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ANALYTICAL REPORT

Job Number: 280-123009-1

Job Description: Cornhusker (CHAAP)

For:
Brice Environmental Services, Corp
3800 Centerpoint Drive, Suite 520
Anchorage, AK 99503

Attention: Scott Mann



Approved for release.
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Manager of Project Management
5/30/2019 5:56 AM

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The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is 4025.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

HPLC/IC

Qualifier	Qualifier Description
D	The reported value is from a dilution.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

CASE NARRATIVE

Client: Brice Environmental Services, Corp

Project: Cornhusker (CHAAP)

Report Number: 280-123009-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 4/25/2019 8:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 0.2º C and 0.2º C.

VOLATILE ORGANIC COMPOUNDS (GC/MS)
Samples SP-S2 (280-123011-1), SP-E1 (280-123011-2), SP-S22 (280-123011-4) and TB-1048 (280-123011-5) were analyzed for volatile organic compounds (GC/MS) in accordance with 8260B. The samples were analyzed on 05/07/2019.

The following compound was outside control limits in the continuing calibration verification (CCV) associated with batch 280-457279: Bromoform @ -25.5%D. Associated results are flagged Q. The failing compound is considered a poor performer and is allowed up to 30%D. Associated samples: SP-S2 (280-123011-1), SP-E1 (280-123011-2), SP-S22 (280-123011-4), TB-1048 (280-123011-5) and (CCV 280-457279/2)

The sample was collected in properly preserved vials for analysis of volatile organic compounds (VOCs). However, when verified by the laboratory, the pH was greater than 2 and the following samples were analyzed after 7 days from sampling: SP-S2 (280-123011-1) and SP-E1 (280-123011-2).

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

EXPLOSIVES
Samples SP-S2 (280-123009-1), SP-S6 (280-123009-2), SP-S8 (280-123009-3), SP-E1 (280-123009-4) and SP-S22 (280-123009-5) were analyzed for Explosives in accordance with SW846 8330A. The samples were prepared on 04/29/2019 and analyzed on 05/03/2019 and 05/24/2019.

Samples SP-S2 (280-123009-1)[5X] and SP-S22 (280-123009-5)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP/MS)
Samples SP-E1 (280-123011-2) and SP-E11 (280-123011-3) were analyzed for total metals (ICP/MS) in accordance with 6020A. The samples were prepared on 05/06/2019 and analyzed on 05/07/2019.

The interference check standard solution (ICSA) associated with batch 280-457404 had results for one or more elements at a level greater than the limit of detection (LOD). The closing ICSA result was > LOD for Co. Associated results are flagged Q. We believe that this element is a trace impurity in the CPI ICSA standard. These results are not indicative of a matrix interference.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL SUSPENDED SOLIDS
Samples SP-S2 (280-123011-1) and SP-S22 (280-123011-4) were analyzed for total suspended solids in accordance with SM20 2540D. The samples were analyzed on 04/26/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

CORROSIVITY (PH)

Samples SP-S2 (280-123011-1), SP-E1 (280-123011-2) and SP-S22 (280-123011-4) were analyzed for Corrosivity (pH) in accordance with EPA SW-846 9040C. The samples were analyzed on 05/03/2019 and 05/06/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Brice Environmental Services, Corp
Project/Site: Cornhusker (CHAAP)

Job ID: 280-123009-1

Client Sample ID: SP-S2 — Lab Sample ID: 280-123009-1

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
1,3-Dinitrobenzene	0.058	J	0.15	0.10	0.051	ug/L	1		8330A	Total/NA
2,4,6-Trinitrotoluene	6.7		0.15	0.10	0.051	ug/L	1		8330A	Total/NA
2-Amino-4,6-dinitrotoluene	1.6		0.15	0.10	0.030	ug/L	1		8330A	Total/NA
4-Amino-2,6-dinitrotoluene	1.5		0.15	0.10	0.051	ug/L	1		8330A	Total/NA
HMX	0.47	M	0.15	0.10	0.036	ug/L	1		8330A	Total/NA
RDX	0.60	M	0.15	0.10	0.036	ug/L	1		8330A	Total/NA
1,3,5-Trinitrobenzene - DL	20	D M	0.76	0.51	0.16	ug/L	5		8330A	Total/NA

Client Sample ID: SP-S6 — Lab Sample ID: 280-123009-2

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
1,3,5-Trinitrobenzene	5.1	M	0.15	0.098	0.030	ug/L	1		8330A	Total/NA
2,4,6-Trinitrotoluene	1.0		0.15	0.098	0.049	ug/L	1		8330A	Total/NA
2-Amino-4,6-dinitrotoluene	0.24		0.15	0.098	0.029	ug/L	1		8330A	Total/NA
4-Amino-2,6-dinitrotoluene	0.27		0.15	0.098	0.049	ug/L	1		8330A	Total/NA
HMX	0.21	M	0.15	0.098	0.035	ug/L	1		8330A	Total/NA
RDX	0.37	M	0.15	0.098	0.035	ug/L	1		8330A	Total/NA

Client Sample ID: SP-S8 — Lab Sample ID: 280-123009-3

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
1,3,5-Trinitrobenzene	0.49	M	0.15	0.099	0.031	ug/L	1		8330A	Total/NA
HMX	0.053	J M	0.15	0.099	0.036	ug/L	1		8330A	Total/NA
RDX	0.16	M	0.15	0.099	0.036	ug/L	1		8330A	Total/NA

Client Sample ID: SP-E1 — Lab Sample ID: 280-123009-4

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
1,3,5-Trinitrobenzene	0.41	M	0.15	0.099	0.031	ug/L	1		8330A	Total/NA
HMX	0.044	J M	0.15	0.099	0.036	ug/L	1		8330A	Total/NA
RDX	0.15	M	0.15	0.099	0.036	ug/L	1		8330A	Total/NA

Client Sample ID: SP-S22 — Lab Sample ID: 280-123009-5

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
2,4,6-Trinitrotoluene	7.4		0.15	0.10	0.050	ug/L	1		8330A	Total/NA
2-Amino-4,6-dinitrotoluene	1.8		0.15	0.10	0.030	ug/L	1		8330A	Total/NA
4-Amino-2,6-dinitrotoluene	1.6		0.15	0.10	0.050	ug/L	1		8330A	Total/NA
HMX	0.49	M	0.15	0.10	0.036	ug/L	1		8330A	Total/NA
RDX	0.61	M	0.15	0.10	0.036	ug/L	1		8330A	Total/NA
1,3,5-Trinitrobenzene - DL	20	D	0.76	0.50	0.16	ug/L	5		8330A	Total/NA

Client Sample ID: SP-S2 — Lab Sample ID: 280-123011-1

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	0.26	J	3.0	0.40	0.18	ug/L	1		8260B	Total/NA
pH adj. to 25 deg C	7.9	HF	0.1	0.1	0.1	SU	1		9040C	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Brice Environmental Services, Corp
Project/Site: Cornhusker (CHAAP)

Job ID: 280-123009-1

Client Sample ID: SP-S2 (Continued) — Lab Sample ID: 280-123011-1

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Solids	1.6	J	4.0	2.8	1.1	mg/L	1		SM 2540D	Total/NA

Client Sample ID: SP-E1 — Lab Sample ID: 280-123011-2

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	0.58	J	3.0	0.40	0.18	ug/L	1		8260B	Total/NA
Selenium	1.2	J	5.0	1.0	0.37	ug/L	1		6020A	Total/NA
pH adj. to 25 deg C	7.3	HF	0.1	0.1	0.1	SU	1		9040C	Total/NA

Client Sample ID: SP-E11 — Lab Sample ID: 280-123011-3

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Selenium	1.1	J	5.0	1.0	0.37	ug/L	1		6020A	Total/NA

Client Sample ID: SP-S22 — Lab Sample ID: 280-123011-4

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	0.25	J	3.0	0.40	0.18	ug/L	1		8260B	Total/NA
pH adj. to 25 deg C	7.9	HF	0.1	0.1	0.1	SU	1		9040C	Total/NA

Client Sample ID: TB-1048 — Lab Sample ID: 280-123011-5

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: SP-S2
Lab Sample ID: 280-123009-1
Date Collected: 04/24/19 08:40
Matrix: Water
Date Received: 04/25/19 08:40

Method: 8330A - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3-Dinitrobenzene	**0.058**	**J**	0.15	0.10	0.051	ug/L		05/03/19 05:46	1
2,4,6-Trinitrotoluene	**6.7**		0.15	0.10	0.051	ug/L		05/03/19 05:46	1
2,4-Dinitrotoluene	0.10	U	0.13	0.10	0.051	ug/L		05/03/19 05:46	1
2,6-Dinitrotoluene	0.10	U	0.13	0.10	0.051	ug/L		05/03/19 05:46	1
2-Amino-4,6-dinitrotoluene	**1.6**		0.15	0.10	0.030	ug/L		05/03/19 05:46	1
2-Nitrotoluene	0.20	U	0.51	0.20	0.089	ug/L		05/03/19 05:46	1
3-Nitrotoluene	0.20	U	0.51	0.20	0.058	ug/L		05/03/19 05:46	1
4-Amino-2,6-dinitrotoluene	**1.5**		0.15	0.10	0.051	ug/L		05/03/19 05:46	1
4-Nitrotoluene	0.20	U	0.51	0.20	0.089	ug/L		05/03/19 05:46	1
HMX	**0.47**	**M**	0.15	0.10	0.036	ug/L		05/03/19 05:46	1
MNX	0.10	U	0.51	0.10	0.028	ug/L		05/03/19 05:46	1
Nitrobenzene	0.10	U	0.15	0.10	0.051	ug/L		05/03/19 05:46	1
RDX	**0.60**	**M**	0.15	0.10	0.036	ug/L		05/03/19 05:46	1
Tetryl	0.10	U	0.15	0.10	0.051	ug/L		05/03/19 05:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*89*		*79 - 111*	*04/29/19 06:59*	*05/03/19 05:46*	*1*
3,4-Dinitrotoluene	*84*		*79 - 111*	*04/29/19 06:59*	*05/24/19 06:24*	*1*

Method: 8330A - Nitroaromatics and Nitramines (HPLC) - DL

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	**20**	**D M**	0.76	0.51	0.16	ug/L		05/24/19 14:35	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*92*		*79 - 111*	*04/29/19 06:59*	*05/24/19 11:12*	*5*
3,4-Dinitrotoluene	*94*	*M*	*79 - 111*	*04/29/19 06:59*	*05/24/19 14:35*	*5*

Client Sample ID: SP-S6
Lab Sample ID: 280-123009-2
Date Collected: 04/24/19 08:45
Matrix: Water
Date Received: 04/25/19 08:40

Method: 8330A - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	**5.1**	**M**	0.15	0.098	0.030	ug/L		05/03/19 06:40	1
1,3-Dinitrobenzene	0.098	U	0.15	0.098	0.049	ug/L		05/03/19 06:40	1
2,4,6-Trinitrotoluene	**1.0**		0.15	0.098	0.049	ug/L		05/03/19 06:40	1
2,4-Dinitrotoluene	0.098	U	0.13	0.098	0.049	ug/L		05/03/19 06:40	1
2,6-Dinitrotoluene	0.098	U	0.13	0.098	0.049	ug/L		05/03/19 06:40	1
2-Amino-4,6-dinitrotoluene	**0.24**		0.15	0.098	0.029	ug/L		05/03/19 06:40	1
2-Nitrotoluene	0.20	U	0.49	0.20	0.086	ug/L		05/03/19 06:40	1
3-Nitrotoluene	0.20	U	0.49	0.20	0.056	ug/L		05/03/19 06:40	1
4-Amino-2,6-dinitrotoluene	**0.27**		0.15	0.098	0.049	ug/L		05/03/19 06:40	1
4-Nitrotoluene	0.20	U	0.49	0.20	0.086	ug/L		05/03/19 06:40	1
HMX	**0.21**	**M**	0.15	0.098	0.035	ug/L		05/03/19 06:40	1
MNX	0.098	U M	0.49	0.098	0.027	ug/L		05/03/19 06:40	1
Nitrobenzene	0.098	U M	0.15	0.098	0.049	ug/L		05/03/19 06:40	1
RDX	**0.37**	**M**	0.15	0.098	0.035	ug/L		05/03/19 06:40	1
Tetryl	0.098	U	0.15	0.098	0.049	ug/L		05/03/19 06:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*94*		*79 - 111*	*04/29/19 06:59*	*05/03/19 06:40*	*1*

Client Sample ID: SP-S6
Lab Sample ID: 280-123009-2

Date Collected: 04/24/19 08:45
Matrix: Water
Date Received: 04/25/19 08:40

Method: 8330A - Nitroaromatics and Nitramines (HPLC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*91*		*79 - 111*	*04/29/19 06:59*	*05/24/19 07:21*	*1*

Client Sample ID: SP-S8
Lab Sample ID: 280-123009-3

Date Collected: 04/24/19 08:48
Matrix: Water
Date Received: 04/25/19 08:40

Method: 8330A - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	**0.49**	**M**	0.15	0.099	0.031	ug/L		05/03/19 09:21	1
1,3-Dinitrobenzene	0.099	U	0.15	0.099	0.050	ug/L		05/03/19 09:21	1
2,4,6-Trinitrotoluene	0.099	U M	0.15	0.099	0.050	ug/L		05/03/19 09:21	1
2,4-Dinitrotoluene	0.099	U	0.13	0.099	0.050	ug/L		05/03/19 09:21	1
2,6-Dinitrotoluene	0.099	U	0.13	0.099	0.050	ug/L		05/03/19 09:21	1
2-Amino-4,6-dinitrotoluene	0.099	U	0.15	0.099	0.030	ug/L		05/03/19 09:21	1
2-Nitrotoluene	0.20	U	0.50	0.20	0.087	ug/L		05/03/19 09:21	1
3-Nitrotoluene	0.20	U	0.50	0.20	0.057	ug/L		05/03/19 09:21	1
4-Amino-2,6-dinitrotoluene	0.099	U	0.15	0.099	0.050	ug/L		05/03/19 09:21	1
4-Nitrotoluene	0.20	U	0.50	0.20	0.087	ug/L		05/03/19 09:21	1
HMX	**0.053**	**J M**	0.15	0.099	0.036	ug/L		05/03/19 09:21	1
MNX	0.099	U M	0.50	0.099	0.028	ug/L		05/03/19 09:21	1
Nitrobenzene	0.099	U	0.15	0.099	0.050	ug/L		05/03/19 09:21	1
RDX	**0.16**	**M**	0.15	0.099	0.036	ug/L		05/03/19 09:21	1
Tetryl	0.099	U	0.15	0.099	0.050	ug/L		05/03/19 09:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*97*		*79 - 111*	*04/29/19 06:59*	*05/03/19 09:21*	*1*
3,4-Dinitrotoluene	*89*	*M*	*79 - 111*	*04/29/19 06:59*	*05/24/19 08:19*	*1*

Client Sample ID: SP-E1
Lab Sample ID: 280-123009-4

Date Collected: 04/24/19 08:51
Matrix: Water
Date Received: 04/25/19 08:40

Method: 8330A - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	**0.41**	**M**	0.15	0.099	0.031	ug/L		05/03/19 10:14	1
1,3-Dinitrobenzene	0.099	U	0.15	0.099	0.050	ug/L		05/03/19 10:14	1
2,4,6-Trinitrotoluene	0.099	U M	0.15	0.099	0.050	ug/L		05/03/19 10:14	1
2,4-Dinitrotoluene	0.099	U	0.13	0.099	0.050	ug/L		05/03/19 10:14	1
2,6-Dinitrotoluene	0.099	U	0.13	0.099	0.050	ug/L		05/03/19 10:14	1
2-Amino-4,6-dinitrotoluene	0.099	U	0.15	0.099	0.030	ug/L		05/03/19 10:14	1
2-Nitrotoluene	0.20	U	0.50	0.20	0.087	ug/L		05/03/19 10:14	1
3-Nitrotoluene	0.20	U	0.50	0.20	0.057	ug/L		05/03/19 10:14	1
4-Amino-2,6-dinitrotoluene	0.099	U	0.15	0.099	0.050	ug/L		05/03/19 10:14	1
4-Nitrotoluene	0.20	U	0.50	0.20	0.087	ug/L		05/03/19 10:14	1
HMX	**0.044**	**J M**	0.15	0.099	0.036	ug/L		05/03/19 10:14	1
MNX	0.099	U	0.50	0.099	0.028	ug/L		05/03/19 10:14	1
Nitrobenzene	0.099	U	0.15	0.099	0.050	ug/L		05/03/19 10:14	1
RDX	**0.15**	**M**	0.15	0.099	0.036	ug/L		05/03/19 10:14	1
Tetryl	0.099	U	0.15	0.099	0.050	ug/L		05/03/19 10:14	1

