDARD	CODE
DFTPP	53055
CAL. STD.	53039 53058
ICV. STD.	
IS MIX	53056

REVIEWED AND APPROVED BY:
DATE:

SVOA-005 – Revision 2 – 02/13/2018

QAMS650

0000013

KATAHDIN ANALYTICAL SERVICES
GC/MS SVOA INJ LOG INSTRUMENT: 5975B - N

DATE OF DFTPP INJECTION: 032118

JOB	SAMPLE	DATAFILE	DF	VIAL #	METHOD	UL INJ	CHEMIST	COMMENTS
WG225136-1	50 ng DFTPP	ND496	1	1	DFTPP SIM	2.0	[illegible]	ok
	SSTD 2.0 NO 321	N8051		2	NSPSIM 87			✓
	0.2	52		3				✓
	0.5	53		4				✓
	7.0	54		5				✓
	10.	55		6				✓
	15.	56		7				✓
	100	57		8				ok
	WG225022-1	58		9				ok
	-2	59		10				ok
	SL2079-10	60		11				ok
	-11	61		12				ok
	-12	62		13				ok
	-13	63		14				ok
	SL2133-4	64		15				ok
	WG225022-3	65		16				— not used
	-4	66		17				—
	SL2133-5	67		18				ok
	-6	68		19				ok
	-7	69		20				ok
	-8	70		21				ok
	-9	71		22				ok
	SSTD 2.0 NO 321	72-74		23				ok
	SL2133-10	75		24				Screen
	-11	76		25				
	-12	77		26				
	-13	78		27				
	-14	79		28				
		80-82		23				

STANDARD	CODE
DFTPP	53055
CAL. STD.	53039 53058
ICV. STD.	53054
IS MIX	53056

REVIEWED AND APPROVED BY: _____
DATE: _____

EXPLOSIVES DATA

QC Summary Section

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** Cornhusker Army Ammunition Plant **Matrix:** AQ
Lab Code: KAS **SDG:** SL2079

Client Sample ID	Lab Sample ID	Col. ID	DNB	#
CHAAP-BKRD-EB-031418	SL2079-14	B	98.5	
Method Blank Sample	WG225094-1	B	96.3	
Laboratory Control S	WG225094-2	B	101.	

		QC Limits
DNB	1,2-DINITROBENZENE	83-120

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

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ANALYTICAL SERVICES

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** Cornhusker Army Ammunition Plant **Matrix:** SL
Lab Code: KAS **SDG:** SL2079

Client Sample ID	Lab Sample ID	Col. ID	DNB	#
CHAAP-BKRD-SB08	SL2079-1	B	93.5	
CHAAP-BKRD-SS11	SL2079-10	B	88.0	
CHAAP-BKRD-SS12	SL2079-11	B	89.4	
CHAAP-BKRD-SS13	SL2079-12	B	89.8	
CHAAP-BKRD-SS109	SL2079-13	B	89.9	
CHAAP-BKRD-SB09	SL2079-2	B	94.1	
CHAAP-BKRD-SB10	SL2079-3	B	95.8	
CHAAP-BKRD-SB11	SL2079-4	B	93.3	
CHAAP-BKRD-SB12	SL2079-5	B	92.6	
CHAAP-BKRD-SB13	SL2079-6	B	92.2	
CHAAP-BKRD-SS08	SL2079-7	B	88.6	
CHAAP-BKRD-SS09	SL2079-8	B	88.3	
CHAAP-BKRD-SS10	SL2079-9	B	88.9	
Method Blank Sample	WG225027-1	B	90.4	
Laboratory Control S	WG225027-2	B	99.4	
Matrix Spike	WG225027-3	B	98.2	
Matrix Spike Duplica	WG225027-4	B	185.	*
Laboratory Control S	WG225027-5	B	101.	

		QC Limits
DNB	1,2-DINITROBENZENE	78-125

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

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Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : HLC10039.D
Instrument ID : HPLC02
Matrix : SL

SDG : SL2079
Lab Sample ID : WG225027-1
Date Extracted : 19-MAR-18
Date Analyzed : 20-MAR-18
Time Analyzed : 19:09

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG225027-2	HLC10040.	03/20/18	19:40
Laboratory Control S	WG225027-5	HLC10041.	03/20/18	20:12
Matrix Spike	WG225027-3	HLC10042.	03/20/18	20:44
Matrix Spike Duplica	WG225027-4	HLC10043.	03/20/18	21:16
CHAAP-BKRD-SB08	SL2079-1	HLC10085.	03/21/18	20:45
CHAAP-BKRD-SB09	SL2079-2	HLC10086.	03/21/18	21:17
CHAAP-BKRD-SB10	SL2079-3	HLC10087.	03/21/18	21:49
CHAAP-BKRD-SB11	SL2079-4	HLC10088.	03/21/18	22:20
CHAAP-BKRD-SB12	SL2079-5	HLC10089.	03/21/18	22:52
CHAAP-BKRD-SB13	SL2079-6	HLC10090.	03/21/18	23:24
CHAAP-BKRD-SS08	SL2079-7	HLC10091.	03/21/18	23:56
CHAAP-BKRD-SS09	SL2079-8	HLC10093.	03/22/18	00:59
CHAAP-BKRD-SS10	SL2079-9	HLC10094.	03/22/18	04:27
CHAAP-BKRD-SS11	SL2079-10	HLC10095.	03/22/18	04:59
CHAAP-BKRD-SS12	SL2079-11	HLC10096.	03/22/18	05:31
CHAAP-BKRD-SS13	SL2079-12	HLC10097.	03/22/18	06:02
CHAAP-BKRD-SS109	SL2079-13	HLC10098.	03/22/18	06:34

Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab File ID : HLC10044.D
Instrument ID : HPLC02
Matrix : AQ

SDG : SL2079
Lab Sample ID : WG225094-1
Date Extracted : 19-MAR-18
Date Analyzed : 20-MAR-18
Time Analyzed : 21:47

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG225094-2	HLC10045.	03/20/18	22:19
CHAAP-BKRD-EB-031418	SL2079-14	HLC10046.	03/20/18	22:51

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Form 8
GC Analytical Sequence

Lab Name : Katahdin Analytical Services **SDG :** SL2079
Project : Cornhusker Army Ammunition Plant **Column ID :** B
Instrument ID : HPLC02

Client Sample ID	Lab Sample ID	Date Analyzed	Time Analyzed	DNB	DNB
Initial Calibration	WG225143-7	03/20/18	14:54	8.575	
Initial Calibration	WG225143-6	03/20/18	15:26	8.57	
Initial Calibration	WG225143-5	03/20/18	15:58	8.57	
Initial Calibration	WG225143-4	03/20/18	16:30	8.57	
Initial Calibration	WG225143-3	03/20/18	17:01	8.57	
Initial Calibration	WG225143-2	03/20/18	17:33	8.574	
Initial Calibration	WG225143-1	03/20/18	18:05	8.587	
Independent Source	WG225143-8	03/20/18	18:37		
Method Blank Sample	WG225027-1	03/20/18	19:09	8.572	
Laboratory Control S	WG225027-2	03/20/18	19:40	8.562	
Laboratory Control S	WG225027-5	03/20/18	20:12	8.559	
Matrix Spike	WG225027-3	03/20/18	20:44	8.58	
Matrix Spike Duplica	WG225027-4	03/20/18	21:16	8.581	
Method Blank Sample	WG225094-1	03/20/18	21:47	8.593	
Laboratory Control S	WG225094-2	03/20/18	22:19	8.594	
CHAAP-BKRD-EB-031418	SL2079-14	03/20/18	22:51	8.592	
Continuing Calibrati	WG225143-9	03/21/18	00:26	8.567	
Continuing Calibrati	WG225143-13	03/21/18	18:38	8.541	
CHAAP-BKRD-SB08	SL2079-1	03/21/18	20:45	8.554	
CHAAP-BKRD-SB09	SL2079-2	03/21/18	21:17	8.558	
CHAAP-BKRD-SB10	SL2079-3	03/21/18	21:49	8.557	
CHAAP-BKRD-SB11	SL2079-4	03/21/18	22:20	8.563	
CHAAP-BKRD-SB12	SL2079-5	03/21/18	22:52	8.55	
CHAAP-BKRD-SB13	SL2079-6	03/21/18	23:24	8.557	
CHAAP-BKRD-SS08	SL2079-7	03/21/18	23:56	8.564	
Continuing Calibrati	WG225143-14	03/22/18	00:27	8.553	
CHAAP-BKRD-SS09	SL2079-8	03/22/18	00:59	8.557	
CHAAP-BKRD-SS10	SL2079-9	03/22/18	04:27	8.557	
CHAAP-BKRD-SS11	SL2079-10	03/22/18	04:59	8.558	
CHAAP-BKRD-SS12	SL2079-11	03/22/18	05:31	8.558	
CHAAP-BKRD-SS13	SL2079-12	03/22/18	06:02	8.555	
CHAAP-BKRD-SS109	SL2079-13	03/22/18	06:34	8.562	
Continuing Calibrati	WG225143-15	03/22/18	09:13	8.547	

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Sample Data Section

KATAHDIN ANALYTICAL SERVICES - ORGANIC DATA QUALIFIERS

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.

* Compound recovery or percent RPD (relative percent difference) was outside of quality control limits.

D Indicates the result was obtained from analysis of a diluted sample. Surrogate recoveries may not be calculable.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

or

J Used for Pesticides, PCBs, Herbicides, Formaldehyde, Explosives and Method 504.1 analytes when there is a greater than 40% difference for detected concentrations between the two GC columns.

B Indicates the analyte was detected in the laboratory method blank analyzed concurrently with the sample.

C Indicates that the flagged compound did not meet DoD criteria in the corresponding daily calibration verification (CV).

L Indicates that the flagged compound did not meet DoD criteria in the corresponding Laboratory Control Sample (LCS) and/or Laboratory Control Sample Duplicate (LCSD) prepared and/or analyzed concurrently with the sample.

M Indicates that the flagged compound did not meet DoD criteria in the Matrix Spike and/or Matrix Spike Duplicate prepared and/or analyzed concurrently with the native sample.

N Presumptive evidence of a compound based on a mass spectral library search.

A Indicates that a tentatively identified compound is a suspected aldol-condensation product.

P Used for Pesticide/Aroclor analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. (for CLP methods only).

Katahdin Analytical Services, Inc.

Manual Integration Codes For GC/MS, GC, HPLC and/or IC

M1	Peak splitting.
M2	Well defined peaks on the shoulders of the other peaks.
M3	There is additional area due to a coeluting interferant.
M4	There are negative spikes in the baseline.
M5	There are rising or falling baselines.
M6	The software has failed to detect a peak or misidentified a peak.
M7	Excessive peak tailing.
M8	Analysis such as GRO, DRO and TPH require a baseline hold.
M9	Peak was not completely integrated as in GC/MS.
M10	Primary ion was correctly integrated, but secondary or tertiary ion needed manual integration as in GC/MS.
M11	For GC analysis, when a sample is diluted by 1:10 or more, the surrogate is set to undetected and then the area under the surrogate is manually integrated.
M12	Manual integration saved in method due to TurboChrom floating point error.

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-1
Client ID: CHAAP-BKRD-SB08
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: HLC10085.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: JMS
Extraction Method: SW846 8330B MOD
Lab Prep Batch: WG225027

Analysis Date: 21-MAR-18
Analyst: AC
Analysis Method: SW846 8330B
Matrix: SL
% Solids: 81.
Report Date: 27-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	60	ug/Kgdrywt	1	100	120	10.	60.
RDX	U	60	ug/Kgdrywt	1	100	120	8.1	60.
1,3,5-Trinitrobenzene	U	60	ug/Kgdrywt	1	100	120	8.0	60.
1,3-Dinitrobenzene	U	60	ug/Kgdrywt	1	100	120	7.4	60.
Tetryl	U	60	ug/Kgdrywt	1	100	120	6.5	60.
Nitrobenzene	U	60	ug/Kgdrywt	1	100	120	26.	60.
2,4,6-Trinitrotoluene	U	60	ug/Kgdrywt	1	100	120	8.0	60.
2-Am-DNT	U	60	ug/Kgdrywt	1	100	120	25.	60.
4-Am-DNT	U	60	ug/Kgdrywt	1	100	120	20.	60.
2,6-Dinitrotoluene	U	60	ug/Kgdrywt	1	100	120	32.	60.
2,4-Dinitrotoluene	U	60	ug/Kgdrywt	1	100	120	18.	60.
2-Nitrotoluene	U	60	ug/Kgdrywt	1	100	120	14.	60.
3-Nitrotoluene	U	60	ug/Kgdrywt	1	100	120	9.5	60.
4-Nitrotoluene	U	60	ug/Kgdrywt	1	100	120	32.	60.
Nitroglycerin	U	480	ug/Kgdrywt	1	800	960	150	480
PETN	U	480	ug/Kgdrywt	1	800	960	130	480
1,2-Dinitrobenzene		93.5	%					

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Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10085.D
Report Date: 27-Mar-2018 13:51

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10085.D
Lab Smp Id: SL2079-1 Client Smp ID: CHAAP-BKRD-SB08
Inj Date : 21-MAR-2018 20:45
Operator : AC Inst ID: hplc02.i
Smp Info : SL2079-1
Misc Info : WG225143,WG225027,WG225143-5
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\EXPB05A.m
Meth Date : 22-Mar-2018 09:44 hplc02.i Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 62
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ngpetn.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

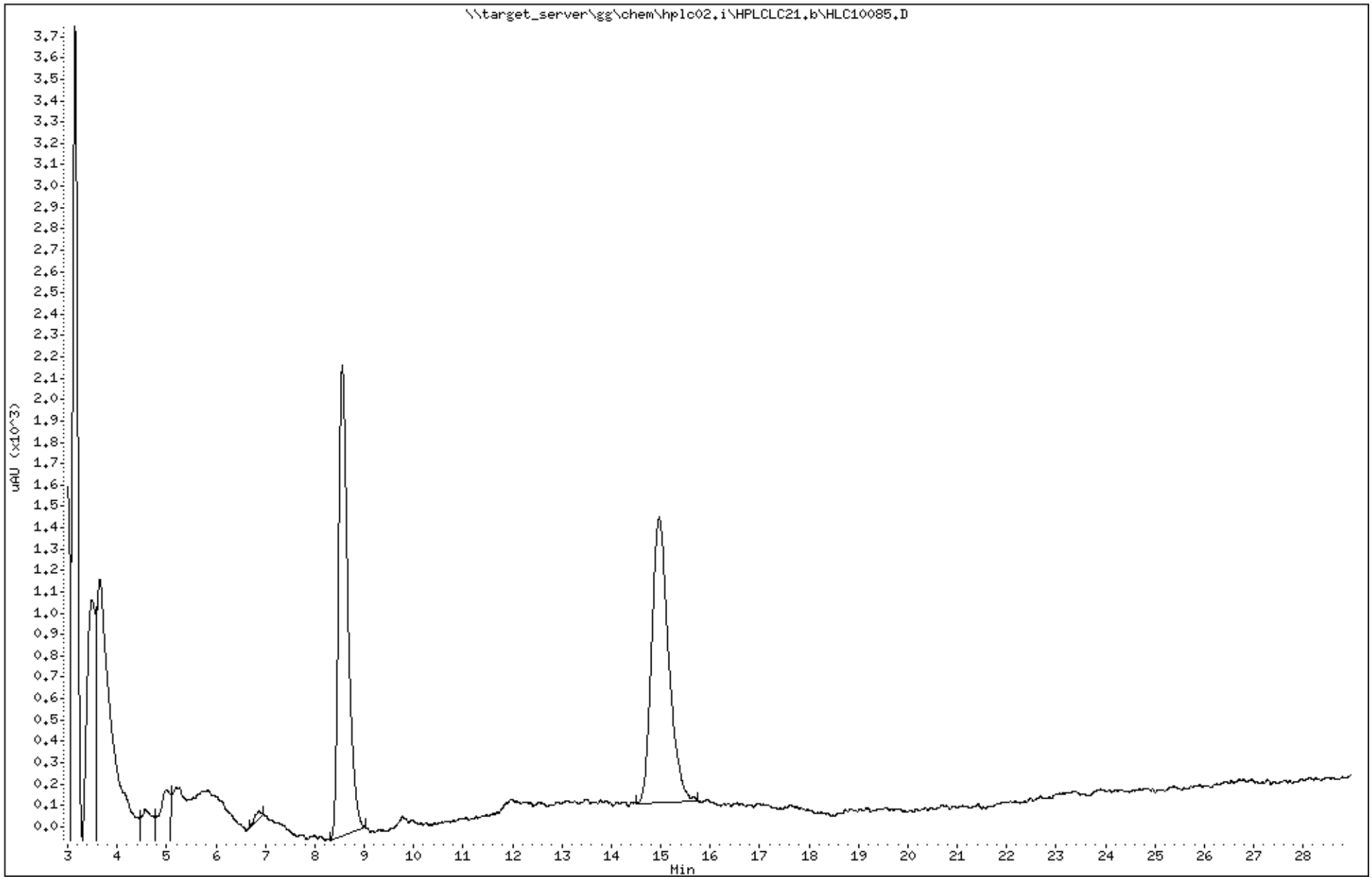
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01030	Weight of Sample (Kg)
M	18.939	% Moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/Kgdrywt)

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10085.D
Date : 21-MAR-2018 20:45
Client ID: CHAAP-BKRD-SB08
Sample Info: SL2079-1

Instrument: hplc02.i

Operator: AC
Column phase: Acclaim Exp E1
Column diameter: 4.60



Katahdin Analytical Services 3000013

Data File: HLC10085.D
Report Date: 27-Mar-2018 13:55

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HPLCLC21.b\HLC10085.D
Lab Smp Id: SL2079-1 Client Smp ID: CHAAP-BKRD-SB08
Inj Date : 21-MAR-2018 20:45
Operator : AC Inst ID: hplc02.i
Smp Info : SL2079-1
Misc Info : WG225143,WG225027,WG225143-5
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\EXPB05A.m\EXPB05A.m
Meth Date : 27-Mar-2018 08:49 hplc02.i Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 62
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: SW8330A.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

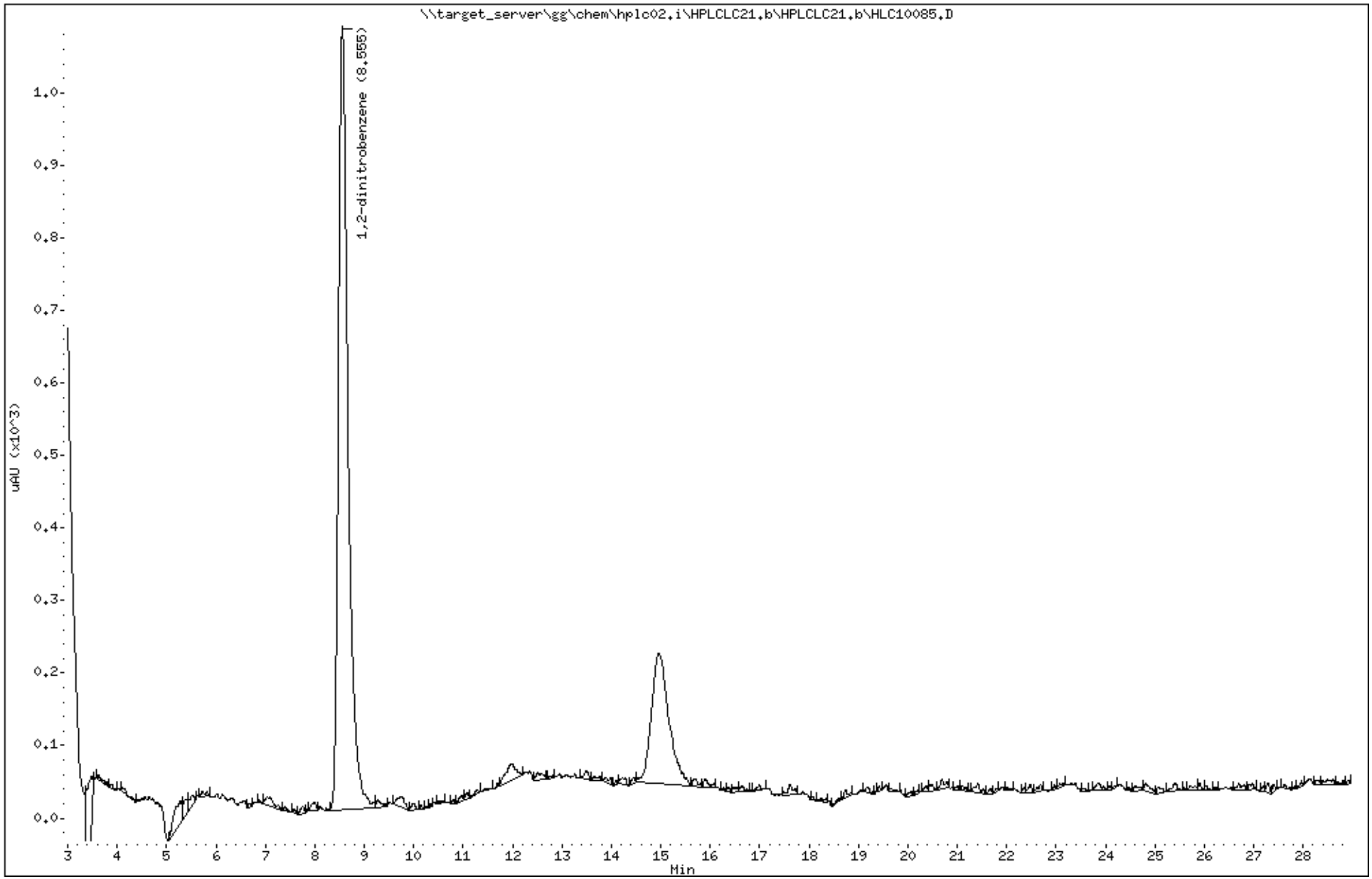
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01030	Weight of Sample (Kg)
M	18.939	% Moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/Kgdrywt)	REVIEW CODE
Compounds	RT	EXP RT	DLT RT	RESPONSE				
$ 2 1,2-dinitrobenzene	8.554	8.549	0.005	1081		0.23361	560	

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HPLCLC21.b\HLC10085.D
Date : 21-MAR-2018 20:45
Client ID: CHAAP-BKRD-SB08
Sample Info: SL2079-1

Instrument: hplc02.i

Operator: AC
Column phase: Acclaim Exp E1
Column diameter: 4.60



Katahdin Analytical Services 3000015

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-2
Client ID: CHAAP-BKRD-SB09
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: HLC10086.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: JMS
Extraction Method: SW846 8330B MOD
Lab Prep Batch: WG225027

Analysis Date: 21-MAR-18
Analyst: AC
Analysis Method: SW846 8330B
Matrix: SL
% Solids: 86.
Report Date: 27-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	46	ug/Kgdrywt	1	100	92.	7.9	46.
RDX	U	46	ug/Kgdrywt	1	100	92.	6.3	46.
1,3,5-Trinitrobenzene	U	46	ug/Kgdrywt	1	100	92.	6.2	46.
1,3-Dinitrobenzene	U	46	ug/Kgdrywt	1	100	92.	5.7	46.
Tetryl	U	46	ug/Kgdrywt	1	100	92.	5.0	46.
Nitrobenzene	U	46	ug/Kgdrywt	1	100	92.	20.	46.
2,4,6-Trinitrotoluene	U	46	ug/Kgdrywt	1	100	92.	6.2	46.
2-Am-DNT	U	46	ug/Kgdrywt	1	100	92.	19.	46.
4-Am-DNT	U	46	ug/Kgdrywt	1	100	92.	16.	46.
2,6-Dinitrotoluene	U	46	ug/Kgdrywt	1	100	92.	25.	46.
2,4-Dinitrotoluene	U	46	ug/Kgdrywt	1	100	92.	14.	46.
2-Nitrotoluene	U	46	ug/Kgdrywt	1	100	92.	11.	46.
3-Nitrotoluene	U	46	ug/Kgdrywt	1	100	92.	7.3	46.
4-Nitrotoluene	U	46	ug/Kgdrywt	1	100	92.	25.	46.
Nitroglycerin	U	370	ug/Kgdrywt	1	800	740	110	370
PETN	U	370	ug/Kgdrywt	1	800	740	100	370
1,2-Dinitrobenzene		94.1	%					

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Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10086.D
Report Date: 27-Mar-2018 13:51

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10086.D
Lab Smp Id: SL2079-2 Client Smp ID: CHAAP-BKRD-SB09
Inj Date : 21-MAR-2018 21:17
Operator : AC Inst ID: hplc02.i
Smp Info : SL2079-2
Misc Info : WG225143,WG225027,WG225143-5
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\EXPB05A.m
Meth Date : 22-Mar-2018 09:44 hplc02.i Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 63
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ngpetn.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01260	Weight of Sample (Kg)
M	13.906	% Moisture
Cpnd Variable		Local Compound Variable

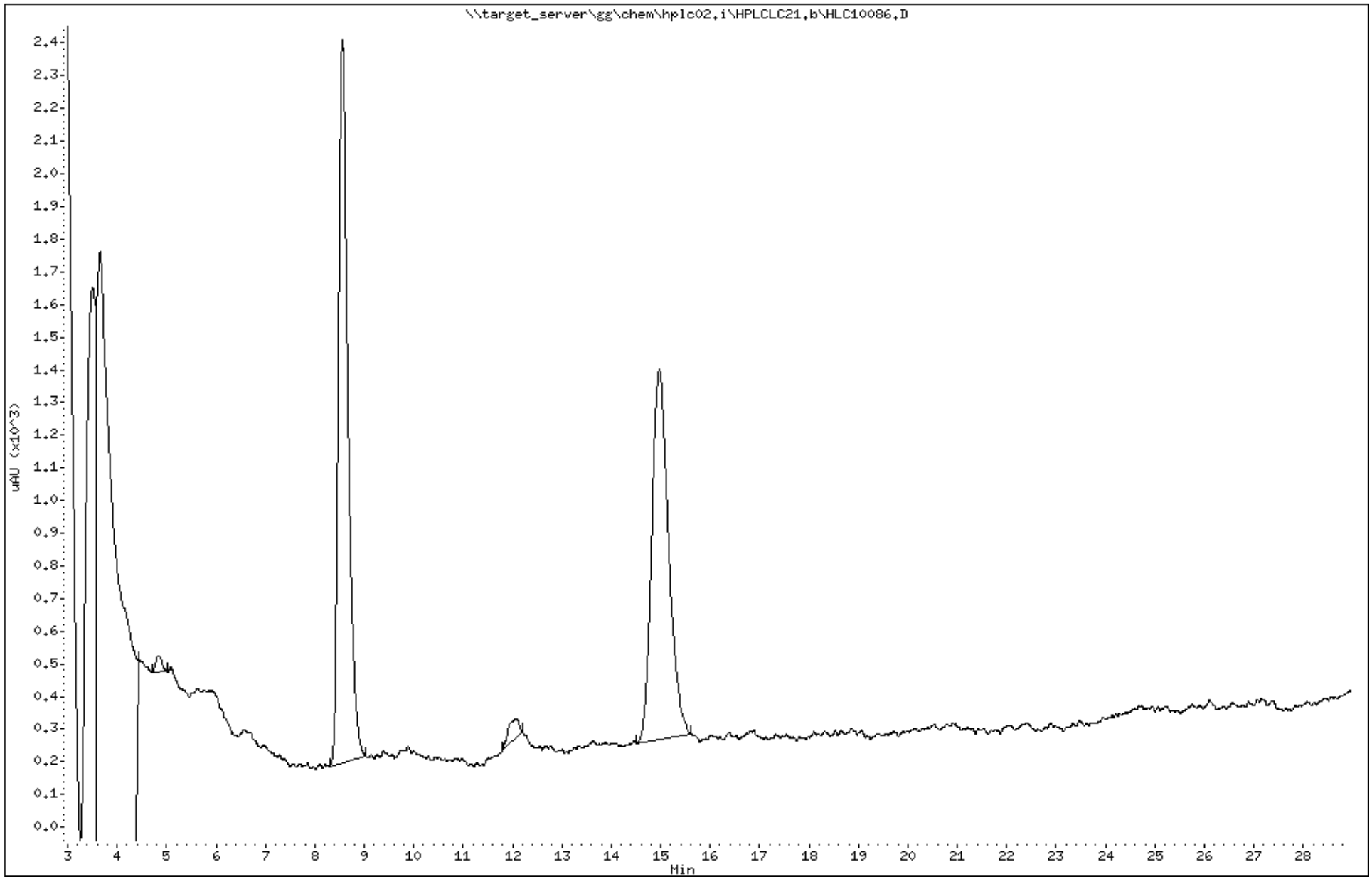
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/Kgdrywt)

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10086.D
Date : 21-MAR-2018 21:17
Client ID: CHAAP-BKRD-SB09
Sample Info: SL2079-2

Instrument: hplc02.i

Operator: AC
Column diameter: 4.60

Column phase: Acclaim Exp E1



Katahdin Analytical Services 3000018

Data File: HLC10086.D
Report Date: 27-Mar-2018 13:55

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HPLCLC21.b\HLC10086.D
Lab Smp Id: SL2079-2 Client Smp ID: CHAAP-BKRD-SB09
Inj Date : 21-MAR-2018 21:17
Operator : AC Inst ID: hplc02.i
Smp Info : SL2079-2
Misc Info : WG225143,WG225027,WG225143-5
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\EXPB05A.m\EXPB05A.m
Meth Date : 27-Mar-2018 08:49 hplc02.i Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 63
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: SW8330A.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01260	Weight of Sample (Kg)
M	13.906	% Moisture
Cpnd Variable		Local Compound Variable

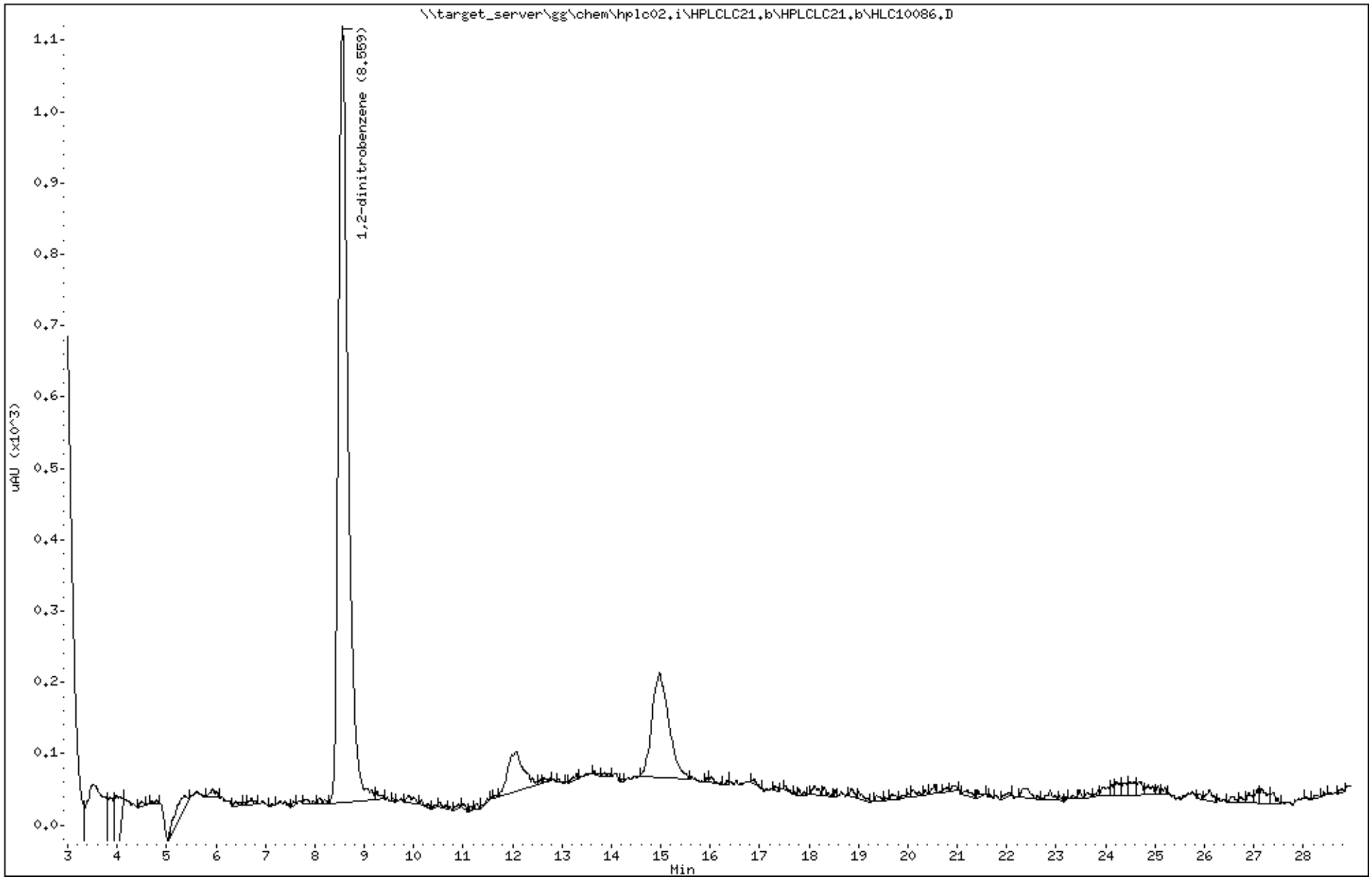
						CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/Kgdrywt)	
Compounds	RT	EXP RT	DLT RT	RESPONSE				REVIEW CODE
$ 2 1,2-dinitrobenzene	8.558	8.549	0.009	1089		0.23534	434	

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HPLCLC21.b\HLC10086.D
Date : 21-MAR-2018 21:17
Client ID: CHAAP-BKRD-SB09
Sample Info: SL2079-2

Instrument: hplc02.i

Operator: AC
Column diameter: 4.60

Column phase: Acclaim Exp E1



Katahdin Analytical Services 3000020

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-3
Client ID: CHAAP-BKRD-SB10
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: HLC10087.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: JMS
Extraction Method: SW846 8330B MOD
Lab Prep Batch: WG225027

Analysis Date: 21-MAR-18
Analyst: AC
Analysis Method: SW846 8330B
Matrix: SL
% Solids: 84.
Report Date: 27-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	57	ug/Kgdrywt	1	100	110	9.8	57.
RDX	U	57	ug/Kgdrywt	1	100	110	7.7	57.
1,3,5-Trinitrobenzene	U	57	ug/Kgdrywt	1	100	110	7.6	57.
1,3-Dinitrobenzene	U	57	ug/Kgdrywt	1	100	110	7.0	57.
Tetryl	U	57	ug/Kgdrywt	1	100	110	6.1	57.
Nitrobenzene	U	57	ug/Kgdrywt	1	100	110	25.	57.
2,4,6-Trinitrotoluene	U	57	ug/Kgdrywt	1	100	110	7.6	57.
2-Am-DNT	U	57	ug/Kgdrywt	1	100	110	24.	57.
4-Am-DNT	U	57	ug/Kgdrywt	1	100	110	19.	57.
2,6-Dinitrotoluene	U	57	ug/Kgdrywt	1	100	110	31.	57.
2,4-Dinitrotoluene	U	57	ug/Kgdrywt	1	100	110	17.	57.
2-Nitrotoluene	U	57	ug/Kgdrywt	1	100	110	14.	57.
3-Nitrotoluene	U	57	ug/Kgdrywt	1	100	110	9.0	57.
4-Nitrotoluene	U	57	ug/Kgdrywt	1	100	110	31.	57.
Nitroglycerin	U	460	ug/Kgdrywt	1	800	910	140	460
PETN	U	460	ug/Kgdrywt	1	800	910	120	460
1,2-Dinitrobenzene		95.8	%					

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Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10087.D
Report Date: 27-Mar-2018 13:51

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10087.D
Lab Smp Id: SL2079-3 Client Smp ID: CHAAP-BKRD-SB10
Inj Date : 21-MAR-2018 21:49
Operator : AC Inst ID: hplc02.i
Smp Info : SL2079-3
Misc Info : WG225143,WG225027,WG225143-5
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\EXPB05A.m
Meth Date : 22-Mar-2018 09:44 hplc02.i Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 64
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ngpetn.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01050	Weight of Sample (Kg)
M	16.356	% Moisture
Cpnd Variable		Local Compound Variable

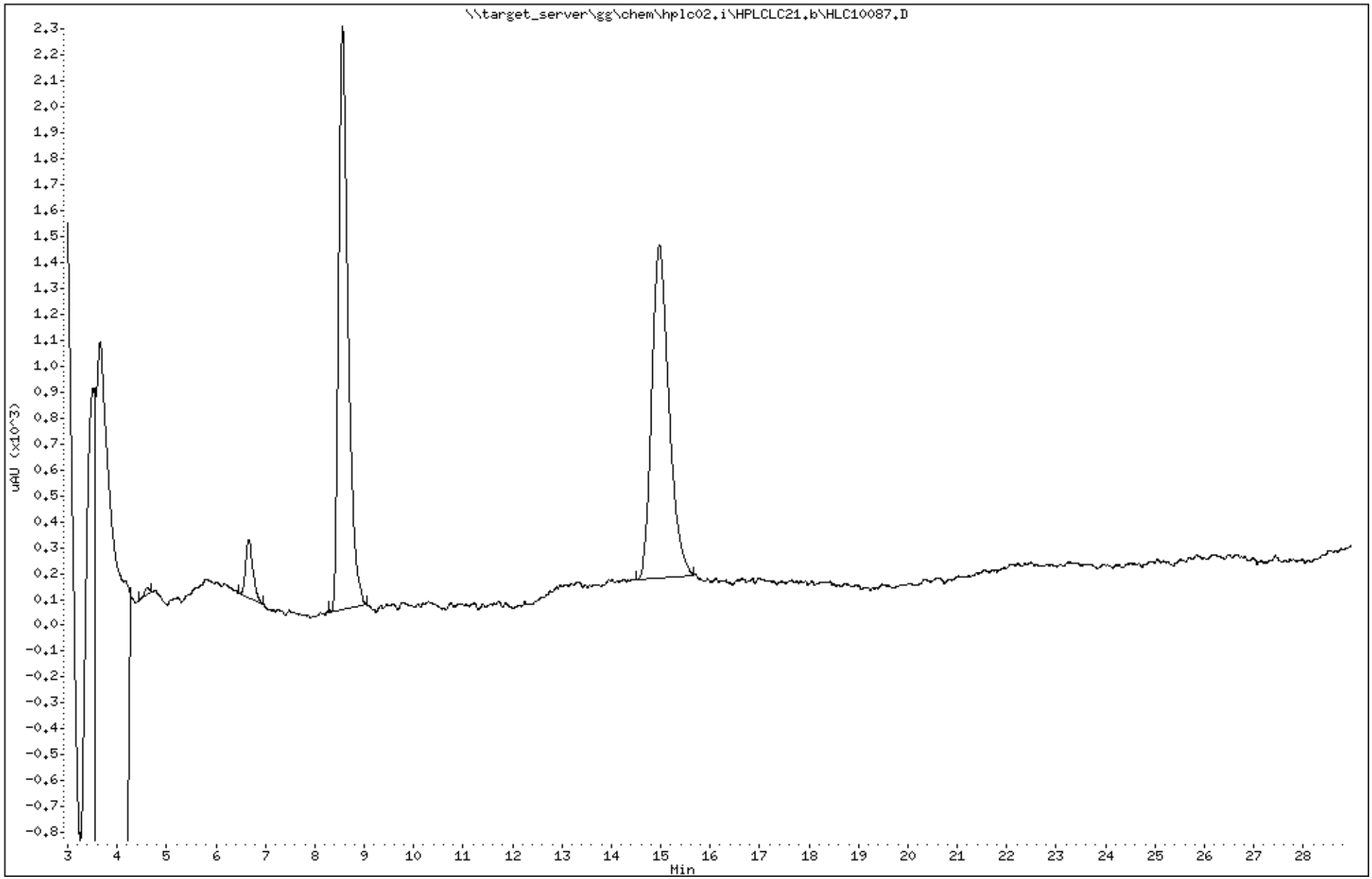
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/Kgdrywt)

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10087.D
Date : 21-MAR-2018 21:49
Client ID: CHAAP-BKRD-SB10
Sample Info: SL2079-3

Instrument: hplc02.i

Operator: AC
Column diameter: 4.60

Column phase: Acclaim Exp E1



Katahdin Analytical Services 3000023

Data File: HLC10087.D
Report Date: 27-Mar-2018 13:55

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HPLCLC21.b\HLC10087.D
Lab Smp Id: SL2079-3 Client Smp ID: CHAAP-BKRD-SB10
Inj Date : 21-MAR-2018 21:49
Operator : AC Inst ID: hplc02.i
Smp Info : SL2079-3
Misc Info : WG225143,WG225027,WG225143-5
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\EXPB05A.m\EXPB05A.m
Meth Date : 27-Mar-2018 08:49 hplc02.i Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 64
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: SW8330A.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

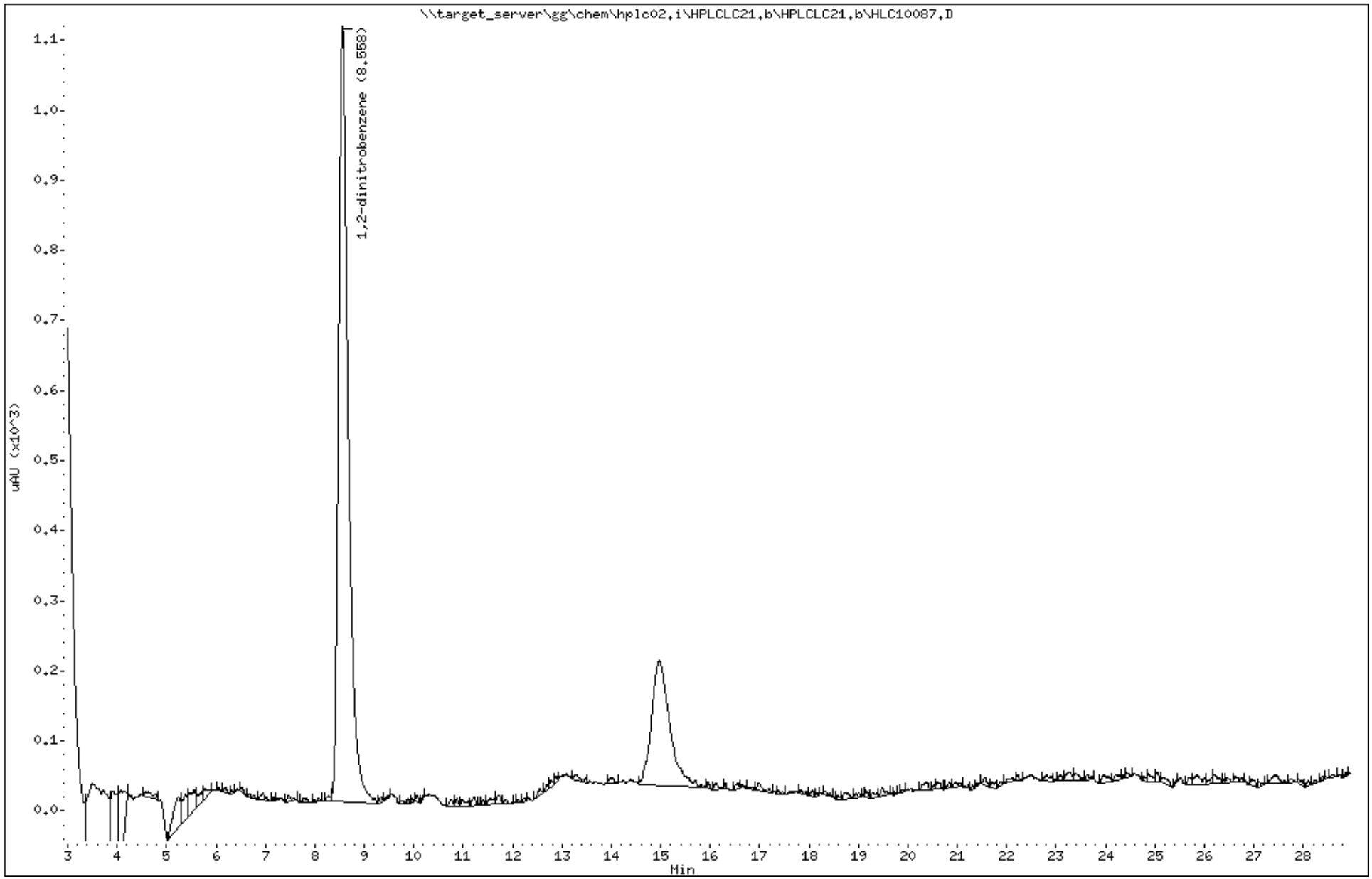
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01050	Weight of Sample (Kg)
M	16.356	% Moisture
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS		
					ON-COLUMN	FINAL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/Kgdrywt)	REVIEW CODE
$ 2 1,2-dinitrobenzene	8.557	8.549	0.008	1107	0.23923	545	

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HPLCLC21.b\HLC10087.D
Date : 21-MAR-2018 21:49
Client ID: CHAAP-BKRD-SB10
Sample Info: SL2079-3

Instrument: hplc02.i

Operator: AC
Column phase: Acclaim Exp E1
Column diameter: 4.60



Katahdin Analytical Services 3000025

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-4
Client ID: CHAAP-BKRD-SB11
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: HLC10088.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: JMS
Extraction Method: SW846 8330B MOD
Lab Prep Batch: WG225027

Analysis Date: 21-MAR-18
Analyst: AC
Analysis Method: SW846 8330B
Matrix: SL
% Solids: 80.
Report Date: 27-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	62	ug/Kgdrywt	1	100	120	10.	62.
RDX	U	62	ug/Kgdrywt	1	100	120	8.4	62.
1,3,5-Trinitrobenzene	U	62	ug/Kgdrywt	1	100	120	8.2	62.
1,3-Dinitrobenzene	U	62	ug/Kgdrywt	1	100	120	7.6	62.
Tetryl	U	62	ug/Kgdrywt	1	100	120	6.6	62.
Nitrobenzene	U	62	ug/Kgdrywt	1	100	120	27.	62.
2,4,6-Trinitrotoluene	U	62	ug/Kgdrywt	1	100	120	8.2	62.
2-Am-DNT	U	62	ug/Kgdrywt	1	100	120	26.	62.
4-Am-DNT	U	62	ug/Kgdrywt	1	100	120	21.	62.
2,6-Dinitrotoluene	U	62	ug/Kgdrywt	1	100	120	33.	62.
2,4-Dinitrotoluene	U	62	ug/Kgdrywt	1	100	120	18.	62.
2-Nitrotoluene	U	62	ug/Kgdrywt	1	100	120	15.	62.
3-Nitrotoluene	U	62	ug/Kgdrywt	1	100	120	9.7	62.
4-Nitrotoluene	U	62	ug/Kgdrywt	1	100	120	33.	62.
Nitroglycerin	U	490	ug/Kgdrywt	1	800	980	150	490
PETN	U	490	ug/Kgdrywt	1	800	980	130	490
1,2-Dinitrobenzene		93.3	%					

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Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10088.D
Report Date: 27-Mar-2018 13:51

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10088.D
Lab Smp Id: SL2079-4 Client Smp ID: CHAAP-BKRD-SB11
Inj Date : 21-MAR-2018 22:20
Operator : AC Inst ID: hplc02.i
Smp Info : SL2079-4
Misc Info : WG225143,WG225027,WG225143-5
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\EXPB05A.m
Meth Date : 22-Mar-2018 09:44 hplc02.i Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 65
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ngpetn.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01020	Weight of Sample (Kg)
M	20.323	% Moisture
Cpnd Variable		Local Compound Variable

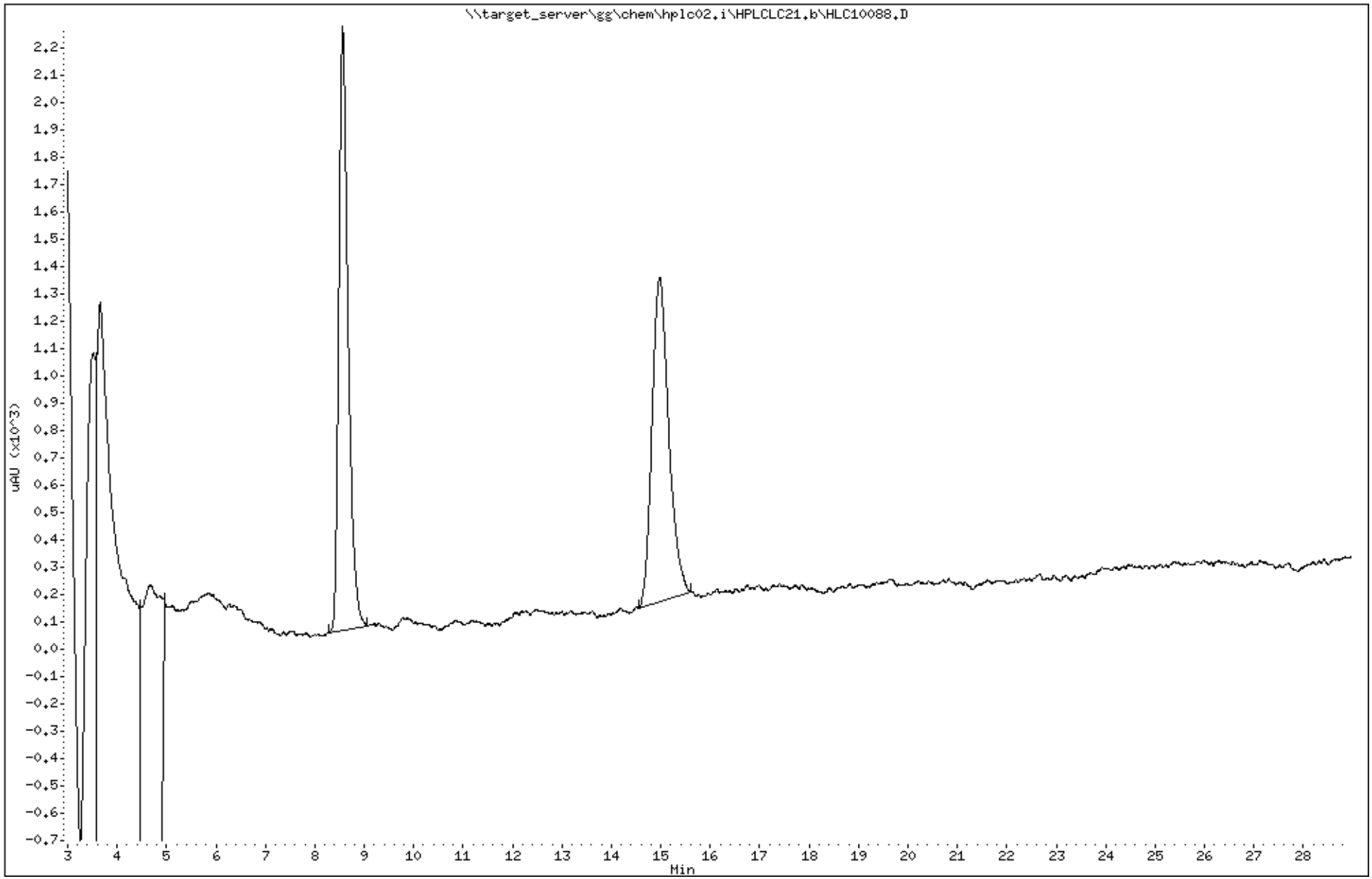
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/Kgdrywt)

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10088.D
Date : 21-MAR-2018 22:20
Client ID: CHAAP-BKRD-SB11
Sample Info: SL2079-4

Instrument: hplc02.i

Operator: AC
Column diameter: 4.60

Column phase: Acclaim Exp E1



Katahdin Analytical Services 3000028

Data File: HLC10088.D
Report Date: 27-Mar-2018 13:55

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HPLCLC21.b\HLC10088.D
Lab Smp Id: SL2079-4 Client Smp ID: CHAAP-BKRD-SB11
Inj Date : 21-MAR-2018 22:20
Operator : AC Inst ID: hplc02.i
Smp Info : SL2079-4
Misc Info : WG225143,WG225027,WG225143-5
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\EXPB05A.m\EXPB05A.m
Meth Date : 27-Mar-2018 08:49 hplc02.i Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 65
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: SW8330A.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01020	Weight of Sample (Kg)
M	20.323	% Moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/Kgdrywt)	REVIEW CODE
$ 2 1,2-dinitrobenzene	8.563	8.549	0.014	1080	0.23339	574(M)	M2

QC Flag Legend

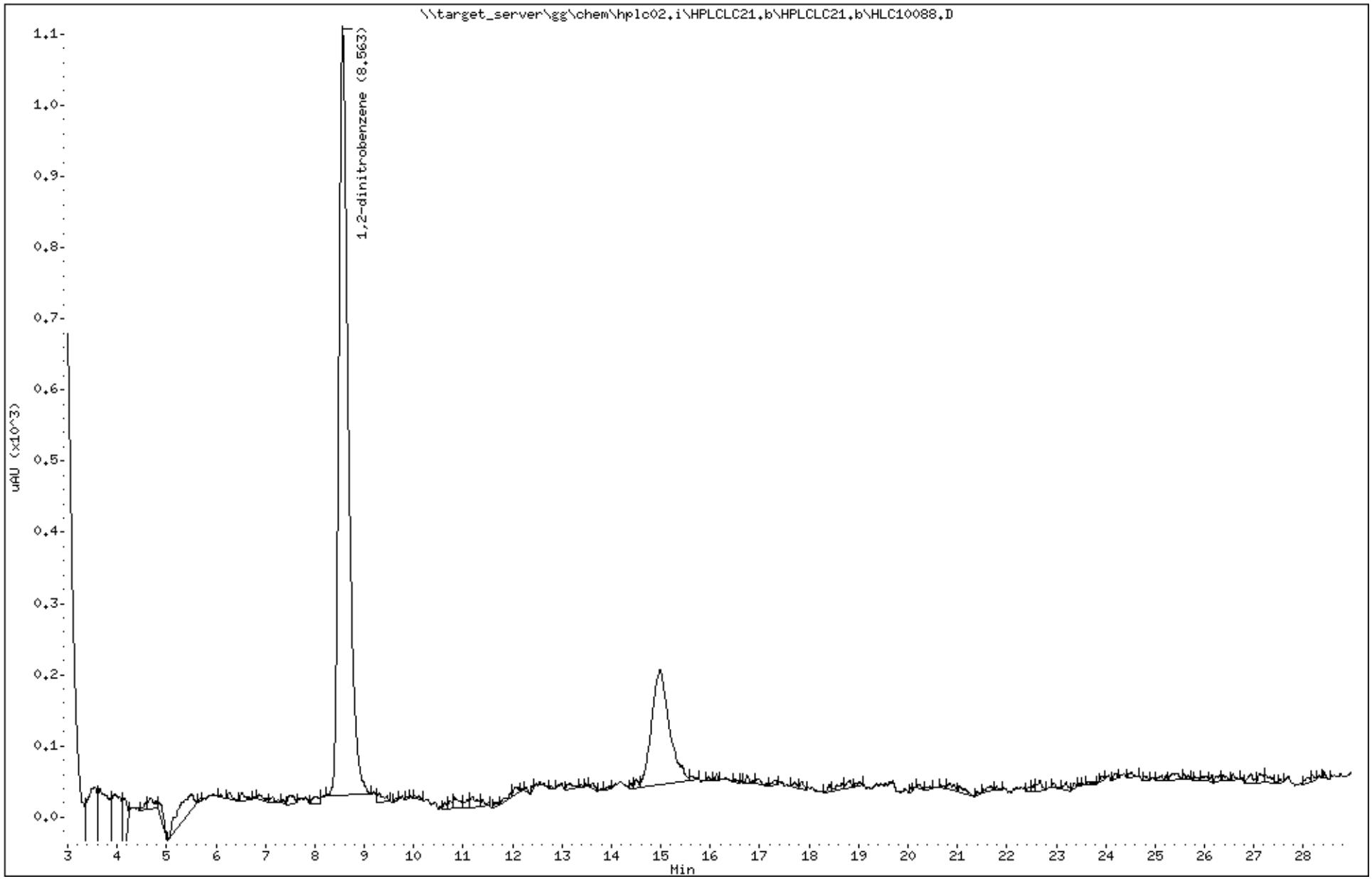
M - Compound response manually integrated.

2:49 pm, Mar 27, 2018

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HPLCLC21.b\HLC10088.D
Date : 21-MAR-2018 22:20
Client ID: CHAAP-BKRD-SB11
Sample Info: SL2079-4

Instrument: hplc02.i

Operator: AC
Column phase: Acclaim Exp E1
Column diameter: 4.60



Katahdin Analytical Services 3000030

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-5
Client ID: CHAAP-BKRD-SB12
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: HLC10089.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: JMS
Extraction Method: SW846 8330B MOD
Lab Prep Batch: WG225027

Analysis Date: 21-MAR-18
Analyst: AC
Analysis Method: SW846 8330B
Matrix: SL
% Solids: 83.
Report Date: 27-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	58	ug/Kgdrywt	1	100	120	10.	58.
RDX	U	58	ug/Kgdrywt	1	100	120	8.0	58.
1,3,5-Trinitrobenzene	U	58	ug/Kgdrywt	1	100	120	7.8	58.
1,3-Dinitrobenzene	U	58	ug/Kgdrywt	1	100	120	7.2	58.
Tetryl	U	58	ug/Kgdrywt	1	100	120	6.3	58.
Nitrobenzene	U	58	ug/Kgdrywt	1	100	120	26.	58.
2,4,6-Trinitrotoluene	U	58	ug/Kgdrywt	1	100	120	7.8	58.
2-Am-DNT	U	58	ug/Kgdrywt	1	100	120	24.	58.
4-Am-DNT	U	58	ug/Kgdrywt	1	100	120	20.	58.
2,6-Dinitrotoluene	U	58	ug/Kgdrywt	1	100	120	32.	58.
2,4-Dinitrotoluene	U	58	ug/Kgdrywt	1	100	120	18.	58.
2-Nitrotoluene	U	58	ug/Kgdrywt	1	100	120	14.	58.
3-Nitrotoluene	U	58	ug/Kgdrywt	1	100	120	9.2	58.
4-Nitrotoluene	U	58	ug/Kgdrywt	1	100	120	32.	58.
Nitroglycerin	U	470	ug/Kgdrywt	1	800	940	140	470
PETN	U	470	ug/Kgdrywt	1	800	940	130	470
1,2-Dinitrobenzene		92.6	%					

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Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10089.D
Report Date: 27-Mar-2018 13:51

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10089.D
Lab Smp Id: SL2079-5 Client Smp ID: CHAAP-BKRD-SB12
Inj Date : 21-MAR-2018 22:52
Operator : AC Inst ID: hplc02.i
Smp Info : SL2079-5
Misc Info : WG225143,WG225027,WG225143-5
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\EXPB05A.m
Meth Date : 22-Mar-2018 09:44 hplc02.i Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 66
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ngpetn.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01030	Weight of Sample (Kg)
M	16.970	% Moisture
Cpnd Variable		Local Compound Variable

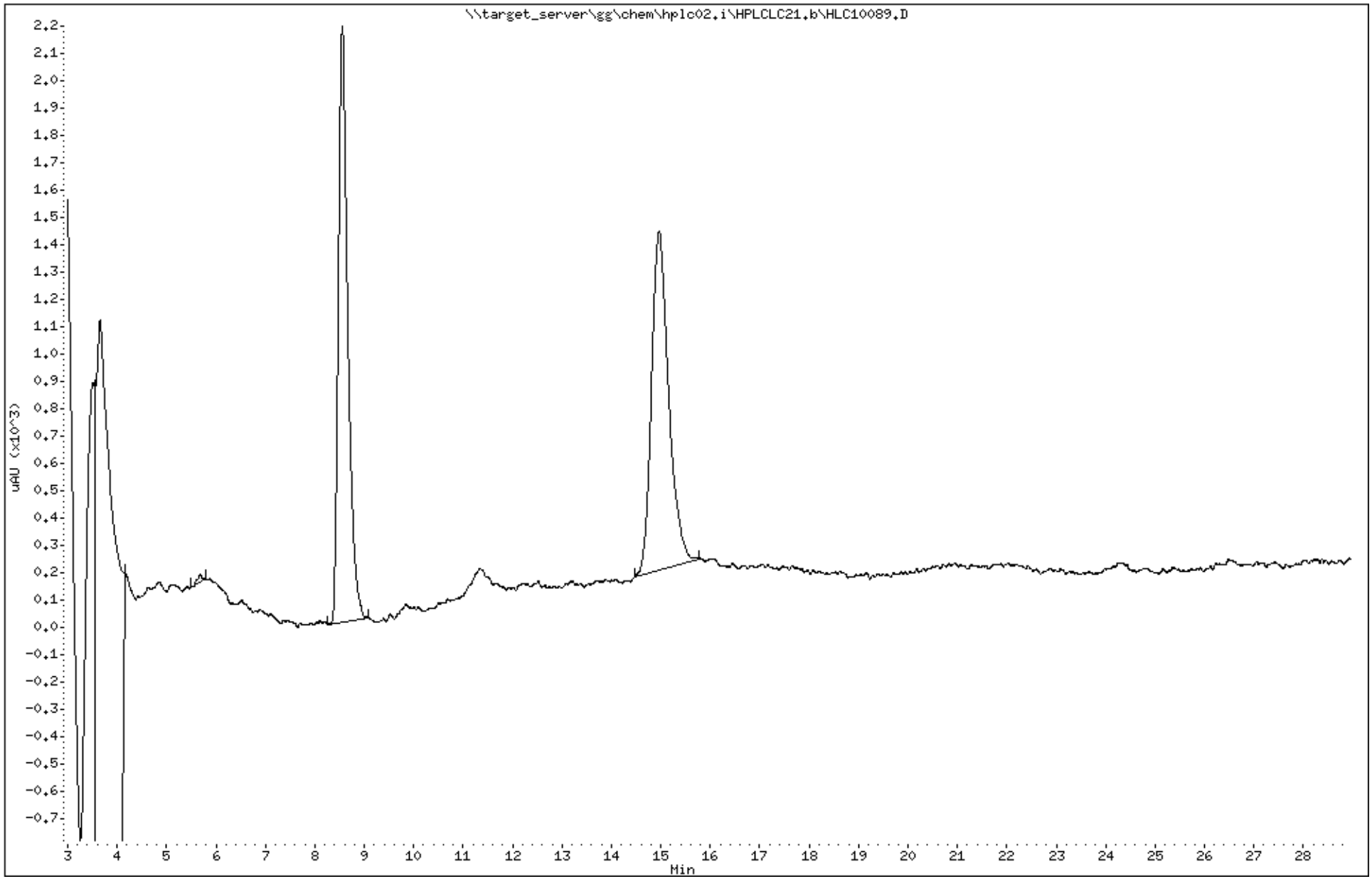
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/Kgdrywt)

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10089.D
Date : 21-MAR-2018 22:52
Client ID: CHAAP-BKRD-SB12
Sample Info: SL2079-5

Instrument: hplc02.i

Operator: AC
Column diameter: 4.60

Column phase: Acclaim Exp E1



Katahdin Analytical Services 3000033

Data File: HLC10089.D
Report Date: 27-Mar-2018 13:55

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HPLCLC21.b\HLC10089.D
Lab Smp Id: SL2079-5 Client Smp ID: CHAAP-BKRD-SB12
Inj Date : 21-MAR-2018 22:52
Operator : AC Inst ID: hplc02.i
Smp Info : SL2079-5
Misc Info : WG225143,WG225027,WG225143-5
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\EXPB05A.m\EXPB05A.m
Meth Date : 27-Mar-2018 08:49 hplc02.i Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 66
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: SW8330A.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01030	Weight of Sample (Kg)
M	16.970	% Moisture
Cpnd Variable		Local Compound Variable

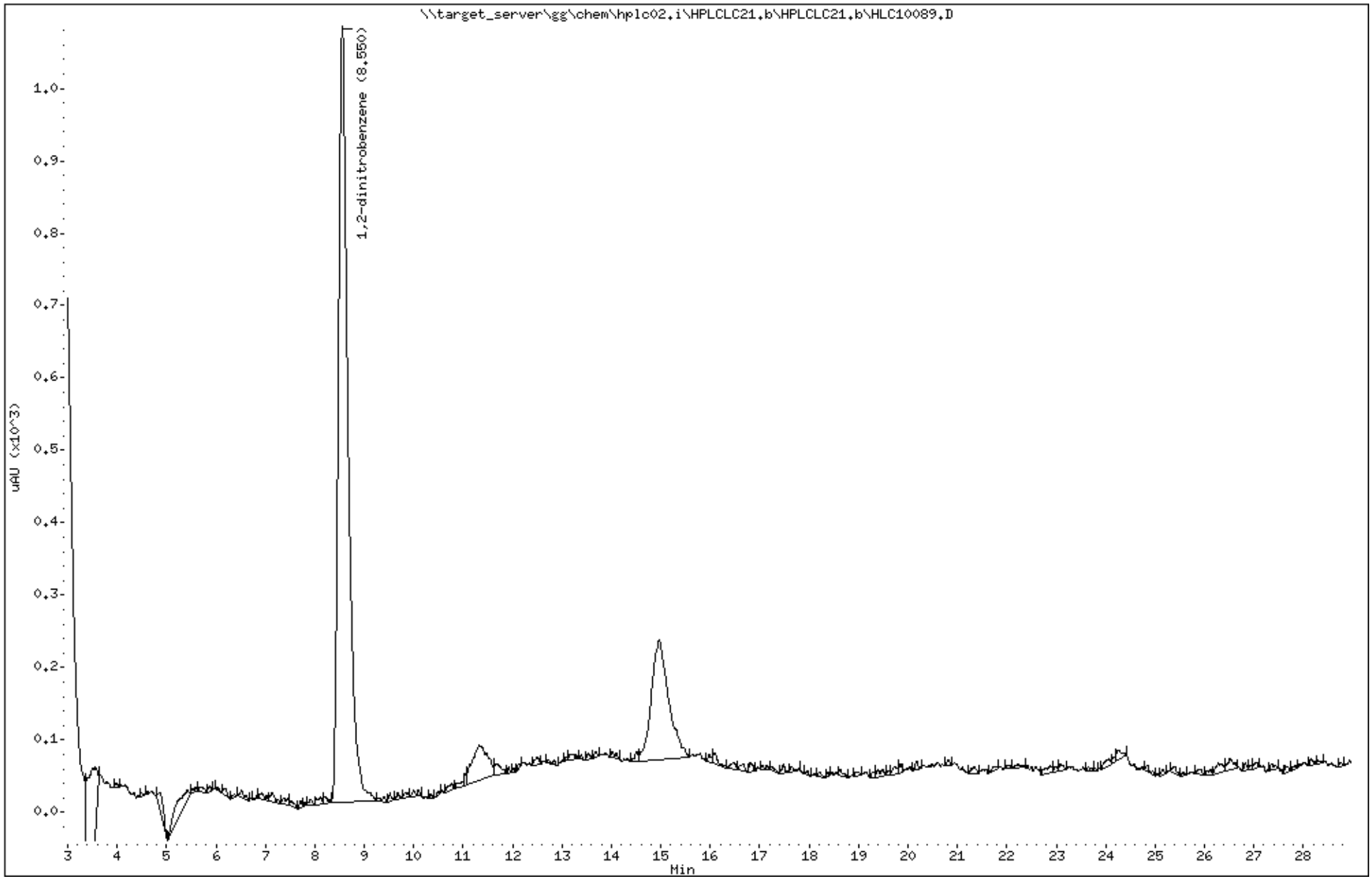
						CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/Kgdrywt)	
Compounds	RT	EXP RT	DLT RT	RESPONSE				REVIEW CODE
$ 2 1,2-dinitrobenzene	8.550	8.549	0.001	1073		0.23188	542	

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HPLCLC21.b\HLC10089.D
Date : 21-MAR-2018 22:52
Client ID: CHAAP-BKRD-SB12
Sample Info: SL2079-5

Instrument: hplc02.i

Operator: AC
Column diameter: 4.60

Column phase: Acclaim Exp E1



Katahdin Analytical Services 3000035

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-6
Client ID: CHAAP-BKRD-SB13
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: HLC10090.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: JMS
Extraction Method: SW846 8330B MOD
Lab Prep Batch: WG225027

Analysis Date: 21-MAR-18
Analyst: AC
Analysis Method: SW846 8330B
Matrix: SL
% Solids: 80.
Report Date: 27-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	62	ug/Kgdrywt	1	100	120	11.	62.
RDX	U	62	ug/Kgdrywt	1	100	120	8.4	62.
1,3,5-Trinitrobenzene	U	62	ug/Kgdrywt	1	100	120	8.3	62.
1,3-Dinitrobenzene	U	62	ug/Kgdrywt	1	100	120	7.7	62.
Tetryl	U	62	ug/Kgdrywt	1	100	120	6.7	62.
Nitrobenzene	U	62	ug/Kgdrywt	1	100	120	27.	62.
2,4,6-Trinitrotoluene	U	62	ug/Kgdrywt	1	100	120	8.3	62.
2-Am-DNT	U	62	ug/Kgdrywt	1	100	120	26.	62.
4-Am-DNT	U	62	ug/Kgdrywt	1	100	120	21.	62.
2,6-Dinitrotoluene	U	62	ug/Kgdrywt	1	100	120	33.	62.
2,4-Dinitrotoluene	U	62	ug/Kgdrywt	1	100	120	19.	62.
2-Nitrotoluene	U	62	ug/Kgdrywt	1	100	120	15.	62.
3-Nitrotoluene	U	62	ug/Kgdrywt	1	100	120	9.8	62.
4-Nitrotoluene	U	62	ug/Kgdrywt	1	100	120	33.	62.
Nitroglycerin	U	500	ug/Kgdrywt	1	800	990	150	500
PETN	U	500	ug/Kgdrywt	1	800	990	130	500
1,2-Dinitrobenzene		92.2	%					

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Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10090.D
Report Date: 27-Mar-2018 13:51

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10090.D
Lab Smp Id: SL2079-6 Client Smp ID: CHAAP-BKRD-SB13
Inj Date : 21-MAR-2018 23:24
Operator : AC Inst ID: hplc02.i
Smp Info : SL2079-6
Misc Info : WG225143,WG225027,WG225143-5
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\EXPB05A.m
Meth Date : 22-Mar-2018 09:44 hplc02.i Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 67
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ngpetn.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01010	Weight of Sample (Kg)
M	20.177	% Moisture
Cpnd Variable		Local Compound Variable

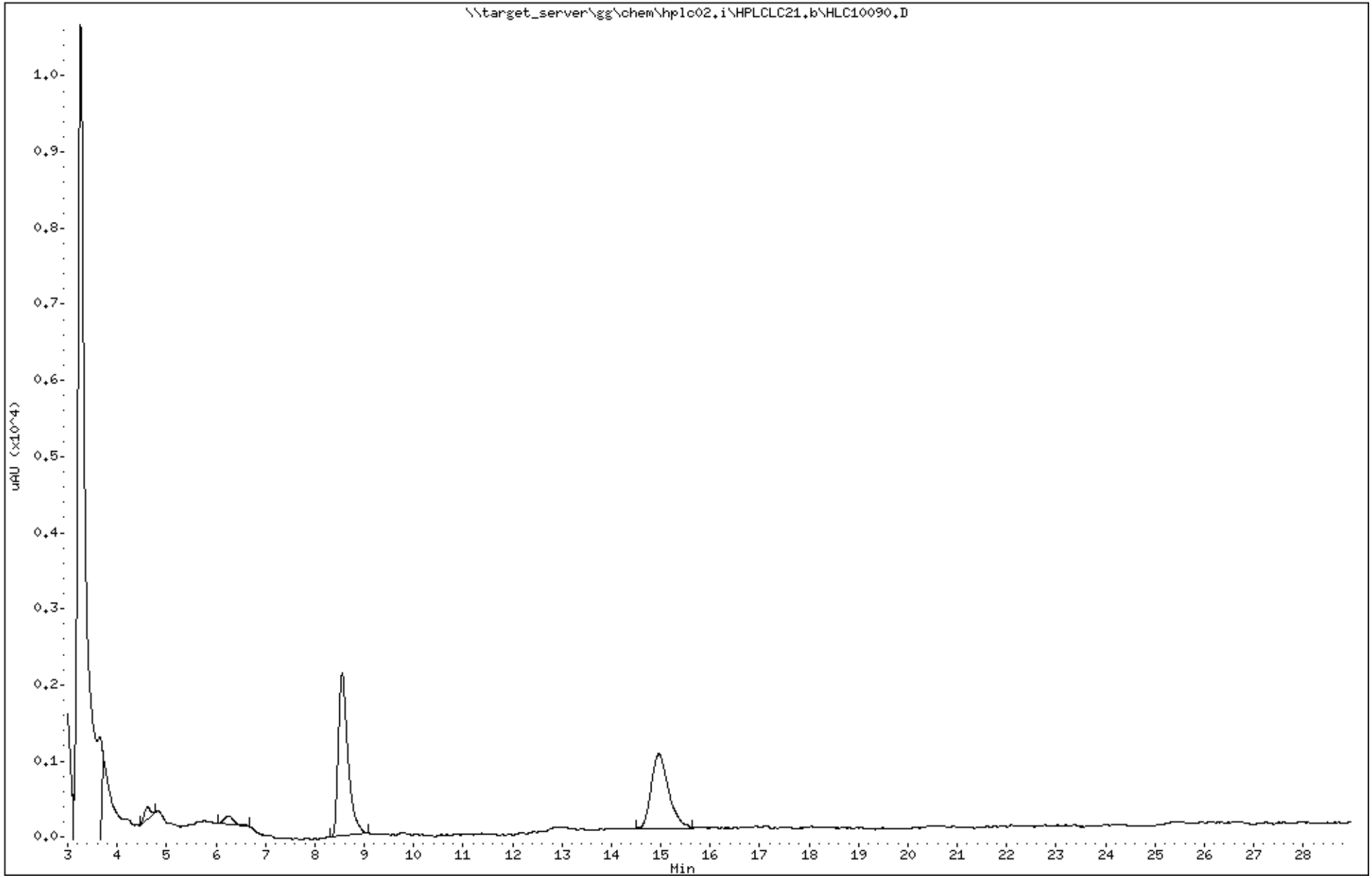
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/Kgdrywt)

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10090.D
Date : 21-MAR-2018 23:24
Client ID: CHAAP-BKRD-SB13
Sample Info: SL2079-6

Instrument: hplc02.i

Operator: AC
Column diameter: 4.60

Column phase: Acclaim Exp E1



Katahdin Analytical Services 3000038

Data File: HLC10090.D
Report Date: 27-Mar-2018 13:55

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HPLCLC21.b\HLC10090.D
Lab Smp Id: SL2079-6 Client Smp ID: CHAAP-BKRD-SB13
Inj Date : 21-MAR-2018 23:24
Operator : AC Inst ID: hplc02.i
Smp Info : SL2079-6
Misc Info : WG225143,WG225027,WG225143-5
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\EXPB05A.m\EXPB05A.m
Meth Date : 27-Mar-2018 08:49 hplc02.i Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 67
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: SW8330A.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