Client Sample ID: SP-E1
Lab Sample ID: 280-123009-4
Date Collected: 04/24/19 08:51
Matrix: Water
Date Received: 04/25/19 08:40

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
3,4-Dinitrotoluene	94		79 - 111	04/29/19 06:59	05/03/19 10:14	1
3,4-Dinitrotoluene	86	M	79 - 111	04/29/19 06:59	05/24/19 09:16	1

Client Sample ID: SP-S22
Lab Sample ID: 280-123009-5
Date Collected: 04/24/19 08:43
Matrix: Water
Date Received: 04/25/19 08:40

Method: 8330A - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3-Dinitrobenzene	0.10	U M	0.15	0.10	0.050	ug/L		05/03/19 11:08	1
2,4,6-Trinitrotoluene	**7.4**		0.15	0.10	0.050	ug/L		05/03/19 11:08	1
2,4-Dinitrotoluene	0.10	U	0.13	0.10	0.050	ug/L		05/03/19 11:08	1
2,6-Dinitrotoluene	0.10	U M	0.13	0.10	0.050	ug/L		05/03/19 11:08	1
2-Amino-4,6-dinitrotoluene	**1.8**		0.15	0.10	0.030	ug/L		05/03/19 11:08	1
2-Nitrotoluene	0.20	U	0.50	0.20	0.089	ug/L		05/03/19 11:08	1
3-Nitrotoluene	0.20	U	0.50	0.20	0.057	ug/L		05/03/19 11:08	1
4-Amino-2,6-dinitrotoluene	**1.6**		0.15	0.10	0.050	ug/L		05/03/19 11:08	1
4-Nitrotoluene	0.20	U	0.50	0.20	0.089	ug/L		05/03/19 11:08	1
HMX	**0.49**	**M**	0.15	0.10	0.036	ug/L		05/03/19 11:08	1
MNX	0.10	U	0.50	0.10	0.028	ug/L		05/03/19 11:08	1
Nitrobenzene	0.10	U	0.15	0.10	0.050	ug/L		05/03/19 11:08	1
RDX	**0.61**	**M**	0.15	0.10	0.036	ug/L		05/03/19 11:08	1
Tetryl	0.10	U	0.15	0.10	0.050	ug/L		05/03/19 11:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
3,4-Dinitrotoluene	99		79 - 111	04/29/19 06:59	05/03/19 11:08	1
3,4-Dinitrotoluene	86		79 - 111	04/29/19 06:59	05/24/19 10:14	1

Method: 8330A - Nitroaromatics and Nitramines (HPLC) - DL

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	**20**	**D**	0.76	0.50	0.16	ug/L		05/24/19 15:28	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
3,4-Dinitrotoluene	93		79 - 111	04/29/19 06:59	05/24/19 12:09	5
3,4-Dinitrotoluene	89	M	79 - 111	04/29/19 06:59	05/24/19 15:28	5

Client Sample ID: SP-S2
Lab Sample ID: 280-123011-1
Date Collected: 04/24/19 08:40
Matrix: Water
Date Received: 04/25/19 08:40

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16	ug/L		05/07/19 15:02	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21	ug/L		05/07/19 15:02	1
1,1,2-Trichloro-1,2,2-trifluoroethane	**0.26**	**J**	3.0	0.40	0.18	ug/L		05/07/19 15:02	1
1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27	ug/L		05/07/19 15:02	1
1,1-Dichloroethane	0.80	U	1.0	0.80	0.22	ug/L		05/07/19 15:02	1
1,1-Dichloroethene	0.80	U	1.0	0.80	0.23	ug/L		05/07/19 15:02	1
1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.21	ug/L		05/07/19 15:02	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.21	ug/L		05/07/19 15:02	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.47	ug/L		05/07/19 15:02	1
1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.15	ug/L		05/07/19 15:02	1

Client Sample ID: SP-S2

Date Collected: 04/24/19 08:40
Date Received: 04/25/19 08:40

Lab Sample ID: 280-123011-1

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,2-Dichloroethane	0.40	U	1.0	0.40	0.13	ug/L		05/07/19 15:02	1
1,2-Dichloropropane	0.40	U	1.0	0.40	0.18	ug/L		05/07/19 15:02	1
1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.13	ug/L		05/07/19 15:02	1
1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16	ug/L		05/07/19 15:02	1
2-Butanone (MEK)	4.0	U	6.0	4.0	2.0	ug/L		05/07/19 15:02	1
2-Hexanone	4.0	U	5.0	4.0	1.7	ug/L		05/07/19 15:02	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98	ug/L		05/07/19 15:02	1
Acetone	6.4	U	10	6.4	1.9	ug/L		05/07/19 15:02	1
Benzene	0.40	U	1.0	0.40	0.16	ug/L		05/07/19 15:02	1
Bromochloromethane	0.20	U	1.0	0.20	0.10	ug/L		05/07/19 15:02	1
Bromodichloromethane	0.40	U	1.0	0.40	0.17	ug/L		05/07/19 15:02	1
Bromoform	1.0	U Q	1.0	1.0	0.46	ug/L		05/07/19 15:02	1
Bromomethane	0.80	U	2.0	0.80	0.21	ug/L		05/07/19 15:02	1
Carbon disulfide	0.80	U	2.0	0.80	0.17	ug/L		05/07/19 15:02	1
Carbon tetrachloride	0.40	U	2.0	0.40	0.19	ug/L		05/07/19 15:02	1
Chlorobenzene	0.40	U	1.0	0.40	0.17	ug/L		05/07/19 15:02	1
Chloroethane	1.6	U	2.0	1.6	0.41	ug/L		05/07/19 15:02	1
Chloroform	0.40	U	1.0	0.40	0.16	ug/L		05/07/19 15:02	1
Chloromethane	0.80	U	2.0	0.80	0.30	ug/L		05/07/19 15:02	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15	ug/L		05/07/19 15:02	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16	ug/L		05/07/19 15:02	1
Cyclohexane	0.80	U	2.0	0.80	0.28	ug/L		05/07/19 15:02	1
Dibromochloromethane	0.40	U	1.0	0.40	0.17	ug/L		05/07/19 15:02	1
Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31	ug/L		05/07/19 15:02	1
Ethylbenzene	0.40	U	1.0	0.40	0.16	ug/L		05/07/19 15:02	1
Ethylene Dibromide	0.40	U	1.0	0.40	0.18	ug/L		05/07/19 15:02	1
Isopropylbenzene	0.40	U	1.0	0.40	0.19	ug/L		05/07/19 15:02	1
Methyl acetate	4.0	U	5.0	4.0	1.6	ug/L		05/07/19 15:02	1
Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25	ug/L		05/07/19 15:02	1
Methylcyclohexane	0.40	U	2.0	0.40	0.10	ug/L		05/07/19 15:02	1
Methylene Chloride	2.0	U	5.0	2.0	0.94	ug/L		05/07/19 15:02	1
Styrene	0.80	U	1.0	0.80	0.36	ug/L		05/07/19 15:02	1
Tetrachloroethene	0.40	U	1.0	0.40	0.20	ug/L		05/07/19 15:02	1
Toluene	0.40	U	1.0	0.40	0.17	ug/L		05/07/19 15:02	1
trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15	ug/L		05/07/19 15:02	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19	ug/L		05/07/19 15:02	1
Trichloroethene	0.40	U	1.0	0.40	0.16	ug/L		05/07/19 15:02	1
Trichlorofluoromethane	0.80	U	2.0	0.80	0.29	ug/L		05/07/19 15:02	1
Vinyl chloride	0.20	U	1.5	0.20	0.10	ug/L		05/07/19 15:02	1
Xylenes, Total	0.80	U	1.0	0.80	0.19	ug/L		05/07/19 15:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*81 - 118*		*05/07/19 15:02*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*05/07/19 15:02*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 119*		*05/07/19 15:02*	*1*
Toluene-d8 (Surr)	*99*		*89 - 112*		*05/07/19 15:02*	*1*

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
pH adj. to 25 deg C	**7.9**	**HF**	0.1	0.1	0.1	SU		05/03/19 17:58	1

Client Sample ID: SP-S2

Date Collected: 04/24/19 08:40
Date Received: 04/25/19 08:40

Lab Sample ID: 280-123011-1

Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Suspended Solids	**1.6**	**J**	4.0	2.8	1.1	mg/L		04/26/19 11:03	1

Client Sample ID: SP-E1

Date Collected: 04/24/19 08:51
Date Received: 04/25/19 08:40

Lab Sample ID: 280-123011-2

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16	ug/L		05/07/19 15:23	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21	ug/L		05/07/19 15:23	1
1,1,2-Trichloro-1,2,2-trifluoroethane	**0.58**	**J**	3.0	0.40	0.18	ug/L		05/07/19 15:23	1
1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27	ug/L		05/07/19 15:23	1
1,1-Dichloroethane	0.80	U	1.0	0.80	0.22	ug/L		05/07/19 15:23	1
1,1-Dichloroethene	0.80	U	1.0	0.80	0.23	ug/L		05/07/19 15:23	1
1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.21	ug/L		05/07/19 15:23	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.21	ug/L		05/07/19 15:23	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.47	ug/L		05/07/19 15:23	1
1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.15	ug/L		05/07/19 15:23	1
1,2-Dichloroethane	0.40	U	1.0	0.40	0.13	ug/L		05/07/19 15:23	1
1,2-Dichloropropane	0.40	U	1.0	0.40	0.18	ug/L		05/07/19 15:23	1
1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.13	ug/L		05/07/19 15:23	1
1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16	ug/L		05/07/19 15:23	1
2-Butanone (MEK)	4.0	U	6.0	4.0	2.0	ug/L		05/07/19 15:23	1
2-Hexanone	4.0	U	5.0	4.0	1.7	ug/L		05/07/19 15:23	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98	ug/L		05/07/19 15:23	1
Acetone	6.4	U	10	6.4	1.9	ug/L		05/07/19 15:23	1
Benzene	0.40	U	1.0	0.40	0.16	ug/L		05/07/19 15:23	1
Bromochloromethane	0.20	U	1.0	0.20	0.10	ug/L		05/07/19 15:23	1
Bromodichloromethane	0.40	U	1.0	0.40	0.17	ug/L		05/07/19 15:23	1
Bromoform	1.0	U Q	1.0	1.0	0.46	ug/L		05/07/19 15:23	1
Bromomethane	0.80	U	2.0	0.80	0.21	ug/L		05/07/19 15:23	1
Carbon disulfide	0.80	U	2.0	0.80	0.17	ug/L		05/07/19 15:23	1
Carbon tetrachloride	0.40	U	2.0	0.40	0.19	ug/L		05/07/19 15:23	1
Chlorobenzene	0.40	U	1.0	0.40	0.17	ug/L		05/07/19 15:23	1
Chloroethane	1.6	U	2.0	1.6	0.41	ug/L		05/07/19 15:23	1
Chloroform	0.40	U	1.0	0.40	0.16	ug/L		05/07/19 15:23	1
Chloromethane	0.80	U	2.0	0.80	0.30	ug/L		05/07/19 15:23	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15	ug/L		05/07/19 15:23	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16	ug/L		05/07/19 15:23	1
Cyclohexane	0.80	U	2.0	0.80	0.28	ug/L		05/07/19 15:23	1
Dibromochloromethane	0.40	U	1.0	0.40	0.17	ug/L		05/07/19 15:23	1
Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31	ug/L		05/07/19 15:23	1
Ethylbenzene	0.40	U	1.0	0.40	0.16	ug/L		05/07/19 15:23	1
Ethylene Dibromide	0.40	U	1.0	0.40	0.18	ug/L		05/07/19 15:23	1
Isopropylbenzene	0.40	U	1.0	0.40	0.19	ug/L		05/07/19 15:23	1
Methyl acetate	4.0	U	5.0	4.0	1.6	ug/L		05/07/19 15:23	1
Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25	ug/L		05/07/19 15:23	1
Methylcyclohexane	0.40	U	2.0	0.40	0.10	ug/L		05/07/19 15:23	1
Methylene Chloride	2.0	U	5.0	2.0	0.94	ug/L		05/07/19 15:23	1
Styrene	0.80	U	1.0	0.80	0.36	ug/L		05/07/19 15:23	1

Client Sample ID: SP-E1

Date Collected: 04/24/19 08:51
Date Received: 04/25/19 08:40

Lab Sample ID: 280-123011-2

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Tetrachloroethene	0.40	U	1.0	0.40	0.20	ug/L		05/07/19 15:23	1
Toluene	0.40	U	1.0	0.40	0.17	ug/L		05/07/19 15:23	1
trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15	ug/L		05/07/19 15:23	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19	ug/L		05/07/19 15:23	1
Trichloroethene	0.40	U	1.0	0.40	0.16	ug/L		05/07/19 15:23	1
Trichlorofluoromethane	0.80	U	2.0	0.80	0.29	ug/L		05/07/19 15:23	1
Vinyl chloride	0.20	U	1.5	0.20	0.10	ug/L		05/07/19 15:23	1
Xylenes, Total	0.80	U	1.0	0.80	0.19	ug/L		05/07/19 15:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*81 - 118*		*05/07/19 15:23*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*05/07/19 15:23*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 119*		*05/07/19 15:23*	*1*
Toluene-d8 (Surr)	*98*		*89 - 112*		*05/07/19 15:23*	*1*

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Selenium	**1.2**	**J**	5.0	1.0	0.37	ug/L		05/07/19 14:24	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
pH adj. to 25 deg C	**7.3**	**HF**	0.1	0.1	0.1	SU		05/03/19 18:03	1

Client Sample ID: SP-E11

Date Collected: 04/24/19 08:51
Date Received: 04/25/19 08:40

Lab Sample ID: 280-123011-3

Matrix: Water

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Selenium	**1.1**	**J**	5.0	1.0	0.37	ug/L		05/07/19 14:28	1

Client Sample ID: SP-S22

Date Collected: 04/24/19 08:43
Date Received: 04/25/19 08:40

Lab Sample ID: 280-123011-4

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16	ug/L		05/07/19 15:45	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21	ug/L		05/07/19 15:45	1
1,1,2-Trichloro-1,2,2-trifluoroethane	**0.25**	**J**	3.0	0.40	0.18	ug/L		05/07/19 15:45	1
1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27	ug/L		05/07/19 15:45	1
1,1-Dichloroethane	0.80	U	1.0	0.80	0.22	ug/L		05/07/19 15:45	1
1,1-Dichloroethene	0.80	U	1.0	0.80	0.23	ug/L		05/07/19 15:45	1
1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.21	ug/L		05/07/19 15:45	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.21	ug/L		05/07/19 15:45	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.47	ug/L		05/07/19 15:45	1
1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.15	ug/L		05/07/19 15:45	1
1,2-Dichloroethane	0.40	U	1.0	0.40	0.13	ug/L		05/07/19 15:45	1
1,2-Dichloropropane	0.40	U	1.0	0.40	0.18	ug/L		05/07/19 15:45	1
1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.13	ug/L		05/07/19 15:45	1
1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16	ug/L		05/07/19 15:45	1