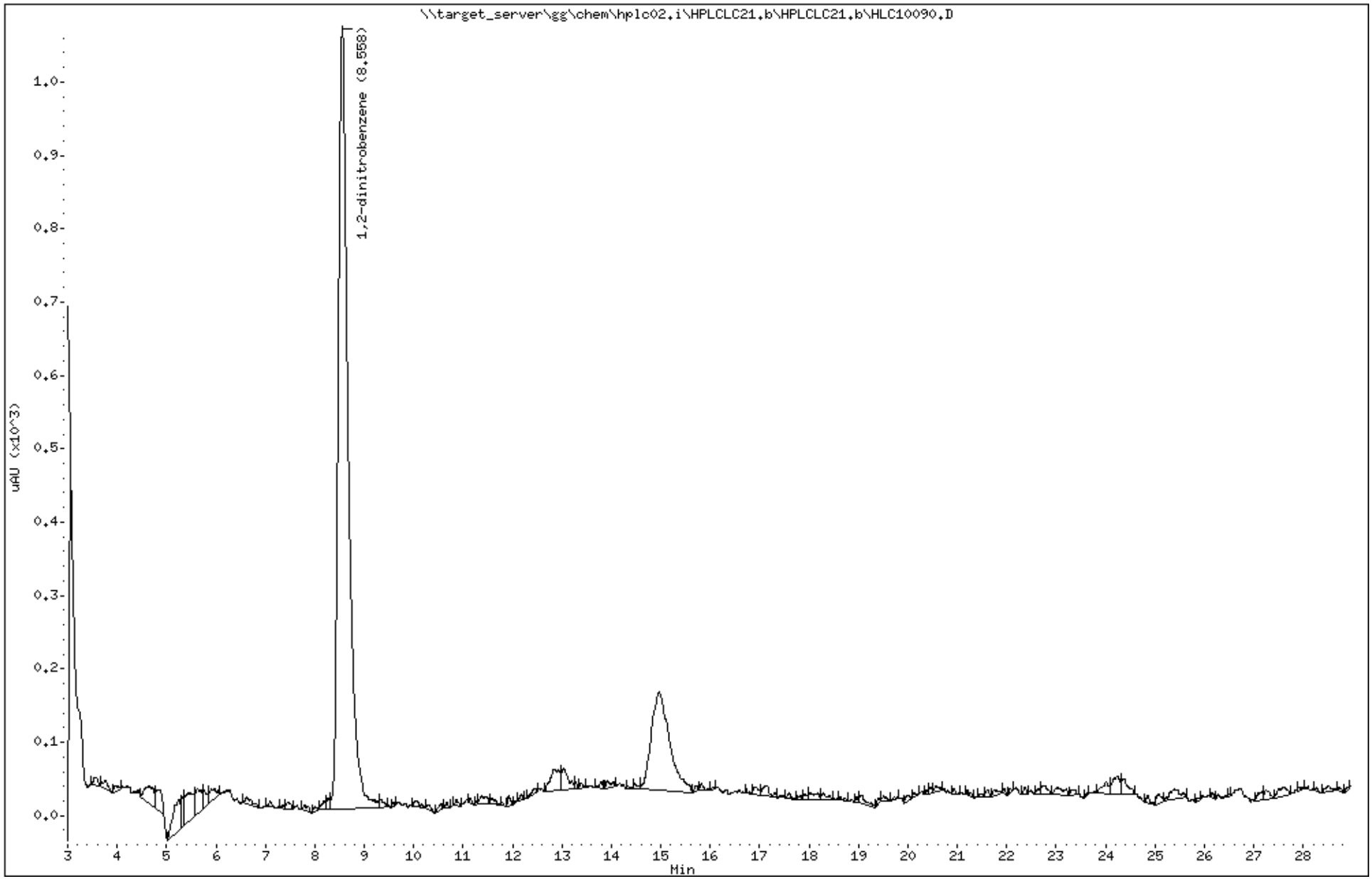
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01010	Weight of Sample (Kg)
M	20.177	% Moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/Kgdrywt)	REVIEW CODE
$ 2 1,2-dinitrobenzene	8.557	8.549	0.008	1067	0.23058	572	

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HPLCLC21.b\HLC10090.D
Date : 21-MAR-2018 23:24
Client ID: CHAAP-BKRD-SB13
Sample Info: SL2079-6

Instrument: hplc02.i

Operator: AC
Column phase: Acclaim Exp E1
Column diameter: 4.60



Katahdin Analytical Services 3000040

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-7
Client ID: CHAAP-BKRD-SS08
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: HLC10091.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: JMS
Extraction Method: SW846 8330B MOD
Lab Prep Batch: WG225027

Analysis Date: 21-MAR-18
Analyst: AC
Analysis Method: SW846 8330B
Matrix: SL
% Solids: 79.
Report Date: 27-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	60	ug/Kgdrywt	1	100	120	10.	60.
RDX	U	60	ug/Kgdrywt	1	100	120	8.1	60.
1,3,5-Trinitrobenzene	U	60	ug/Kgdrywt	1	100	120	8.0	60.
1,3-Dinitrobenzene	U	60	ug/Kgdrywt	1	100	120	7.4	60.
Tetryl	U	60	ug/Kgdrywt	1	100	120	6.5	60.
Nitrobenzene	U	60	ug/Kgdrywt	1	100	120	26.	60.
2,4,6-Trinitrotoluene	U	60	ug/Kgdrywt	1	100	120	8.0	60.
2-Am-DNT	U	60	ug/Kgdrywt	1	100	120	25.	60.
4-Am-DNT	U	60	ug/Kgdrywt	1	100	120	20.	60.
2,6-Dinitrotoluene	U	60	ug/Kgdrywt	1	100	120	32.	60.
2,4-Dinitrotoluene	U	60	ug/Kgdrywt	1	100	120	18.	60.
2-Nitrotoluene	U	60	ug/Kgdrywt	1	100	120	14.	60.
3-Nitrotoluene	U	60	ug/Kgdrywt	1	100	120	9.4	60.
4-Nitrotoluene	U	60	ug/Kgdrywt	1	100	120	32.	60.
Nitroglycerin	U	480	ug/Kgdrywt	1	800	960	150	480
PETN	U	480	ug/Kgdrywt	1	800	960	130	480
1,2-Dinitrobenzene		88.6	%					

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Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10091.D
Report Date: 27-Mar-2018 13:51

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10091.D
Lab Smp Id: SL2079-7 Client Smp ID: CHAAP-BKRD-SS08
Inj Date : 21-MAR-2018 23:56
Operator : AC Inst ID: hplc02.i
Smp Info : SL2079-7
Misc Info : WG225143,WG225027,WG225143-5
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\EXPB05A.m
Meth Date : 22-Mar-2018 09:44 hplc02.i Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 68
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ngpetn.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01060	Weight of Sample (Kg)
M	21.201	% Moisture
Cpnd Variable		Local Compound Variable

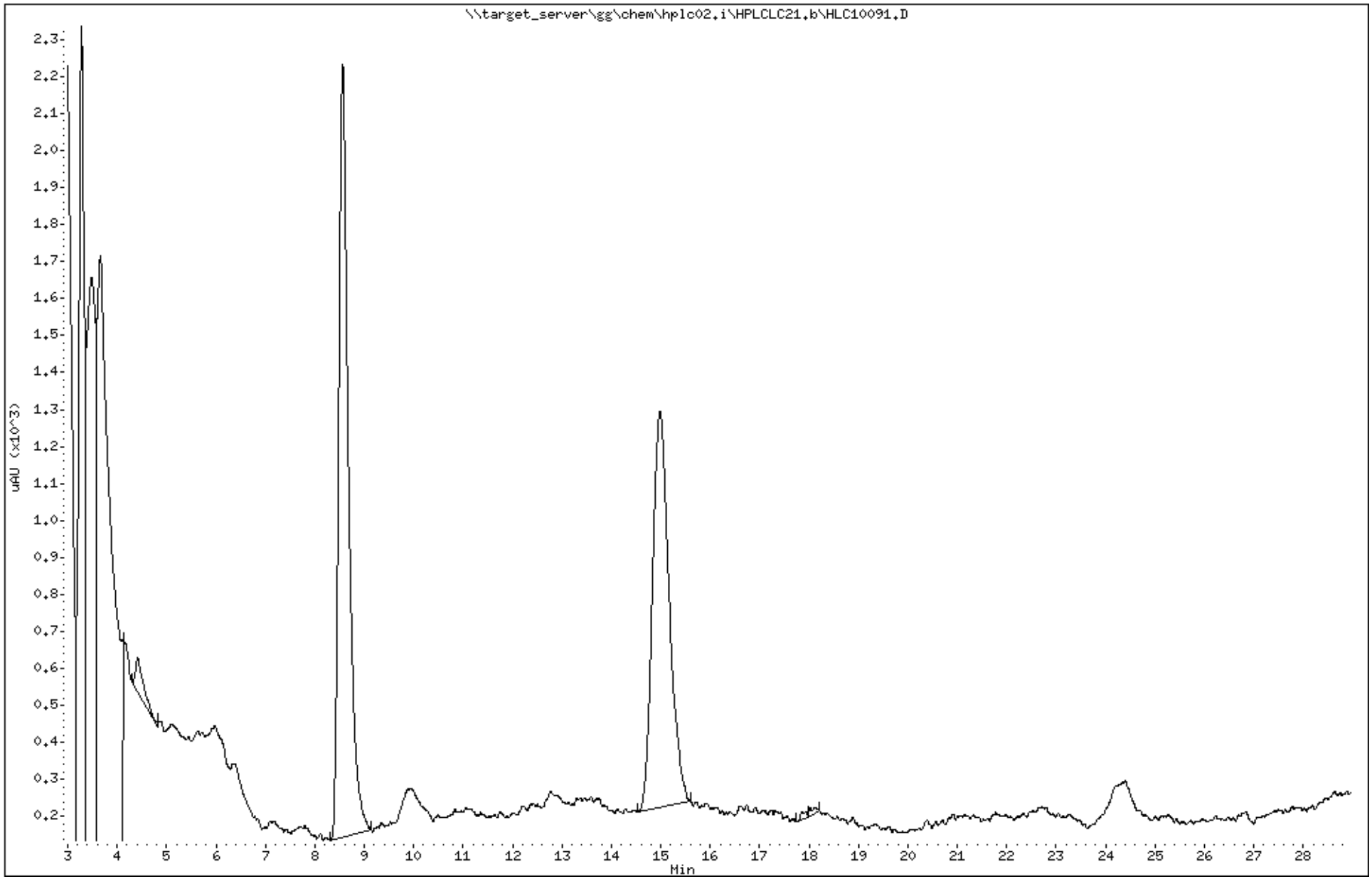
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/Kgdrywt)

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10091.D
Date : 21-MAR-2018 23:56
Client ID: CHAAP-BKRD-SS08
Sample Info: SL2079-7

Instrument: hplc02.i

Operator: AC
Column diameter: 4.60

Column phase: Acclaim Exp E1



Katahdin Analytical Services 3000043

Data File: HLC10091.D
Report Date: 27-Mar-2018 13:55

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HPLCLC21.b\HLC10091.D
Lab Smp Id: SL2079-7 Client Smp ID: CHAAP-BKRD-SS08
Inj Date : 21-MAR-2018 23:56
Operator : AC Inst ID: hplc02.i
Smp Info : SL2079-7
Misc Info : WG225143,WG225027,WG225143-5
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\EXPB05A.m\EXPB05A.m
Meth Date : 27-Mar-2018 08:49 hplc02.i Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 68
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: SW8330A.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01060	Weight of Sample (Kg)
M	21.201	% Moisture
Cpnd Variable		Local Compound Variable

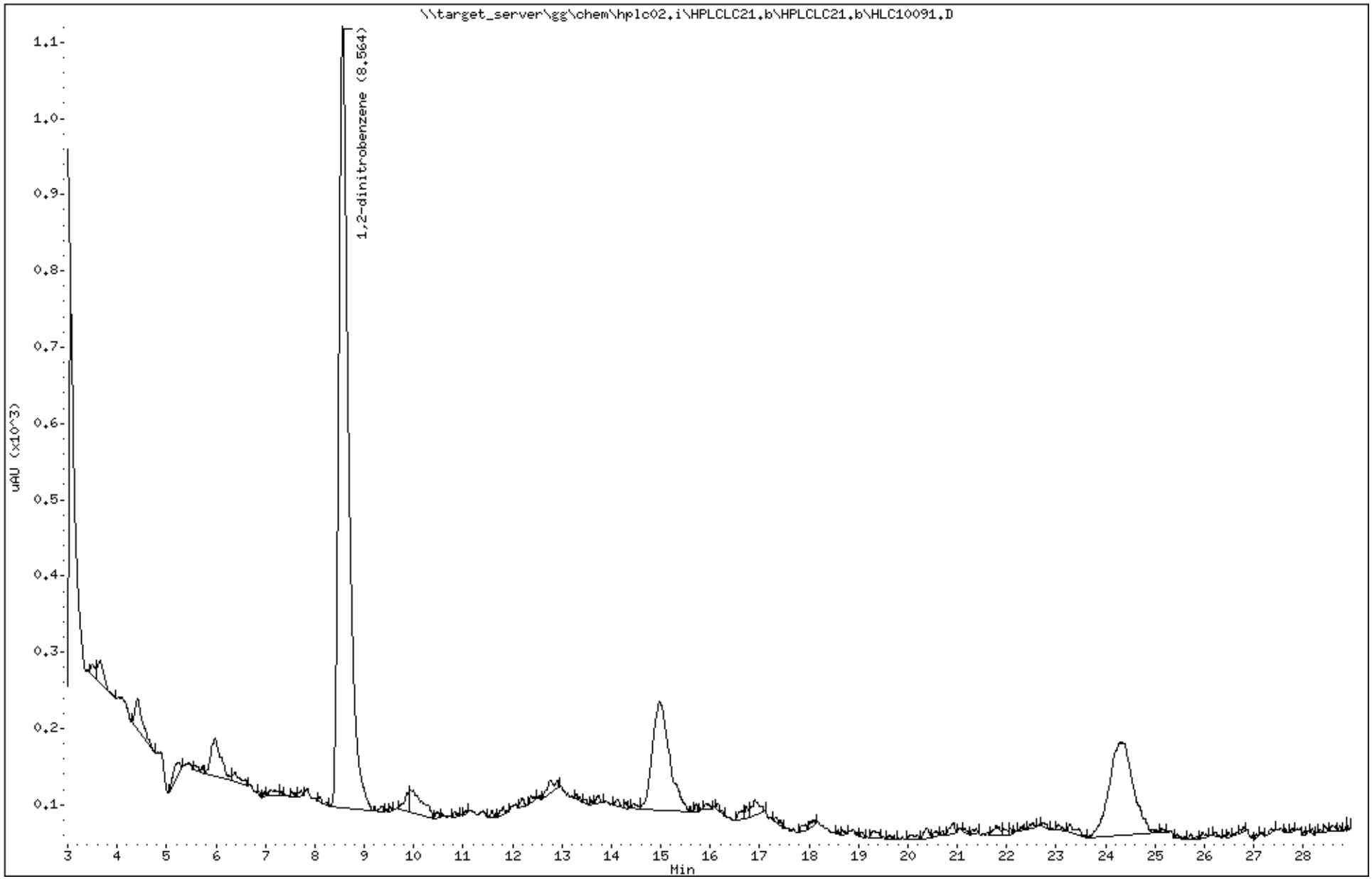
					CONCENTRATIONS		
					ON-COLUMN	FINAL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/Kgdrywt)	REVIEW CODE
$ 2 1,2-dinitrobenzene	8.564	8.549	0.015	1025	0.22151	530	

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HPLCLC21.b\HLC10091.D
Date : 21-MAR-2018 23:56
Client ID: CHAAP-BKRD-SS08
Sample Info: SL2079-7

Instrument: hplc02.i

Operator: AC
Column diameter: 4.60

Column phase: Acclaim Exp E1



Katahdin Analytical Services 3000045

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-8
Client ID: CHAAP-BKRD-SS09
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: HLC10093.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: JMS
Extraction Method: SW846 8330B MOD
Lab Prep Batch: WG225027

Analysis Date: 22-MAR-18
Analyst: AC
Analysis Method: SW846 8330B
Matrix: SL
% Solids: 83.
Report Date: 19-APR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	60	ug/Kgdrywt	1	100	120	10.	60.
RDX	U	60	ug/Kgdrywt	1	100	120	8.1	60.
1,3,5-Trinitrobenzene	U	60	ug/Kgdrywt	1	100	120	8.0	60.
1,3-Dinitrobenzene	U	60	ug/Kgdrywt	1	100	120	7.4	60.
Tetryl	U	60	ug/Kgdrywt	1	100	120	6.4	60.
Nitrobenzene	U	60	ug/Kgdrywt	1	100	120	26.	60.
2,4,6-Trinitrotoluene	U	60	ug/Kgdrywt	1	100	120	8.0	60.
2-Am-DNT	U	60	ug/Kgdrywt	1	100	120	25.	60.
4-Am-DNT	U	60	ug/Kgdrywt	1	100	120	20.	60.
2,6-Dinitrotoluene	U	60	ug/Kgdrywt	1	100	120	32.	60.
2,4-Dinitrotoluene	U	60	ug/Kgdrywt	1	100	120	18.	60.
2-Nitrotoluene	U	60	ug/Kgdrywt	1	100	120	14.	60.
3-Nitrotoluene	U	60	ug/Kgdrywt	1	100	120	9.4	60.
4-Nitrotoluene	U	60	ug/Kgdrywt	1	100	120	32.	60.
Nitroglycerin	U	480	ug/Kgdrywt	1	800	960	150	480
PETN	U	480	ug/Kgdrywt	1	800	960	130	480
1,2-Dinitrobenzene		88.3	%					

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Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10093.D
Report Date: 27-Mar-2018 13:51

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10093.D
Lab Smp Id: SL2079-8 Client Smp ID: CHAAP-BKRD-SS09
Inj Date : 22-MAR-2018 00:59
Operator : AC Inst ID: hplc02.i
Smp Info : SL2079-8
Misc Info : WG225143,WG225027,WG225143-5
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\EXPB05A.m
Meth Date : 22-Mar-2018 09:44 hplc02.i Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 70
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ngpetn.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

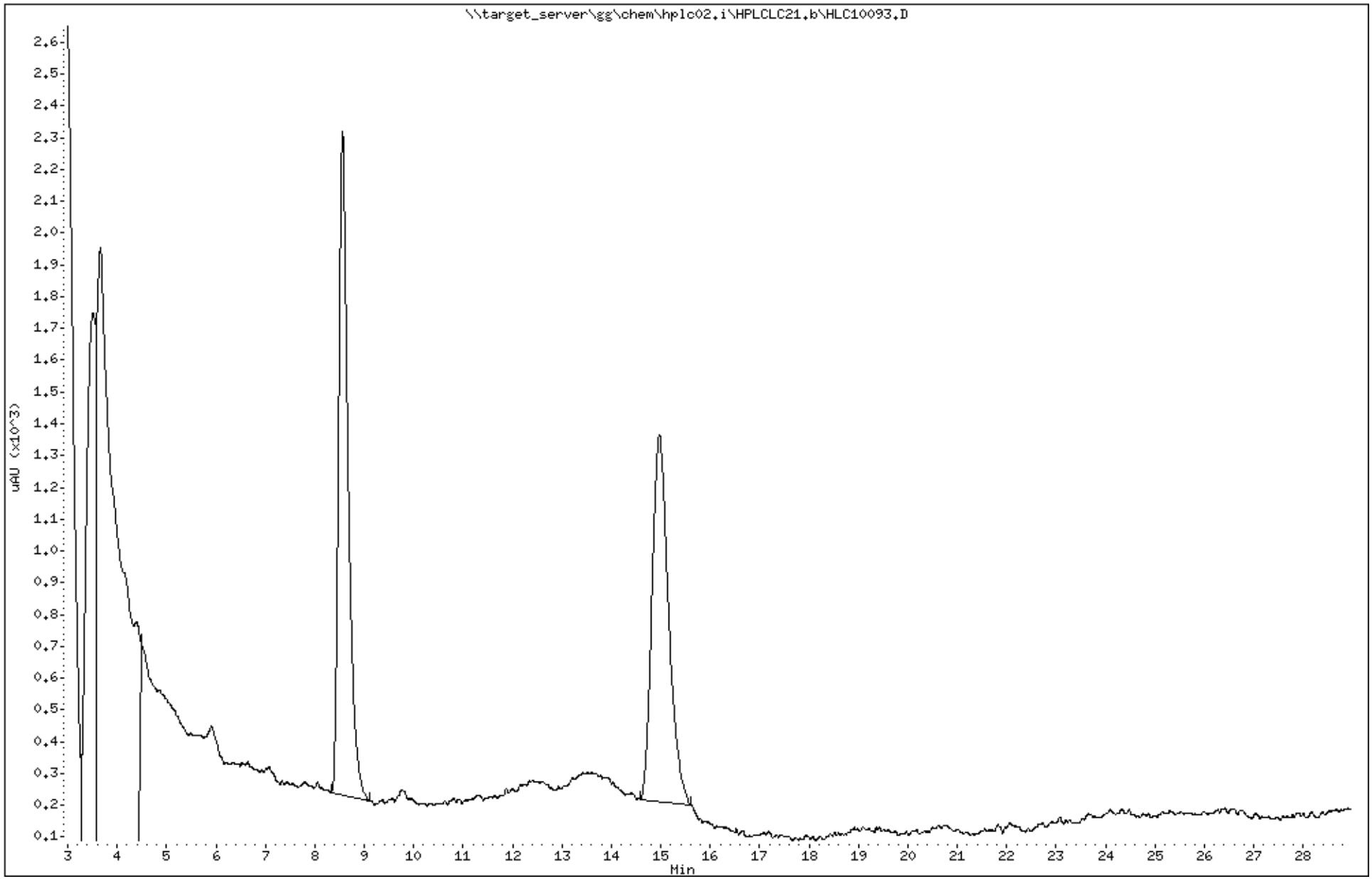
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01010	Weight of Sample (Kg)
M	17.148	% Moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/Kgdrywt)

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10093.D
Date : 22-MAR-2018 00:59
Client ID: CHAAP-BKRD-SS09
Sample Info: SL2079-8

Instrument: hplc02.i

Operator: AC
Column phase: Acclaim Exp E1
Column diameter: 4.60



Katahdin Analytical Services 3000048

Data File: HLC10093.D
Report Date: 27-Mar-2018 13:55

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HPLCLC21.b\HLC10093.D
Lab Smp Id: SL2079-8 Client Smp ID: CHAAP-BKRD-SS09
Inj Date : 22-MAR-2018 00:59
Operator : AC Inst ID: hplc02.i
Smp Info : SL2079-8
Misc Info : WG225143,WG225027,WG225143-5
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\EXPB05A.m\EXPB05A.m
Meth Date : 27-Mar-2018 08:49 hplc02.i Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 70
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: SW8330A.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01010	Weight of Sample (Kg)
M	17.148	% Moisture
Cpnd Variable		Local Compound Variable

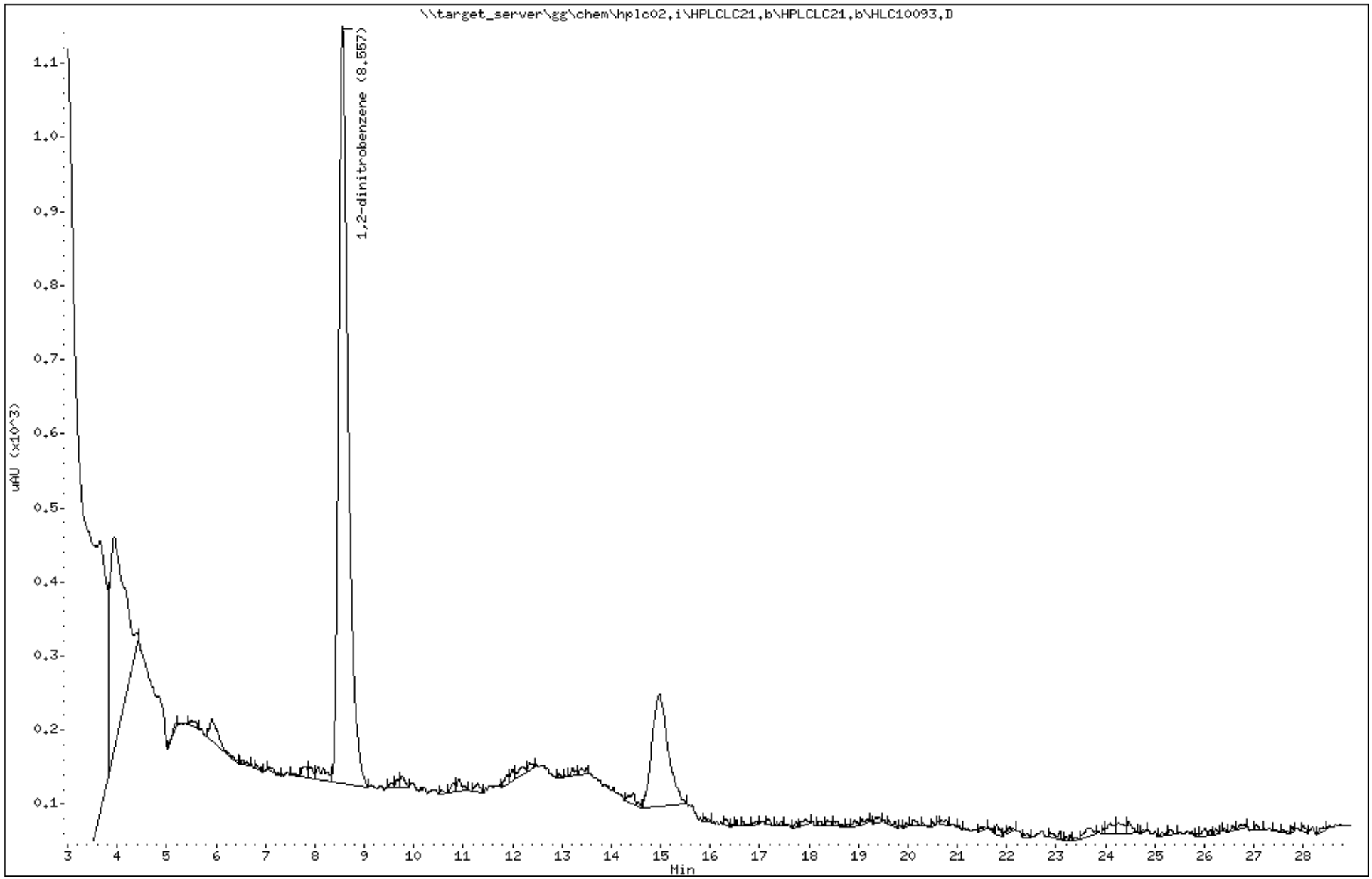
						CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/Kgdrywt)	REVIEW CODE
Compounds	RT	EXP RT	DLT RT	RESPONSE				
$ 2 1,2-dinitrobenzene	8.557	8.549	0.008	1022		0.22086	528	

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HPLCLC21.b\HLC10093.D
Date : 22-MAR-2018 00:59
Client ID: CHAAP-BKRD-SS09
Sample Info: SL2079-8

Instrument: hplc02.i

Operator: AC
Column diameter: 4.60

Column phase: Acclaim Exp E1



Katahdin Analytical Services 3000050

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-9
Client ID: CHAAP-BKRD-SS10
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: HLC10094.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: JMS
Extraction Method: SW846 8330B MOD
Lab Prep Batch: WG225027

Analysis Date: 22-MAR-18
Analyst: AC
Analysis Method: SW846 8330B
Matrix: SL
% Solids: 75.
Report Date: 27-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	65	ug/Kgdrywt	1	100	130	11.	65.
RDX	U	65	ug/Kgdrywt	1	100	130	8.8	65.
1,3,5-Trinitrobenzene	U	65	ug/Kgdrywt	1	100	130	8.7	65.
1,3-Dinitrobenzene	U	65	ug/Kgdrywt	1	100	130	8.1	65.
Tetryl	U	65	ug/Kgdrywt	1	100	130	7.0	65.
Nitrobenzene	U	65	ug/Kgdrywt	1	100	130	29.	65.
2,4,6-Trinitrotoluene	U	65	ug/Kgdrywt	1	100	130	8.7	65.
2-Am-DNT	U	65	ug/Kgdrywt	1	100	130	27.	65.
4-Am-DNT	U	65	ug/Kgdrywt	1	100	130	22.	65.
2,6-Dinitrotoluene	U	65	ug/Kgdrywt	1	100	130	35.	65.
2,4-Dinitrotoluene	U	65	ug/Kgdrywt	1	100	130	20.	65.
2-Nitrotoluene	U	65	ug/Kgdrywt	1	100	130	16.	65.
3-Nitrotoluene	U	65	ug/Kgdrywt	1	100	130	10.	65.
4-Nitrotoluene	U	65	ug/Kgdrywt	1	100	130	35.	65.
Nitroglycerin	U	520	ug/Kgdrywt	1	800	1000	160	520
PETN	U	520	ug/Kgdrywt	1	800	1000	140	520
1,2-Dinitrobenzene		88.9	%					

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Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10094.D
Report Date: 27-Mar-2018 13:51

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10094.D
Lab Smp Id: SL2079-9 Client Smp ID: CHAAP-BKRD-SS10
Inj Date : 22-MAR-2018 04:27
Operator : AC Inst ID: hplc02.i
Smp Info : SL2079-9
Misc Info : WG225143,WG225027,WG225143-5
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\EXPB05A.m
Meth Date : 22-Mar-2018 09:44 hplc02.i Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 71
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ngpetn.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01030	Weight of Sample (Kg)
M	25.390	% Moisture
Cpnd Variable		Local Compound Variable

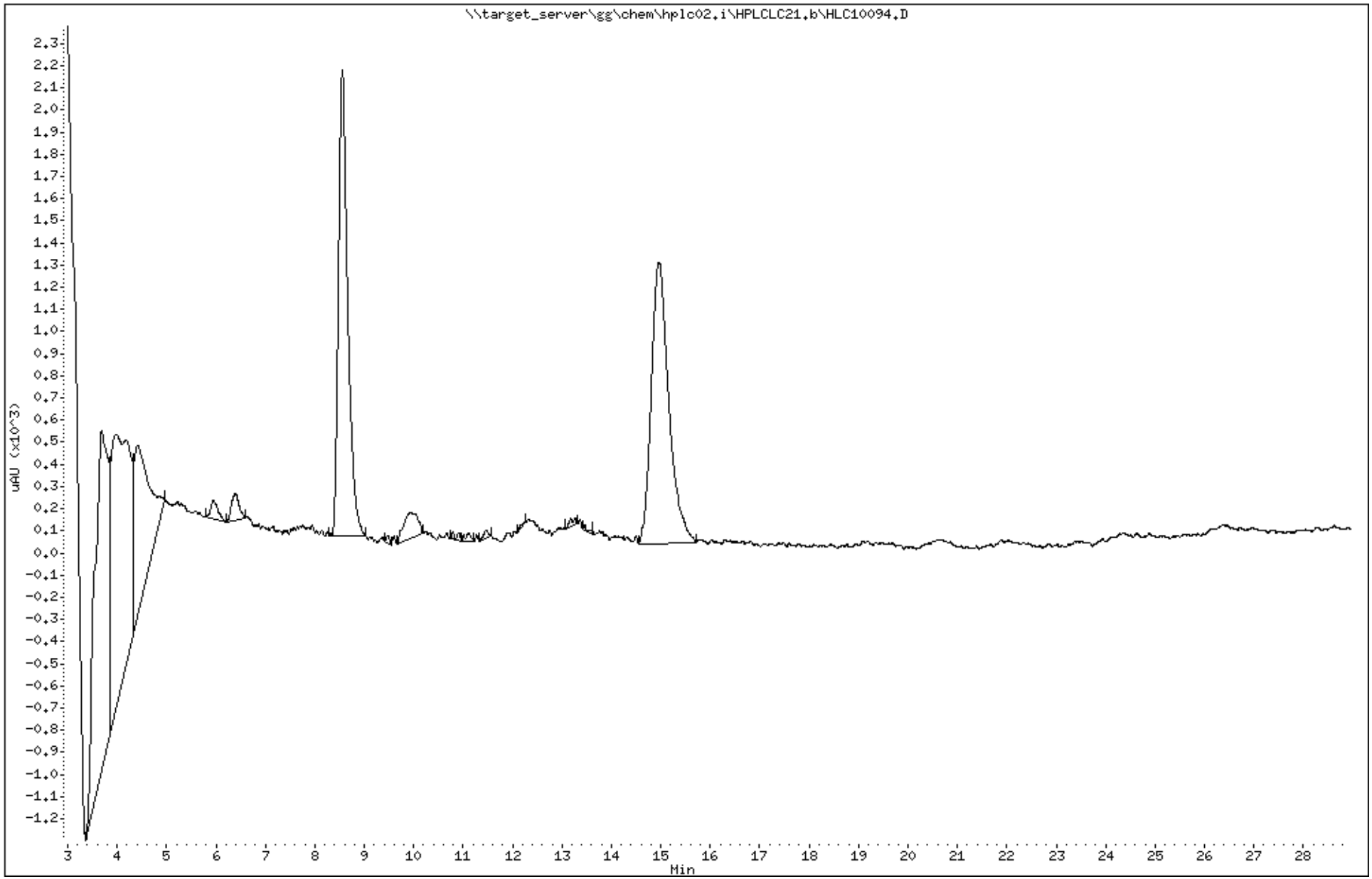
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/Kgdrywt)

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10094.D
Date : 22-MAR-2018 04:27
Client ID: CHAAP-BKRD-SS10
Sample Info: SL2079-9

Instrument: hplc02.i

Operator: AC
Column diameter: 4.60

Column phase: Acclaim Exp E1



Katahdin Analytical Services 3000053

Data File: HLC10094.D
Report Date: 27-Mar-2018 13:55

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HPLCLC21.b\HLC10094.D
Lab Smp Id: SL2079-9 Client Smp ID: CHAAP-BKRD-SS10
Inj Date : 22-MAR-2018 04:27
Operator : AC Inst ID: hplc02.i
Smp Info : SL2079-9
Misc Info : WG225143,WG225027,WG225143-5
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\EXPB05A.m\EXPB05A.m
Meth Date : 27-Mar-2018 08:49 hplc02.i Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 71
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: SW8330A.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

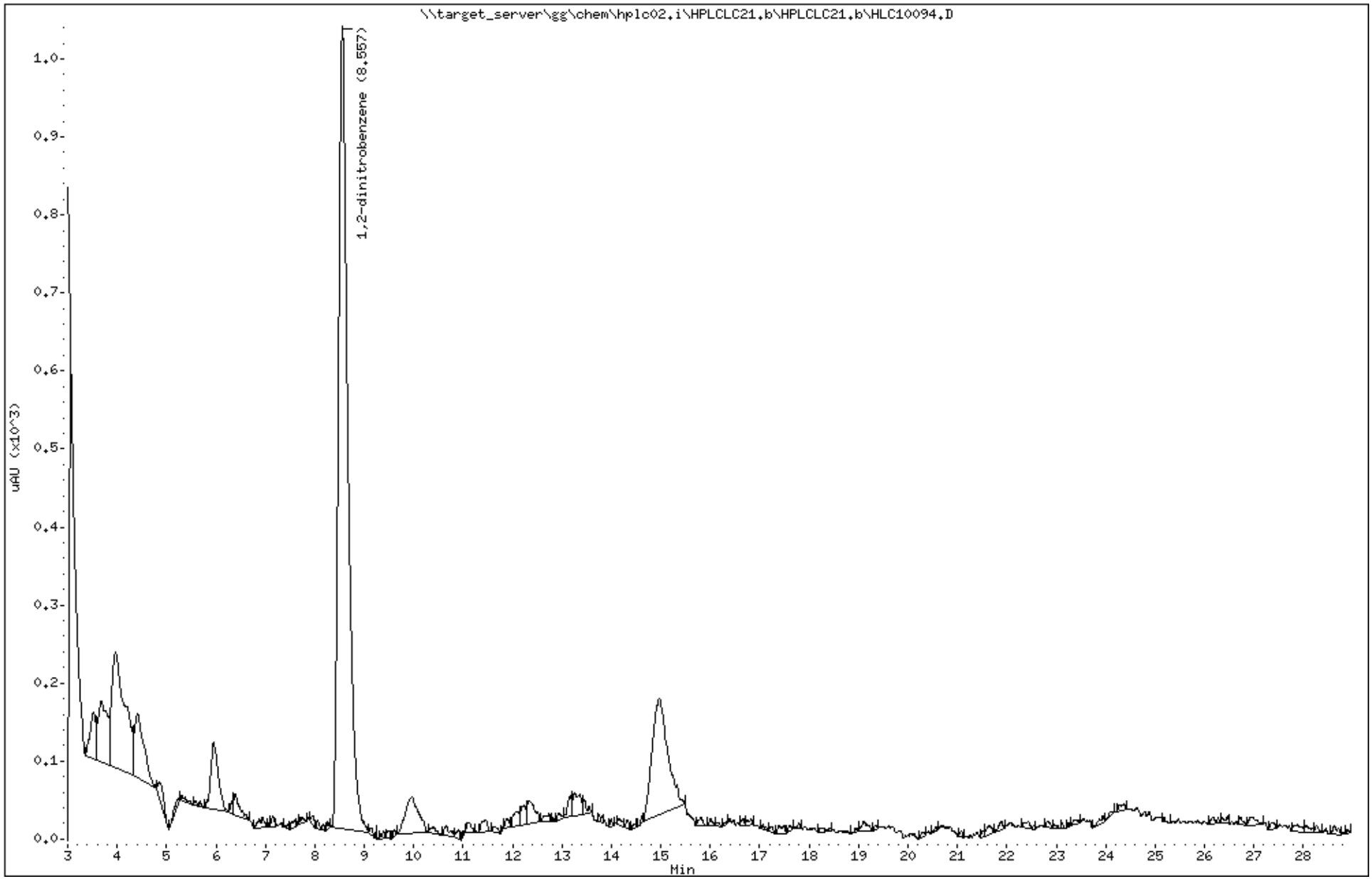
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01030	Weight of Sample (Kg)
M	25.390	% Moisture
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/Kgdrywt)	
Compounds	RT	EXP RT	DLT RT	RESPONSE				REVIEW CODE
$ 2 1,2-dinitrobenzene	8.557	8.549	0.008	1029		0.22237	579	

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HPLCLC21.b\HLC10094.D
Date : 22-MAR-2018 04:27
Client ID: CHAAP-BKRD-SS10
Sample Info: SL2079-9

Instrument: hplc02.i

Operator: AC
Column phase: Acclaim Exp E1
Column diameter: 4.60



Katahdin Analytical Services 3000055

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-10
Client ID: CHAAP-BKRD-SS11
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: HLC10095.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: JMS
Extraction Method: SW846 8330B MOD
Lab Prep Batch: WG225027

Analysis Date: 22-MAR-18
Analyst: AC
Analysis Method: SW846 8330B
Matrix: SL
% Solids: 81.
Report Date: 19-APR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	59	ug/Kgdrywt	1	100	120	10.	59.
RDX	U	59	ug/Kgdrywt	1	100	120	8.0	59.
1,3,5-Trinitrobenzene	U	59	ug/Kgdrywt	1	100	120	7.9	59.
1,3-Dinitrobenzene	U	59	ug/Kgdrywt	1	100	120	7.3	59.
Tetryl	U	59	ug/Kgdrywt	1	100	120	6.4	59.
Nitrobenzene	U	59	ug/Kgdrywt	1	100	120	26.	59.
2,4,6-Trinitrotoluene	U	59	ug/Kgdrywt	1	100	120	7.9	59.
2-Am-DNT	U	59	ug/Kgdrywt	1	100	120	25.	59.
4-Am-DNT	U	59	ug/Kgdrywt	1	100	120	20.	59.
2,6-Dinitrotoluene	U	59	ug/Kgdrywt	1	100	120	32.	59.
2,4-Dinitrotoluene	U	59	ug/Kgdrywt	1	100	120	18.	59.
2-Nitrotoluene	U	59	ug/Kgdrywt	1	100	120	14.	59.
3-Nitrotoluene	U	59	ug/Kgdrywt	1	100	120	9.3	59.
4-Nitrotoluene	U	59	ug/Kgdrywt	1	100	120	32.	59.
Nitroglycerin	U	470	ug/Kgdrywt	1	800	940	150	470
PETN	U	470	ug/Kgdrywt	1	800	940	130	470
1,2-Dinitrobenzene		88.0	%					

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Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10095.D
Report Date: 27-Mar-2018 13:51

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10095.D
Lab Smp Id: SL2079-10 Client Smp ID: CHAAP-BKRD-SS11
Inj Date : 22-MAR-2018 04:59
Operator : AC Inst ID: hplc02.i
Smp Info : SL2079-10
Misc Info : WG225143,WG225027,WG225143-5
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\EXPB05A.m
Meth Date : 22-Mar-2018 09:44 hplc02.i Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 72
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ngpetn.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

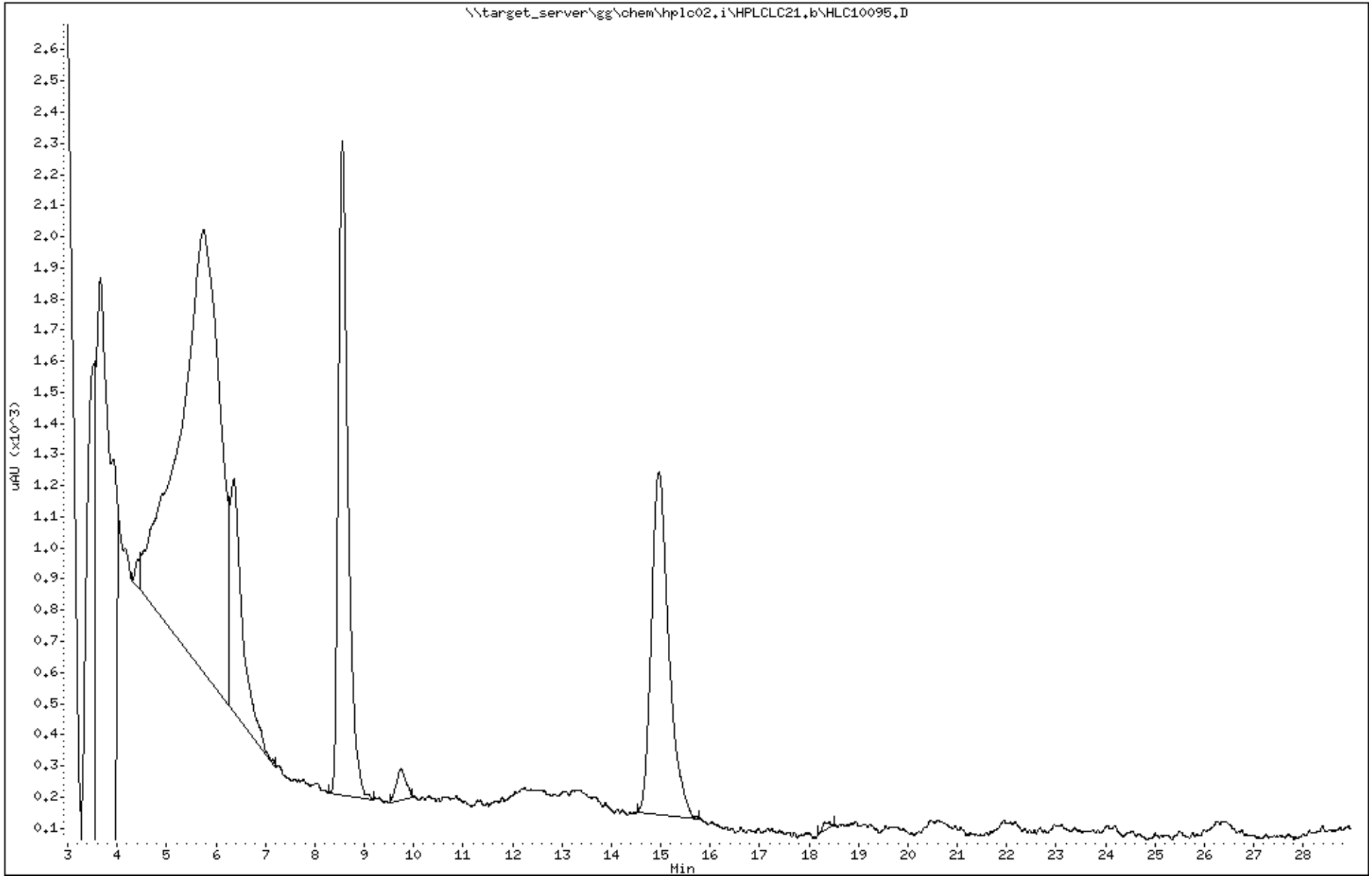
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01040	Weight of Sample (Kg)
M	18.664	% Moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/Kgdrywt)

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10095.D
Date : 22-MAR-2018 04:59
Client ID: CHAAP-BKRD-SS11
Sample Info: SL2079-10

Instrument: hplc02.i

Operator: AC
Column phase: Acclaim Exp E1
Column diameter: 4.60



Katahdin Analytical Services 3000058

Data File: HLC10095.D
Report Date: 27-Mar-2018 13:55

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HPLCLC21.b\HLC10095.D
Lab Smp Id: SL2079-10 Client Smp ID: CHAAP-BKRD-SS11
Inj Date : 22-MAR-2018 04:59
Operator : AC Inst ID: hplc02.i
Smp Info : SL2079-10
Misc Info : WG225143,WG225027,WG225143-5
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\EXPB05A.m\EXPB05A.m
Meth Date : 27-Mar-2018 08:49 hplc02.i Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 72
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: SW8330A.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01040	Weight of Sample (Kg)
M	18.664	% Moisture
Cpnd Variable		Local Compound Variable

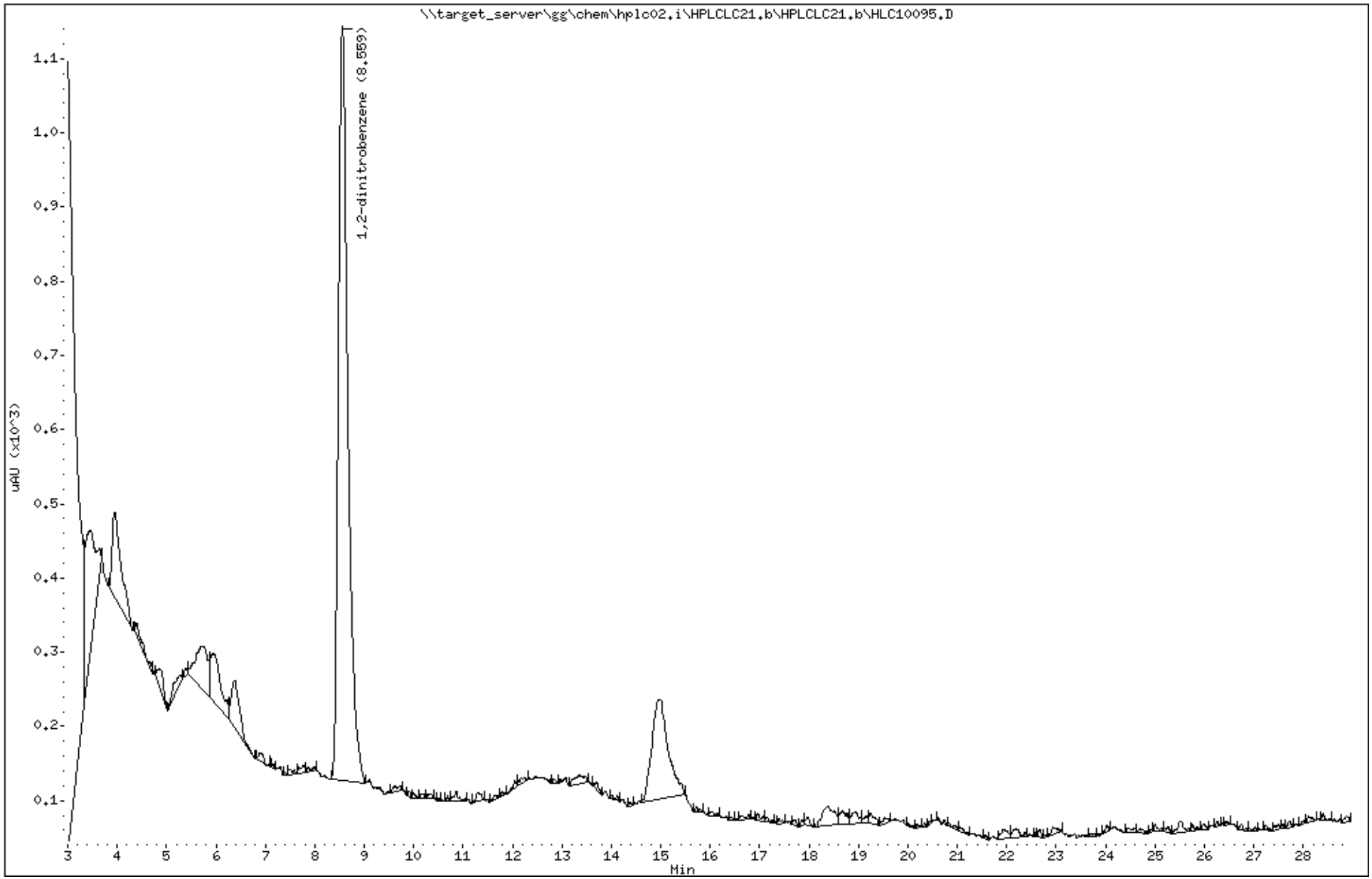
						CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/Kgdrywt)	
Compounds	RT	EXP RT	DLT RT	RESPONSE				REVIEW CODE
$ 2 1,2-dinitrobenzene	8.558	8.549	0.009	1018		0.21999	520	

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HPLCLC21.b\HLC10095.D
Date : 22-MAR-2018 04:59
Client ID: CHAAP-BKRD-SS11
Sample Info: SL2079-10

Instrument: hplc02.i

Operator: AC
Column diameter: 4.60

Column phase: Acclaim Exp E1



Katahdin Analytical Services 3000060

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-11
Client ID: CHAAP-BKRD-SS12
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: HLC10096.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: JMS
Extraction Method: SW846 8330B MOD
Lab Prep Batch: WG225027

Analysis Date: 22-MAR-18
Analyst: AC
Analysis Method: SW846 8330B
Matrix: SL
% Solids: 78.
Report Date: 27-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	63	ug/Kgdrywt	1	100	130	11.	63.
RDX	U	63	ug/Kgdrywt	1	100	130	8.6	63.
1,3,5-Trinitrobenzene	U	63	ug/Kgdrywt	1	100	130	8.4	63.
1,3-Dinitrobenzene	U	63	ug/Kgdrywt	1	100	130	7.8	63.
Tetryl	U	63	ug/Kgdrywt	1	100	130	6.8	63.
Nitrobenzene	U	63	ug/Kgdrywt	1	100	130	28.	63.
2,4,6-Trinitrotoluene	U	63	ug/Kgdrywt	1	100	130	8.4	63.
2-Am-DNT	U	63	ug/Kgdrywt	1	100	130	26.	63.
4-Am-DNT	U	63	ug/Kgdrywt	1	100	130	21.	63.
2,6-Dinitrotoluene	U	63	ug/Kgdrywt	1	100	130	34.	63.
2,4-Dinitrotoluene	U	63	ug/Kgdrywt	1	100	130	19.	63.
2-Nitrotoluene	U	63	ug/Kgdrywt	1	100	130	15.	63.
3-Nitrotoluene	U	63	ug/Kgdrywt	1	100	130	10.	63.
4-Nitrotoluene	U	63	ug/Kgdrywt	1	100	130	34.	63.
Nitroglycerin	U	500	ug/Kgdrywt	1	800	1000	160	500
PETN	U	500	ug/Kgdrywt	1	800	1000	140	500
1,2-Dinitrobenzene		89.4	%					

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Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10096.D
Report Date: 27-Mar-2018 13:51

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10096.D
Lab Smp Id: SL2079-11 Client Smp ID: CHAAP-BKRD-SS12
Inj Date : 22-MAR-2018 05:31
Operator : AC Inst ID: hplc02.i
Smp Info : SL2079-11
Misc Info : WG225143,WG225027,WG225143-5
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\EXPB05A.m
Meth Date : 22-Mar-2018 09:44 hplc02.i Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 73
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ngpetn.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

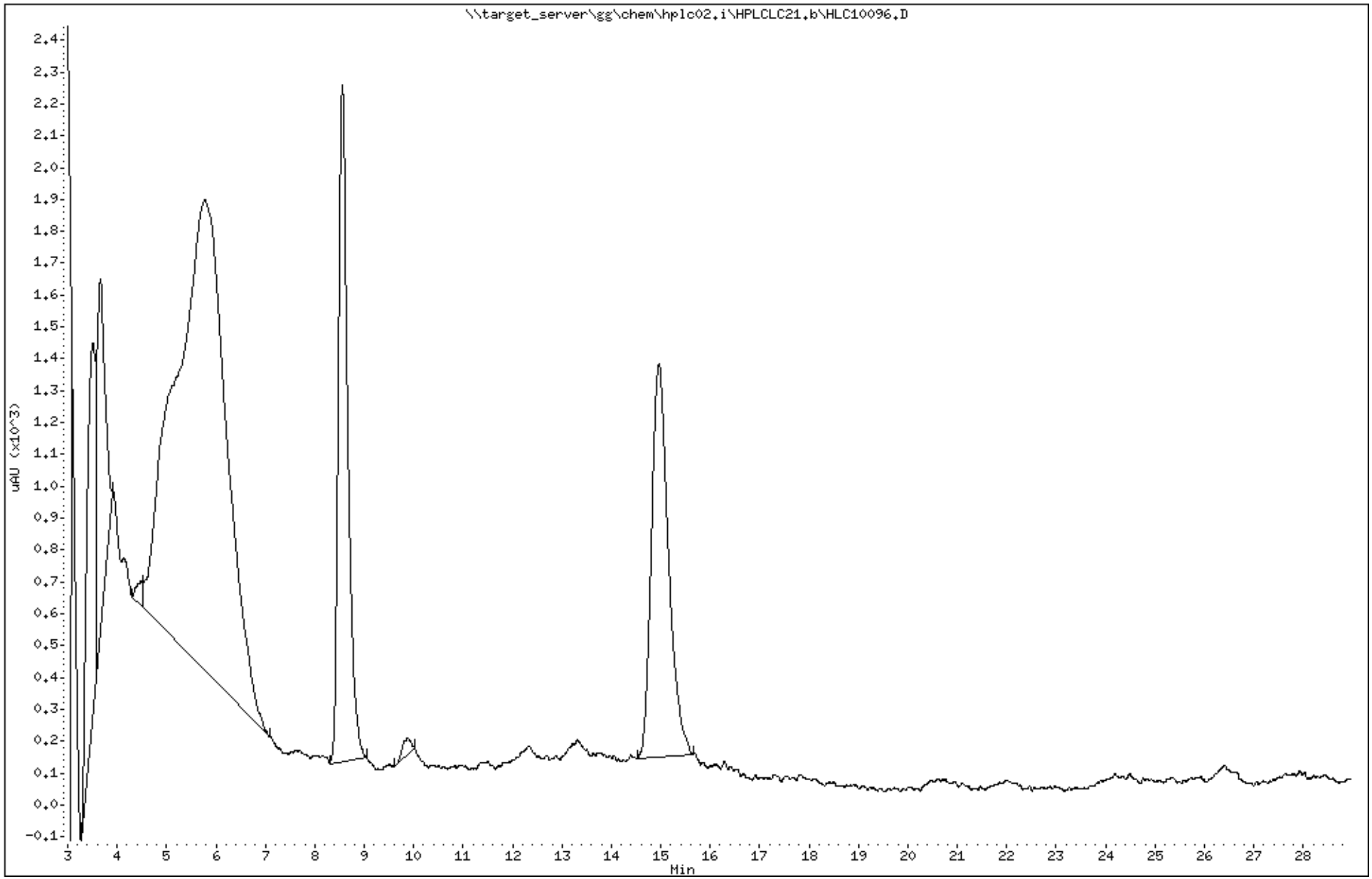
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01010	Weight of Sample (Kg)
M	21.451	% Moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/Kgdrywt)

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10096.D
Date : 22-MAR-2018 05:31
Client ID: CHAAP-BKRD-SS12
Sample Info: SL2079-11

Instrument: hplc02.i

Operator: AC
Column phase: Acclaim Exp E1
Column diameter: 4.60



Katahdin Analytical Services 3000063

Data File: HLC10096.D
Report Date: 27-Mar-2018 13:55

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HPLCLC21.b\HLC10096.D
Lab Smp Id: SL2079-11 Client Smp ID: CHAAP-BKRD-SS12
Inj Date : 22-MAR-2018 05:31
Operator : AC Inst ID: hplc02.i
Smp Info : SL2079-11
Misc Info : WG225143,WG225027,WG225143-5
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\EXPB05A.m\EXPB05A.m
Meth Date : 27-Mar-2018 08:49 hplc02.i Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 73
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: SW8330A.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01010	Weight of Sample (Kg)
M	21.451	% Moisture
Cpnd Variable		Local Compound Variable

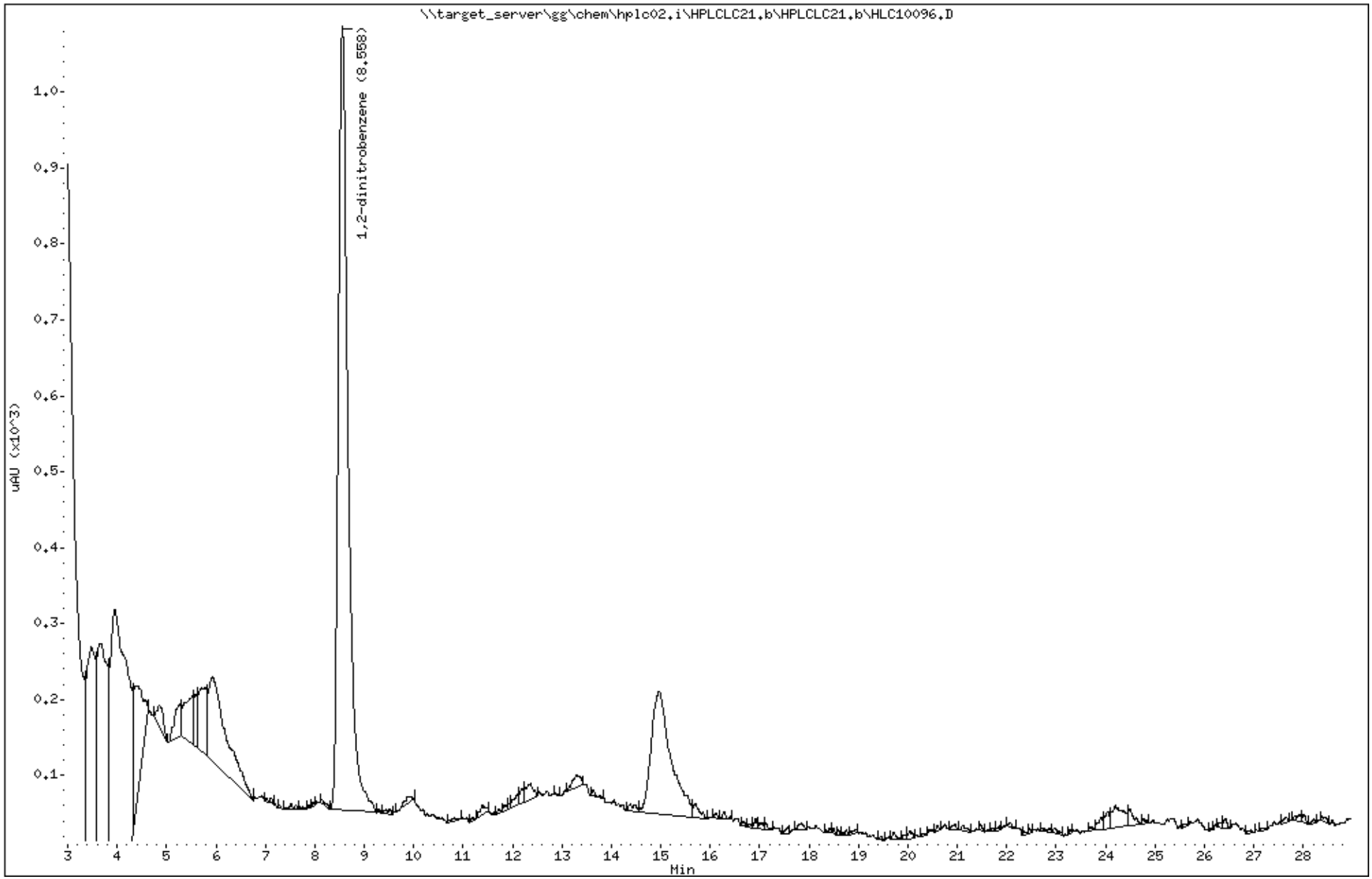
						CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/Kgdrywt)	
Compounds	RT	EXP RT	DLT RT	RESPONSE				REVIEW CODE
$ 2 1,2-dinitrobenzene	8.558	8.549	0.009	1034		0.22345	563	

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HPLCLC21.b\HLC10096.D
Date : 22-MAR-2018 05:31
Client ID: CHAAP-BKRD-SS12
Sample Info: SL2079-11

Instrument: hplc02.i

Operator: AC
Column diameter: 4.60

Column phase: Acclaim Exp E1



Katahdin Analytical Services 3000065

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-12
Client ID: CHAAP-BKRD-SS13
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: HLC10097.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: JMS
Extraction Method: SW846 8330B MOD
Lab Prep Batch: WG225027

Analysis Date: 22-MAR-18
Analyst: AC
Analysis Method: SW846 8330B
Matrix: SL
% Solids: 78.
Report Date: 27-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	62	ug/Kgdrywt	1	100	120	11.	62.
RDX	U	62	ug/Kgdrywt	1	100	120	8.4	62.
1,3,5-Trinitrobenzene	U	62	ug/Kgdrywt	1	100	120	8.3	62.
1,3-Dinitrobenzene	U	62	ug/Kgdrywt	1	100	120	7.6	62.
Tetryl	U	62	ug/Kgdrywt	1	100	120	6.6	62.
Nitrobenzene	U	62	ug/Kgdrywt	1	100	120	27.	62.
2,4,6-Trinitrotoluene	U	62	ug/Kgdrywt	1	100	120	8.3	62.
2-Am-DNT	U	62	ug/Kgdrywt	1	100	120	26.	62.
4-Am-DNT	U	62	ug/Kgdrywt	1	100	120	21.	62.
2,6-Dinitrotoluene	U	62	ug/Kgdrywt	1	100	120	33.	62.
2,4-Dinitrotoluene	U	62	ug/Kgdrywt	1	100	120	18.	62.
2-Nitrotoluene	U	62	ug/Kgdrywt	1	100	120	15.	62.
3-Nitrotoluene	U	62	ug/Kgdrywt	1	100	120	9.7	62.
4-Nitrotoluene	U	62	ug/Kgdrywt	1	100	120	33.	62.
Nitroglycerin	U	490	ug/Kgdrywt	1	800	990	150	490
PETN	U	490	ug/Kgdrywt	1	800	990	130	490
1,2-Dinitrobenzene		89.8	%					

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Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10097.D
Report Date: 27-Mar-2018 13:51

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10097.D
Lab Smp Id: SL2079-12 Client Smp ID: CHAAP-BKRD-SS13
Inj Date : 22-MAR-2018 06:02
Operator : AC Inst ID: hplc02.i
Smp Info : SL2079-12
Misc Info : WG225143,WG225027,WG225143-5
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\EXPB05A.m
Meth Date : 22-Mar-2018 09:44 hplc02.i Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 74
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ngpetn.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01040	Weight of Sample (Kg)
M	22.033	% Moisture
Cpnd Variable		Local Compound Variable

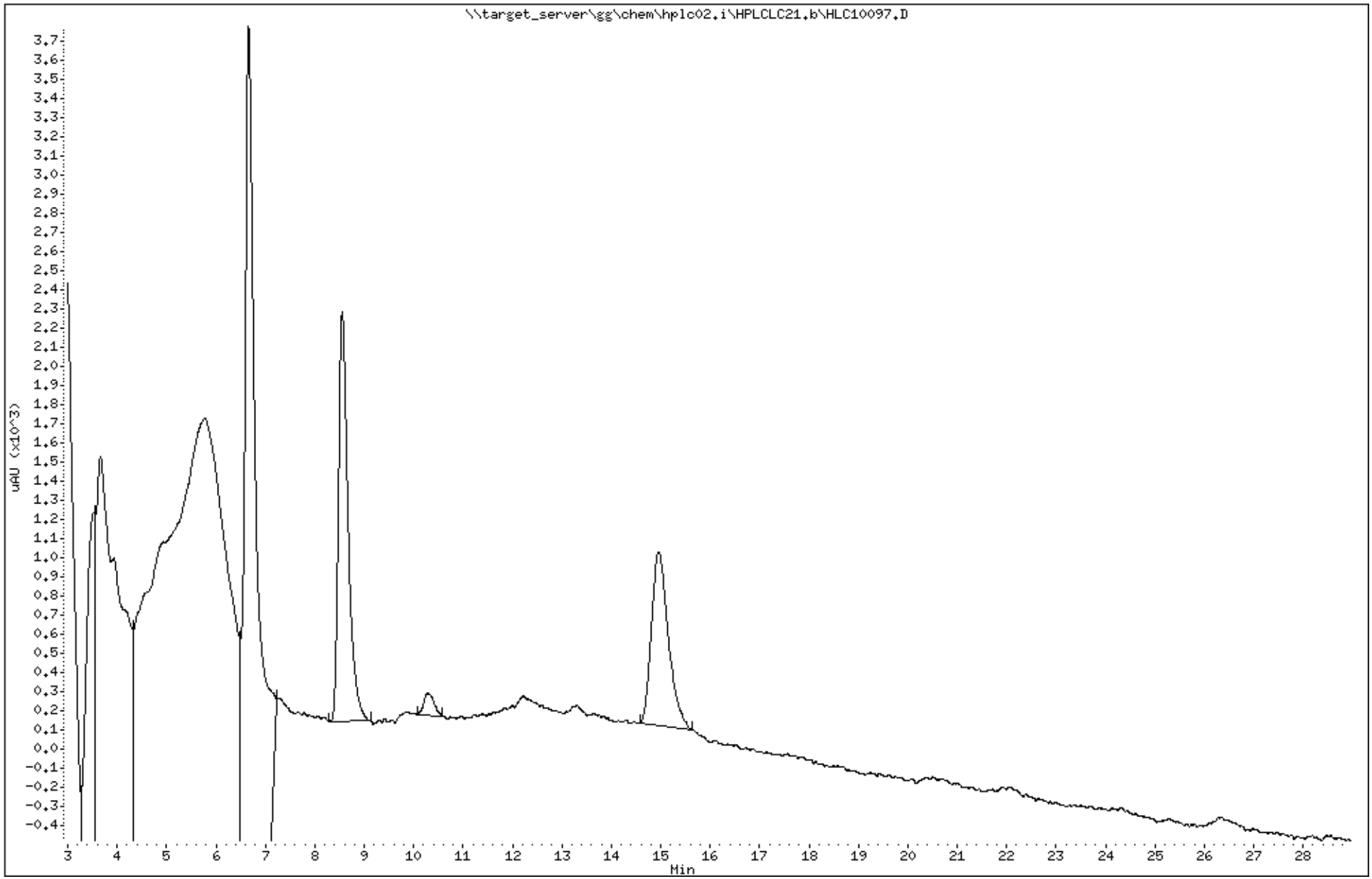
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/Kgdrywt)

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10097.D
Date : 22-MAR-2018 06:02
Client ID: CHAAP-BKRD-SS13
Sample Info: SL2079-12

Instrument: hplc02.i

Operator: AC
Column diameter: 4.60

Column phase: Acclaim Exp E1



Katahdin Analytical Services 3000068

Data File: HLC10097.D
Report Date: 27-Mar-2018 13:55

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HPLCLC21.b\HLC10097.D
Lab Smp Id: SL2079-12 Client Smp ID: CHAAP-BKRD-SS13
Inj Date : 22-MAR-2018 06:02
Operator : AC Inst ID: hplc02.i
Smp Info : SL2079-12
Misc Info : WG225143,WG225027,WG225143-5
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\EXPB05A.m\EXPB05A.m
Meth Date : 27-Mar-2018 08:49 hplc02.i Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 74
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: SW8330A.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01040	Weight of Sample (Kg)
M	22.033	% Moisture
Cpnd Variable		Local Compound Variable

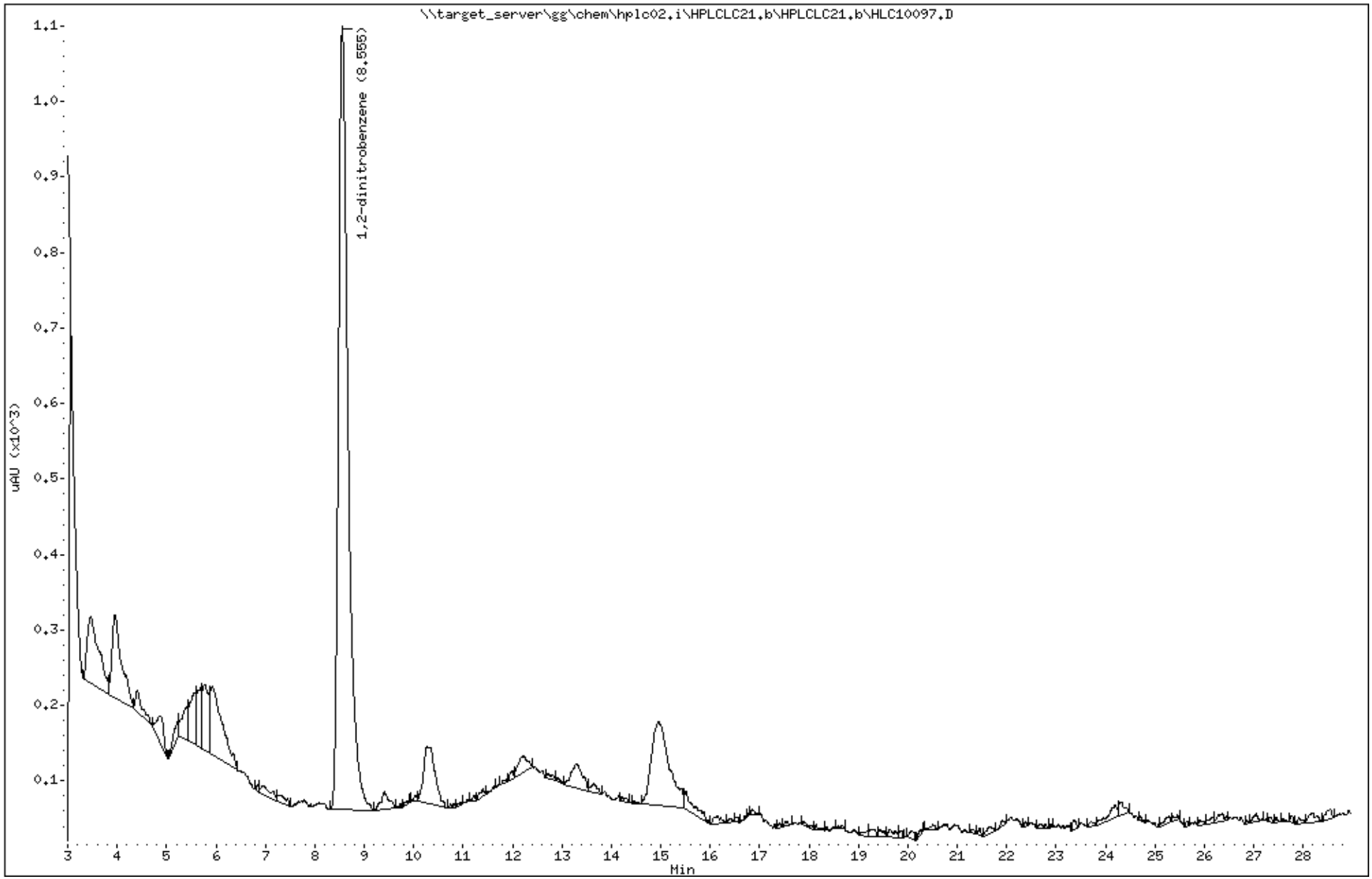
					CONCENTRATIONS		
					ON-COLUMN	FINAL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/Kgdrywt)	REVIEW CODE
$ 2 1,2-dinitrobenzene	8.555	8.549	0.006	1039	0.22453	554	

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HPLCLC21.b\HLC10097.D
Date : 22-MAR-2018 06:02
Client ID: CHAAP-BKRD-SS13
Sample Info: SL2079-12

Instrument: hplc02.i

Operator: AC
Column diameter: 4.60

Column phase: Acclaim Exp E1



Katahdin Analytical Services 3000070

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-13
Client ID: CHAAP-BKRD-SS109
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: HLC10098.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: JMS
Extraction Method: SW846 8330B MOD
Lab Prep Batch: WG225027

Analysis Date: 22-MAR-18
Analyst: AC
Analysis Method: SW846 8330B
Matrix: SL
% Solids: 83.
Report Date: 27-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	60	ug/Kgdrywt	1	100	120	10.	60.
RDX	U	60	ug/Kgdrywt	1	100	120	8.1	60.
1,3,5-Trinitrobenzene	U	60	ug/Kgdrywt	1	100	120	8.0	60.
1,3-Dinitrobenzene	U	60	ug/Kgdrywt	1	100	120	7.4	60.
Tetryl	U	60	ug/Kgdrywt	1	100	120	6.4	60.
Nitrobenzene	U	60	ug/Kgdrywt	1	100	120	26.	60.
2,4,6-Trinitrotoluene	U	60	ug/Kgdrywt	1	100	120	8.0	60.
2-Am-DNT	U	60	ug/Kgdrywt	1	100	120	25.	60.
4-Am-DNT	U	60	ug/Kgdrywt	1	100	120	20.	60.
2,6-Dinitrotoluene	U	60	ug/Kgdrywt	1	100	120	32.	60.
2,4-Dinitrotoluene	U	60	ug/Kgdrywt	1	100	120	18.	60.
2-Nitrotoluene	U	60	ug/Kgdrywt	1	100	120	14.	60.
3-Nitrotoluene	U	60	ug/Kgdrywt	1	100	120	9.4	60.
4-Nitrotoluene	U	60	ug/Kgdrywt	1	100	120	32.	60.
Nitroglycerin	U	480	ug/Kgdrywt	1	800	960	150	480
PETN	U	480	ug/Kgdrywt	1	800	960	130	480
1,2-Dinitrobenzene		89.9	%					

600 Technology Way
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Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10098.D
Report Date: 27-Mar-2018 13:51

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10098.D
Lab Smp Id: SL2079-13 Client Smp ID: CHAAP-BKRD-SS109
Inj Date : 22-MAR-2018 06:34
Operator : AC Inst ID: hplc02.i
Smp Info : SL2079-13
Misc Info : WG225143,WG225027,WG225143-5
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\EXPB05A.m
Meth Date : 22-Mar-2018 09:44 hplc02.i Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 75
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ngpetn.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

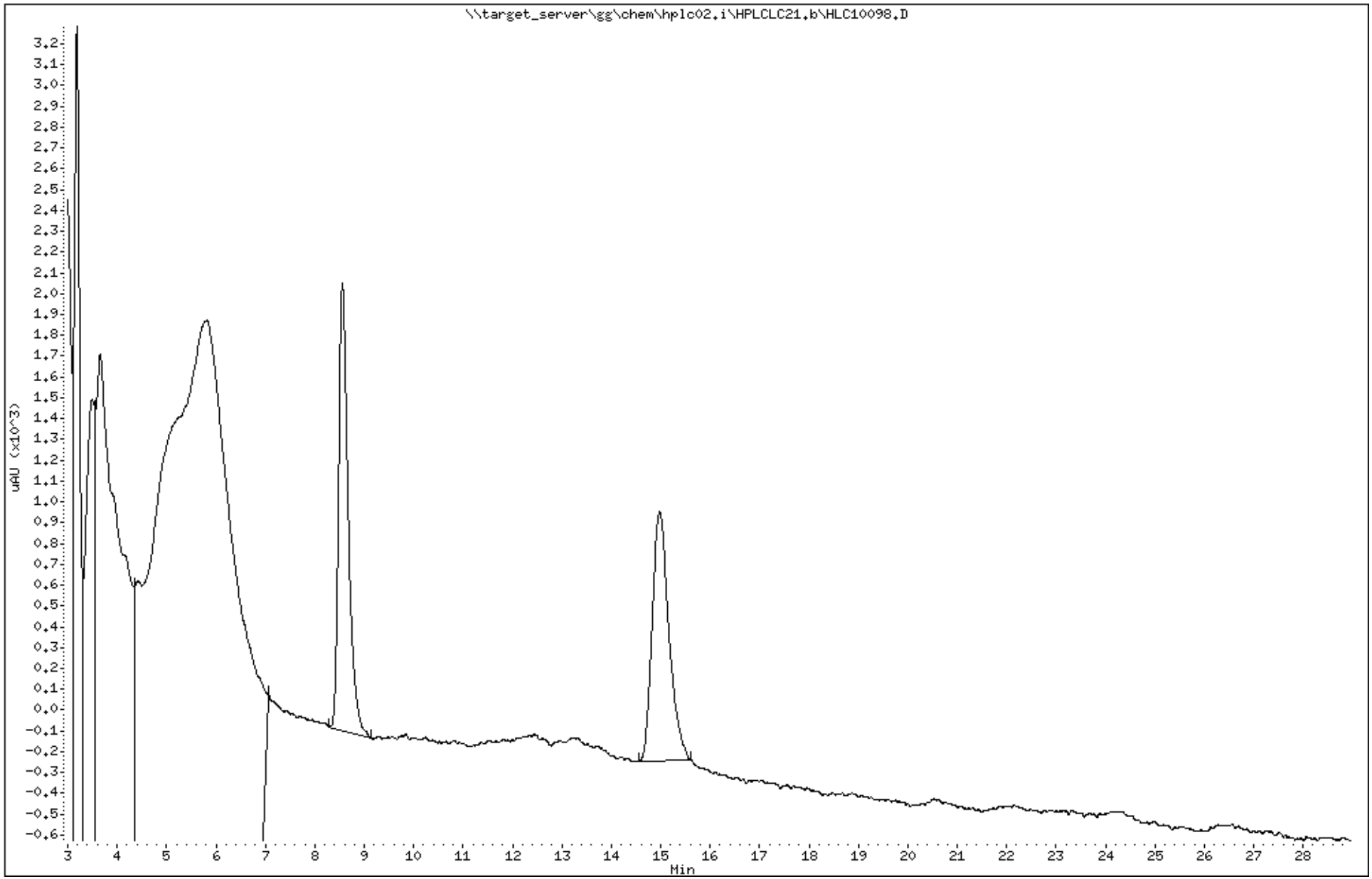
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01010	Weight of Sample (Kg)
M	17.091	% Moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/Kgdrywt)

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10098.D
Date : 22-MAR-2018 06:34
Client ID: CHAAP-BKRD-SS109
Sample Info: SL2079-13

Instrument: hplc02.i

Operator: AC
Column phase: Acclaim Exp E1
Column diameter: 4.60



Katahdin Analytical Services 3000073

Data File: HLC10098.D
Report Date: 27-Mar-2018 13:55

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HPLCLC21.b\HLC10098.D
Lab Smp Id: SL2079-13 Client Smp ID: CHAAP-BKRD-SS109
Inj Date : 22-MAR-2018 06:34
Operator : AC Inst ID: hplc02.i
Smp Info : SL2079-13
Misc Info : WG225143,WG225027,WG225143-5
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\EXPB05A.m\EXPB05A.m
Meth Date : 27-Mar-2018 08:49 hplc02.i Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 75
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: SW8330A.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

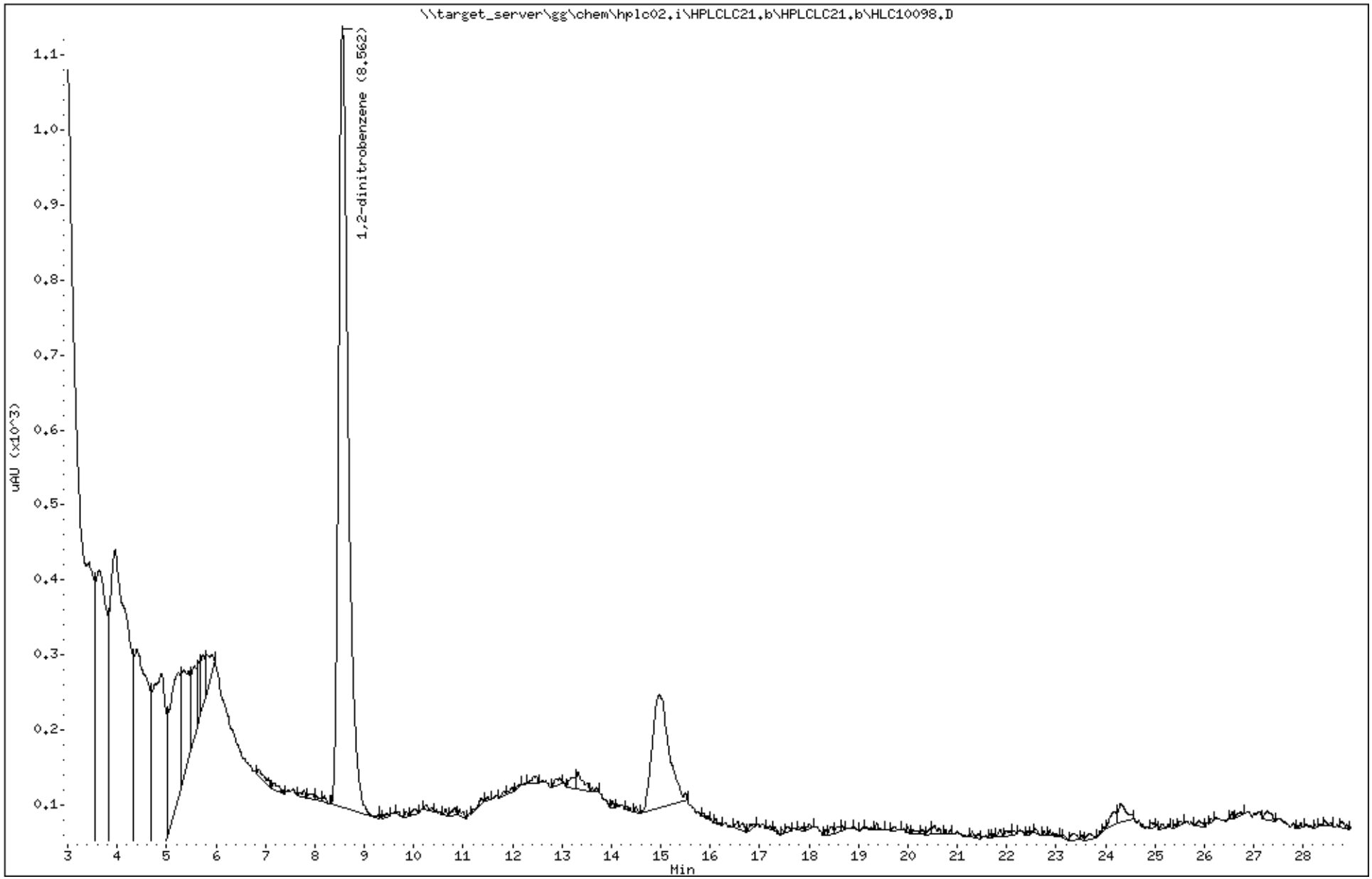
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01010	Weight of Sample (Kg)
M	17.091	% Moisture
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS		
					ON-COLUMN	FINAL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/Kgdrywt)	REVIEW CODE
$ 2 1,2-dinitrobenzene	8.562	8.549	0.013	1041	0.22496	537	

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HPLCLC21.b\HLC10098.D
Date : 22-MAR-2018 06:34
Client ID: CHAAP-BKRD-SS109
Sample Info: SL2079-13

Instrument: hplc02.i

Operator: AC
Column phase: Acclaim Exp E1
Column diameter: 4.60



Katahdin Analytical Services 3000075

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: ATI, Inc.
Lab ID: SL2079-14
Client ID: CHAAP-BKRD-EB-031418
Project: Cornhusker Army Ammunition Plant
SDG: SL2079
Lab File ID: HLC10046.D

Sample Date: 14-MAR-18
Received Date: 15-MAR-18
Extract Date: 19-MAR-18
Extracted By: JMS
Extraction Method: SW846 8330
Lab Prep Batch: WG225094

Analysis Date: 20-MAR-18
Analyst: AC
Analysis Method: SW846 8330B
Matrix: AQ
% Solids: NA
Report Date: 27-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	0.12	ug/L	1	.25	0.25	0.043	0.12
RDX	U	0.12	ug/L	1	.25	0.25	0.046	0.12
1,3,5-Trinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.040	0.12
1,3-Dinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.045	0.12
Tetryl	U	0.12	ug/L	1	.25	0.25	0.060	0.12
Nitrobenzene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
2,4,6-Trinitrotoluene	U	0.12	ug/L	1	.25	0.25	0.064	0.12
4-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.053	0.12
2-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.038	0.12
2,6-Dinitrotoluene	U	0.12	ug/L	1	.25	0.25	0.056	0.12
2,4-Dinitrotoluene	U	0.12	ug/L	1	.25	0.25	0.052	0.12
2-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
4-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.060	0.12
3-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.063	0.12
Nitroglycerin	U	2.0	ug/L	1	4	4.0	0.67	2.0
PETN	U	2.0	ug/L	1	4	4.0	0.58	2.0
1,2-Dinitrobenzene		98.5	%					

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Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10046.D
Report Date: 27-Mar-2018 13:39

Katahdin Analytical Services

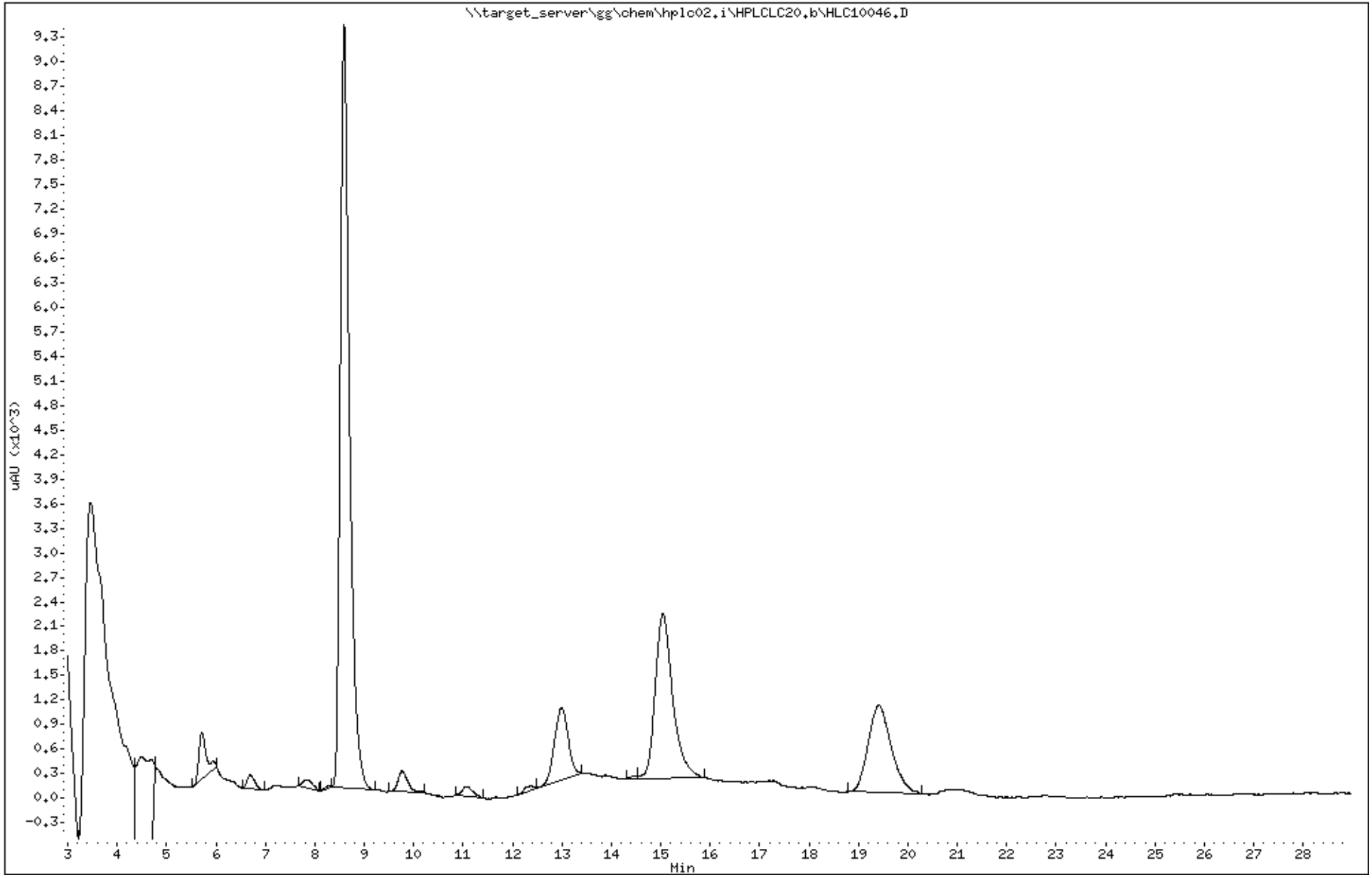
Data file : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10046.D
Lab Smp Id: SL2079-14 Client Smp ID: HAAP-BKRD-EB-031418
Inj Date : 20-MAR-2018 22:51
Operator : AC Inst ID: hplc02.i
Smp Info : SL2079-14
Misc Info : WG225143,WG225094,WG225143-5
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\EXPB05A.m
Meth Date : 21-Mar-2018 11:31 abullentin Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 23
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ngpetn.sub
Target Version: 4.12
Processing Host: V200T1

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00500	Final Volume (L)
Vo	0.50000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10046.D
Date : 20-MAR-2018 22:51
Client ID: HAAP-BKRD-EB-031418
Instrument: hplc02.i
Sample Info: SL2079-14
Purge Volume: 0.5
Operator: AC
Column phase: Acclaim Exp E1
Column diameter: 4.60



Katahdin Analytical Services 3000078

Data File: HLC10046.D
Report Date: 27-Mar-2018 14:47

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HPLCLC20.b\HLC10046.D
Lab Smp Id: SL2079-14 Client Smp ID: HAAP-BKRD-EB-031418
Inj Date : 20-MAR-2018 22:51
Operator : AC Inst ID: hplc02.i
Smp Info : SL2079-14
Misc Info : WG225143,WG225094,WG225143-5
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\EXPB05A.m\EXPB05A.m
Meth Date : 22-Mar-2018 05:09 abullentin Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 23
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: SW8330A.sub
Target Version: 4.12
Processing Host: V200T1

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00500	Final Volume (L)
Vo	0.50000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS		
					ON-COLUMN	FINAL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/L)	REVIEW CODE
$ 2 1,2-dinitrobenzene	8.592	8.575	0.017	4560	0.98543	9.85	

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HPLCLC20.b\HLC10046.D

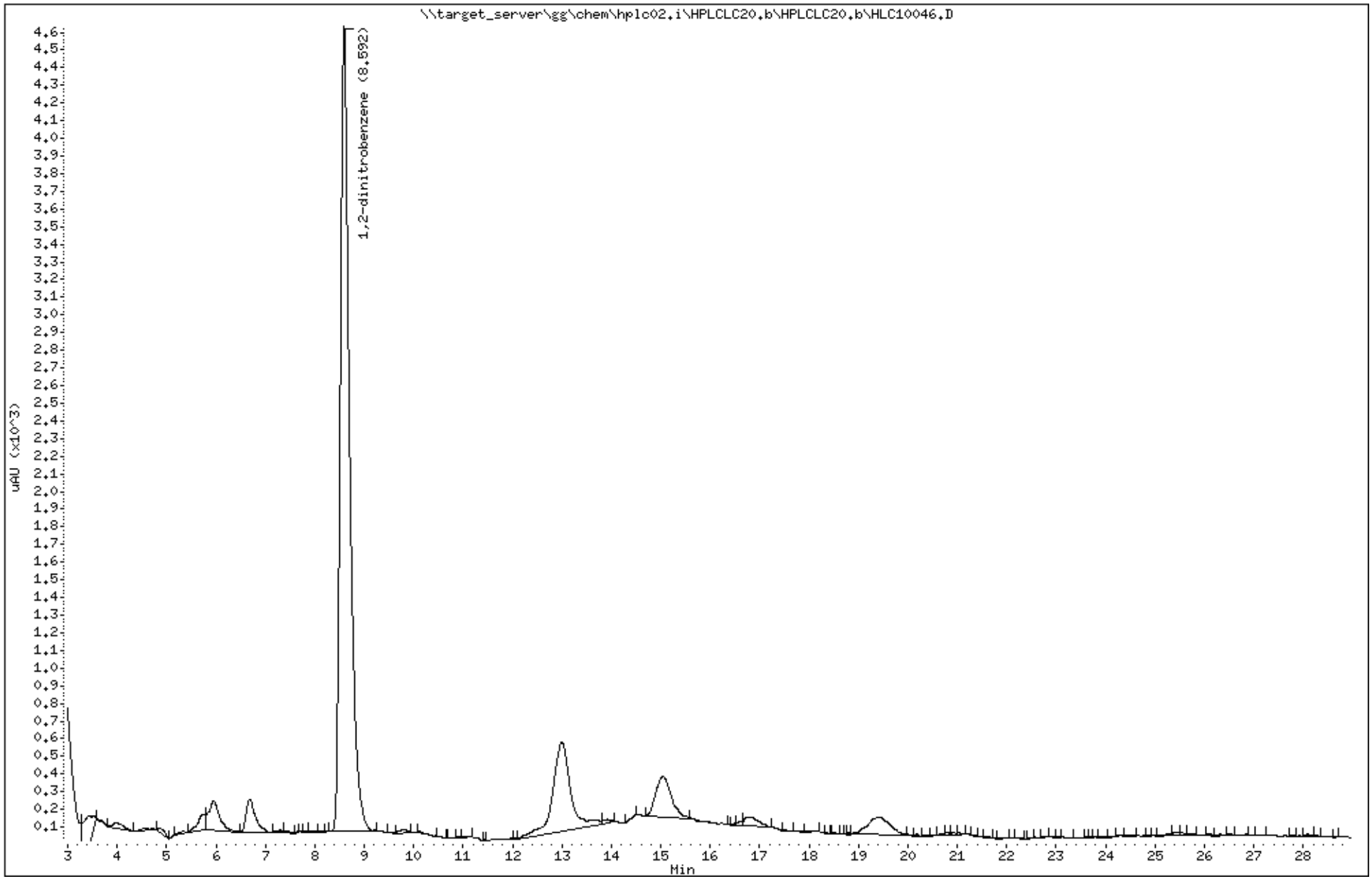
Date : 20-MAR-2018 22:51

Client ID: HAAP-BKRD-EB-031418 Instrument: hplc02.i

Sample Info: SL2079-14

Purge Volume: 0.5 Operator: AC

Column phase: Acclaim Exp E1 Column diameter: 4.60



Katahdin Analytical Services 3000080

Standards Data Section

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL2079
Project : Cornhusker Army Ammunition Plant
Instrument ID: HPLC02
Lab File IDs : HLC10037.D HLC10036.D HLC10035.D HLC10034.D HLC10033.D HLC10032.D HLC10031.D
Calibration Date(s): 20-MAR-18 14:54 20-MAR-18 18:05

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7		Crv				Max	
	0.025000(	0.050000(	0.100000(	0.250000(	0.500000(	1.0000	2.0000		New	b	m1	%RSD	%RSD	
NITROGLYCERIN	5440	5685	5280	5392	5454	5917	5425		AVG		5513	3.90686	20.00000	O
PETN	3020	2970	2465	3064	2834	3010	2768		AVG		2876	7.31282	15.00000	O

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10038.D
Report Date: 26-Mar-2018 14:36

Katahdin Analytical Services

RECOVERY REPORT

Client Name: Client SDG: SDGa00508
Sample Matrix: LIQUID Fraction: Explosives
Lab Smp Id: WG225143-8
Level: LOW Operator: AC
Data Type: LC DATA SampleType: LCS
SpikeList File: IND.spk Quant Type: ESTD
Sublist File: ngpetnedgn.sub
Method File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\EXPB05A.m
Misc Info: WG225143,WG225143,WG225143-5,SL2295-1

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
3 Ethylene Glycol Di	20.0	19.5	97.34	30-150
8 NITROGLYCERIN	20.0	18.5	92.69	80-120
18 PETN	20.0	19.6	97.78	80-120

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10038.D
Report Date: 26-Mar-2018 14:36

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10038.D
Lab Smp Id: WG225143-8
Inj Date : 20-MAR-2018 18:37
Operator : AC Inst ID: hplc02.i
Smp Info : WG225143-8,SL2295
Misc Info : WG225143,WG225143,WG225143-5,SL2295-1
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\EXPB05A.m
Meth Date : 21-Mar-2018 11:31 abullentin Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 15 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ngpetnedgn.sub
Target Version: 4.12
Processing Host: V200T1

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00500	Final Volume (L)
Vo	0.50000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

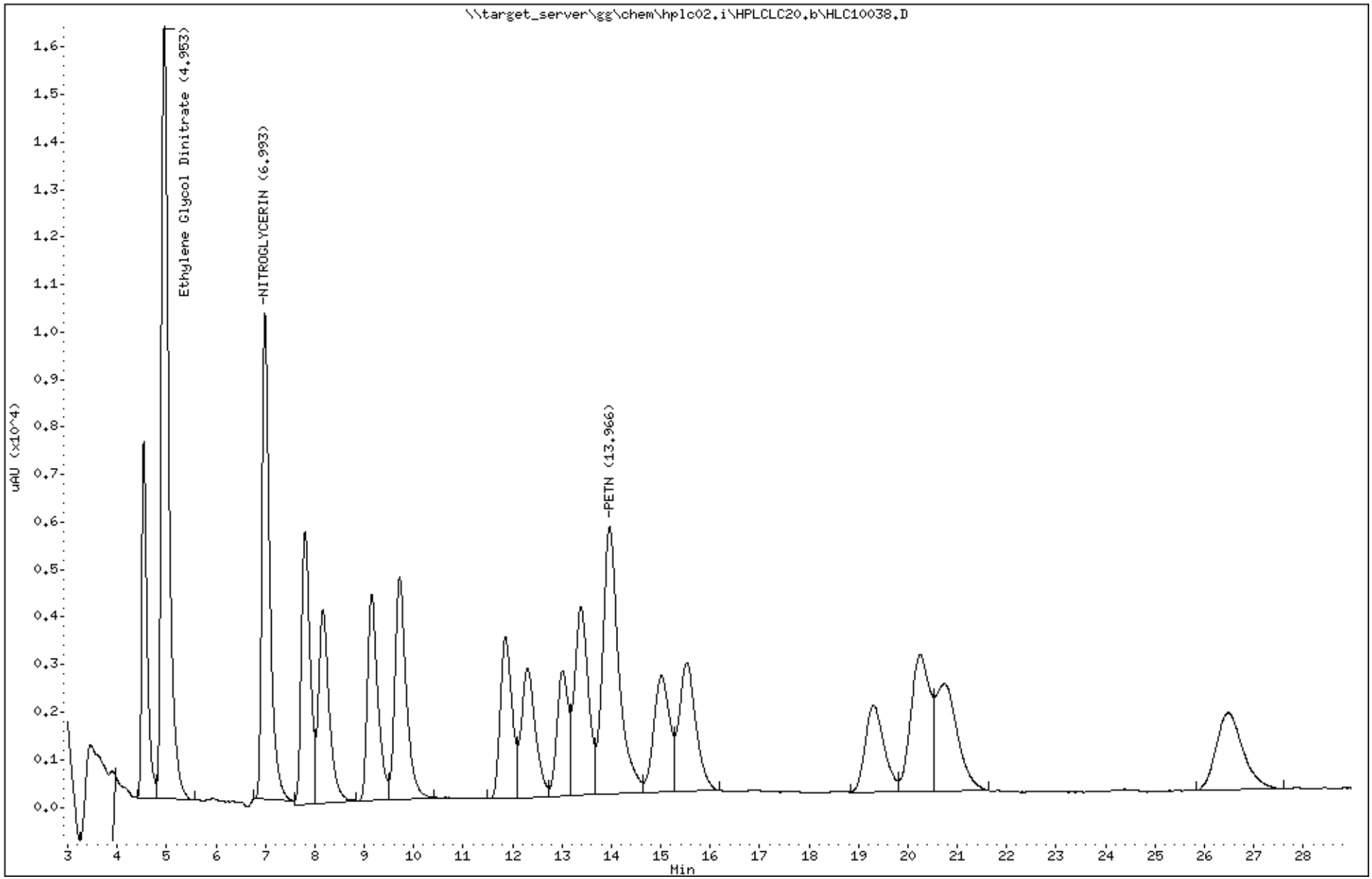
						CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)	
Compounds		RT	EXP RT	DLT RT	RESPONSE			
8	NITROGLYCERIN	6.992	6.997	-0.005	10220	1.85373	18.5(M)	M2
18	PETN	13.966	13.963	0.003	5624	1.95560	19.6	
3	Ethylene Glycol Dinitrate	4.952	4.957	-0.005	16261	1.94680	19.5	

QC Flag Legend

M - Compound response manually integrated.

AAB
2:37 pm, Mar 26, 2018

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10038.D
Date : 20-MAR-2018 18:37
Client ID:
Instrument: hplc02.i
Sample Info: WG225143-8,SL2295
Purge Volume: 0.5
Operator: AC
Column phase: Acclaim Exp E1
Column diameter: 4.60



Katahdin Analytical Services 3000085

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10031.D
Report Date: 26-Mar-2018 13:04

Katahdin Analytical Services

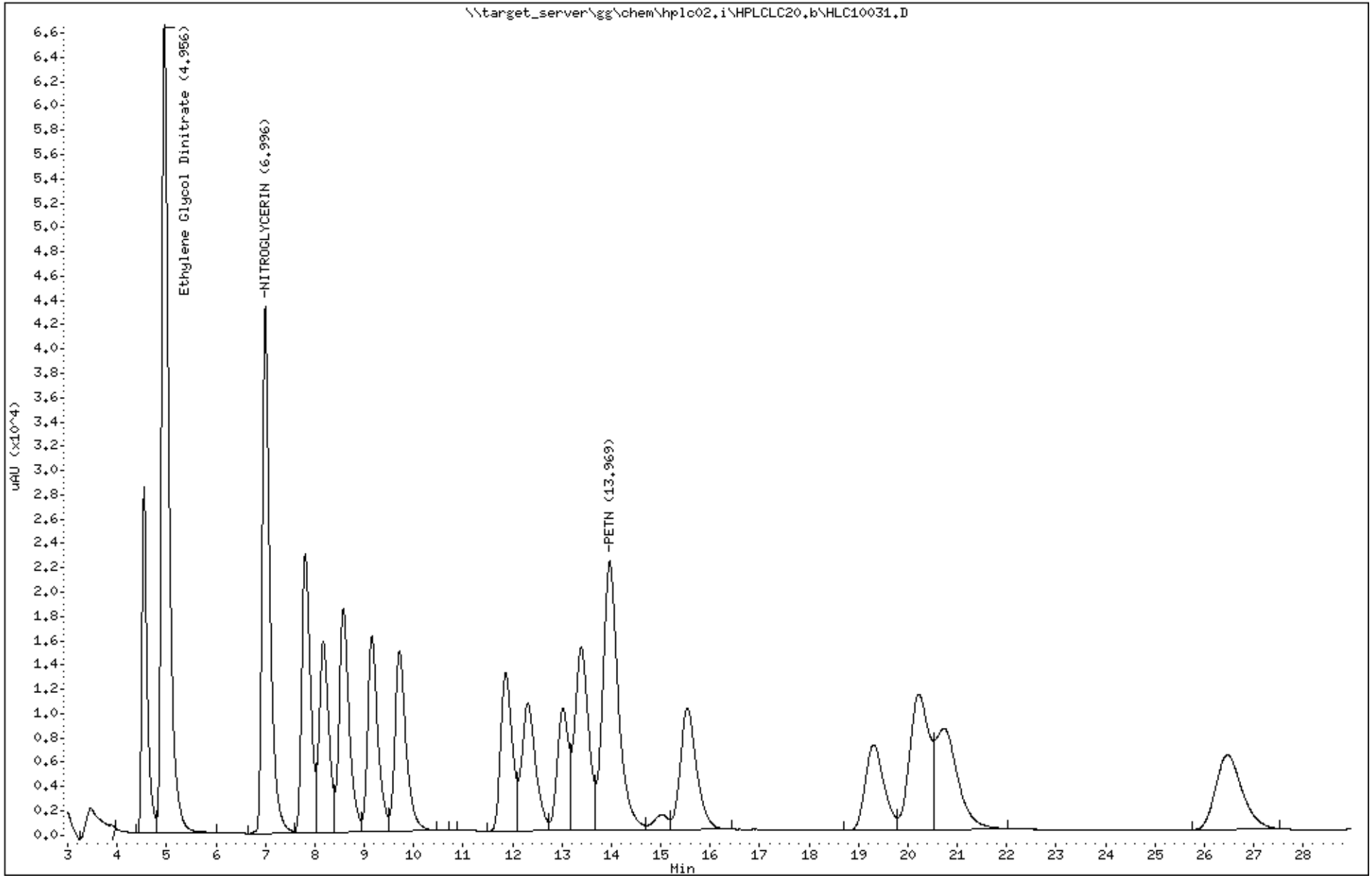
Data file : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10031.D
Lab Smp Id: WG225143-7
Inj Date : 20-MAR-2018 14:54
Operator : AC   Inst ID: hplc02.i
Smp Info : WG225143-7
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\EXPB05A.m
Meth Date : 21-Mar-2018 11:31 abullentin Quant Type: ESTD
Cal Date : 20-MAR-2018 14:54   Cal File: HLC10031.D
Als bottle: 8   Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: ngpetnedgn.sub
Target Version: 4.12
Processing Host: V200T1

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00500	Final Volume (L)
Vo	0.50000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)
8 NITROGLYCERIN	6.995	6.997	-0.002	43399	8.00000	7.98
18 PETN	13.969	13.963	0.006	22141	8.00000	7.90
3 Ethylene Glycol Dinitrate	4.955	4.957	-0.002	66513	8.00000	8.00

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10031.D
Date : 20-MAR-2018 14:54
Client ID:
Instrument: hplc02.i
Sample Info: WG225143-7
Purge Volume: 0.5
Operator: AC
Column phase: Acclaim Exp E1
Column diameter: 4.60



Katahdin Analytical Services 3000087

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10032.D
Report Date: 26-Mar-2018 13:04

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10032.D
Lab Smp Id: WG225143-6
Inj Date : 20-MAR-2018 15:26
Operator : AC   Inst ID: hplc02.i
Smp Info : WG225143-6
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\EXPB05A.m
Meth Date : 21-Mar-2018 11:31 abullentin Quant Type: ESTD
Cal Date : 20-MAR-2018 15:26   Cal File: HLC10032.D
Als bottle: 9   Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: ngpetnedgn.sub
Target Version: 4.12
Processing Host: V200T1

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00500	Final Volume (L)
Vo	0.50000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

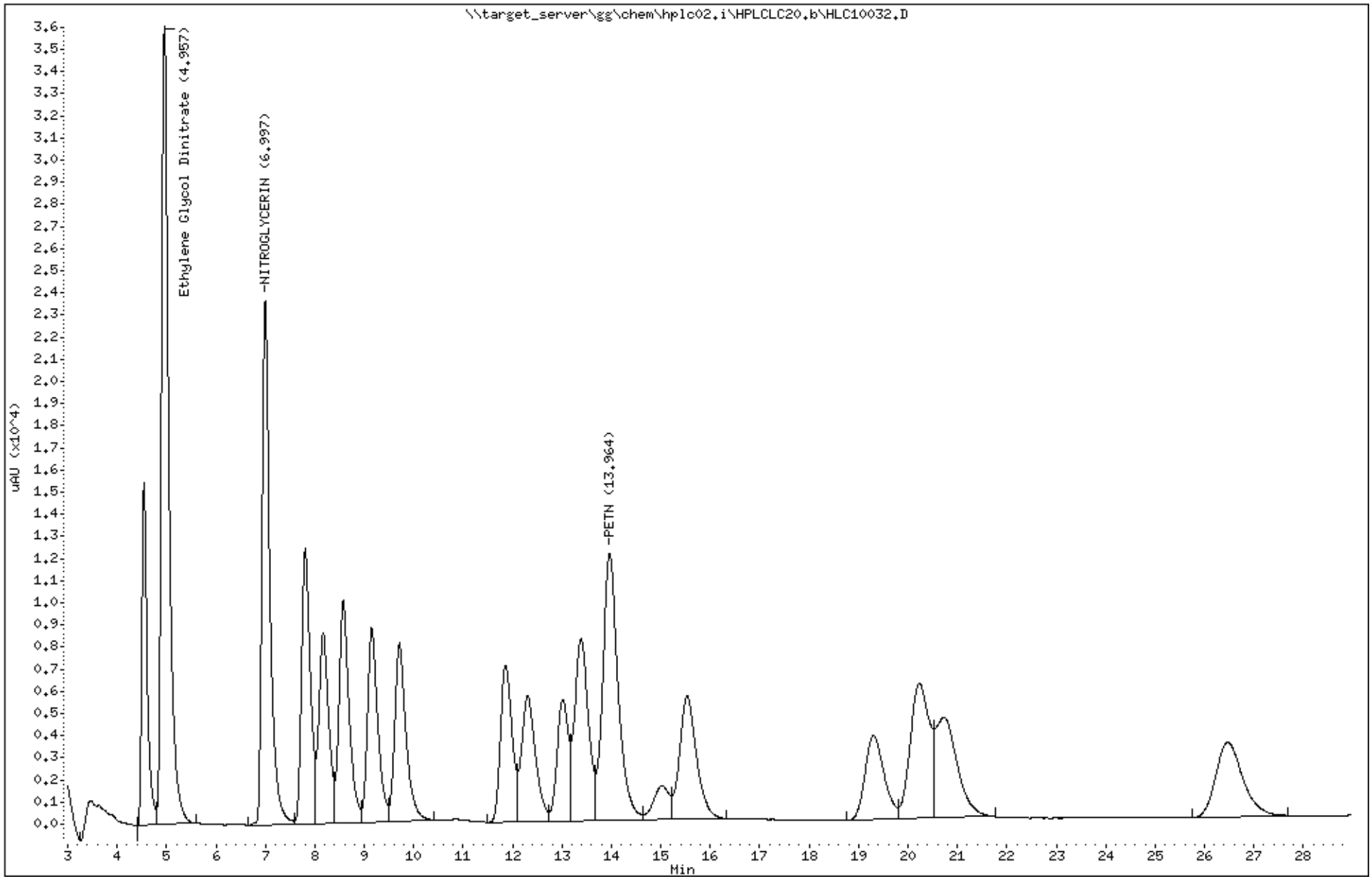
					AMOUNTS		
					CAL-AMT	ON-COL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	
8 NITROGLYCERIN	6.997	6.997	0.000	23668	4.00000	4.27	
18 PETN	13.963	13.963	0.000	12041	4.00000	4.43	
3 Ethylene Glycol Dinitrate	4.957	4.957	0.000	36056	4.00000	2.84(M)	M2

QC Flag Legend

M - Compound response manually integrated.

AAB
2:39 pm, Mar 26, 2018

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10032.D
Date : 20-MAR-2018 15:26
Client ID:
Instrument: hplc02.i
Sample Info: WG225143-6
Purge Volume: 0.5
Operator: AC
Column phase: Acclaim Exp E1
Column diameter: 4.60



Katahdin Analytical Services 3000089

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10033.D
Report Date: 26-Mar-2018 13:04

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10033.D
Lab Smp Id: WG225143-5
Inj Date : 20-MAR-2018 15:58
Operator : AC   Inst ID: hplc02.i
Smp Info : WG225143-5
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\EXPB05A.m
Meth Date : 21-Mar-2018 11:31 abullentin Quant Type: ESTD
Cal Date : 20-MAR-2018 15:58   Cal File: HLC10033.D
Als bottle: 10   Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: ngpetnedgn.sub
Target Version: 4.12
Processing Host: V200T1

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00500	Final Volume (L)
Vo	0.50000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

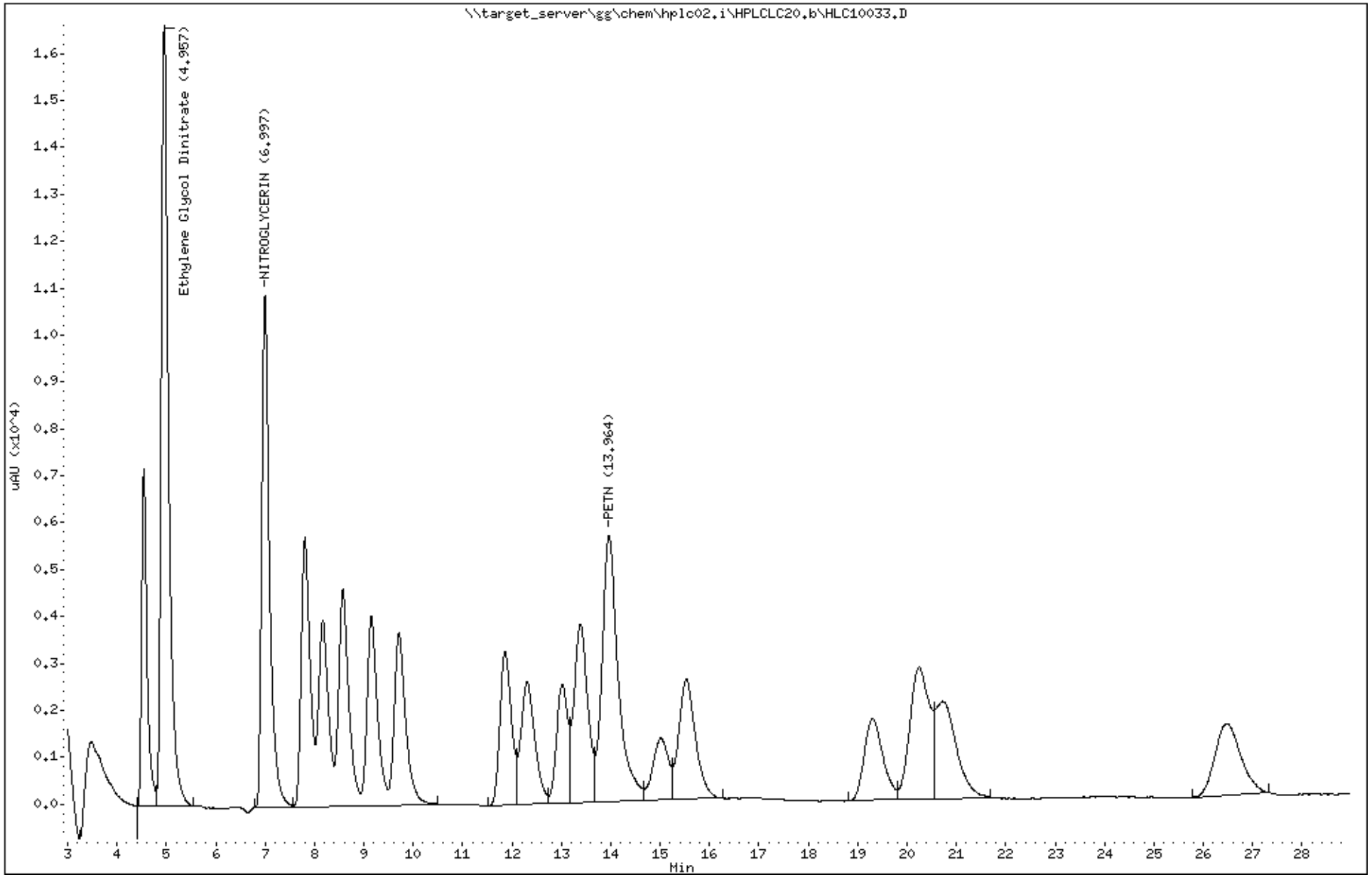
						AMOUNTS		
						CAL-AMT	ON-COL	
Compounds	RT	EXP RT	DLT RT	RESPONSE		(ug/mL)	(ug/mL)	
8	NITROGLYCERIN	6.997	6.997	0.000	10907	2.00000	2.00(aM)	M2
18	PETN	13.963	13.963	0.000	5668	2.00000	2.00(a)	
3	Ethylene Glycol Dinitrate	4.957	4.957	0.000	16637	2.00000	2.00(aM)	

2:42 pm, Mar 26, 2018

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10033.D
Date : 20-MAR-2018 15:58
Client ID:
Instrument: hplc02.i
Sample Info: WG225143-5
Purge Volume: 0.5
Operator: AC
Column phase: Acclaim Exp E1
Column diameter: 4.60



Katahdin Analytical Services 3000091

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10034.D
Report Date: 26-Mar-2018 13:04

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10034.D
Lab Smp Id: WG225143-4
Inj Date : 20-MAR-2018 16:30
Operator : AC   Inst ID: hplc02.i
Smp Info : WG225143-4
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\EXPB05A.m
Meth Date : 21-Mar-2018 11:31 abullentin Quant Type: ESTD
Cal Date : 20-MAR-2018 16:30   Cal File: HLC10034.D
Als bottle: 11   Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: ngpetnedgn.sub
Target Version: 4.12
Processing Host: V200T1

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00500	Final Volume (L)
Vo	0.50000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

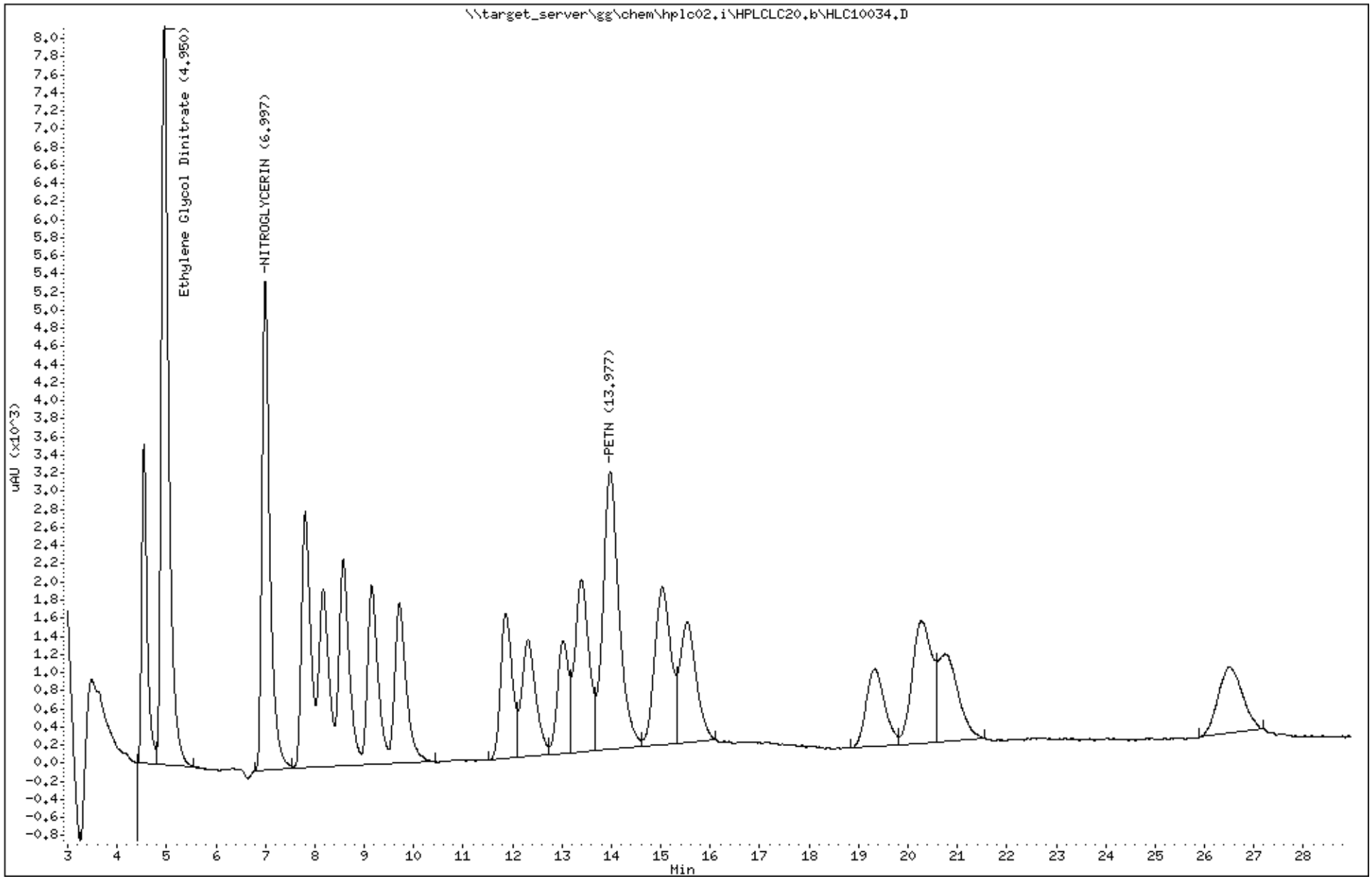
						AMOUNTS		
						CAL-AMT	ON-COL	
Compounds	RT	EXP RT	DLT RT	RESPONSE		(ug/mL)	(ug/mL)	
8	NITROGLYCERIN	6.997	6.997	0.000	5392	1.00000	0.974(aM)	M2
18	PETN	13.977	13.963	0.014	3064	1.00000	1.13(a)	
3	Ethylene Glycol Dinitrate	4.950	4.957	-0.007	8157	1.00000	0.705(aM)	

2:42 pm, Mar 26, 2018

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10034.D
Date : 20-MAR-2018 16:30
Client ID:
Instrument: hplc02.i
Sample Info: WG225143-4
Purge Volume: 0.5
Operator: AC
Column phase: Acclaim Exp E1
Column diameter: 4.60



Katahdin Analytical Services 3000093

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10035.D
Report Date: 26-Mar-2018 13:04

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10035.D
Lab Smp Id: WG225143-3
Inj Date : 20-MAR-2018 17:01
Operator : AC   Inst ID: hplc02.i
Smp Info : WG225143-3
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\EXPB05A.m
Meth Date : 21-Mar-2018 11:31 abullentin Quant Type: ESTD
Cal Date : 20-MAR-2018 17:01   Cal File: HLC10035.D
Als bottle: 12   Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: ngpetnedgn.sub
Target Version: 4.12
Processing Host: V200T1

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00500	Final Volume (L)
Vo	0.50000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

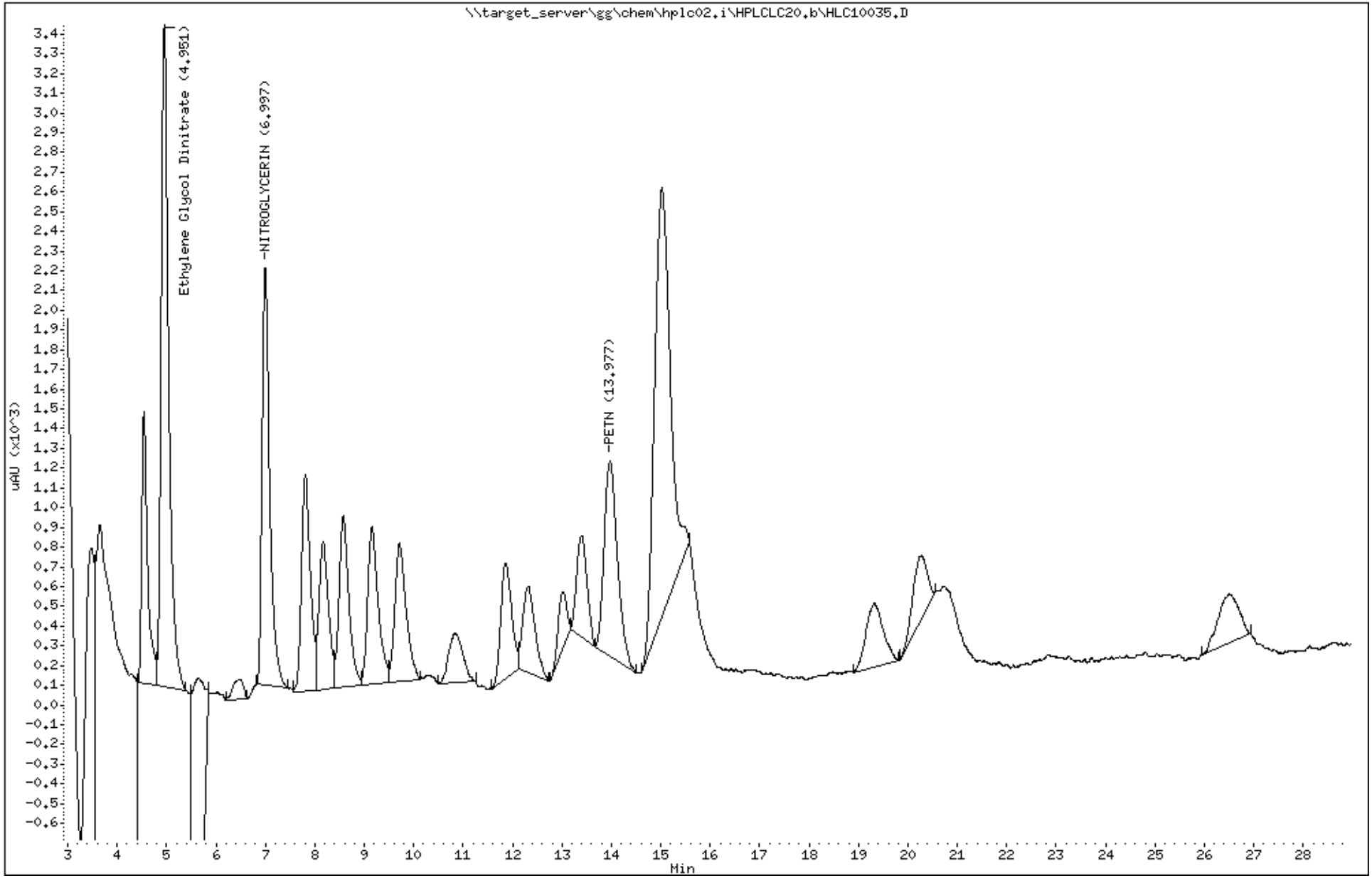
					AMOUNTS		
					CAL-AMT	ON-COL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	
8 NITROGLYCERIN	6.997	6.997	0.000	2112	0.40000	0.383(aM)	M2
18 PETN	13.977	13.963	0.014	986	0.40000	0.363(a)	
3 Ethylene Glycol Dinitrate	4.950	4.957	-0.007	3354	0.40000	0.402(aM)	

2:42 pm, Mar 26, 2018

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10035.D
Date : 20-MAR-2018 17:01
Client ID:
Instrument: hplc02.i
Sample Info: WG225143-3
Purge Volume: 0.5
Operator: AC
Column phase: Acclaim Exp E1
Column diameter: 4.60



Katahdin Analytical Services 3000095

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10036.D
Report Date: 26-Mar-2018 13:04

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10036.D
Lab Smp Id: WG225143-2
Inj Date : 20-MAR-2018 17:33
Operator : AC   Inst ID: hplc02.i
Smp Info : WG225143-2
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\EXPB05A.m
Meth Date : 21-Mar-2018 11:31 abullentin Quant Type: ESTD
Cal Date : 20-MAR-2018 17:33   Cal File: HLC10036.D
Als bottle: 13   Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: ngpetnedgn.sub
Target Version: 4.12
Processing Host: V200T1

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00500	Final Volume (L)
Vo	0.50000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

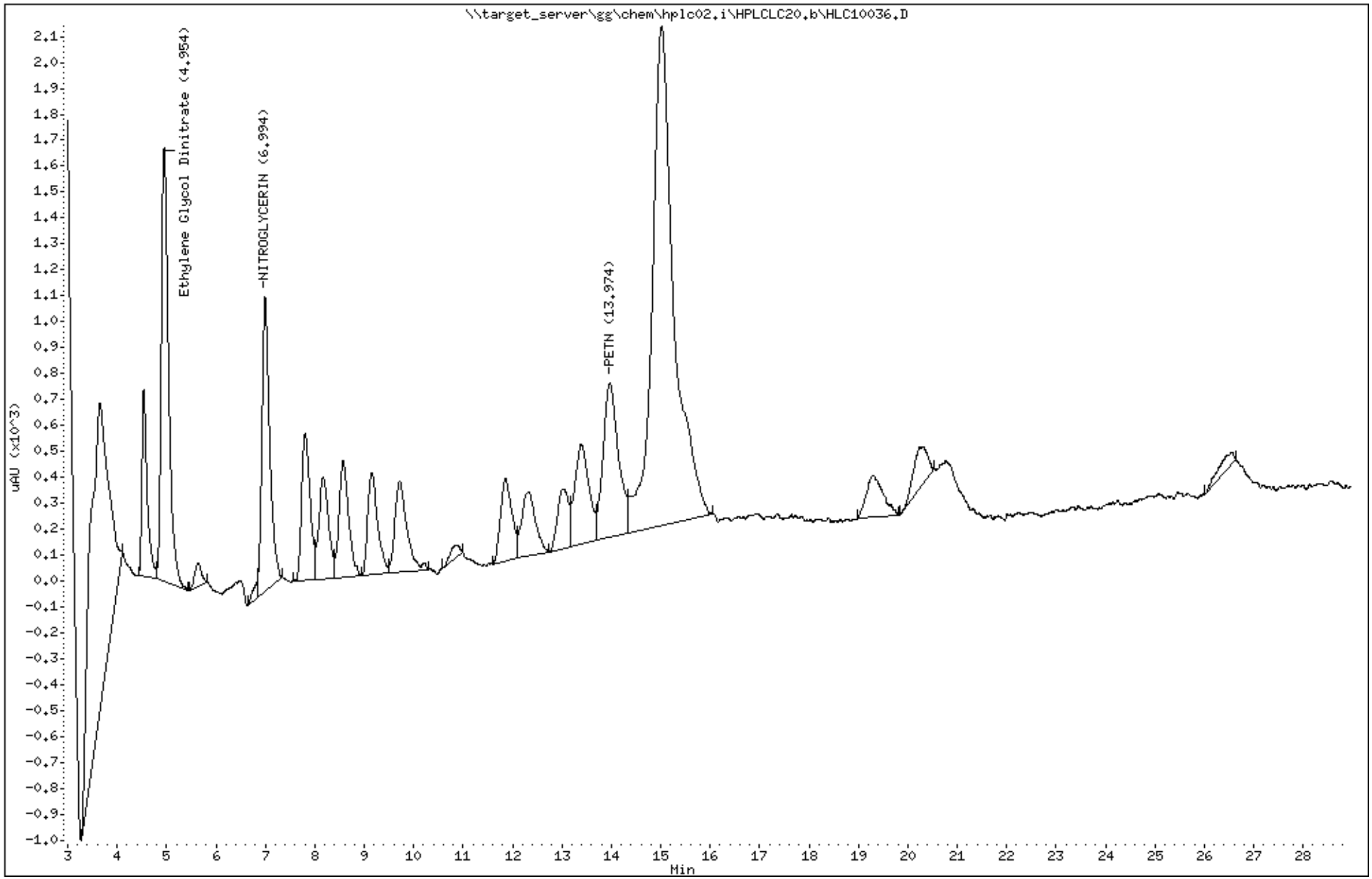
						AMOUNTS		
						CAL-AMT	ON-COL	
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	
8	NITROGLYCERIN	6.994	6.997	-0.003	1137	0.20000	0.206(aM)	M2
18	PETN	13.974	13.963	0.011	594	0.20000	0.218(a)	
3	Ethylene Glycol Dinitrate	4.954	4.957	-0.003	1670	0.20000	0.200(a)	

2:42 pm, Mar 26, 2018

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10036.D
Date : 20-MAR-2018 17:33
Client ID:
Instrument: hplc02.i
Sample Info: WG225143-2
Purge Volume: 0.5
Operator: AC
Column phase: Acclaim Exp E1
Column diameter: 4.60



Katahdin Analytical Services 3000097

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10037.D
Report Date: 26-Mar-2018 13:04

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10037.D
Lab Smp Id: WG225143-1
Inj Date : 20-MAR-2018 18:05
Operator : AC   Inst ID: hplc02.i
Smp Info : WG225143-1
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\EXPB05A.m
Meth Date : 21-Mar-2018 11:31 abullentin Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05   Cal File: HLC10037.D
Als bottle: 14   Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: ngpetnedgn.sub
Target Version: 4.12
Processing Host: V200T1

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00500	Final Volume (L)
Vo	0.50000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

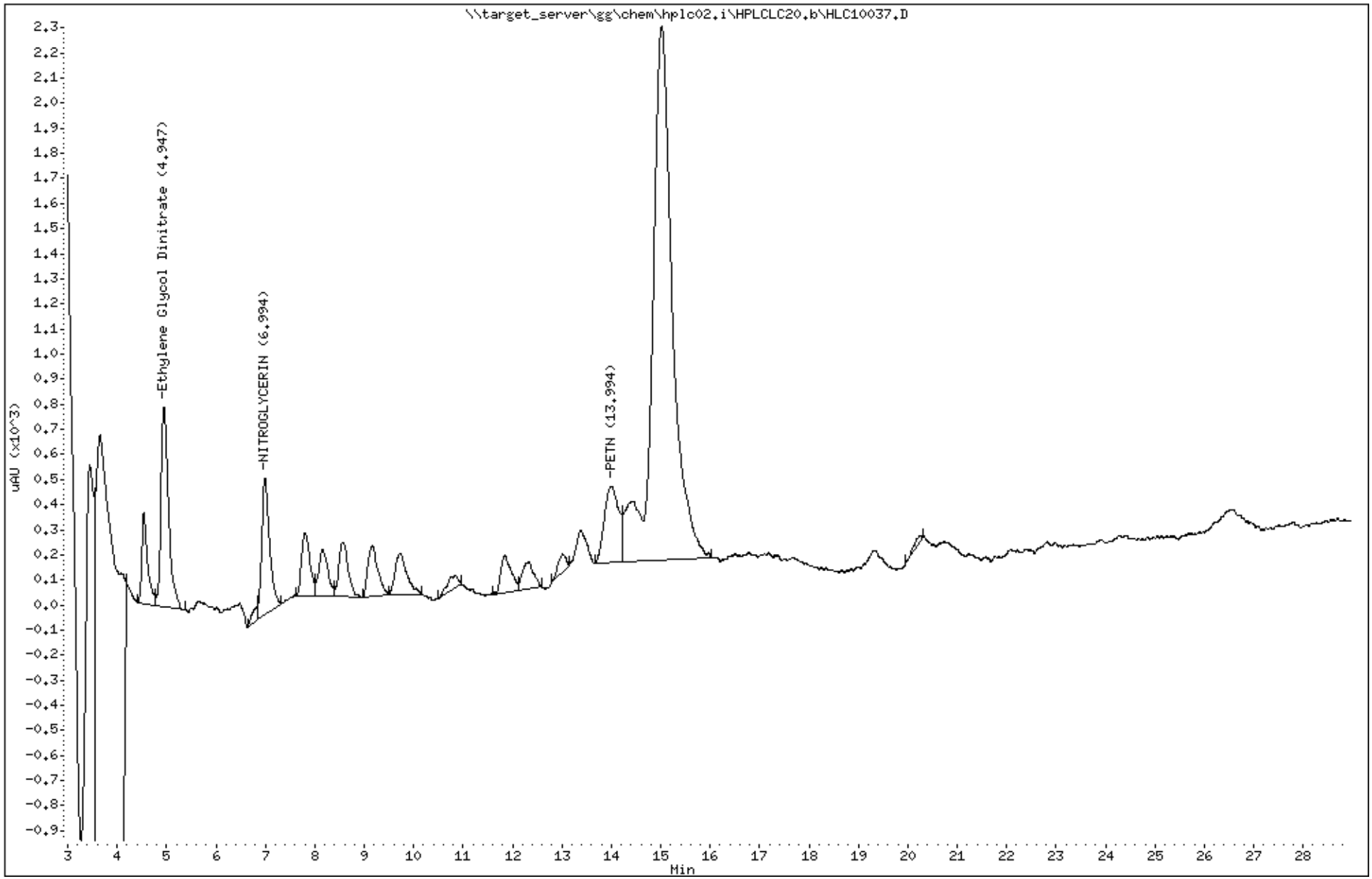
					AMOUNTS		
					CAL-AMT	ON-COL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	
8 NITROGLYCERIN	6.993	6.997	-0.004	544	0.10000	0.0987(aM)	M3
18 PETN	13.993	13.963	0.030	302	0.10000	0.105(aM)	
3 Ethylene Glycol Dinitrate	4.947	4.957	-0.010	793	0.10000	0.0949(a)	

2:43 pm, Mar 26, 2018

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10037.D
Date : 20-MAR-2018 18:05
Client ID:
Instrument: hplc02.i
Sample Info: WG225143-1
Purge Volume: 0.5
Operator: AC
Column phase: Acclaim Exp E1
Column diameter: 4.60



Katahdin Analytical Services 3000099

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SL2079
Project : Cornhusker Army Ammunition Plant
Instrument ID: HPLC02
Lab File IDs : HLC10037.D HLC10036.D HLC10035.D HLC10034.D HLC10033.D HLC10032.D HLC10031.D
Calibration Date(s): 20-MAR-18 14:54 20-MAR-18 18:05

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7		Crv				Max	
	0.025000(	0.050000(	0.100000(	0.250000(	0.500000(	1.0000	2.0000		New	b	m1	%RSD	%RSD	
HMX	5320	5440	5140	5296	5378	5810	5351		AVG		5391	3.83807	20.00000	O
RDX	75.00000	225	466	1287	2694	5888	10895		LNR	0.00587	5552	0.99828	0.99000	O
1,3,5-trinitrobenzene	3240	3680	3770	3628	3744	4074	3686		AVG		3689	6.66990	20.00000	O
1,3-dinitrobenzene	6680	7280	7410	7508	7512	8198	7518		AVG		7444	5.99405	20.00000	O
TETRYL	2240	2660	2530	2424	2550	2797	2541		AVG		2535	6.90733	20.00000	O
nitrobenzene	6760	6820	6610	6736	6892	7418	6831		AVG		6867	3.77157	20.00000	O
2,4,6-trinitrotoluene	2600	2520	2510	2460	2478	2672	2445		AVG		2526	3.24744	20.00000	O
4-AM-DNT	4200	4040	4240	4260	4366	4695	4318		AVG		4303	4.68155	20.00000	O
2-AM-DNT	5360	5700	5640	5720	5838	6280	5787		AVG		5761	4.78978	20.00000	O
2,6-dinitrotoluene	101	175	345	733	1390	3147	5661		LNR	-0.01275	2869	0.99714	0.99000	O
2,4-dinitrotoluene	4280	4700	4560	4552	4620	5008	4610		AVG		4619	4.68458	20.00000	O
2-nitrotoluene	2520	2760	2900	2944	2952	3214	2937		AVG		2890	7.31192	20.00000	O
4-nitrotoluene	2280	1980	2350	2484	2298	2635	2370		AVG		2342	8.60342	20.00000	O
3-nitrotoluene	3360	3180	3390	3404	3136	3585	3225		AVG		3326	4.69272	20.00000	O
1,2-dinitrobenzene	4680	4500	4480	4532	4640	4978	4582		AVG		4627	3.69030	20.00000	

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://katahdinlab.com
sales@katahdinlab.com

Data File: HLC10038.D
Report Date: 26-Mar-2018 14:36

Katahdin Analytical Services

RECOVERY REPORT

Client Name: Client SDG: SDGa00508
Sample Matrix: LIQUID Fraction: Explosives
Lab Smp Id: WG225143-8
Level: LOW Operator: AC
Data Type: LC DATA SampleType: LCS
SpikeList File: IND.spk Quant Type: ESTD
Sublist File: SW8330A.sub
Method File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\EXPB05A.m\EXPB05A.m
Misc Info: WG225143,WG225143,WG225143-5,SL2295-1

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1 HMX	5.00	5.25	104.96	80-120
4 RDX	5.00	5.14	102.73	80-120
5 1,3,5-trinitrobenz	5.00	5.21	104.21	80-120
6 1,3-dinitrobenzene	5.00	5.16	103.31	80-120
7 nitrobenzene	5.00	5.09	101.80	80-120
9 TETRYL	5.00	5.52	110.47	80-120
10 2,4,6-trinitrotolu	5.00	5.09	101.89	80-120
11 4-AM-DNT	5.00	5.41	108.21	80-120
12 2-AM-DNT	5.00	5.19	103.77	80-120
13 2,6-dinitrotoluene	5.00	4.91	98.26	80-120
14 2,4-dinitrotoluene	5.00	5.23	104.54	80-120
15 2-nitrotoluene	5.00	5.27	105.48	80-120
16 4-nitrotoluene	5.00	5.12	102.37	80-120
17 3-nitrotoluene	5.00	4.93	98.57	80-120
51 3,5-Dinitroaniline	5.00	4.94	98.91	80-120

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 2 1,2-dinitrobenzene	10.0	0.000	*	83-119

Data File: HLC10038.D
Report Date: 26-Mar-2018 14:36

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HPLCLC20.b\HLC10038.D
Lab Smp Id: WG225143-8
Inj Date : 20-MAR-2018 18:37
Operator : AC Inst ID: hplc02.i
Smp Info : WG225143-8,SL2295
Misc Info : WG225143,WG225143,WG225143-5,SL2295-1
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\EXPB05A.m\EXPB05A.m
Meth Date : 22-Mar-2018 05:09 abullentin Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 15 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: SW8330A.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00500	Final Volume (L)
Vo	0.50000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

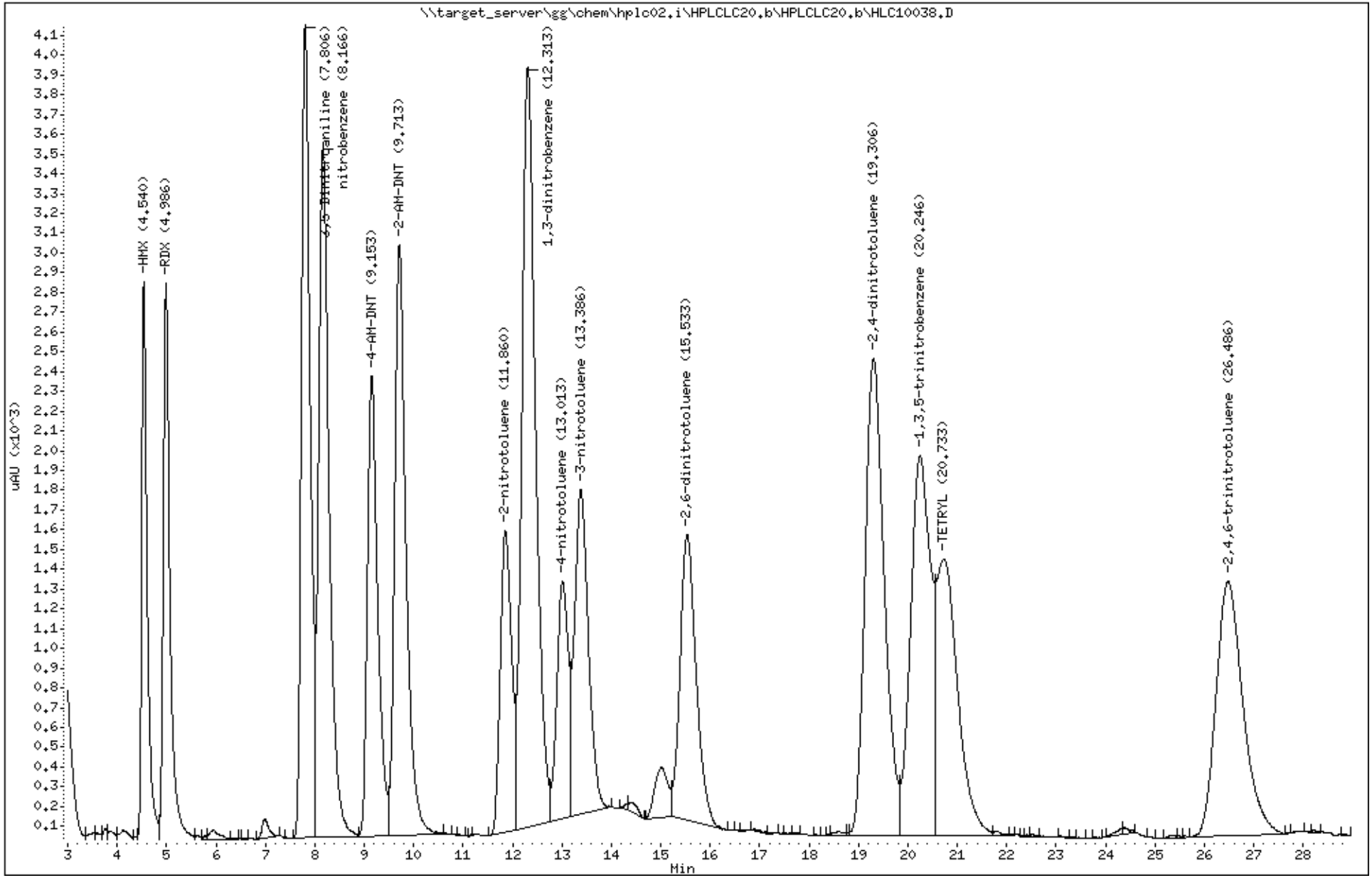
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
1	HMX	4.539	4.542	-0.003	2829	0.52480	5.25(M)	M5
4	RDX	4.986	4.989	-0.003	2819	0.51364	5.14(M)	
51	3,5-Dinitroaniline	7.806	7.809	-0.003	4113	0.49457	4.94	
7	nitrobenzene	8.166	8.175	-0.009	3495	0.50898	5.09	
11	4-AM-DNT	9.152	9.155	-0.003	2328	0.54105	5.41	
12	2-AM-DNT	9.712	9.715	-0.003	2989	0.51886	5.19	
15	2-nitrotoluene	11.859	11.862	-0.003	1524	0.52741	5.27	
6	1,3-dinitrobenzene	12.312	12.315	-0.003	3845	0.51654	5.16	
16	4-nitrotoluene	13.012	13.022	-0.010	1199	0.51186	5.12	
17	3-nitrotoluene	13.386	13.389	-0.003	1639	0.49284	4.93	
13	2,6-dinitrotoluene	15.532	15.542	-0.010	1446	0.49132	4.91	
14	2,4-dinitrotoluene	19.306	19.309	-0.003	2414	0.52268	5.23	
5	1,3,5-trinitrobenzene	20.246	20.222	0.024	1922	0.52103	5.21	
9	TETRYL	20.732	20.722	0.010	1400	0.55236	5.52	
10	2,4,6-trinitrotoluene	26.486	26.469	0.017	1287	0.50943	5.09	

AAB
2:37 pm, Mar 26, 2018

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HPLCLC20.b\HLC10038.D
Date : 20-MAR-2018 18:37
Client ID:
Instrument: hplc02.i
Sample Info: WG225143-8,SL2295
Purge Volume: 0.5
Operator: AC
Column phase: Acclaim Exp E1
Column diameter: 4.60



Katahdin Analytical Services 3000103

Data File: HLC10031.D
Report Date: 26-Mar-2018 13:10

Katahdin Analytical Services

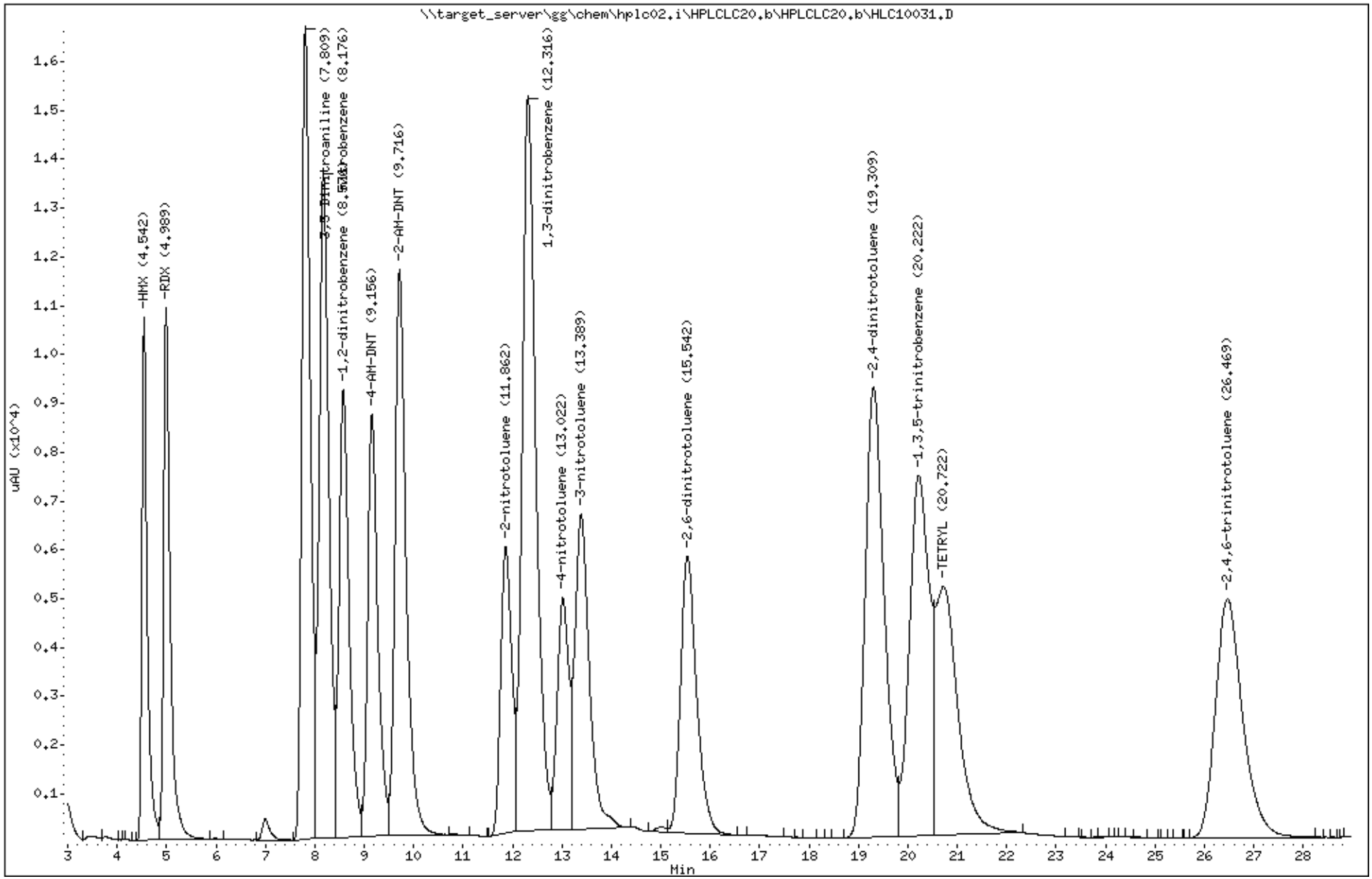
Data file : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HPLCLC20.b\HLC10031.D
Lab Smp Id: WG225143-7
Inj Date : 20-MAR-2018 14:54
Operator : AC   Inst ID: hplc02.i
Smp Info : WG225143-7
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\EXPB05A.m\EXPB05A.m
Meth Date : 22-Mar-2018 05:09 abullentin Quant Type: ESTD
Cal Date : 20-MAR-2018 14:54   Cal File: HLC10031.D
Als bottle: 8   Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: SW8330A.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00500	Final Volume (L)
Vo	0.50000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)	REVIEW CODE
1	HMX	4.542	4.542	0.000	10701	2.00000	2.00	
4	RDX	4.989	4.989	0.000	10895	2.00000	2.00	
51	3,5-Dinitroaniline	7.809	7.809	0.000	16640	2.00000	2.00	
7	nitrobenzene	8.175	8.175	0.000	13661	2.00000	2.00	
$ 2	1,2-dinitrobenzene	8.575	8.575	0.000	9164	2.00000	2.00	
11	4-AM-DNT	9.155	9.155	0.000	8636	2.00000	2.00	
12	2-AM-DNT	9.715	9.715	0.000	11574	2.00000	2.00	
15	2-nitrotoluene	11.862	11.862	0.000	5874	2.00000	2.00	
6	1,3-dinitrobenzene	12.315	12.315	0.000	15036	2.00000	2.00	
16	4-nitrotoluene	13.022	13.022	0.000	4740	2.00000	2.00	
17	3-nitrotoluene	13.389	13.389	0.000	6449	2.00000	2.00	
13	2,6-dinitrotoluene	15.542	15.542	0.000	5661	2.00000	2.00	
14	2,4-dinitrotoluene	19.309	19.309	0.000	9219	2.00000	2.00	
5	1,3,5-trinitrobenzene	20.222	20.222	0.000	7372	2.00000	2.00	
9	TETRYL	20.722	20.722	0.000	5082	2.00000	2.00	
10	2,4,6-trinitrotoluene	26.469	26.469	0.000	4889	2.00000	2.00	

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HPLCLC20.b\HLC10031.D
Date : 20-MAR-2018 14:54
Client ID:
Instrument: hplc02.i
Sample Info: WG225143-7
Purge Volume: 0.5
Operator: AC
Column phase: Acclaim Exp E1
Column diameter: 4.60



Katahdin Analytical Services 3000105

Data File: HLC10032.D
Report Date: 26-Mar-2018 13:10

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HPLCLC20.b\HLC10032.D
Lab Smp Id: WG225143-6
Inj Date : 20-MAR-2018 15:26
Operator : AC   Inst ID: hplc02.i
Smp Info : WG225143-6
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\EXPB05A.m\EXPB05A.m
Meth Date : 22-Mar-2018 05:09 abullentin Quant Type: ESTD
Cal Date : 20-MAR-2018 15:26   Cal File: HLC10032.D
Als bottle: 9   Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: SW8330A.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

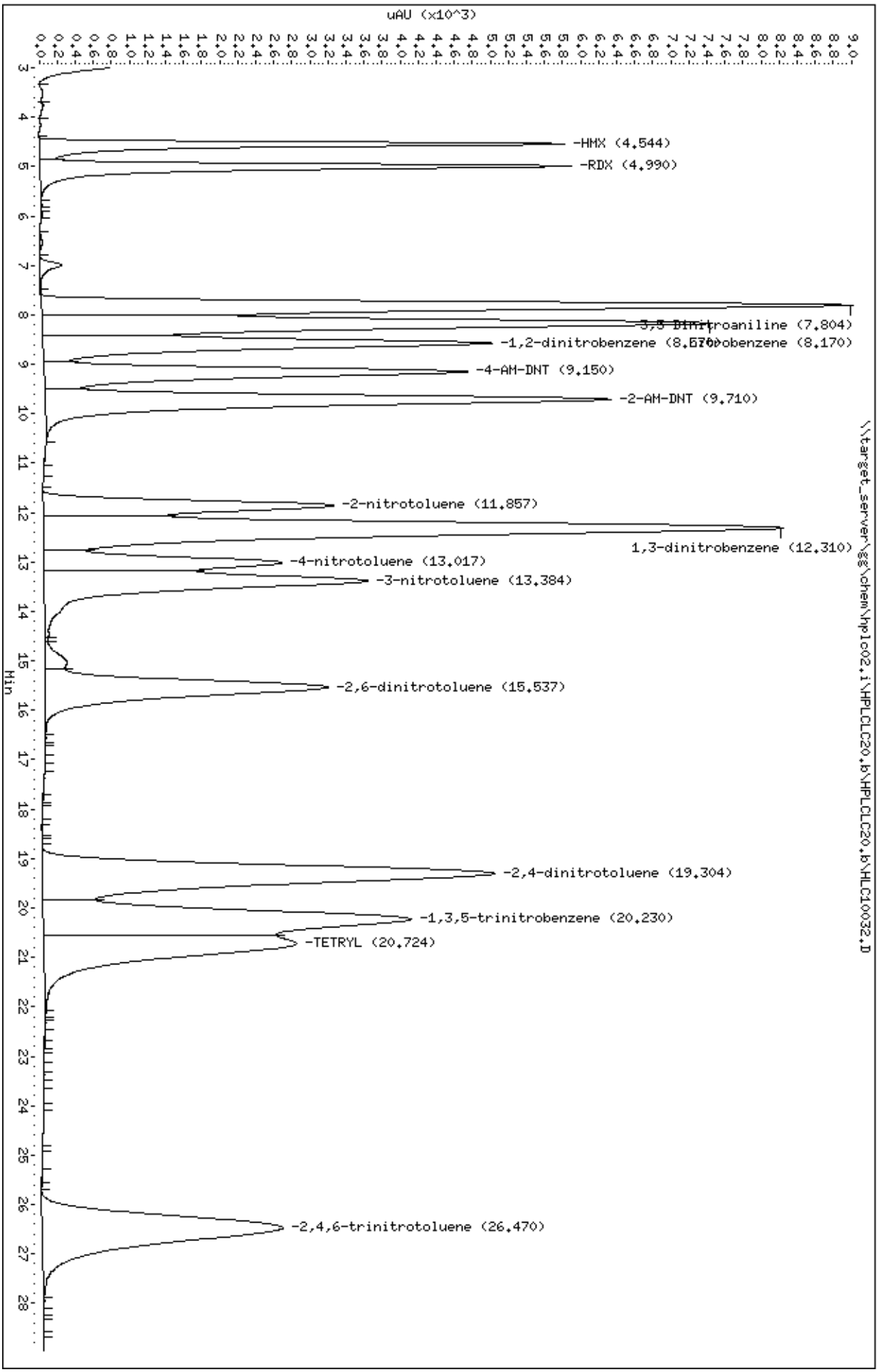
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00500	Final Volume (L)
Vo	0.50000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)	REVIEW CODE
1	HMX	4.543	4.542	0.001	5810	1.00000	1.08(M)	M5
4	RDX	4.990	4.989	0.001	5888	1.00000	1.21(M)	
51	3,5-Dinitroaniline	7.803	7.809	-0.006	8996	1.00000	1.08	
7	nitrobenzene	8.170	8.175	-0.005	7418	1.00000	1.08	
$ 2	1,2-dinitrobenzene	8.570	8.575	-0.005	4978	1.00000	1.08	
11	4-AM-DNT	9.150	9.155	-0.005	4695	1.00000	1.09	
12	2-AM-DNT	9.710	9.715	-0.005	6280	1.00000	1.09	
15	2-nitrotoluene	11.857	11.862	-0.005	3214	1.00000	1.11	
6	1,3-dinitrobenzene	12.310	12.315	-0.005	8198	1.00000	1.11	
16	4-nitrotoluene	13.017	13.022	-0.005	2635	1.00000	1.19	
17	3-nitrotoluene	13.383	13.389	-0.006	3585	1.00000	1.13	
13	2,6-dinitrotoluene	15.537	15.542	-0.005	3147	1.00000	1.06	
14	2,4-dinitrotoluene	19.303	19.309	-0.006	5008	1.00000	1.09	
5	1,3,5-trinitrobenzene	20.230	20.222	0.008	4074	1.00000	1.35	
9	TETRYL	20.723	20.722	0.001	2797	1.00000	1.42	
10	2,4,6-trinitrotoluene	26.470	26.469	0.001	2672	1.00000	1.17	

2:43 pm, Mar 26, 2018

QC Flag Legend

M - Compound response manually integrated.


Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HPLCLC20.b\HLC10032.D
Date : 20-MAR-2018 15:26
Client ID:
Sample Info: WG225143-6
Purge Volume: 0.5
Column phase: Acclaim Exp E1
Instrument: hplc02.i
Operator: AC
Column diameter: 4.60
uAU (x10^3)
Min
-HMX (4.544)
-RDX (4.990)
3,5-Dinitroaniline (7.804)
-1,2-dinitrobenzene (8.570)
nitrobenzene (8.170)
-4-AM-DNT (9.150)
-2-AM-DNT (9.710)
-2-nitrotoluene (11.857)
1,3-dinitrobenzene (12.310)
-4-nitrotoluene (13.017)
-3-nitrotoluene (13.384)
-2,6-dinitrotoluene (15.537)
-2,4-dinitrotoluene (19.304)
-1,3,5-trinitrobenzene (20.230)
-TETRYL (20.724)
-2,4,6-trinitrotoluene (26.470)
\\target_server\gg\chem\hplc02.i\HPLCLC20.b\HPLCLC20.b\HLC10032.D

Data File: HLC10033.D
Report Date: 26-Mar-2018 13:10

Katahdin Analytical Services

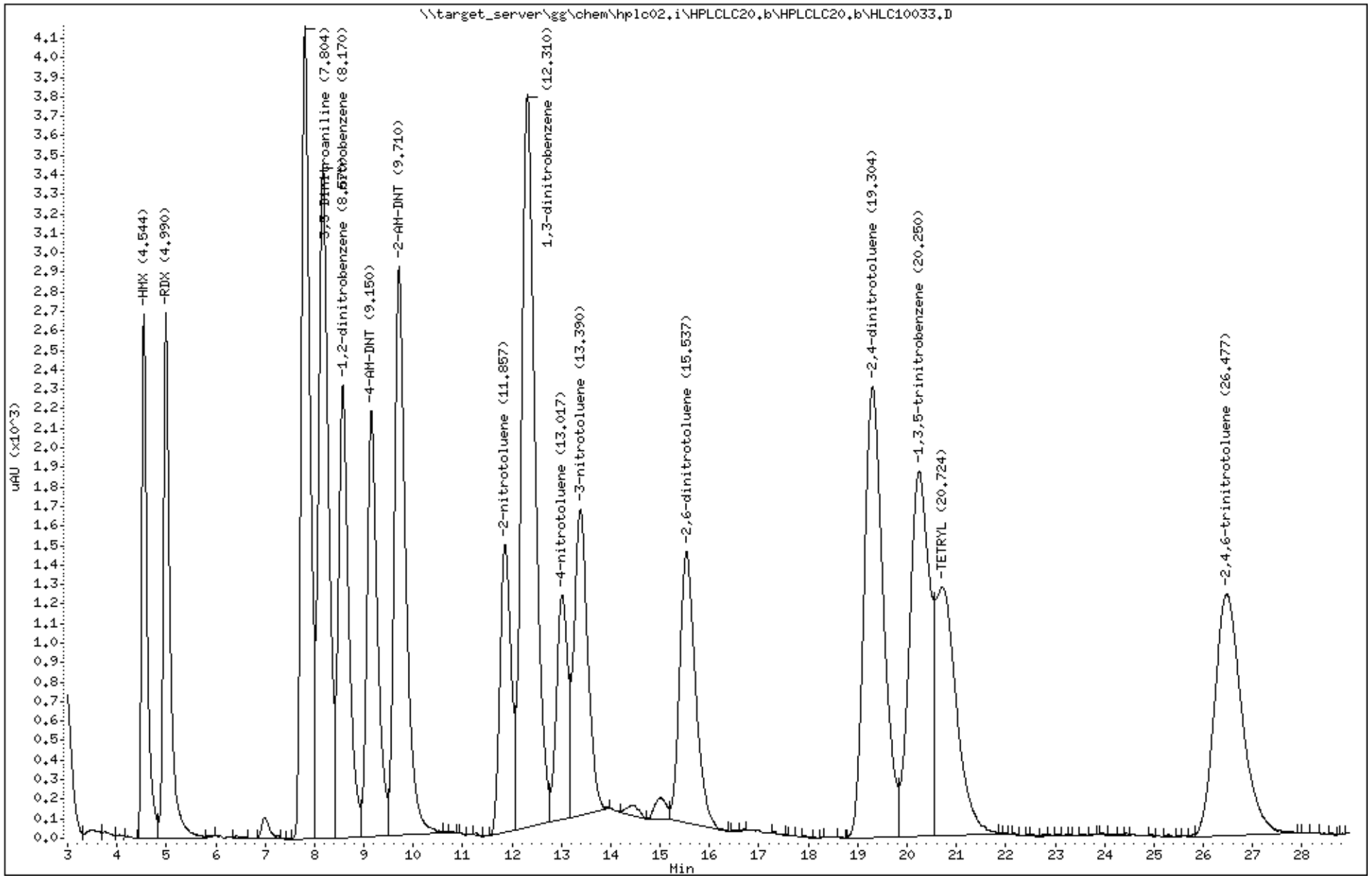
Data file : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HPLCLC20.b\HLC10033.D
Lab Smp Id: WG225143-5
Inj Date : 20-MAR-2018 15:58
Operator : AC   Inst ID: hplc02.i
Smp Info : WG225143-5
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\EXPB05A.m\EXPB05A.m
Meth Date : 22-Mar-2018 05:09 abullentin Quant Type: ESTD
Cal Date : 20-MAR-2018 15:58   Cal File: HLC10033.D
Als bottle: 10   Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: SW8330A.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00500	Final Volume (L)
Vo	0.50000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)	REVIEW CODE
1	HMX	4.543	4.542	0.001	2689	0.50000	0.478	
4	RDX	4.990	4.989	0.001	2694	0.50000	0.477	
51	3,5-Dinitroaniline	7.803	7.809	-0.006	4166	0.50000	0.487	
7	nitrobenzene	8.170	8.175	-0.005	3446	0.50000	0.489	
$ 2	1,2-dinitrobenzene	8.570	8.575	-0.005	2320	0.50000	0.490	
11	4-AM-DNT	9.150	9.155	-0.005	2183	0.50000	0.489	
12	2-AM-DNT	9.710	9.715	-0.005	2919	0.50000	0.489	
15	2-nitrotoluene	11.857	11.862	-0.005	1476	0.50000	0.486	
6	1,3-dinitrobenzene	12.310	12.315	-0.005	3756	0.50000	0.485	
16	4-nitrotoluene	13.017	13.022	-0.005	1149	0.50000	0.472	
17	3-nitrotoluene	13.390	13.389	0.001	1568	0.50000	0.473	
13	2,6-dinitrotoluene	15.537	15.542	-0.005	1390	0.50000	0.476	
14	2,4-dinitrotoluene	19.303	19.309	-0.006	2310	0.50000	0.487	
5	1,3,5-trinitrobenzene	20.250	20.222	0.028	1872	0.50000	0.488	
9	TETRYL	20.723	20.722	0.001	1275	0.50000	0.485	
10	2,4,6-trinitrotoluene	26.477	26.469	0.008	1239	0.50000	0.489	

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HPLCLC20.b\HLC10033.D
Date : 20-MAR-2018 15:58
Client ID:
Instrument: hplc02.i
Sample Info: WG225143-5
Purge Volume: 0.5
Operator: AC
Column phase: Acclaim Exp E1
Column diameter: 4.60



Katahdin Analytical Services 3000109

Data File: HLC10034.D
Report Date: 26-Mar-2018 13:10

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HPLCLC20.b\HLC10034.D
Lab Smp Id: WG225143-4
Inj Date : 20-MAR-2018 16:30
Operator : AC   Inst ID: hplc02.i
Smp Info : WG225143-4
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\EXPB05A.m\EXPB05A.m
Meth Date : 22-Mar-2018 05:09 abullentin Quant Type: ESTD
Cal Date : 20-MAR-2018 16:30   Cal File: HLC10034.D
Als bottle: 11   Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: SW8330A.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

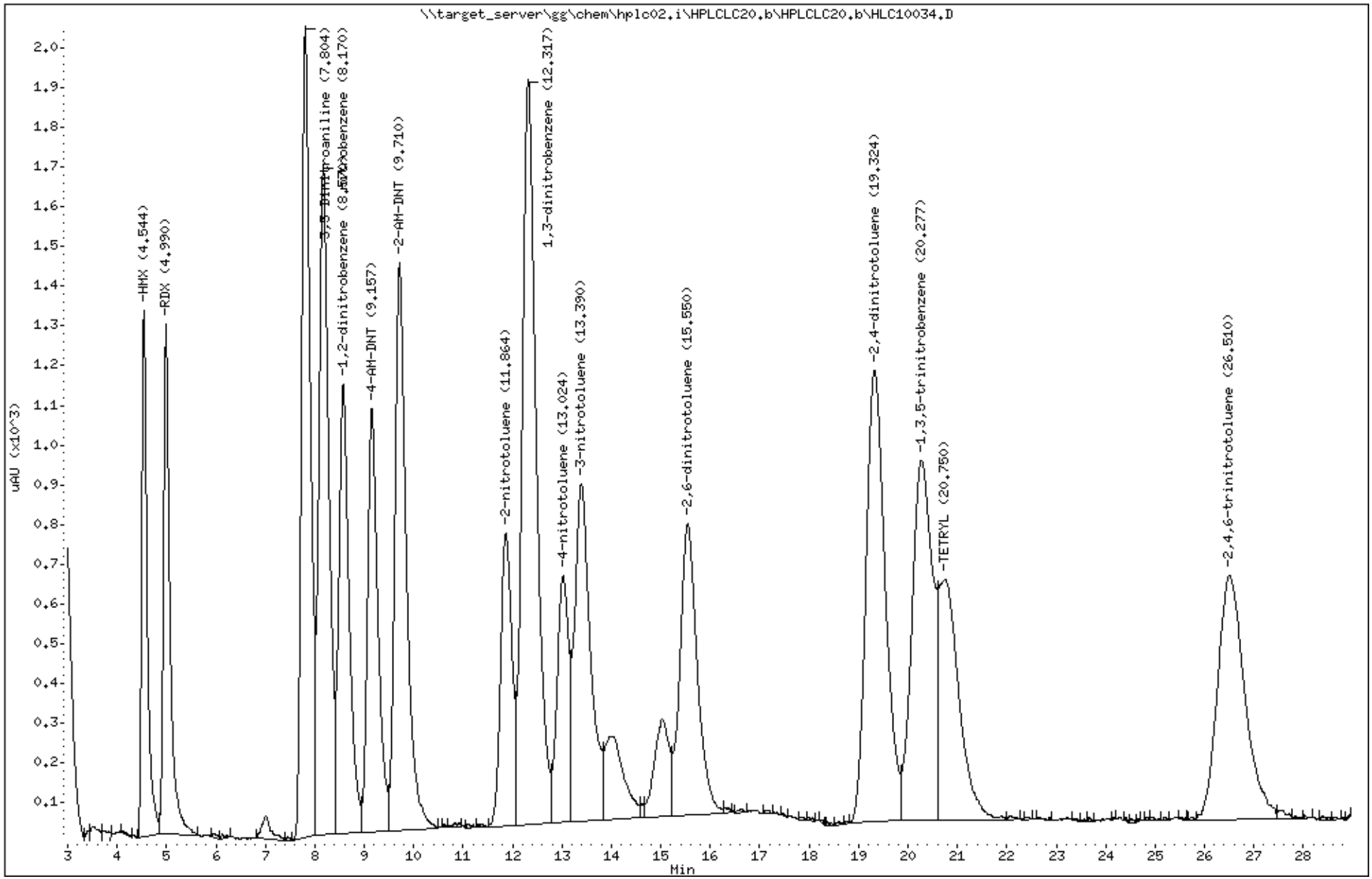
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00500	Final Volume (L)
Vo	0.50000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)	REVIEW CODE
1	HMX	4.543	4.542	0.001	1324	0.25000	0.239(a)	
4	RDX	4.990	4.989	0.001	1287	0.25000	0.233(a)	
51	3,5-Dinitroaniline	7.803	7.809	-0.006	2044	0.25000	0.242(a)	
7	nitrobenzene	8.170	8.175	-0.005	1684	0.25000	0.242(a)	
$ 2	1,2-dinitrobenzene	8.570	8.575	-0.005	1133	0.25000	0.242(a)	
11	4-AM-DNT	9.157	9.155	0.002	1065	0.25000	0.242(a)	
12	2-AM-DNT	9.710	9.715	-0.005	1430	0.25000	0.242(a)	
15	2-nitrotoluene	11.863	11.862	0.001	736	0.25000	0.244(a)	
6	1,3-dinitrobenzene	12.317	12.315	0.002	1877	0.25000	0.244(a)	
16	4-nitrotoluene	13.023	13.022	0.001	621	0.25000	0.254	
17	3-nitrotoluene	13.390	13.389	0.001	851	0.25000	0.255	
13	2,6-dinitrotoluene	15.550	15.542	0.008	733	0.25000	0.251	
14	2,4-dinitrotoluene	19.323	19.309	0.014	1138	0.25000	0.242(a)	
5	1,3,5-trinitrobenzene	20.277	20.222	0.055	907	0.25000	0.240(a)	
9	TETRYL	20.750	20.722	0.028	606	0.25000	0.235(a)	
10	2,4,6-trinitrotoluene	26.510	26.469	0.041	615	0.25000	0.245(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HPLCLC20.b\HLC10034.D
Date : 20-MAR-2018 16:30
Client ID:
Instrument: hplc02.i
Sample Info: WG225143-4
Purge Volume: 0.5
Operator: AC
Column phase: Acclaim Exp E1
Column diameter: 4.60



Katahdin Analytical Services 3000111

Data File: HLC10035.D
Report Date: 26-Mar-2018 13:10

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HPLCLC20.b\HLC10035.D
Lab Smp Id: WG225143-3
Inj Date : 20-MAR-2018 17:01
Operator : AC   Inst ID: hplc02.i
Smp Info : WG225143-3
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\EXPB05A.m\EXPB05A.m
Meth Date : 22-Mar-2018 05:09 abullentin Quant Type: ESTD
Cal Date : 20-MAR-2018 17:01   Cal File: HLC10035.D
Als bottle: 12   Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: SW8330A.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

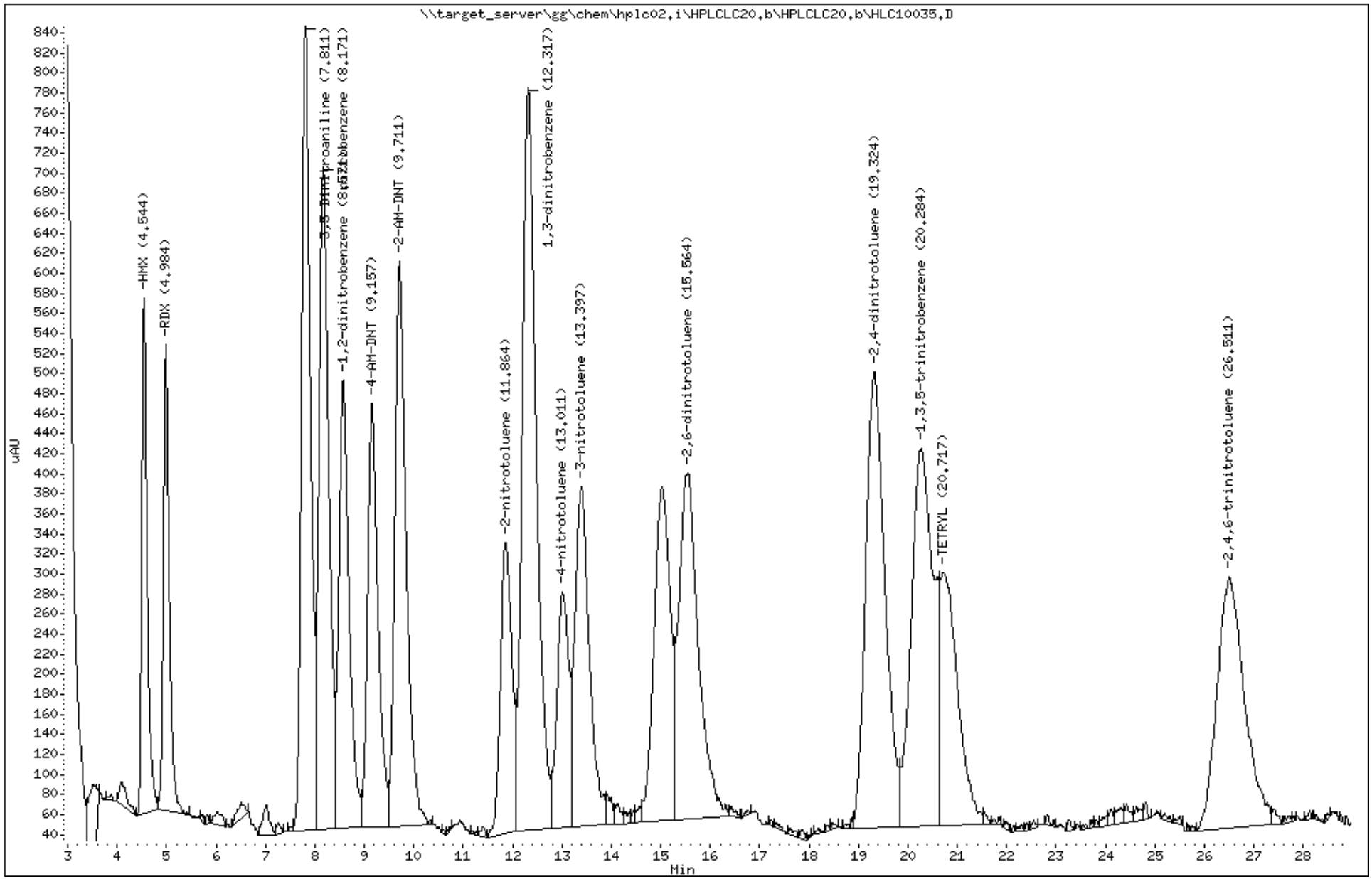
Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00500	Final Volume (L)
Vo	0.50000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)	REVIEW CODE
1	HMX	4.544	4.542	0.002	514	0.10000	0.0940(a)	
4	RDX	4.984	4.989	-0.005	466	0.10000	0.0870(a)	
51	3,5-Dinitroaniline	7.810	7.809	0.001	803	0.10000	0.0959(a)	
7	nitrobenzene	8.170	8.175	-0.005	661	0.10000	0.0958(a)	
$ 2	1,2-dinitrobenzene	8.570	8.575	-0.005	448	0.10000	0.0965(a)	
11	4-AM-DNT	9.157	9.155	0.002	424	0.10000	0.0969(a)	
12	2-AM-DNT	9.710	9.715	-0.005	564	0.10000	0.0964(a)	
15	2-nitrotoluene	11.864	11.862	0.002	290	0.10000	0.0970(a)	
6	1,3-dinitrobenzene	12.317	12.315	0.002	741	0.10000	0.0971(a)	
16	4-nitrotoluene	13.010	13.022	-0.012	235	0.10000	0.0968(a)	
17	3-nitrotoluene	13.397	13.389	0.008	339	0.10000	0.101(a)	
13	2,6-dinitrotoluene	15.564	15.542	0.022	345	0.10000	0.114(a)	
14	2,4-dinitrotoluene	19.324	19.309	0.015	456	0.10000	0.0976(a)	
5	1,3,5-trinitrobenzene	20.284	20.222	0.062	377	0.10000	0.0997(a)	
9	TETRYL	20.717	20.722	-0.005	253	0.10000	0.0985(a)	
10	2,4,6-trinitrotoluene	26.510	26.469	0.041	251	0.10000	0.0999(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HPLCLC20.b\HLC10035.D
Date : 20-MAR-2018 17:01
Client ID:
Instrument: hplc02.i
Sample Info: WG225143-3
Purge Volume: 0.5
Operator: AC
Column phase: Acclaim Exp E1
Column diameter: 4.60



Katahdin Analytical Services 3000113

Data File: HLC10036.D
Report Date: 26-Mar-2018 13:10

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HPLCLC20.b\HLC10036.D
Lab Smp Id: WG225143-2
Inj Date : 20-MAR-2018 17:33
Operator : AC   Inst ID: hplc02.i
Smp Info : WG225143-2
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\EXPB05A.m\EXPB05A.m
Meth Date : 22-Mar-2018 05:09 abullentin Quant Type: ESTD
Cal Date : 20-MAR-2018 17:33   Cal File: HLC10036.D
Als bottle: 13   Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: SW8330A.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00500	Final Volume (L)
Vo	0.50000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

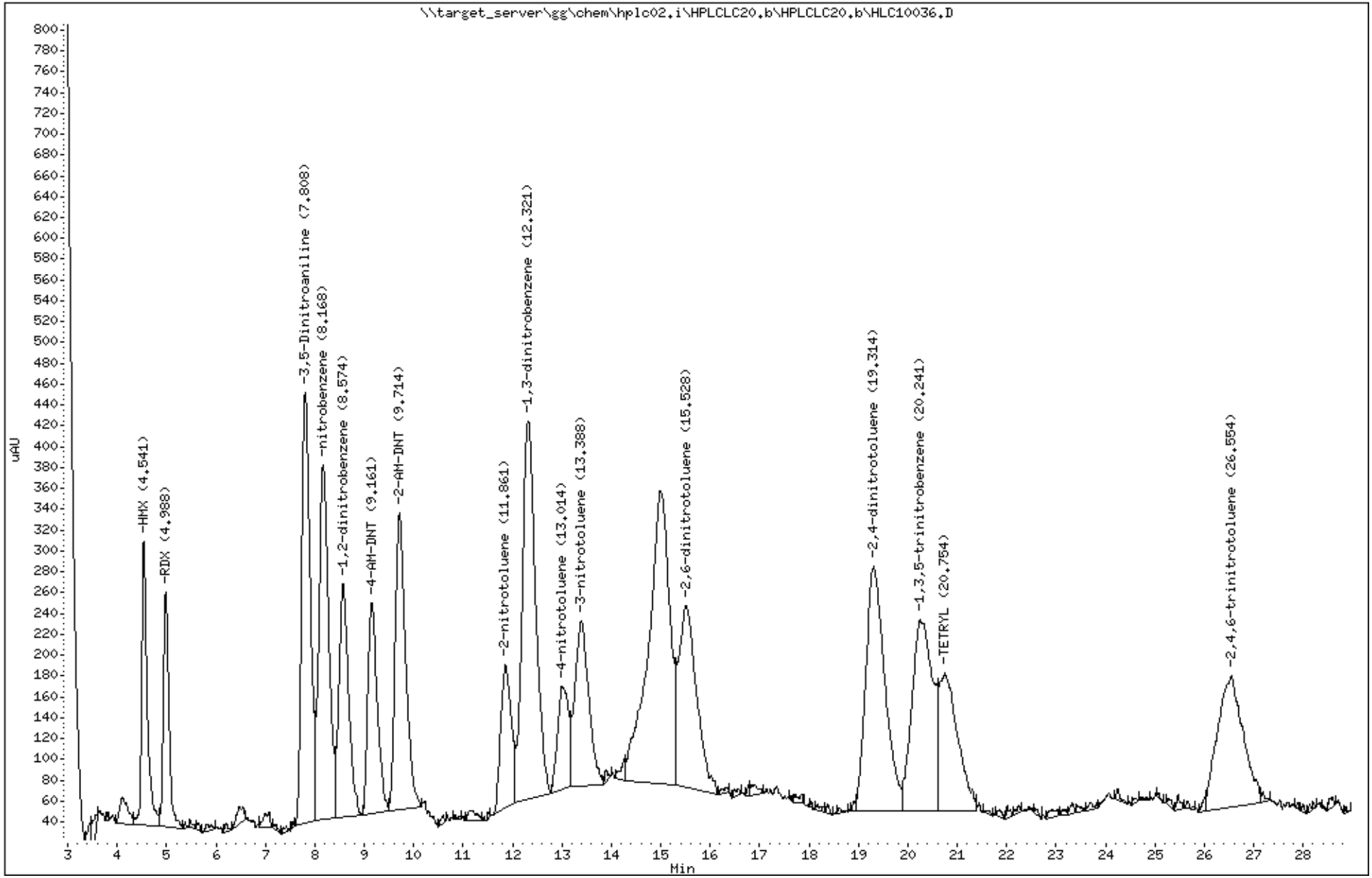
	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)	REVIEW CODE
1	HMX	4.541	4.542	-0.001	272	0.05000	0.0504(a)	
4	RDX	4.987	4.989	-0.002	225	0.05000	0.0463(a)	
51	3,5-Dinitroaniline	7.807	7.809	-0.002	414	0.05000	0.0498(a)	
7	nitrobenzene	8.167	8.175	-0.008	341	0.05000	0.0497(a)	
$ 2	1,2-dinitrobenzene	8.574	8.575	-0.001	225	0.05000	0.0486(a)	
11	4-AM-DNT	9.161	9.155	0.006	202	0.05000	0.0469(a)	
12	2-AM-DNT	9.714	9.715	-0.001	285	0.05000	0.0495(a)	
15	2-nitrotoluene	11.861	11.862	-0.001	138	0.05000	0.0478(a)	
6	1,3-dinitrobenzene	12.321	12.315	0.006	364	0.05000	0.0492(a)	
16	4-nitrotoluene	13.014	13.022	-0.008	99	0.05000	0.0449(a)	
17	3-nitrotoluene	13.387	13.389	-0.002	159	0.05000	0.0502(a)	
13	2,6-dinitrotoluene	15.527	15.542	-0.015	175	0.05000	0.0588(a)	
14	2,4-dinitrotoluene	19.307	19.309	-0.002	235	0.05000	0.0508(aM)	M9
5	1,3,5-trinitrobenzene	20.241	20.222	0.019	184	0.05000	0.0548(aM)	M9
9	TETRYL	20.754	20.722	0.032	133	0.05000	0.0593(aM)	M9
10	2,4,6-trinitrotoluene	26.554	26.469	0.085	126	0.05000	0.0551(a)	

2:43 pm, Mar 26, 2018

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HPLCLC20.b\HLC10036.D
Date : 20-MAR-2018 17:33
Client ID:
Instrument: hplc02.i
Sample Info: WG225143-2
Purge Volume: 0.5
Operator: AC
Column phase: Acclaim Exp E1
Column diameter: 4.60



Katahdin Analytical Services 3000115

Data File: HLC10037.D
Report Date: 26-Mar-2018 13:11

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HPLCLC20.b\HLC10037.D
Lab Smp Id: WG225143-1
Inj Date : 20-MAR-2018 18:05
Operator : AC   Inst ID: hplc02.i
Smp Info : WG225143-1
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\EXPB05A.m\EXPB05A.m
Meth Date : 22-Mar-2018 05:09 abullentin Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05   Cal File: HLC10037.D
Als bottle: 14   Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: SW8330A.sub
Target Version: 4.12
Processing Host: T8-D4700

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00500	Final Volume (L)
Vo	0.50000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

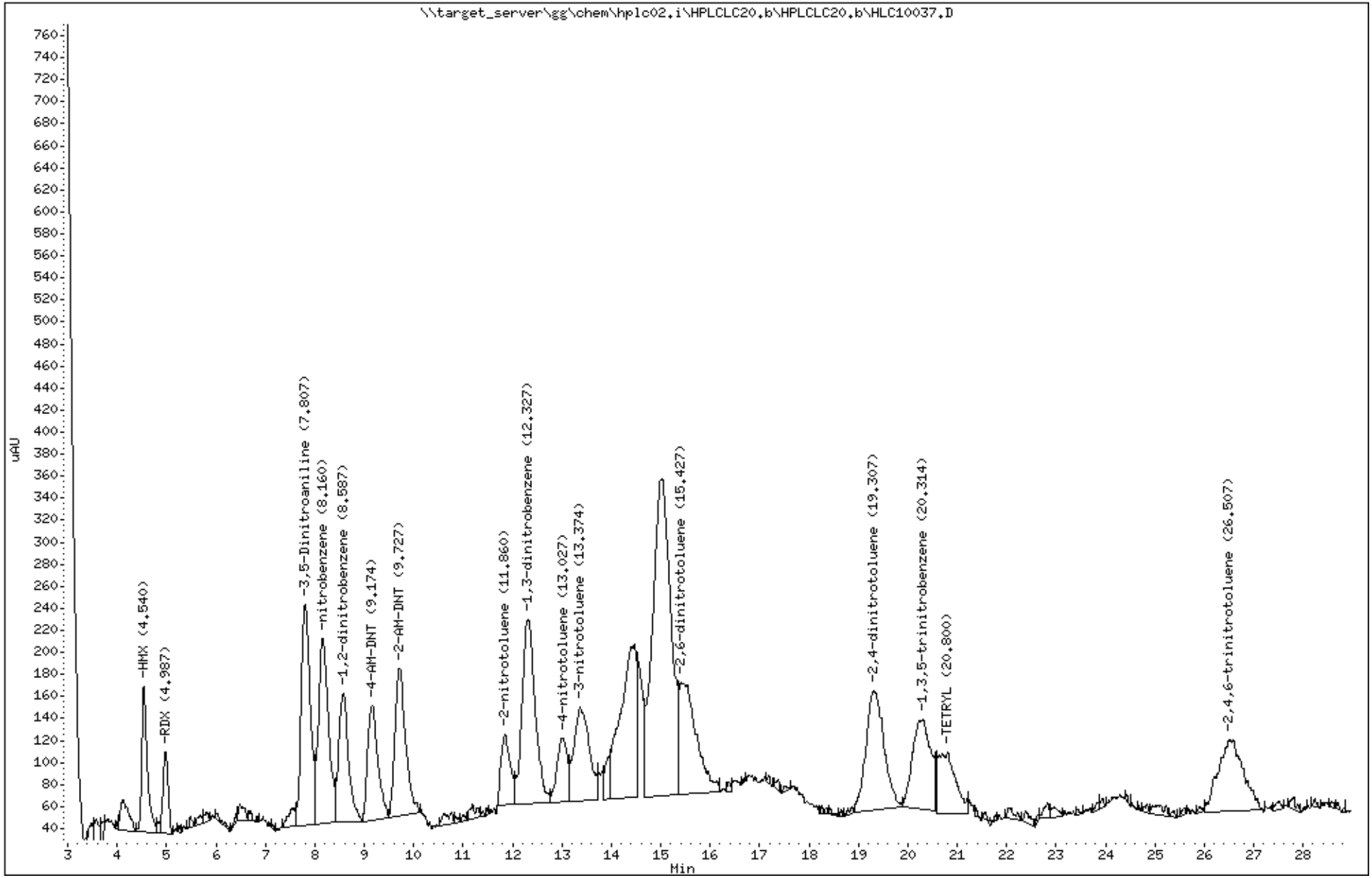
	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)	REVIEW CODE
1	HMX	4.540	4.542	-0.002	133	0.02500	0.0247(a)	
4	RDX	4.987	4.989	-0.002	75	0.02500	0.0154(a)	
51	3,5-Dinitroaniline	7.807	7.809	-0.002	202	0.02500	0.0243(a)	
7	nitrobenzene	8.160	8.175	-0.015	169	0.02500	0.0246(a)	
$ 2	1,2-dinitrobenzene	8.587	8.575	0.012	117	0.02500	0.0253(a)	
11	4-AM-DNT	9.173	9.155	0.018	105	0.02500	0.0244(a)	
12	2-AM-DNT	9.727	9.715	0.012	134	0.02500	0.0233(a)	
15	2-nitrotoluene	11.847	11.862	-0.015	63	0.02500	0.0218(aM)	M9
6	1,3-dinitrobenzene	12.327	12.315	0.012	167	0.02500	0.0224(aM)	M9
16	4-nitrotoluene	12.993	13.022	-0.029	57	0.02500	0.0243(aM)	M9
17	3-nitrotoluene	13.373	13.389	-0.016	84	0.02500	0.0252(aM)	M9
13	2,6-dinitrotoluene	15.407	15.542	-0.135	101	0.02500	0.0312(aM)	M5
14	2,4-dinitrotoluene	19.307	19.309	-0.002	107	0.02500	0.0232(aM)	M9
5	1,3,5-trinitrobenzene	20.313	20.222	0.091	81	0.02500	0.0220(aM)	M9
9	TETRYL	20.800	20.722	0.078	56	0.02500	0.0221(aM)	M9
10	2,4,6-trinitrotoluene	26.507	26.469	0.038	65	0.02500	0.0257(aM)	M9

2:43 pm, Mar 26, 2018

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HPLCLC20.b\HLC10037.D
Date : 20-MAR-2018 18:05
Client ID:
Instrument: hplc02.i
Sample Info: WG225143-1
Purge Volume: 0.5
Operator: AC
Column phase: Acclaim Exp E1
Column diameter: 4.60



Katahdin Analytical Services 3000117

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition P
Lab ID : WG225143-9
Lab File ID : HLC10049.D
Initial Calibration Date(s): 03/20/18 14:54 03/20/18 18:05

SDG: SL2079
Analytical Date: 03/21/18 00:26
Instrument ID: HPLC02
Column ID: A

Compound	RRF/Amount	RF0.500	Min RRF	%D/ %Drift	Max %D/ %Drift	Curve Type
130 NITROGLYCERIN	5513	5412	0.010	-1.83553	20.00000	Averaged
140 PETN	2876	2882	0.010	0.19684	20.00000	Averaged

*** = Compound out of QC criteria**

600 Technology Way
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Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10049.D
Report Date: 27-Mar-2018 13:39

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10049.D
Lab Smp Id: WG225143-9
Inj Date : 21-MAR-2018 00:26
Operator : AC   Inst ID: hplc02.i
Smp Info : WG225143-9,SL2079
Misc Info : WG225143,WG225027,WG225143-5,SL2079-1
Comment   :
Method   : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\EXPB05A.m
Meth Date : 21-Mar-2018 11:31 abullentin Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05   Cal File: HLC10037.D
Als bottle: 26   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: ngpetn.sub
Target Version: 4.12
Processing Host: V200T1

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01000	Weight of Sample (Kg)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

					AMOUNTS		
					CAL-AMT	ON-COL	
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)	
8 NITROGLYCERIN	6.987	6.997	-0.010	10824	1.00000	1.96(aM)	M2
18 PETN	13.954	13.963	-0.009	5763	1.00000	2.00(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

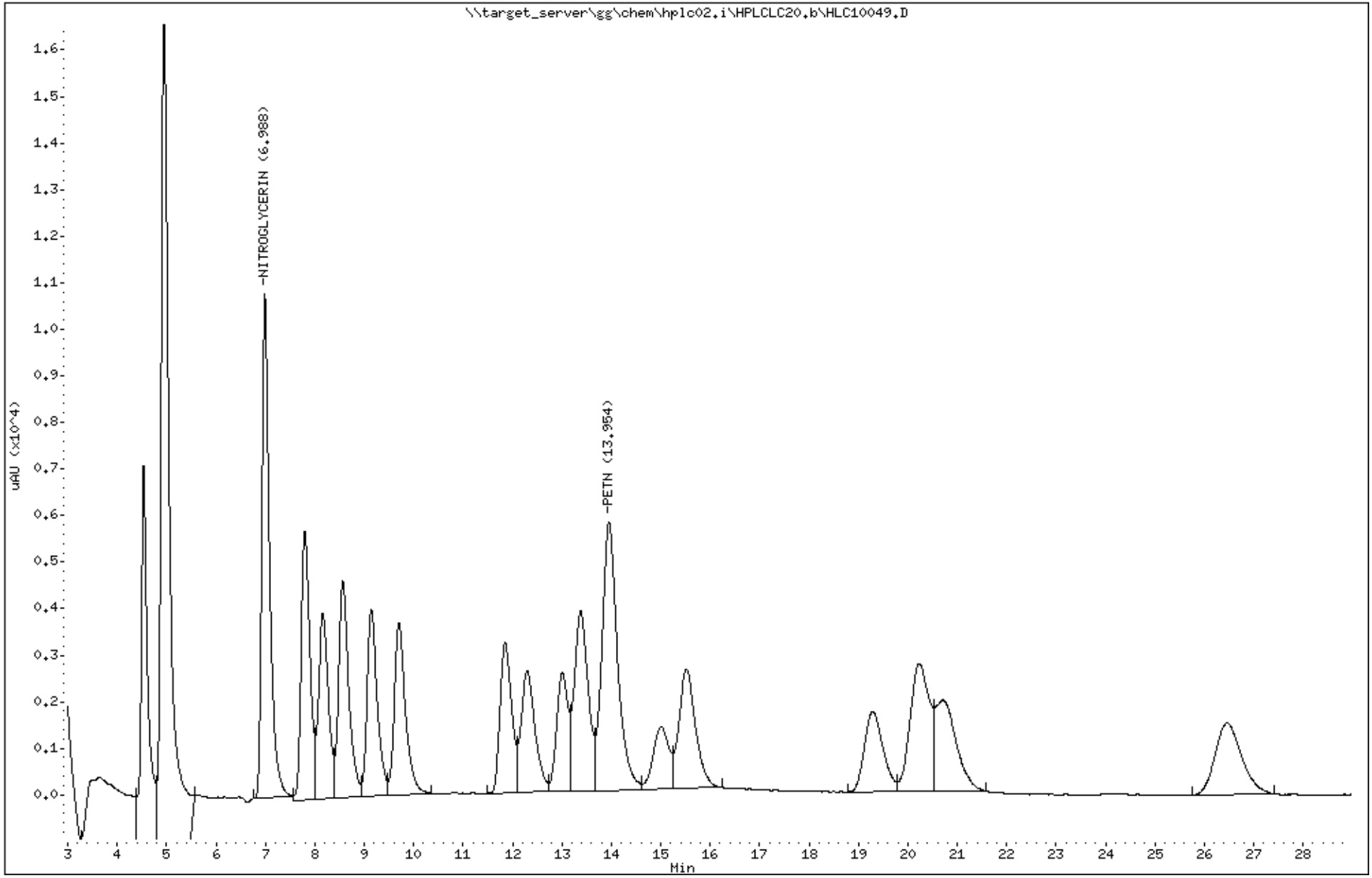
2:50 pm, Mar 27, 2018

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10049.D
Date : 21-MAR-2018 00:26
Client ID:
Sample Info: WG225143-9,SL2079

Column phase: Acclaim Exp E1

Instrument: hplc02.i

Operator: AC
Column diameter: 4.60



Katahdin Analytical Services 3000120

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition F
Lab ID : WG225143-13
Lab File ID : HLC10081.D
Initial Calibration Date(s): 03/20/18 14:54 03/20/18 18:05

SDG: SL2079
Analytical Date: 03/21/18 18:38
Instrument ID: HPLC02
Column ID: A

Compound	RRF/Amount	RF0.250	Min RRF	%D/ %Drift	Max %D/ %Drift	Curve Type
130 NITROGLYCERIN	5513	5380	0.010	-2.41596	20.00000	Averaged
140 PETN	2876	2806	0.010	-2.42848	20.00000	Averaged

*** = Compound out of QC criteria**

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Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10081.D
Report Date: 27-Mar-2018 13:45

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10081.D
Lab Smp Id: WG225143-13
Inj Date : 21-MAR-2018 18:38
Operator : AC   Inst ID: hplc02.i
Smp Info : WG225143-13,SL2079
Misc Info : WG225143,WG225027,WG225143-5,SL2079-1
Comment   :
Method   : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\EXPB05A.m
Meth Date : 22-Mar-2018 09:44 hplc02.i   Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05   Cal File: HLC10037.D
Als bottle: 58   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: ngpetn.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01000	Weight of Sample (Kg)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)
8 NITROGLYCERIN	6.975	6.975	0.000	5380	1.00000	0.976(a)
18 PETN	13.901	13.902	-0.001	2806	1.00000	0.976(a)

QC Flag Legend

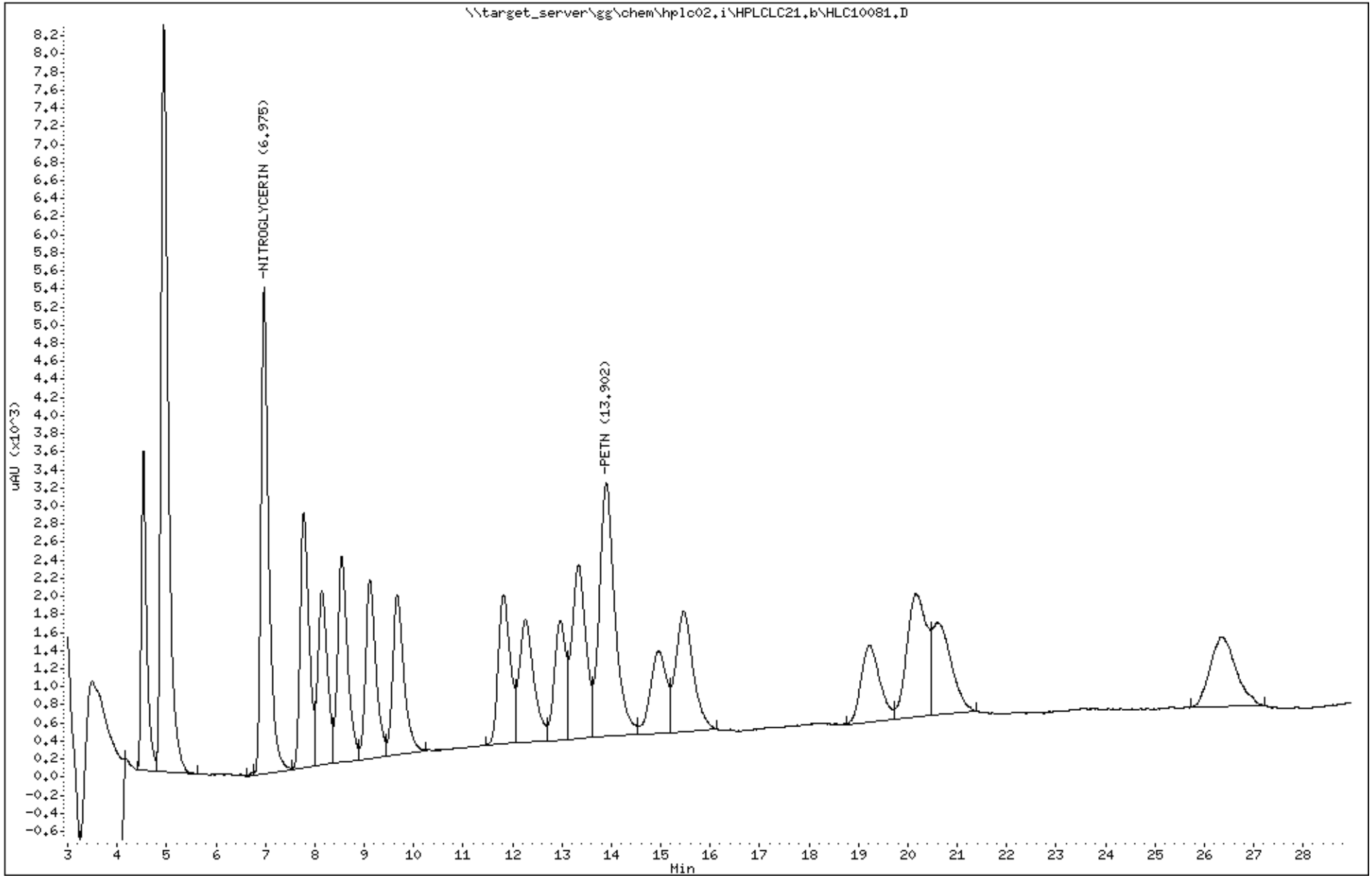
a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10081.D
Date : 21-MAR-2018 18:38
Client ID:
Sample Info: WG225143-13,SL2079

Instrument: hplc02.i

Operator: AC
Column diameter: 4.60

Column phase: Acclaim Exp E1



Katahdin Analytical Services 3000123

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition F
Lab ID : WG225143-14
Lab File ID : HLC10092.D
Initial Calibration Date(s): 03/20/18 14:54 03/20/18 18:05

SDG: SL2079
Analytical Date: 03/22/18 00:27
Instrument ID: HPLC02
Column ID: A

Compound	RRF/Amount	RF0.500	Min RRF	%D/ %Drift	Max %D/ %Drift	Curve Type
130 NITROGLYCERIN	5513	5396	0.010	-2.12574	20.00000	Averaged
140 PETN	2876	2806	0.010	-2.44587	20.00000	Averaged

*** = Compound out of QC criteria**

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Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10092.D
Report Date: 27-Mar-2018 13:46

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10092.D
Lab Smp Id: WG225143-14
Inj Date : 22-MAR-2018 00:27
Operator : AC   Inst ID: hplc02.i
Smp Info : WG225143-14,SL2079
Misc Info : WG225143,WG225027,WG225143-5,SL2079-1
Comment   :
Method   : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\EXPB05A.m
Meth Date : 22-Mar-2018 09:44 hplc02.i   Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05   Cal File: HLC10037.D
Als bottle: 69   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: ngpetn.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01000	Weight of Sample (Kg)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)
8 NITROGLYCERIN	6.979	6.975	0.004	10792	1.00000	1.96(a)
18 PETN	13.913	13.902	0.011	5611	1.00000	1.95(a)

QC Flag Legend

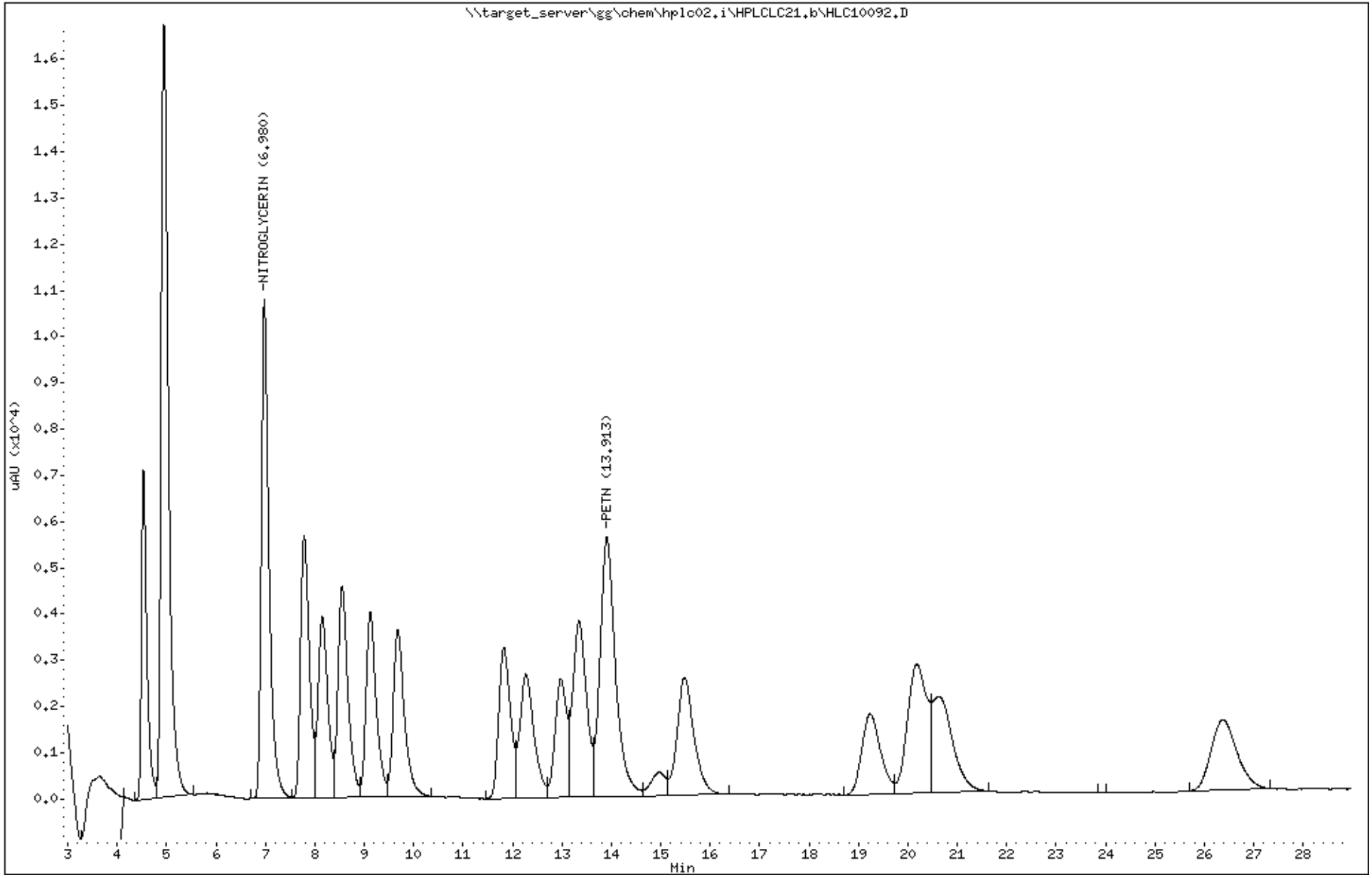
a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10092.D
Date : 22-MAR-2018 00:27
Client ID:
Sample Info: WG225143-14,SL2079

Column phase: Acclaim Exp E1

Instrument: hplc02.i

Operator: AC
Column diameter: 4.60



Katahdin Analytical Services 3000126

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition F
Lab ID : WG225143-15
Lab File ID : HLC10103.D
Initial Calibration Date(s): 03/20/18 14:54 03/20/18 18:05

SDG: SL2079
Analytical Date: 03/22/18 09:13
Instrument ID: HPLC02
Column ID: A

Compound	RRF/Amount	RF0.250	Min RRF	%D/ %Drift	Max %D/ %Drift	Curve Type
130 NITROGLYCERIN	5513	5384	0.010	-2.34340	20.00000	Averaged
140 PETN	2876	2764	0.010	-3.88893	20.00000	Averaged

*** = Compound out of QC criteria**

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Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10103.D
Report Date: 27-Mar-2018 13:46

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10103.D
Lab Smp Id: WG225143-15
Inj Date : 22-MAR-2018 09:13
Operator : AC   Inst ID: hplc02.i
Smp Info : WG225143-15,SL2079
Misc Info : WG225143,WG225027,WG225143-5,SL2079-1
Comment   :
Method   : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\EXPB05A.m
Meth Date : 22-Mar-2018 09:44 hplc02.i   Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05   Cal File: HLC10037.D
Als bottle: 80   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: ngpetn.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01000	Weight of Sample (Kg)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/mL)
8 NITROGLYCERIN	6.973	6.975	-0.002	5384	1.00000	0.976(a)
18 PETN	13.907	13.902	0.005	2764	1.00000	0.961(a)

QC Flag Legend

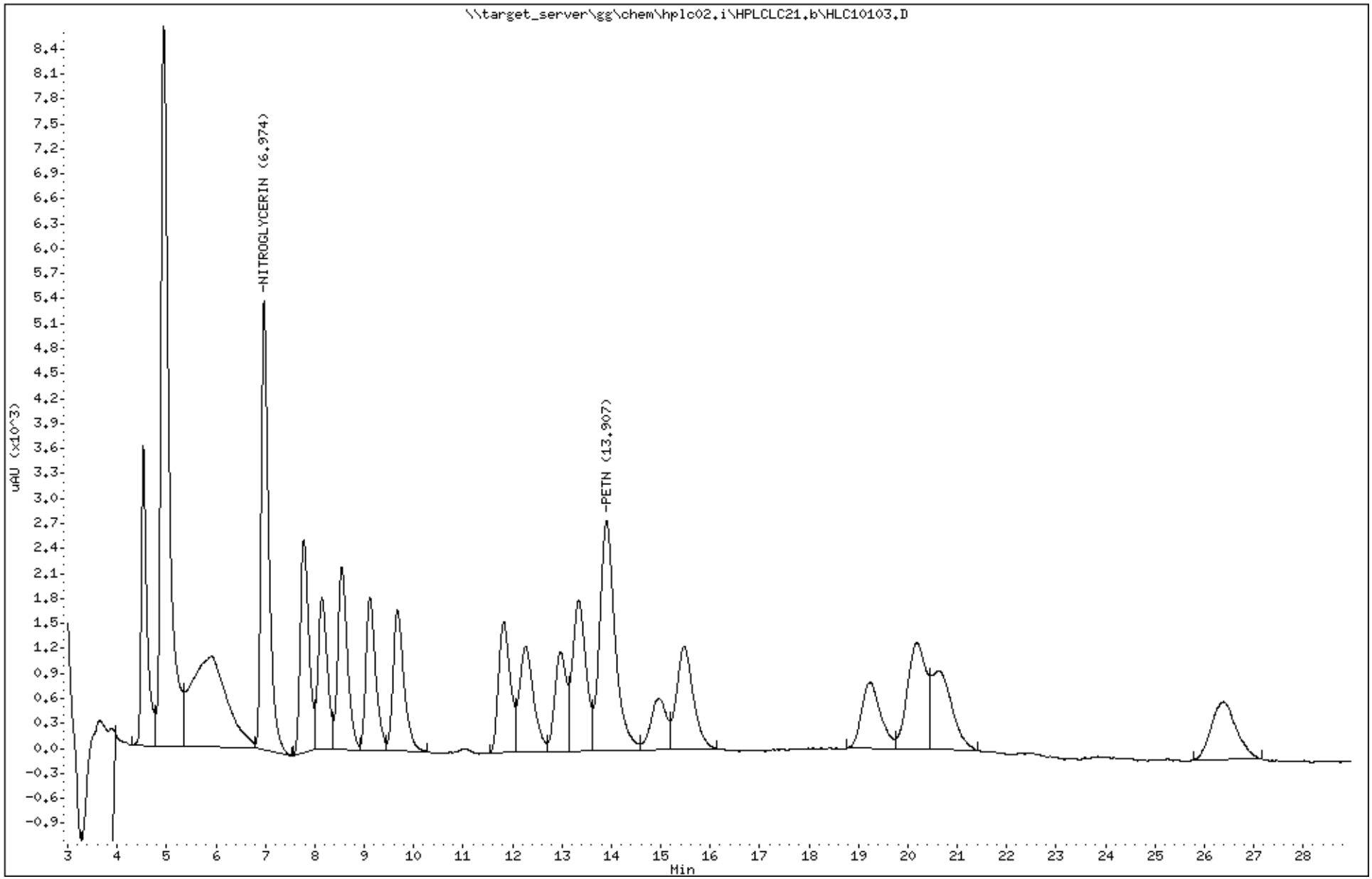
a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HLC10103.D
Date : 22-MAR-2018 09:13
Client ID:
Sample Info: WG225143-15,SL2079

Column phase: Acclaim Exp E1

Instrument: hplc02.i

Operator: AC
Column diameter: 4.60



Katahdin Analytical Services 3000129

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG225143-9
Lab File ID : HLC10049.D
Initial Calibration Date(s): 03/20/18 14:54 03/20/18 18:05

SDG: SL2079
Analytical Date: 03/21/18 00:26
Instrument ID: HPLC02
Column ID: B

	Compound	$\overline{RRF}$/Amount	RF0.500	CCAL RRF0.500	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
1	HMX	5391	5336	5336	0.010	-1.01366	20.00000	Averaged
4	RDX	0.50000	0.48680	5340	0.010	-2.64053	20.00000	Linear
5	1,3,5-trinitrobenzene	3689	3670	3670	0.010	-0.51119	20.00000	Averaged
6	1,3-dinitrobenzene	7444	7568	7568	0.010	1.66967	20.00000	Averaged
7	nitrobenzene	6867	6846	6846	0.010	-0.30063	20.00000	Averaged
9	TETRYL	2535	2450	2450	0.010	-3.33672	20.00000	Averaged
10	2,4,6-trinitrotoluene	2526	2460	2460	0.010	-2.62659	20.00000	Averaged
11	4-AM-DNT	4303	4346	4346	0.010	1.00601	20.00000	Averaged
12	2-AM-DNT	5761	5818	5818	0.010	0.99442	20.00000	Averaged
13	2,6-dinitrotoluene	0.50000	0.48644	2864	0.010	-2.71162	20.00000	Linear
14	2,4-dinitrotoluene	4619	4600	4600	0.010	-0.40056	20.00000	Averaged
15	2-nitrotoluene	2890	2980	2980	0.010	3.12948	20.00000	Averaged
16	4-nitrotoluene	2342	2480	2480	0.010	5.87303	20.00000	Averaged
17	3-nitrotoluene	3326	3392	3392	0.010	1.99532	20.00000	Averaged
2	1,2-dinitrobenzene	4627	4632	4632	0.010	0.09879	20.00000	Averaged

*** = Compound out of QC criteria**

Data File: HLC10049.D
Report Date: 27-Mar-2018 13:43

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HPLCLC20.b\HLC10049.D
Lab Smp Id: WG225143-9
Inj Date : 21-MAR-2018 00:26
Operator : AC   Inst ID: hplc02.i
Smp Info : WG225143-9,SL2079
Misc Info : WG225143,WG225027,WG225143-5,SL2079-1
Comment   :
Method   : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\EXPB05A.m\EXPB05A.m
Meth Date : 22-Mar-2018 05:09 abullentin Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05   Cal File: HLC10037.D
Als bottle: 26   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: SW8330A.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01000	Weight of Sample (Kg)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

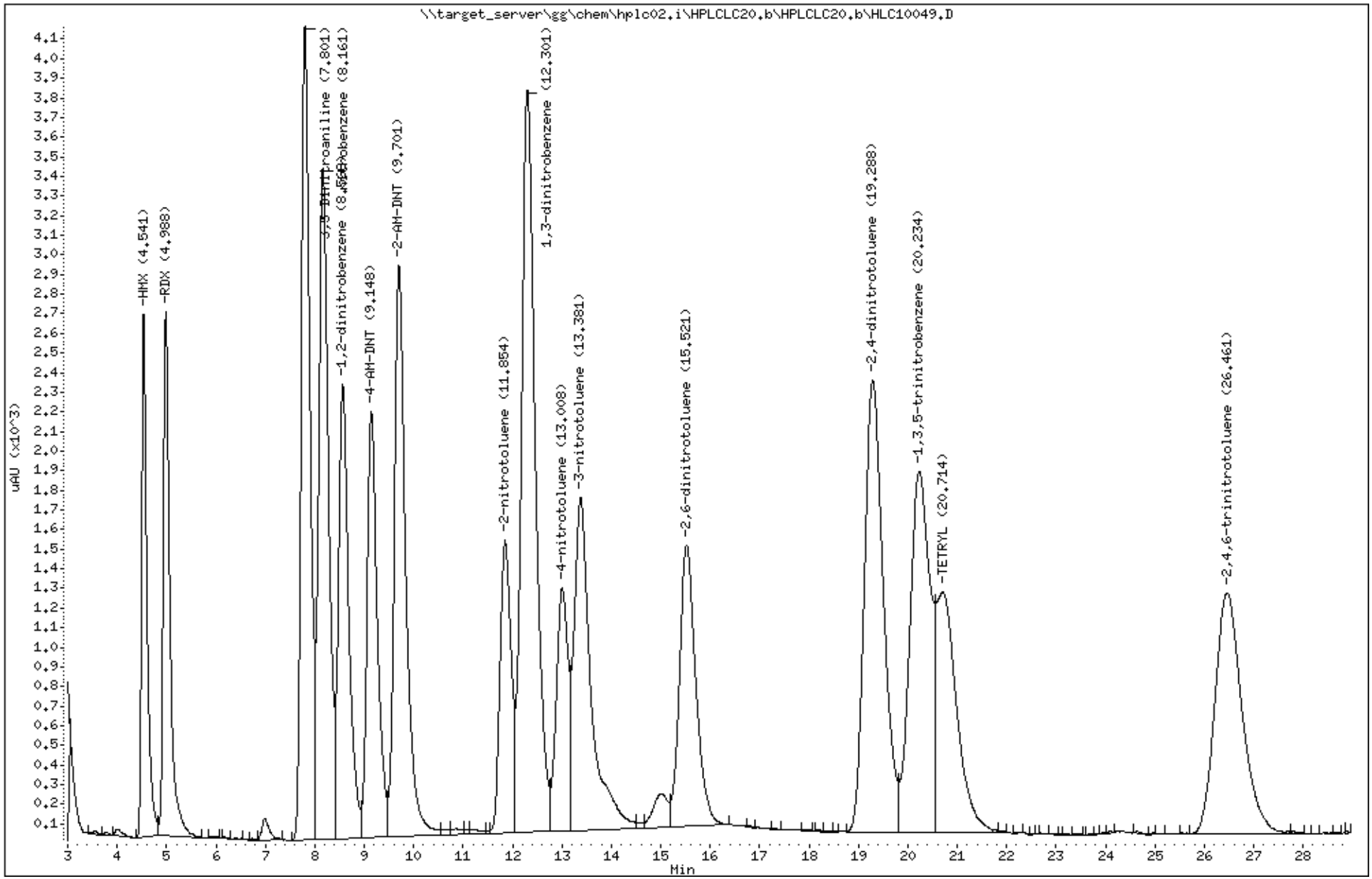
	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)	REVIEW CODE
1	HMX	4.541	4.542	-0.001	2668	0.25000	0.495	
4	RDX	4.987	4.989	-0.002	2670	0.25000	0.487	
51	3,5-Dinitroaniline	7.801	7.809	-0.008	4148	0.25000	0.499	
7	nitrobenzene	8.161	8.175	-0.014	3423	0.25000	0.498	
$ 2	1,2-dinitrobenzene	8.567	8.575	-0.008	2316	0.25000	0.500	
11	4-AM-DNT	9.147	9.155	-0.008	2173	0.25000	0.505	
12	2-AM-DNT	9.701	9.715	-0.014	2909	0.25000	0.505	
15	2-nitrotoluene	11.854	11.862	-0.008	1490	0.25000	0.516	
6	1,3-dinitrobenzene	12.301	12.315	-0.014	3784	0.25000	0.508	
16	4-nitrotoluene	13.007	13.022	-0.015	1240	0.25000	0.529	
17	3-nitrotoluene	13.381	13.389	-0.008	1696	0.25000	0.510	
13	2,6-dinitrotoluene	15.521	15.542	-0.021	1432	0.25000	0.486	
14	2,4-dinitrotoluene	19.287	19.309	-0.022	2300	0.25000	0.498	
5	1,3,5-trinitrobenzene	20.234	20.222	0.012	1835	0.25000	0.497	
9	TETRYL	20.714	20.722	-0.008	1225	0.25000	0.483	
10	2,4,6-trinitrotoluene	26.461	26.469	-0.008	1230	0.25000	0.487	

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HPLCLC20.b\HLC10049.D
Date : 21-MAR-2018 00:26
Client ID:
Sample Info: WG225143-9,SL2079

Instrument: hplc02.i

Operator: AC
Column diameter: 4.60

Column phase: Acclaim Exp E1



Katahdin Analytical Services 3000132

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
SDG: SL2079
Lab ID : WG225143-13
Analytical Date: 03/21/18 18:38
Lab File ID : HLC10081.D
Instrument ID: HPLC02
Initial Calibration Date(s): 03/20/18 14:54 03/20/18 18:05
Column ID: B

	Compound	RRF/Amount	RF0.250	CCAL RRF0.250	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
1	HMX	5391	5288	5288	0.010	-1.90409	20.00000	Averaged
4	RDX	0.25000	0.23859	5168	0.010	-4.56414	20.00000	Linear
5	1,3,5-trinitrobenzene	3689	3736	3736	0.010	1.27798	20.00000	Averaged
6	1,3-dinitrobenzene	7444	7752	7752	0.010	4.14156	20.00000	Averaged
7	nitrobenzene	6867	6748	6748	0.010	-1.72781	20.00000	Averaged
9	TETRYL	2535	2624	2624	0.010	3.52835	20.00000	Averaged
10	2,4,6-trinitrotoluene	2526	2464	2464	0.010	-2.46826	20.00000	Averaged
11	4-AM-DNT	4303	4320	4320	0.010	0.40174	20.00000	Averaged
12	2-AM-DNT	5761	5732	5732	0.010	-0.49845	20.00000	Averaged
13	2,6-dinitrotoluene	0.25000	0.23859	2884	0.010	-4.56349	20.00000	Linear
14	2,4-dinitrotoluene	4619	4584	4584	0.010	-0.74700	20.00000	Averaged
15	2-nitrotoluene	2890	3120	3120	0.010	7.97449	20.00000	Averaged
16	4-nitrotoluene	2342	2740	2740	0.010	16.97262	20.00000	Averaged
17	3-nitrotoluene	3326	3476	3476	0.010	4.52115	20.00000	Averaged
2	1,2-dinitrobenzene	4627	4576	4576	0.010	-1.11139	20.00000	Averaged

*** = Compound out of QC criteria**

Data File: HLC10081.D
Report Date: 27-Mar-2018 13:55

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HPLCLC21.b\HLC10081.D
Lab Smp Id: WG225143-13
Inj Date : 21-MAR-2018 18:38
Operator : AC   Inst ID: hplc02.i
Smp Info : WG225143-13,SL2079
Misc Info : WG225143,WG225027,WG225143-5,SL2079-1
Comment   :
Method   : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\EXPB05A.m\EXPB05A.m
Meth Date : 27-Mar-2018 08:49 hplc02.i   Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05   Cal File: HLC10037.D
Als bottle: 58   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: SW8330A.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01000	Weight of Sample (Kg)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)	REVIEW CODE
1	HMX	4.535	4.529	0.006	1322	0.25000	0.245(a)	
4	RDX	4.975	4.975	0.000	1292	0.25000	0.238(a)	
51	3,5-Dinitroaniline	7.775	7.782	-0.007	2054	0.25000	0.247(a)	
7	nitrobenzene	8.148	8.149	-0.001	1687	0.25000	0.246(a)	
$ 2	1,2-dinitrobenzene	8.541	8.549	-0.008	1144	0.25000	0.247(a)	
11	4-AM-DNT	9.115	9.115	0.000	1080	0.25000	0.251	
12	2-AM-DNT	9.668	9.675	-0.007	1433	0.25000	0.249(a)	
15	2-nitrotoluene	11.821	11.822	-0.001	780	0.25000	0.270	
6	1,3-dinitrobenzene	12.268	12.269	-0.001	1938	0.25000	0.260	
16	4-nitrotoluene	12.968	12.969	-0.001	685	0.25000	0.292	
17	3-nitrotoluene	13.335	13.342	-0.007	869	0.25000	0.261	
13	2,6-dinitrotoluene	15.475	15.475	0.000	721	0.25000	0.238(a)	
14	2,4-dinitrotoluene	19.221	19.235	-0.014	1146	0.25000	0.248(a)	
5	1,3,5-trinitrobenzene	20.168	20.175	-0.007	934	0.25000	0.253	
9	TETRYL	20.595	20.622	-0.027	656	0.25000	0.259	
10	2,4,6-trinitrotoluene	26.355	26.382	-0.027	616	0.25000	0.244(a)	

QC Flag Legend

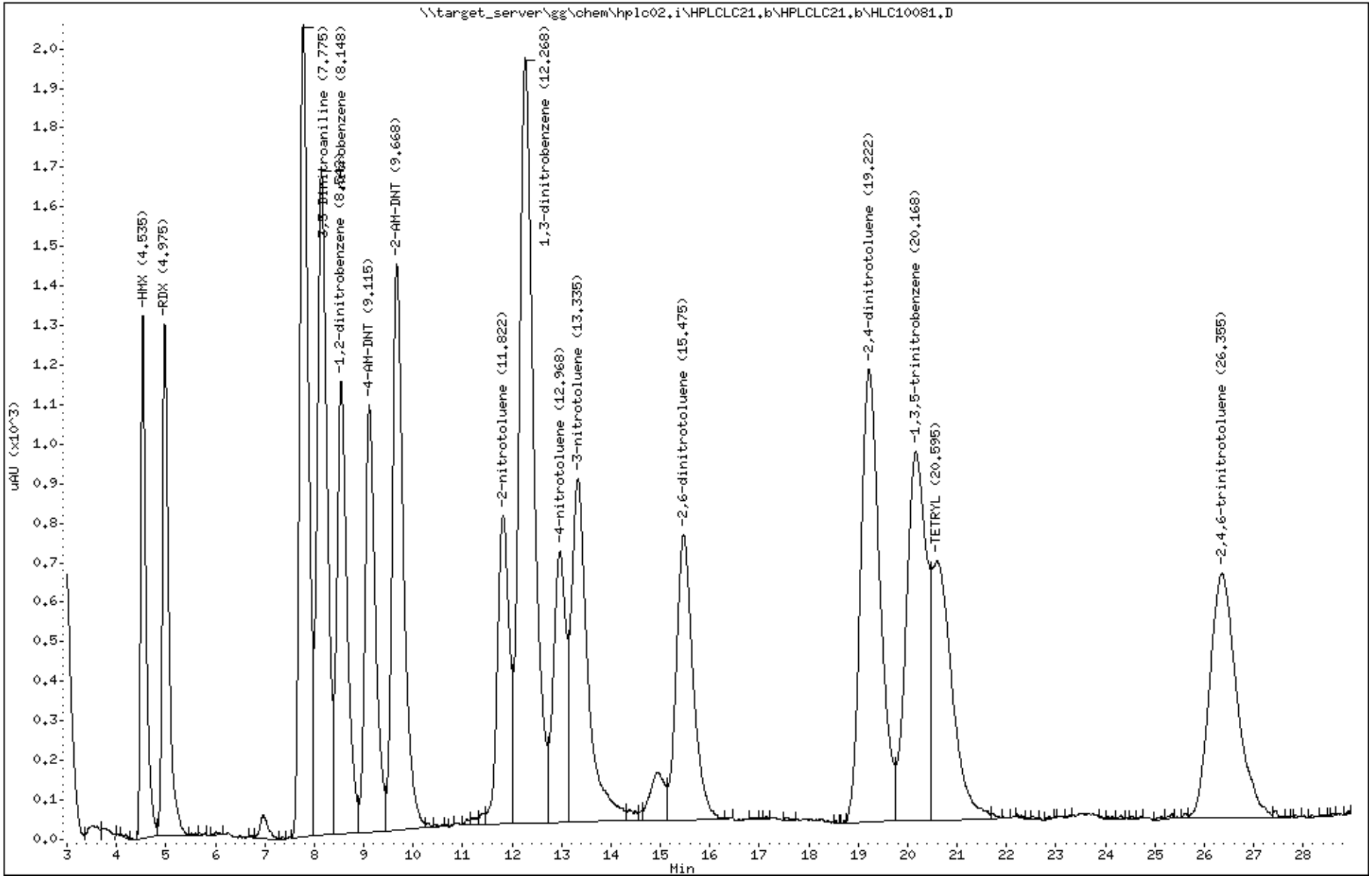
a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HPLCLC21.b\HLC10081.D
Date : 21-MAR-2018 18:38
Client ID:
Sample Info: WG225143-13,SL2079