Client Sample ID: SP-S22

Date Collected: 04/24/19 08:43
Date Received: 04/25/19 08:40

Lab Sample ID: 280-123011-4

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
2-Butanone (MEK)	4.0	U	6.0	4.0	2.0	ug/L		05/07/19 15:45	1
2-Hexanone	4.0	U	5.0	4.0	1.7	ug/L		05/07/19 15:45	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98	ug/L		05/07/19 15:45	1
Acetone	6.4	U	10	6.4	1.9	ug/L		05/07/19 15:45	1
Benzene	0.40	U	1.0	0.40	0.16	ug/L		05/07/19 15:45	1
Bromochloromethane	0.20	U	1.0	0.20	0.10	ug/L		05/07/19 15:45	1
Bromodichloromethane	0.40	U	1.0	0.40	0.17	ug/L		05/07/19 15:45	1
Bromoform	1.0	U Q	1.0	1.0	0.46	ug/L		05/07/19 15:45	1
Bromomethane	0.80	U	2.0	0.80	0.21	ug/L		05/07/19 15:45	1
Carbon disulfide	0.80	U	2.0	0.80	0.17	ug/L		05/07/19 15:45	1
Carbon tetrachloride	0.40	U	2.0	0.40	0.19	ug/L		05/07/19 15:45	1
Chlorobenzene	0.40	U	1.0	0.40	0.17	ug/L		05/07/19 15:45	1
Chloroethane	1.6	U	2.0	1.6	0.41	ug/L		05/07/19 15:45	1
Chloroform	0.40	U	1.0	0.40	0.16	ug/L		05/07/19 15:45	1
Chloromethane	0.80	U	2.0	0.80	0.30	ug/L		05/07/19 15:45	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15	ug/L		05/07/19 15:45	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16	ug/L		05/07/19 15:45	1
Cyclohexane	0.80	U	2.0	0.80	0.28	ug/L		05/07/19 15:45	1
Dibromochloromethane	0.40	U	1.0	0.40	0.17	ug/L		05/07/19 15:45	1
Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31	ug/L		05/07/19 15:45	1
Ethylbenzene	0.40	U	1.0	0.40	0.16	ug/L		05/07/19 15:45	1
Ethylene Dibromide	0.40	U	1.0	0.40	0.18	ug/L		05/07/19 15:45	1
Isopropylbenzene	0.40	U	1.0	0.40	0.19	ug/L		05/07/19 15:45	1
Methyl acetate	4.0	U	5.0	4.0	1.6	ug/L		05/07/19 15:45	1
Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25	ug/L		05/07/19 15:45	1
Methylcyclohexane	0.40	U	2.0	0.40	0.10	ug/L		05/07/19 15:45	1
Methylene Chloride	2.0	U	5.0	2.0	0.94	ug/L		05/07/19 15:45	1
Styrene	0.80	U	1.0	0.80	0.36	ug/L		05/07/19 15:45	1
Tetrachloroethene	0.40	U	1.0	0.40	0.20	ug/L		05/07/19 15:45	1
Toluene	0.40	U	1.0	0.40	0.17	ug/L		05/07/19 15:45	1
trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15	ug/L		05/07/19 15:45	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19	ug/L		05/07/19 15:45	1
Trichloroethene	0.40	U	1.0	0.40	0.16	ug/L		05/07/19 15:45	1
Trichlorofluoromethane	0.80	U	2.0	0.80	0.29	ug/L		05/07/19 15:45	1
Vinyl chloride	0.20	U	1.5	0.20	0.10	ug/L		05/07/19 15:45	1
Xylenes, Total	0.80	U	1.0	0.80	0.19	ug/L		05/07/19 15:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*81 - 118*		*05/07/19 15:45*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*05/07/19 15:45*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 119*		*05/07/19 15:45*	*1*
Toluene-d8 (Surr)	*99*		*89 - 112*		*05/07/19 15:45*	*1*

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
pH adj. to 25 deg C	**7.9**	**HF**	0.1	0.1	0.1	SU		05/06/19 13:56	1
Total Suspended Solids	2.8	U	4.0	2.8	1.1	mg/L		04/26/19 11:03	1

Client Sample ID: TB-1048
Date Collected: 04/24/19 08:40
Date Received: 04/25/19 08:40

Lab Sample ID: 280-123011-5
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16	ug/L		05/07/19 16:06	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21	ug/L		05/07/19 16:06	1
1,1,2-Trichloro-1,2,2-trifluoroethane	0.40	U	3.0	0.40	0.18	ug/L		05/07/19 16:06	1
1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27	ug/L		05/07/19 16:06	1
1,1-Dichloroethane	0.80	U	1.0	0.80	0.22	ug/L		05/07/19 16:06	1
1,1-Dichloroethene	0.80	U	1.0	0.80	0.23	ug/L		05/07/19 16:06	1
1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.21	ug/L		05/07/19 16:06	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.21	ug/L		05/07/19 16:06	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.47	ug/L		05/07/19 16:06	1
1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.15	ug/L		05/07/19 16:06	1
1,2-Dichloroethane	0.40	U	1.0	0.40	0.13	ug/L		05/07/19 16:06	1
1,2-Dichloropropane	0.40	U	1.0	0.40	0.18	ug/L		05/07/19 16:06	1
1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.13	ug/L		05/07/19 16:06	1
1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16	ug/L		05/07/19 16:06	1
2-Butanone (MEK)	4.0	U	6.0	4.0	2.0	ug/L		05/07/19 16:06	1
2-Hexanone	4.0	U	5.0	4.0	1.7	ug/L		05/07/19 16:06	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98	ug/L		05/07/19 16:06	1
Acetone	6.4	U	10	6.4	1.9	ug/L		05/07/19 16:06	1
Benzene	0.40	U	1.0	0.40	0.16	ug/L		05/07/19 16:06	1
Bromochloromethane	0.20	U	1.0	0.20	0.10	ug/L		05/07/19 16:06	1
Bromodichloromethane	0.40	U	1.0	0.40	0.17	ug/L		05/07/19 16:06	1
Bromoform	1.0	U Q	1.0	1.0	0.46	ug/L		05/07/19 16:06	1
Bromomethane	0.80	U	2.0	0.80	0.21	ug/L		05/07/19 16:06	1
Carbon disulfide	0.80	U	2.0	0.80	0.17	ug/L		05/07/19 16:06	1
Carbon tetrachloride	0.40	U	2.0	0.40	0.19	ug/L		05/07/19 16:06	1
Chlorobenzene	0.40	U	1.0	0.40	0.17	ug/L		05/07/19 16:06	1
Chloroethane	1.6	U	2.0	1.6	0.41	ug/L		05/07/19 16:06	1
Chloroform	0.40	U	1.0	0.40	0.16	ug/L		05/07/19 16:06	1
Chloromethane	0.80	U	2.0	0.80	0.30	ug/L		05/07/19 16:06	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15	ug/L		05/07/19 16:06	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16	ug/L		05/07/19 16:06	1
Cyclohexane	0.80	U	2.0	0.80	0.28	ug/L		05/07/19 16:06	1
Dibromochloromethane	0.40	U	1.0	0.40	0.17	ug/L		05/07/19 16:06	1
Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31	ug/L		05/07/19 16:06	1
Ethylbenzene	0.40	U	1.0	0.40	0.16	ug/L		05/07/19 16:06	1
Ethylene Dibromide	0.40	U	1.0	0.40	0.18	ug/L		05/07/19 16:06	1
Isopropylbenzene	0.40	U	1.0	0.40	0.19	ug/L		05/07/19 16:06	1
Methyl acetate	4.0	U	5.0	4.0	1.6	ug/L		05/07/19 16:06	1
Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25	ug/L		05/07/19 16:06	1
Methylcyclohexane	0.40	U	2.0	0.40	0.10	ug/L		05/07/19 16:06	1
Methylene Chloride	2.0	U	5.0	2.0	0.94	ug/L		05/07/19 16:06	1
Styrene	0.80	U	1.0	0.80	0.36	ug/L		05/07/19 16:06	1
Tetrachloroethene	0.40	U	1.0	0.40	0.20	ug/L		05/07/19 16:06	1
Toluene	0.40	U	1.0	0.40	0.17	ug/L		05/07/19 16:06	1
trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15	ug/L		05/07/19 16:06	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19	ug/L		05/07/19 16:06	1
Trichloroethene	0.40	U	1.0	0.40	0.16	ug/L		05/07/19 16:06	1
Trichlorofluoromethane	0.80	U	2.0	0.80	0.29	ug/L		05/07/19 16:06	1
Vinyl chloride	0.20	U	1.5	0.20	0.10	ug/L		05/07/19 16:06	1

Client Sample ID: TB-1048
Date Collected: 04/24/19 08:40
Date Received: 04/25/19 08:40

Lab Sample ID: 280-123011-5
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Xylenes, Total	0.80	U	1.0	0.80	0.19	ug/L		05/07/19 16:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*81 - 118*		*05/07/19 16:06*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*05/07/19 16:06*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 119*		*05/07/19 16:06*	*1*
Toluene-d8 (Surr)	*99*		*89 - 112*		*05/07/19 16:06*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	LOQ	DL	Units
1,1,1-Trichloroethane	1.0	0.16	ug/L
1,1,2,2-Tetrachloroethane	1.0	0.21	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	3.0	0.18	ug/L
1,1,2-Trichloroethane	1.0	0.27	ug/L
1,1-Dichloroethane	1.0	0.22	ug/L
1,1-Dichloroethene	1.0	0.23	ug/L
1,2,3-Trichlorobenzene	1.0	0.21	ug/L
1,2,4-Trichlorobenzene	1.0	0.21	ug/L
1,2-Dibromo-3-Chloropropane	5.0	0.47	ug/L
1,2-Dichlorobenzene	1.0	0.15	ug/L
1,2-Dichloroethane	1.0	0.13	ug/L
1,2-Dichloropropane	1.0	0.18	ug/L
1,3-Dichlorobenzene	1.0	0.13	ug/L
1,4-Dichlorobenzene	1.0	0.16	ug/L
2-Butanone (MEK)	6.0	2.0	ug/L
2-Hexanone	5.0	1.7	ug/L
4-Methyl-2-pentanone (MIBK)	5.0	0.98	ug/L
Acetone	10	1.9	ug/L
Benzene	1.0	0.16	ug/L
Bromochloromethane	1.0	0.10	ug/L
Bromodichloromethane	1.0	0.17	ug/L
Bromoform	1.0	0.46	ug/L
Bromomethane	2.0	0.21	ug/L
Carbon disulfide	2.0	0.17	ug/L
Carbon tetrachloride	2.0	0.19	ug/L
Chlorobenzene	1.0	0.17	ug/L
Chloroethane	2.0	0.41	ug/L
Chloroform	1.0	0.16	ug/L
Chloromethane	2.0	0.30	ug/L
cis-1,2-Dichloroethene	1.0	0.15	ug/L
cis-1,3-Dichloropropene	1.0	0.16	ug/L
Cyclohexane	2.0	0.28	ug/L
Dibromochloromethane	1.0	0.17	ug/L
Dichlorodifluoromethane	2.0	0.31	ug/L
Ethylbenzene	1.0	0.16	ug/L
Ethylene Dibromide	1.0	0.18	ug/L
Isopropylbenzene	1.0	0.19	ug/L
Methyl acetate	5.0	1.6	ug/L
Methyl tert-butyl ether	5.0	0.25	ug/L
Methylcyclohexane	2.0	0.10	ug/L
Methylene Chloride	5.0	0.94	ug/L
Styrene	1.0	0.36	ug/L
Tetrachloroethene	1.0	0.20	ug/L
Toluene	1.0	0.17	ug/L
trans-1,2-Dichloroethene	1.0	0.15	ug/L
trans-1,3-Dichloropropene	1.0	0.19	ug/L
Trichloroethene	1.0	0.16	ug/L
Trichlorofluoromethane	2.0	0.29	ug/L
Vinyl chloride	1.5	0.10	ug/L
Xylenes, Total	1.0	0.19	ug/L

Method: 8330A - Nitroaromatics and Nitramines (HPLC)

Prep: 8330-Prep

Default Detection Limits

Client: Brice Environmental Services, Corp
Job ID: 280-123009-1
Project/Site: Cornhusker (CHAAP)

Method: 8330A - Nitroaromatics and Nitramines (HPLC)

Prep: 8330-Prep

Analyte	LOQ	DL	Units
1,3,5-Trinitrobenzene	0.15	0.031	ug/L
1,3-Dinitrobenzene	0.15	0.050	ug/L
2,4,6-Trinitrotoluene	0.15	0.050	ug/L
2,4-Dinitrotoluene	0.13	0.050	ug/L
2,6-Dinitrotoluene	0.13	0.050	ug/L
2-Amino-4,6-dinitrotoluene	0.15	0.030	ug/L
2-Nitrotoluene	0.50	0.088	ug/L
3-Nitrotoluene	0.50	0.057	ug/L
4-Amino-2,6-dinitrotoluene	0.15	0.050	ug/L
4-Nitrotoluene	0.50	0.088	ug/L
HMX	0.15	0.036	ug/L
MNX	0.50	0.028	ug/L
Nitrobenzene	0.15	0.050	ug/L
RDX	0.15	0.036	ug/L
Tetryl	0.15	0.050	ug/L

Method: 6020A - Metals (ICP/MS)

Prep: 3020A

Analyte	LOQ	DL	Units
Selenium	5.0	0.37	ug/L

General Chemistry

Analyte	LOQ	DL	Units
pH adj. to 25 deg C	0.1	0.1	SU
Total Suspended Solids	4.0	1.1	mg/L

Surrogate Summary

Client: Brice Environmental Services, Corp
Project/Site: Cornhusker (CHAAP)

Job ID: 280-123009-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(81-118)	(85-114)	(80-119)	(89-112)
280-123011-1	SP-S2	107	101	103	99
280-123011-2	SP-E1	107	101	103	98
280-123011-4	SP-S22	107	101	103	99
280-123011-5	TB-1048	107	101	103	99
LCS 280-457279/4	Lab Control Sample	103	100	105	98
MB 280-457279/6	Method Blank	104	100	104	99

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8330A - Nitroaromatics and Nitramines (HPLC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
		DNT1
Lab Sample ID	Client Sample ID	(79-111)
280-123009-1	SP-S2	89
280-123009-1	SP-S2	84
280-123009-1 - DL	SP-S2	92
280-123009-1 - DL	SP-S2	94 M
280-123009-2	SP-S6	94
280-123009-2	SP-S6	91
280-123009-3	SP-S8	97
280-123009-3	SP-S8	89 M
280-123009-4	SP-E1	94
280-123009-4	SP-E1	86 M
280-123009-5	SP-S22	99
280-123009-5	SP-S22	86
280-123009-5 - DL	SP-S22	93
280-123009-5 - DL	SP-S22	89 M
LCS 320-291065/2-A	Lab Control Sample	93 M
LCS 320-291065/2-A	Lab Control Sample	89
LCSD 320-291065/3-A	Lab Control Sample Dup	94
LCSD 320-291065/3-A	Lab Control Sample Dup	88
MB 320-291065/1-A	Method Blank	95
MB 320-291065/1-A	Method Blank	94

Surrogate Legend

DNT = 3,4-Dinitrotoluene

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-457279/6
Matrix: Water
Analysis Batch: 457279

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16	ug/L		05/07/19 11:29	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21	ug/L		05/07/19 11:29	1
1,1,2-Trichloro-1,2,2-trifluoroethane	0.40	U	3.0	0.40	0.18	ug/L		05/07/19 11:29	1
1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27	ug/L		05/07/19 11:29	1
1,1-Dichloroethane	0.80	U	1.0	0.80	0.22	ug/L		05/07/19 11:29	1
1,1-Dichloroethene	0.80	U	1.0	0.80	0.23	ug/L		05/07/19 11:29	1
1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.21	ug/L		05/07/19 11:29	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.21	ug/L		05/07/19 11:29	1
1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.47	ug/L		05/07/19 11:29	1
1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.15	ug/L		05/07/19 11:29	1
1,2-Dichloroethane	0.40	U	1.0	0.40	0.13	ug/L		05/07/19 11:29	1
1,2-Dichloropropane	0.40	U	1.0	0.40	0.18	ug/L		05/07/19 11:29	1
1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.13	ug/L		05/07/19 11:29	1
1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16	ug/L		05/07/19 11:29	1
2-Butanone (MEK)	4.0	U	6.0	4.0	2.0	ug/L		05/07/19 11:29	1
2-Hexanone	4.0	U	5.0	4.0	1.7	ug/L		05/07/19 11:29	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98	ug/L		05/07/19 11:29	1
Acetone	6.4	U	10	6.4	1.9	ug/L		05/07/19 11:29	1
Benzene	0.40	U	1.0	0.40	0.16	ug/L		05/07/19 11:29	1
Bromochloromethane	0.20	U	1.0	0.20	0.10	ug/L		05/07/19 11:29	1
Bromodichloromethane	0.40	U	1.0	0.40	0.17	ug/L		05/07/19 11:29	1
Bromoform	1.0	U	1.0	1.0	0.46	ug/L		05/07/19 11:29	1
Bromomethane	0.80	U	2.0	0.80	0.21	ug/L		05/07/19 11:29	1
Carbon disulfide	0.80	U	2.0	0.80	0.17	ug/L		05/07/19 11:29	1
Carbon tetrachloride	0.40	U	2.0	0.40	0.19	ug/L		05/07/19 11:29	1
Chlorobenzene	0.40	U	1.0	0.40	0.17	ug/L		05/07/19 11:29	1
Chloroethane	1.6	U	2.0	1.6	0.41	ug/L		05/07/19 11:29	1
Chloroform	0.40	U	1.0	0.40	0.16	ug/L		05/07/19 11:29	1
Chloromethane	0.80	U	2.0	0.80	0.30	ug/L		05/07/19 11:29	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15	ug/L		05/07/19 11:29	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16	ug/L		05/07/19 11:29	1
Cyclohexane	0.80	U	2.0	0.80	0.28	ug/L		05/07/19 11:29	1
Dibromochloromethane	0.40	U	1.0	0.40	0.17	ug/L		05/07/19 11:29	1
Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31	ug/L		05/07/19 11:29	1
Ethylbenzene	0.40	U	1.0	0.40	0.16	ug/L		05/07/19 11:29	1
Ethylene Dibromide	0.40	U	1.0	0.40	0.18	ug/L		05/07/19 11:29	1
Isopropylbenzene	0.40	U	1.0	0.40	0.19	ug/L		05/07/19 11:29	1
Methyl acetate	4.0	U	5.0	4.0	1.6	ug/L		05/07/19 11:29	1
Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25	ug/L		05/07/19 11:29	1
Methylcyclohexane	0.40	U	2.0	0.40	0.10	ug/L		05/07/19 11:29	1
Methylene Chloride	2.0	U	5.0	2.0	0.94	ug/L		05/07/19 11:29	1
Styrene	0.80	U	1.0	0.80	0.36	ug/L		05/07/19 11:29	1
Tetrachloroethene	0.40	U	1.0	0.40	0.20	ug/L		05/07/19 11:29	1
Toluene	0.40	U	1.0	0.40	0.17	ug/L		05/07/19 11:29	1
trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15	ug/L		05/07/19 11:29	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19	ug/L		05/07/19 11:29	1
Trichloroethene	0.40	U	1.0	0.40	0.16	ug/L		05/07/19 11:29	1
Trichlorofluoromethane	0.80	U	2.0	0.80	0.29	ug/L		05/07/19 11:29	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-457279/6
Matrix: Water
Analysis Batch: 457279