Instrument: hplc02.i

Operator: AC
Column diameter: 4.60

Column phase: Acclaim Exp E1



Katahdin Analytical Services 3000135

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG225143-14
Lab File ID : HLC10092.D
Initial Calibration Date(s): 03/20/18 14:54 03/20/18 18:05

SDG: SL2079
Analytical Date: 03/22/18 00:27
Instrument ID: HPLC02
Column ID: B

	Compound	RRF/Amount	RF0.500	CCAL RRF0.500	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
1	HMX	5391	5370	5370	0.010	-0.38294	20.00000	Averaged
4	RDX	0.50000	0.48842	5358	0.010	-2.31631	20.00000	Linear
5	1,3,5-trinitrobenzene	3689	3718	3718	0.010	0.79002	20.00000	Averaged
6	1,3-dinitrobenzene	7444	7578	7578	0.010	1.80401	20.00000	Averaged
7	nitrobenzene	6867	6804	6804	0.010	-0.91228	20.00000	Averaged
9	TETRYL	2535	2586	2586	0.010	2.02908	20.00000	Averaged
10	2,4,6-trinitrotoluene	2526	2450	2450	0.010	-3.02242	20.00000	Averaged
11	4-AM-DNT	4303	4318	4318	0.010	0.35526	20.00000	Averaged
12	2-AM-DNT	5761	5754	5754	0.010	-0.11655	20.00000	Averaged
13	2,6-dinitrotoluene	0.50000	0.48261	2842	0.010	-3.47852	20.00000	Linear
14	2,4-dinitrotoluene	4619	4604	4604	0.010	-0.31395	20.00000	Averaged
15	2-nitrotoluene	2890	2986	2986	0.010	3.33712	20.00000	Averaged
16	4-nitrotoluene	2342	2452	2452	0.010	4.67768	20.00000	Averaged
17	3-nitrotoluene	3326	3306	3306	0.010	-0.59065	20.00000	Averaged
2	1,2-dinitrobenzene	4627	4566	4566	0.010	-1.32749	20.00000	Averaged

*** = Compound out of QC criteria**

Data File: HLC10092.D
Report Date: 27-Mar-2018 13:55

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HPLCLC21.b\HLC10092.D
Lab Smp Id: WG225143-14
Inj Date : 22-MAR-2018 00:27
Operator : AC   Inst ID: hplc02.i
Smp Info : WG225143-14,SL2079
Misc Info : WG225143,WG225027,WG225143-5,SL2079-1
Comment   :
Method   : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\EXPB05A.m\EXPB05A.m
Meth Date : 27-Mar-2018 08:49 hplc02.i   Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05   Cal File: HLC10037.D
Als bottle: 69   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: SW8330A.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01000	Weight of Sample (Kg)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)	REVIEW CODE
1	HMX	4.533	4.529	0.004	2685	0.25000	0.498(a)	
4	RDX	4.979	4.975	0.004	2679	0.25000	0.488(a)	
51	3,5-Dinitroaniline	7.786	7.782	0.004	4135	0.25000	0.497(a)	
7	nitrobenzene	8.153	8.149	0.004	3402	0.25000	0.495(a)	
$ 2	1,2-dinitrobenzene	8.553	8.549	0.004	2283	0.25000	0.493(a)	
11	4-AM-DNT	9.126	9.115	0.011	2159	0.25000	0.502(a)	
12	2-AM-DNT	9.679	9.675	0.004	2877	0.25000	0.499(a)	
15	2-nitrotoluene	11.826	11.822	0.004	1493	0.25000	0.517(a)	
6	1,3-dinitrobenzene	12.279	12.269	0.010	3789	0.25000	0.509(a)	
16	4-nitrotoluene	12.979	12.969	0.010	1226	0.25000	0.523(a)	
17	3-nitrotoluene	13.346	13.342	0.004	1653	0.25000	0.497(a)	
13	2,6-dinitrotoluene	15.486	15.475	0.011	1421	0.25000	0.483(a)	
14	2,4-dinitrotoluene	19.239	19.235	0.004	2302	0.25000	0.498(a)	
5	1,3,5-trinitrobenzene	20.186	20.175	0.011	1859	0.25000	0.504(a)	
9	TETRYL	20.619	20.622	-0.003	1293	0.25000	0.510(a)	
10	2,4,6-trinitrotoluene	26.366	26.382	-0.016	1225	0.25000	0.485(a)	

QC Flag Legend

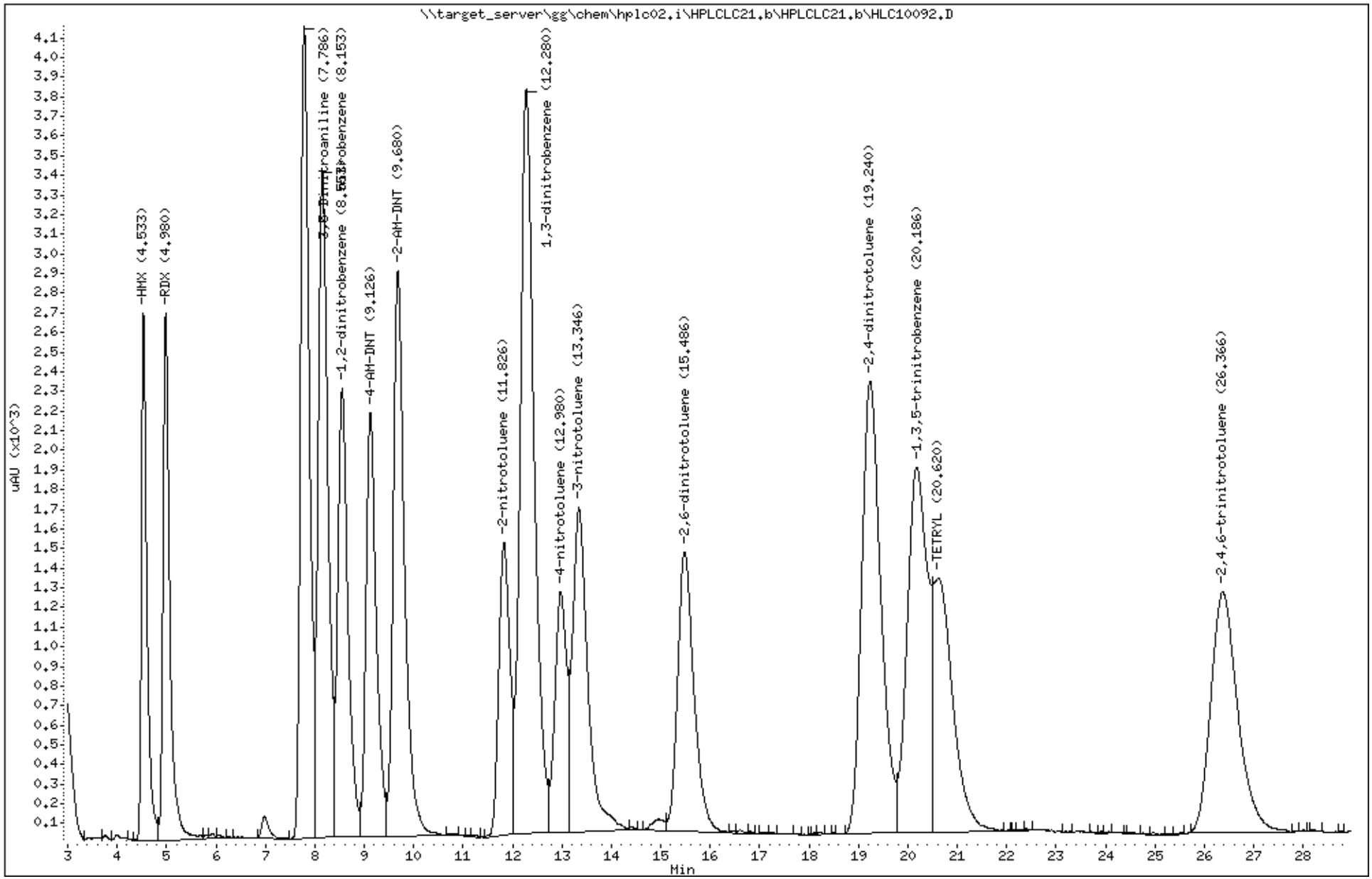
a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HPLCLC21.b\HLC10092.D
Date : 22-MAR-2018 00:27
Client ID:
Sample Info: WG225143-14,SL2079

Instrument: hplc02.i

Operator: AC
Column diameter: 4.60

Column phase: Acclaim Exp E1



Katahdin Analytical Services 3000138

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : Cornhusker Army Ammunition Plant
Lab ID : WG225143-15
Lab File ID : HLC10103.D
Initial Calibration Date(s): 03/20/18 14:54 03/20/18 18:05

SDG: SL2079
Analytical Date: 03/22/18 09:13
Instrument ID: HPLC02
Column ID: B

	Compound	$\overline{RRF}$/Amount	RF0.250	CCAL RRF0.250	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
1	HMX	5391	5312	5312	0.010	-1.45888	20.00000	Averaged
4	RDX	0.25000	0.24633	5340	0.010	-1.46605	20.00000	Linear
5	1,3,5-trinitrobenzene	3689	3384	3384	0.010	-8.26427	20.00000	Averaged
6	1,3-dinitrobenzene	7444	7072	7072	0.010	-4.99367	20.00000	Averaged
7	nitrobenzene	6867	6608	6608	0.010	-3.76666	20.00000	Averaged
9	TETRYL	2535	2344	2344	0.010	-7.51888	20.00000	Averaged
10	2,4,6-trinitrotoluene	2526	2276	2276	0.010	-9.90981	20.00000	Averaged
11	4-AM-DNT	4303	4096	4096	0.010	-4.80428	20.00000	Averaged
12	2-AM-DNT	5761	5412	5412	0.010	-6.05332	20.00000	Averaged
13	2,6-dinitrotoluene	0.25000	0.22883	2772	0.010	-8.46775	20.00000	Linear
14	2,4-dinitrotoluene	4619	4236	4236	0.010	-8.28191	20.00000	Averaged
15	2-nitrotoluene	2890	2876	2876	0.010	-0.46967	20.00000	Averaged
16	4-nitrotoluene	2342	2248	2248	0.010	-4.03123	20.00000	Averaged
17	3-nitrotoluene	3326	3072	3072	0.010	-7.62688	20.00000	Averaged
2	1,2-dinitrobenzene	4627	4552	4552	0.010	-1.63003	20.00000	Averaged

*** = Compound out of QC criteria**

Data File: HLC10103.D
Report Date: 27-Mar-2018 13:55

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HPLCLC21.b\HLC10103.D
Lab Smp Id: WG225143-15
Inj Date : 22-MAR-2018 09:13
Operator : AC   Inst ID: hplc02.i
Smp Info : WG225143-15,SL2079
Misc Info : WG225143,WG225027,WG225143-5,SL2079-1
Comment   :
Method   : \\target_server\gg\chem\hplc02.i\HPLCLC21.b\EXPB05A.m\EXPB05A.m
Meth Date : 27-Mar-2018 08:49 hplc02.i   Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05   Cal File: HLC10037.D
Als bottle: 80   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon   Compound Sublist: SW8330A.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01000	Weight of Sample (Kg)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)	REVIEW CODE
1	HMX	4.533	4.529	0.004	1328	0.25000	0.246(a)	
4	RDX	4.980	4.975	0.005	1335	0.25000	0.246(a)	
51	3,5-Dinitroaniline	7.780	7.782	-0.002	1893	0.25000	0.228(a)	
7	nitrobenzene	8.147	8.149	-0.002	1652	0.25000	0.240(a)	
$ 2	1,2-dinitrobenzene	8.547	8.549	-0.002	1138	0.25000	0.246(a)	
11	4-AM-DNT	9.113	9.115	-0.002	1024	0.25000	0.238(a)	
12	2-AM-DNT	9.673	9.675	-0.002	1353	0.25000	0.235(a)	
15	2-nitrotoluene	11.820	11.822	-0.002	719	0.25000	0.249(a)	
6	1,3-dinitrobenzene	12.273	12.269	0.004	1768	0.25000	0.238(a)	
16	4-nitrotoluene	12.973	12.969	0.004	562	0.25000	0.240(a)	
17	3-nitrotoluene	13.340	13.342	-0.002	768	0.25000	0.231(a)	
13	2,6-dinitrotoluene	15.480	15.475	0.005	693	0.25000	0.229(a)	
14	2,4-dinitrotoluene	19.240	19.235	0.005	1059	0.25000	0.229(a)	
5	1,3,5-trinitrobenzene	20.180	20.175	0.005	846	0.25000	0.229(a)	
9	TETRYL	20.620	20.622	-0.002	586	0.25000	0.231(a)	
10	2,4,6-trinitrotoluene	26.387	26.382	0.005	569	0.25000	0.225(a)	

QC Flag Legend

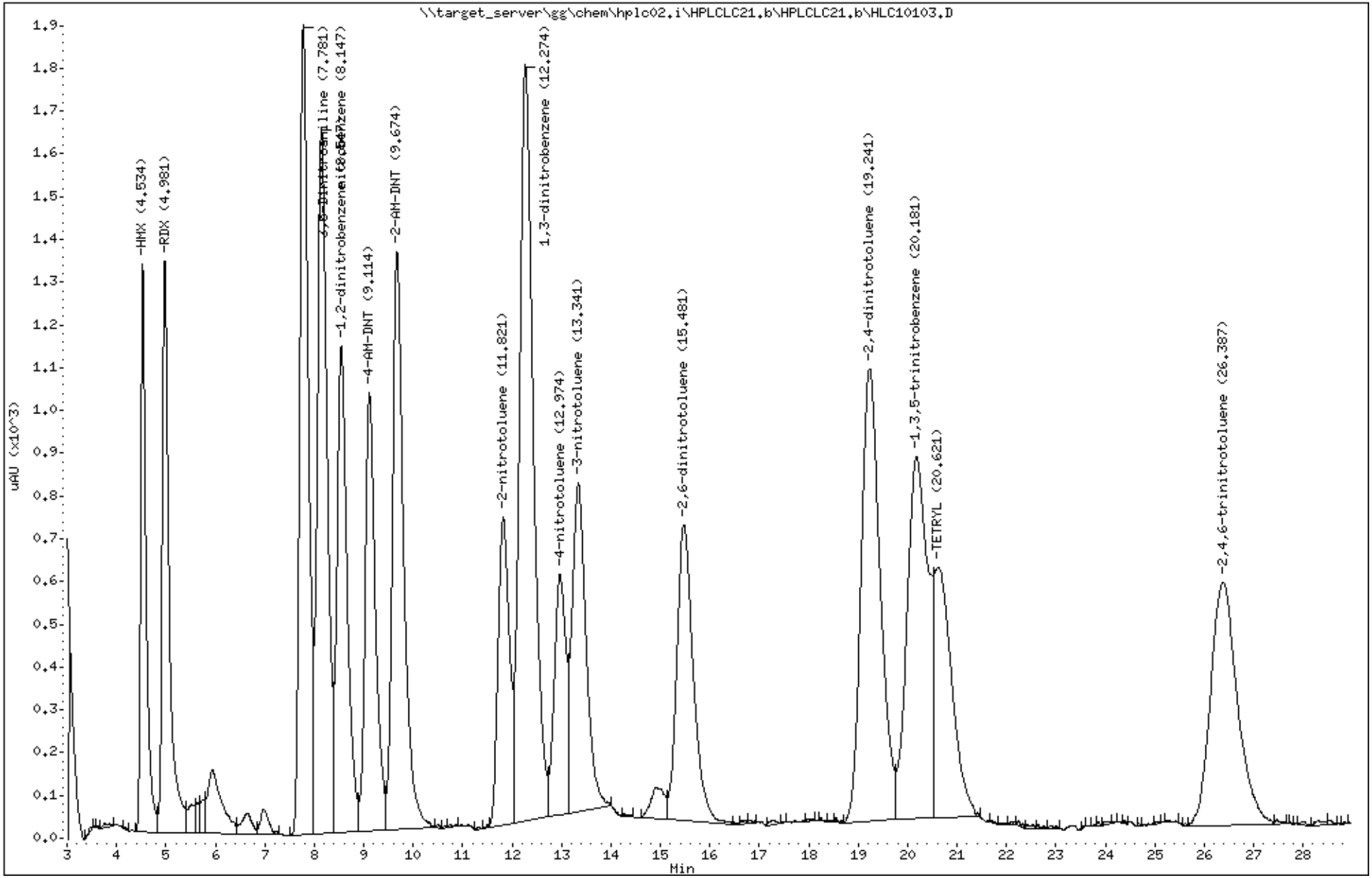
a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC21.b\HPLCLC21.b\HLC10103.D
Date : 22-MAR-2018 09:13
Client ID:
Sample Info: WG225143-15,SL2079

Instrument: hplc02.i

Operator: AC
Column diameter: 4.60

Column phase: Acclaim Exp E1



Katahdin Analytical Services 3000141

Raw QC Data Section

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG225027-1
Client ID: Method Blank Sample
Project:
SDG: SL2079
Lab File ID: HLC10039.D

Sample Date:
Received Date:
Extract Date: 19-MAR-18
Extracted By: JMS
Extraction Method: SW846 8330B MOD
Lab Prep Batch: WG225027

Analysis Date: 20-MAR-18
Analyst: AC
Analysis Method: SW846 8330B
Matrix: SL
% Solids: NA
Report Date: 27-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	50	ug/Kgdrywt	1	100	100	8.6	50.
RDX	U	50	ug/Kgdrywt	1	100	100	6.8	50.
1,3,5-Trinitrobenzene	U	50	ug/Kgdrywt	1	100	100	6.7	50.
1,3-Dinitrobenzene	U	50	ug/Kgdrywt	1	100	100	6.2	50.
Tetryl	U	50	ug/Kgdrywt	1	100	100	5.4	50.
Nitrobenzene	U	50	ug/Kgdrywt	1	100	100	22.	50.
2,4,6-Trinitrotoluene	U	50	ug/Kgdrywt	1	100	100	6.7	50.
2-Am-DNT	U	50	ug/Kgdrywt	1	100	100	21.	50.
4-Am-DNT	U	50	ug/Kgdrywt	1	100	100	17.	50.
2,6-Dinitrotoluene	U	50	ug/Kgdrywt	1	100	100	27.	50.
2,4-Dinitrotoluene	U	50	ug/Kgdrywt	1	100	100	15.	50.
2-Nitrotoluene	U	50	ug/Kgdrywt	1	100	100	12.	50.
3-Nitrotoluene	U	50	ug/Kgdrywt	1	100	100	7.9	50.
4-Nitrotoluene	U	50	ug/Kgdrywt	1	100	100	27.	50.
Nitroglycerin	U	400	ug/Kgdrywt	1	800	800	120	400
PETN	U	400	ug/Kgdrywt	1	800	800	110	400
1,2-Dinitrobenzene		90.4	%					

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://www.katahdinlab.com

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10039.D
Report Date: 27-Mar-2018 13:39

Katahdin Analytical Services

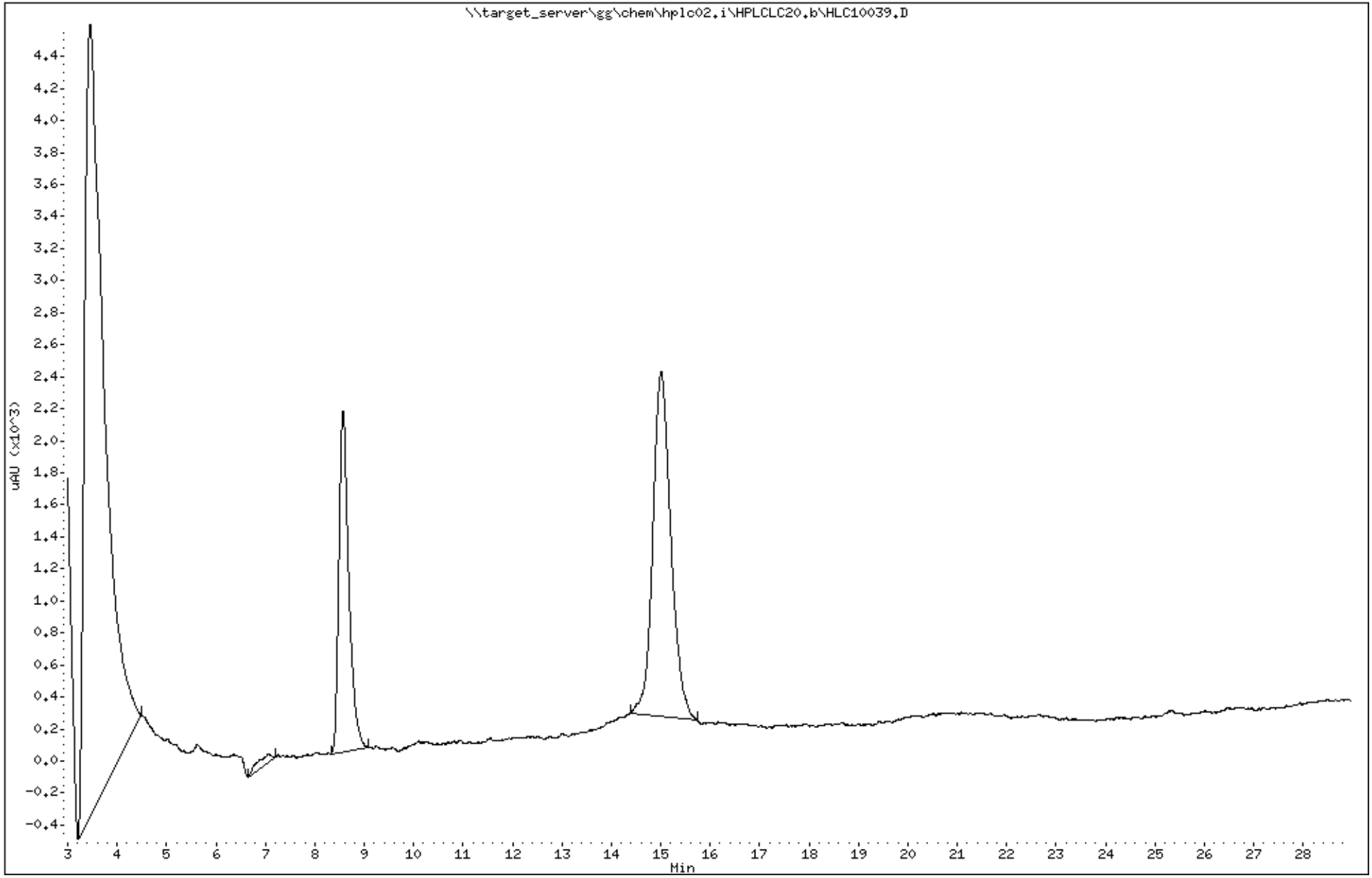
Data file : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10039.D
Lab Smp Id: WG225027-1 Client Smp ID: WG225027-Blank
Inj Date : 20-MAR-2018 19:09
Operator : AC Inst ID: hplc02.i
Smp Info : WG225027-1,SL2079
Misc Info : WG225143,WG225027,WG225143-5,SL2079-1
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\EXPB05A.m
Meth Date : 21-Mar-2018 11:31 abullentin Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 16 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ngpetn.sub
Target Version: 4.12
Processing Host: V200T1

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01000	Weight of Sample (Kg)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/Kgdrywt)

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10039.D
Date : 20-MAR-2018 19:09
Client ID: WG225027-Blank
Instrument: hplc02.i
Sample Info: WG225027-1,SL2079
Operator: AC
Column phase: Acclaim Exp E1
Column diameter: 4.60



Katahdin Analytical Services 3000145

Data File: HLC10039.D
Report Date: 27-Mar-2018 13:42

Katahdin Analytical Services

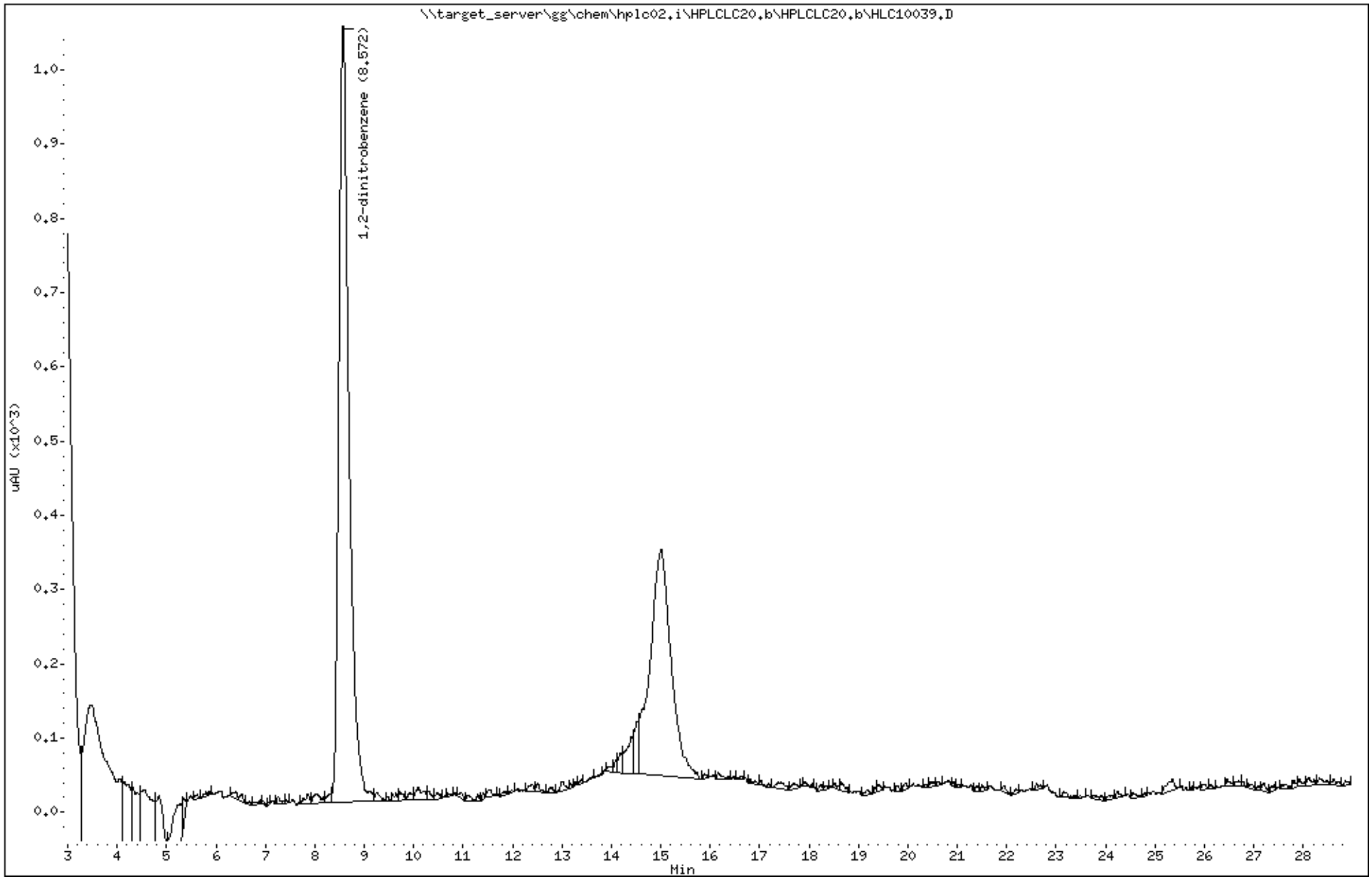
Data file : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HPLCLC20.b\HLC10039.D
Lab Smp Id: WG225027-1 Client Smp ID: WG225027-Blank
Inj Date : 20-MAR-2018 19:09
Operator : AC Inst ID: hplc02.i
Smp Info : WG225027-1,SL2079
Misc Info : WG225143,WG225027,WG225143-5,SL2079-1
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\EXPB05A.m\EXPB05A.m
Meth Date : 22-Mar-2018 05:09 abullentin Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 16 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: SW8330A.sub
Target Version: 4.12
Processing Host: V200T1

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01000	Weight of Sample (Kg)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/Kgdrywt)	REVIEW CODE
$ 2 1,2-dinitrobenzene	8.572	8.575	-0.003	1046	0.22604	452	

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HPLCLC20.b\HLC10039.D
Date : 20-MAR-2018 19:09
Client ID: WG225027-Blank
Instrument: hplc02.i
Sample Info: WG225027-1,SL2079
Operator: AC
Column phase: Acclaim Exp E1
Column diameter: 4.60



Katahdin Analytical Services 3000147

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client:
Lab ID: WG225094-1
Client ID: Method Blank Sample
Project:
SDG: SL2079
Lab File ID: HLC10044.D

Sample Date:
Received Date:
Extract Date: 19-MAR-18
Extracted By: JMS
Extraction Method: SW846 8330
Lab Prep Batch: WG225094

Analysis Date: 20-MAR-18
Analyst: AC
Analysis Method: SW846 8330B
Matrix: AQ
% Solids: NA
Report Date: 27-MAR-18

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	0.12	ug/L	1	.25	0.25	0.043	0.12
RDX	U	0.12	ug/L	1	.25	0.25	0.046	0.12
1,3,5-Trinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.040	0.12
1,3-Dinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.045	0.12
Tetryl	U	0.12	ug/L	1	.25	0.25	0.060	0.12
Nitrobenzene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
2,4,6-Trinitrotoluene	U	0.12	ug/L	1	.25	0.25	0.064	0.12
4-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.053	0.12
2-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.038	0.12
2,6-Dinitrotoluene	U	0.12	ug/L	1	.25	0.25	0.056	0.12
2,4-Dinitrotoluene	U	0.12	ug/L	1	.25	0.25	0.052	0.12
2-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
4-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.060	0.12
3-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.063	0.12
Nitroglycerin	U	2.0	ug/L	1	4	4.0	0.67	2.0
PETN	U	2.0	ug/L	1	4	4.0	0.58	2.0
1,2-Dinitrobenzene		96.3	%					

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://www.katahdinlab.com

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10044.D
Report Date: 27-Mar-2018 13:39

Katahdin Analytical Services

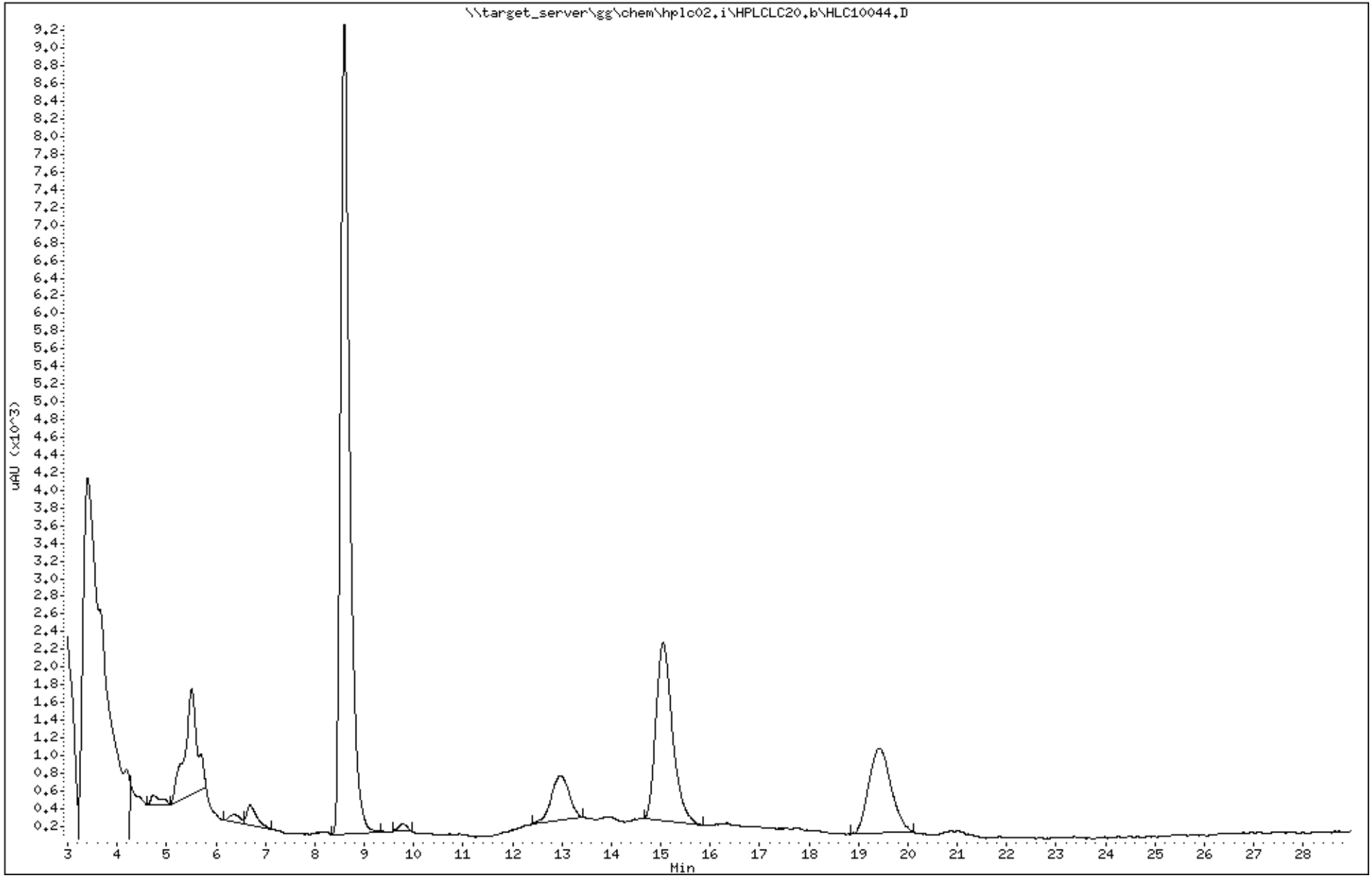
Data file : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10044.D
Lab Smp Id: WG225094-1 Client Smp ID: WG225094-Blank
Inj Date : 20-MAR-2018 21:47
Operator : AC Inst ID: hplc02.i
Smp Info : WG225094-1,SL2079
Misc Info : WG225143,WG225094,WG225143-5,SL2079-14
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\EXPB05A.m
Meth Date : 21-Mar-2018 11:31 abullentin Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 21 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ngpetn.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00500	Final Volume (L)
Vo	0.50000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10044.D
Date : 20-MAR-2018 21:47
Client ID: WG225094-Blank
Instrument: hplc02.i
Sample Info: WG225094-1,SL2079
Purge Volume: 0.5
Operator: AC
Column phase: Acclaim Exp E1
Column diameter: 4.60



Katahdin Analytical Services 3000150

Data File: HLC10044.D
Report Date: 27-Mar-2018 13:43

Katahdin Analytical Services

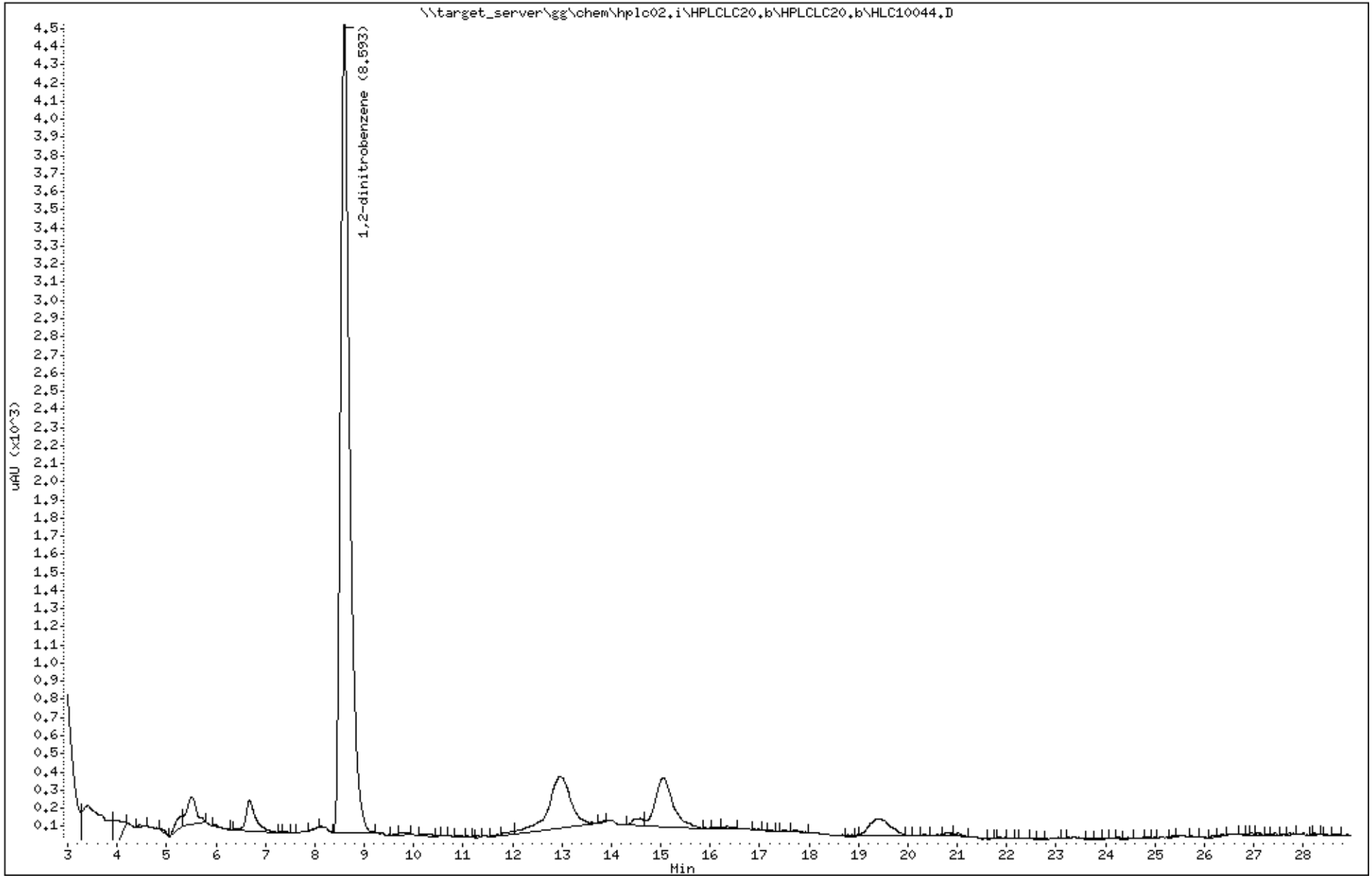
Data file : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HPLCLC20.b\HLC10044.D
Lab Smp Id: WG225094-1 Client Smp ID: WG225094-Blank
Inj Date : 20-MAR-2018 21:47
Operator : AC Inst ID: hplc02.i
Smp Info : WG225094-1,SL2079
Misc Info : WG225143,WG225094,WG225143-5,SL2079-14
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\EXPB05A.m\EXPB05A.m
Meth Date : 22-Mar-2018 05:09 abullentin Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 21 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: SW8330A.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00500	Final Volume (L)
Vo	0.50000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 2 1,2-dinitrobenzene	8.593	8.575	0.018	4455	0.96274	9.63	

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HPLCLC20.b\HLC10044.D
Date : 20-MAR-2018 21:47
Client ID: WG225094-Blank
Instrument: hplc02.i
Sample Info: WG225094-1,SL2079
Purge Volume: 0.5
Operator: AC
Column phase: Acclaim Exp E1
Column diameter: 4.60



Katahdin Analytical Services 3000152

Katahdin
ANALYTICAL SERVICES

LCS/LCSD Recovery Report

LCS ID: WG225027-2
LCSD ID: WG225027-5
Project:
SDG: SL2079
Report Date: 19-APR-18
LCS File ID: HLC10040.D

Received Date:
Extract Date: 19-MAR-18
Extracted By: JMS
Extraction Method: SW846 8330B MOD
Lab Prep Batch: WG225027
LCSD File ID: HLC10041.D

Analysis Date: 20-MAR-18
Analyst: AC
Analysis Method: SW846 8330B
Matrix: SL
% Solids: NA

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
HMX	1000	1030	103.	1030	103.	ug/Kgdrywt	0	20	74-125
RDX	1000	993.	99.3	984.	98.4	ug/Kgdrywt	1	20	67-129
1,3,5-Trinitrobenzene	1000	1040	104.	1050	105.	ug/Kgdrywt	1	20	80-125
1,3-Dinitrobenzene	1000	1030	103.	1030	103.	ug/Kgdrywt	0	20	73-125
Tetryl	1000	1090	109.	1120	112.	ug/Kgdrywt	3	20	68-135
Nitrobenzene	1000	1000	100.	1000	100.	ug/Kgdrywt	0	20	67-129
2,4,6-Trinitrotoluene	1000	1020	102.	1020	102.	ug/Kgdrywt	0	20	71-125
2-Am-DNT	1000	1010	101.	1010	101.	ug/Kgdrywt	0	20	71-125
4-Am-DNT	1000	1060	106.	1070	107.	ug/Kgdrywt	1	20	64-127
2,6-Dinitrotoluene	1000	1030	103.	1010	101.	ug/Kgdrywt	2	20	79-125
2,4-Dinitrotoluene	1000	1040	104.	1030	103.	ug/Kgdrywt	1	20	75-125
2-Nitrotoluene	1000	1060	106.	1050	105.	ug/Kgdrywt	1	20	70-125
3-Nitrotoluene	1000	1040	104.	1040	104.	ug/Kgdrywt	0	20	67-129
4-Nitrotoluene	1000	1090	109.	1080	108.	ug/Kgdrywt	1	20	71-125
Nitroglycerin	1000	880.	88.0	822.	82.2	ug/Kgdrywt	7	20	73-125
PETN	1000	1030	103.	1130	113.	ug/Kgdrywt	9	20	72-128
1,2-Dinitrobenzene			99.4		101.				78-125

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REISSUE

Katahdin Analytical Services 3000153

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10040.D
Report Date: 27-Mar-2018 13:39

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10040.D
Lab Smp Id: WG225027-2 Client Smp ID: WG225027-LCS
Inj Date : 20-MAR-2018 19:40
Operator : AC Inst ID: hplc02.i
Smp Info : WG225027-2,SL2079
Misc Info : WG225143,WG225027,WG225143-5,SL2079-1
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\EXPB05A.m
Meth Date : 21-Mar-2018 11:31 abullentin Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 17 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ngpetn.sub
Target Version: 4.12
Processing Host: V200T1

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01000	Weight of Sample (Kg)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/Kgdrywt)	
8 NITROGLYCERIN	6.988	6.997	-0.009	2425	0.43985	880(M)	M2
18 PETN	13.955	13.963	-0.008	1486	0.51672	1030	

QC Flag Legend

M - Compound response manually integrated.

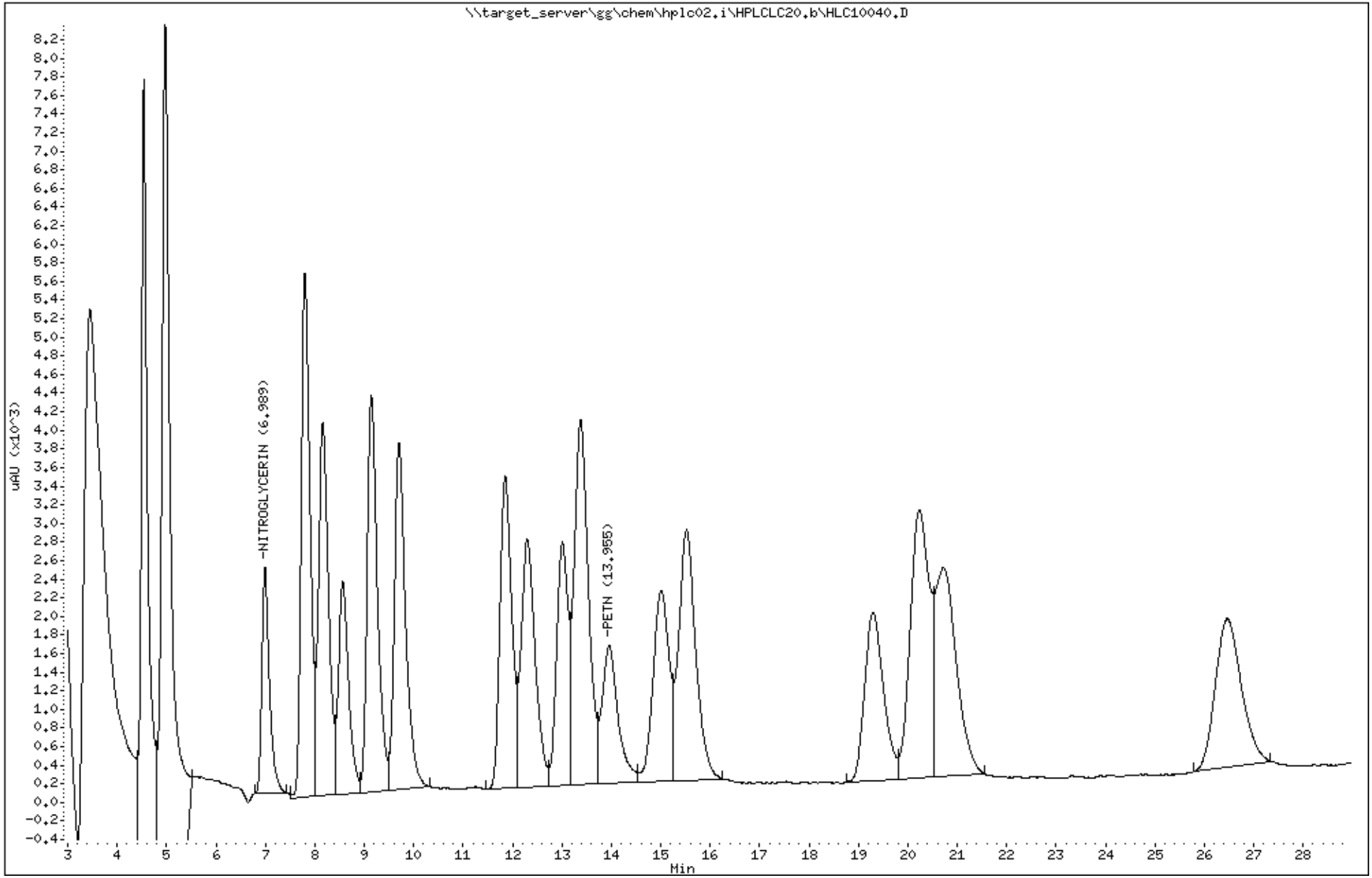
2:43 pm, Mar 27, 2018

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10040.D
Date : 20-MAR-2018 19:40
Client ID: WG225027-LCS
Sample Info: WG225027-2,SL2079

Instrument: hplc02.i

Operator: AC
Column diameter: 4.60

Column phase: Acclaim Exp E1



Katahdin Analytical Services 3000155

Data File: HLC10040.D
Report Date: 27-Mar-2018 13:42

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HPLCLC20.b\HLC10040.D
Lab Smp Id: WG225027-2 Client Smp ID: WG225027-LCS
Inj Date : 20-MAR-2018 19:40
Operator : AC Inst ID: hplc02.i
Smp Info : WG225027-2,SL2079
Misc Info : WG225143,WG225027,WG225143-5,SL2079-1
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\EXPB05A.m\EXPB05A.m
Meth Date : 22-Mar-2018 05:09 abullentin Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 17 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: SW8330A.sub
Target Version: 4.12
Processing Host: V200T1

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01000	Weight of Sample (Kg)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/Kgdrywt)	REVIEW CODE
1	HMX	4.542	4.542	0.000	2772	0.51422	1030(M)	M4
4	RDX	4.988	4.989	-0.001	2725	0.49670	993(M)	M4
51	3,5-Dinitroaniline	7.802	7.809	-0.007	4066	0.48892	978	
7	nitrobenzene	8.162	8.175	-0.013	3446	0.50185	1000	
$ 2	1,2-dinitrobenzene	8.562	8.575	-0.013	1151	0.24873	497	
11	4-AM-DNT	9.148	9.155	-0.007	2286	0.53129	1060	
12	2-AM-DNT	9.702	9.715	-0.013	2919	0.50671	1010	
15	2-nitrotoluene	11.855	11.862	-0.007	1527	0.52845	1060	
6	1,3-dinitrobenzene	12.302	12.315	-0.013	3844	0.51641	1030	
16	4-nitrotoluene	13.008	13.022	-0.014	1275	0.54431	1090	
17	3-nitrotoluene	13.382	13.389	-0.007	1729	0.51990	1040	
13	2,6-dinitrotoluene	15.528	15.542	-0.014	1514	0.51503	1030	
14	2,4-dinitrotoluene	19.302	19.309	-0.007	2391	0.51770	1040	
5	1,3,5-trinitrobenzene	20.235	20.222	0.013	1921	0.52076	1040	
9	TETRYL	20.722	20.722	0.000	1386	0.54684	1090	
10	2,4,6-trinitrotoluene	26.468	26.469	-0.001	1288	0.50982	1020	

2:44 pm, Mar 27, 2018

QC Flag Legend

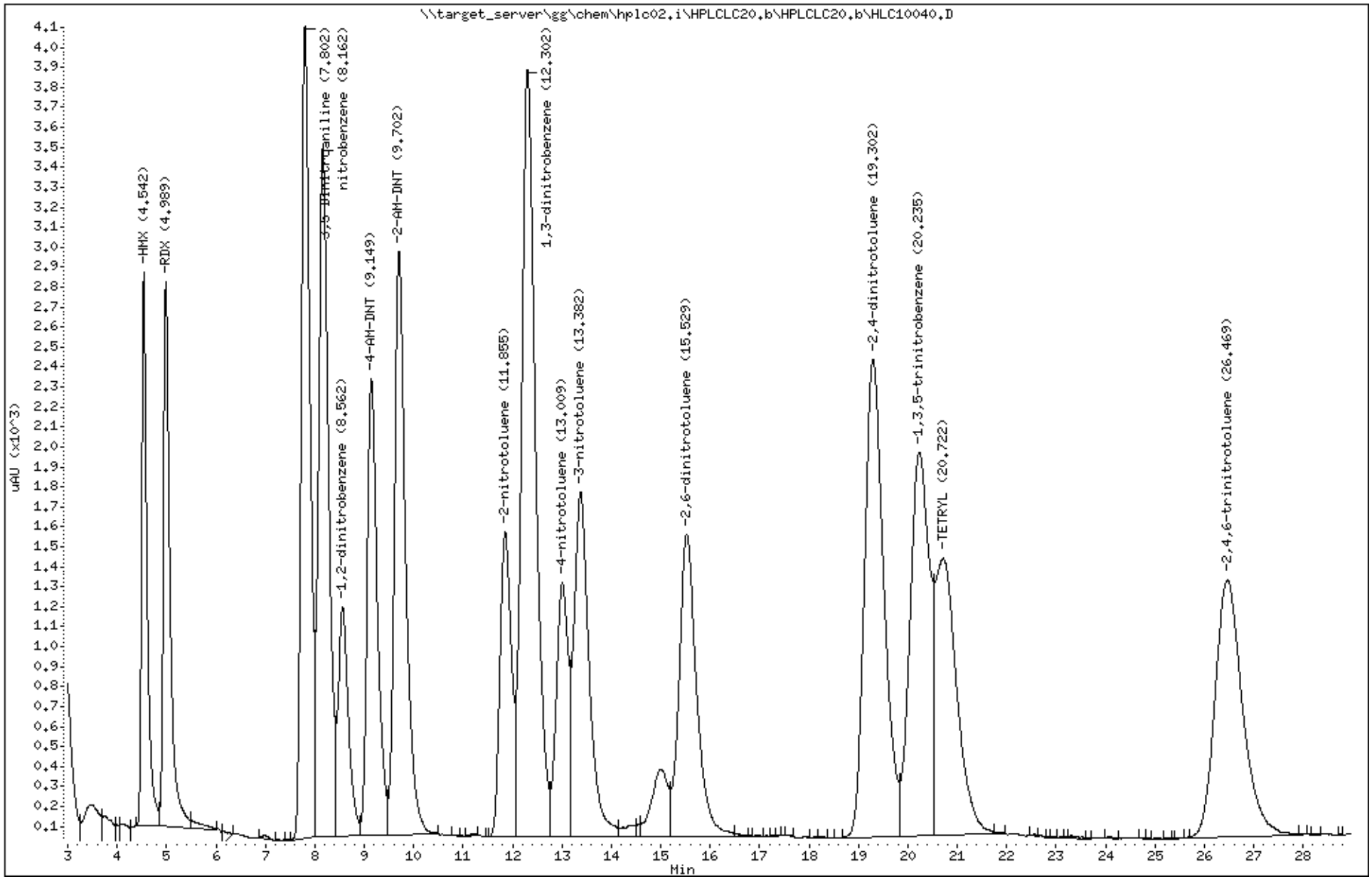
M - Compound response manually integrated.

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HPLCLC20.b\HLC10040.D
Date : 20-MAR-2018 19:40
Client ID: WG225027-LCS
Sample Info: WG225027-2,SL2079

Instrument: hplc02.i

Operator: AC
Column diameter: 4.60

Column phase: Acclaim Exp E1



Katahdin Analytical Services 3000157

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10041.D
Report Date: 27-Mar-2018 13:39

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10041.D
Lab Smp Id: WG225027-5 Client Smp ID: WG225027-LCSD
Inj Date : 20-MAR-2018 20:12
Operator : AC Inst ID: hplc02.i
Smp Info : WG225027-5,SL2079
Misc Info : WG225143,WG225027,WG225143-5,SL2079-1
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\EXPB05A.m
Meth Date : 21-Mar-2018 11:31 abullentin Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 18 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ngpetn.sub
Target Version: 4.12
Processing Host: V200T1

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01000	Weight of Sample (Kg)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

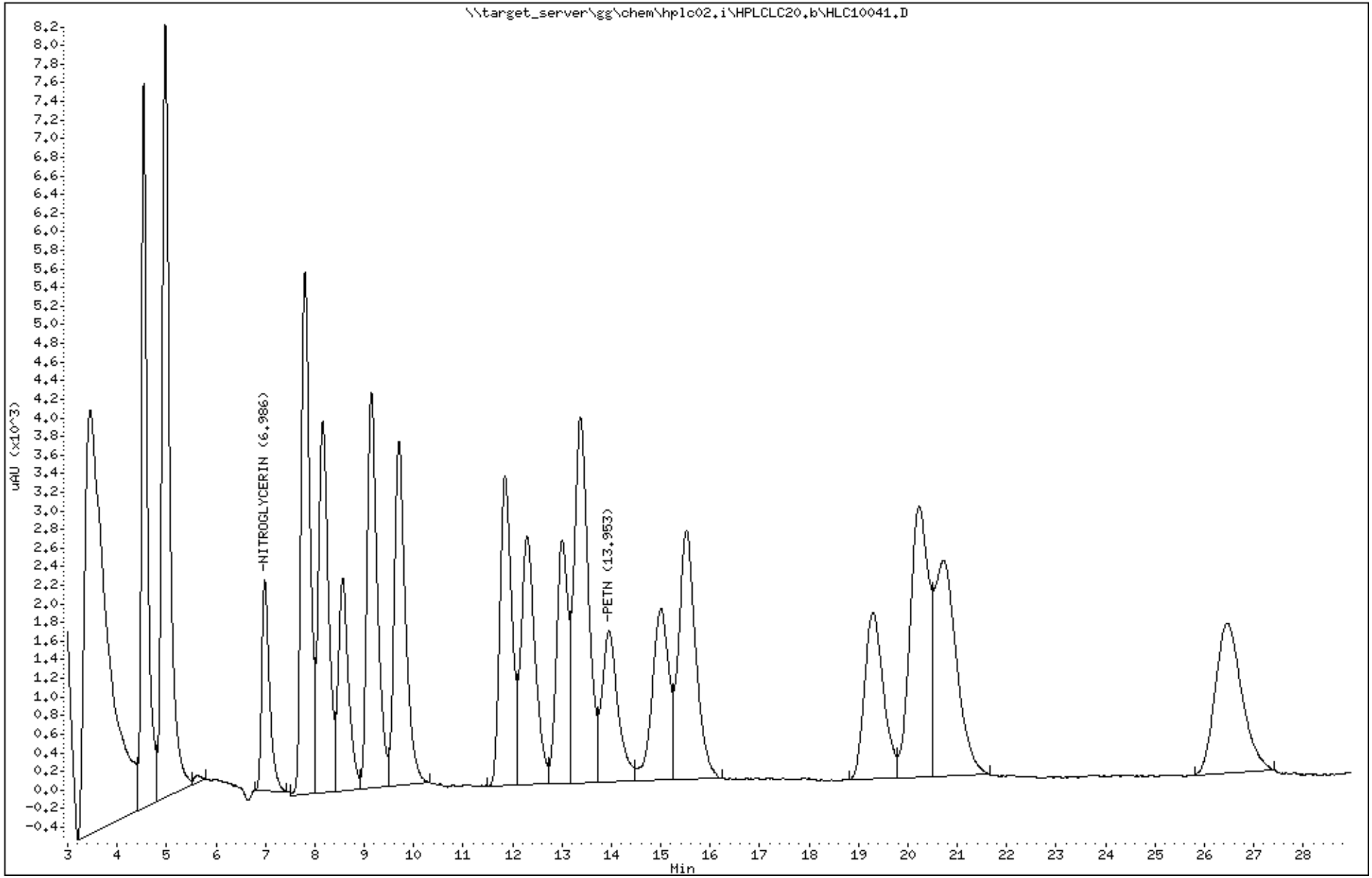
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/Kgdrywt)	
8 NITROGLYCERIN	6.985	6.997	-0.012	2265	0.41083	822(M)	M2
18 PETN	13.952	13.963	-0.011	1626	0.56540	1130	

QC Flag Legend

M - Compound response manually integrated.

AAB
2:44 pm, Mar 27, 2018

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10041.D
Date : 20-MAR-2018 20:12
Client ID: WG225027-LCSD
Instrument: hplc02.i
Sample Info: WG225027-5,SL2079
Operator: AC
Column phase: Acclaim Exp E1
Column diameter: 4.60



Katahdin Analytical Services 3000159

Data File: HLC10041.D
Report Date: 27-Mar-2018 13:43

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HPLCLC20.b\HLC10041.D
Lab Smp Id: WG225027-5 Client Smp ID: WG225027-LCSD
Inj Date : 20-MAR-2018 20:12
Operator : AC Inst ID: hplc02.i
Smp Info : WG225027-5,SL2079
Misc Info : WG225143,WG225027,WG225143-5,SL2079-1
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\EXPB05A.m\EXPB05A.m
Meth Date : 22-Mar-2018 05:09 abullentin Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 18 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: SW8330A.sub
Target Version: 4.12
Processing Host: V200T1

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01000	Weight of Sample (Kg)
M	0.00000	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/Kgdrywt)	REVIEW CODE
1	HMX	4.539	4.542	-0.003	2771	0.51404	1030(M)	M4
4	RDX	4.985	4.989	-0.004	2700	0.49220	984(M)	M4
51	3,5-Dinitroaniline	7.799	7.809	-0.010	4051	0.48712	974	
7	nitrobenzene	8.159	8.175	-0.016	3442	0.50126	1000	
$ 2	1,2-dinitrobenzene	8.559	8.575	-0.016	1166	0.25198	504	
11	4-AM-DNT	9.145	9.155	-0.010	2297	0.53385	1070	
12	2-AM-DNT	9.699	9.715	-0.016	2923	0.50740	1010	
15	2-nitrotoluene	11.845	11.862	-0.017	1520	0.52603	1050	
6	1,3-dinitrobenzene	12.299	12.315	-0.016	3835	0.51520	1030	
16	4-nitrotoluene	13.005	13.022	-0.017	1267	0.54089	1080	
17	3-nitrotoluene	13.372	13.389	-0.017	1722	0.51779	1040	
13	2,6-dinitrotoluene	15.525	15.542	-0.017	1492	0.50736	1010	
14	2,4-dinitrotoluene	19.292	19.309	-0.017	2385	0.51640	1030	
5	1,3,5-trinitrobenzene	20.232	20.222	0.010	1935	0.52455	1050	
9	TETRYL	20.719	20.722	-0.003	1424	0.56183	1120	
10	2,4,6-trinitrotoluene	26.472	26.469	0.003	1292	0.51141	1020	

2:44 pm, Mar 27, 2018

QC Flag Legend

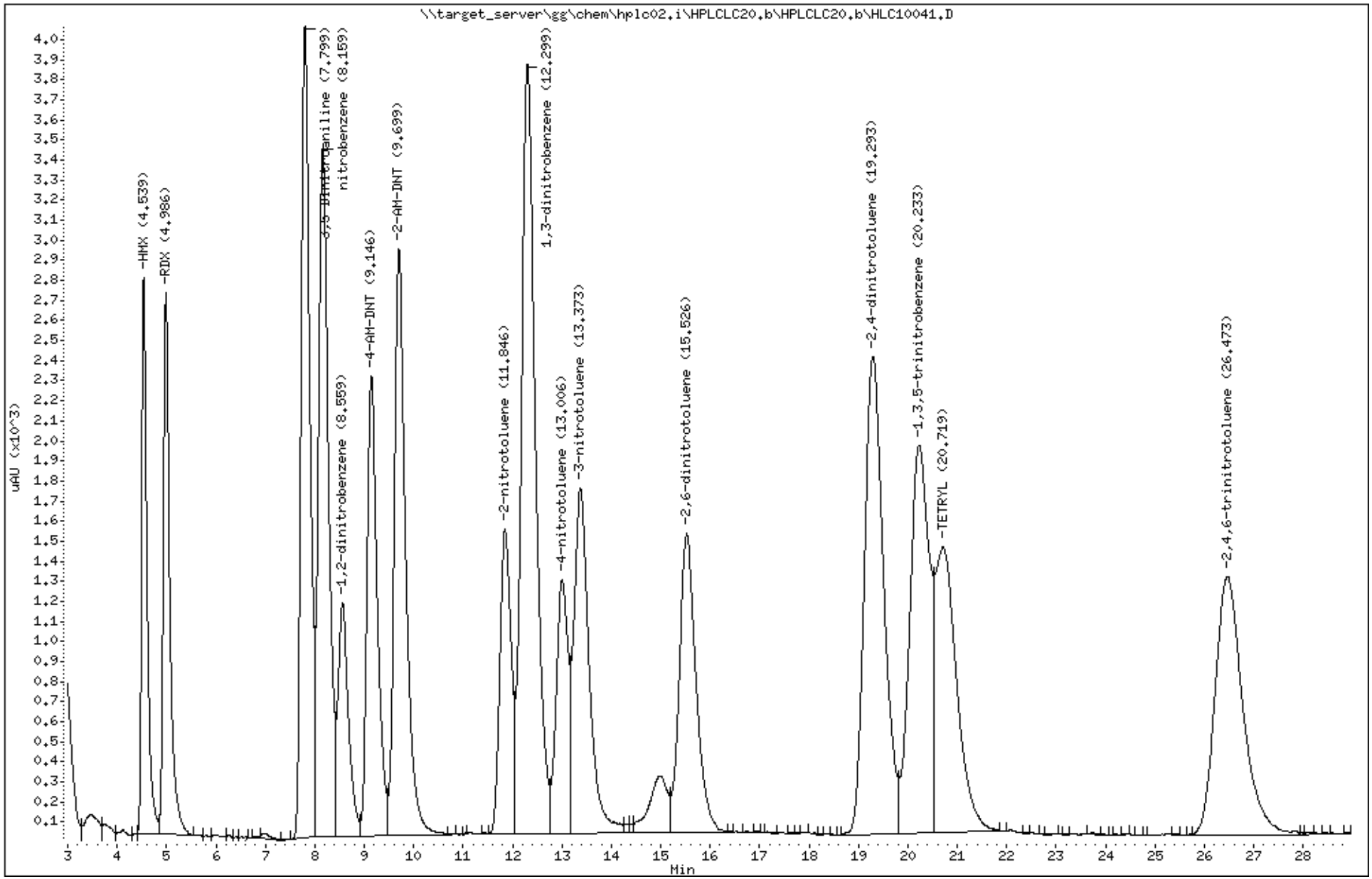
M - Compound response manually integrated.

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HPLCLC20.b\HLC10041.D
Date : 20-MAR-2018 20:12
Client ID: WG225027-LCSD
Sample Info: WG225027-5,SL2079

Instrument: hplc02.i

Operator: AC
Column diameter: 4.60

Column phase: Acclaim Exp E1



Katahdin Analytical Services 3000161

Katahdin
ANALYTICAL SERVICES

Cert No E87604

LCS Recovery Report

Client:
Lab ID: WG225094-2
Client ID: LCS
Project:
SDG: SL2079
LCS File ID: HLC10045.D

Sample Date:
Received Date:
Extract Date: 19-MAR-18
Extracted By: JMS
Extraction Method: SW846 8330
Lab Prep Batch: WG225094

Analysis Date: 20-MAR-18
Analyst: AC
Analysis Method: SW846 8330B
Matrix: AQ
% Solids: NA
Report Date: 27-MAR-18

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
HMX	113.	5.00	5.66	ug/L	65-135
RDX	114.	5.00	5.71	ug/L	68-130
1,3,5-Trinitrobenzene	110.	5.00	5.51	ug/L	73-125
1,3-Dinitrobenzene	115.	5.00	5.74	ug/L	78-120
Tetryl	103.	5.00	5.16	ug/L	64-128
Nitrobenzene	115.	5.00	5.74	ug/L	65-134
2,4,6-Trinitrotoluene	109.	5.00	5.44	ug/L	71-123
4-Am-DNT	121.	5.00	6.03	ug/L	76-125
2-Am-DNT	114.	5.00	5.70	ug/L	79-120
2,6-Dinitrotoluene	111.	5.00	5.54	ug/L	77-127
2,4-Dinitrotoluene	116.	5.00	5.79	ug/L	78-120
2-Nitrotoluene	117.	5.00	5.85	ug/L	70-127
4-Nitrotoluene	120.	5.00	6.01	ug/L	71-127
3-Nitrotoluene	111.	5.00	5.53	ug/L	73-125
Nitroglycerin	111.	20.0	22.2	ug/L	74-127
PETN	103.	20.0	20.6	ug/L	73-127
1,2-Dinitrobenzene	101.				83-120

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
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Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10045.D
Report Date: 27-Mar-2018 13:39

Katahdin Analytical Services

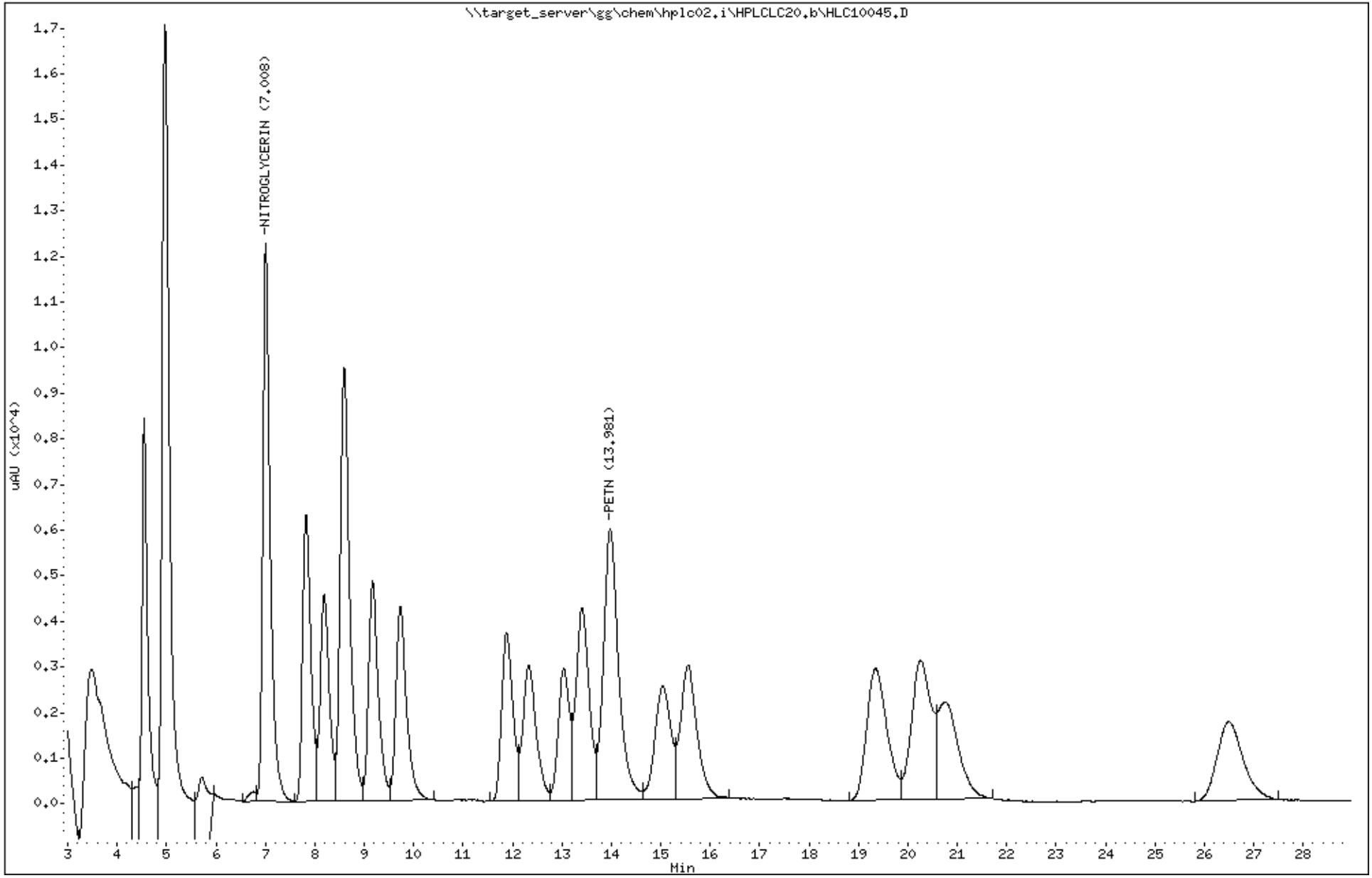
Data file : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10045.D
Lab Smp Id: WG225094-2 Client Smp ID: WG225094-LCS
Inj Date : 20-MAR-2018 22:19
Operator : AC Inst ID: hplc02.i
Smp Info : WG225094-2,SL2079
Misc Info : WG225143,WG225094,WG225143-5,SL2079-14
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\EXPB05A.m
Meth Date : 21-Mar-2018 11:31 abullentin Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 22 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ngpetn.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00500	Final Volume (L)
Vo	0.50000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
8 NITROGLYCERIN	7.007	6.997	0.010	12218	2.21614	22.2
18 PETN	13.981	13.963	0.018	5923	2.05957	20.6

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10045.D
Date : 20-MAR-2018 22:19
Client ID: WG225094-LCS
Instrument: hplc02.i
Sample Info: WG225094-2,SL2079
Purge Volume: 0.5
Operator: AC
Column phase: Acclaim Exp E1
Column diameter: 4.60



Katahdin Analytical Services 3000164

Data File: HLC10045.D
Report Date: 27-Mar-2018 13:43

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HPLCLC20.b\HLC10045.D
Lab Smp Id: WG225094-2 Client Smp ID: WG225094-LCS
Inj Date : 20-MAR-2018 22:19
Operator : AC Inst ID: hplc02.i
Smp Info : WG225094-2,SL2079
Misc Info : WG225143,WG225094,WG225143-5,SL2079-14
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\EXPB05A.m\EXPB05A.m
Meth Date : 22-Mar-2018 05:09 abullentin Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 22 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: SW8330A.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*(Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.00500	Final Volume (L)
Vo	0.50000	Sample Volume (L)
Cpnd Variable		Local Compound Variable

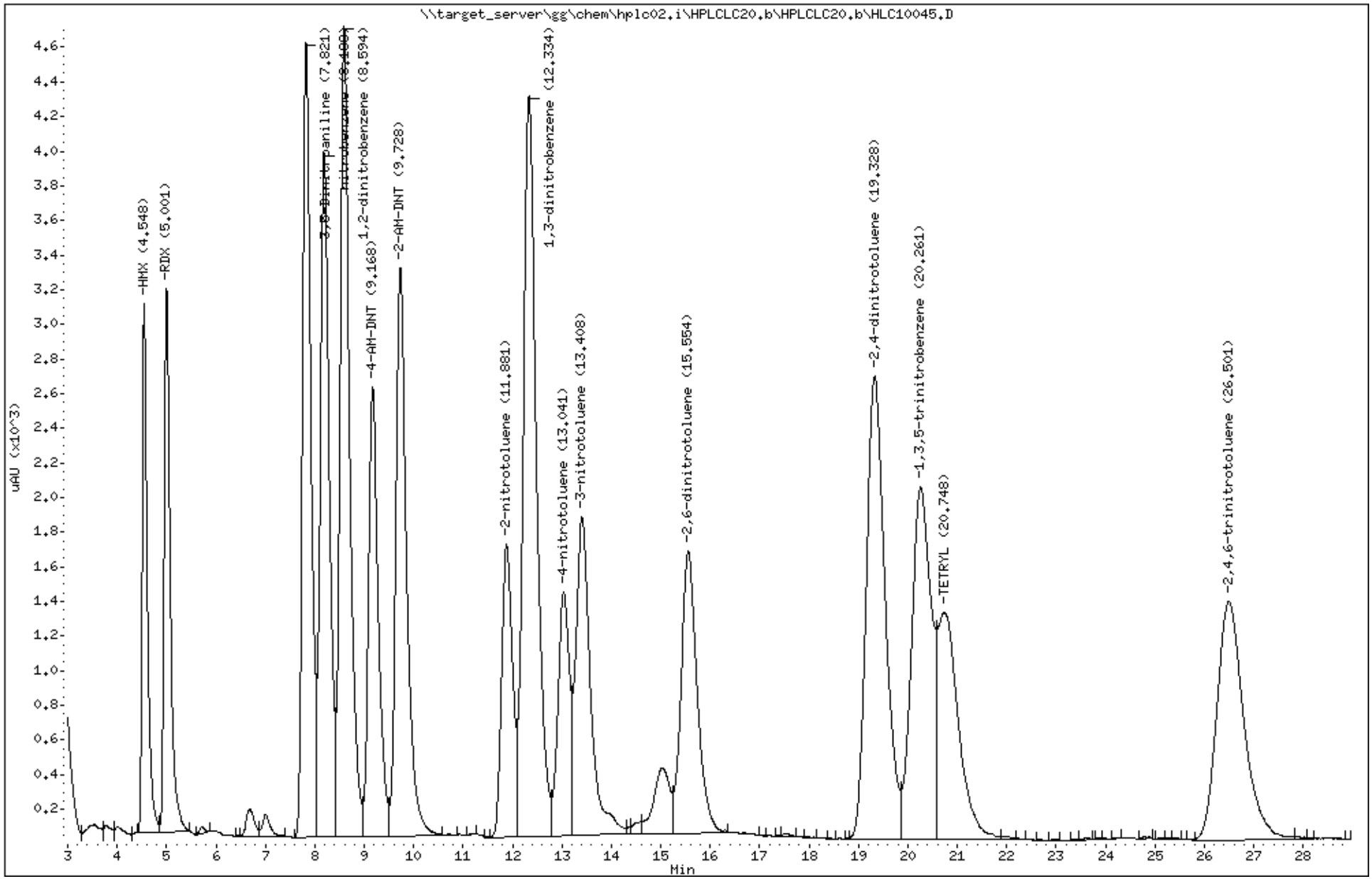
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
1	HMX	4.547	4.542	0.005	3053	0.56635	5.66(M)	M2
4	RDX	5.001	4.989	0.012	3137	0.57091	5.71(M)	M2
51	3,5-Dinitroaniline	7.821	7.809	0.012	4585	0.55133	5.51	
7	nitrobenzene	8.187	8.175	0.012	3945	0.57452	5.74	
$ 2	1,2-dinitrobenzene	8.594	8.575	0.019	4680	1.01136	10.1	
11	4-AM-DNT	9.167	9.155	0.012	2595	0.60311	6.03	
12	2-AM-DNT	9.727	9.715	0.012	3281	0.56955	5.70	
15	2-nitrotoluene	11.881	11.862	0.019	1691	0.58521	5.85	
6	1,3-dinitrobenzene	12.334	12.315	0.019	4273	0.57404	5.74	
16	4-nitrotoluene	13.041	13.022	0.019	1407	0.60066	6.01	
17	3-nitrotoluene	13.407	13.389	0.018	1838	0.55268	5.53	
13	2,6-dinitrotoluene	15.554	15.542	0.012	1627	0.55442	5.54	
14	2,4-dinitrotoluene	19.327	19.309	0.018	2673	0.57876	5.79	
5	1,3,5-trinitrobenzene	20.261	20.222	0.039	2033	0.55112	5.51	
9	TETRYL	20.747	20.722	0.025	1309	0.51646	5.16	
10	2,4,6-trinitrotoluene	26.501	26.469	0.032	1375	0.54426	5.44	

AAB
2:43 pm, Mar 27, 2018

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HPLCLC20.b\HLC10045.D
Date : 20-MAR-2018 22:19
Client ID: WG225094-LCS
Instrument: hplc02.i
Sample Info: WG225094-2,SL2079
Purge Volume: 0.5
Operator: AC
Column phase: Acclaim Exp E1
Column diameter: 4.60



Katahdin Analytical Services 3000166

Katahdin
ANALYTICAL SERVICES

MS/MSD Recovery Report

MS ID: WG225027-3
MSD ID: WG225027-4
Sample ID: SL2079-9
Client ID: CHAAP-BKRD-SS10
Project:
SDG: SL2079
MS File ID: HLC10042.D

Received Date:
Extract Date: 19-MAR-18
Extracted By: JMS
Extraction Method: SW846 8330B MOD
Lab Prep Batch: WG225027
Report Date: 19-APR-18
MSD File ID: HLC10043.D

Analysis Date: 20-MAR-18
Analyst: AC
Analysis Method: SW846 8330B
Matrix: SL
% Solids: 75.

Compound	MS Spike	MSD Spike	Conc Units	Samp Conc	MS Conc	MSD Conc	MS Rec (%)	MSD Rec (%)	RPD (%)	RPD Limit	Limits
HMX	1330	1280	ug/Kgdrywt	U65	1400	1200	102.	97.9	8	20	74-125
RDX	1330	1280	ug/Kgdrywt	U65	1300	1200	97.2	93.2	8	20	67-129
1,3,5-Trinitrobenzene	1330	1280	ug/Kgdrywt	U65	1300	1300	100.	98.7	5	20	80-125
1,3-Dinitrobenzene	1330	1280	ug/Kgdrywt	U65	1400	1300	102.	98.7	7	20	73-125
Tetryl	1330	1280	ug/Kgdrywt	U65	1400	1300	107.	104.	6	20	68-135
Nitrobenzene	1330	1280	ug/Kgdrywt	U65	1300	1200	99.5	96.4	7	20	67-129
2,4,6-Trinitrotoluene	1330	1280	ug/Kgdrywt	U65	1300	1200	98.7	94.8	8	20	71-125
2-Am-DNT	1330	1280	ug/Kgdrywt	U65	1300	1200	101.	97.9	7	20	71-125
4-Am-DNT	1330	1280	ug/Kgdrywt	U65	1400	1300	106.	103.	6	20	64-127
2,6-Dinitrotoluene	1330	1280	ug/Kgdrywt	U65	1300	1200	100.	97.1	7	20	79-125
2,4-Dinitrotoluene	1330	1280	ug/Kgdrywt	U65	1300	1300	101.	98.7	6	20	75-125
2-Nitrotoluene	1330	1280	ug/Kgdrywt	U65	1400	1300	105.	101.	7	20	70-125
3-Nitrotoluene	1330	1280	ug/Kgdrywt	U65	1400	1200	102.	97.1	8	20	67-129
4-Nitrotoluene	1330	1280	ug/Kgdrywt	U65	1400	1300	107.	103.	8	20	71-125
Nitroglycerin	1330	1280	ug/Kgdrywt	U520	1200	1100	90.4	85.4	10	20	73-125
PETN	1330	1280	ug/Kgdrywt	U520	1200	1300	89.7	102.	9	20	72-128
1,2-Dinitrobenzene							98.2	185.*			78-125

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029
http://www.katahdinlab.com

REISSUE

Katahdin Analytical Services 3000167

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10042.D
Report Date: 27-Mar-2018 13:48

Katahdin Analytical Services

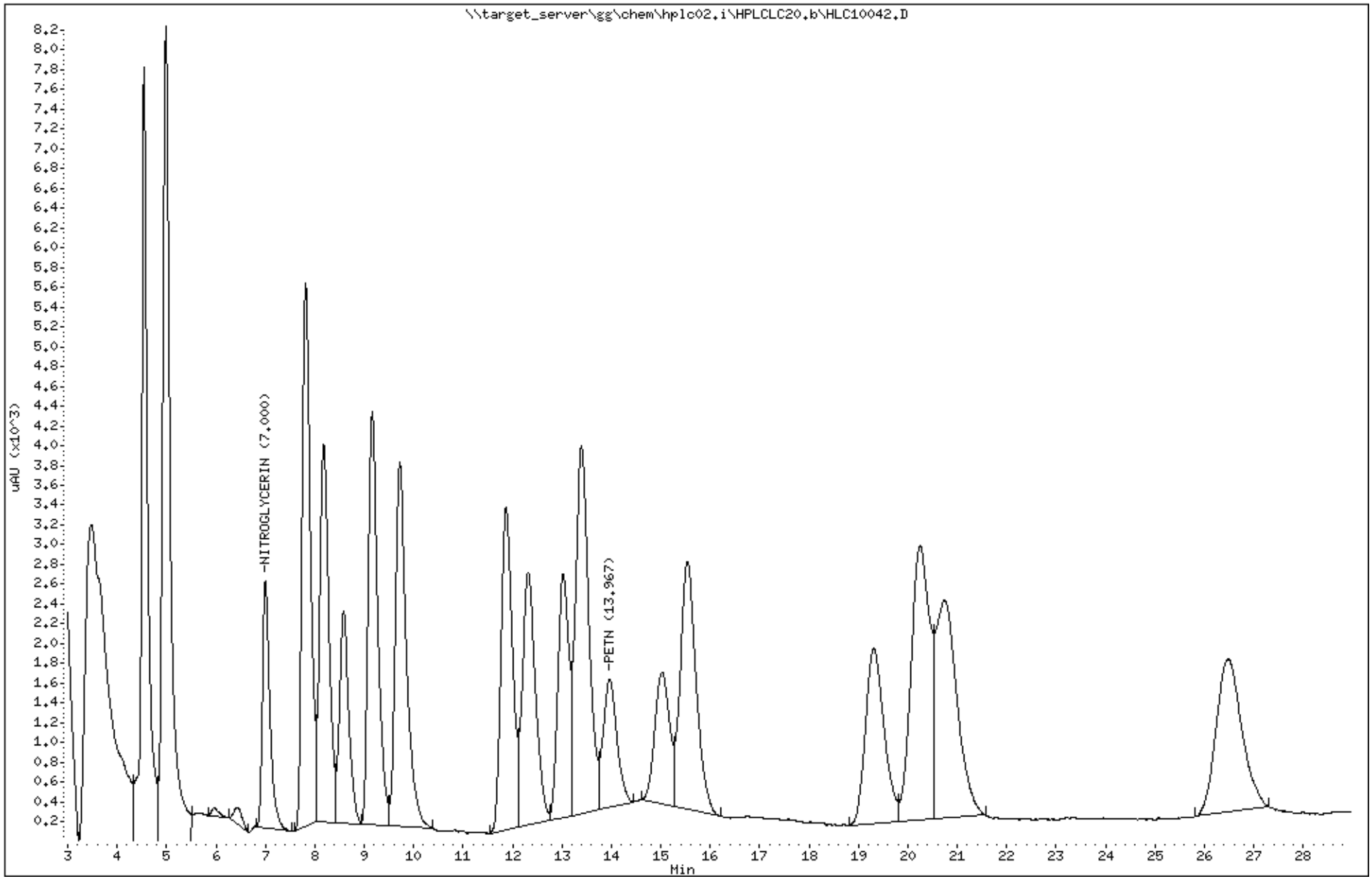
Data file : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10042.D
Lab Smp Id: WG225027-3 Client Smp ID: CHAAP-BKRD-SS10MS
Inj Date : 20-MAR-2018 20:44
Operator : AC Inst ID: hplc02.i
Smp Info : WG225027-3,SL2079
Misc Info : WG225143,WG225027,WG225143-5,SL2079-9
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\EXPB05A.m
Meth Date : 21-Mar-2018 11:31 abullentin Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 19 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ngpetn.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01010	Weight of Sample (Kg)
M	25.390	% Moisture
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/Kgdrywt)
8 NITROGLYCERIN	7.000	6.997	0.003	2496	0.45273	1200
18 PETN	13.966	13.963	0.003	1289	0.44822	1190

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10042.D
Date : 20-MAR-2018 20:44
Client ID: CHAAP-BKRD-SS10MS
Instrument: hplc02.i
Sample Info: WG225027-3,SL2079
Operator: AC
Column phase: Acclaim Exp E1
Column diameter: 4.60



Katahdin Analytical Services 3000169

Data File: HLC10042.D
Report Date: 27-Mar-2018 13:49

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HPLCLC20.b\HLC10042.D
Lab Smp Id: WG225027-3 Client Smp ID: CHAAP-BKRD-SS10MS
Inj Date : 20-MAR-2018 20:44
Operator : AC Inst ID: hplc02.i
Smp Info : WG225027-3,SL2079
Misc Info : WG225143,WG225027,WG225143-5,SL2079-9
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\EXPB05A.m\EXPB05A.m
Meth Date : 22-Mar-2018 05:09 abullentin Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 19 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: SW8330A.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01010	Weight of Sample (Kg)
M	25.390	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/Kgdrywt)	REVIEW CODE
1	HMX	4.546	4.542	0.004	2759	0.51181	1360(M)	M4
4	RDX	4.993	4.989	0.004	2673	0.48734	1290(M)	M4
51	3,5-Dinitroaniline	7.813	7.809	0.004	4035	0.48519	1290	
7	nitrobenzene	8.180	8.175	0.005	3420	0.49806	1320	
$ 2	1,2-dinitrobenzene	8.580	8.575	0.005	1137	0.24571	652	
11	4-AM-DNT	9.160	9.155	0.005	2284	0.53083	1410	
12	2-AM-DNT	9.720	9.715	0.005	2904	0.50410	1340	
15	2-nitrotoluene	11.873	11.862	0.011	1510	0.52257	1390	
6	1,3-dinitrobenzene	12.320	12.315	0.005	3798	0.51023	1350	
16	4-nitrotoluene	13.026	13.022	0.004	1252	0.53449	1420	
17	3-nitrotoluene	13.400	13.389	0.011	1695	0.50968	1350	
13	2,6-dinitrotoluene	15.540	15.542	-0.002	1473	0.50073	1330	
14	2,4-dinitrotoluene	19.313	19.309	0.004	2331	0.50471	1340	
5	1,3,5-trinitrobenzene	20.246	20.222	0.024	1854	0.50259	1330	
9	TETRYL	20.740	20.722	0.018	1357	0.53540	1420	
10	2,4,6-trinitrotoluene	26.486	26.469	0.017	1248	0.49399	1310	



2:44 pm, Mar 27, 2018

QC Flag Legend

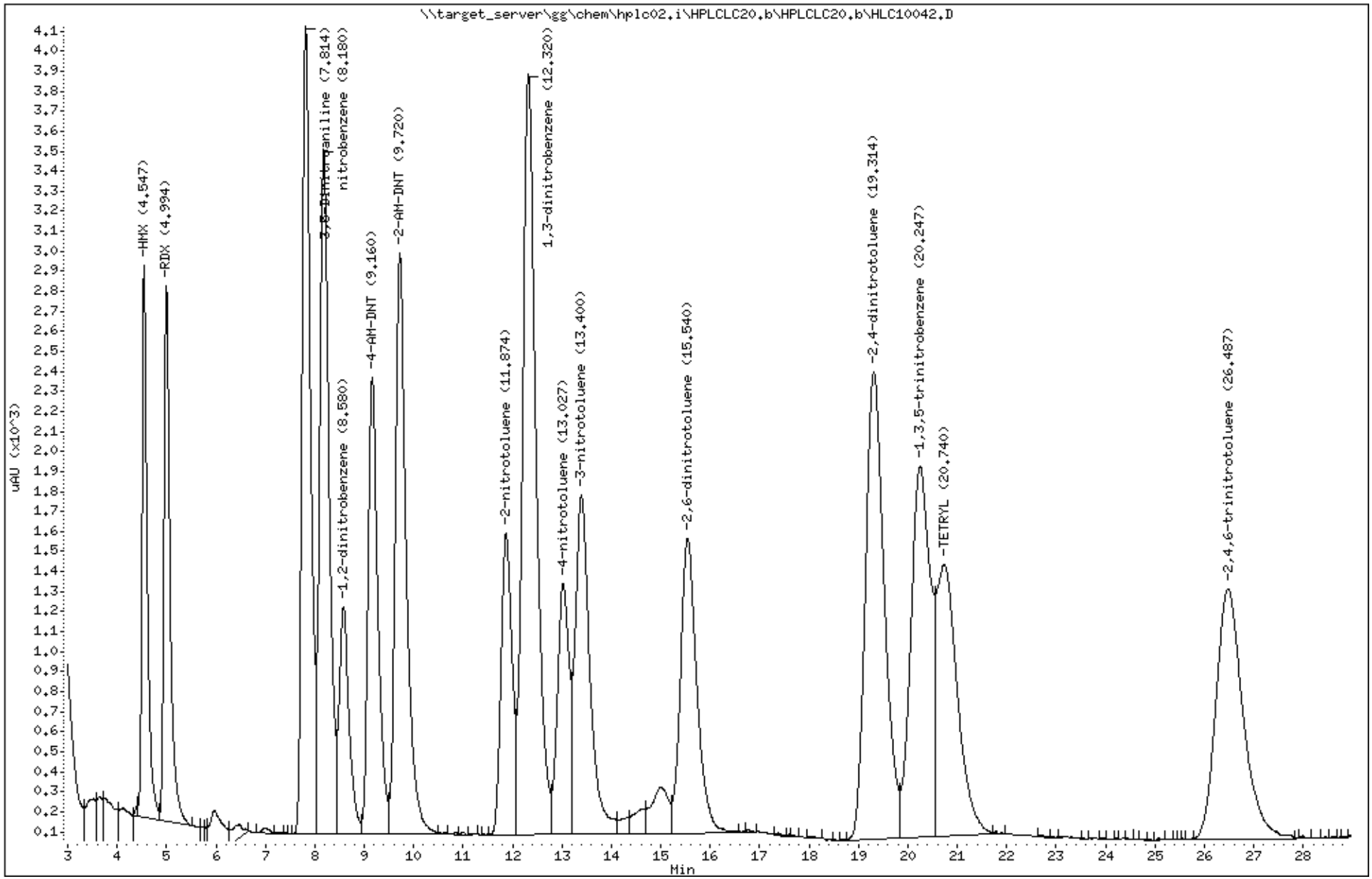
M - Compound response manually integrated.

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HPLCLC20.b\HLC10042.D
Date : 20-MAR-2018 20:44
Client ID: CHAAP-BKRD-SS10MS
Sample Info: WG225027-3,SL2079

Instrument: hplc02.i

Operator: AC
Column diameter: 4.60

Column phase: Acclaim Exp E1



Katahdin Analytical Services 3000171

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10043.D
Report Date: 27-Mar-2018 13:48

Katahdin Analytical Services

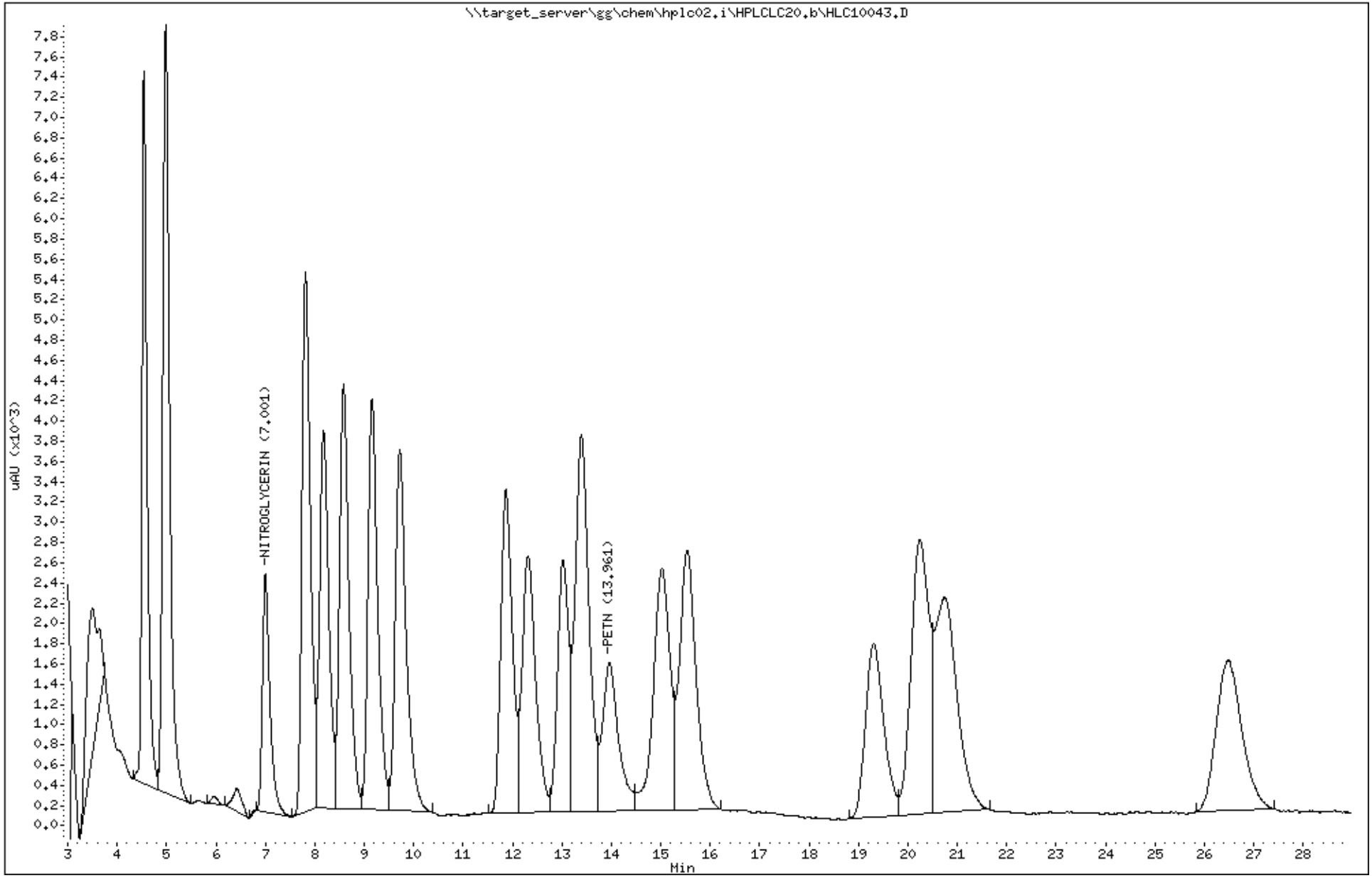
Data file : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10043.D
Lab Smp Id: WG225027-4 Client Smp ID: CHAAP-BKRD-SS10MSD
Inj Date : 20-MAR-2018 21:16
Operator : AC Inst ID: hplc02.i
Smp Info : WG225027-4,SL2079
Misc Info : WG225143,WG225027,WG225143-5,SL2079-9
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\EXPB05A.m
Meth Date : 21-Mar-2018 11:31 abullentin Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 20 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ngpetn.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01050	Weight of Sample (Kg)
M	25.390	% Moisture
Cpnd Variable		Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/Kgdrywt)
8 NITROGLYCERIN	7.001	6.997	0.004	2351	0.42643	1090
18 PETN	13.961	13.963	-0.002	1464	0.50907	1300

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HLC10043.D
Date : 20-MAR-2018 21:16
Client ID: CHAAP-BKRD-SS10MSD
Instrument: hplc02.i
Sample Info: WG225027-4,SL2079
Operator: AC
Column phase: Acclaim Exp E1
Column diameter: 4.60



Katahdin Analytical Services 3000173

Data File: HLC10043.D
Report Date: 27-Mar-2018 13:49

Katahdin Analytical Services

Data file : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HPLCLC20.b\HLC10043.D
Lab Smp Id: WG225027-4 Client Smp ID: CHAAP-BKRD-SS10MSD
Inj Date : 20-MAR-2018 21:16
Operator : AC Inst ID: hplc02.i
Smp Info : WG225027-4,SL2079
Misc Info : WG225143,WG225027,WG225143-5,SL2079-9
Comment :
Method : \\target_server\gg\chem\hplc02.i\HPLCLC20.b\EXPB05A.m\EXPB05A.m
Meth Date : 22-Mar-2018 05:09 abullentin Quant Type: ESTD
Cal Date : 20-MAR-2018 18:05 Cal File: HLC10037.D
Als bottle: 20 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: SW8330A.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 1000*Vt*(1/Ws)*(100/(100-M)) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	0.02000	Final Volume (L)
Ws	0.01050	Weight of Sample (Kg)
M	25.390	% Moisture
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/Kgdrywt)	REVIEW CODE
1	HMX	4.541	4.542	-0.001	2648	0.49122	1250	
4	RDX	4.994	4.989	0.005	2565	0.46788	1190	
51	3,5-Dinitroaniline	7.814	7.809	0.005	3906	0.46968	1200	
7	nitrobenzene	8.181	8.175	0.006	3319	0.48335	1230	
$ 2	1,2-dinitrobenzene	8.581	8.575	0.006	2133	0.46095	1180(RR)	
11	4-AM-DNT	9.161	9.155	0.006	2228	0.51781	1320	
12	2-AM-DNT	9.714	9.715	-0.001	2820	0.48952	1250	
15	2-nitrotoluene	11.867	11.862	0.005	1465	0.50700	1290	
6	1,3-dinitrobenzene	12.321	12.315	0.006	3675	0.49371	1260	
16	4-nitrotoluene	13.021	13.022	-0.001	1201	0.51272	1310	
17	3-nitrotoluene	13.394	13.389	0.005	1621	0.48742	1240	
13	2,6-dinitrotoluene	15.541	15.542	-0.001	1427	0.48470	1240	
14	2,4-dinitrotoluene	19.307	19.309	-0.002	2272	0.49193	1260	
5	1,3,5-trinitrobenzene	20.241	20.222	0.019	1820	0.49338	1260	
9	TETRYL	20.741	20.722	0.019	1322	0.52159	1330	
10	2,4,6-trinitrotoluene	26.481	26.469	0.012	1201	0.47539	1210	

QC Flag Legend

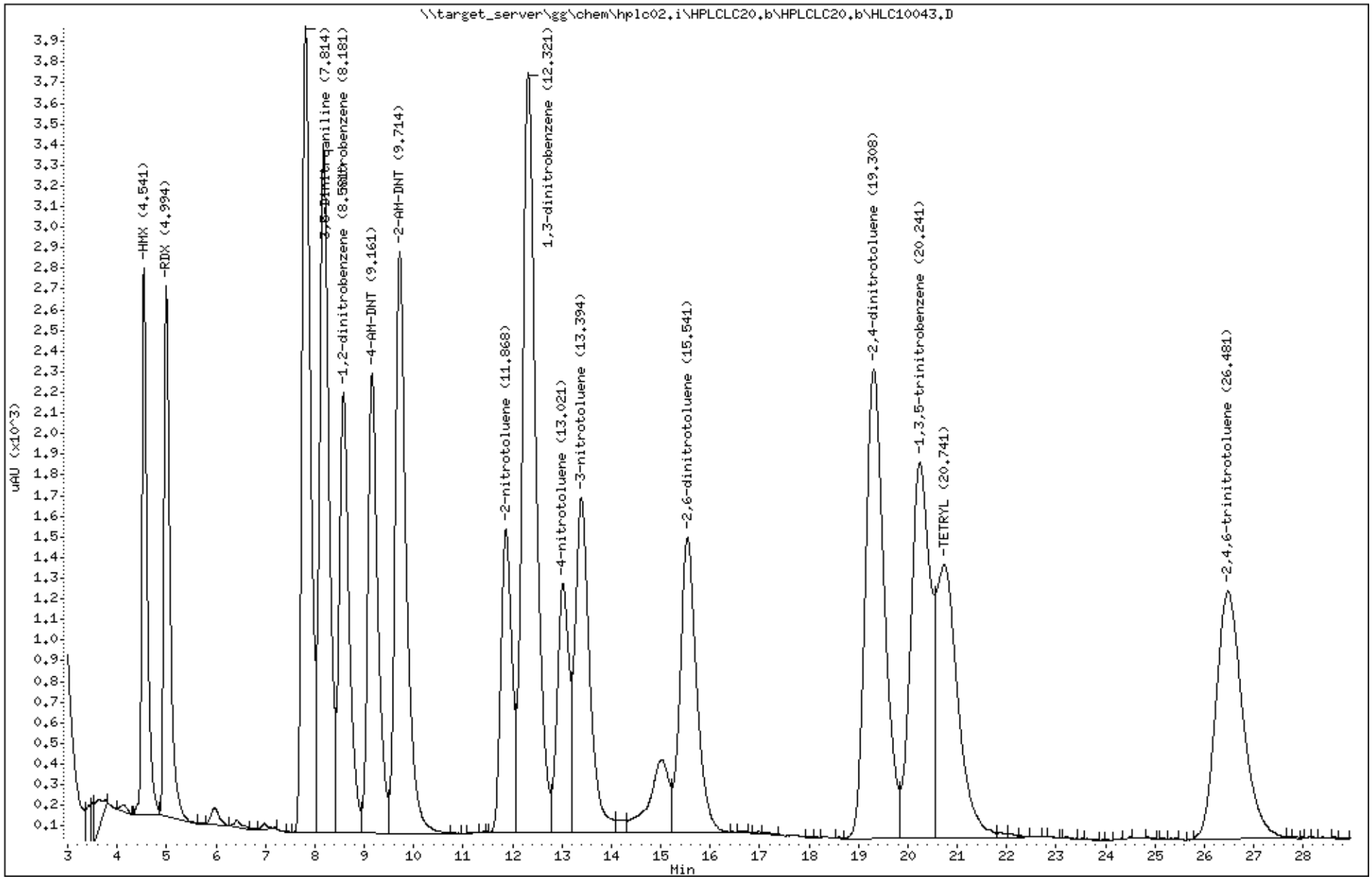
R - Spike/Surrogate failed recovery limits.

Data File: \\target_server\gg\chem\hplc02.i\HPLCLC20.b\HPLCLC20.b\HLC10043.D
Date : 20-MAR-2018 21:16
Client ID: CHAAP-BKRD-SS10MSD
Sample Info: WG225027-4,SL2079

Instrument: hplc02.i

Operator: AC
Column diameter: 4.60

Column phase: Acclaim Exp E1



Katahdin Analytical Services 3000175

Logbooks and Supporting Documents

Katahdin Analytical Services, Inc.
Organic Extractions Log – Explosives (Soils)

Method SW846 8330B

Surrogate Lot # P9006
Spike Lot # P8990
Acetonitrile (ACN) Lot # DQ315

Extraction Start Time: 15:40 3/19/18
Extraction End Time: 9:40 3/20/18

Balance S/N Mettler PJ400
Sieve (No. 30) S/N —

NG: STK5340 PETN: STK5339 EDGN: STK5457

Date Extracted	Analyst	Sample Id.	Initial Amount (g)	Surrogate Volume (ml)	Spike Volume (ml)	Final Volume (mL)	Filter 5 ml of Extract	Add 10 ml of Water to ACN Extract	EXP231 Tray Location	Comments
3-19-18	JMS	WG225027-1	10.00	0.50	NR	20mL	✓	✓	F4	IR465575
		-2	10.03		100ml				5	
		-3	10.10						6	MS SL2079-9 N
		-4	10.54						7	MSD possible double surr
		-5	10.01						8	LCSD

EX-022 – Revision 1 – 11/01/2012

QAEX297

Date Extracted	Analyst	Sample Id.	Initial Amount (g)	Surrogate Volume (ml)	Spike Volume (ml)	Final Volume (mL)	Filter 5 ml of Extract	Add 10 ml of Water to ACN Extract	EXP231 Tray Location	Comments
3-19-18	JMS	SL2079-1 E	10.30	0.5ml	NR	20ml	✓	✓	F9	clay
		-2 E	12.56						10	
		-3 E	10.51						11	
		-4 E	10.24						12	
		-5 E	10.26						EXP232 A1	
		-6 E	10.13						2	
		-7 E	10.60						3	
		-8 E	10.10						4	
		-9 N	10.30						5	MS10
		-10 E	10.36						6	
		-11 E	10.06						7	
		-12 E	10.37						8	
		-13 E	10.06						9	
		SL2133-1 A	10.30						10	
		-2 A	10.30						11	
		-3 A	10.89						12	
		-4 A	10.34						B1	

EX-022 – Revision 1 – 11/01/2012

KATAHDIN ANALYTICAL SERVICES
ORGANIC EXTRACTIONS LOGBOOK - AQUEOUS EXPLOSIVES
METHOD: SW846 8330 B Mod.

Surrogate Lot # P9006
Spike Lot # P8499D
Acetonitrile (ACN) Lot # PQ315
Cartridge Lot # 1076775, 1045284

Other Lot # NG: STK5340
Other Lot # PETN: STK5339
EDGN: STK5457
Extraction Start Time: 11:30
Extraction Finish Time: 15:35

Extract Date	Extract Time	Analyst	Sample ID	Bottle ID.	Initial Vol. (500 mL)	Surr.: Add 500 uL of 10 ug/mL Add to all samples	SPIKE: Add 25 uL of 100 ug/mL to MS/D & LCS/D	Elute 15 mL ACN (at gravity flow rate) thru cartridge and discard	Elute 30 mL water thru cartridge and discard	Elute sample through cartridge and discard	Elute 5 mL ACN through cartridge and collect	Add 10 mL water to ACN extract	Store sample in labeled vial	EXP 232 Tray Location	Comments
3/19/18	11:40	JMS	WG225094-1	2	✓	✓	NR	✓	✓	✓	✓	✓	✓	B2	R466201
			-2				✓							3	10uL P+N+HE
			-3	J										4	MS SL2295-2
J	J	J	-4	J	✓	✓	✓	✓	✓	✓	✓	✓	✓	5	MSD J

QAEX339

0000056

HP-001 - Revision 1 - 02/11/2010

Extract Date	Extract Time	Analyst	Sample ID	Bottle ID.	Initial Vol. (500 mL)	Surr.: Add 500 uL of 10 ug/mL Add to all samples	SPIKE: Add 25 uL of 100 ug/mL to MS/D & LCS/D	Elute 15 mL ACN (at gravity flow rate) thru cartridge and discard	Elute 30 mL water thru cartridge and discard	Elute sample through cartridge and discard	Elute 5 mL ACN through cartridge and collect	Add 10 mL water to ACN extract	Store sample in labeled amber vial	EXP 232 Tray Location	Comments
3/19/18	11:40	JMS	SL2079-14	F	✓	✓	NR	✓	✓	✓	✓	✓	✓	B6	
			SL2133-20	A										7	
			SL2295-1	A										8	
			-2	K										9	MS10
	↓		-3	A										10	
	13:20		-4	A										11	
			-5	A										12	
			-6	A										C1	
			-7	A										2	
			-8	A										3	
			-9	A										4	
			-10	A										5	
			-11	A										6	
			-12	A										7	
	14:30		-13	A										8	
			-14	A										9	
			-15	A										10	
			-16	A										11	
			-17	A										12	
			-18	D										D1	

QAEX339

0000057

Katahdin Analytical Services

HPLC Runlog
Instrument: HPLC02

Method (circle): ~~8330B MOD.~~ 8330B

Column: PHENOMENEX	Injection Volume: 100uL	Standard	Standard ID
Flow Rate: 1.0 mL/MIN	Methanol lot #: DS202	C5	P9009
Detector Wavelengths: 210 nm / 254 nm		C4	P9010

Date	Init.	Result File	Sample ID	Y/N	Analyical Workgroup	Method	Comments
031618	AC	HLC10023	COMBO	N		CANNAB1	CANN TESTING
CHANGE TO PHENOMENEX COLUMN							
032018	AC	HLC10024	C5	Y		EXPBO4A	
		025	WG225027-1	N			
		026	-2				
		027	-5				
		028	-3				
		029	-4				
		030	IND	N	WG225143	EXPBO5A	
		031	C7 -7	Y			P9008
		032	C6 -6				↓ 150→300
		033	C5 -5				P9009
		034	C4 -4				P9010
		035	C3 -3				P9009 100→500
		036	C2 -2				↓ 50→500
		037	C1 -1				P9010 50→500
		038	IND -8				P9071
		039	WG225027-1	Y			
		040	-2				
		041	-5				
		042	-3				
		043	-4				SS DOUBLE SPIKE
		044	WG225094-1	Y			
		045	-2				
		046	SL2079-14	Y			R,4
		047	SL2135-20	Y			
		048	SL2295-1	Y			PETN SS ROUNDS IN
032118		049	C5 -9	Y			

Reviewed by/Date: _____

Katahdin Analytical Services

HPLC Runlog
Instrument: HPLC02

Method (circle): 8330B MOD. 8330B

Column: PHENOMENEX	Injection Volume: 100uL	Standard	Standard ID
Flow Rate: 1.0mL/MIN	Methanol lot #: DR116	C5	P9009
Detector Wavelengths: 210 nm / 254 nm		C4	P9010

Date	Init.	Result File	Sample ID	Y/N	Analyical Workgroup	Method	Comments
032118	AC	HLC10078	SL2295-24	Y	WG225143	EXPB05A	
		079	-25				R
		080	SL2329-16	Y			
		081	C4 -13	Y			
		082	WG225028-1	Y			
		083	-2				
		084	SL2294-1	Y			~~SS↓~~ AAB 88.1% SS↓ ~~032218~~
		085	SL2079-1	Y			
		086	-2				
		087	-3				
		088	-4				
		089	-5				
		090	-6				
		091	-7				SS ROUNDS IN
032218		092	C5 -14	Y			
		093	SL2079-8	Y			SS↓ 88.3%
		094	-9	Y			SS ROUNDS IN
		095	-10	Y			SS↓ 88.0%
		096	-11	Y			
		097	-12				
		098	-13				
		099	SL2133-1	Y			H R
		100	-2				H R
		101	-3				H R
		102	-4				H R 4AM 2AM
		103	C4 -15	Y			
		104	WG225028-3	Y			H↑
		105	-4				H↑

Reviewed by/Date:

METALS DATA

Sample Data Section

METALS SAMPLE FLAGGING

FLAG	SPECIFIED MEANING
E	The reported value is estimated because of the presence of interference (as indicated by serial dilution).
N	The pre-digestion spiked sample recovery is not within control limits.
*	The duplicate sample analysis relative percent difference (RPD) is not within control limits.
B	Indicates the analyte was detected in the laboratory method blank analyzed concurrently with the sample.
A	The post-digestion spiked sample recovery is not within control limits.
•	Analytical run QC sample (e.g. ICV, CCV, ICB, CCB, ICSA, ICSAB) not within control limits.
U	The analyte was not detected above the specified level. This level may be the Practical Quantitation Level (PQL) (also called Limit of Quantitation (LOQ)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client. Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL, "U" LOQ or "U" LOD, where the rate of false negatives is <1%.
J	Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Practical Quantitation Level (PQL) (also called Limit of Quantitation (LOQ)), but above the Method Detection Limit (MDL).
Q	One or more quality control criteria failed (e.g., LCS recovery, surrogate spike recovery or CCV).

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: Katahdin Analytical Services

SDG Name: SL2079 **SOW No.** SW846

Client Field ID	Lab Sample ID
CHAAP-BKRD-EB-031418	SL2079-014
CHAAP-BKRD-SB08	SL2079-001
CHAAP-BKRD-SB09	SL2079-002
CHAAP-BKRD-SB10	SL2079-003
CHAAP-BKRD-SB11	SL2079-004
CHAAP-BKRD-SB12	SL2079-005
CHAAP-BKRD-SB13	SL2079-006
CHAAP-BKRD-SS08	SL2079-007
CHAAP-BKRD-SS09	SL2079-008
CHAAP-BKRD-SS10	SL2079-009
CHAAP-BKRD-SS10	SL2079-009P
CHAAP-BKRD-SS10	SL2079-009S
CHAAP-BKRD-SS109	SL2079-013
CHAAP-BKRD-SS11	SL2079-010
CHAAP-BKRD-SS12	SL2079-011
CHAAP-BKRD-SS13	SL2079-012

Were ICP interelement corrections applied ?	Yes
Were ICP background corrections applied ?	Yes
If yes - were raw data generated before application of background corrections ?	No

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: Madison Dinsmore

Date: 3/28/18 Title: Analyst

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-BKRD-SB08

Matrix: SOIL **SDG Name:** SL2079

Percent Solids: 81.1 **Lab Sample ID:** SL2079-001

Concentration Units : mg/Kg drywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	15200			MS	5	6.5	0.32	2.6
7440-36-0	ANTIMONY, TOTAL	0.132			MS	5	0.065	0.013	0.032
7440-38-2	ARSENIC, TOTAL	7.20			MS	5	0.32	0.097	0.26
7440-39-3	BARIUM, TOTAL	207			MS	5	0.13	0.024	0.065
7440-41-7	BERYLLIUM, TOTAL	0.899			MS	5	0.065	0.0026	0.013
7440-43-9	CADMIUM, TOTAL	0.013	U		MS	5	0.065	0.0049	0.013
7440-70-2	CALCIUM, TOTAL	13800			MS	5	6.5	2.5	5.2
7440-47-3	CHROMIUM, TOTAL	13.8			MS	5	0.32	0.032	0.26
7440-48-4	COBALT, TOTAL	5.90			MS	5	0.065	0.0036	0.019
7440-50-8	COPPER, TOTAL	13.2			MS	5	0.19	0.045	0.13
7439-89-6	IRON, TOTAL	13800			MS	5	6.5	1.6	3.9
7439-92-1	LEAD, TOTAL	12.1			MS	5	0.065	0.0045	0.032
7439-95-4	MAGNESIUM, TOTAL	6640			MS	5	6.5	0.88	5.2
7439-96-5	MANGANESE, TOTAL	113			MS	5	0.13	0.027	0.065
7439-97-6	MERCURY, TOTAL	0.018	J		CV	1	0.039	0.0061	0.020
7440-02-0	NICKEL, TOTAL	15.6			MS	5	0.13	0.017	0.078
7440-09-7	POTASSIUM, TOTAL	4040			MS	5	65	3.0	26
7782-49-2	SELENIUM, TOTAL	0.335			MS	5	0.32	0.025	0.19
7440-22-4	SILVER, TOTAL	0.0914			MS	5	0.065	0.0042	0.026
7440-23-5	SODIUM, TOTAL	2290			MS	5	65	1.7	26
7440-28-0	THALLIUM, TOTAL	0.302			MS	5	0.065	0.0062	0.026
7440-62-2	VANADIUM, TOTAL	27.0			MS	5	0.32	0.071	0.26
7440-66-6	ZINC, TOTAL	45.7			MS	5	0.65	0.084	0.52

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-BKRD-SB09

Matrix: SOIL **SDG Name:** SL2079

Percent Solids: 86.1 **Lab Sample ID:** SL2079-002

Concentration Units : mg/Kg drywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	15000			MS	5	6.5	0.32	2.6
7440-36-0	ANTIMONY, TOTAL	0.189			MS	5	0.065	0.013	0.032
7440-38-2	ARSENIC, TOTAL	13.6			MS	5	0.32	0.097	0.26
7440-39-3	BARIUM, TOTAL	135			MS	5	0.13	0.024	0.065
7440-41-7	BERYLLIUM, TOTAL	0.872			MS	5	0.065	0.0026	0.013
7440-43-9	CADMIUM, TOTAL	0.013	U		MS	5	0.065	0.0049	0.013
7440-70-2	CALCIUM, TOTAL	10600			MS	5	6.5	2.5	5.2
7440-47-3	CHROMIUM, TOTAL	14.5			MS	5	0.32	0.032	0.26
7440-48-4	COBALT, TOTAL	7.10			MS	5	0.065	0.0036	0.019
7440-50-8	COPPER, TOTAL	13.7			MS	5	0.19	0.045	0.13
7439-89-6	IRON, TOTAL	15700			MS	5	6.5	1.6	3.9
7439-92-1	LEAD, TOTAL	13.0			MS	5	0.065	0.0045	0.032
7439-95-4	MAGNESIUM, TOTAL	5520			MS	5	6.5	0.88	5.2
7439-96-5	MANGANESE, TOTAL	118			MS	5	0.13	0.027	0.065
7439-97-6	MERCURY, TOTAL	0.029	J		CV	1	0.037	0.0058	0.019
7440-02-0	NICKEL, TOTAL	17.8			MS	5	0.13	0.017	0.078
7440-09-7	POTASSIUM, TOTAL	4220			MS	5	65	3.0	26
7782-49-2	SELENIUM, TOTAL	0.352			MS	5	0.32	0.025	0.19
7440-22-4	SILVER, TOTAL	0.108			MS	5	0.065	0.0042	0.026
7440-23-5	SODIUM, TOTAL	2050			MS	5	65	1.7	26
7440-28-0	THALLIUM, TOTAL	0.270			MS	5	0.065	0.0062	0.026
7440-62-2	VANADIUM, TOTAL	34.0			MS	5	0.32	0.071	0.26
7440-66-6	ZINC, TOTAL	47.9			MS	5	0.65	0.084	0.52

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-BKRD-SB10

Matrix: SOIL **SDG Name:** SL2079

Percent Solids: 83.6 **Lab Sample ID:** SL2079-003

Concentration Units : mg/Kg drywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	17300			MS	5	8.0	0.40	3.2
7440-36-0	ANTIMONY, TOTAL	0.216			MS	5	0.080	0.016	0.040
7440-38-2	ARSENIC, TOTAL	8.44			MS	5	0.40	0.12	0.32
7440-39-3	BARIUM, TOTAL	331			MS	5	0.16	0.029	0.080
7440-41-7	BERYLLIUM, TOTAL	0.844			MS	5	0.080	0.0032	0.016
7440-43-9	CADMIUM, TOTAL	0.016	U		MS	5	0.080	0.0060	0.016
7440-70-2	CALCIUM, TOTAL	46800			MS	5	8.0	3.0	6.4
7440-47-3	CHROMIUM, TOTAL	15.3			MS	5	0.40	0.039	0.32
7440-48-4	COBALT, TOTAL	6.44			MS	5	0.080	0.0044	0.024
7440-50-8	COPPER, TOTAL	10.6			MS	5	0.24	0.056	0.16
7439-89-6	IRON, TOTAL	14100			MS	5	8.0	1.9	4.8
7439-92-1	LEAD, TOTAL	11.8			MS	5	0.080	0.0056	0.040
7439-95-4	MAGNESIUM, TOTAL	6680			MS	5	8.0	1.1	6.4
7439-96-5	MANGANESE, TOTAL	134			MS	5	0.16	0.034	0.080
7439-97-6	MERCURY, TOTAL	0.018	J		CV	1	0.031	0.0048	0.016
7440-02-0	NICKEL, TOTAL	16.2			MS	5	0.16	0.021	0.096
7440-09-7	POTASSIUM, TOTAL	4460			MS	5	80	3.7	32
7782-49-2	SELENIUM, TOTAL	0.411			MS	5	0.40	0.031	0.24
7440-22-4	SILVER, TOTAL	0.0672	J		MS	5	0.080	0.0052	0.032
7440-23-5	SODIUM, TOTAL	916			MS	5	80	2.0	32
7440-28-0	THALLIUM, TOTAL	0.301			MS	5	0.080	0.0076	0.032
7440-62-2	VANADIUM, TOTAL	35.8			MS	5	0.40	0.088	0.32
7440-66-6	ZINC, TOTAL	39.7			MS	5	0.80	0.10	0.64

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-BKRD-SB11

Matrix: SOIL **SDG Name:** SL2079

Percent Solids: 79.7 **Lab Sample ID:** SL2079-004

Concentration Units : mg/Kg drywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	17500			MS	5	12	0.60	4.8
7440-36-0	ANTIMONY, TOTAL	0.22			MS	5	0.12	0.024	0.060
7440-38-2	ARSENIC, TOTAL	5.75			MS	5	0.60	0.18	0.48
7440-39-3	BARIUM, TOTAL	127			MS	5	0.24	0.044	0.12
7440-41-7	BERYLLIUM, TOTAL	0.936			MS	5	0.12	0.0048	0.024
7440-43-9	CADMIUM, TOTAL	0.024	U		MS	5	0.12	0.0090	0.024
7440-70-2	CALCIUM, TOTAL	7460			MS	5	12	4.5	9.6
7440-47-3	CHROMIUM, TOTAL	16.4			MS	5	0.60	0.059	0.48
7440-48-4	COBALT, TOTAL	4.61			MS	5	0.12	0.0066	0.036
7440-50-8	COPPER, TOTAL	13.8			MS	5	0.36	0.084	0.24
7439-89-6	IRON, TOTAL	17800			MS	5	12	2.9	7.2
7439-92-1	LEAD, TOTAL	16.8			MS	5	0.12	0.0084	0.060
7439-95-4	MAGNESIUM, TOTAL	5570			MS	5	12	1.6	9.6
7439-96-5	MANGANESE, TOTAL	97.1			MS	5	0.24	0.050	0.12
7439-97-6	MERCURY, TOTAL	0.024	J		CV	1	0.038	0.0059	0.019
7440-02-0	NICKEL, TOTAL	16.3			MS	5	0.24	0.032	0.14
7440-09-7	POTASSIUM, TOTAL	4560			MS	5	120	5.4	48
7782-49-2	SELENIUM, TOTAL	0.37	J		MS	5	0.60	0.047	0.36
7440-22-4	SILVER, TOTAL	0.0802	J		MS	5	0.12	0.0078	0.048
7440-23-5	SODIUM, TOTAL	1960			MS	5	120	3.0	48
7440-28-0	THALLIUM, TOTAL	0.349			MS	5	0.12	0.011	0.048
7440-62-2	VANADIUM, TOTAL	36.4			MS	5	0.60	0.13	0.48
7440-66-6	ZINC, TOTAL	41.8			MS	5	1.2	0.16	0.96

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-BKRD-SB12

Matrix: SOIL **SDG Name:** SL2079

Percent Solids: 83.0 **Lab Sample ID:** SL2079-005

Concentration Units : mg/Kg drywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	16100			MS	5	9.0	0.45	3.6
7440-36-0	ANTIMONY, TOTAL	0.16			MS	5	0.090	0.018	0.045
7440-38-2	ARSENIC, TOTAL	3.09			MS	5	0.45	0.13	0.36
7440-39-3	BARIUM, TOTAL	174			MS	5	0.18	0.033	0.090
7440-41-7	BERYLLIUM, TOTAL	0.873			MS	5	0.090	0.0036	0.018
7440-43-9	CADMIUM, TOTAL	0.018	U		MS	5	0.090	0.0067	0.018
7440-70-2	CALCIUM, TOTAL	17700			MS	5	9.0	3.4	7.2
7440-47-3	CHROMIUM, TOTAL	13.9			MS	5	0.45	0.044	0.36
7440-48-4	COBALT, TOTAL	4.72			MS	5	0.090	0.0049	0.027
7440-50-8	COPPER, TOTAL	10.3			MS	5	0.27	0.063	0.18
7439-89-6	IRON, TOTAL	13900			MS	5	9.0	2.2	5.4
7439-92-1	LEAD, TOTAL	12.9			MS	5	0.090	0.0063	0.045
7439-95-4	MAGNESIUM, TOTAL	8140			MS	5	9.0	1.2	7.2
7439-96-5	MANGANESE, TOTAL	198			MS	5	0.18	0.038	0.090
7439-97-6	MERCURY, TOTAL	0.017	J		CV	1	0.039	0.0060	0.020
7440-02-0	NICKEL, TOTAL	11.3			MS	5	0.18	0.024	0.11
7440-09-7	POTASSIUM, TOTAL	4490			MS	5	90	4.1	36
7782-49-2	SELENIUM, TOTAL	0.509			MS	5	0.45	0.035	0.27
7440-22-4	SILVER, TOTAL	0.0892	J		MS	5	0.090	0.0058	0.036
7440-23-5	SODIUM, TOTAL	3010			MS	5	90	2.3	36
7440-28-0	THALLIUM, TOTAL	0.285			MS	5	0.090	0.0085	0.036
7440-62-2	VANADIUM, TOTAL	26.5			MS	5	0.45	0.099	0.36
7440-66-6	ZINC, TOTAL	40.1			MS	5	0.90	0.12	0.72

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-BKRD-SB13

Matrix: SOIL **SDG Name:** SL2079

Percent Solids: 79.8 **Lab Sample ID:** SL2079-006

Concentration Units : mg/Kg drywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	17900			MS	5	10	0.51	4.0
7440-36-0	ANTIMONY, TOTAL	0.19			MS	5	0.10	0.020	0.050
7440-38-2	ARSENIC, TOTAL	8.88			MS	5	0.50	0.15	0.40
7440-39-3	BARIUM, TOTAL	143			MS	5	0.20	0.037	0.10
7440-41-7	BERYLLIUM, TOTAL	0.921			MS	5	0.10	0.0041	0.020
7440-43-9	CADMIUM, TOTAL	0.020	U		MS	5	0.10	0.0076	0.020
7440-70-2	CALCIUM, TOTAL	14200			MS	5	10	3.8	8.1
7440-47-3	CHROMIUM, TOTAL	15.3			MS	5	0.50	0.050	0.40
7440-48-4	COBALT, TOTAL	5.85			MS	5	0.10	0.0056	0.030
7440-50-8	COPPER, TOTAL	12.7			MS	5	0.30	0.071	0.20
7439-89-6	IRON, TOTAL	16700			MS	5	10	2.4	6.1
7439-92-1	LEAD, TOTAL	13.1			MS	5	0.10	0.0071	0.050
7439-95-4	MAGNESIUM, TOTAL	8140			MS	5	10	1.4	8.1
7439-96-5	MANGANESE, TOTAL	263			MS	5	0.20	0.042	0.10
7439-97-6	MERCURY, TOTAL	0.026	J		CV	1	0.034	0.0052	0.017
7440-02-0	NICKEL, TOTAL	12.8			MS	5	0.20	0.027	0.12
7440-09-7	POTASSIUM, TOTAL	4520			MS	5	100	4.6	40
7782-49-2	SELENIUM, TOTAL	0.512			MS	5	0.50	0.039	0.30
7440-22-4	SILVER, TOTAL	0.0723	J		MS	5	0.10	0.0066	0.040
7440-23-5	SODIUM, TOTAL	1860			MS	5	100	2.6	40
7440-28-0	THALLIUM, TOTAL	0.319			MS	5	0.10	0.0096	0.040
7440-62-2	VANADIUM, TOTAL	36.4			MS	5	0.50	0.11	0.40
7440-66-6	ZINC, TOTAL	43.9			MS	5	1.0	0.13	0.81

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-BKRD-SS08

Matrix: SOIL **SDG Name:** SL2079

Percent Solids: 78.8 **Lab Sample ID:** SL2079-007

Concentration Units : mg/Kg drywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	7550			MS	5	8.6	0.43	3.4
7440-36-0	ANTIMONY, TOTAL	0.10			MS	5	0.086	0.017	0.043
7440-38-2	ARSENIC, TOTAL	1.99			MS	5	0.43	0.13	0.34
7440-39-3	BARIUM, TOTAL	109			MS	5	0.17	0.031	0.086
7440-41-7	BERYLLIUM, TOTAL	0.435			MS	5	0.086	0.0035	0.017
7440-43-9	CADMIUM, TOTAL	0.150			MS	5	0.086	0.0064	0.017
7440-70-2	CALCIUM, TOTAL	1620			MS	5	8.6	3.3	6.8
7440-47-3	CHROMIUM, TOTAL	7.83			MS	5	0.43	0.042	0.34
7440-48-4	COBALT, TOTAL	4.41			MS	5	0.086	0.0047	0.026
7440-50-8	COPPER, TOTAL	6.34			MS	5	0.26	0.060	0.17
7439-89-6	IRON, TOTAL	6520			MS	5	8.6	2.1	5.1
7439-92-1	LEAD, TOTAL	10.9			MS	5	0.086	0.0060	0.043
7439-95-4	MAGNESIUM, TOTAL	1900			MS	5	8.6	1.2	6.8
7439-96-5	MANGANESE, TOTAL	241			MS	5	0.17	0.036	0.086
7439-97-6	MERCURY, TOTAL	0.018	J		CV	1	0.032	0.0050	0.016
7440-02-0	NICKEL, TOTAL	5.96			MS	5	0.17	0.023	0.10
7440-09-7	POTASSIUM, TOTAL	2510			MS	5	86	3.9	34
7782-49-2	SELENIUM, TOTAL	0.477			MS	5	0.43	0.033	0.26
7440-22-4	SILVER, TOTAL	0.045	J		MS	5	0.086	0.0056	0.034
7440-23-5	SODIUM, TOTAL	298			MS	5	86	2.2	34
7440-28-0	THALLIUM, TOTAL	0.170			MS	5	0.086	0.0081	0.034
7440-62-2	VANADIUM, TOTAL	15.8			MS	5	0.43	0.094	0.34
7440-66-6	ZINC, TOTAL	22.6			MS	5	0.86	0.11	0.68

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-BKRD-SS09

Matrix: SOIL **SDG Name:** SL2079

Percent Solids: 82.8 **Lab Sample ID:** SL2079-008

Concentration Units : mg/Kg drywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	9310			MS	5	9.4	0.47	3.8
7440-36-0	ANTIMONY, TOTAL	0.10			MS	5	0.094	0.019	0.047
7440-38-2	ARSENIC, TOTAL	2.26			MS	5	0.47	0.14	0.38
7440-39-3	BARIUM, TOTAL	138			MS	5	0.19	0.034	0.094
7440-41-7	BERYLLIUM, TOTAL	0.546			MS	5	0.094	0.0038	0.019
7440-43-9	CADMIUM, TOTAL	0.152			MS	5	0.094	0.0071	0.019
7440-70-2	CALCIUM, TOTAL	1600			MS	5	9.4	3.6	7.5
7440-47-3	CHROMIUM, TOTAL	9.44			MS	5	0.47	0.046	0.38
7440-48-4	COBALT, TOTAL	4.87			MS	5	0.094	0.0052	0.028
7440-50-8	COPPER, TOTAL	7.02			MS	5	0.28	0.066	0.19
7439-89-6	IRON, TOTAL	7770			MS	5	9.4	2.3	5.6
7439-92-1	LEAD, TOTAL	11.7			MS	5	0.094	0.0066	0.047
7439-95-4	MAGNESIUM, TOTAL	2190			MS	5	9.4	1.3	7.5
7439-96-5	MANGANESE, TOTAL	310			MS	5	0.19	0.040	0.094
7439-97-6	MERCURY, TOTAL	0.020	J		CV	1	0.036	0.0056	0.018
7440-02-0	NICKEL, TOTAL	6.99			MS	5	0.19	0.025	0.11
7440-09-7	POTASSIUM, TOTAL	2770			MS	5	94	4.3	38
7782-49-2	SELENIUM, TOTAL	0.662			MS	5	0.47	0.037	0.28
7440-22-4	SILVER, TOTAL	0.052	J		MS	5	0.094	0.0061	0.038
7440-23-5	SODIUM, TOTAL	178			MS	5	94	2.4	38
7440-28-0	THALLIUM, TOTAL	0.215			MS	5	0.094	0.0090	0.038
7440-62-2	VANADIUM, TOTAL	18.1			MS	5	0.47	0.10	0.38
7440-66-6	ZINC, TOTAL	26.4			MS	5	0.94	0.12	0.75

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-BKRD-SS10

Matrix: SOIL **SDG Name:** SL2079

Percent Solids: 74.6 **Lab Sample ID:** SL2079-009

Concentration Units : mg/Kg drywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	8370		NA	MS	5	10	0.52	4.2
7440-36-0	ANTIMONY, TOTAL	0.10	J	N	MS	5	0.10	0.021	0.052
7440-38-2	ARSENIC, TOTAL	2.22			MS	5	0.52	0.16	0.42
7440-39-3	BARIUM, TOTAL	127		A	MS	5	0.21	0.038	0.10
7440-41-7	BERYLLIUM, TOTAL	0.484			MS	5	0.10	0.0042	0.021
7440-43-9	CADMIUM, TOTAL	0.149			MS	5	0.10	0.0079	0.021
7440-70-2	CALCIUM, TOTAL	1900		NA	MS	5	10	4.0	8.4
7440-47-3	CHROMIUM, TOTAL	8.34			MS	5	0.52	0.051	0.42
7440-48-4	COBALT, TOTAL	4.48			MS	5	0.10	0.0058	0.031
7440-50-8	COPPER, TOTAL	6.51			MS	5	0.31	0.073	0.21
7439-89-6	IRON, TOTAL	7520		NEA	MS	5	10	2.5	6.3
7439-92-1	LEAD, TOTAL	11.0			MS	5	0.10	0.0073	0.052
7439-95-4	MAGNESIUM, TOTAL	2140		NA	MS	5	10	1.4	8.4
7439-96-5	MANGANESE, TOTAL	254		NEA	MS	5	0.21	0.044	0.10
7439-97-6	MERCURY, TOTAL	0.015	J	A	CV	1	0.037	0.0058	0.019
7440-02-0	NICKEL, TOTAL	6.38			MS	5	0.21	0.028	0.12
7440-09-7	POTASSIUM, TOTAL	2950		N	MS	5	100	4.8	42
7782-49-2	SELENIUM, TOTAL	0.576			MS	5	0.52	0.041	0.31
7440-22-4	SILVER, TOTAL	0.045	J		MS	5	0.10	0.0068	0.042
7440-23-5	SODIUM, TOTAL	88.2	J		MS	5	100	2.7	42
7440-28-0	THALLIUM, TOTAL	0.179			MS	5	0.10	0.0099	0.042
7440-62-2	VANADIUM, TOTAL	16.2			MS	5	0.52	0.12	0.42
7440-66-6	ZINC, TOTAL	24.6			MS	5	1.0	0.14	0.84

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-BKRD-SS11

Matrix: SOIL **SDG Name:** SL2079

Percent Solids: 81.3 **Lab Sample ID:** SL2079-010

Concentration Units : mg/Kg drywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	10400			MS	5	10	0.51	4.1
7440-36-0	ANTIMONY, TOTAL	0.11			MS	5	0.10	0.020	0.051
7440-38-2	ARSENIC, TOTAL	2.38			MS	5	0.51	0.15	0.41
7440-39-3	BARIUM, TOTAL	132			MS	5	0.20	0.037	0.10
7440-41-7	BERYLLIUM, TOTAL	0.571			MS	5	0.10	0.0041	0.020
7440-43-9	CADMIUM, TOTAL	0.138			MS	5	0.10	0.0077	0.020
7440-70-2	CALCIUM, TOTAL	1870			MS	5	10	3.9	8.2
7440-47-3	CHROMIUM, TOTAL	10.2			MS	5	0.51	0.050	0.41
7440-48-4	COBALT, TOTAL	4.69			MS	5	0.10	0.0056	0.031
7440-50-8	COPPER, TOTAL	7.65			MS	5	0.31	0.072	0.20
7439-89-6	IRON, TOTAL	9010			MS	5	10	2.5	6.1
7439-92-1	LEAD, TOTAL	12.8			MS	5	0.10	0.0072	0.051
7439-95-4	MAGNESIUM, TOTAL	2320			MS	5	10	1.4	8.2
7439-96-5	MANGANESE, TOTAL	258			MS	5	0.20	0.043	0.10
7439-97-6	MERCURY, TOTAL	0.025	J		CV	1	0.036	0.0056	0.018
7440-02-0	NICKEL, TOTAL	7.24			MS	5	0.20	0.027	0.12
7440-09-7	POTASSIUM, TOTAL	2900			MS	5	100	4.7	41
7782-49-2	SELENIUM, TOTAL	0.571			MS	5	0.51	0.040	0.31
7440-22-4	SILVER, TOTAL	0.052	J		MS	5	0.10	0.0067	0.041
7440-23-5	SODIUM, TOTAL	108			MS	5	100	2.6	41
7440-28-0	THALLIUM, TOTAL	0.216			MS	5	0.10	0.0097	0.041
7440-62-2	VANADIUM, TOTAL	18.8			MS	5	0.51	0.11	0.41
7440-66-6	ZINC, TOTAL	33.1			MS	5	1.0	0.13	0.82

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-BKRD-SS12

Matrix: SOIL **SDG Name:** SL2079

Percent Solids: 78.5 **Lab Sample ID:** SL2079-011

Concentration Units : mg/Kg drywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	8230			MS	5	11	0.55	4.4
7440-36-0	ANTIMONY, TOTAL	0.10	J		MS	5	0.11	0.022	0.055
7440-38-2	ARSENIC, TOTAL	2.32			MS	5	0.55	0.17	0.44
7440-39-3	BARIUM, TOTAL	115			MS	5	0.22	0.040	0.11
7440-41-7	BERYLLIUM, TOTAL	0.478			MS	5	0.11	0.0045	0.022
7440-43-9	CADMIUM, TOTAL	0.112			MS	5	0.11	0.0083	0.022
7440-70-2	CALCIUM, TOTAL	1860			MS	5	11	4.2	8.8
7440-47-3	CHROMIUM, TOTAL	8.73			MS	5	0.55	0.054	0.44
7440-48-4	COBALT, TOTAL	4.37			MS	5	0.11	0.0061	0.033
7440-50-8	COPPER, TOTAL	6.81			MS	5	0.33	0.077	0.22
7439-89-6	IRON, TOTAL	7420			MS	5	11	2.7	6.6
7439-92-1	LEAD, TOTAL	10.9			MS	5	0.11	0.0077	0.055
7439-95-4	MAGNESIUM, TOTAL	2180			MS	5	11	1.5	8.8
7439-96-5	MANGANESE, TOTAL	243			MS	5	0.22	0.046	0.11
7439-97-6	MERCURY, TOTAL	0.020	J		CV	1	0.034	0.0053	0.018
7440-02-0	NICKEL, TOTAL	6.42			MS	5	0.22	0.029	0.13
7440-09-7	POTASSIUM, TOTAL	3160			MS	5	110	5.0	44
7782-49-2	SELENIUM, TOTAL	0.567			MS	5	0.55	0.043	0.33
7440-22-4	SILVER, TOTAL	0.046	J		MS	5	0.11	0.0072	0.044
7440-23-5	SODIUM, TOTAL	179			MS	5	110	2.8	44
7440-28-0	THALLIUM, TOTAL	0.195			MS	5	0.11	0.011	0.044
7440-62-2	VANADIUM, TOTAL	17.6			MS	5	0.55	0.12	0.44
7440-66-6	ZINC, TOTAL	23.4			MS	5	1.1	0.14	0.88

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-BKRD-SS13

Matrix: SOIL **SDG Name:** SL2079

Percent Solids: 78.0 **Lab Sample ID:** SL2079-012

Concentration Units : mg/Kg drywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	9120			MS	5	10	0.52	4.1
7440-36-0	ANTIMONY, TOTAL	0.10			MS	5	0.10	0.021	0.052
7440-38-2	ARSENIC, TOTAL	2.35			MS	5	0.52	0.16	0.41
7440-39-3	BARIUM, TOTAL	118			MS	5	0.21	0.038	0.10
7440-41-7	BERYLLIUM, TOTAL	0.520			MS	5	0.10	0.0042	0.021
7440-43-9	CADMIUM, TOTAL	0.144			MS	5	0.10	0.0078	0.021
7440-70-2	CALCIUM, TOTAL	1800			MS	5	10	3.9	8.3
7440-47-3	CHROMIUM, TOTAL	9.69			MS	5	0.52	0.051	0.41
7440-48-4	COBALT, TOTAL	4.93			MS	5	0.10	0.0057	0.031
7440-50-8	COPPER, TOTAL	7.19			MS	5	0.31	0.072	0.21
7439-89-6	IRON, TOTAL	8120			MS	5	10	2.5	6.2
7439-92-1	LEAD, TOTAL	13.3			MS	5	0.10	0.0072	0.052
7439-95-4	MAGNESIUM, TOTAL	2260			MS	5	10	1.4	8.3
7439-96-5	MANGANESE, TOTAL	280			MS	5	0.21	0.043	0.10
7439-97-6	MERCURY, TOTAL	0.021	J		CV	1	0.035	0.0054	0.018
7440-02-0	NICKEL, TOTAL	7.02			MS	5	0.21	0.027	0.12
7440-09-7	POTASSIUM, TOTAL	3080			MS	5	100	4.7	41
7782-49-2	SELENIUM, TOTAL	0.752			MS	5	0.52	0.040	0.31
7440-22-4	SILVER, TOTAL	0.053	J		MS	5	0.10	0.0067	0.041
7440-23-5	SODIUM, TOTAL	344			MS	5	100	2.6	41
7440-28-0	THALLIUM, TOTAL	0.198			MS	5	0.10	0.0098	0.041
7440-62-2	VANADIUM, TOTAL	19.3			MS	5	0.52	0.11	0.41
7440-66-6	ZINC, TOTAL	27.0			MS	5	1.0	0.13	0.83

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-BKRD-SS109

Matrix: SOIL **SDG Name:** SL2079

Percent Solids: 82.9 **Lab Sample ID:** SL2079-013

Concentration Units : mg/Kg drywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	8660			MS	5	8.9	0.45	3.6
7440-36-0	ANTIMONY, TOTAL	0.10			MS	5	0.089	0.018	0.045
7440-38-2	ARSENIC, TOTAL	2.13			MS	5	0.45	0.13	0.36
7440-39-3	BARIUM, TOTAL	141			MS	5	0.18	0.033	0.089
7440-41-7	BERYLLIUM, TOTAL	0.533			MS	5	0.089	0.0036	0.018
7440-43-9	CADMIUM, TOTAL	0.179			MS	5	0.089	0.0067	0.018
7440-70-2	CALCIUM, TOTAL	1630			MS	5	8.9	3.4	7.1
7440-47-3	CHROMIUM, TOTAL	8.59			MS	5	0.45	0.044	0.36
7440-48-4	COBALT, TOTAL	5.02			MS	5	0.089	0.0049	0.027
7440-50-8	COPPER, TOTAL	6.70			MS	5	0.27	0.063	0.18
7439-89-6	IRON, TOTAL	7500			MS	5	8.9	2.1	5.4
7439-92-1	LEAD, TOTAL	11.9			MS	5	0.089	0.0063	0.045
7439-95-4	MAGNESIUM, TOTAL	2130			MS	5	8.9	1.2	7.1
7439-96-5	MANGANESE, TOTAL	352			MS	5	0.18	0.038	0.089
7439-97-6	MERCURY, TOTAL	0.019	J		CV	1	0.038	0.0058	0.019
7440-02-0	NICKEL, TOTAL	7.22			MS	5	0.18	0.024	0.11
7440-09-7	POTASSIUM, TOTAL	2600			MS	5	89	4.1	36
7782-49-2	SELENIUM, TOTAL	0.611			MS	5	0.45	0.035	0.27
7440-22-4	SILVER, TOTAL	0.049	J		MS	5	0.089	0.0058	0.036
7440-23-5	SODIUM, TOTAL	172			MS	5	89	2.3	36
7440-28-0	THALLIUM, TOTAL	0.196			MS	5	0.089	0.0085	0.036
7440-62-2	VANADIUM, TOTAL	16.2			MS	5	0.45	0.098	0.36
7440-66-6	ZINC, TOTAL	25.4			MS	5	0.89	0.12	0.71

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-BKRD-EB-031418

Matrix: WATER **SDG Name:** SL2079

Percent Solids: 0.00 **Lab Sample ID:** SL2079-014

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	9.2	J		MS	5	100	4.4	40
7440-36-0	ANTIMONY, TOTAL	0.11	J		MS	5	1.0	0.055	0.50
7440-38-2	ARSENIC, TOTAL	4.0	U		MS	5	5.0	2.3	4.0
7440-39-3	BARIUM, TOTAL	1.0	U		MS	5	2.0	0.27	1.0
7440-41-7	BERYLLIUM, TOTAL	0.20	U		MS	5	1.0	0.034	0.20
7440-43-9	CADMIUM, TOTAL	0.20	U		MS	5	1.0	0.029	0.20
7440-70-2	CALCIUM, TOTAL	61	J		MS	5	100	21	80
7440-47-3	CHROMIUM, TOTAL	0.75	J		MS	5	5.0	0.22	4.0
7440-48-4	COBALT, TOTAL	0.30	U		MS	5	1.0	0.060	0.30
7440-50-8	COPPER, TOTAL	0.23	J		MS	5	3.0	0.19	2.0
7439-89-6	IRON, TOTAL	60	U		MS	5	100	13	60
7439-92-1	LEAD, TOTAL	0.50	U		MS	5	1.0	0.075	0.50
7439-95-4	MAGNESIUM, TOTAL	13	J		MS	5	100	8.0	80
7439-96-5	MANGANESE, TOTAL	0.52	J		MS	5	2.0	0.35	1.0
7439-97-6	MERCURY, TOTAL	0.033	J		CV	1	0.20	0.013	0.10
7440-02-0	NICKEL, TOTAL	1.2	U		MS	5	2.0	0.15	1.2
7440-09-7	POTASSIUM, TOTAL	400	U		MS	5	1000	31	400
7782-49-2	SELENIUM, TOTAL	0.26	J		MS	5	5.0	0.19	3.0
7440-22-4	SILVER, TOTAL	0.40	U		MS	5	1.0	0.050	0.40
7440-23-5	SODIUM, TOTAL	43	J		MS	5	1000	19	400
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	1.0	0.060	0.40
7440-62-2	VANADIUM, TOTAL	4.0	U		MS	5	5.0	0.50	4.0
7440-66-6	ZINC, TOTAL	8.0	U		MS	5	10	3.9	8.0

Comments:

QC Summary Section

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICV

File: HLC16A Mar 16, 2018 12:21

Analyte	True	Found	%R (1)
MERCURY	6.0	6.09	101.5

SAMPLE: CCV

File: HLC16A Mar 16, 2018 12:27

Analyte	True	Found	%R (1)
MERCURY	5.0	4.81	96.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: CCV

File: HLC16A Mar 16, 2018 12:50

Analyte	True	Found	%R (1)
MERCURY	5.0	4.99	99.8

SAMPLE: CCV

File: HLC16A Mar 16, 2018 13:18

Analyte	True	Found	%R (1)
MERCURY	5.0	4.58	91.6

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: CCV

File: HLC16A Mar 16, 2018 13:28

Analyte	True	Found	%R (1)
MERCURY	5.0	4.57	91.4

SAMPLE: CCV

File: HLC16A Mar 16, 2018 13:41

Analyte	True	Found	%R (1)
MERCURY	5.0	4.81	96.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICV

File: HLC19A Mar 19, 2018 12:05

Analyte	True	Found	%R (1)
MERCURY	6.0	6.36	106.0

SAMPLE: CCV

File: HLC19A Mar 19, 2018 12:13

Analyte	True	Found	%R (1)
MERCURY	5.0	4.70	94.0

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: CCV

File: HLC19A Mar 19, 2018 12:37

Analyte	True	Found	%R (1)
MERCURY	5.0	4.55	91.0

SAMPLE: CCV

File: HLC19A Mar 19, 2018 13:02

Analyte	True	Found	%R (1)
MERCURY	5.0	4.86	97.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICV

File: JLC16A Mar 16, 2018 15:07

Analyte	True	Found	%R (1)
ALUMINUM	400.0	397.60	99.4
ARSENIC	20.0	19.97	99.8
BARIUM	20.0	20.06	100.3
BERYLLIUM	20.0	19.49	97.4
CADMIUM	20.0	20.23	101.2
CALCIUM	4000.0	4101.00	102.5
CHROMIUM	20.0	19.56	97.8
COBALT	20.0	19.54	97.7
COPPER	20.0	19.94	99.7
IRON	4000.0	4059.00	101.5
LEAD	20.0	19.62	98.1
MAGNESIUM	4000.0	3929.00	98.2
MANGANESE	20.0	19.88	99.4
MOLYBDENUM	40.0	38.73	96.8
NICKEL	20.0	19.93	99.6
POTASSIUM	4000.0	3951.00	98.8
SELENIUM	20.0	20.08	100.4
SILVER	20.0	19.84	99.2
SODIUM	4000.0	3989.00	99.7
THALLIUM	20.0	20.02	100.1
VANADIUM	20.0	19.99	99.9
ZINC	20.0	20.19	101.0

SAMPLE: CCV

File: JLC16A Mar 16, 2018 15:47

Analyte	True	Found	%R (1)
ALUMINUM	500.0	496.20	99.2
ARSENIC	25.0	25.17	100.7
BARIUM	25.0	24.95	99.8
BERYLLIUM	25.0	24.97	99.9
CADMIUM	25.0	25.19	100.8
CALCIUM	5000.0	5183.00	103.7
CHROMIUM	25.0	24.84	99.4
COBALT	25.0	24.98	99.9
COPPER	25.0	25.23	100.9
IRON	5000.0	5126.00	102.5
LEAD	25.0	24.65	98.6
MAGNESIUM	5000.0	4944.00	98.9
MANGANESE	25.0	24.90	99.6
MOLYBDENUM	25.0	24.93	99.7
NICKEL	25.0	25.29	101.2
POTASSIUM	5000.0	4996.00	99.9
SELENIUM	25.0	25.19	100.8
SILVER	25.0	25.15	100.6
SODIUM	5000.0	5005.00	100.1
THALLIUM	25.0	24.47	97.9
VANADIUM	25.0	24.83	99.3
ZINC	25.0	25.05	100.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: CCV