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Vinyl chloride	0.20	U	1.5	0.20	0.10	ug/L		05/07/19 11:29	1
Xylenes, Total	0.80	U	1.0	0.80	0.19	ug/L		05/07/19 11:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*81 - 118*		*05/07/19 11:29*	*1*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*		*05/07/19 11:29*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 119*		*05/07/19 11:29*	*1*
Toluene-d8 (Surr)	*99*		*89 - 112*		*05/07/19 11:29*	*1*

Lab Sample ID: LCS 280-457279/4
Matrix: Water
Analysis Batch: 457279

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	23.8		ug/L		95	74 - 131
1,1,2,2-Tetrachloroethane	25.0	22.4		ug/L		90	71 - 121
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	24.2		ug/L		97	70 - 136
1,1,2-Trichloroethane	25.0	23.2		ug/L		93	80 - 119
1,1-Dichloroethane	25.0	24.4		ug/L		98	77 - 125
1,1-Dichloroethene	25.0	23.9		ug/L		96	71 - 131
1,2,3-Trichlorobenzene	25.0	24.3		ug/L		97	69 - 129
1,2,4-Trichlorobenzene	25.0	22.6		ug/L		90	69 - 130
1,2-Dibromo-3-Chloropropane	25.0	20.0		ug/L		80	62 - 128
1,2-Dichlorobenzene	25.0	22.2		ug/L		89	80 - 119
1,2-Dichloroethane	25.0	23.6		ug/L		94	73 - 128
1,2-Dichloropropane	25.0	23.5		ug/L		94	78 - 122
1,3-Dichlorobenzene	25.0	22.8		ug/L		91	80 - 119
1,4-Dichlorobenzene	25.0	22.0		ug/L		88	79 - 118
2-Butanone (MEK)	100	89.6		ug/L		90	56 - 143
2-Hexanone	100	87.4		ug/L		87	57 - 139
4-Methyl-2-pentanone (MIBK)	100	89.3		ug/L		89	67 - 130
Acetone	100	79.6		ug/L		80	39 - 160
Benzene	25.0	23.7		ug/L		95	79 - 120
Bromochloromethane	25.0	24.0		ug/L		96	78 - 123
Bromodichloromethane	25.0	22.2		ug/L		89	79 - 125
Bromoform	25.0	17.5		ug/L		70	66 - 130
Bromomethane	25.0	26.2		ug/L		105	53 - 141
Carbon disulfide	25.0	22.5		ug/L		90	64 - 133
Carbon tetrachloride	25.0	23.1		ug/L		93	72 - 136
Chlorobenzene	25.0	23.4		ug/L		94	82 - 118
Chloroethane	25.0	22.1		ug/L		88	60 - 138
Chloroform	25.0	24.0		ug/L		96	79 - 124
Chloromethane	25.0	21.9		ug/L		87	50 - 139
cis-1,2-Dichloroethene	25.0	23.5		ug/L		94	78 - 123
cis-1,3-Dichloropropene	25.0	23.5		ug/L		94	75 - 124
Cyclohexane	25.0	23.5		ug/L		94	71 - 130
Dibromochloromethane	25.0	19.7		ug/L		79	74 - 126
Dichlorodifluoromethane	25.0	23.7		ug/L		95	32 - 152

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-457279/4
Matrix: Water
Analysis Batch: 457279

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	25.0	22.9		ug/L		92	79 - 121
Ethylene Dibromide	25.0	23.1		ug/L		92	77 - 121
Isopropylbenzene	25.0	24.5		ug/L		98	72 - 131
Methyl acetate	50.0	47.4		ug/L		95	56 - 136
Methyl tert-butyl ether	25.0	23.4		ug/L		94	71 - 124
Methylcyclohexane	25.0	24.3		ug/L		97	72 - 132
Methylene Chloride	25.0	22.8		ug/L		91	74 - 124
Styrene	25.0	23.2		ug/L		93	78 - 123
Tetrachloroethene	25.0	23.6		ug/L		94	74 - 129
Toluene	25.0	22.9		ug/L		92	80 - 121
trans-1,2-Dichloroethene	25.0	23.4		ug/L		94	75 - 124
trans-1,3-Dichloropropene	25.0	22.8		ug/L		91	73 - 127
Trichloroethene	25.0	23.4		ug/L		93	79 - 123
Trichlorofluoromethane	25.0	23.0		ug/L		92	65 - 141
Vinyl chloride	25.0	22.3		ug/L		89	58 - 137
Xylenes, Total	50.0	46.3		ug/L		93	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*103*		*81 - 118*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*
Dibromofluoromethane (Surr)	*105*		*80 - 119*
Toluene-d8 (Surr)	*98*		*89 - 112*

Method: 8330A - Nitroaromatics and Nitramines (HPLC)

Lab Sample ID: MB 320-291065/1-A
Matrix: Water
Analysis Batch: 291526

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 291065

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.10	U M	0.15	0.10	0.031	ug/L		05/02/19 17:15	1
1,3-Dinitrobenzene	0.10	U	0.15	0.10	0.050	ug/L		05/02/19 17:15	1
2,4,6-Trinitrotoluene	0.10	U M	0.15	0.10	0.050	ug/L		05/02/19 17:15	1
2,4-Dinitrotoluene	0.10	U	0.13	0.10	0.050	ug/L		05/02/19 17:15	1
2,6-Dinitrotoluene	0.10	U	0.13	0.10	0.050	ug/L		05/02/19 17:15	1
2-Amino-4,6-dinitrotoluene	0.10	U	0.15	0.10	0.030	ug/L		05/02/19 17:15	1
2-Nitrotoluene	0.20	U	0.50	0.20	0.088	ug/L		05/02/19 17:15	1
3-Nitrotoluene	0.20	U	0.50	0.20	0.057	ug/L		05/02/19 17:15	1
4-Amino-2,6-dinitrotoluene	0.10	U	0.15	0.10	0.050	ug/L		05/02/19 17:15	1
4-Nitrotoluene	0.20	U	0.50	0.20	0.088	ug/L		05/02/19 17:15	1
HMX	0.10	U	0.15	0.10	0.036	ug/L		05/02/19 17:15	1
MNX	0.10	U	0.50	0.10	0.028	ug/L		05/02/19 17:15	1
Nitrobenzene	0.10	U	0.15	0.10	0.050	ug/L		05/02/19 17:15	1
RDX	0.10	U	0.15	0.10	0.036	ug/L		05/02/19 17:15	1
Tetryl	0.10	U	0.15	0.10	0.050	ug/L		05/02/19 17:15	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*95*		*79 - 111*	*04/29/19 06:59*	*05/02/19 17:15*	*1*

Method: 8330A - Nitroaromatics and Nitramines (HPLC) (Continued)

Lab Sample ID: MB 320-291065/1-A
Matrix: Water
Analysis Batch: 295993

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 291065

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
3,4-Dinitrotoluene	94		79 - 111	04/29/19 06:59	05/23/19 16:57	1

Lab Sample ID: LCS 320-291065/2-A
Matrix: Water
Analysis Batch: 292661

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 291065

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trinitrobenzene	1.00	0.957		ug/L		96	73 - 125
1,3-Dinitrobenzene	1.00	0.977		ug/L		98	78 - 120
2,4,6-Trinitrotoluene	1.00	0.873		ug/L		87	71 - 123
2,4-Dinitrotoluene	1.00	0.953		ug/L		95	78 - 120
2,6-Dinitrotoluene	1.00	0.940		ug/L		94	77 - 127
2-Amino-4,6-dinitrotoluene	1.00	0.977		ug/L		98	79 - 120
2-Nitrotoluene	1.00	0.931		ug/L		93	70 - 127
3-Nitrotoluene	1.00	0.932		ug/L		93	73 - 125
4-Amino-2,6-dinitrotoluene	1.00	1.01	M	ug/L		101	76 - 125
4-Nitrotoluene	1.00	0.918		ug/L		92	71 - 127
HMX	1.00	0.984		ug/L		98	65 - 135
MNX	4.68	5.15		ug/L		110	57 - 132
Nitrobenzene	1.00	0.977		ug/L		98	65 - 134
RDX	1.00	1.08		ug/L		108	68 - 130
Tetryl	1.00	0.872		ug/L		87	64 - 128

Surrogate	LCS %Recovery	LCS Qualifier	Limits
3,4-Dinitrotoluene	93	M	79 - 111

Lab Sample ID: LCS 320-291065/2-A
Matrix: Water
Analysis Batch: 295993

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 291065

Surrogate	LCS %Recovery	LCS Qualifier	Limits
3,4-Dinitrotoluene	89		79 - 111

Lab Sample ID: LCSD 320-291065/3-A
Matrix: Water
Analysis Batch: 292661

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 291065

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trinitrobenzene	1.00	0.968		ug/L		97	73 - 125	1	20
1,3-Dinitrobenzene	1.00	0.984		ug/L		98	78 - 120	1	20
2,4,6-Trinitrotoluene	1.00	0.879		ug/L		88	71 - 123	1	20
2,4-Dinitrotoluene	1.00	0.960		ug/L		96	78 - 120	1	20
2,6-Dinitrotoluene	1.00	0.951		ug/L		95	77 - 127	1	20
2-Amino-4,6-dinitrotoluene	1.00	0.974		ug/L		97	79 - 120	0	20
2-Nitrotoluene	1.00	0.962		ug/L		96	70 - 127	3	20
3-Nitrotoluene	1.00	0.936		ug/L		94	73 - 125	0	20
4-Amino-2,6-dinitrotoluene	1.00	0.940		ug/L		94	76 - 125	7	20
4-Nitrotoluene	1.00	0.930		ug/L		93	71 - 127	1	20

Method: 8330A - Nitroaromatics and Nitramines (HPLC) (Continued)

Lab Sample ID: LCSD 320-291065/3-A
Matrix: Water
Analysis Batch: 292661

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 291065

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
HMX			1.00	1.02		ug/L		102	65 - 135	3	20
MNX			4.68	5.23		ug/L		112	57 - 132	2	20
Nitrobenzene			1.00	0.979		ug/L		98	65 - 134	0	20
RDX			1.00	1.08		ug/L		108	68 - 130	0	20
Tetryl			1.00	0.880		ug/L		88	64 - 128	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
3,4-Dinitrotoluene	*94*		*79 - 111*

Lab Sample ID: LCSD 320-291065/3-A
Matrix: Water
Analysis Batch: 295993

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 291065

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
3,4-Dinitrotoluene	*88*		*79 - 111*

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 280-456592/1-A
Matrix: Water
Analysis Batch: 457404

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 456592

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Selenium	1.0	U	5.0	1.0	0.37	ug/L		05/07/19 15:15	1

Lab Sample ID: LCS 280-456592/2-A
Matrix: Water
Analysis Batch: 457404

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 456592

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Selenium			40.0	39.1		ug/L		98	80 - 120		

Lab Sample ID: LCSD 280-456592/3-A
Matrix: Water
Analysis Batch: 457404

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 456592

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Selenium			40.0	37.9		ug/L		95	80 - 120	3	20

Method: 9040C - pH

Lab Sample ID: LCS 280-457145/4
Matrix: Water
Analysis Batch: 457145

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
pH adj. to 25 deg C			7.00	7.0		SU		100	99 - 101		

Method: 9040C - pH (Continued)

Lab Sample ID: LCS 280-457275/4
Matrix: Water
Analysis Batch: 457275

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
pH adj. to 25 deg C			7.00	7.0		SU		100	99 - 101		

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 280-456087/1
Matrix: Water
Analysis Batch: 456087

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Suspended Solids	2.8	U	4.0	2.8	1.1	mg/L		04/26/19 11:03	1

Lab Sample ID: LCS 280-456087/2
Matrix: Water
Analysis Batch: 456087

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Suspended Solids			100	86.4		mg/L		86	79 - 114		

Lab Sample ID: LCSD 280-456087/3
Matrix: Water
Analysis Batch: 456087

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Suspended Solids			100	94.8		mg/L		95	79 - 114	9	20

QC Association Summary

Client: Brice Environmental Services, Corp
Project/Site: Cornhusker (CHAAP)

Job ID: 280-123009-1

GC/MS VOA

Analysis Batch: 457279

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-123011-1	SP-S2	Total/NA	Water	8260B	
280-123011-2	SP-E1	Total/NA	Water	8260B	
280-123011-4	SP-S22	Total/NA	Water	8260B	
280-123011-5	TB-1048	Total/NA	Water	8260B	
MB 280-457279/6	Method Blank	Total/NA	Water	8260B	
LCS 280-457279/4	Lab Control Sample	Total/NA	Water	8260B	

HPLC/IC

Prep Batch: 291065

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-123009-1 - DL	SP-S2	Total/NA	Water	8330-Prep	
280-123009-1	SP-S2	Total/NA	Water	8330-Prep	
280-123009-2	SP-S6	Total/NA	Water	8330-Prep	
280-123009-3	SP-S8	Total/NA	Water	8330-Prep	
280-123009-4	SP-E1	Total/NA	Water	8330-Prep	
280-123009-5	SP-S22	Total/NA	Water	8330-Prep	
280-123009-5 - DL	SP-S22	Total/NA	Water	8330-Prep	
MB 320-291065/1-A	Method Blank	Total/NA	Water	8330-Prep	
LCS 320-291065/2-A	Lab Control Sample	Total/NA	Water	8330-Prep	
LCSD 320-291065/3-A	Lab Control Sample Dup	Total/NA	Water	8330-Prep	

Analysis Batch: 291526

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-123009-1	SP-S2	Total/NA	Water	8330A	291065
280-123009-2	SP-S6	Total/NA	Water	8330A	291065
280-123009-3	SP-S8	Total/NA	Water	8330A	291065
280-123009-4	SP-E1	Total/NA	Water	8330A	291065
280-123009-5	SP-S22	Total/NA	Water	8330A	291065
MB 320-291065/1-A	Method Blank	Total/NA	Water	8330A	291065

Analysis Batch: 292661

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 320-291065/2-A	Lab Control Sample	Total/NA	Water	8330A	291065
LCSD 320-291065/3-A	Lab Control Sample Dup	Total/NA	Water	8330A	291065