File: JLC16A Mar 16, 2018 16:33

Analyte	True	Found	%R (1)
ALUMINUM	500.0	501.70	100.3
ARSENIC	25.0	24.37	97.5
BARIUM	25.0	24.71	98.8
BERYLLIUM	25.0	24.47	97.9
CADMIUM	25.0	24.78	99.1
CALCIUM	5000.0	5140.00	102.8
CHROMIUM	25.0	24.08	96.3
COBALT	25.0	24.14	96.6
COPPER	25.0	24.20	96.8
IRON	5000.0	4954.00	99.1
LEAD	25.0	24.63	98.5
MAGNESIUM	5000.0	5028.00	100.6
MANGANESE	25.0	24.31	97.2
MOLYBDENUM	25.0	24.21	96.8
NICKEL	25.0	24.40	97.6
POTASSIUM	5000.0	4987.00	99.7
SELENIUM	25.0	25.18	100.7
SILVER	25.0	24.34	97.4
SODIUM	5000.0	4939.00	98.8
THALLIUM	25.0	24.62	98.5
VANADIUM	25.0	24.18	96.7
ZINC	25.0	24.35	97.4

SAMPLE: CCV

File: JLC16A Mar 16, 2018 17:19

Analyte	True	Found	%R (1)
ALUMINUM	500.0	510.70	102.1
ARSENIC	25.0	24.89	99.6
BARIUM	25.0	24.69	98.8
BERYLLIUM	25.0	24.74	99.0
CADMIUM	25.0	24.44	97.8
CALCIUM	5000.0	5179.00	103.6
CHROMIUM	25.0	24.91	99.6
COBALT	25.0	24.70	98.8
COPPER	25.0	25.07	100.3
IRON	5000.0	5085.00	101.7
LEAD	25.0	24.47	97.9
MAGNESIUM	5000.0	5091.00	101.8
MANGANESE	25.0	24.79	99.2
MOLYBDENUM	25.0	24.18	96.7
NICKEL	25.0	24.93	99.7
POTASSIUM	5000.0	5005.00	100.1
SELENIUM	25.0	24.65	98.6
SILVER	25.0	24.31	97.2
SODIUM	5000.0	5055.00	101.1
THALLIUM	25.0	24.55	98.2
VANADIUM	25.0	24.91	99.6
ZINC	25.0	25.01	100.0

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICV

File: JLC20C Mar 20, 2018 17:33

Analyte	True	Found	%R (1)
ALUMINUM	400.0	390.20	97.5
ANTIMONY	20.0	19.96	99.8
ARSENIC	20.0	20.09	100.4
BARIUM	20.0	20.22	101.1
BERYLLIUM	20.0	19.93	99.6
CADMIUM	20.0	20.45	102.3
CALCIUM	4000.0	4082.00	102.1
CHROMIUM	20.0	19.88	99.4
COBALT	20.0	20.16	100.8
COPPER	20.0	20.13	100.6
IRON	4000.0	4081.00	102.0
LEAD	20.0	19.80	99.0
MAGNESIUM	4000.0	3976.00	99.4
MANGANESE	20.0	19.96	99.8
MOLYBDENUM	40.0	39.30	98.3
NICKEL	20.0	20.31	101.5
POTASSIUM	4000.0	3895.00	97.4
SELENIUM	20.0	20.25	101.3
SILVER	20.0	20.10	100.5
SODIUM	4000.0	3961.00	99.0
THALLIUM	20.0	19.99	99.9
VANADIUM	20.0	20.11	100.6
ZINC	20.0	20.82	104.1

SAMPLE: CCV

File: JLC20C Mar 20, 2018 18:17

Analyte	True	Found	%R (1)
ALUMINUM	500.0	484.50	96.9
ANTIMONY	25.0	24.95	99.8
ARSENIC	25.0	25.03	100.1
BARIUM	25.0	25.45	101.8
BERYLLIUM	25.0	25.10	100.4
CADMIUM	25.0	25.59	102.4
CALCIUM	5000.0	5088.00	101.8
CHROMIUM	25.0	24.93	99.7
COBALT	25.0	24.92	99.7
COPPER	25.0	25.06	100.2
IRON	5000.0	5113.00	102.3
LEAD	25.0	24.69	98.8
MAGNESIUM	5000.0	4945.00	98.9
MANGANESE	25.0	24.82	99.3
MOLYBDENUM	25.0	25.31	101.2
NICKEL	25.0	25.08	100.3
POTASSIUM	5000.0	4901.00	98.0
SELENIUM	25.0	25.69	102.8
SILVER	25.0	25.66	102.6
SODIUM	5000.0	4913.00	98.3
THALLIUM	25.0	24.65	98.6
VANADIUM	25.0	24.69	98.8
ZINC	25.0	25.08	100.3

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: CCV

File: JLC20C Mar 20, 2018 19:06

Analyte	True	Found	%R (1)
ALUMINUM	500.0	483.90	96.8
ANTIMONY	25.0	25.19	100.8
ARSENIC	25.0	24.87	99.5
BARIUM	25.0	25.80	103.2
BERYLLIUM	25.0	24.82	99.3
CADMIUM	25.0	25.11	100.4
CALCIUM	5000.0	5097.00	101.9
CHROMIUM	25.0	24.80	99.2
COBALT	25.0	25.00	100.0
COPPER	25.0	24.76	99.0
IRON	5000.0	5095.00	101.9
LEAD	25.0	24.71	98.8
MAGNESIUM	5000.0	4897.00	97.9
MANGANESE	25.0	24.63	98.5
MOLYBDENUM	25.0	25.11	100.4
NICKEL	25.0	25.25	101.0
POTASSIUM	5000.0	4910.00	98.2
SELENIUM	25.0	25.11	100.4
SILVER	25.0	25.27	101.1
SODIUM	5000.0	4849.00	97.0
THALLIUM	25.0	24.70	98.8
VANADIUM	25.0	24.98	99.9
ZINC	25.0	24.81	99.2

SAMPLE: CCV

File: JLC20C Mar 20, 2018 19:56

Analyte	True	Found	%R (1)
ALUMINUM	500.0	486.70	97.3
ANTIMONY	25.0	24.98	99.9
ARSENIC	25.0	24.45	97.8
BARIUM	25.0	25.28	101.1
BERYLLIUM	25.0	24.80	99.2
CADMIUM	25.0	24.72	98.9
CALCIUM	5000.0	5108.00	102.2
CHROMIUM	25.0	24.78	99.1
COBALT	25.0	24.76	99.0
COPPER	25.0	24.69	98.8
IRON	5000.0	5088.00	101.8
LEAD	25.0	24.66	98.6
MAGNESIUM	5000.0	4972.00	99.4
MANGANESE	25.0	24.62	98.5
MOLYBDENUM	25.0	24.73	98.9
NICKEL	25.0	25.07	100.3
POTASSIUM	5000.0	4950.00	99.0
SELENIUM	25.0	24.34	97.4
SILVER	25.0	25.09	100.4
SODIUM	5000.0	4901.00	98.0
THALLIUM	25.0	24.47	97.9
VANADIUM	25.0	24.54	98.2
ZINC	25.0	24.77	99.1

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: CCV

File: JLC20C Mar 20, 2018 20:47

Analyte	True	Found	%R (1)
ALUMINUM	500.0	486.90	97.4
ANTIMONY	25.0	25.06	100.2
ARSENIC	25.0	24.90	99.6
BARIUM	25.0	25.02	100.1
BERYLLIUM	25.0	24.51	98.0
CADMIUM	25.0	24.86	99.4
CALCIUM	5000.0	5103.00	102.1
CHROMIUM	25.0	24.62	98.5
COBALT	25.0	24.54	98.2
COPPER	25.0	24.85	99.4
IRON	5000.0	5065.00	101.3
LEAD	25.0	24.45	97.8
MAGNESIUM	5000.0	4923.00	98.5
MANGANESE	25.0	24.48	97.9
MOLYBDENUM	25.0	24.89	99.6
NICKEL	25.0	24.59	98.4
POTASSIUM	5000.0	4927.00	98.5
SELENIUM	25.0	25.01	100.0
SILVER	25.0	25.14	100.6
SODIUM	5000.0	4858.00	97.2
THALLIUM	25.0	24.37	97.5
VANADIUM	25.0	24.81	99.2
ZINC	25.0	24.53	98.1

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICV

File: JLC21A Mar 21, 2018 14:56

Analyte	True	Found	%R (1)
ALUMINUM	400.0	396.10	99.0
ANTIMONY	20.0	19.58	97.9
BERYLLIUM	20.0	19.18	95.9
CALCIUM	4000.0	4035.00	100.9
IRON	4000.0	4101.00	102.5
MAGNESIUM	4000.0	3918.00	98.0
MOLYBDENUM	40.0	38.63	96.6
POTASSIUM	4000.0	3903.00	97.6
SODIUM	4000.0	3874.00	96.9
THALLIUM	20.0	20.31	101.5

SAMPLE: CCV

File: JLC21A Mar 21, 2018 15:37

Analyte	True	Found	%R (1)
ALUMINUM	500.0	504.10	100.8
ANTIMONY	25.0	25.67	102.7
BERYLLIUM	25.0	25.09	100.4
CALCIUM	5000.0	5204.00	104.1
IRON	5000.0	5146.00	102.9
MAGNESIUM	5000.0	5069.00	101.4
MOLYBDENUM	25.0	25.59	102.4
POTASSIUM	5000.0	5069.00	101.4
SODIUM	5000.0	4971.00	99.4
THALLIUM	25.0	25.63	102.5

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: CCV

File: JLC21A Mar 21, 2018 16:23

Analyte	True	Found	%R (1)
ALUMINUM	500.0	502.70	100.5
ANTIMONY	25.0	25.76	103.0
BERYLLIUM	25.0	24.48	97.9
CALCIUM	5000.0	5197.00	103.9
IRON	5000.0	5094.00	101.9
MAGNESIUM	5000.0	4952.00	99.0
MOLYBDENUM	25.0	25.19	100.8
POTASSIUM	5000.0	5029.00	100.6
SODIUM	5000.0	4845.00	96.9
THALLIUM	25.0	25.25	101.0

SAMPLE: CCV

File: JLC21A Mar 21, 2018 17:11

Analyte	True	Found	%R (1)
ALUMINUM	500.0	502.80	100.6
ANTIMONY	25.0	25.78	103.1
BERYLLIUM	25.0	24.88	99.5
CALCIUM	5000.0	5148.00	103.0
IRON	5000.0	5095.00	101.9
MAGNESIUM	5000.0	4935.00	98.7
MOLYBDENUM	25.0	24.97	99.9
POTASSIUM	5000.0	5032.00	100.6
SODIUM	5000.0	4840.00	96.8
THALLIUM	25.0	25.26	101.0

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: CCV

File: JLC21A Mar 21, 2018 18:00

Analyte	True	Found	%R (1)
ALUMINUM	500.0	516.40	103.3
ANTIMONY	25.0	25.69	102.8
BERYLLIUM	25.0	24.45	97.8
CALCIUM	5000.0	5113.00	102.3
IRON	5000.0	5130.00	102.6
MAGNESIUM	5000.0	5018.00	100.4
MOLYBDENUM	25.0	24.95	99.8
POTASSIUM	5000.0	4985.00	99.7
SODIUM	5000.0	4872.00	97.4
THALLIUM	25.0	25.24	101.0

SAMPLE: CCV

File: JLC21A Mar 21, 2018 18:49

Analyte	True	Found	%R (1)
ALUMINUM	500.0	498.00	99.6
ANTIMONY	25.0	25.35	101.4
BERYLLIUM	25.0	24.77	99.1
CALCIUM	5000.0	5149.00	103.0
IRON	5000.0	5091.00	101.8
MAGNESIUM	5000.0	4973.00	99.5
MOLYBDENUM	25.0	24.79	99.2
POTASSIUM	5000.0	4973.00	99.5
SODIUM	5000.0	4915.00	98.3
THALLIUM	25.0	25.01	100.0

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: CCV

File: JLC21A Mar 21, 2018 19:39

Analyte	True	Found	%R (1)
ALUMINUM	500.0	507.80	101.6
ANTIMONY	25.0	25.70	102.8
BERYLLIUM	25.0	24.62	98.5
CALCIUM	5000.0	5141.00	102.8
IRON	5000.0	5247.00	104.9
MAGNESIUM	5000.0	5106.00	102.1
MOLYBDENUM	25.0	25.13	100.5
POTASSIUM	5000.0	4994.00	99.9
SODIUM	5000.0	4993.00	99.9
THALLIUM	25.0	25.28	101.1

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICV

File: JLC22E Mar 22, 2018 17:17

Analyte	True	Found	%R (1)
ALUMINUM	400.0	397.80	99.5
ARSENIC	20.0	19.34	96.7
BARIUM	20.0	19.59	98.0
BERYLLIUM	20.0	19.45	97.2
CADMIUM	20.0	19.99	99.9
CALCIUM	4000.0	4012.00	100.3
CHROMIUM	20.0	19.33	96.6
COBALT	20.0	19.42	97.1
COPPER	20.0	19.63	98.1
IRON	4000.0	4018.00	100.4
LEAD	20.0	19.61	98.0
MAGNESIUM	4000.0	3890.00	97.3
MANGANESE	20.0	19.49	97.4
MOLYBDENUM	40.0	38.27	95.7
NICKEL	20.0	19.62	98.1
POTASSIUM	4000.0	3845.00	96.1
SELENIUM	20.0	19.90	99.5
SILVER	20.0	19.82	99.1
SODIUM	4000.0	3813.00	95.3
VANADIUM	20.0	19.51	97.5
ZINC	20.0	20.06	100.3

SAMPLE: CCV

File: JLC22E Mar 22, 2018 18:01

Analyte	True	Found	%R (1)
ALUMINUM	500.0	493.40	98.7
ARSENIC	25.0	24.82	99.3
BARIUM	25.0	25.14	100.6
BERYLLIUM	25.0	25.86	103.4
CADMIUM	25.0	25.02	100.1
CALCIUM	5000.0	5013.00	100.3
CHROMIUM	25.0	24.86	99.4
COBALT	25.0	25.02	100.1
COPPER	25.0	25.20	100.8
IRON	5000.0	5019.00	100.4
LEAD	25.0	24.74	99.0
MAGNESIUM	5000.0	4873.00	97.5
MANGANESE	25.0	24.98	99.9
MOLYBDENUM	25.0	24.60	98.4
NICKEL	25.0	24.92	99.7
POTASSIUM	5000.0	4939.00	98.8
SELENIUM	25.0	24.82	99.3
SILVER	25.0	24.98	99.9
SODIUM	5000.0	4836.00	96.7
VANADIUM	25.0	24.81	99.2
ZINC	25.0	25.09	100.4

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: CCV

File: JLC22E Mar 22, 2018 18:50

Analyte	True	Found	%R (1)
ALUMINUM	500.0	495.80	99.2
ARSENIC	25.0	25.05	100.2
BARIUM	25.0	25.20	100.8
BERYLLIUM	25.0	24.79	99.2
CADMIUM	25.0	25.49	102.0
CALCIUM	5000.0	5038.00	100.8
CHROMIUM	25.0	25.06	100.2
COBALT	25.0	24.97	99.9
COPPER	25.0	25.31	101.2
IRON	5000.0	5076.00	101.5
LEAD	25.0	24.87	99.5
MAGNESIUM	5000.0	4847.00	96.9
MANGANESE	25.0	25.13	100.5
MOLYBDENUM	25.0	25.46	101.8
NICKEL	25.0	25.22	100.9
POTASSIUM	5000.0	5003.00	100.1
SELENIUM	25.0	25.25	101.0
SILVER	25.0	25.54	102.2
SODIUM	5000.0	4751.00	95.0
VANADIUM	25.0	25.18	100.7
ZINC	25.0	25.33	101.3

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICV

File: JLC26B Mar 26, 2018 16:22

Analyte	True	Found	%R (1)
ALUMINUM	400.0	403.00	100.8
ARSENIC	20.0	19.53	97.7
CALCIUM	4000.0	4003.00	100.1
CHROMIUM	20.0	19.40	97.0
COPPER	20.0	19.59	98.0
IRON	4000.0	3993.00	99.8
MAGNESIUM	4000.0	4012.00	100.3
MANGANESE	20.0	19.46	97.3
MOLYBDENUM	40.0	38.12	95.3
NICKEL	20.0	19.67	98.4
POTASSIUM	4000.0	3930.00	98.3
SELENIUM	20.0	19.96	99.8
SILVER	20.0	19.61	98.0
SODIUM	4000.0	3930.00	98.3
VANADIUM	20.0	19.40	97.0
ZINC	20.0	20.16	100.8

SAMPLE: CCV

File: JLC26B Mar 26, 2018 17:05

Analyte	True	Found	%R (1)
ALUMINUM	500.0	510.10	102.0
ARSENIC	25.0	25.14	100.6
CALCIUM	5000.0	5134.00	102.7
CHROMIUM	25.0	25.17	100.7
COPPER	25.0	25.34	101.4
IRON	5000.0	5116.00	102.3
MAGNESIUM	5000.0	5127.00	102.5
MANGANESE	25.0	25.18	100.7
MOLYBDENUM	25.0	24.97	99.9
NICKEL	25.0	25.33	101.3
POTASSIUM	5000.0	5053.00	101.1
SELENIUM	25.0	25.50	102.0
SILVER	25.0	25.53	102.1
SODIUM	5000.0	5011.00	100.2
VANADIUM	25.0	24.80	99.2
ZINC	25.0	25.62	102.5

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: CCV

File: JLC26B Mar 26, 2018 17:53

Analyte	True	Found	%R (1)
ALUMINUM	500.0	518.10	103.6
ARSENIC	25.0	25.50	102.0
CALCIUM	5000.0	5144.00	102.9
CHROMIUM	25.0	25.14	100.6
COPPER	25.0	25.39	101.6
IRON	5000.0	5142.00	102.8
MAGNESIUM	5000.0	5057.00	101.1
MANGANESE	25.0	25.38	101.5
MOLYBDENUM	25.0	25.05	100.2
NICKEL	25.0	25.29	101.2
POTASSIUM	5000.0	5014.00	100.3
SELENIUM	25.0	25.57	102.3
SILVER	25.0	25.70	102.8
SODIUM	5000.0	4974.00	99.5
VANADIUM	25.0	24.93	99.7
ZINC	25.0	25.79	103.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICV

File: JLC27A Mar 27, 2018 14:13

Analyte	True	Found	%R (1)
ALUMINUM	400.0	404.00	101.0
CADMIUM	20.0	19.91	99.6
CALCIUM	4000.0	4023.00	100.6
COBALT	20.0	19.42	97.1
IRON	4000.0	3991.00	99.8
MAGNESIUM	4000.0	3980.00	99.5
MOLYBDENUM	40.0	38.36	95.9
POTASSIUM	4000.0	3887.00	97.2
SODIUM	4000.0	3844.00	96.1

SAMPLE: CCV

File: JLC27A Mar 27, 2018 14:54

Analyte	True	Found	%R (1)
ALUMINUM	500.0	499.00	99.8
CADMIUM	25.0	25.18	100.7
CALCIUM	5000.0	5081.00	101.6
COBALT	25.0	24.68	98.7
IRON	5000.0	5053.00	101.1
MAGNESIUM	5000.0	5019.00	100.4
MOLYBDENUM	25.0	25.37	101.5
POTASSIUM	5000.0	4964.00	99.3
SODIUM	5000.0	4919.00	98.4

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: CCV

File: JLC27A Mar 27, 2018 15:40

Analyte	True	Found	%R (1)
ALUMINUM	500.0	509.20	101.8
CADMIUM	25.0	24.86	99.4
CALCIUM	5000.0	5097.00	101.9
COBALT	25.0	24.96	99.8
IRON	5000.0	5108.00	102.2
MAGNESIUM	5000.0	5155.00	103.1
MOLYBDENUM	25.0	24.53	98.1
POTASSIUM	5000.0	5045.00	100.9
SODIUM	5000.0	5099.00	102.0

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: PQL

File: HLC16A Mar 16, 2018 12:25

Analyte	TRUE	FOUND	% R
MERCURY	0.2	0.23	115.0

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: PQL

File: HLC19A Mar 19, 2018 12:11

Analyte	TRUE	FOUND	% R
MERCURY	0.2	0.21	105.0

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: PQL

File: JLC16A Mar 16, 2018 15:14

Analyte	TRUE	FOUND	% R
ALUMINUM	20.0	20.44	102.2
ARSENIC	1.0	1.03	103.0
BARIUM	0.4	0.43	107.5
BERYLLIUM	0.2	0.20	100.0
CADMIUM	0.2	0.19	95.0
CALCIUM	20.0	17.15	85.8
CHROMIUM	1.0	0.94	94.0
COBALT	0.2	0.21	105.0
COPPER	0.6	0.64	106.7
IRON	20.0	17.78	88.9
LEAD	0.2	0.19	95.0
MAGNESIUM	20.0	20.27	101.4
MANGANESE	0.4	0.42	105.0
MOLYBDENUM	1.0	1.03	103.0
NICKEL	0.4	0.41	102.5
POTASSIUM	200.0	196.70	98.3
SELENIUM	1.0	1.16	116.0
SILVER	0.2	0.21	105.0
SODIUM	200.0	211.90	106.0
THALLIUM	0.2	0.19	95.0
VANADIUM	1.0	1.08	108.0
ZINC	2.0	2.33	116.5

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: PQL

File: JLC20C Mar 20, 2018 17:40

Analyte	TRUE	FOUND	% R
ALUMINUM	20.0	20.06	100.3
ANTIMONY	0.2	0.20	100.0
ARSENIC	1.0	1.02	102.0
BARIUM	0.4	0.41	102.5
BERYLLIUM	0.2	0.20	100.0
CADMIUM	0.2	0.19	95.0
CALCIUM	20.0	20.39	102.0
CHROMIUM	1.0	0.98	98.0
COBALT	0.2	0.21	105.0
COPPER	0.6	0.71	118.3
IRON	20.0	21.35	106.8
LEAD	0.2	0.19	95.0
MAGNESIUM	20.0	20.47	102.3
MANGANESE	0.4	0.40	100.0
MOLYBDENUM	1.0	1.05	105.0
NICKEL	0.4	0.42	105.0
POTASSIUM	200.0	198.10	99.0
SELENIUM	1.0	1.13	113.0
SILVER	0.2	0.22	110.0
SODIUM	200.0	207.40	103.7
THALLIUM	0.2	0.19	95.0
VANADIUM	1.0	1.01	101.0
ZINC	2.0	2.43	121.5•

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: PQL

File: JLC21A Mar 21, 2018 15:03

Analyte	TRUE	FOUND	% R
ALUMINUM	20.0	20.23	101.2
ANTIMONY	0.2	0.18	90.0
BERYLLIUM	0.2	0.21	105.0
CALCIUM	20.0	18.96	94.8
IRON	20.0	18.68	93.4
MAGNESIUM	20.0	19.76	98.8
MOLYBDENUM	1.0	0.99	99.0
POTASSIUM	200.0	199.40	99.7
SODIUM	200.0	208.70	104.3
THALLIUM	0.2	0.20	100.0

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: PQL

File: JLC22E Mar 22, 2018 17:25

Analyte	TRUE	FOUND	% R
ALUMINUM	20.0	20.04	100.2
ARSENIC	1.0	1.15	115.0
BARIUM	0.4	0.39	97.5
BERYLLIUM	0.2	0.19	95.0
CADMIUM	0.2	0.20	100.0
CALCIUM	20.0	21.81	109.1
CHROMIUM	1.0	0.94	94.0
COBALT	0.2	0.21	105.0
COPPER	0.6	0.61	101.7
IRON	20.0	22.97	114.8
LEAD	0.2	0.19	95.0
MAGNESIUM	20.0	19.83	99.1
MANGANESE	0.4	0.38	95.0
MOLYBDENUM	1.0	0.98	98.0
NICKEL	0.4	0.43	107.5
POTASSIUM	200.0	192.60	96.3
SELENIUM	1.0	1.20	120.0
SILVER	0.2	0.20	100.0
SODIUM	200.0	198.30	99.2
VANADIUM	1.0	0.98	98.0
ZINC	2.0	2.09	104.5

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: PQL

File: JLC26B Mar 26, 2018 16:29

Analyte	TRUE	FOUND	% R
ALUMINUM	20.0	19.04	95.2
ARSENIC	1.0	1.04	104.0
CALCIUM	20.0	19.97	99.8
CHROMIUM	1.0	1.02	102.0
COPPER	0.6	0.64	106.7
IRON	20.0	17.40	87.0
MAGNESIUM	20.0	20.22	101.1
MANGANESE	0.4	0.40	100.0
MOLYBDENUM	1.0	0.95	95.0
NICKEL	0.4	0.39	97.5
POTASSIUM	200.0	201.30	100.6
SELENIUM	1.0	1.19	119.0
SILVER	0.2	0.20	100.0
SODIUM	200.0	210.10	105.1
VANADIUM	1.0	0.97	97.0
ZINC	2.0	2.06	103.0

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: PQL

File: JLC27A Mar 27, 2018 14:21

Analyte	TRUE	FOUND	% R
ALUMINUM	20.0	19.44	97.2
CADMIUM	0.2	0.19	95.0
CALCIUM	20.0	18.99	94.9
COBALT	0.2	0.20	100.0
IRON	20.0	19.97	99.8
MAGNESIUM	20.0	20.14	100.7
MOLYBDENUM	1.0	0.98	98.0
POTASSIUM	200.0	194.40	97.2
SODIUM	200.0	203.70	101.8

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICB

File: HLC16A Mar 16, 2018 12:23

Analyte	Result	C
MERCURY	0.035	J

SAMPLE: CCB

File: HLC16A Mar 16, 2018 12:29

Analyte	Result	C
MERCURY	0.025	J

SAMPLE: CCB

File: HLC16A Mar 16, 2018 12:53

Analyte	Result	C
MERCURY	0.040	J

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: CCB

File: HLC16A Mar 16, 2018 13:16

Analyte	Result	C
MERCURY	0.035	J

SAMPLE: CCB

File: HLC16A Mar 16, 2018 13:30

Analyte	Result	C
MERCURY	0.044	J

SAMPLE: CCB

File: HLC16A Mar 16, 2018 13:43

Analyte	Result	C
MERCURY	0.034	J

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICB

File: HLC19A Mar 19, 2018 12:09

Analyte	Result	C
MERCURY	0.024	U

SAMPLE: CCB

File: HLC19A Mar 19, 2018 12:15

Analyte	Result	C
MERCURY	0.024	U

SAMPLE: CCB

File: HLC19A Mar 19, 2018 12:39

Analyte	Result	C
MERCURY	0.024	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: CCB

File: HLC19A Mar 19, 2018 13:04

Analyte	Result	C
MERCURY	0.024	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICB
File: JLC16A Mar 16, 2018 15:11

Analyte	Result	C
ALUMINUM	1.900	U
ARSENIC	0.180	U
BARIUM	0.075	U
BERYLLIUM	0.004	U
CADMIUM	0.007	U
CALCIUM	5.300	U
CHROMIUM	-0.119	U
COBALT	0.006	U
COPPER	0.030	U
IRON	4.300	U
LEAD	0.010	U
MAGNESIUM	1.300	U
MANGANESE	0.021	U
MOLYBDENUM	0.034	U
NICKEL	0.018	U
POTASSIUM	7.900	U
SELENIUM	0.470	U
SILVER	0.003	U
SODIUM	4.400	U
THALLIUM	0.009	J
VANADIUM	0.063	U
ZINC	0.270	U

SAMPLE: CCB
File: JLC16A Mar 16, 2018 15:51

Analyte	Result	C
ALUMINUM	1.900	U
ARSENIC	0.180	U
BARIUM	0.075	U
BERYLLIUM	0.004	U
CADMIUM	0.007	U
CALCIUM	5.300	U
CHROMIUM	0.062	U
COBALT	0.006	U
COPPER	0.040	J
IRON	4.300	U
LEAD	0.011	J
MAGNESIUM	1.300	U
MANGANESE	0.029	J
MOLYBDENUM	0.046	J
NICKEL	0.018	U
POTASSIUM	7.900	U
SELENIUM	0.470	U
SILVER	0.005	J
SODIUM	4.400	U
THALLIUM	0.008	U
VANADIUM	0.063	U
ZINC	0.270	U

SAMPLE: CCB
File: JLC16A Mar 16, 2018 16:36

Analyte	Result	C
ALUMINUM	1.900	U
ARSENIC	0.180	U
BARIUM	0.075	U
BERYLLIUM	0.004	U
CADMIUM	0.007	U
CALCIUM	5.300	U
CHROMIUM	-0.078	U
COBALT	0.006	U
COPPER	0.043	J
IRON	4.300	U
LEAD	0.010	U
MAGNESIUM	1.300	U
MANGANESE	0.031	J
MOLYBDENUM	0.034	U
NICKEL	0.018	U
POTASSIUM	7.900	U
SELENIUM	0.470	U
SILVER	0.007	J
SODIUM	4.400	U
THALLIUM	0.008	U
VANADIUM	0.063	U
ZINC	0.270	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: CCB

File: JLC16A Mar 16, 2018 17:23

Analyte	Result	C
ALUMINUM	1.900	U
ARSENIC	0.180	U
BARIUM	0.075	U
BERYLLIUM	0.004	U
CADMIUM	0.007	U
CALCIUM	5.300	U
CHROMIUM	-0.069	U
COBALT	0.006	U
COPPER	0.031	J
IRON	4.300	U
LEAD	0.010	U
MAGNESIUM	1.300	U
MANGANESE	0.041	J
MOLYBDENUM	0.034	U
NICKEL	0.018	U
POTASSIUM	7.900	U
SELENIUM	0.470	U
SILVER	0.005	J
SODIUM	8.643	J
THALLIUM	0.008	U
VANADIUM	0.063	U
ZINC	0.270	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICB
File: JLC20C Mar 20, 2018 17:37

Analyte	Result	C
ALUMINUM	1.900	U
ANTIMONY	0.011	J
ARSENIC	0.180	U
BARIUM	0.075	U
BERYLLIUM	0.004	U
CADMIUM	0.007	U
CALCIUM	5.300	U
CHROMIUM	0.062	U
COBALT	0.006	J
COPPER	0.030	U
IRON	4.300	U
LEAD	0.010	U
MAGNESIUM	1.300	U
MANGANESE	0.021	U
MOLYBDENUM	0.034	U
NICKEL	0.018	U
POTASSIUM	7.900	U
SELENIUM	0.470	U
SILVER	0.003	U
SODIUM	4.400	U
THALLIUM	0.008	U
VANADIUM	0.063	U
ZINC	0.270	U

SAMPLE: CCB
File: JLC20C Mar 20, 2018 18:21

Analyte	Result	C
ALUMINUM	1.900	U
ANTIMONY	0.006	U
ARSENIC	0.180	U
BARIUM	0.075	U
BERYLLIUM	0.004	U
CADMIUM	0.007	U
CALCIUM	5.300	U
CHROMIUM	0.062	U
COBALT	0.010	J
COPPER	0.030	U
IRON	4.300	U
LEAD	0.010	U
MAGNESIUM	1.300	U
MANGANESE	0.021	U
MOLYBDENUM	0.037	J
NICKEL	0.018	U
POTASSIUM	7.900	U
SELENIUM	0.470	U
SILVER	0.003	U
SODIUM	4.400	U
THALLIUM	0.008	U
VANADIUM	0.063	U
ZINC	0.270	U

SAMPLE: CCB
File: JLC20C Mar 20, 2018 19:10

Analyte	Result	C
ALUMINUM	1.900	U
ANTIMONY	0.006	U
ARSENIC	0.180	U
BARIUM	0.075	U
BERYLLIUM	0.004	U
CADMIUM	0.007	U
CALCIUM	5.300	U
CHROMIUM	0.062	U
COBALT	0.006	J
COPPER	0.030	U
IRON	4.300	U
LEAD	0.010	U
MAGNESIUM	1.300	U
MANGANESE	0.021	U
MOLYBDENUM	0.034	U
NICKEL	0.018	U
POTASSIUM	7.900	U
SELENIUM	0.470	U
SILVER	0.003	U
SODIUM	4.400	U
THALLIUM	0.008	U
VANADIUM	0.063	U
ZINC	0.270	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: CCB

File: JLC20C Mar 20, 2018 20:00

Analyte	Result	C
ALUMINUM	1.900	U
ANTIMONY	0.006	U
ARSENIC	0.180	U
BARIUM	0.075	U
BERYLLIUM	0.004	U
CADMIUM	0.007	U
CALCIUM	5.300	U
CHROMIUM	0.062	U
COBALT	0.006	U
COPPER	0.030	U
IRON	4.300	U
LEAD	0.010	U
MAGNESIUM	1.300	U
MANGANESE	0.024	J
MOLYBDENUM	0.034	U
NICKEL	0.018	U
POTASSIUM	7.900	U
SELENIUM	0.470	U
SILVER	0.003	U
SODIUM	4.400	U
THALLIUM	0.008	U
VANADIUM	0.063	U
ZINC	0.270	U

SAMPLE: CCB

File: JLC20C Mar 20, 2018 20:51

Analyte	Result	C
ALUMINUM	1.900	U
ANTIMONY	0.006	U
ARSENIC	0.180	U
BARIUM	0.075	U
BERYLLIUM	0.004	U
CADMIUM	0.007	U
CALCIUM	5.300	U
CHROMIUM	0.062	U
COBALT	0.007	J
COPPER	0.030	U
IRON	4.300	U
LEAD	0.010	U
MAGNESIUM	1.300	U
MANGANESE	0.021	U
MOLYBDENUM	0.034	U
NICKEL	0.018	U
POTASSIUM	7.900	U
SELENIUM	0.470	U
SILVER	0.003	U
SODIUM	4.400	U
THALLIUM	0.008	U
VANADIUM	0.063	U
ZINC	0.270	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICB
File: JLC21A Mar 21, 2018 15:00

Analyte	Result	C
ALUMINUM	1.900	U
ANTIMONY	0.006	J
BERYLLIUM	0.004	U
CALCIUM	5.300	U
IRON	4.300	U
MAGNESIUM	1.300	U
MOLYBDENUM	0.036	J
POTASSIUM	7.900	U
SODIUM	4.400	U
THALLIUM	0.008	U

SAMPLE: CCB
File: JLC21A Mar 21, 2018 15:40

Analyte	Result	C
ALUMINUM	1.900	U
ANTIMONY	0.008	J
BERYLLIUM	0.004	U
CALCIUM	5.300	U
IRON	-5.579	U
MAGNESIUM	1.300	U
MOLYBDENUM	0.045	J
POTASSIUM	7.900	U
SODIUM	4.400	U
THALLIUM	0.008	U

SAMPLE: CCB
File: JLC21A Mar 21, 2018 16:27

Analyte	Result	C
ALUMINUM	1.900	U
ANTIMONY	0.006	U
BERYLLIUM	0.004	U
CALCIUM	5.300	U
IRON	-4.412	U
MAGNESIUM	1.300	U
MOLYBDENUM	0.034	U
POTASSIUM	7.900	U
SODIUM	4.400	U
THALLIUM	0.008	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: CCB
File: JLC21A Mar 21, 2018 17:15

Analyte	Result	C
ALUMINUM	1.900	U
ANTIMONY	0.006	U
BERYLLIUM	0.004	U
CALCIUM	5.300	U
IRON	4.300	U
MAGNESIUM	1.300	U
MOLYBDENUM	0.034	U
POTASSIUM	7.900	U
SODIUM	4.400	U
THALLIUM	0.008	U

SAMPLE: CCB
File: JLC21A Mar 21, 2018 18:04

Analyte	Result	C
ALUMINUM	14.670	B
ANTIMONY	0.013	J
BERYLLIUM	0.004	U
CALCIUM	9.193	J
IRON	6.456	J
MAGNESIUM	8.290	J
MOLYBDENUM	0.058	J
POTASSIUM	7.900	U
SODIUM	5.128	J
THALLIUM	0.016	J

SAMPLE: CCB
File: JLC21A Mar 21, 2018 18:53

Analyte	Result	C
ALUMINUM	1.900	U
ANTIMONY	0.006	U
BERYLLIUM	0.004	U
CALCIUM	5.300	U
IRON	4.300	U
MAGNESIUM	1.300	U
MOLYBDENUM	0.034	U
POTASSIUM	7.900	U
SODIUM	4.400	U
THALLIUM	0.008	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: CCB

File: JLC21A Mar 21, 2018 19:43

Analyte	Result	C
ALUMINUM	1.900	U
ANTIMONY	0.007	J
BERYLLIUM	0.004	U
CALCIUM	5.300	U
IRON	4.300	U
MAGNESIUM	1.300	U
MOLYBDENUM	0.034	U
POTASSIUM	-8.891	U
SODIUM	11.440	J
THALLIUM	0.008	U

3A

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICB

File: JLC22E Mar 22, 2018 17:21

Analyte	Result	C
ALUMINUM	1.900	U
ARSENIC	0.180	U
BARIUM	0.075	U
BERYLLIUM	0.004	U
CADMIUM	0.007	U
CALCIUM	5.300	U
CHROMIUM	0.062	U
COBALT	0.006	U
COPPER	0.030	U
IRON	4.300	U
LEAD	0.010	U
MAGNESIUM	1.300	U
MANGANESE	0.021	U
MOLYBDENUM	0.034	U
NICKEL	0.018	U
POTASSIUM	7.900	U
SELENIUM	0.470	U
SILVER	0.003	U
SODIUM	4.400	U
VANADIUM	0.063	U
ZINC	0.270	U

SAMPLE: CCB

File: JLC22E Mar 22, 2018 18:05

Analyte	Result	C
ALUMINUM	1.900	U
ARSENIC	0.180	U
BARIUM	0.075	U
BERYLLIUM	0.004	U
CADMIUM	0.007	U
CALCIUM	5.300	U
CHROMIUM	0.062	U
COBALT	0.006	U
COPPER	0.030	U
IRON	4.300	U
LEAD	0.010	U
MAGNESIUM	1.300	U
MANGANESE	0.021	U
MOLYBDENUM	0.035	J
NICKEL	0.018	U
POTASSIUM	-10.590	U
SELENIUM	0.470	U
SILVER	0.003	U
SODIUM	4.400	U
VANADIUM	0.063	U
ZINC	0.270	U

SAMPLE: CCB

File: JLC22E Mar 22, 2018 18:54

Analyte	Result	C
ALUMINUM	1.900	U
ARSENIC	0.180	U
BARIUM	0.075	U
BERYLLIUM	0.004	U
CADMIUM	0.007	U
CALCIUM	5.300	U
CHROMIUM	0.062	U
COBALT	0.006	U
COPPER	0.030	U
IRON	4.300	U
LEAD	0.010	U
MAGNESIUM	1.300	U
MANGANESE	0.021	U
MOLYBDENUM	0.034	U
NICKEL	0.018	U
POTASSIUM	7.900	U
SELENIUM	0.470	U
SILVER	0.003	U
SODIUM	4.400	U
VANADIUM	0.063	U
ZINC	0.270	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICB

File: JLC26B Mar 26, 2018 16:26

Analyte	Result	C
ALUMINUM	1.900	U
ARSENIC	0.180	U
CALCIUM	5.300	U
CHROMIUM	0.062	U
COPPER	0.030	U
IRON	4.300	U
MAGNESIUM	1.300	U
MANGANESE	0.021	U
MOLYBDENUM	0.034	U
NICKEL	0.018	U
POTASSIUM	7.900	U
SELENIUM	0.470	U
SILVER	0.003	U
SODIUM	4.400	U
VANADIUM	0.063	U
ZINC	0.270	U

SAMPLE: CCB

File: JLC26B Mar 26, 2018 17:09

Analyte	Result	C
ALUMINUM	49.710	B
ARSENIC	0.350	J
CALCIUM	44.900	B
CHROMIUM	0.201	J
COPPER	0.188	J
IRON	27.730	B
MAGNESIUM	67.070	B
MANGANESE	0.200	J
MOLYBDENUM	0.360	J
NICKEL	0.122	J
POTASSIUM	48.810	J
SELENIUM	0.470	U
SILVER	0.015	J
SODIUM	55.320	J
VANADIUM	0.098	J
ZINC	0.430	J

SAMPLE: CCB

File: JLC26B Mar 26, 2018 17:57

Analyte	Result	C
ALUMINUM	1.900	U
ARSENIC	0.180	U
CALCIUM	5.300	U
CHROMIUM	0.062	U
COPPER	0.030	U
IRON	4.300	U
MAGNESIUM	1.300	U
MANGANESE	0.021	U
MOLYBDENUM	0.034	U
NICKEL	0.018	U
POTASSIUM	7.900	U
SELENIUM	0.470	U
SILVER	0.003	U
SODIUM	4.400	U
VANADIUM	0.063	U
ZINC	0.270	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICB

File: JLC27A Mar 27, 2018 14:17

Analyte	Result	C
ALUMINUM	1.900	U
CADMIUM	0.007	U
CALCIUM	5.300	U
COBALT	-0.011	U
IRON	4.300	U
MAGNESIUM	-1.312	U
MOLYBDENUM	0.034	U
POTASSIUM	7.900	U
SODIUM	-9.854	U

SAMPLE: CCB

File: JLC27A Mar 27, 2018 14:58

Analyte	Result	C
ALUMINUM	1.900	U
CADMIUM	0.007	U
CALCIUM	5.300	U
COBALT	0.006	U
IRON	4.300	U
MAGNESIUM	1.300	U
MOLYBDENUM	0.037	J
POTASSIUM	7.900	U
SODIUM	-7.426	U

SAMPLE: CCB

File: JLC27A Mar 27, 2018 15:43

Analyte	Result	C
ALUMINUM	1.900	U
CADMIUM	-0.008	U
CALCIUM	5.300	U
COBALT	-0.009	U
IRON	-5.942	U
MAGNESIUM	1.300	U
MOLYBDENUM	0.034	U
POTASSIUM	-9.445	U
SODIUM	-9.172	U

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBSLC16HGS1

Matrix: SOIL **SDG Name:** SL2079

QC Batch ID: LC16HGS1

Concentration Units : mg/Kg drywt

Analyte	RESULT	C
MERCURY	0.017	U

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBSLC19IMS1

Matrix: SOIL **SDG Name:** SL2079

QC Batch ID: LC19IMS1

Concentration Units : mg/Kg drywt

Analyte	RESULT	C
ALUMINUM	1.4	J
ANTIMONY	0.050	U
ARSENIC	0.40	U
BARIUM	0.10	U
BERYLLIUM	0.020	U
CADMIUM	0.020	U
CALCIUM	8.0	U
CHROMIUM	0.12	J
COBALT	0.030	U
COPPER	0.075	J
IRON	6.0	U
LEAD	0.031	J
MAGNESIUM	1.7	J
MANGANESE	0.10	U
NICKEL	0.052	J
POTASSIUM	40	U
SELENIUM	0.30	U
SILVER	0.040	U
SODIUM	4.0	J
THALLIUM	0.040	U
VANADIUM	0.40	U
ZINC	0.80	U

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBWLC16HGW2

Matrix: WATER **SDG Name:** SL2079

QC Batch ID: LC16HGW2

Concentration Units : ug/L

Analyte	RESULT	C
MERCURY	0.045	J

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBWLC16IMW1

Matrix: WATER **SDG Name:** SL2079

QC Batch ID: LC16IMW1

Concentration Units : ug/L

Analyte	RESULT	C
ALUMINUM	5.2	J
ANTIMONY	0.11	J
ARSENIC	4.0	U
BARIUM	1.0	U
BERYLLIUM	0.20	U
CADMIUM	0.20	U
CALCIUM	80	U
CHROMIUM	0.74	J
COBALT	0.30	U
COPPER	2.0	U
IRON	60	U
LEAD	0.50	U
MAGNESIUM	80	U
MANGANESE	1.0	U
NICKEL	1.2	U
POTASSIUM	400	U
SELENIUM	1.5	J
SILVER	0.40	U
SODIUM	24	J
THALLIUM	0.40	U
VANADIUM	4.0	U
ZINC	8.0	U

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICSA

File: JLC16A Mar 16, 2018 15:22

Analyte	TRUE	FOUND	% R
ALUMINUM	100000.00	96580.00	96.6
ARSENIC	0	0.06	
BARIUM	0	0.11	
BERYLLIUM	0	0.00	
CADMIUM	0	0.07	
CALCIUM	100000.00	98280.00	98.3
CHROMIUM	0	0.82	
COBALT	0	0.09	
COPPER	0	0.92	
IRON	100000.00	94480.00	94.5
LEAD	0	0.09	
MAGNESIUM	100000.00	95380.00	95.4
MANGANESE	0	0.39	
MOLYBDENUM	2000.00	1895.00	94.8
NICKEL	0	-0.13	
POTASSIUM	100000.00	98070.00	98.1
SELENIUM	0	0.04	
SILVER	0	0.02	
SODIUM	100000.00	98320.00	98.3
THALLIUM	0	0.00	
VANADIUM	0	0.22	
ZINC	0	2.18	

SAMPLE: ICSAB

File: JLC16A Mar 16, 2018 15:25

Analyte	TRUE	FOUND	% R
ALUMINUM	100000.00	97480.00	97.5
ARSENIC	20.00	20.56	105.0
BARIUM	21.00	20.94	100.0
BERYLLIUM	20.00	20.88	105.0
CADMIUM	20.00	18.81	95.0
CALCIUM	100000.00	100100.00	100.1
CHROMIUM	20.00	21.07	105.0
COBALT	20.00	19.98	100.0
COPPER	20.00	20.14	100.0
IRON	100000.00	95630.00	95.6
LEAD	20.00	21.48	105.0
MAGNESIUM	100000.00	96570.00	96.6
MANGANESE	20.00	20.43	100.0
MOLYBDENUM	2000.00	1934.00	96.7
NICKEL	20.00	19.36	95.0
POTASSIUM	100000.00	100500.00	100.5
SELENIUM	20.00	19.99	100.0
SILVER	20.00	18.44	90.0
SODIUM	100000.00	100100.00	100.1
THALLIUM	20.00	21.52	110.0
VANADIUM	20.00	20.86	105.0
ZINC	20.00	20.94	105.0

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICSA

File: JLC20C Mar 20, 2018 17:48

Analyte	TRUE	FOUND	% R
ALUMINUM	100000.00	95700.00	95.7
ANTIMONY	0	0.07	
ARSENIC	0	0.34	
BARIUM	0	0.09	
BERYLLIUM	0	0.00	
CADMIUM	0	0.02	
CALCIUM	100000.00	98950.00	99.0
CHROMIUM	0	0.88	
COBALT	0	0.10	
COPPER	0	0.97	
IRON	100000.00	95490.00	95.5
LEAD	0	0.09	
MAGNESIUM	100000.00	96440.00	96.4
MANGANESE	0	0.33	
MOLYBDENUM	2000.00	1966.00	98.3
NICKEL	0	-0.09	
POTASSIUM	100000.00	98660.00	98.7
SELENIUM	0	0.20	
SILVER	0	0.03	
SODIUM	100000.00	97650.00	97.7
THALLIUM	0	0.00	
VANADIUM	0	0.20	
ZINC	0	2.28	

SAMPLE: ICSAB

File: JLC20C Mar 20, 2018 17:53

Analyte	TRUE	FOUND	% R
ALUMINUM	100000.00	96200.00	96.2
ANTIMONY	20.00	20.65	105.0
ARSENIC	20.00	21.27	105.0
BARIUM	21.00	21.34	100.0
BERYLLIUM	20.00	20.99	105.0
CADMIUM	20.00	19.62	100.0
CALCIUM	100000.00	100000.00	100.0
CHROMIUM	20.00	21.50	110.0
COBALT	20.00	20.49	100.0
COPPER	20.00	20.60	105.0
IRON	100000.00	97530.00	97.5
LEAD	20.00	21.68	110.0
MAGNESIUM	100000.00	97350.00	97.4
MANGANESE	20.00	20.70	105.0
MOLYBDENUM	2000.00	1998.00	99.9
NICKEL	20.00	19.86	100.0
POTASSIUM	100000.00	99710.00	99.7
SELENIUM	20.00	20.57	105.0
SILVER	20.00	19.27	95.0
SODIUM	100000.00	98390.00	98.4
THALLIUM	20.00	21.78	110.0
VANADIUM	20.00	21.28	105.0
ZINC	20.00	21.47	105.0

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICSA

File: JLC21A Mar 21, 2018 15:11

Analyte	TRUE	FOUND	% R
ALUMINUM	100000.00	94680.00	94.7
ANTIMONY	0	0.06	
BERYLLIUM	0	0.00	
CALCIUM	100000.00	95910.00	95.9
IRON	100000.00	93650.00	93.7
MAGNESIUM	100000.00	94340.00	94.3
MOLYBDENUM	2000.00	1885.00	94.3
POTASSIUM	100000.00	96960.00	97.0
SODIUM	100000.00	94290.00	94.3
THALLIUM	0	0.00	

SAMPLE: ICSAB

File: JLC21A Mar 21, 2018 15:15

Analyte	TRUE	FOUND	% R
ALUMINUM	100000.00	93340.00	93.3
ANTIMONY	20.00	19.87	100.0
BERYLLIUM	20.00	20.00	100.0
CALCIUM	100000.00	95000.00	95.0
IRON	100000.00	92240.00	92.2
MAGNESIUM	100000.00	92740.00	92.7
MOLYBDENUM	2000.00	1887.00	94.3
POTASSIUM	100000.00	95980.00	96.0
SODIUM	100000.00	92720.00	92.7
THALLIUM	20.00	21.05	105.0

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICSA

File: JLC22E Mar 22, 2018 17:33

Analyte	TRUE	FOUND	% R
ALUMINUM	100000.00	95920.00	95.9
ARSENIC	0	0.33	
BARIUM	0	0.07	
BERYLLIUM	0	0.00	
CADMIUM	0	0.09	
CALCIUM	100000.00	97010.00	97.0
CHROMIUM	0	0.85	
COBALT	0	0.10	
COPPER	0	0.99	
IRON	100000.00	90580.00	90.6
LEAD	0	0.09	
MAGNESIUM	100000.00	94160.00	94.2
MANGANESE	0	0.33	
MOLYBDENUM	2000.00	1841.00	92.0
NICKEL	0	-0.07	
POTASSIUM	100000.00	97790.00	97.8
SELENIUM	0	0.34	
SILVER	0	0.02	
SODIUM	100000.00	95480.00	95.5
VANADIUM	0	0.19	
ZINC	0	2.38	

SAMPLE: ICSAB

File: JLC22E Mar 22, 2018 17:37

Analyte	TRUE	FOUND	% R
ALUMINUM	100000.00	95880.00	95.9
ARSENIC	20.00	20.07	100.0
BARIUM	21.00	20.27	95.2
BERYLLIUM	20.00	20.91	105.0
CADMIUM	20.00	18.83	95.0
CALCIUM	100000.00	97010.00	97.0
CHROMIUM	20.00	20.45	100.0
COBALT	20.00	19.40	95.0
COPPER	20.00	19.57	100.0
IRON	100000.00	91780.00	91.8
LEAD	20.00	21.30	105.0
MAGNESIUM	100000.00	93700.00	93.7
MANGANESE	20.00	19.91	100.0
MOLYBDENUM	2000.00	1880.00	94.0
NICKEL	20.00	18.72	95.0
POTASSIUM	100000.00	97430.00	97.4
SELENIUM	20.00	19.53	100.0
SILVER	20.00	18.51	95.0
SODIUM	100000.00	94740.00	94.7
VANADIUM	20.00	20.28	100.0
ZINC	20.00	20.67	105.0

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICSA

File: JLC26B Mar 26, 2018 16:37

Analyte	TRUE	FOUND	% R
ALUMINUM	100000.00	95400.00	95.4
ARSENIC	0	0.38	
CALCIUM	100000.00	94520.00	94.5
CHROMIUM	0	0.74	
COPPER	0	0.88	
IRON	100000.00	89940.00	89.9
MAGNESIUM	100000.00	95140.00	95.1
MANGANESE	0	0.29	
MOLYBDENUM	2000.00	1802.00	90.1
NICKEL	0	-0.11	
POTASSIUM	100000.00	96960.00	97.0
SELENIUM	0	0.18	
SILVER	0	0.02	
SODIUM	100000.00	96140.00	96.1
VANADIUM	0	0.20	
ZINC	0	2.26	

SAMPLE: ICSAB

File: JLC26B Mar 26, 2018 16:41

Analyte	TRUE	FOUND	% R
ALUMINUM	100000.00	96870.00	96.9
ARSENIC	20.00	19.72	100.0
CALCIUM	100000.00	96200.00	96.2
CHROMIUM	20.00	20.08	100.0
COPPER	20.00	19.10	95.0
IRON	100000.00	89700.00	89.7
MAGNESIUM	100000.00	95310.00	95.3
MANGANESE	20.00	19.49	95.0
MOLYBDENUM	2000.00	1839.00	92.0
NICKEL	20.00	18.54	95.0
POTASSIUM	100000.00	98350.00	98.4
SELENIUM	20.00	19.21	95.0
SILVER	20.00	18.49	90.0
SODIUM	100000.00	96010.00	96.0
VANADIUM	20.00	19.84	100.0
ZINC	20.00	20.51	105.0

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Concentration Units: ug/L

SAMPLE: ICSA

File: JLC27A Mar 27, 2018 14:28

Analyte	TRUE	FOUND	% R
ALUMINUM	100000.00	96500.00	96.5
CADMIUM	0	0.06	
CALCIUM	100000.00	96750.00	96.8
COBALT	0	0.08	
IRON	100000.00	90520.00	90.5
MAGNESIUM	100000.00	94440.00	94.4
MOLYBDENUM	2000.00	1863.00	93.2
POTASSIUM	100000.00	98410.00	98.4
SODIUM	100000.00	95720.00	95.7

SAMPLE: ICSAB

File: JLC27A Mar 27, 2018 14:32

Analyte	TRUE	FOUND	% R
ALUMINUM	100000.00	100500.00	100.5
CADMIUM	20.00	19.56	100.0
CALCIUM	100000.00	99630.00	99.6
COBALT	20.00	19.92	100.0
IRON	100000.00	95340.00	95.3
MAGNESIUM	100000.00	99060.00	99.1
MOLYBDENUM	2000.00	1964.00	98.2
POTASSIUM	100000.00	101500.00	101.5
SODIUM	100000.00	100000.00	100.0

5A

SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-BKRD-SS10S

Matrix: SOIL **SDG Name:** SL2079

Percent Solids: 74.6 **Lab Sample ID:** SL2079-009P

Concentration Units : mg/Kg drywt

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
ALUMINUM, TOTAL	11200		8370		206.2	1390.8	N	78	124	MS
ANTIMONY, TOTAL	2.70		0.10	J	10.31	25.2	N	72	124	MS
ARSENIC, TOTAL	11.3		2.22		10.31	87.9		82	118	MS
BARIUM, TOTAL	351		127		206.2	108.7		86	116	MS
BERYLLIUM, TOTAL	5.47		0.484		5.16	96.7		80	120	MS
CADMIUM, TOTAL	23.3		0.149		25.78	89.9		84	116	MS
CALCIUM, TOTAL	2410		1900		257.75	198.5	N	86	118	MS
CHROMIUM, TOTAL	28.3		8.34		20.62	97.0		83	119	MS
COBALT, TOTAL	51.6		4.48		51.55	91.5		84	115	MS
COPPER, TOTAL	29.7		6.51		25.78	90.1		84	119	MS
IRON, TOTAL	8680		7520		103.1	1126.1	N	81	124	MS
LEAD, TOTAL	22.2		11.0		10.31	108.9		84	118	MS
MAGNESIUM, TOTAL	2970		2140		515.5	161.4	N	80	123	MS
MANGANESE, TOTAL	317		254		51.55	122.7	N	85	116	MS
MERCURY, TOTAL	0.198		0.015	J	0.18	101.9		80	124	CV
NICKEL, TOTAL	52.7		6.38		51.55	89.9		84	119	MS
POTASSIUM, TOTAL	4440		2950		1031	144.2	N	85	119	MS
SELENIUM, TOTAL	9.09		0.576		10.31	82.6		80	119	MS
SILVER, TOTAL	4.75		0.045	J	5.16	91.3		83	118	MS
SODIUM, TOTAL	864		88.2	J	773.25	100.3		79	125	MS
THALLIUM, TOTAL	10.4		0.179		10.31	99.4		83	118	MS
VANADIUM, TOTAL	66.3		16.2		51.55	97.2		82	116	MS
ZINC, TOTAL	71.5		24.6		51.55	91.0		82	119	MS

Comments:

5A

SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-BKRD-SS10S

Matrix: SOIL **SDG Name:** SL2079

Percent Solids: 74.6 **Lab Sample ID:** SL2079-009S

Concentration Units : mg/Kg drywt

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
ALUMINUM, TOTAL	11000		8370		206.2	1295.8	N	78	124	MS
ANTIMONY, TOTAL	2.49		0.10	J	10.31	23.2	N	72	124	MS
ARSENIC, TOTAL	11.3		2.22		10.31	88.0		82	118	MS
BARIUM, TOTAL	349		127		206.2	107.5		86	116	MS
BERYLLIUM, TOTAL	5.53		0.484		5.16	97.8		80	120	MS
CADMIUM, TOTAL	23.4		0.149		25.78	90.3		84	116	MS
CALCIUM, TOTAL	2430		1900		257.75	206.5	N	86	118	MS
CHROMIUM, TOTAL	28.0		8.34		20.62	95.5		83	119	MS
COBALT, TOTAL	51.2		4.48		51.55	90.6		84	115	MS
COPPER, TOTAL	31.5		6.51		25.78	97.1		84	119	MS
IRON, TOTAL	8470		7520		103.1	926.1	N	81	124	MS
LEAD, TOTAL	21.8		11.0		10.31	105.2		84	118	MS
MAGNESIUM, TOTAL	2900		2140		515.5	148.1	N	80	123	MS
MANGANESE, TOTAL	313		254		51.55	114.8		85	116	MS
MERCURY, TOTAL	0.182		0.015	J	0.18	92.6		80	124	CV
NICKEL, TOTAL	53.3		6.38		51.55	91.0		84	119	MS
POTASSIUM, TOTAL	4370		2950		1031	137.8	N	85	119	MS
SELENIUM, TOTAL	9.10		0.576		10.31	82.7		80	119	MS
SILVER, TOTAL	4.70		0.045	J	5.16	90.3		83	118	MS
SODIUM, TOTAL	847		88.2	J	773.25	98.1		79	125	MS
THALLIUM, TOTAL	10.3		0.179		10.31	98.6		83	118	MS
VANADIUM, TOTAL	64.9		16.2		51.55	94.5		82	116	MS
ZINC, TOTAL	71.0		24.6		51.55	90.1		82	119	MS

Comments:

5B

POST DIGEST SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-BKRD-SS10S

Matrix: SOIL **SDG Name:** SL2079

Percent Solids: 74.6 **Lab Sample ID:** SL2079-009A

Concentration Units : ug/L

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
ALUMINUM, TOTAL	15600		16000		200	-190.0	A	80	120	MS
ANTIMONY, TOTAL	2.34		0.19	J	2	107.6		80	120	MS
ARSENIC, TOTAL	14.9		4.25		10	106.1		80	120	MS
BARIUM, TOTAL	239		242		4	-80.0	A	80	120	MS
BERYLLIUM, TOTAL	3.19		0.924		2	113.4		80	120	MS
CADMIUM, TOTAL	2.30		0.285		2	100.7		80	120	MS
CALCIUM, TOTAL	3700		3620		200	40.0	A	80	120	MS
CHROMIUM, TOTAL	25.9		15.9		10	100.2		80	120	MS
COBALT, TOTAL	10.3		8.55		2	89.0		80	120	MS
COPPER, TOTAL	18.4		12.4		6	100.5		80	120	MS
IRON, TOTAL	14100		14400		200	-130.0	A	80	120	MS
LEAD, TOTAL	22.6		20.9		2	83.5		80	120	MS
MAGNESIUM, TOTAL	4120		4080		200	22.0	A	80	120	MS
MANGANESE, TOTAL	471		484		4	-325.0	A	80	120	MS
MERCURY, TOTAL	0.800		0.083	J	1	71.7	A	80	120	CV
NICKEL, TOTAL	16.2		12.2		4	99.8		80	120	MS
POTASSIUM, TOTAL	7760		5630		2000	106.7		80	120	MS
SELENIUM, TOTAL	11.6		1.10		10	105.5		80	120	MS
SILVER, TOTAL	2.27		0.085	J	2	109.3		80	120	MS
SODIUM, TOTAL	2440		168	J	2000	113.5		80	120	MS
THALLIUM, TOTAL	2.59		0.342		2	112.6		80	120	MS
VANADIUM, TOTAL	40.4		31.0		10	94.3		80	120	MS
ZINC, TOTAL	66.5		46.9		20	97.9		80	120	MS

Comments:

5D

SPIKE DUPLICATES

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-BKRD-SS10

Matrix: SOIL **SDG Name:** SL2079

Percent Solids: 74.6 **Lab Sample ID:** SL2079-009

Concentration Units : mg/Kg drywt

Analyte	Control Limits	Spike Result	C	Spike Dup. Result	C	RPD	Q	M
ALUMINUM, TOTAL		11000		11200		1.8		MS
ANTIMONY, TOTAL		2.49		2.70		8.2		MS
ARSENIC, TOTAL		11.3		11.3		0.1		MS
BARIUM, TOTAL		349		351		0.7		MS
BERYLLIUM, TOTAL		5.53		5.47		1.0		MS
CADMIUM, TOTAL		23.4		23.3		0.4		MS
CALCIUM, TOTAL		2430		2410		0.9		MS
CHROMIUM, TOTAL		28.0		28.3		1.1		MS
COBALT, TOTAL		51.2		51.6		0.9		MS
COPPER, TOTAL		31.5		29.7		5.9		MS
IRON, TOTAL		8470		8680		2.4		MS
LEAD, TOTAL		21.8		22.2		1.7		MS
MAGNESIUM, TOTAL		2900		2970		2.3		MS
MANGANESE, TOTAL		313		317		1.3		MS
MERCURY, TOTAL		0.182		0.198		8.8		CV
NICKEL, TOTAL		53.3		52.7		1.1		MS
POTASSIUM, TOTAL		4370		4440		1.5		MS
SELENIUM, TOTAL		9.10		9.09		0.1		MS
SILVER, TOTAL		4.70		4.75		1.0		MS
SODIUM, TOTAL		847		864		2.0		MS
THALLIUM, TOTAL		10.3		10.4		0.7		MS
VANADIUM, TOTAL		64.9		66.3		2.1		MS
ZINC, TOTAL		71.0		71.5		0.7		MS

Comments:

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSOLC16HGS1

Matrix: SOIL **SDG Name:** SL2079

QC Batch ID: LC16HGS1

Concentration Units : mg/Kg drywt

Analyte	TRUE	FOUND	% R	LIMITS (%)	
MERCURY	0.833	0.778	94.0	80	124

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSOLC19IMS1

Matrix: SOIL **SDG Name:** SL2079

QC Batch ID: LC19IMS1

Concentration Units : mg/Kg drywt

Analyte	TRUE	FOUND	% R	LIMITS (%)	
ALUMINUM	200	198	99.0	78	124
ANTIMONY	10.0	10.2	102.5	72	124
ARSENIC	10.0	10.0	100.0	82	118
BARIUM	200	205	102.6	86	116
BERYLLIUM	5.00	4.93	98.6	80	120
CADMIUM	25.0	25.5	102.0	84	116
CALCIUM	250	253	101.0	86	118
CHROMIUM	20.0	19.4	97.0	83	119
COBALT	50.0	50.2	100.3	84	115
COPPER	25.0	24.7	98.7	84	119
IRON	100	97.3	97.3	81	124
LEAD	10.0	10.2	102.3	84	118
MAGNESIUM	500	508	101.5	80	123
MANGANESE	50.0	48.8	97.7	85	116
NICKEL	50.0	50.5	101.0	84	119
POTASSIUM	1000	976	97.5	85	119
SELENIUM	10.0	9.78	97.8	80	119
SILVER	5.00	5.11	102.2	83	118
SODIUM	750	731	97.5	79	125
THALLIUM	10.0	10.0	100.6	83	118
VANADIUM	50.0	49.0	98.1	82	116
ZINC	50.0	47.9	95.8	82	119

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSWLC16HGW2

Matrix: WATER **SDG Name:** SL2079

QC Batch ID: LC16HGW2

Concentration Units : ug/L

Analyte	TRUE	FOUND	% R	LIMITS (%)	
MERCURY	5.00	4.60	92.0	82	119

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSWLC16IMW1

Matrix: WATER **SDG Name:** SL2079

QC Batch ID: LC16IMW1

Concentration Units : ug/L

Analyte	TRUE	FOUND	% R	LIMITS (%)	
ALUMINUM	2000	2070	103.7	84	117
ANTIMONY	100	106	106.5	85	117
ARSENIC	100	99.0	99.0	84	116
BARIUM	2000	2060	102.9	86	114
BERYLLIUM	50.0	47.7	95.4	83	121
CADMIUM	250	249	99.5	87	115
CALCIUM	2500	2520	101.0	87	118
CHROMIUM	200	193	96.5	85	116
COBALT	500	495	99.1	86	115
COPPER	250	245	98.0	85	118
IRON	1000	943	94.3	87	118
LEAD	100	101	101.5	88	115
MAGNESIUM	5000	5220	104.5	83	118
MANGANESE	500	488	97.7	87	115
NICKEL	500	489	97.8	85	117
POTASSIUM	10000	9840	98.4	87	115
SELENIUM	100	98.0	98.0	80	120
SILVER	50.0	49.2	98.4	85	116
SODIUM	7500	7460	99.4	85	117
THALLIUM	100	99.6	99.7	82	116
VANADIUM	500	498	99.7	86	115
ZINC	500	480	96.0	83	119

ICP SERIAL DILUTION

Lab Name: Katahdin Analytical Services **Client Field ID:** CHAAP-BKRD-SS10L

Matrix: SOIL **SDG Name:** SL2079

Lab Sample ID: SL2079-009L

Concentration Units: ug/L

Analyte	Sample Result	C	Dilution Result	C	% Difference	Q	M
ALUMINUM, TOTAL	16000		16400		2.5		MS
ANTIMONY, TOTAL	0.19	J	0.21	J	10.5		MS
ARSENIC, TOTAL	4.25		4.4	J	3.5		MS
BARIUM, TOTAL	242		242		0.0		MS
BERYLLIUM, TOTAL	0.924		0.911	J	1.4		MS
CADMIUM, TOTAL	0.285		0.36	J	26.3		MS
CALCIUM, TOTAL	3620		3650		0.8		MS
CHROMIUM, TOTAL	15.9		17.0		6.9		MS
COBALT, TOTAL	8.55		9.17		7.3		MS
COPPER, TOTAL	12.4		13.9		12.1		MS
IRON, TOTAL	14400		16300		13.2	E	MS
LEAD, TOTAL	20.9		21.3		1.9		MS
MAGNESIUM, TOTAL	4080		4090		0.2		MS
MANGANESE, TOTAL	484		548		13.2	E	MS
MERCURY, TOTAL	0.083	J	0.16	U	100.0		CV
NICKEL, TOTAL	12.2		13.1		7.4		MS
POTASSIUM, TOTAL	5630		5700		1.2		MS
SELENIUM, TOTAL	1.10		2.5	J	127.3		MS
SILVER, TOTAL	0.085	J	0.083	J	2.4		MS
SODIUM, TOTAL	168	J	160	J	4.8		MS
THALLIUM, TOTAL	0.342		0.39	J	14.0		MS
VANADIUM, TOTAL	31.0		33.4		7.7		MS
ZINC, TOTAL	46.9		53.2		13.4		MS

INSTRUMENT DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** H

Instrument Name: CETAC M6100 **Date:** 1/11/2018

Concentration Units: ug/L

Analyte	PQL/LOQ	IDL	M
MERCURY	0.20	0.024	CV

INSTRUMENT DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** J

Instrument Name: AGILENT 7500 ICP-MS **Date:** 1/15/2018

Concentration Units: ug/L

Analyte	PQL/LOQ	IDL	M
ALUMINUM	20	1.9	MS
ANTIMONY	0.20	0.0056	MS
ARSENIC	1.0	0.18	MS
BARIUM	0.40	0.075	MS
BERYLLIUM	0.20	0.0037	MS
CADMIUM	0.20	0.0069	MS
CALCIUM	20	5.3	MS
CHROMIUM	1.0	0.062	MS
COBALT	0.20	0.0062	MS
COPPER	0.60	0.030	MS
IRON	20	4.3	MS
LEAD	0.20	0.010	MS
MAGNESIUM	20	1.3	MS
MANGANESE	0.40	0.021	MS
MOLYBDENUM	1.0	0.034	MS
NICKEL	0.40	0.018	MS
POTASSIUM	200	7.9	MS
SELENIUM	1.0	0.47	MS
SILVER	0.20	0.0030	MS
SODIUM	200	4.4	MS
THALLIUM	0.20	0.0084	MS
VANADIUM	1.0	0.063	MS
ZINC	2.0	0.27	MS

LIMITS of DETECTION

Lab Name: Katahdin Analytical Services **Instrument Code:** H

Instrument Name: CETAC M6100 **Date:** 1/7/2011

Analyte	LOD	Units	M	EPA Prep./Anal. Method
MERCURY	0.017	mg/Kg	CV	SW846 7471B / SW846 7471B

LIMITS of DETECTION

Lab Name: Katahdin Analytical Services **Instrument Code:** H

Instrument Name: CETAC M6100 **Date:** 2/9/2011

Analyte	LOD	Units	M	EPA Prep./Anal. Method
MERCURY	0.10	ug/L	CV	SW846 7470A / SW846 7470A

LIMITS of DETECTION

Lab Name: Katahdin Analytical Services **Instrument Code:** J

Instrument Name: AGILENT 7500 ICP-MS **Date:** 1/25/2011

Analyte	LOD	Units	M	EPA Prep./Anal. Method
ALUMINUM	8.0	ug/L	MS	SW846 3010A / SW846 6020A
ANTIMONY	0.10	ug/L	MS	SW846 3010A / SW846 6020A
ARSENIC	0.80	ug/L	MS	SW846 3010A / SW846 6020A
BARIUM	0.20	ug/L	MS	SW846 3010A / SW846 6020A
BERYLLIUM	0.040	ug/L	MS	SW846 3010A / SW846 6020A
CADMIUM	0.040	ug/L	MS	SW846 3010A / SW846 6020A
CALCIUM	16	ug/L	MS	SW846 3010A / SW846 6020A
CHROMIUM	0.80	ug/L	MS	SW846 3010A / SW846 6020A
COBALT	0.060	ug/L	MS	SW846 3010A / SW846 6020A
COPPER	0.40	ug/L	MS	SW846 3010A / SW846 6020A
IRON	12	ug/L	MS	SW846 3010A / SW846 6020A
LEAD	0.10	ug/L	MS	SW846 3010A / SW846 6020A
MAGNESIUM	16	ug/L	MS	SW846 3010A / SW846 6020A
MANGANESE	0.20	ug/L	MS	SW846 3010A / SW846 6020A
NICKEL	0.24	ug/L	MS	SW846 3010A / SW846 6020A
POTASSIUM	80	ug/L	MS	SW846 3010A / SW846 6020A
SELENIUM	0.60	ug/L	MS	SW846 3010A / SW846 6020A
SILVER	0.080	ug/L	MS	SW846 3010A / SW846 6020A
SODIUM	80	ug/L	MS	SW846 3010A / SW846 6020A
THALLIUM	0.080	ug/L	MS	SW846 3010A / SW846 6020A
VANADIUM	0.80	ug/L	MS	SW846 3010A / SW846 6020A
ZINC	1.6	ug/L	MS	SW846 3010A / SW846 6020A

LIMITS of DETECTION

Lab Name: Katahdin Analytical Services **Instrument Code:** J

Instrument Name: AGILENT 7500 ICP-MS **Date:** 1/26/2011

Analyte	LOD	Units	M	EPA Prep./Anal. Method
ALUMINUM	0.80	mg/kg	MS	SW846 3050B / SW846 6020A
ANTIMONY	0.010	mg/kg	MS	SW846 3050B / SW846 6020A
ARSENIC	0.080	mg/kg	MS	SW846 3050B / SW846 6020A
BARIUM	0.020	mg/kg	MS	SW846 3050B / SW846 6020A
BERYLLIUM	0.0040	mg/Kg	MS	SW846 3050B / SW846 6020A
CADMIUM	0.0040	mg/kg	MS	SW846 3050B / SW846 6020A
CALCIUM	1.6	mg/kg	MS	SW846 3050B / SW846 6020A
CHROMIUM	0.080	mg/kg	MS	SW846 3050B / SW846 6020A
COBALT	0.0060	mg/kg	MS	SW846 3050B / SW846 6020A
COPPER	0.040	mg/kg	MS	SW846 3050B / SW846 6020A
IRON	1.2	mg/kg	MS	SW846 3050B / SW846 6020A
LEAD	0.010	mg/Kg	MS	SW846 3050B / SW846 6020A
MAGNESIUM	1.6	mg/kg	MS	SW846 3050B / SW846 6020A
MANGANESE	0.020	mg/kg	MS	SW846 3050B / SW846 6020A
NICKEL	0.024	mg/kg	MS	SW846 3050B / SW846 6020A
POTASSIUM	8.0	mg/Kg	MS	SW846 3050B / SW846 6020A
SELENIUM	0.060	mg/kg	MS	SW846 3050B / SW846 6020A
SILVER	0.0080	mg/kg	MS	SW846 3050B / SW846 6020A
SODIUM	8.0	mg/kg	MS	SW846 3050B / SW846 6020A
THALLIUM	0.0080	mg/kg	MS	SW846 3050B / SW846 6020A
VANADIUM	0.080	mg/Kg	MS	SW846 3050B / SW846 6020A
ZINC	0.16	mg/kg	MS	SW846 3050B / SW846 6020A

METHOD DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** H

Instrument Name: CETAC M6100 **Date:** 1/7/2011

Analyte	MDL	Units	M	EPA Prep./Anal. Method
MERCURY	0.0052	mg/Kg	CV	SW846 7471B / SW846 7471B

METHOD DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** H

Instrument Name: CETAC M6100 **Date:** 2/9/2011

Analyte	MDL	Units	M	EPA Prep./Anal. Method
MERCURY	0.013	ug/L	CV	SW846 7470A / SW846 7470A

METHOD DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** J

Instrument Name: AGILENT 7500 ICP-MS **Date:** 1/25/2011

Analyte	MDL	Units	M	EPA Prep./Anal. Method
ALUMINUM	0.88	ug/L	MS	SW846 3010A / SW846 6020A
ANTIMONY	0.011	ug/L	MS	SW846 3010A / SW846 6020A
ARSENIC	0.45	ug/L	MS	SW846 3010A / SW846 6020A
BARIUM	0.054	ug/L	MS	SW846 3010A / SW846 6020A
BERYLLIUM	0.0067	ug/L	MS	SW846 3010A / SW846 6020A
CADMIUM	0.0059	ug/L	MS	SW846 3010A / SW846 6020A
CALCIUM	4.1	ug/L	MS	SW846 3010A / SW846 6020A
CHROMIUM	0.044	ug/L	MS	SW846 3010A / SW846 6020A
COBALT	0.012	ug/L	MS	SW846 3010A / SW846 6020A
COPPER	0.037	ug/L	MS	SW846 3010A / SW846 6020A
IRON	2.6	ug/L	MS	SW846 3010A / SW846 6020A
LEAD	0.015	ug/L	MS	SW846 3010A / SW846 6020A
MAGNESIUM	1.6	ug/L	MS	SW846 3010A / SW846 6020A
MANGANESE	0.070	ug/L	MS	SW846 3010A / SW846 6020A
NICKEL	0.030	ug/L	MS	SW846 3010A / SW846 6020A
POTASSIUM	6.1	ug/L	MS	SW846 3010A / SW846 6020A
SELENIUM	0.037	ug/L	MS	SW846 3010A / SW846 6020A
SILVER	0.010	ug/L	MS	SW846 3010A / SW846 6020A
SODIUM	3.7	ug/L	MS	SW846 3010A / SW846 6020A
THALLIUM	0.012	ug/L	MS	SW846 3010A / SW846 6020A
VANADIUM	0.10	ug/L	MS	SW846 3010A / SW846 6020A
ZINC	0.78	ug/L	MS	SW846 3010A / SW846 6020A

METHOD DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** J

Instrument Name: AGILENT 7500 ICP-MS **Date:** 1/26/2011

Analyte	MDL	Units	M	EPA Prep./Anal. Method
ALUMINUM	0.10	mg/kg	MS	SW846 3050B / SW846 6020A
ANTIMONY	0.0040	mg/kg	MS	SW846 3050B / SW846 6020A
ARSENIC	0.029	mg/kg	MS	SW846 3050B / SW846 6020A
BARIUM	0.0073	mg/kg	MS	SW846 3050B / SW846 6020A
BERYLLIUM	0.00081	mg/kg	MS	SW846 3050B / SW846 6020A
CADMIUM	0.0015	mg/kg	MS	SW846 3050B / SW846 6020A
CALCIUM	0.77	mg/kg	MS	SW846 3050B / SW846 6020A
CHROMIUM	0.0098	mg/kg	MS	SW846 3050B / SW846 6020A
COBALT	0.0011	mg/kg	MS	SW846 3050B / SW846 6020A
COPPER	0.014	mg/kg	MS	SW846 3050B / SW846 6020A
IRON	0.48	mg/kg	MS	SW846 3050B / SW846 6020A
LEAD	0.0014	mg/kg	MS	SW846 3050B / SW846 6020A
MAGNESIUM	0.27	mg/kg	MS	SW846 3050B / SW846 6020A
MANGANESE	0.0084	mg/kg	MS	SW846 3050B / SW846 6020A
NICKEL	0.0053	mg/kg	MS	SW846 3050B / SW846 6020A
POTASSIUM	0.91	mg/kg	MS	SW846 3050B / SW846 6020A
SELENIUM	0.0078	mg/kg	MS	SW846 3050B / SW846 6020A
SILVER	0.0013	mg/kg	MS	SW846 3050B / SW846 6020A
SODIUM	0.51	mg/kg	MS	SW846 3050B / SW846 6020A
THALLIUM	0.0019	mg/kg	MS	SW846 3050B / SW846 6020A
VANADIUM	0.022	mg/kg	MS	SW846 3050B / SW846 6020A
ZINC	0.026	mg/kg	MS	SW846 3050B / SW846 6020A

ICP LINEAR RANGES

Lab Name: Katahdin Analytical Services **Instrument Code:** J

Instrument Name: AGILENT 7500 ICP-MS **Date:** 1/31/2018

Concentration Units: ug/L

Analyte	Integration Time (sec)	Linear Range	M
ALUMINUM	0.01	200000	MS
ANTIMONY	0.10	1000	MS
ARSENIC	0.30	1000	MS
BARIUM	0.10	2000	MS
BERYLLIUM	0.30	100	MS
CADMIUM	0.10	1000	MS
CALCIUM	0.03	200000	MS
CHROMIUM	0.10	2000	MS
COBALT	0.10	1000	MS
COPPER	0.10	2000	MS
IRON	0.03	100000	MS
LEAD	0.10	2000	MS
MAGNESIUM	0.05	200000	MS
MANGANESE	0.10	2000	MS
MOLYBDENUM	0.10	1000	MS
NICKEL	0.10	1000	MS
POTASSIUM	0.01	200000	MS
SELENIUM	0.30	1000	MS
SILVER	0.10	100	MS
SODIUM	0.01	200000	MS
THALLIUM	0.10	1000	MS
VANADIUM	0.10	1000	MS
ZINC	0.10	2000	MS

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** LC16HGS1

Matrix: SOIL **SDG Name:** SL2079

Method: CV **Prep Date:** 03/16/2018

Client ID	Lab Sample ID	Initial (g)	Final (L)	Bottle ID
LCSOLC16HGS1	LCSOLC16HGS1	0.6	0.1	
PBSLC16HGS1	PBSLC16HGS1	0.6	0.1	
CHAAP-BKRD-SB08	SL2079-001	0.63	0.1	E
CHAAP-BKRD-SB09	SL2079-002	0.62	0.1	E
CHAAP-BKRD-SB10	SL2079-003	0.77	0.1	E
CHAAP-BKRD-SB11	SL2079-004	0.66	0.1	E
CHAAP-BKRD-SB12	SL2079-005	0.62	0.1	E
CHAAP-BKRD-SB13	SL2079-006	0.74	0.1	E
CHAAP-BKRD-SS08	SL2079-007	0.78	0.1	E
CHAAP-BKRD-SS09	SL2079-008	0.67	0.1	E
CHAAP-BKRD-SS10	SL2079-009	0.72	0.1	N
CHAAP-BKRD-SS10P	SL2079-009P	0.73	0.1	N
CHAAP-BKRD-SS10S	SL2079-009S	0.75	0.1	N
CHAAP-BKRD-SS11	SL2079-010	0.68	0.1	E
CHAAP-BKRD-SS12	SL2079-011	0.74	0.1	E
CHAAP-BKRD-SS13	SL2079-012	0.73	0.1	E
CHAAP-BKRD-SS109	SL2079-013	0.64	0.1	E

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** LC16HGW2

Matrix: WATER **SDG Name:** SL2079

Method: CV **Prep Date:** 03/16/2018

Client ID	Lab Sample ID	Initial (L)	Final (L)	Bottle ID
LCSWLC16HGW2	LCSWLC16HGW2	0.025	0.025	
PBWLC16HGW2	PBWLC16HGW2	0.025	0.025	
CHAAP-BKRD-EB-031418	SL2079-014	0.025	0.025	D

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** LC16IMW1

Matrix: WATER **SDG Name:** SL2079

Method: MS **Prep Date:** 03/16/2018

Client ID	Lab Sample ID	Initial (L)	Final (L)	Bottle ID
LCSWLC16IMW1	LCSWLC16IMW1	0.05	0.05	
PBWLC16IMW1	PBWLC16IMW1	0.05	0.05	
CHAAP-BKRD-EB-031418	SL2079-014	0.05	0.05	D

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** LC19IMS1

Matrix: SOIL **SDG Name:** SL2079

Method: MS **Prep Date:** 03/19/2018

Client ID	Lab Sample ID	Initial (g)	Final (L)	Bottle ID
LCSOLC19IMS1	LCSOLC19IMS1	1	0.1	
PBSLC19IMS1	PBSLC19IMS1	1	0.1	
CHAAP-BKRD-SB08	SL2079-001	1.9	0.1	E
CHAAP-BKRD-SB09	SL2079-002	1.79	0.1	E
CHAAP-BKRD-SB10	SL2079-003	1.49	0.1	E
CHAAP-BKRD-SB11	SL2079-004	1.05	0.1	E
CHAAP-BKRD-SB12	SL2079-005	1.34	0.1	E
CHAAP-BKRD-SB13	SL2079-006	1.24	0.1	E
CHAAP-BKRD-SS08	SL2079-007	1.48	0.1	E
CHAAP-BKRD-SS09	SL2079-008	1.28	0.1	E
CHAAP-BKRD-SS10	SL2079-009	1.28	0.1	N
CHAAP-BKRD-SS10P	SL2079-009P	1.3	0.1	N
CHAAP-BKRD-SS10S	SL2079-009S	1.3	0.1	N
CHAAP-BKRD-SS11	SL2079-010	1.2	0.1	E
CHAAP-BKRD-SS12	SL2079-011	1.15	0.1	E
CHAAP-BKRD-SS13	SL2079-012	1.24	0.1	E
CHAAP-BKRD-SS109	SL2079-013	1.35	0.1	E

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Instrument ID: CETAC M6100 **File Name:** HLC16A

Date: 3/16/2018 **Method:** CV

Lab Sample ID	Client ID	D.F.	Time	Elements
Calibration Blank		1	12:08	Hg
Standard #1 (0.2 ppb		1	12:10	Hg
Standard #2 (0.5 ppb		1	12:12	Hg
Standard #3 (1.0 ppb		1	12:14	Hg
Standard #4 (5.0 ppb		1	12:16	Hg
Standard #5 (10.0 pp		1	12:19	Hg
ICV		1	12:21	HG
ICB		1	12:23	HG
PQL		1	12:25	HG
CCV		1	12:27	HG
CCB		1	12:29	HG
ZZZZZZ		1	12:31	
ZZZZZZ		1	12:33	
ZZZZZZ		1	12:36	
ZZZZZZ		1	12:38	
PBWLC16HGW2		1	12:40	HG
LCSWLC16HGW2		1	12:42	HG
ZZZZZZ		1	12:44	
ZZZZZZ		1	12:46	
ZZZZZZ		1	12:48	
CCV		1	12:50	HG
CCB		1	12:53	HG
ZZZZZZ		1	12:55	
ZZZZZZ		1	12:57	
ZZZZZZ		1	12:59	
ZZZZZZ		1	13:01	
ZZZZZZ		1	13:03	

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Instrument ID: CETAC M6100 **File Name:** HLC16A

Date: 3/16/2018 **Method:** CV

Lab Sample ID	Client ID	D.F.	Time	Elements
ZZZZZZ		1	13:05	
ZZZZZZ		1	13:08	
ZZZZZZ		1	13:10	
ZZZZZZ		1	13:12	
ZZZZZZ		1	13:14	
CCB		1	13:16	HG
CCV		1	13:18	HG
ZZZZZZ		5	13:20	
ZZZZZZ		1	13:23	
CCV		1	13:28	HG
CCB		1	13:30	HG
ZZZZZZ		1	13:32	
ZZZZZZ		1	13:34	
ZZZZZZ		1	13:36	
SL2079-014	CHAAP-BKRD-EB-031418	1	13:39	HG
CCV		1	13:41	HG
CCB		1	13:43	HG

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Instrument ID: CETAC M6100 **File Name:** HLC19A

Date: 3/19/2018 **Method:** CV

Lab Sample ID	Client ID	D.F.	Time	Elements
Calibration Blank		1	11:44	Hg
Standard #1 (0.2 ppb		1	11:46	Hg
Standard #2 (0.5 ppb		1	11:48	Hg
Standard #3 (1.0 ppb		1	11:50	Hg
Standard #4 (5.0 ppb		1	11:59	Hg
Standard #5 (10.0 pp		1	12:01	Hg
ICV		1	12:05	HG
ICB		1	12:09	HG
PQL		1	12:11	HG
CCV		1	12:13	HG
CCB		1	12:15	HG
PBSLC16HGS1		1	12:17	HG
LCSOLC16HGS1		1	12:20	HG
SL2079-001	CHAAP-BKRD-SB08	1	12:22	HG
SL2079-002	CHAAP-BKRD-SB09	1	12:24	HG
SL2079-003	CHAAP-BKRD-SB10	1	12:26	HG
SL2079-004	CHAAP-BKRD-SB11	1	12:28	HG
SL2079-005	CHAAP-BKRD-SB12	1	12:30	HG
SL2079-006	CHAAP-BKRD-SB13	1	12:32	HG
SL2079-007	CHAAP-BKRD-SS08	1	12:35	HG
CCV		1	12:37	HG
CCB		1	12:39	HG
SL2079-008	CHAAP-BKRD-SS09	1	12:41	HG
SL2079-009	CHAAP-BKRD-SS10	1	12:43	HG
SL2079-009L	CHAAP-BKRD-SS10L	5	12:45	HG
SL2079-009A	CHAAP-BKRD-SS10A	1	12:47	HG
SL2079-009S	CHAAP-BKRD-SS10S	1	12:49	HG

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Instrument ID: CETAC M6100 **File Name:** HLC19A

Date: 3/19/2018 **Method:** CV

Lab Sample ID	Client ID	D.F.	Time	Elements
SL2079-009P	CHAAP-BKRD-SS10P	1	12:52	HG
SL2079-010	CHAAP-BKRD-SS11	1	12:54	HG
SL2079-011	CHAAP-BKRD-SS12	1	12:56	HG
SL2079-012	CHAAP-BKRD-SS13	1	12:58	HG
SL2079-013	CHAAP-BKRD-SS109	1	13:00	HG
CCV		1	13:02	HG
CCB		1	13:04	HG

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Instrument ID: AGILENT 7500 ICP-MS **File Name:** JLC16A

Date: 3/16/2018 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements
6020 TUNE		1	14:11	
200.8 TUNE		1	14:14	
Cal Blank		1	15:00	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
Cal Std 6		1	15:03	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
ICV		1	15:07	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
ICB		1	15:11	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
PQL		1	15:14	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
ZZZZZZ		1	15:18	
ICSA		1	15:22	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
ICSAB		1	15:25	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
ZZZZZZ		1	15:29	
ZZZZZZ		1	15:33	
ZZZZZZ		1	15:36	
ZZZZZZ		1	15:40	
ZZZZZZ		1	15:44	
CCV		1	15:47	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
CCB		1	15:51	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
ZZZZZZ		1	15:55	
ZZZZZZ		1	15:59	
ZZZZZZ		5	16:02	
ZZZZZZ		1	16:06	
ZZZZZZ		1	16:10	
ZZZZZZ		5	16:14	
ZZZZZZ		5	16:17	
ZZZZZZ		5	16:21	
ZZZZZZ		5	16:25	
ZZZZZZ		1	16:29	

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Instrument ID: AGILENT 7500 ICP-MS **File Name:** JLC16A

Date: 3/16/2018 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements
CCV		1	16:33	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
CCB		1	16:36	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
ZZZZZZ		5	16:40	
ZZZZZZ		5	16:44	
ZZZZZZ		1	16:48	
PBWLC16IMW1		5	16:52	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
LCSWLC16IMW1		5	16:56	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
SL2079-014	CHAAP-BKRD-EB-031418	5	17:00	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
ZZZZZZ		5	17:04	
ZZZZZZ		5	17:07	
ZZZZZZ		5	17:11	
ZZZZZZ		5	17:15	
CCV		1	17:19	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
CCB		1	17:23	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Instrument ID: AGILENT 7500 ICP-MS **File Name:** JLC20C

Date: 3/20/2018 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements
6020 TUNE		1	14:01	
200.8 TUNE		1	14:04	
Cal Blank		1	17:25	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
Cal Std 6		1	17:29	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
ICV		1	17:33	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
ICB		1	17:37	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
PQL		1	17:40	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
ZZZZZZ		1	17:44	
ICSA		1	17:48	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
ICSAB		1	17:53	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
ZZZZZZ		1	17:57	
ZZZZZZ		1	18:01	
ZZZZZZ		1	18:04	
ZZZZZZ		1	18:09	
ZZZZZZ		1	18:13	
CCV		1	18:17	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
CCB		1	18:21	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
PBSLC19IMS1		5	18:25	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
LCSOLC19IMS1		5	18:29	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
SL2079-001	CHAAP-BKRD-SB08	5	18:33	Al Sb Ca Mg K Na Tl
SL2079-002	CHAAP-BKRD-SB09	5	18:37	Ba Pb
SL2079-003	CHAAP-BKRD-SB10	5	18:41	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
SL2079-004	CHAAP-BKRD-SB11	5	18:45	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
SL2079-005	CHAAP-BKRD-SB12	5	18:50	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
SL2079-006	CHAAP-BKRD-SB13	5	18:54	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
SL2079-007	CHAAP-BKRD-SS08	5	18:58	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
ZZZZZZ		1	19:02	

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Instrument ID: AGILENT 7500 ICP-MS **File Name:** JLC20C

Date: 3/20/2018 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements
CCV		1	19:06	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
CCB		1	19:10	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
SL2079-008	CHAAP-BKRD-SS09	5	19:14	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
SL2079-009	CHAAP-BKRD-SS10	5	19:19	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
SL2079-009L	CHAAP-BKRD-SS10L	25	19:23	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
SL2079-009A	CHAAP-BKRD-SS10A	5	19:27	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
SL2079-009S	CHAAP-BKRD-SS10S	5	19:31	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
SL2079-009P	CHAAP-BKRD-SS10P	5	19:35	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
SL2079-010	CHAAP-BKRD-SS11	5	19:40	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
SL2079-011	CHAAP-BKRD-SS12	5	19:44	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
SL2079-012	CHAAP-BKRD-SS13	5	19:48	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
ZZZZZZ		1	19:52	
CCV		1	19:56	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
CCB		1	20:00	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
SL2079-013	CHAAP-BKRD-SS109	5	20:04	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Ni K Se Ag Na Tl V Zn
ZZZZZZ		5	20:09	
ZZZZZZ		5	20:13	
ZZZZZZ		5	20:17	
ZZZZZZ		5	20:21	
ZZZZZZ		5	20:25	
ZZZZZZ		5	20:30	
ZZZZZZ		5	20:34	
ZZZZZZ		5	20:38	
ZZZZZZ		5	20:42	
CCV		1	20:47	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn
CCB		1	20:51	Al Sb As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na Tl V Zn

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Instrument ID: AGILENT 7500 ICP-MS **File Name:** JLC21A

Date: 3/21/2018 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements									
6020 TUNE		1	14:00										
200.8 TUNE		1	14:03										
Cal Blank		1	14:49	Al	Sb	Be	Ca	Fe	Mg	Mo	K	Na	Tl
Cal Std 6		1	14:53	Al	Sb	Be	Ca	Fe	Mg	Mo	K	Na	Tl
ICV		1	14:56	Al	Sb	Be	Ca	Fe	Mg	Mo	K	Na	Tl
ICB		1	15:00	Al	Sb	Be	Ca	Fe	Mg	Mo	K	Na	Tl
PQL		1	15:03	Al	Sb	Be	Ca	Fe	Mg	Mo	K	Na	Tl
ZZZZZZ		1	15:07										
ICSA		1	15:11	Al	Sb	Be	Ca	Fe	Mg	Mo	K	Na	Tl
ICSAB		1	15:15	Al	Sb	Be	Ca	Fe	Mg	Mo	K	Na	Tl
ZZZZZZ		1	15:18										
ZZZZZZ		1	15:22										
ZZZZZZ		1	15:25										
ZZZZZZ		1	15:29										
ZZZZZZ		1	15:33										
CCV		1	15:37	Al	Sb	Be	Ca	Fe	Mg	Mo	K	Na	Tl
CCB		1	15:40	Al	Sb	Be	Ca	Fe	Mg	Mo	K	Na	Tl
ZZZZZZ		5	15:44										
ZZZZZZ		10	15:48										
SL2079-002	CHAAP-BKRD-SB09	5	15:52	Al	Sb	Be	Ca		Mg		K	Na	Tl
ZZZZZZ		10	15:56										
ZZZZZZ		5	16:00										
ZZZZZZ		10	16:04										
ZZZZZZ		10	16:08										
ZZZZZZ		5	16:11										
ZZZZZZ		10	16:15										
ZZZZZZ		1	16:19										

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Instrument ID: AGILENT 7500 ICP-MS **File Name:** JLC21A

Date: 3/21/2018 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements									
CCV		1	16:23	Al	Sb	Be	Ca	Fe	Mg	Mo	K	Na	Tl
CCB		1	16:27	Al	Sb	Be	Ca	Fe	Mg	Mo	K	Na	Tl
ZZZZZZ		5	16:31										
ZZZZZZ		5	16:35										
ZZZZZZ		5	16:39										
ZZZZZZ		10	16:43										
ZZZZZZ		5	16:47										
ZZZZZZ		10	16:51										
ZZZZZZ		5	16:55										
ZZZZZZ		5	16:59										
ZZZZZZ		5	17:03										
ZZZZZZ		1	17:07										
CCV		1	17:11	Al	Sb	Be	Ca	Fe	Mg	Mo	K	Na	Tl
CCB		1	17:15	Al	Sb	Be	Ca	Fe	Mg	Mo	K	Na	Tl
ZZZZZZ		10	17:19										
ZZZZZZ		5	17:23										
ZZZZZZ		10	17:27										
ZZZZZZ		5	17:31										
ZZZZZZ		5	17:36										
ZZZZZZ		5	17:40										
ZZZZZZ		5	17:44										
ZZZZZZ		5	17:48										
ZZZZZZ		5	17:52										
ZZZZZZ		1	17:56										
CCV		1	18:00	Al	Sb	Be	Ca	Fe	Mg	Mo	K	Na	Tl
CCB		1	18:04	Al	Sb	Be	Ca	Fe	Mg	Mo	K	Na	Tl
ZZZZZZ		25	18:08										

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Instrument ID: AGILENT 7500 ICP-MS **File Name:** JLC21A

Date: 3/21/2018 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements									
ZZZZZZ		5	18:12										
ZZZZZZ		5	18:16										
ZZZZZZ		5	18:20										
ZZZZZZ		5	18:25										
ZZZZZZ		5	18:29										
ZZZZZZ		1	18:33										
ZZZZZZ		1	18:37										
PBWLC16IMW1		5	18:41		Sb								
LCSWLC16IMW1		5	18:45		Sb								
CCV		1	18:49	Al	Sb	Be	Ca	Fe	Mg	Mo	K	Na	Tl
CCB		1	18:53	Al	Sb	Be	Ca	Fe	Mg	Mo	K	Na	Tl
SL2079-014	CHAAP-BKRD-EB-031418	5	18:58		Sb								
ZZZZZZ		5	19:02										
ZZZZZZ		5	19:06										
ZZZZZZ		5	19:10										
ZZZZZZ		1	19:14										
ZZZZZZ		5	19:18										
ZZZZZZ		5	19:22										
ZZZZZZ		5	19:26										
ZZZZZZ		1	19:31										
ZZZZZZ		1	19:35										
CCV		1	19:39	Al	Sb	Be	Ca	Fe	Mg	Mo	K	Na	Tl
CCB		1	19:43	Al	Sb	Be	Ca	Fe	Mg	Mo	K	Na	Tl

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Instrument ID: AGILENT 7500 ICP-MS **File Name:** JLC22E

Date: 3/22/2018 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements
6020 TUNE		1	13:55	
200.8 TUNE		1	13:57	
Cal Blank		1	17:09	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na V Zn
Cal Std 6		1	17:13	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na V Zn
ICV		1	17:17	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na V Zn
ICB		1	17:21	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na V Zn
PQL		1	17:25	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na V Zn
ZZZZZZ		1	17:29	
ICSA		1	17:33	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na V Zn
ICSAB		1	17:37	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na V Zn
ZZZZZZ		1	17:41	
ZZZZZZ		1	17:45	
ZZZZZZ		1	17:49	
ZZZZZZ		1	17:53	
ZZZZZZ		1	17:57	
CCV		1	18:01	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na V Zn
CCB		1	18:05	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na V Zn
SL2079-001	CHAAP-BKRD-SB08	5	18:09	As Ba Be Cd Cr Co Cu Fe Pb Mn Ni Se Ag V Zn
ZZZZZZ		5	18:13	
ZZZZZZ		5	18:18	
ZZZZZZ		5	18:22	
ZZZZZZ		5	18:26	
ZZZZZZ		5	18:30	
ZZZZZZ		5	18:34	
ZZZZZZ		5	18:38	
ZZZZZZ		1	18:42	
ZZZZZZ		1	18:46	

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Instrument ID: AGILENT 7500 ICP-MS **File Name:** JLC22E

Date: 3/22/2018 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements
CCV		1	18:50	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na V Zn
CCB		1	18:54	Al As Ba Be Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag Na V Zn

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Instrument ID: AGILENT 7500 ICP-MS **File Name:** JLC26B

Date: 3/26/2018 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements
6020 TUNE		1	13:56	
200.8 TUNE		1	13:59	
Cal Blank		1	16:14	Al As Ca Cr Cu Fe Mg Mn Mo Ni K Se Ag Na V Zn
Cal Std 6		1	16:18	Al As Ca Cr Cu Fe Mg Mn Mo Ni K Se Ag Na V Zn
ICV		1	16:22	Al As Ca Cr Cu Fe Mg Mn Mo Ni K Se Ag Na V Zn
ICB		1	16:26	Al As Ca Cr Cu Fe Mg Mn Mo Ni K Se Ag Na V Zn
PQL		1	16:29	Al As Ca Cr Cu Fe Mg Mn Mo Ni K Se Ag Na V Zn
ZZZZZZ		1	16:33	
ICSA		1	16:37	Al As Ca Cr Cu Fe Mg Mn Mo Ni K Se Ag Na V Zn
ICSAB		1	16:41	Al As Ca Cr Cu Fe Mg Mn Mo Ni K Se Ag Na V Zn
ZZZZZZ		1	16:46	
ZZZZZZ		1	16:49	
ZZZZZZ		1	16:53	
ZZZZZZ		1	16:57	
ZZZZZZ		1	17:01	
CCV		1	17:05	Al As Ca Cr Cu Fe Mg Mn Mo Ni K Se Ag Na V Zn
CCB		1	17:09	Al As Ca Cr Cu Fe Mg Mn Mo Ni K Se Ag Na V Zn
ZZZZZZ		1	17:13	
ZZZZZZ		1	17:17	
ZZZZZZ		1	17:21	
ZZZZZZ		1	17:25	
ZZZZZZ		1	17:29	
ZZZZZZ		1	17:33	
ZZZZZZ		1	17:37	
ZZZZZZ		1	17:41	
SL2079-002	CHAAP-BKRD-SB09	5	17:45	As Cr Cu Mn Ni Se Ag V Zn
ZZZZZZ		10	17:49	

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Instrument ID: AGILENT 7500 ICP-MS **File Name:** JLC26B

Date: 3/26/2018 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements																	
CCV		1	17:53	Al	As	Ca	Cr	Cu	Fe	Mg	Mn	Mo	Ni	K	Se	Ag	Na	V	Zn		
CCB		1	17:57	Al	As	Ca	Cr	Cu	Fe	Mg	Mn	Mo	Ni	K	Se	Ag	Na	V	Zn		

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Instrument ID: AGILENT 7500 ICP-MS **File Name:** JLC27A

Date: 3/27/2018 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements							
6020 TUNE		1	13:17								
200.8 TUNE		1	13:20								
Cal Blank		1	14:06	Al	Cd	Ca	Co	Fe	Mg	Mo	K	Na
Cal Std 6		1	14:10	Al	Cd	Ca	Co	Fe	Mg	Mo	K	Na
ICV		1	14:13	Al	Cd	Ca	Co	Fe	Mg	Mo	K	Na
ICB		1	14:17	Al	Cd	Ca	Co	Fe	Mg	Mo	K	Na
PQL		1	14:21	Al	Cd	Ca	Co	Fe	Mg	Mo	K	Na
ZZZZZZ		1	14:24								
ICSA		1	14:28	Al	Cd	Ca	Co	Fe	Mg	Mo	K	Na
ICSAB		1	14:32	Al	Cd	Ca	Co	Fe	Mg	Mo	K	Na
ZZZZZZ		1	14:36								
ZZZZZZ		1	14:39								
ZZZZZZ		1	14:43								
ZZZZZZ		1	14:46								
ZZZZZZ		1	14:50								
CCV		1	14:54	Al	Cd	Ca	Co	Fe	Mg	Mo	K	Na
CCB		1	14:58	Al	Cd	Ca	Co	Fe	Mg	Mo	K	Na
ZZZZZZ		1	15:01								
ZZZZZZ		1	15:05								
ZZZZZZ		1	15:09								
ZZZZZZ		1	15:13								
ZZZZZZ		1	15:16								
ZZZZZZ		1	15:20								
ZZZZZZ		1	15:24								
ZZZZZZ		1	15:28								
SL2079-002	CHAAP-BKRD-SB09	5	15:32		Cd		Co	Fe			
ZZZZZZ		10	15:36								

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SL2079

Instrument ID: AGILENT 7500 ICP-MS **File Name:** JLC27A

Date: 3/27/2018 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements								
CCV		1	15:40	Al	Cd	Ca	Co	Fe	Mg	Mo	K	Na
CCB		1	15:43	Al	Cd	Ca	Co	Fe	Mg	Mo	K	Na

Raw Data Section

KATAHDIN ANALYTICAL SERVICES, LLC
METALS ANALYSIS RUN INFORMATION SHEET

INSTR. ID: Cetac M6100 (H) **ANALYST:** AMJ **ANALYSIS DATE:** 03/16/2018

FILE NAME: HLC16A **METHOD: CVAA**

☑ 245.1
☑ 7470
☐ 7471
☑ DoD
☐ _____

REVIEWED
MD 3/19/18
KATAHDIN ANALYTICAL
METALS SECTION

Analyte : Mercury

$SnCl_2$ Lot : MR1951

STANDARDS USED:

Standard Name	Prep. Date	Expiration Date	Standard Conc.
Cal. Blank / ICB / CCB	03/16/2018	06/30/2018	0.00 ug/L
Standard #1 / PQL	03/16/2018	06/30/2018	0.20 ug/L
Standard #2	03/16/2018	06/30/2018	0.50 ug/L
Standard #3	03/16/2018	06/30/2018	1.00 ug/L
Standard #4	03/16/2018	06/30/2018	5.00 ug/L
Standard #5	03/16/2018	06/30/2018	10.00 ug/L
ICV	03/16/2018	03/31/2018	6.00 ug/L

Additional Comments and Notes:

MD 3/16/18

Post Spike (245.1/7470): 0.005 mL MS2112 (pipet M17) into 8.0mL (pipet M12) of sample

Post Spike (7471): 0.008 mL MS2112 (pipet M17) into 8.0mL (pipet M12) of sample

5x Dilution: 1.6mL (pipet M12) of sample + 6.4mL (pipet M12) of Cal. Blank

O flag: Sample concentration over calibration, re-analyzed at dilution

Q flag: Analytical run QC outside laboratory limits

INSTRUMENT RUNLOG

Instrument: CETAC M6100

SAMPLE ID	DF	FILE	DATE	TIME	ANALYST
Calibration Blank	1.0000	HLC16A	3/16/2018	12:08	AMJ
Standard #1 (0.2 ppb)	1.0000	HLC16A	3/16/2018	12:10	AMJ
Standard #2 (0.5 ppb)	1.0000	HLC16A	3/16/2018	12:12	AMJ
Standard #3 (1.0 ppb)	1.0000	HLC16A	3/16/2018	12:14	AMJ
Standard #4 (5.0 ppb)	1.0000	HLC16A	3/16/2018	12:16	AMJ
Standard #5 (10.0 ppb)	1.0000	HLC16A	3/16/2018	12:19	AMJ
ICV	1.0000	HLC16A	3/16/2018	12:21	AMJ
ICB	1.0000	HLC16A	3/16/2018	12:23	AMJ
PQL	1.0000	HLC16A	3/16/2018	12:25	AMJ
CCV	1.0000	HLC16A	3/16/2018	12:27	AMJ
CCB	1.0000	HLC16A	3/16/2018	12:29	AMJ
PBWLC16HGW1	1.0000	HLC16A	3/16/2018	12:31	AMJ
LCSWLC16HGW1	1.0000	HLC16A	3/16/2018	12:33	AMJ
SL2041-007	1.0000	HLC16A	3/16/2018	12:36	AMJ
SL2089-001	1.0000	HLC16A	3/16/2018	12:38	AMJ
PBWLC16HGW2	1.0000	HLC16A	3/16/2018	12:40	AMJ
LCSWLC16HGW2	1.0000	HLC16A	3/16/2018	12:42	AMJ
PBT1443A	1.0000	HLC16A	3/16/2018	12:44	AMJ
PBT1444A	1.0000	HLC16A	3/16/2018	12:46	AMJ
SL1633-005	1.0000	HLC16A	3/16/2018	12:48	AMJ
CCV	1.0000	HLC16A	3/16/2018	12:50	AMJ
CCB	1.0000	HLC16A	3/16/2018	12:53	AMJ
SL1633-006	1.0000	HLC16A	3/16/2018	12:55	AMJ
SL2050-001	1.0000	HLC16A	3/16/2018	12:57	AMJ
SL2050-002	1.0000	HLC16A	3/16/2018	12:59	AMJ
SL2050-003	1.0000	HLC16A	3/16/2018	13:01	AMJ
SL2050-004	1.0000	HLC16A	3/16/2018	13:03	AMJ
SL2049-002	1.0000	HLC16A	3/16/2018	13:05	AMJ
SL2049-003	1.0000	HLC16A	3/16/2018	13:08	AMJ
SL2049-005	1.0000	HLC16A	3/16/2018	13:10	AMJ
SL2049-006	1.0000	HLC16A	3/16/2018	13:12	AMJ
SL2049-008	1.0000	HLC16A	3/16/2018	13:14	AMJ
CCB	1.0000	HLC16A	3/16/2018	13:16	AMJ
CCV	1.0000	HLC16A	3/16/2018	13:18	AMJ
SL2049-008L	5.0000	HLC16A	3/16/2018	13:20	AMJ
SL2049-008A	1.0000	HLC16A	3/16/2018	13:23	AMJ
CCV	1.0000	HLC16A	3/16/2018	13:28	AMJ
CCB	1.0000	HLC16A	3/16/2018	13:30	AMJ
SL2049-008S	1.0000	HLC16A	3/16/2018	13:32	AMJ
SL2049-008P	1.0000	HLC16A	3/16/2018	13:34	AMJ
SL2049-009	1.0000	HLC16A	3/16/2018	13:36	AMJ
SL2079-014	1.0000	HLC16A	3/16/2018	13:39	AMJ
CCV	1.0000	HLC16A	3/16/2018	13:41	AMJ
CCB	1.0000	HLC16A	3/16/2018	13:43	AMJ

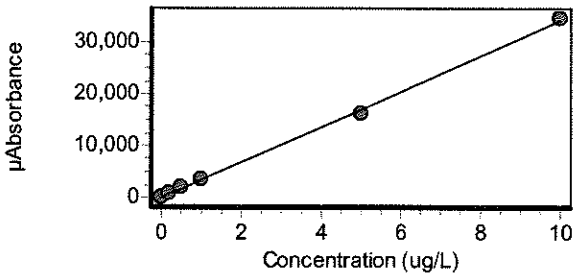
Report Generated By CETAC QuickTrace
Analyst: kasgc
Worksheet file: C:\Program Files\QuickTrace\Worksheets\HLC16A.wsz
Date Started: 3/16/2018 12:06:05 PM
Comment:

Results

Sample Name				Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
Calibration Blank				STD	03/16/18 12:08:26 pm	0.000	-5	556.51		1.00
Replicates	-20.2	11.6	25.9	-38.4						
Standard #1 (0.2 ppb)				STD	03/16/18 12:10:33 pm	0.200	732	7.61		1.00
Replicates	684.9	750.7	689.2	802.0						
Standard #2 (0.5 ppb)				STD	03/16/18 12:12:40 pm	0.500	1703	3.87		1.00
Replicates	1630.8	1662.8	1756.3	1760.6						
Standard #3 (1.0 ppb)				STD	03/16/18 12:14:47 pm	1.000	3363	1.84		1.00
Replicates	3338.6	3306.0	3356.0	3450.2						
Standard #4 (5.0 ppb)				STD	03/16/18 12:16:56 pm	5.000	16065	2.29		1.00
Replicates	15977.0	15736.7	15955.5	16592.2						
Standard #5 (10.0 ppb)				STD	03/16/18 12:19:04 pm	10.000	34598	4.10		1.00
Replicates	36535.2	34770.1	33454.5	33632.0						

Calibration

Equation: A = -130.360 + 3427.379C
R2: 0.99877
SEE: 538.0110
Flags:



ICV				ICV	03/16/18 12:21:13 pm	6.089	20738	3.36		1.00
Replicates	21734.5	20659.6	20144.0	20412.0						
% Recovery	101.48									
ICB				ICB	03/16/18 12:23:19 pm	0.035	-9	141.38		1.00
Replicates	1.3	2.5	-24.0	-17.5						

Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
PQL					CRDL	03/16/18 12:25:26 pm	0.228	651	5.98		1.00
	Replicates	617.5	628.2	655.0	704.8						
	% Recovery	114.04									
CCV					CCV	03/16/18 12:27:34 pm	4.812	16361	1.74		1.00
	Replicates	16296.2	16140.6	16231.0	16777.5						
	% Recovery	96.24									
CCB					CCB	03/16/18 12:29:40 pm	0.025	-46	37.58		1.00
	Replicates	-20.4	-57.8	-54.8	-51.7						
PBWLC16HGW1					PBK	03/16/18 12:31:47 pm	0.042	15	74.98		1.00
	Replicates	17.0	24.2	20.7	-1.3						
LCSWLC16HGW1					LCS	03/16/18 12:33:55 pm	4.758	16178	2.39		1.00
	Replicates	15940.3	15882.9	16159.4	16729.9						
	% Recovery	95.17									
SL2041-007					UNK	03/16/18 12:36:02 pm	0.041	10	163.72		1.00
	Replicates	29.0	-4.1	-2.7	16.9						
SL2089-001					UNK	03/16/18 12:38:11 pm	0.067	101	6.93		1.00
	Replicates	105.9	90.5	102.8	104.0						
PBWLC16HGW2					PBK	03/16/18 12:40:19 pm	0.045	25	98.02		1.00
	Replicates	-4.4	54.7	22.7	25.5						
LCSWLC16HGW2					LCS	03/16/18 12:42:26 pm	4.600	15636	3.93		1.00
	Replicates	15027.0	15291.5	15805.0	16419.7						
	% Recovery	92.00									
PBT1443A					UNK	03/16/18 12:44:34 pm	0.034	-15	155.82		1.00
	Replicates	-2.6	11.4	-32.3	-34.6						
PBT1444A					UNK	03/16/18 12:46:42 pm	0.043	19	182.66		1.00
	Replicates	-1.2	-1.5	7.9	68.9						
SL1633-005					UNK	03/16/18 12:48:51 pm	0.043	18	81.20		1.00
	Replicates	9.7	26.3	33.3	2.0						

Sample Name				Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
CCV				CCV	03/16/18 12:50:59 pm	4.985	16956	5.43		1.00
Replicates	18272.0	16896.5	16224.0	16432.3						
% Recovery	99.71									
CCB				CCB	03/16/18 12:53:05 pm	0.040	7	399.27		1.00
Replicates	44.0	-3.3	14.1	-25.4						
SL1633-006				UNK	03/16/18 12:55:14 pm	0.111	251	17.97		1.00
Replicates	240.6	224.8	318.2	222.3						
SL2050-001				UNK	03/16/18 12:57:22 pm	0.048	36	52.40		1.00
Replicates	11.8	49.4	52.1	30.1						
SL2050-002				UNK	03/16/18 12:59:30 pm	0.033	-17	110.99		1.00
Replicates	-7.7	-18.7	-43.0	0.8						
SL2050-003				UNK	03/16/18 01:01:38 pm	0.046	29	68.01		1.00
Replicates	0.9	44.6	39.0	29.8						
SL2050-004				UNK	03/16/18 01:03:47 pm	0.041	10	203.39		1.00
Replicates	-9.1	-2.9	15.9	37.4						
SL2049-002				UNK	03/16/18 01:05:56 pm	0.031	-26	41.17		1.00
Replicates	-18.2	-32.0	-37.1	-15.3						
SL2049-003				UNK	03/16/18 01:08:04 pm	0.051	44	84.10		1.00
Replicates	80.2	-1.7	67.1	30.6						
SL2049-005				UNK	03/16/18 01:10:13 pm	0.048	34	44.05		1.00
Replicates	35.3	38.2	13.9	50.4						
SL2049-006				UNK	03/16/18 01:12:22 pm	0.048	34	95.97		1.00
Replicates	42.0	2.6	15.7	77.6						
SL2049-008				UNK	03/16/18 01:14:31 pm	0.079	139	25.22		1.00
Replicates	86.3	158.7	153.1	156.6						

Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
CCB					CCB	03/16/18 01:16:37 pm	0.035	-11	181.86		1.00
	Replicates	-17.1	15.6	-10.4	-31.2						
CCV					CCV	03/16/18 01:18:45 pm	4.575	15549	4.01		1.00
	Replicates	16322.6	15768.8	15164.5	14939.0						
	% Recovery	91.49									
SL2049-008L					UNK	03/16/18 01:20:55 pm	0.218	19	122.41		5.00
	Replicates	-7.8	35.3	7.1	42.3						
SL2049-008A					UNK	03/16/18 01:23:03 pm	0.894	2934	4.53		1.00
	Replicates	3114.1	2955.4	2835.5	2832.5						
CCV					CCV	03/16/18 01:28:19 pm	4.565	15516	4.28		1.00
	Replicates	14807.8	15242.6	15642.4	16372.4						
	% Recovery	91.30									
CCB					CCB	03/16/18 01:30:25 pm	0.044	19	110.04		1.00
	Replicates	1.8	0.1	39.3	36.1						
SL2049-008S					UNK	03/16/18 01:32:34 pm	1.626	5443	2.07		1.00
	Replicates	5466.2	5324.4	5393.4	5587.4						
SL2049-008P					UNK	03/16/18 01:34:43 pm	1.577	5274	2.34		1.00
	Replicates	5169.1	5217.8	5257.3	5450.3						
SL2049-009					UNK	03/16/18 01:36:53 pm	0.030	-26	87.08		1.00
	Replicates	-20.6	-55.7	-1.0	-26.7						
SL2079-014					UNK	03/16/18 01:39:03 pm	0.033	-18	86.14		1.00
	Replicates	-23.6	-18.9	-34.4	3.3						
CCV					CCV	03/16/18 01:41:11 pm	4.811	16357	2.01		1.00
	Replicates	16197.8	16124.3	16265.0	16841.5						
	% Recovery	96.21									
CCB					CCB	03/16/18 01:43:17 pm	0.034	-13	167.65		1.00
	Replicates	0.2	10.9	-31.0	-32.8						

KATAHDIN ANALYTICAL SERVICES, LLC
METALS ANALYSIS RUN INFORMATION SHEET

INSTR. ID: Cetac M6100 (H) **ANALYST:** AMJ **ANALYSIS DATE:** 03/19/2018

FILE NAME: HLC19A **METHOD: CVAA**

☐ 245.1
☐ 7470
☑ 7471
☑ DoD
☐ _____

REVIEWED
MD 3/20/18
KATAHDIN ANALYTICAL
METALS SECTION

Analyte : Mercury

$SnCl_2$ Lot : MR1969

STANDARDS USED:

Standard Name	Prep. Date	Expiration Date	Standard Conc.
Cal. Blank / ICB / CCB	03/19/2018	06/30/2018	0.00 ug/L
Standard #1 / PQL	03/19/2018	06/30/2018	0.20 ug/L
Standard #2	03/19/2018	06/30/2018	0.50 ug/L
Standard #3	03/19/2018	06/30/2018	1.00 ug/L
Standard #4	03/19/2018	06/30/2018	5.00 ug/L
Standard #5	03/19/2018	06/30/2018	10.00 ug/L
ICV	03/19/2018	03/31/2018	6.00 ug/L

Additional Comments and Notes:

MD 3/20/18

Post Spike (245.1/7470): 0.005 mL MS2112 (pipet M17) into 8.0mL (pipet M12) of sample

Post Spike (7471): 0.008 mL MS2112 (pipet M17) into 8.0mL (pipet M12) of sample

5x Dilution: 1.6mL (pipet M12) of sample + 6.4mL (pipet M12) of Cal. Blank

O flag: Sample concentration over calibration, re-analyzed at dilution

Q flag: Analytical run QC outside laboratory limits

INSTRUMENT RUNLOG

Instrument: CETAC M6100

SAMPLE ID	DF	FILE	DATE	TIME	ANALYST
Calibration Blank	1.0000	HLC19A	3/19/2018	11:44	AMJ
Standard #1 (0.2 ppb)	1.0000	HLC19A	3/19/2018	11:46	AMJ
Standard #2 (0.5 ppb)	1.0000	HLC19A	3/19/2018	11:48	AMJ
Standard #3 (1.0 ppb)	1.0000	HLC19A	3/19/2018	11:50	AMJ
Standard #4 (5.0 ppb)	1.0000	HLC19A	3/19/2018	11:59	AMJ
Standard #5 (10.0 ppb)	1.0000	HLC19A	3/19/2018	12:01	AMJ
ICV	1.0000	HLC19A	3/19/2018	12:05	AMJ
ICB	1.0000	HLC19A	3/19/2018	12:09	AMJ
PQL	1.0000	HLC19A	3/19/2018	12:11	AMJ
CCV	1.0000	HLC19A	3/19/2018	12:13	AMJ
CCB	1.0000	HLC19A	3/19/2018	12:15	AMJ
PBSLC16HGS1	1.0000	HLC19A	3/19/2018	12:17	AMJ
LCSOLC16HGS1	1.0000	HLC19A	3/19/2018	12:20	AMJ
SL2079-001	1.0000	HLC19A	3/19/2018	12:22	AMJ
SL2079-002	1.0000	HLC19A	3/19/2018	12:24	AMJ
SL2079-003	1.0000	HLC19A	3/19/2018	12:26	AMJ
SL2079-004	1.0000	HLC19A	3/19/2018	12:28	AMJ
SL2079-005	1.0000	HLC19A	3/19/2018	12:30	AMJ
SL2079-006	1.0000	HLC19A	3/19/2018	12:32	AMJ
SL2079-007	1.0000	HLC19A	3/19/2018	12:35	AMJ
CCV	1.0000	HLC19A	3/19/2018	12:37	AMJ
CCB	1.0000	HLC19A	3/19/2018	12:39	AMJ
SL2079-008	1.0000	HLC19A	3/19/2018	12:41	AMJ
SL2079-009	1.0000	HLC19A	3/19/2018	12:43	AMJ
SL2079-009L	5.0000	HLC19A	3/19/2018	12:45	AMJ
SL2079-009A	1.0000	HLC19A	3/19/2018	12:47	AMJ
SL2079-009S	1.0000	HLC19A	3/19/2018	12:49	AMJ
SL2079-009P	1.0000	HLC19A	3/19/2018	12:52	AMJ
SL2079-010	1.0000	HLC19A	3/19/2018	12:54	AMJ
SL2079-011	1.0000	HLC19A	3/19/2018	12:56	AMJ
SL2079-012	1.0000	HLC19A	3/19/2018	12:58	AMJ
SL2079-013	1.0000	HLC19A	3/19/2018	13:00	AMJ
CCV	1.0000	HLC19A	3/19/2018	13:02	AMJ
CCB	1.0000	HLC19A	3/19/2018	13:04	AMJ
SL2082-001	1.0000	HLC19A	3/19/2018	13:07	AMJ
SL2082-002	1.0000	HLC19A	3/19/2018	13:09	AMJ
SL2082-003	1.0000	HLC19A	3/19/2018	13:11	AMJ
PBSLC19HGS1	1.0000	HLC19A	3/19/2018	13:13	AMJ
LCSOLC19HGS1	1.0000	HLC19A	3/19/2018	13:15	AMJ
SL2133-001	1.0000	HLC19A	3/19/2018	13:17	AMJ
SL2133-002	1.0000	HLC19A	3/19/2018	13:19	AMJ
SL2133-003	1.0000	HLC19A	3/19/2018	13:22	AMJ
SL2133-004	1.0000	HLC19A	3/19/2018	13:24	AMJ
SL2133-005	1.0000	HLC19A	3/19/2018	13:26	AMJ

SAMPLE ID	DF	FILE	DATE	TIME	ANALYST
CCV	1.0000	HLC19A	3/19/2018	13:28	AMJ
CCB	1.0000	HLC19A	3/19/2018	13:31	AMJ

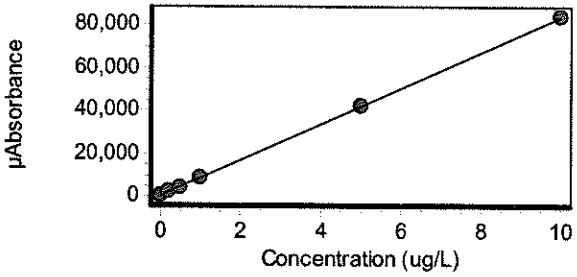
Report Generated By CETAC QuickTrace
Analyst: kasgc
Worksheet file: C:\Program Files\QuickTrace\Worksheets\HLC19A.wsz
Date Started: 3/19/2018 11:40:51 AM
Comment:

Results

Sample Name				Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
Calibration Blank				STD	03/19/18 11:44:11 am	0.000	-1	615.73		1.00
Replicates	55.0	-14.6	-46.5	1.4						
Standard #1 (0.2 ppb)				STD	03/19/18 11:46:17 am	0.200	1893	6.25		1.00
Replicates	2061.4	1883.0	1832.7	1793.3						
Standard #2 (0.5 ppb)				STD	03/19/18 11:48:24 am	0.500	4163	3.64		1.00
Replicates	3994.2	4108.5	4193.9	4353.9						
Standard #3 (1.0 ppb)				STD	03/19/18 11:50:32 am	1.000	8248	3.88		1.00
Replicates	7848.2	8143.8	8427.8	8570.5						
Standard #4 (5.0 ppb)				STD	03/19/18 11:59:35 am	5.000	42324	5.12		1.00
Replicates	39253.3	42350.7	43736.8	43957.0						
Standard #5 (10.0 ppb)				STD	03/19/18 12:01:44 pm	10.000	84082	5.36		1.00
Replicates	88882.0	86596.0	81991.3	78860.0						

Calibration

Equation: A = 32.188 + 8414.089C
R2: 0.99998
SEE: 184.0147
Flags:



ICV				ICV	03/19/18 12:05:36 pm	6.355	53504	3.14		1.00
Replicates	51033.4	53983.4	54765.5	54233.5						
% Recovery	105.92									
ICB				ICB	03/19/18 12:09:30 pm	0.005	73	16.21		1.00
Replicates	85.9	65.1	60.7	79.2						

Katahdin Analytical Services 4000123

Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
PQL					CRDL	03/19/18 12:11:36 pm	0.207	1773	2.12		1.00
	Replicates	1720.0	1771.2	1800.7	1798.7						
	% Recovery	103.42									
CCV					CCV	03/19/18 12:13:44 pm	4.696	39542	3.82		1.00
	Replicates	37441.1	40599.4	40687.4	39440.3						
	% Recovery	93.91									
CCB					CCB	03/19/18 12:15:50 pm	-0.012	-71	12.82		1.00
	Replicates	-63.0	-63.4	-79.6	-78.4						
PBSLC16HGS1					PBK	03/19/18 12:17:57 pm	-0.002	12	133.29		1.00
	Replicates	1.3	-4.6	27.4	24.5						
LCSOLC16HGS1					LCS	03/19/18 12:20:05 pm	4.666	39296	3.67		1.00
	Replicates	41118.5	39778.5	38268.0	38017.8						
	% Recovery	93.33									
SL2079-001					UNK	03/19/18 12:22:13 pm	0.093	817	4.49		1.00
	Replicates	772.2	833.0	804.1	857.0						
SL2079-002					UNK	03/19/18 12:24:21 pm	0.154	1330	4.71		1.00
	Replicates	1263.5	1341.0	1411.3	1305.3						
SL2079-003					UNK	03/19/18 12:26:29 pm	0.119	1034	2.82		1.00
	Replicates	1055.5	1055.4	1033.4	993.5						
SL2079-004					UNK	03/19/18 12:28:36 pm	0.126	1088	5.84		1.00
	Replicates	1009.7	1067.6	1120.1	1155.5						
SL2079-005					UNK	03/19/18 12:30:44 pm	0.086	758	4.95		1.00
	Replicates	729.7	803.7	772.7	724.5						
SL2079-006					UNK	03/19/18 12:32:52 pm	0.156	1348	4.18		1.00
	Replicates	1271.1	1339.7	1385.9	1393.9						
SL2079-007					UNK	03/19/18 12:35:01 pm	0.113	982	6.91		1.00
	Replicates	923.8	950.1	974.6	1078.8						

Sample Name				Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
CCV				CCV	03/19/18 12:37:09 pm	4.552	38334	2.67		1.00
Replicates	37221.5	39248.9	39156.1	37708.1						
% Recovery	91.04									
CCB				CCB	03/19/18 12:39:15 pm	-0.013	-75	31.65		1.00
Replicates	-86.8	-55.9	-55.4	-103.8						
SL2079-008				UNK	03/19/18 12:41:24 pm	0.109	947	5.05		1.00
Replicates	926.0	1004.1	963.6	893.3						
SL2079-009				UNK	03/19/18 12:43:32 pm	0.083	733	3.53		1.00
Replicates	695.8	754.8	735.6	744.8						
SL2079-009L				UNK	03/19/18 12:45:40 pm	0.083	172	24.28		5.00
Replicates	117.9	171.4	180.9	219.4						
SL2079-009A				UNK	03/19/18 12:47:48 pm	0.800	6766	2.09		1.00
Replicates	6727.8	6933.3	6807.2	6596.0						
SL2079-009S				UNK	03/19/18 12:49:57 pm	1.017	8589	5.28		1.00
Replicates	7931.7	8643.2	8870.7	8909.1						
SL2079-009P				UNK	03/19/18 12:52:06 pm	1.081	9129	7.62		1.00
Replicates	8195.2	9011.4	9575.2	9734.2						
SL2079-010				UNK	03/19/18 12:54:14 pm	0.139	1203	2.49		1.00
Replicates	1189.9	1244.8	1201.3	1175.1						
SL2079-011				UNK	03/19/18 12:56:23 pm	0.118	1029	4.08		1.00
Replicates	1053.4	1075.0	999.1	988.0						
SL2079-012				UNK	03/19/18 12:58:32 pm	0.119	1031	2.46		1.00
Replicates	1049.0	1027.4	1051.9	997.0						
SL2079-013				UNK	03/19/18 01:00:41 pm	0.103	900	5.10		1.00
Replicates	947.8	913.7	899.0	838.0						

Sample Name				Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
CCV				CCV	03/19/18 01:02:49 pm	4.857	40901	2.56		1.00
Replicates	41223.6	41930.5	41001.2	39450.0						
% Recovery	97.14									
CCB				CCB	03/19/18 01:04:55 pm	-0.023	-159	6.57		1.00
Replicates	-144.3	-158.0	-165.4	-167.4						
SL2082-001				UNK	03/19/18 01:07:05 pm	0.103	900	8.60		1.00
Replicates	1010.7	897.0	851.4	842.0						
SL2082-002				UNK	03/19/18 01:09:13 pm	0.100	876	1.00		1.00
Replicates	879.0	884.7	875.2	864.0						
SL2082-003				UNK	03/19/18 01:11:22 pm	0.031	293	6.63		1.00
Replicates	297.0	266.7	294.7	313.6						
PBSLC19HGS1				PBK	03/19/18 01:13:31 pm	-0.002	13	326.89		1.00
Replicates	25.2	-48.2	25.3	49.3						
LCSOLC19HGS1				LCS	03/19/18 01:15:40 pm	4.954	41716	7.43		1.00
Replicates	37338.0	41739.3	43604.3	44184.0						
% Recovery	99.08									
SL2133-001				UNK	03/19/18 01:17:50 pm	0.105	912	10.54		1.00
Replicates	784.9	890.3	989.0	983.7						
SL2133-002				UNK	03/19/18 01:19:59 pm	0.139	1203	3.21		1.00
Replicates	1144.9	1222.5	1224.7	1218.7						
SL2133-003				UNK	03/19/18 01:22:08 pm	0.117	1020	3.74		1.00
Replicates	963.4	1038.8	1045.1	1033.8						
SL2133-004				UNK	03/19/18 01:24:17 pm	0.139	1203	2.99		1.00
Replicates	1251.5	1201.2	1196.5	1164.4						
SL2133-005				UNK	03/19/18 01:26:27 pm	0.109	948	2.87		1.00
Replicates	944.4	946.2	984.7	918.5						

re-jected due to QC failure

JS 3.19.18

Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Flags	DF
CCV					CCV	03/19/18 01:28:35 pm	4.240	35710	3.78	Q	1.00
	Replicates	33742.4	35919.8	36647.1	36531.6						
	% Recovery	84.81									
CCB					CCB	03/19/18 01:31:14 pm	-0.025	-182	19.12		1.00
	Replicates	-222.1	-139.5	-173.1	-193.8						

KATAHDIN ANALYTICAL SERVICES, LLC
METALS ANALYSIS RUN INFORMATION SHEET

INSTR. ID: J (Agilent 7500) **ANALYST**: JS **ANALYSIS DATE**: 03/16/2018

FILE NAME: JLC16A **METHOD: ICP-MS**

- ☑ 200.8
- ☑ 6020
- ☑ DOD

REVIEWED
MD 3/19/18
KATAHDIN ANALYTICAL
METALS SECTION

The pHs of all samples that were tested by direct analysis in this analytical run were checked just prior to analysis and confirmed to be <2. The time of preservation of these samples was checked in the "Measured Turbidity and Preservation of Incoming Samples" logbook to verify that they had been preserved at least 16 hours prior to analysis. These verifications were performed by JS (initals) on 3.16.18 (date).

STANDARDS USED:

Standard Name	Standard ID	Prep Date	Expiration Date	Standard Conc.
Cal. Blk/ICB/CCB	MW17581	02/21/2018	02/21/2019	0 ug/L
Standard 1	MW17608	03/09/2018	03/21/2018	Varies by Element
ICV	MW17588	02/23/2018	05/23/2018	Varies by Element
PQL	MW17610	03/12/2018	04/30/2018	Varies by Element
LRS1	MW17597	03/02/2018	06/02/2018	Varies by Element
LRS2	MW17570	02/16/2018	05/14/2018	Varies by Element
ICSA	MW17613	03/14/2018	03/20/2018	Varies by Element
ICSAB	MW17614	03/14/2018	03/20/2018	Varies by Element
CCV	MW17615	03/14/2018	03/21/2018	Varies by Element
Internal Standard	MW17585	02/22/2018	05/22/2018	0.4 mg/L (Li,Sc,Ge/Y,Tb,Bi)

Additional Comments and Notes:

- SD failed inclosing PQL, didn't accept any non-DoD samples

MD 3/19/18

Dilutions: Some samples were diluted based on history or due to interfering element concentrations. Dilution preparations are as follows:

25x serial diln.: 1.6mL of 5x diln. of sample(pipet M18) + 6.4mL of MW17581(pipet M18)

5x diln.: 1.6mL of sample(pipet M18) + 6.4mL of MW17581(pipet M18)

Post Spike: 0.08mL of MW17555(pipet M16) into 5x diln. of sample(pipet M18)

(Unless otherwise specified)

INSTRUMENT RUNLOG

Instrument: ICAP 6500

SAMPLE ID	DF	FILE	DATE	TIME	ANALYST
Blank	1.000	ILC16A	3/16/2018	14:13	JS
Std 1	1.000	ILC16A	3/16/2018	14:17	JS
ICV	1.000	ILC16A	3/16/2018	14:21	JS
ICB	1.000	ILC16A	3/16/2018	14:25	JS
PQL	1.000	ILC16A	3/16/2018	14:29	JS
ICSA	1.000	ILC16A	3/16/2018	14:33	JS
ICSAB	1.000	ILC16A	3/16/2018	14:38	JS
CCV	1.000	ILC16A	3/16/2018	14:44	JS
CCB	1.000	ILC16A	3/16/2018	14:48	JS
LRS1	1.000	ILC16A	3/16/2018	14:52	JS
LRS2	1.000	ILC16A	3/16/2018	14:57	JS
CCV	1.000	ILC16A	3/16/2018	15:03	JS
CCB	1.000	ILC16A	3/16/2018	15:07	JS
PBWLC15ICW1	1.000	ILC16A	3/16/2018	15:11	JS
LCSWLC15ICW1	1.000	ILC16A	3/16/2018	15:15	JS
SL2050-001	1.000	ILC16A	3/16/2018	15:19	JS
SL2050-001L	5.000	ILC16A	3/16/2018	15:24	JS
SL2050-001A	1.000	ILC16A	3/16/2018	15:28	JS
SL2050-001S	1.000	ILC16A	3/16/2018	15:33	JS
SL2050-001P	1.000	ILC16A	3/16/2018	15:39	JS
SL2050-002	1.000	ILC16A	3/16/2018	15:44	JS
SL2050-003	1.000	ILC16A	3/16/2018	15:49	JS
SL2050-004	1.000	ILC16A	3/16/2018	15:54	JS
CCV	1.000	ILC16A	3/16/2018	15:58	JS
CCB	1.000	ILC16A	3/16/2018	16:02	JS
SL2007-001	2.000	ILC16A	3/16/2018	16:06	JS
SL2007-001	10.00	ILC16A	3/16/2018	16:11	JS
SL2007-002	1.000	ILC16A	3/16/2018	16:15	JS
SL2007-003	2.000	ILC16A	3/16/2018	16:20	JS
PBWLC16ICW1	1.000	ILC16A	3/16/2018	16:24	JS
LCSWLC16ICW1	1.000	ILC16A	3/16/2018	16:28	JS
PBT1443A	1.000	ILC16A	3/16/2018	16:32	JS
PBT1444A	1.000	ILC16A	3/16/2018	16:37	JS
SL1633-005	1.000	ILC16A	3/16/2018	16:41	JS
RINSE	1.000	ILC16A	3/16/2018	16:46	JS
CCV	1.000	ILC16A	3/16/2018	16:50	JS
CCB	1.000	ILC16A	3/16/2018	16:54	JS
SL1633-006	1.000	ILC16A	3/16/2018	16:58	JS
SL1633-001	2.000	ILC16A	3/16/2018	17:03	JS
SL1633-002	2.000	ILC16A	3/16/2018	17:07	JS
SL1832-004	1.000	ILC16A	3/16/2018	17:11	JS
PBSLC16ICS1	1.000	ILC16A	3/16/2018	17:16	JS
LCSOLC16ICS1	1.000	ILC16A	3/16/2018	17:20	JS
SL1734-001	1.000	ILC16A	3/16/2018	17:24	JS

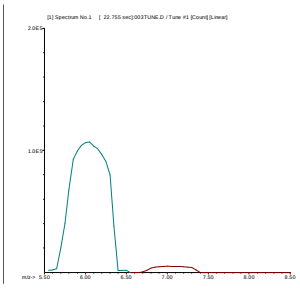
SAMPLE ID	DF	FILE	DATE	TIME	ANALYST
SL1734-002	1.000	ILC16A	3/16/2018	17:28	JS
SL1734-003	1.000	ILC16A	3/16/2018	17:33	JS
SL1734-004	1.000	ILC16A	3/16/2018	17:36	JS
CCV	1.000	ILC16A	3/16/2018	17:41	JS
CCB	1.000	ILC16A	3/16/2018	17:45	JS
SL1734-005	1.000	ILC16A	3/16/2018	17:49	JS
SL1734-006	1.000	ILC16A	3/16/2018	17:53	JS
SL1734-007	1.000	ILC16A	3/16/2018	17:57	JS
SL1734-008	1.000	ILC16A	3/16/2018	18:02	JS
SL1989-002	1.000	ILC16A	3/16/2018	18:06	JS
SL2033-001	1.000	ILC16A	3/16/2018	18:11	JS
SL2033-001L	5.000	ILC16A	3/16/2018	18:15	JS
SL2033-001A	1.000	ILC16A	3/16/2018	18:19	JS
SL2033-001S	1.000	ILC16A	3/16/2018	18:23	JS
SL2033-001P	1.000	ILC16A	3/16/2018	18:27	JS
CCV	1.000	ILC16A	3/16/2018	18:31	JS
CCB	1.000	ILC16A	3/16/2018	18:35	JS
SL2045-001	1.000	ILC16A	3/16/2018	18:39	JS
SL2049-001	1.000	ILC16A	3/16/2018	18:43	JS
SL2049-004	1.000	ILC16A	3/16/2018	18:48	JS
SL2049-007	1.000	ILC16A	3/16/2018	18:53	JS
SL2082-001	1.000	ILC16A	3/16/2018	18:59	JS
SL2082-002	1.000	ILC16A	3/16/2018	19:03	JS
SL2082-003	1.000	ILC16A	3/16/2018	19:07	JS
SL2049-001	2.000	ILC16A	3/16/2018	19:12	JS
SL2049-004	2.000	ILC16A	3/16/2018	19:18	JS
SL2049-004	5.000	ILC16A	3/16/2018	19:23	JS
CCV	1.000	ILC16A	3/16/2018	19:27	JS
CCB	1.000	ILC16A	3/16/2018	19:31	JS
SL2049-007	2.000	ILC16A	3/16/2018	19:35	JS
SL2049-007	5.000	ILC16A	3/16/2018	19:40	JS
SL2082-003	2.000	ILC16A	3/16/2018	19:44	JS
CCV	1.000	ILC16A	3/16/2018	19:49	JS
CCB	1.000	ILC16A	3/16/2018	19:53	JS
PQL	1.000	ILC16A	3/16/2018	19:57	JS
ICSA	1.000	ILC16A	3/16/2018	20:01	JS
ICSAB	1.000	ILC16A	3/16/2018	20:06	JS
CCV	1.000	ILC16A	3/16/2018	20:11	JS
CCB	1.000	ILC16A	3/16/2018	20:15	JS

6020 QC Tune Report

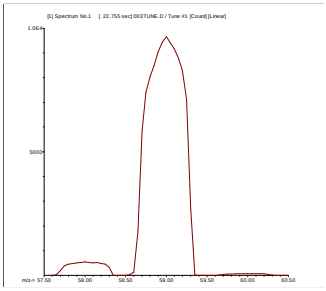
Data File: C:\ICPCHEM\1\DATA\JLC16A.B\003TUNE.D
Date Acquired: Mar 16 2018 02:11 pm
Acq. Method: TN6020E.M
Operator: JS
Sample Name: 6020 TUNE
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\TN6020E.M

RSD (%)

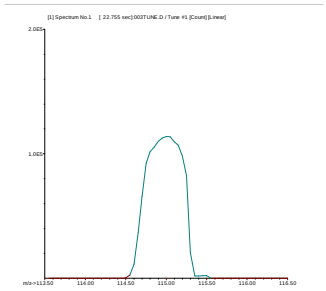
Element	Actual	Required	Flag
7 Li	1.57	5.00	
59 Co	0.82	5.00	
115 In	1.34	5.00	
205 Tl	2.26	5.00	



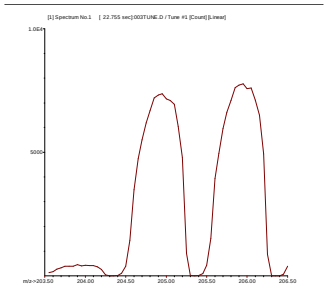
7 Li
Mass Calib.
Actual: 7.05
Required: 6.90 - 7.10
Flag:
Peak Width
Actual: 0.60
Required: 0.90
Flag:



59 Co
Mass Calib.
Actual: 59.00
Required: 58.90 - 59.10
Flag:
Peak Width
Actual: 0.65
Required: 0.90
Flag:



115 In
Mass Calib.
Actual: 115.00
Required: 114.90 - 115.10
Flag:
Peak Width
Actual: 0.65
Required: 0.90
Flag:



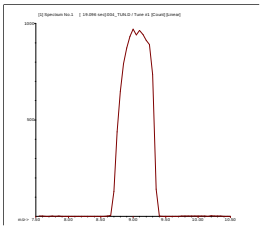
205 Tl
Mass Calib.
Actual: 204.95
Required: 204.90 - 205.10
Flag:
Peak Width
Actual: 0.65
Required: 0.90
Flag:

200.8 QC Tune Report

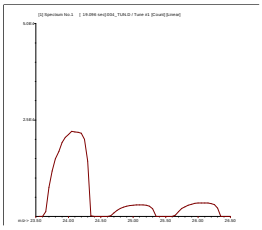
Data File: C:\ICPCHEM\1\DATA\JLC16A.B\004_TUN.D
Date Acquired: Mar 16 2018 02:14 pm
Acq. Method: TN200_8E.M
Operator: JS
Sample Name: 200.8 TUNE
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\TN200_8E.M

RSD (%)

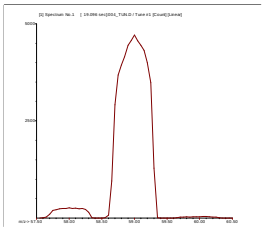
Element	Actual	Required	Flag
9 Be	1.97	5.00	
24 Mg	0.92	5.00	
59 Co	2.81	5.00	
115 In	1.16	5.00	
208 Pb	2.51	5.00	



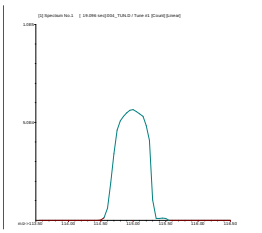
9 Be
Mass Calib.
Actual: 9.05
Required: 8.90 - 9.10
Flag:
Peak Width
Actual: 0.65
Required: 1.00
Flag:



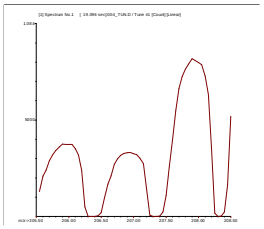
24 Mg
Mass Calib.
Actual: 24.10
Required: 23.90 - 24.10
Flag:
Peak Width
Actual: 0.65
Required: 1.00
Flag:



59 Co
Mass Calib.
Actual: 59.00
Required: 58.90 - 59.10
Flag:
Peak Width
Actual: 0.65
Required: 1.00
Flag:



115 In
Mass Calib.
Actual: 115.00
Required: 114.90 - 115.10
Flag:
Peak Width
Actual: 0.70
Required: 1.00
Flag:



208 Pb
Mass Calib.
Actual: 207.95
Required: 207.90 - 208.10
Flag:
Peak Width
Actual: 0.65
Required: 1.00
Flag:

Tune Result: Pass

Katahdin Analytical Services 4000132

Calibration Blank QC Report

Data File: C:\ICPCHEM\1\DATA\JLC16A.B\017CALB.I
Date Acquired: Mar 16 2018 03:00 pm
Operator: JS
Sample Name: Cal Blank
Misc Info:
Vial Number: 1203
Current Method: C:\ICPCHEM\1\METHODS\1PTCAL16.M
Calibration File: C:\ICPCHEM\1\CALIB\1PTCAL16.C
Last Cal Update: Mar 16 2018 03:02 pm
Sample Type: CalBlk
Total Dil Factor: 1.00

QC&ISTD Elements

Element		CPS Mean		SD	RSD(%)
6	Li	3533775.00	A	26260.00	0.74
9	Be	19.26	P	2.80	14.52
11	B	176.67	P	34.80	19.70
23	Na	35006.23	P	1316.00	3.76
25	Mg	93.34	P	11.55	12.37
27	Al	2012.00	P	192.50	9.57
28	Si	6278515.00	A	160100.00	2.55
29	Si	519651.31	P	11630.00	2.24
39	K	1201625.00	A	19700.00	1.64
43	Ca	325.97	P	63.19	19.39
44	Ca	12895.28	P	89.34	0.69
45	Sc	3253126.00	A	46110.00	1.42
51	V	2399.89	P	734.60	30.61
52	Cr	9388.77	P	151.70	1.62
53	Cr	12977.08	P	108.70	0.84
55	Mn	1526.79	P	46.31	3.03
56	Fe	1910401.00	A	9342.00	0.49
57	Fe	13975.97	P	501.50	3.59
59	Co	88.89	P	23.41	26.34
60	Ni	66.53	P	20.09	30.20
63	Cu	354.46	P	33.39	9.42
65	Cu	187.78	P	32.03	17.06
66	Zn	885.61	P	30.79	3.48
68	Zn	3524.98	P	39.78	1.13
72	Ge		P		
75	As	-135.30	P	188.20	139.10
82	Se	-29.76	P	11.96	40.19
88	Sr	81.49	P	44.91	55.11
89	Y	4442820.00	A	73030.00	1.64
98	Mo	45.37	P	8.08	17.82
107	Ag	43.33	P	10.00	23.08
109	Ag	20.00	P	5.77	28.87
111	Cd	1073.95	P	32.99	3.07
114	Cd	0.65	P	6.41	988.59
115	In	3904665.00	A	62260.00	1.59
118	Sn	355.57	P	10.18	2.86
120	Sn	544.47	P	23.65	4.34
121	Sb	1092.30	P	68.35	6.26
123	Sb	812.27	P	60.59	7.46
135	Ba	16.67	P	6.67	40.00
137	Ba	27.78	P	6.94	24.98
159	Tb	4762571.00	A	51890.00	1.09
182	W	160.01	P	23.33	14.58
203	Tl	11.11	P	6.94	62.45
205	Tl	35.56	P	3.85	10.83
208	Pb	302.24	P	26.94	8.91
209	Bi	2744185.00	A	43110.00	1.57
232	Th	8.89	P	1.93	21.66
238	U	16.67	P	11.55	69.30

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\JLC16A.B\018CALI.D\018CALI.D#
Date Acquired: Mar 16 2018 03:03 pm
Operator: JS
Sample Name: Cal Std 6
Misc Info:
Vial Number: 1101
Current Method: C:\ICPCHEM\1\METHODS\1PTCAL16.M
Calibration File: C:\ICPCHEM\1\CALIB\1PTCAL16.C
Last Cal Update: Mar 16 2018 03:02 pm
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	RSD(%)
6 Li	3938998.00	A	75060.00	1.91
9 Be	134745.09	P	2133.00	1.58
11 B	84367.51	P	1461.00	1.73
23 Na	89409592.00	A	1075000.00	1.20
25 Mg	7986813.00	A	96850.00	1.21
27 Al	7887140.00	A	41250.00	0.52
28 Si	10736310.00	A	125700.00	1.17
29 Si	914804.63	A	26360.00	2.88
39 K	100143800.00	A	1198000.00	1.20
43 Ca	183395.50	P	2158.00	1.18
44 Ca	2948726.00	A	15880.00	0.54
45 Sc	3647740.00	A	29850.00	0.82
51 V	662739.19	P	2897.00	0.44
52 Cr	576639.31	P	5290.00	0.92
53 Cr	76894.41	P	1916.00	2.49
55 Mn	715516.50	P	7821.00	1.09
56 Fe	117906600.00	A	576500.00	0.49
57 Fe	2838419.00	A	35280.00	1.24
59 Co	629230.50	P	8961.00	1.42
60 Ni	138960.30	P	1206.00	0.87
63 Cu	323014.69	P	5738.00	1.78
65 Cu	150231.91	P	3013.00	2.01
66 Zn	74044.25	P	1337.00	1.81
68 Zn	55387.93	P	1027.00	1.85
72 Ge		P		
75 As	72208.77	P	526.80	0.73
82 Se	5225.44	P	27.83	0.53
88 Sr	738725.19	A	11750.00	1.59
89 Y	4893734.00	A	51720.00	1.06
98 Mo	238011.50	P	3261.00	1.37
107 Ag	368685.91	P	6140.00	1.67
109 Ag	347435.91	P	5261.00	1.51
111 Cd	70246.83	P	918.20	1.31
114 Cd	151705.91	P	2233.00	1.47
115 In	4294708.00	A	53410.00	1.24
118 Sn	206649.50	P	1877.00	0.91
120 Sn	283981.50	P	4170.00	1.47
121 Sb	254208.70	P	3100.00	1.22
123 Sb	192275.00	P	1767.00	0.92
135 Ba	57150.46	P	1111.00	1.94
137 Ba	99135.94	P	2061.00	2.08
159 Tb	5278230.00	A	19280.00	0.37
182 W	234297.80	P	1976.00	0.84
203 Tl	204628.80	P	2656.00	1.30
205 Tl	488983.09	P	7561.00	1.55
208 Pb	675661.81	P	8650.00	1.28
209 Bi	2940602.00	A	28010.00	0.95
232 Th	777046.19	P	10670.00	1.37
238 U	769160.69	P	7208.00	0.94

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	3938998.30	1.91	3533775.30	111.5	79.5 - 120.4	
45 Sc	3647740.30	0.82	3253126.50	112.1	79.5 - 120.4	
89 Y	4893733.50	1.06	4442820.00	110.1	79.5 - 120.4	
159 Tb	5278230.50	0.37	4762571.00	110.8	79.5 - 120.4	
209 Bi	2940602.30	0.95	2744185.50	107.2	79.5 - 120.4	

ISTD Ref File : C:\ICPCHEM\1\DATA\JLC16A.B\017CALB.D\017CALB.D#

--- :Element Failures --- :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

Katahdin Analytical Services 4000134