Analysis Batch: 295993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-123009-1	SP-S2	Total/NA	Water	8330A	291065
280-123009-1 - DL	SP-S2	Total/NA	Water	8330A	291065
280-123009-2	SP-S6	Total/NA	Water	8330A	291065
280-123009-3	SP-S8	Total/NA	Water	8330A	291065
280-123009-4	SP-E1	Total/NA	Water	8330A	291065
280-123009-5	SP-S22	Total/NA	Water	8330A	291065
280-123009-5 - DL	SP-S22	Total/NA	Water	8330A	291065
MB 320-291065/1-A	Method Blank	Total/NA	Water	8330A	291065
LCS 320-291065/2-A	Lab Control Sample	Total/NA	Water	8330A	291065
LCSD 320-291065/3-A	Lab Control Sample Dup	Total/NA	Water	8330A	291065

HPLC/IC

Analysis Batch: 296662

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-123009-1 - DL	SP-S2	Total/NA	Water	8330A	291065
280-123009-5 - DL	SP-S22	Total/NA	Water	8330A	291065

Metals

Prep Batch: 456592

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-123011-2	SP-E1	Total/NA	Water	3020A	
280-123011-3	SP-E11	Total/NA	Water	3020A	
MB 280-456592/1-A	Method Blank	Total/NA	Water	3020A	
LCS 280-456592/2-A	Lab Control Sample	Total/NA	Water	3020A	
LCSD 280-456592/3-A	Lab Control Sample Dup	Total/NA	Water	3020A	

Analysis Batch: 457404

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-123011-2	SP-E1	Total/NA	Water	6020A	456592
280-123011-3	SP-E11	Total/NA	Water	6020A	456592
MB 280-456592/1-A	Method Blank	Total/NA	Water	6020A	456592
LCS 280-456592/2-A	Lab Control Sample	Total/NA	Water	6020A	456592
LCSD 280-456592/3-A	Lab Control Sample Dup	Total/NA	Water	6020A	456592

General Chemistry

Analysis Batch: 456087

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-123011-1	SP-S2	Total/NA	Water	SM 2540D	
280-123011-4	SP-S22	Total/NA	Water	SM 2540D	
MB 280-456087/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-456087/2	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 280-456087/3	Lab Control Sample Dup	Total/NA	Water	SM 2540D	

Analysis Batch: 457145

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-123011-1	SP-S2	Total/NA	Water	9040C	
280-123011-2	SP-E1	Total/NA	Water	9040C	
LCS 280-457145/4	Lab Control Sample	Total/NA	Water	9040C	

Analysis Batch: 457275

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-123011-4	SP-S22	Total/NA	Water	9040C	
LCS 280-457275/4	Lab Control Sample	Total/NA	Water	9040C	

Client Sample ID: SP-S2

Lab Sample ID: 280-123009-1

Date Collected: 04/24/19 08:40

Matrix: Water

Date Received: 04/25/19 08:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8330-Prep			986.8 mL	20 mL	291065	04/29/19 06:59	NGK	TAL SAC
Total/NA	Analysis	8330A		1	1 mL	1.0 mL	291526	05/03/19 05:46	AMAO	TAL SAC
Total/NA	Prep	8330-Prep	DL		986.8 mL	20 mL	291065	04/29/19 06:59	NGK	TAL SAC
Total/NA	Analysis	8330A	DL	5			296662	05/24/19 14:35	AMAO	TAL SAC
Total/NA	Prep	8330-Prep			986.8 mL	20 mL	291065	04/29/19 06:59	NGK	TAL SAC
Total/NA	Analysis	8330A		1			295993	05/24/19 06:24	AJC	TAL SAC
Total/NA	Prep	8330-Prep	DL		986.8 mL	20 mL	291065	04/29/19 06:59	NGK	TAL SAC
Total/NA	Analysis	8330A	DL	5			295993	05/24/19 11:12	AJC	TAL SAC

Client Sample ID: SP-S6

Lab Sample ID: 280-123009-2

Date Collected: 04/24/19 08:45

Matrix: Water

Date Received: 04/25/19 08:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8330-Prep			1019.5 mL	20 mL	291065	04/29/19 06:59	NGK	TAL SAC
Total/NA	Analysis	8330A		1			291526	05/03/19 06:40	AMAO	TAL SAC
Total/NA	Prep	8330-Prep			1019.5 mL	20 mL	291065	04/29/19 06:59	NGK	TAL SAC
Total/NA	Analysis	8330A		1			295993	05/24/19 07:21	AJC	TAL SAC

Client Sample ID: SP-S8

Lab Sample ID: 280-123009-3

Date Collected: 04/24/19 08:48

Matrix: Water

Date Received: 04/25/19 08:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8330-Prep			1005.9 mL	20 mL	291065	04/29/19 06:59	NGK	TAL SAC
Total/NA	Analysis	8330A		1			291526	05/03/19 09:21	AMAO	TAL SAC
Total/NA	Prep	8330-Prep			1005.9 mL	20 mL	291065	04/29/19 06:59	NGK	TAL SAC
Total/NA	Analysis	8330A		1			295993	05/24/19 08:19	AJC	TAL SAC

Client Sample ID: SP-E1

Lab Sample ID: 280-123009-4

Date Collected: 04/24/19 08:51

Matrix: Water

Date Received: 04/25/19 08:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8330-Prep			1006.7 mL	20 mL	291065	04/29/19 06:59	NGK	TAL SAC
Total/NA	Analysis	8330A		1	1 mL	1.0 mL	291526	05/03/19 10:14	AMAO	TAL SAC
Total/NA	Prep	8330-Prep			1006.7 mL	20 mL	291065	04/29/19 06:59	NGK	TAL SAC
Total/NA	Analysis	8330A		1	1 mL	1.0 mL	295993	05/24/19 09:16	AJC	TAL SAC

Client Sample ID: SP-S22

Lab Sample ID: 280-123009-5

Date Collected: 04/24/19 08:43

Matrix: Water

Date Received: 04/25/19 08:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8330-Prep			991.9 mL	20 mL	291065	04/29/19 06:59	NGK	TAL SAC
Total/NA	Analysis	8330A		1			291526	05/03/19 11:08	AMAO	TAL SAC

Client Sample ID: SP-S22
Lab Sample ID: 280-123009-5
Date Collected: 04/24/19 08:43
Matrix: Water
Date Received: 04/25/19 08:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8330-Prep	DL		991.9 mL	20 mL	291065	04/29/19 06:59	NGK	TAL SAC
Total/NA	Analysis	8330A	DL	5			296662	05/24/19 15:28	AMAO	TAL SAC
Total/NA	Prep	8330-Prep			991.9 mL	20 mL	291065	04/29/19 06:59	NGK	TAL SAC
Total/NA	Analysis	8330A		1			295993	05/24/19 10:14	AJC	TAL SAC
Total/NA	Prep	8330-Prep	DL		991.9 mL	20 mL	291065	04/29/19 06:59	NGK	TAL SAC
Total/NA	Analysis	8330A	DL	5			295993	05/24/19 12:09	AJC	TAL SAC

Client Sample ID: SP-S2
Lab Sample ID: 280-123011-1
Date Collected: 04/24/19 08:40
Matrix: Water
Date Received: 04/25/19 08:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	457279	05/07/19 15:02	GPM	TAL DEN
Total/NA	Analysis	9040C		1			457145	05/03/19 17:58	SGB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	456087	04/26/19 11:03	MJS	TAL DEN

Client Sample ID: SP-E1
Lab Sample ID: 280-123011-2
Date Collected: 04/24/19 08:51
Matrix: Water
Date Received: 04/25/19 08:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	457279	05/07/19 15:23	GPM	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	456592	05/06/19 17:30	DAL	TAL DEN
Total/NA	Analysis	6020A		1			457404	05/07/19 14:24	LMT	TAL DEN
Total/NA	Analysis	9040C		1			457145	05/03/19 18:03	SGB	TAL DEN

Client Sample ID: SP-E11
Lab Sample ID: 280-123011-3
Date Collected: 04/24/19 08:51
Matrix: Water
Date Received: 04/25/19 08:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3020A			50 mL	50 mL	456592	05/06/19 17:30	DAL	TAL DEN
Total/NA	Analysis	6020A		1			457404	05/07/19 14:28	LMT	TAL DEN

Client Sample ID: SP-S22
Lab Sample ID: 280-123011-4
Date Collected: 04/24/19 08:43
Matrix: Water
Date Received: 04/25/19 08:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	457279	05/07/19 15:45	GPM	TAL DEN
Total/NA	Analysis	9040C		1			457275	05/06/19 13:56	SGB	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	456087	04/26/19 11:03	MJS	TAL DEN

Client: Brice Environmental Services, Corp
Job ID: 280-123009-1
Project/Site: Cornhusker (CHAAP)

Client Sample ID: TB-1048
Lab Sample ID: 280-123011-5
Date Collected: 04/24/19 08:40
Matrix: Water
Date Received: 04/25/19 08:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	457279	05/07/19 16:06	GPM	TAL DEN

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: Brice Environmental Services, Corp
Job ID: 280-123009-1
Project/Site: Cornhusker (CHAAP)

Laboratory: Eurofins TestAmerica, Denver

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
A2LA	DoD		2907.01	10-31-19

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte

Laboratory: Eurofins TestAmerica, Sacramento

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
ANAB	DoD		L2468	01-20-21

Method Summary

Client: Brice Environmental Services, Corp
Job ID: 280-123009-1
Project/Site: Cornhusker (CHAAP)

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL DEN
8330A	Nitroaromatics and Nitramines (HPLC)	EPA	TAL SAC
6020A	Metals (ICP/MS)	SW846	TAL DEN
9040C	pH	SW846	TAL DEN
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL DEN
3020A	Preparation, Total Metals	SW846	TAL DEN
5030B	Purge and Trap	SW846	TAL DEN
8330-Prep	Solid-Phase Extraction (Explosives)	SW846	TAL SAC

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Brice Environmental Services, Corp
Project/Site: Cornhusker (CHAAP)

Job ID: 280-123009-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-123009-1	SP-S2	Water	04/24/19 08:40	04/25/19 08:40	
280-123009-2	SP-S6	Water	04/24/19 08:45	04/25/19 08:40	
280-123009-3	SP-S8	Water	04/24/19 08:48	04/25/19 08:40	
280-123009-4	SP-E1	Water	04/24/19 08:51	04/25/19 08:40	
280-123009-5	SP-S22	Water	04/24/19 08:43	04/25/19 08:40	
280-123011-1	SP-S2	Water	04/24/19 08:40	04/25/19 08:40	
280-123011-2	SP-E1	Water	04/24/19 08:51	04/25/19 08:40	
280-123011-3	SP-E11	Water	04/24/19 08:51	04/25/19 08:40	
280-123011-4	SP-S22	Water	04/24/19 08:43	04/25/19 08:40	
280-123011-5	TB-1048	Water	04/24/19 08:40	04/25/19 08:40	

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Instrument ID: VMS_G2 Analysis Batch Number: 457190

Lab Sample ID: IC 280-457190/7 Client Sample ID:

Date Analyzed: 05/06/19 14:58 Lab File ID: g2_4871.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dichloroethane	4.60	Assign Peak	meierg	05/10/19 11:13
Bromoform	8.06	Assign Peak	meierg	05/10/19 11:14

Lab Sample ID: IC 280-457190/8 Client Sample ID:

Date Analyzed: 05/06/19 15:19 Lab File ID: g2_4872.D GC Column: DB-624 (60.25 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dichloroethane	4.60	Assign Peak	meierg	05/10/19 11:04
Bromoform	8.05	Assign Peak	meierg	05/10/19 11:04

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 280-123009-1

SDG No.:

Instrument ID: LC11 Analysis Batch Number: 278694

Lab Sample ID: STD1 320-278694/3 IC Client Sample ID:

Date Analyzed: 02/27/19 19:43 Lab File ID: ZAB0000003.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitroglycerin	27.88	Assign Peak	ortizam	02/28/19 12:09
PETN	40.21	Peak not integrated	ortizam	02/28/19 12:09

Lab Sample ID: STD2 320-278694/4 IC Client Sample ID:

Date Analyzed: 02/27/19 20:37 Lab File ID: ZAB0000004.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Amino-2,6-dinitrotoluene	29.27	Peak assignment corrected	ortizam	02/28/19 12:14
3,4-Dinitrotoluene	29.60	Peak assignment corrected	ortizam	02/28/19 12:14

Lab Sample ID: STD3 320-278694/5 IC Client Sample ID:

Date Analyzed: 02/27/19 21:30 Lab File ID: ZAB0000005.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitroglycerin	27.86	Baseline Smoothing	ortizam	02/28/19 12:15
4-Amino-2,6-dinitrotoluene	29.27	Peak assignment corrected	ortizam	02/28/19 12:15
3,4-Dinitrotoluene	29.59	Baseline Smoothing	ortizam	02/28/19 12:15

Lab Sample ID: STD4 320-278694/6 IC Client Sample ID:

Date Analyzed: 02/27/19 22:24 Lab File ID: ZAB0000006.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitroglycerin	27.85	Baseline Smoothing	ortizam	02/28/19 12:16
4-Amino-2,6-dinitrotoluene	29.27	Peak assignment corrected	ortizam	02/28/19 12:16
3,4-Dinitrotoluene	29.59	Baseline Smoothing	ortizam	02/28/19 12:16

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 280-123009-1

SDG No.:

Instrument ID: LC11 Analysis Batch Number: 278694

Lab Sample ID: STD5 320-278694/7 IC Client Sample ID:

Date Analyzed: 02/27/19 23:17 Lab File ID: ZAB0000007.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitroglycerin	27.85	Baseline Smoothing	ortizam	02/28/19 12:10
4-Amino-2,6-dinitrotoluene	29.28	Peak assignment corrected	ortizam	02/28/19 12:10
3,4-Dinitrotoluene	29.60	Baseline Smoothing	ortizam	02/28/19 12:10

Lab Sample ID: STD6 320-278694/8 IC Client Sample ID:

Date Analyzed: 02/28/19 00:11 Lab File ID: ZAB0000008.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitroglycerin	27.83	Baseline Smoothing	ortizam	02/28/19 12:11
4-Amino-2,6-dinitrotoluene	29.25	Baseline Smoothing	ortizam	02/28/19 12:12
3,4-Dinitrotoluene	29.57	Baseline Smoothing	ortizam	02/28/19 12:12

Lab Sample ID: STD7 320-278694/9 IC Client Sample ID:

Date Analyzed: 02/28/19 01:05 Lab File ID: ZAB0000009.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Amino-2,6-dinitrotoluene	29.25	Peak assignment corrected	ortizam	02/28/19 12:12
3,4-Dinitrotoluene	29.57	Peak assignment corrected	ortizam	02/28/19 12:12

Lab Sample ID: ICV 320-278694/11 Client Sample ID:

Date Analyzed: 02/28/19 02:52 Lab File ID: ZAB0000011.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitroglycerin	27.83	Baseline Smoothing	ortizam	02/28/19 15:14

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 280-123009-1

SDG No.:

Instrument ID: LC11 Analysis Batch Number: 278694

Lab Sample ID: LODV 320-278694/12 Client Sample ID:

Date Analyzed: 02/28/19 03:46 Lab File ID: ZAB0000012.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitroglycerin	27.83	Baseline Smoothing	ortizam	02/28/19 12:26

Lab Sample ID: LODV 320-278694/22 Client Sample ID:

Date Analyzed: 02/28/19 12:42 Lab File ID: ZAB0000022.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
3,5-Dinitroaniline		Invalid Compound ID	ortizam	02/28/19 15:13
Nitroglycerin		Invalid Compound ID	ortizam	02/28/19 15:13
TNX	12.76	Peak not integrated	ortizam	02/28/19 15:13
DNX	16.66	Peak not integrated	ortizam	02/28/19 15:13

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 280-123009-1

SDG No.:

Instrument ID: LC11 Analysis Batch Number: 291526

Lab Sample ID: CCVRT 320-291526/3 Client Sample ID:

Date Analyzed: 04/30/19 13:05 Lab File ID: ZD0000002.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Amino-2,6-dinitrotoluene	29.16	Baseline Smoothing	ortizam	04/30/19 14:55
3,4-Dinitrotoluene	29.48	Baseline Smoothing	ortizam	04/30/19 14:55

Lab Sample ID: MB 320-291065/1-A Client Sample ID:

Date Analyzed: 05/02/19 17:15 Lab File ID: ZD0000059.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3,5-Trinitrobenzene		Invalid Compound ID	ortizam	05/03/19 09:45
2,4,6-Trinitrotoluene		Invalid Compound ID	ortizam	05/03/19 09:45

Lab Sample ID: CCV 320-291526/63 Client Sample ID:

Date Analyzed: 05/02/19 20:49 Lab File ID: ZD0000063.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Amino-2,6-dinitrotoluene	29.07	Peak assignment corrected	ortizam	05/03/19 09:23
3,4-Dinitrotoluene	29.44	Peak assignment corrected	ortizam	05/03/19 09:23

Lab Sample ID: 280-123009-1 Client Sample ID: SP-S2

Date Analyzed: 05/03/19 05:46 Lab File ID: ZD0000073.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	18.09	Baseline Smoothing	ortizam	05/03/19 09:31
RDX	20.62	Baseline Smoothing	ortizam	05/03/19 09:31
1,3,5-Trinitrobenzene	22.39	Baseline Smoothing	ortizam	05/03/19 09:31

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 280-123009-1

SDG No.:

Instrument ID: LC11 Analysis Batch Number: 291526

Lab Sample ID: 280-123009-2 Client Sample ID: SP-S6

Date Analyzed: 05/03/19 06:40 Lab File ID: ZD0000074.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
MNX		Invalid Compound ID	ortizam	05/03/19 09:42
Nitrobenzene		Invalid Compound ID	ortizam	05/03/19 09:42
HMX	18.08	Baseline Smoothing	ortizam	05/03/19 09:42
RDX	20.63	Baseline Smoothing	ortizam	05/03/19 09:42
1,3,5-Trinitrobenzene	22.39	Baseline Smoothing	ortizam	05/03/19 09:43

Lab Sample ID: CCV 320-291526/75 Client Sample ID:

Date Analyzed: 05/03/19 07:33 Lab File ID: ZD0000075.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PETN	39.87	Peak assignment corrected	ortizam	05/03/19 09:58

Lab Sample ID: 280-123009-3 Client Sample ID: SP-S8

Date Analyzed: 05/03/19 09:21 Lab File ID: ZD0000077.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,4,6-Trinitrotoluene		Invalid Compound ID	ortizam	05/03/19 14:26
MNX		Invalid Compound ID	ortizam	05/03/19 14:26
HMX	18.08	Baseline Smoothing	ortizam	05/03/19 14:26
RDX	20.61	Baseline Smoothing	ortizam	05/03/19 14:27
1,3,5-Trinitrobenzene	22.37	Baseline Smoothing	ortizam	05/03/19 14:27

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 280-123009-1

SDG No.:

Instrument ID: LC11 Analysis Batch Number: 291526

Lab Sample ID: 280-123009-4 Client Sample ID: SP-E1

Date Analyzed: 05/03/19 10:14 Lab File ID: ZD0000078.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,4,6-Trinitrotoluene		Invalid Compound ID	ortizam	05/03/19 14:27
HMX	18.05	Baseline Smoothing	ortizam	05/03/19 14:28
RDX	20.58	Baseline Smoothing	ortizam	05/03/19 14:28
1,3,5-Trinitrobenzene	22.36	Peak not integrated	ortizam	05/28/19 15:52

Lab Sample ID: 280-123009-5 Client Sample ID: SP-S22

Date Analyzed: 05/03/19 11:08 Lab File ID: ZD0000079.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3-Dinitrobenzene		Invalid Compound ID	ortizam	05/03/19 13:03
2,6-Dinitrotoluene		Invalid Compound ID	ortizam	05/03/19 13:03
HMX	18.02	Baseline Smoothing	ortizam	05/03/19 13:02
RDX	20.57	Baseline Smoothing	ortizam	05/03/19 13:02
1,3,5-Trinitrobenzene	22.35	Baseline Smoothing	ortizam	05/03/19 13:03

Lab Sample ID: CCV 320-291526/84 Client Sample ID:

Date Analyzed: 05/03/19 12:55 Lab File ID: ZD0000081.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Amino-2,6-dinitrotoluene	29.05	Peak assignment corrected	ortizam	05/03/19 14:25
3,4-Dinitrotoluene	29.40	Peak assignment corrected	ortizam	05/03/19 14:25

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 280-123009-1

SDG No.:

Instrument ID: LC11 Analysis Batch Number: 292661

Lab Sample ID: CCVRT 320-292661/3 Client Sample ID:

Date Analyzed: 05/06/19 15:04 Lab File ID: F0000003.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitroglycerin	27.87	Baseline Smoothing	cartiera	05/06/19 16:18

Lab Sample ID: LCS 320-291065/2-A Client Sample ID:

Date Analyzed: 05/07/19 01:48 Lab File ID: F0000015.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Amino-2,6-dinitrotoluene	29.20	Peak assignment corrected	cartiera	05/07/19 14:13
3,4-Dinitrotoluene	29.51	Peak assignment corrected	cartiera	05/07/19 14:13

Lab Sample ID: CCV 320-292661/26 Client Sample ID:

Date Analyzed: 05/07/19 02:41 Lab File ID: F0000016.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitroglycerin	27.70	Baseline Smoothing	cartiera	05/07/19 14:14
4-Amino-2,6-dinitrotoluene	29.18	Baseline Smoothing	cartiera	05/07/19 14:15
3,4-Dinitrotoluene	29.51	Baseline Smoothing	cartiera	05/07/19 14:15

Lab Sample ID: CCV 320-292661/47 Client Sample ID:

Date Analyzed: 05/07/19 13:25 Lab File ID: F0000028.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitroglycerin	27.64	Baseline Smoothing	cartiera	05/07/19 14:54
4-Amino-2,6-dinitrotoluene	29.11	Baseline Smoothing	cartiera	05/07/19 14:54
3,4-Dinitrotoluene	29.44	Baseline Smoothing	cartiera	05/07/19 14:54

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 280-123009-1

SDG No.:

Instrument ID: LC11 Analysis Batch Number: 296662

Lab Sample ID: 280-123009-1 DL Client Sample ID: SP-S2 DL

Date Analyzed: 05/24/19 14:35 Lab File ID: T0000109.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Nitrotoluene		Invalid Compound ID	ortizam	05/24/19 15:35
MNX		Invalid Compound ID	ortizam	05/24/19 15:35
Tetryl		Invalid Compound ID	ortizam	05/24/19 15:35
HMX	18.02	Baseline Smoothing	ortizam	05/24/19 15:35
RDX	20.59	Baseline Smoothing	ortizam	05/24/19 15:35
1,3,5-Trinitrobenzene	22.35	Baseline Smoothing	ortizam	05/24/19 15:35
4-Amino-2,6-dinitrotoluene	29.04	Baseline Smoothing	ortizam	05/24/19 15:34
3,4-Dinitrotoluene	29.38	Baseline Smoothing	ortizam	05/24/19 15:34

Lab Sample ID: 280-123009-5 DL Client Sample ID: SP-S22 DL

Date Analyzed: 05/24/19 15:28 Lab File ID: T0000110.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Tetryl		Invalid Compound ID	ortizam	05/24/19 16:21
HMX	18.01	Baseline Smoothing	ortizam	05/24/19 16:21
4-Amino-2,6-dinitrotoluene	29.03	Baseline Smoothing	ortizam	05/24/19 16:22
3,4-Dinitrotoluene	29.35	Baseline Smoothing	ortizam	05/24/19 16:22

Lab Sample ID: CCV 320-296662/25 Client Sample ID:

Date Analyzed: 05/24/19 16:22 Lab File ID: T0000111.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Amino-2,6-dinitrotoluene	28.98	Peak assignment corrected	ortizam	05/24/19 17:17
3,4-Dinitrotoluene	29.33	Peak assignment corrected	ortizam	05/24/19 17:17

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 280-123009-1

SDG No.:

Instrument ID: LC12 Analysis Batch Number: 287393

Lab Sample ID: STD1 320-287393/3 IC Client Sample ID:

Date Analyzed: 04/09/19 22:07 Lab File ID: H000032.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrobenzene	20.88	Baseline Smoothing	ortizam	04/10/19 12:41
1,3-Dinitrobenzene	23.11	Baseline Smoothing	ortizam	04/10/19 12:41
1,3,5-Trinitrobenzene	24.71	Baseline Smoothing	ortizam	04/10/19 12:41
2-Nitrotoluene	27.71	Baseline Smoothing	ortizam	04/10/19 12:42
4-Nitrotoluene	27.71	Baseline Smoothing	ortizam	04/10/19 12:42
3-Nitrotoluene	28.10	Baseline Smoothing	ortizam	04/10/19 12:42
3,5-Dinitroaniline	29.18	Baseline Smoothing	ortizam	04/10/19 12:42
RDX	29.95	Baseline Smoothing	ortizam	04/10/19 12:42
2,4-Dinitrotoluene	30.75	Baseline Smoothing	ortizam	04/10/19 12:42
2,6-Dinitrotoluene	31.48	Baseline Smoothing	ortizam	04/10/19 12:42
2-Amino-4,6-dinitrotoluene	33.14	Baseline Smoothing	ortizam	04/10/19 12:41
4-Amino-2,6-dinitrotoluene	33.39	Baseline Smoothing	ortizam	04/10/19 12:41
3,4-Dinitrotoluene	34.27	Baseline Smoothing	ortizam	04/10/19 12:41
2,4,6-Trinitrotoluene	34.63	Baseline Smoothing	ortizam	04/10/19 12:41
HMX	35.87	Baseline Smoothing	ortizam	04/10/19 12:40
Nitroglycerin	36.50	Baseline Smoothing	ortizam	04/10/19 12:42

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 280-123009-1

SDG No.:

Instrument ID: LC12 Analysis Batch Number: 287393

Lab Sample ID: STD2 320-287393/4 IC Client Sample ID:

Date Analyzed: 04/09/19 23:04 Lab File ID: H000033.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrobenzene	20.84	Baseline Smoothing	ortizam	04/10/19 12:45
2-Nitrotoluene	27.66	Peak not integrated	ortizam	04/10/19 12:44
4-Nitrotoluene	27.66	Unspecified	ortizam	04/10/19 12:44
3-Nitrotoluene	28.09	Peak not integrated	ortizam	04/10/19 12:44
3,5-Dinitroaniline	29.05	Baseline Smoothing	ortizam	04/10/19 12:44
RDX	29.93	Baseline Smoothing	ortizam	04/10/19 12:44
2,4-Dinitrotoluene	30.62	Baseline Smoothing	ortizam	04/10/19 12:44
2,6-Dinitrotoluene	31.47	Baseline Smoothing	ortizam	04/10/19 12:44
2-Amino-4,6-dinitrotoluene	33.09	Split Peak	ortizam	04/10/19 12:45
4-Amino-2,6-dinitrotoluene	33.38	Split Peak	ortizam	04/10/19 12:45
PETN	40.90	Baseline Smoothing	ortizam	04/10/19 12:45

Lab Sample ID: STD3 320-287393/5 IC Client Sample ID:

Date Analyzed: 04/10/19 00:02 Lab File ID: H000034.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Amino-4,6-dinitrotoluene	33.13	Baseline Smoothing	ortizam	04/10/19 12:46
4-Amino-2,6-dinitrotoluene	33.38	Baseline Smoothing	ortizam	04/10/19 12:46
3,4-Dinitrotoluene	34.25	Baseline Smoothing	ortizam	04/10/19 12:46
2,4,6-Trinitrotoluene	34.60	Baseline Smoothing	ortizam	04/10/19 12:46
Nitroglycerin	36.50	Baseline Smoothing	ortizam	04/10/19 12:46
PETN	40.92	Baseline Smoothing	ortizam	04/10/19 12:46

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 280-123009-1

SDG No.:

Instrument ID: LC12 Analysis Batch Number: 287393

Lab Sample ID: STD4 320-287393/6 IC Client Sample ID:

Date Analyzed: 04/10/19 01:00 Lab File ID: H000035.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Amino-4,6-dinitrotoluene	33.15	Baseline Smoothing	ortizam	04/10/19 12:42
4-Amino-2,6-dinitrotoluene	33.40	Baseline Smoothing	ortizam	04/10/19 12:42
3,4-Dinitrotoluene	34.26	Baseline Smoothing	ortizam	04/10/19 12:42
2,4,6-Trinitrotoluene	34.63	Baseline Smoothing	ortizam	04/10/19 12:42

Lab Sample ID: STD5 320-287393/7 IC Client Sample ID:

Date Analyzed: 04/10/19 01:57 Lab File ID: H000036.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
3,4-Dinitrotoluene	34.21	Peak assignment corrected	cartiera	04/12/19 12:27

Lab Sample ID: STD2 320-287393/14 IC Client Sample ID:

Date Analyzed: 04/10/19 09:38 Lab File ID: H000044.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
MNX	26.05	Peak not integrated	ortizam	04/10/19 13:05

Lab Sample ID: STD3 320-287393/15 IC Client Sample ID:

Date Analyzed: 04/10/19 10:35 Lab File ID: H000045.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
DNX	21.97	Split Peak	ortizam	04/10/19 13:06
MNX	26.01	Baseline Smoothing	ortizam	04/10/19 13:06

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 280-123009-1

SDG No.:

Instrument ID: LC12 Analysis Batch Number: 294594

Lab Sample ID: STD1 320-294594/4 IC Client Sample ID:

Date Analyzed: 05/14/19 16:46 Lab File ID: N000002.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3,5-Trinitrobenzene	26.71	Baseline Smoothing	ortizam	05/15/19 08:45
2-Nitrotoluene	29.24	Incomplete Integration	ortizam	05/15/19 08:46
4-Nitrotoluene	29.24	Incomplete Integration	ortizam	05/15/19 08:46
3-Nitrotoluene	29.75	Baseline Smoothing	ortizam	05/15/19 08:45
3,5-Dinitroaniline	30.61	Baseline Smoothing	ortizam	05/15/19 08:45
RDX	31.37	Baseline Smoothing	ortizam	05/15/19 08:45
2-Amino-4,6-dinitrotoluene	33.96	Baseline Smoothing	ortizam	05/15/19 08:45
4-Amino-2,6-dinitrotoluene	34.21	Baseline Smoothing	ortizam	05/15/19 08:45
2,4,6-Trinitrotoluene	35.44	Baseline Smoothing	ortizam	05/15/19 08:45
HMX	36.27	Baseline Smoothing	ortizam	05/15/19 08:45
Tetryl	37.89	Baseline Smoothing	ortizam	05/15/19 08:45

Lab Sample ID: STD2 320-294594/5 IC Client Sample ID:

Date Analyzed: 05/14/19 17:43 Lab File ID: N000003.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrobenzene	22.17	Baseline Smoothing	ortizam	05/15/19 08:46
2-Amino-4,6-dinitrotoluene	33.94	Baseline Smoothing	ortizam	05/15/19 08:47
4-Amino-2,6-dinitrotoluene	34.19	Baseline Smoothing	ortizam	05/15/19 08:47

Lab Sample ID: STD3 320-294594/6 IC Client Sample ID:

Date Analyzed: 05/14/19 18:41 Lab File ID: N000004.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrobenzene	22.23	Baseline Smoothing	ortizam	05/15/19 08:47
2,4,6-Trinitrotoluene	35.42	Split Peak	ortizam	05/15/19 08:48

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 280-123009-1

SDG No.:

Instrument ID: LC12 Analysis Batch Number: 294594

Lab Sample ID: STD4 320-294594/7 IC Client Sample ID:

Date Analyzed: 05/14/19 19:38 Lab File ID: N000005.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,4,6-Trinitrotoluene	35.41	Split Peak	ortizam	05/15/19 08:49

Lab Sample ID: STD5 320-294594/8 IC Client Sample ID:

Date Analyzed: 05/14/19 20:36 Lab File ID: N000006.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,4,6-Trinitrotoluene	35.38	Split Peak	ortizam	05/15/19 08:49

Lab Sample ID: STD6 320-294594/9 IC Client Sample ID:

Date Analyzed: 05/14/19 21:33 Lab File ID: N000007.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,4,6-Trinitrotoluene	35.40	Split Peak	ortizam	05/15/19 08:50

Lab Sample ID: STD7 320-294594/10 IC Client Sample ID:

Date Analyzed: 05/14/19 22:31 Lab File ID: N000008.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,4,6-Trinitrotoluene	35.39	Split Peak	ortizam	05/15/19 08:51

Lab Sample ID: STD2 320-294594/14 IC Client Sample ID:

Date Analyzed: 05/15/19 02:21 Lab File ID: N000012.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
TNX	17.78	Baseline Smoothing	ortizam	05/15/19 09:38
DNX	23.21	Baseline Smoothing	ortizam	05/15/19 09:38
MNX	27.50	Baseline Smoothing	ortizam	05/15/19 09:38

8330A

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 280-123009-1

SDG No.:

Instrument ID: LC12 Analysis Batch Number: 295993

Lab Sample ID: MB 320-291065/1-A Client Sample ID:

Date Analyzed: 05/23/19 16:57 Lab File ID: U000053.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3-Dinitrobenzene		Invalid Compound ID	cartiera	05/24/19 09:43
2,4,6-Trinitrotoluene		Invalid Compound ID	cartiera	05/24/19 09:43
2,4-Dinitrotoluene		Invalid Compound ID	cartiera	05/24/19 09:43
2,6-Dinitrotoluene		Invalid Compound ID	cartiera	05/24/19 09:43
2-Amino-4,6-dinitrotoluene		Invalid Compound ID	cartiera	05/24/19 09:43
2-Nitrotoluene		Invalid Compound ID	cartiera	05/24/19 09:43
3-Nitrotoluene		Invalid Compound ID	cartiera	05/24/19 09:43
4-Amino-2,6-dinitrotoluene		Invalid Compound ID	cartiera	05/24/19 09:43
4-Nitrotoluene		Invalid Compound ID	cartiera	05/24/19 09:43
HMX		Invalid Compound ID	cartiera	05/24/19 09:43
MNX		Invalid Compound ID	cartiera	05/24/19 09:43
Nitrobenzene		Invalid Compound ID	cartiera	05/24/19 09:43
RDX		Invalid Compound ID	cartiera	05/24/19 09:43
Tetryl		Invalid Compound ID	cartiera	05/24/19 09:43

Lab Sample ID: LCS 320-291065/2-A Client Sample ID:

Date Analyzed: 05/23/19 17:55 Lab File ID: U000054.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,4-Dinitrotoluene	32.23	Baseline Smoothing	cartiera	05/24/19 09:48
2,6-Dinitrotoluene	32.93	Baseline Smoothing	cartiera	05/24/19 09:48
2-Amino-4,6-dinitrotoluene	33.95	Baseline Smoothing	cartiera	05/24/19 09:48
4-Amino-2,6-dinitrotoluene	34.19	Baseline Smoothing	cartiera	05/24/19 09:48
2,4,6-Trinitrotoluene	35.41	Split Peak	cartiera	05/24/19 09:48

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 280-123009-1

SDG No.:

Instrument ID: LC12 Analysis Batch Number: 295993

Lab Sample ID: LCSD 320-291065/3-A Client Sample ID:

Date Analyzed: 05/23/19 18:53 Lab File ID: U000055.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Nitrotoluene	29.22	Baseline Smoothing	cartiera	05/24/19 09:52
4-Nitrotoluene	29.22	Baseline Smoothing	cartiera	05/24/19 09:52
3-Nitrotoluene	29.81	Baseline Smoothing	cartiera	05/24/19 09:52
RDX	31.40	Baseline Smoothing	cartiera	05/24/19 09:52
2,4-Dinitrotoluene	32.24	Baseline Smoothing	cartiera	05/24/19 09:52
2,6-Dinitrotoluene	32.92	Baseline Smoothing	cartiera	05/24/19 09:52
2-Amino-4,6-dinitrotoluene	33.93	Baseline Smoothing	cartiera	05/24/19 09:52
4-Amino-2,6-dinitrotoluene	34.18	Baseline Smoothing	cartiera	05/24/19 09:52
2,4,6-Trinitrotoluene	35.40	Split Peak	cartiera	05/24/19 09:51

Lab Sample ID: CCV 320-295993/51 Client Sample ID:

Date Analyzed: 05/24/19 01:36 Lab File ID: U000062.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,4,6-Trinitrotoluene	35.40	Split Peak	cartiera	05/24/19 09:41

Lab Sample ID: 280-123009-1 Client Sample ID: SP-S2

Date Analyzed: 05/24/19 06:24 Lab File ID: U000067.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,4-Dinitrotoluene		Invalid Compound ID	cartiera	05/24/19 10:27
2-Nitrotoluene		Invalid Compound ID	cartiera	05/24/19 10:27
3-Nitrotoluene		Invalid Compound ID	cartiera	05/24/19 10:27
4-Nitrotoluene		Invalid Compound ID	cartiera	05/24/19 10:27
Nitrobenzene		Invalid Compound ID	cartiera	05/24/19 10:27
Tetryl		Invalid Compound ID	cartiera	05/24/19 10:28

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 280-123009-1

SDG No.:

Instrument ID: LC12 Analysis Batch Number: 295993

Lab Sample ID: 280-123009-2 Client Sample ID: SP-S6

Date Analyzed: 05/24/19 07:21 Lab File ID: U000068.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3-Dinitrobenzene		Invalid Compound ID	cartiera	05/24/19 10:28
2,4-Dinitrotoluene		Invalid Compound ID	cartiera	05/24/19 10:28
2,6-Dinitrotoluene		Invalid Compound ID	cartiera	05/24/19 10:28
2-Nitrotoluene		Invalid Compound ID	cartiera	05/24/19 10:28
3-Nitrotoluene		Invalid Compound ID	cartiera	05/24/19 10:28
4-Nitrotoluene		Invalid Compound ID	cartiera	05/24/19 10:28
Nitrobenzene		Invalid Compound ID	cartiera	05/24/19 10:28
Tetryl		Invalid Compound ID	cartiera	05/24/19 10:28
HMX	36.22	Split Peak	cartiera	05/24/19 10:28

Lab Sample ID: 280-123009-3 Client Sample ID: SP-S8

Date Analyzed: 05/24/19 08:19 Lab File ID: U000069.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3-Dinitrobenzene		Invalid Compound ID	cartiera	05/24/19 10:29
2,4-Dinitrotoluene		Invalid Compound ID	cartiera	05/24/19 10:29
2,6-Dinitrotoluene		Invalid Compound ID	cartiera	05/24/19 10:29
2-Amino-4,6-dinitrotoluene		Invalid Compound ID	cartiera	05/24/19 10:29
2-Nitrotoluene		Invalid Compound ID	cartiera	05/24/19 10:29
3-Nitrotoluene		Invalid Compound ID	cartiera	05/24/19 10:29
4-Amino-2,6-dinitrotoluene		Invalid Compound ID	cartiera	05/24/19 10:29
4-Nitrotoluene		Invalid Compound ID	cartiera	05/24/19 10:29
MNX		Invalid Compound ID	cartiera	05/24/19 10:29
Nitrobenzene		Invalid Compound ID	cartiera	05/24/19 10:29
RDX	31.42	Incomplete Integration	cartiera	05/24/19 10:42
3,4-Dinitrotoluene	34.81	Baseline Smoothing	cartiera	05/24/19 10:29
2,4,6-Trinitrotoluene	35.39	Baseline Smoothing	cartiera	05/24/19 10:29
HMX	36.23	Baseline Smoothing	cartiera	05/24/19 10:29

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 280-123009-1

SDG No.:

Instrument ID: LC12 Analysis Batch Number: 295993

Lab Sample ID: 280-123009-4 Client Sample ID: SP-E1

Date Analyzed: 05/24/19 09:16 Lab File ID: U000070.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3-Dinitrobenzene		Invalid Compound ID	cartiera	05/24/19 10:30
2,4-Dinitrotoluene		Invalid Compound ID	cartiera	05/24/19 10:31
2,6-Dinitrotoluene		Invalid Compound ID	cartiera	05/24/19 10:31
2-Amino-4,6-dinitrotoluene		Invalid Compound ID	cartiera	05/24/19 10:31
2-Nitrotoluene		Invalid Compound ID	cartiera	05/24/19 10:31
3-Nitrotoluene		Invalid Compound ID	cartiera	05/24/19 10:31
4-Amino-2,6-dinitrotoluene		Invalid Compound ID	cartiera	05/24/19 10:31
4-Nitrotoluene		Invalid Compound ID	cartiera	05/24/19 10:31
Nitrobenzene		Invalid Compound ID	cartiera	05/24/19 10:30
1,3,5-Trinitrobenzene	26.64	Incomplete Integration	cartiera	05/24/19 10:31
3,4-Dinitrotoluene	34.80	Baseline Smoothing	cartiera	05/24/19 10:31
2,4,6-Trinitrotoluene	35.39	Baseline Smoothing	cartiera	05/24/19 10:31
HMX	36.33	Baseline Smoothing	cartiera	05/24/19 10:32

Lab Sample ID: 280-123009-5 Client Sample ID: SP-S22

Date Analyzed: 05/24/19 10:14 Lab File ID: U000071.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,4-Dinitrotoluene		Invalid Compound ID	cartiera	05/24/19 13:13
2-Nitrotoluene		Invalid Compound ID	cartiera	05/24/19 13:12
3-Nitrotoluene		Invalid Compound ID	cartiera	05/24/19 13:12
4-Nitrotoluene		Invalid Compound ID	cartiera	05/24/19 13:12
MNX		Invalid Compound ID	cartiera	05/24/19 13:12
Nitrobenzene		Invalid Compound ID	cartiera	05/24/19 13:11
Tetryl		Invalid Compound ID	cartiera	05/24/19 13:13
1,3-Dinitrobenzene	24.41	Incomplete Integration	cartiera	05/24/19 13:11
1,3,5-Trinitrobenzene	26.62	Baseline Smoothing	cartiera	05/24/19 13:12
2,6-Dinitrotoluene	32.87	Baseline Smoothing	cartiera	05/24/19 13:13

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 280-123009-1

SDG No.:

Instrument ID: LC12 Analysis Batch Number: 295993

Lab Sample ID: 280-123009-1 DL Client Sample ID: SP-S2 DL

Date Analyzed: 05/24/19 11:12 Lab File ID: U000072.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3-Dinitrobenzene		Invalid Compound ID	cartiera	05/24/19 13:14
2,4-Dinitrotoluene		Invalid Compound ID	cartiera	05/24/19 13:14
2,6-Dinitrotoluene		Invalid Compound ID	cartiera	05/24/19 13:14
2-Nitrotoluene		Invalid Compound ID	cartiera	05/24/19 13:14
3-Nitrotoluene		Invalid Compound ID	cartiera	05/24/19 13:14
4-Nitrotoluene		Invalid Compound ID	cartiera	05/24/19 13:14
Nitrobenzene		Invalid Compound ID	cartiera	05/24/19 13:14
RDX		Invalid Compound ID	cartiera	05/24/19 13:14
Tetryl		Invalid Compound ID	cartiera	05/24/19 13:14

Lab Sample ID: 280-123009-5 DL Client Sample ID: SP-S22 DL

Date Analyzed: 05/24/19 12:09 Lab File ID: U000073.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3-Dinitrobenzene		Invalid Compound ID	cartiera	05/24/19 13:14
2,4-Dinitrotoluene		Invalid Compound ID	cartiera	05/24/19 13:14
2,6-Dinitrotoluene		Invalid Compound ID	cartiera	05/24/19 13:14
2-Nitrotoluene		Invalid Compound ID	cartiera	05/24/19 13:14
3-Nitrotoluene		Invalid Compound ID	cartiera	05/24/19 13:14
4-Nitrotoluene		Invalid Compound ID	cartiera	05/24/19 13:14
MNX		Invalid Compound ID	cartiera	05/24/19 13:14
Nitrobenzene		Invalid Compound ID	cartiera	05/24/19 13:14
RDX		Invalid Compound ID	cartiera	05/24/19 13:14
Tetryl		Invalid Compound ID	cartiera	05/24/19 13:14

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 280-123009-1

SDG No.:

Instrument ID: LC12 Analysis Batch Number: 295993

Lab Sample ID: CCV 320-295993/72 Client Sample ID:

Date Analyzed: 05/24/19 13:07 Lab File ID: U000074.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,4,6-Trinitrotoluene	35.35	Split Peak	cartiera	05/24/19 15:48

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
ms 77 alt RL_01198	05/08/19	05/07/19	2%HNO3/0.5% HCl, Lot 216908/217157	50 mL	1 ppm Se_00013	0.25 mL	Selenium	5 ppb
.1 ppm Se_00013	06/30/19	04/17/19	2%HNO3/0.5% HCl, Lot 185595/187518	50 mL	1000 Se_00020	0.05 mL	Selenium	1 mg/L
..1000 Se_00020	03/11/20	Inorganic Ventures, Lot m2-SE663138			(Purchased Reagent)		Selenium	1000 mg/L
ms 77 cal std_02028	05/08/19	05/07/19	2%HNO3/0.5% HCl, Lot 216908/217157	250 mL	MS CALSTD-1_00132	0.25 mL	Selenium	100 ug/L
.MS CALSTD-1_00132	04/10/20	CPI, Lot 982731-1			(Purchased Reagent)		Selenium	100 mg/L
ms 77 ccv_02039	05/08/19	05/07/19	2%HNO3/0.5% HCl, Lot 216908/217157	200 mL	ms 77 cal std_02028	100 mL	Selenium	50 ug/L
.ms 77 cal std_02028	05/08/19	05/07/19	2%HNO3/0.5% HCl, Lot 216908/217157	250 mL	MS CALSTD-1_00132	0.25 mL	Selenium	100 ug/L
..MS CALSTD-1_00132	04/10/20	CPI, Lot 982731-1			(Purchased Reagent)		Selenium	100 mg/L
ms 77 icsa_00417	05/10/19	05/03/19	2%HNO3/0.5% HCl, Lot 200458/198300	100 mL	MS ICSA STOCK_00032	10 mL	Mo	2 mg/L
.MS ICSA STOCK_00032	04/15/20	cpi, Lot 982746-1			(Purchased Reagent)		Mo	20 mg/L
ms 77 icsab_00417	05/10/19	05/03/19	2%HNO3/0.5% HCl, Lot 200458/198300	100 mL	MS ICSA STOCK_00032	10 mL	Mo	2.1 mg/L
					MS ICVMIX--4_00001	0.1 mL	Ag	0.1 mg/L
							Zn	0.1 mg/L
					MS icvMIX-1_00001	0.1 mL	As	0.1 mg/L
							Ba	0.1 mg/L
							Be	0.1 mg/L
							Cd	0.1 mg/L
							Co	0.1 mg/L
							Cr	0.1 mg/L
							Cu	0.1 mg/L
							Mn	0.1 mg/L
							Mo	2.1 mg/L
							Ni	0.1 mg/L
							Pb	0.1 mg/L
							Sb	0.1 mg/L
							Selenium	0.1 mg/L
							Tl	0.1 mg/L
							V	0.1 mg/L
.MS ICSA STOCK_00032	04/15/20	cpi, Lot 982746-1			(Purchased Reagent)		Mo	20 mg/L
.MS ICVMIX--4_00001	05/21/20	CPI, Lot 10088633-10			(Purchased Reagent)		Ag	100 mg/L
							Zn	100 mg/L
.MS icvMIX-1_00001	04/15/20	CPI, Lot 982733-1			(Purchased Reagent)		As	100 mg/L
							Ba	100 mg/L
							Be	100 mg/L
							Cd	100 mg/L
							Co	100 mg/L
							Cr	100 mg/L
							Cu	100 mg/L
							Mn	100 mg/L
							Mo	100 mg/L

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Ni	100 mg/L
							Pb	100 mg/L
							Sb	100 mg/L
							Selenium	100 mg/L
							Tl	100 mg/L
							V	100 mg/L
ms 77 icv_02035	05/08/19	05/07/19	2%HNO3/0.5% HCl, Lot 216908/217157	250 mL	MS icvMIX-1_00001	0.1 mL	Selenium	40 ug/L
.MS icvMIX-1_00001	04/15/20		CPI, Lot 982733-1		(Purchased Reagent)		Selenium	100 mg/L
MS 77 LLCCV_01842	05/08/19	05/07/19	2%HNO3/0.5% HCl, Lot 216908/217157	100 mL	MS LLCCV_00001	1 mL	Selenium	0.005 mg/L
.MS LLCCV_00001	05/15/20		CPI, Lot 10088633-8		(Purchased Reagent)		Selenium	0.5 mg/L
MS CALSTD-1_00136	04/01/20		Inorganic Ventures, Lot P2-MEB675675		(Purchased Reagent)		Ag	20 mg/L
							As	20 mg/L
							Ba	20 mg/L
							Be	20 mg/L
							Cd	20 mg/L
							Co	20 mg/L
							Cr	20 mg/L
							Cu	20 mg/L
							Mn	20 mg/L
							Ni	20 mg/L
							Pb	20 mg/L
							Selenium	20 mg/L
							Th	20 mg/L
							Tl	20 mg/L
							U	20 mg/L
							V	20 mg/L
							Zn	20 mg/L
MS spike 2_00080	07/06/19	04/26/19	1% HNO3, Lot 192582	250 mL	1000 B_00017	5 mL	B	20 mg/L
					1000 Li_00040	10 mL	Li	40 mg/L
					1000 Mo_00013	5 mL	Mo	20 mg/L
					1000 Sb_00019	5 mL	Sb	20 mg/L
					1000 Sn_00016	5 mL	Sn	20 mg/L
					1000 Sr_00011	5 mL	Sr	20 mg/L
					1000 W IV_00014	5 mL	W	20 mg/L
					1000 Zr_00019	5 mL	Zr	20 mg/L
					10000 Al_00019	5 mL	Al	200 mg/L
					10000 Fe_00021	5 mL	Fe	200 mg/L
.1000 B_00017	07/25/19		Inorganic Ventures, Lot M2-B663296		(Purchased Reagent)		B	1000 mg/L
.1000 Li_00040	05/16/20		CPI, Lot 751942-43		(Purchased Reagent)		Li	1000 mg/L
.1000 Mo_00013	08/31/19		Inorganic Ventures, Lot M2-MO657085		(Purchased Reagent)		Mo	1000 mg/L
.1000 Sb_00019	11/30/19		Inorganic Ventures, Lot N2-SB665459		(Purchased Reagent)		Sb	1000 mg/L
.1000 Sn_00016	07/06/21		Inorganic Ventures, Lot M2-SN659324		(Purchased Reagent)		Sn	1000 mg/L
.1000 Sr_00011	08/24/19		Inorganic Ventures, Lot M2-SR658331		(Purchased Reagent)		Sr	1000 mg/L
.1000 W IV_00014	07/06/19		Inorganic Ventures, Lot n2-w664865		(Purchased Reagent)		W	1000 mg/L
.1000 Zr_00019	12/11/19		CPI, Lot 171418-22		(Purchased Reagent)		Zr	1000 mg/L

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.10000 Al_00019	04/15/20	Inorganic Ventures, Lot K2-AL653003			(Purchased Reagent)		Al	10000 mg/L
.10000 Fe_00021	08/08/19	Inorganic Ventures, Lot M2-FE659835			(Purchased Reagent)		Fe	10000 mg/L
MV-BFB_00028							1,2-Dichloroethene, Total	
							1,2-Dichloroethene, Total (URS)	
							1,3-Dichloropropene, Total	
							TAH	
							Tentatively Identified Compound	
							Total BTEX	
							Trihalomethanes, Total	
							Xylenes, Total	
							Xylenes, Total (URS)	
					MV-STS110N1_00066	1.25 mL	BFB	25 ug/mL
.MV-STS110N1_00066	10/31/19	Ultra Scientific, Lot CH-3248Z			(Purchased Reagent)		BFB	2000 ug/mL
mv-Cent IS/SS_00002	03/26/20	03/07/19	P&T Methanol, Lot 1996628	5 mL	mv-8260 IS/SS_00001	1 mL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							1,4-Dichlorobenzene-d4	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Chlorobenzene-d5	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Fluorobenzene	50 ug/mL
							TBA-d9 (IS)	1000 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
.mv-8260 IS/SS_00001	10/31/22	Restek, Lot A0131478			(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	250 ug/mL
							1,4-Dichlorobenzene-d4	250 ug/mL
							4-Bromofluorobenzene (Surr)	250 ug/mL
							Chlorobenzene-d5	250 ug/mL
							Dibromofluoromethane (Surr)	250 ug/mL
							Fluorobenzene	250 ug/mL
							TBA-d9 (IS)	5000 ug/mL
							Toluene-d8 (Surr)	250 ug/mL
mv-Cent IS_00002	05/12/19	04/04/19	P&T Methanol, Lot 1996628	5 mL	MV-568718-D_00016	1 mL	1,4-Dichlorobenzene-d4	50 ug/mL
							Chlorobenzene-d5	50 ug/mL
							Fluorobenzene	50 ug/mL
							TBA-d9 (IS)	1000 ug/mL
.MV-568718-D_00016	07/31/23	RESTEK, Lot A0139459			(Purchased Reagent)		1,4-Dichlorobenzene-d4	250 ug/mL
							Chlorobenzene-d5	250 ug/mL
							Fluorobenzene	250 ug/mL
							TBA-d9 (IS)	5000 ug/mL
MV-Gas A_00023	05/10/19	05/03/19	P&T Methanol, Lot 198123	25 mL	MV-569722_00010	500 uL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Dichlorofluoromethane	50 ug/mL

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
					MV-569723_00005	500 uL	2-Chloroethyl vinyl ether	50 ug/mL
.MV-569722_00010	11/30/21		RESTEK, Lot A0143158		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.MV-569723_00005	10/31/21		RESTEK, Lot A0142584		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
MV-Gas B_00026	05/10/19	05/03/19	P&T Methanol, Lot 198123	25 mL	MV-569722.sec_00010	500 uL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
.MV-569722.sec_00010	10/31/21		RESTEK, Lot A0142594		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
MV-MegaMain B_00012	05/31/19	04/10/19	P&T Methanol, Lot 181124	50 mL	MV-569721.sec_00005	800 uL	2-Butanone (MEK)	200 ug/mL
							2-Hexanone	200 ug/mL
							4-Methyl-2-pentanone (MIBK)	200 ug/mL
							Acetone	200 ug/mL
					MV-571992.sec_00002	1000 uL	1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							Benzene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Cyclohexane	50 ug/mL
							Dibromochloromethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Ethylene Dibromide	50 ug/mL
							Isopropylbenzene	50 ug/mL
							Methyl acetate	100 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylcyclohexane	50 ug/mL
							Methylene Chloride	50 ug/mL
							Styrene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							Trichloroethene	50 ug/mL
							Xylenes, Total	100 ug/mL
.MV-569721.sec_00005	01/31/20		RESTEK, Lot A0113880		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MV-571992.sec_00002	06/30/19		RESTEK, Lot A0123775		(Purchased Reagent)		1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							Benzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dibromochloromethane	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Ethylene Dibromide	2500 ug/mL
							Isopropylbenzene	2500 ug/mL
							Methyl acetate	5000 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							Styrene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							Trichloroethene	2500 ug/mL
							Xylenes, Total	5000 ug/mL
MV-MegaMainA_00014	05/31/19	04/18/19	P&T Methanol, Lot 181124	50 mL	MV-568720_00024	1250 uL	Acrolein	493.75 ug/mL
					MV-569721_00006	800 uL	2-Butanone (MEK)	200 ug/mL
							2-Hexanone	200 ug/mL
							4-Methyl-2-pentanone (MIBK)	200 ug/mL
							Acetone	200 ug/mL
					MV-569724_00019	1000 uL	Vinyl acetate	100 ug/mL
					MV-569727_00008	4000 uL	Cyclohexanone	2000 ug/mL
					MV-571992_00002	1000 uL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,4-Dioxane	1000 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							2-Methyl-2-propanol	500 ug/mL
							3-Chloro-1-propene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Acrylonitrile	500 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Cyclohexane	50 ug/mL
							Dibromochloromethane	50 ug/mL
							Dibromomethane	50 ug/mL
							Ethyl ether	50 ug/mL
							Ethyl methacrylate	50 ug/mL
							Ethylbenzene	50 ug/mL
							Ethylene Dibromide	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Hexane	50 ug/mL
							Iodomethane	50 ug/mL
							Isobutyl alcohol	1250 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	50 ug/mL
							Methyl acetate	100 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylcyclohexane	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Tetrahydrofuran	100 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							trans-1,4-Dichloro-2-butene	50 ug/mL
							Trichloroethene	50 ug/mL
					MV-CUS17739_00004	2500 uL	1-Chlorohexane	50 ug/mL
							2-Pentanone	200 ug/mL
							sec-Butyl Alcohol	1500 ug/mL
.MV-568720_00024	05/31/19		RESTEK, Lot A01413013		(Purchased Reagent)		Acrolein	19750 ug/mL
.MV-569721_00006	10/31/20		RESTEK, Lot A0131486		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MV-569724_00019	07/31/19		RESTEK, Lot A0144661		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
.MV-569727_00008	08/31/21		RESTEK, Lot A0140237		(Purchased Reagent)		Cyclohexanone	25000 ug/mL
.MV-571992_00002	08/31/19		RESTEK, Lot A0123711		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							3-Chloro-1-propene	2500 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added	Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dibromochloromethane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Ethyl ether	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Ethylene Dibromide	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl acetate	5000 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
.MV-CUS17739_00004	10/31/20		Ultra, Lot CS-4707		(Purchased Reagent)		1-Chlorohexane	1000 ug/mL
							2-Pentanone	4000 ug/mL
							sec-Butyl Alcohol	30000 ug/mL
MV-MegaMainA_00014	05/31/19	04/18/19	P&T Methanol, Lot 181124	50 mL	MV-571992_00002	1000 uL	Xylenes, Total	100 ug/mL
.MV-571992_00002	08/31/19		RESTEK, Lot A0123711		(Purchased Reagent)		Xylenes, Total	5000 ug/mL
pH 7.0 Buffer_00255	03/31/21		Ricca, Lot 2903G50		(Purchased Reagent)		pH adj. to 25 deg C	7 SU
pH 7.0 Buffer_00257	04/30/20		SPEX, Lot 1-53MJX		(Purchased Reagent)		pH adj. to 25 deg C	7 SU
TSS Daily STD_00717	07/26/19	04/26/19	Di Water, Lot _	1000 mL	TSS STD_00035	0.1 g	Total Suspended Solids	100 mg/L
.TSS STD_00035	07/13/20		AccuStandard, Lot 217045086-01		(Purchased Reagent)		Total Suspended Solids	1 g/g

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
HP34DNTSU_00112	10/11/19	04/11/19	Acetonitrile, Lot Acetonitrile 00117	25 mL	HP8330SU_00078	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
.HP8330SU_00078	10/31/22	Restek, Lot A0131485			(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
HP8330IC_00061	06/04/19	02/08/19	25% 0.1%HOAc in ACN, Lot 0.1% AC/ACN/H2O-034	25 mL	HP8330TA_00063	10 uL	1,3,5-Trinitrobenzene	200 ng/mL
							1,3-Dinitrobenzene	200 ng/mL
							2,4,6-Trinitrotoluene	200 ng/mL
							2,4-Dinitrotoluene	200 ng/mL
							2,6-Dinitrotoluene	200 ng/mL
							2-Amino-4,6-dinitrotoluene	200 ng/mL
							2-Nitrotoluene	200 ng/mL
							3-Nitrotoluene	200 ng/mL
							4-Amino-2,6-dinitrotoluene	200 ng/mL
							4-Nitrotoluene	200 ng/mL
							HMX	200 ng/mL
							Nitrobenzene	200 ng/mL
							RDX	200 ng/mL
							Tetryl	200 ng/mL
.HP8330TA_00063	12/06/19	AccuStandard, Lot 217101413			(Purchased Reagent)		1,3,5-Trinitrobenzene	500 ug/mL
							1,3-Dinitrobenzene	500 ug/mL
							2,4,6-Trinitrotoluene	500 ug/mL
							2,4-Dinitrotoluene	500 ug/mL
							2,6-Dinitrotoluene	500 ug/mL
							2-Amino-4,6-dinitrotoluene	500 ug/mL
							2-Nitrotoluene	500 ug/mL
							3-Nitrotoluene	500 ug/mL
							4-Amino-2,6-dinitrotoluene	500 ug/mL
							4-Nitrotoluene	500 ug/mL
							HMX	500 ug/mL
							Nitrobenzene	500 ug/mL
							RDX	500 ug/mL
							Tetryl	500 ug/mL
HP8330ICL_00048	05/30/19	02/08/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0034	50 mL	HP8330SP_00108	5 uL	1,3,5-Trinitrobenzene	5 ng/mL
							1,3-Dinitrobenzene	5 ng/mL
							2,4,6-Trinitrotoluene	5 ng/mL
							2,4-Dinitrotoluene	5 ng/mL
							2,6-Dinitrotoluene	5 ng/mL
							2-Amino-4,6-dinitrotoluene	5 ng/mL
							2-Nitrotoluene	5 ng/mL
							3-Nitrotoluene	5 ng/mL
							4-Amino-2,6-dinitrotoluene	5 ng/mL
							4-Nitrotoluene	5 ng/mL
							HMX	5 ng/mL
							Nitrobenzene	5 ng/mL
							RDX	5 ng/mL
							Tetryl	5 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.HP8330SP_00108	07/01/19	12/31/18	Acetonitrile, Lot Acetonitrile_00083	25 mL	HP8330TA_00061	1.25 mL	1,3,5-Trinitrobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							2,4,6-Trinitrotoluene	50 ug/mL
							2,4-Dinitrotoluene	50 ug/mL
							2,6-Dinitrotoluene	50 ug/mL
							2-Amino-4,6-dinitrotoluene	50 ug/mL
							2-Nitrotoluene	50 ug/mL
							3-Nitrotoluene	50 ug/mL
							4-Amino-2,6-dinitrotoluene	50 ug/mL
							4-Nitrotoluene	50 ug/mL
							HMX	50 ug/mL
							Nitrobenzene	50 ug/mL
							RDX	50 ug/mL
							Tetryl	50 ug/mL
..HP8330TA_00061	10/31/21		Restek, Lot A0136453		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
HP8330L1_00041	05/30/19	02/08/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0031	50 mL	HP8330L7_00036	0.5 mL	3,4-Dinitrotoluene	5 ng/mL
							3,5-Dinitroaniline	5 ng/mL
							1,3,5-Trinitrobenzene	5 ng/mL
							1,3-Dinitrobenzene	5 ng/mL
							2,4,6-Trinitrotoluene	5 ng/mL
							2,4-Dinitrotoluene	5 ng/mL
							2,6-Dinitrotoluene	5 ng/mL
							2-Amino-4,6-dinitrotoluene	5 ng/mL
							2-Nitrotoluene	5 ng/mL
							3-Nitrotoluene	5 ng/mL
							4-Amino-2,6-dinitrotoluene	5 ng/mL
							4-Nitrotoluene	5 ng/mL
							HMX	5 ng/mL
							Nitrobenzene	5 ng/mL
							RDX	5 ng/mL
							Tetryl	5 ng/mL
							Nitroglycerin	5 ng/mL
							PETN	5 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.HP8330L7_00036	05/30/19	02/07/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0031	200 mL	HP34DNTSU_00109	2 mL	3,4-Dinitrotoluene	500 ng/mL
					HP8330SP_00108	2 mL	3,5-Dinitroaniline	500 ng/mL
							1,3,5-Trinitrobenzene	500 ng/mL
							1,3-Dinitrobenzene	500 ng/mL
							2,4,6-Trinitrotoluene	500 ng/mL
							2,4-Dinitrotoluene	500 ng/mL
							2,6-Dinitrotoluene	500 ng/mL
							2-Amino-4,6-dinitrotoluene	500 ng/mL
							2-Nitrotoluene	500 ng/mL
							3-Nitrotoluene	500 ng/mL
							4-Amino-2,6-dinitrotoluene	500 ng/mL
							4-Nitrotoluene	500 ng/mL
							HMX	500 ng/mL
							Nitrobenzene	500 ng/mL
							RDX	500 ng/mL
							Tetryl	500 ng/mL
					HPNGPETNSP_00071	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 ng/mL
..HP34DNTSU_00109	07/29/19	01/29/19	Acetonitrile, Lot Acetonitrile_00109	25 mL	HP8330SU_00076	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
...HP8330SU_00076	05/26/27	AccuStandard, Lot 217051415			(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
..HP8330SP_00108	07/01/19	12/31/18	Acetonitrile, Lot Acetonitrile_00083	25 mL	HP35DNATA_00063	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00061	1.25 mL	1,3,5-Trinitrobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							2,4,6-Trinitrotoluene	50 ug/mL
							2,4-Dinitrotoluene	50 ug/mL
							2,6-Dinitrotoluene	50 ug/mL
							2-Amino-4,6-dinitrotoluene	50 ug/mL
							2-Nitrotoluene	50 ug/mL
							3-Nitrotoluene	50 ug/mL
							4-Amino-2,6-dinitrotoluene	50 ug/mL
							4-Nitrotoluene	50 ug/mL
							HMX	50 ug/mL
							Nitrobenzene	50 ug/mL
							RDX	50 ug/mL
							Tetryl	50 ug/mL
...HP35DNATA_00063	10/31/21	Restek, Lot A0136481			(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
...HP8330TA_00061	10/31/21	Restek, Lot A0136453			(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..HPNGPETNSP_00071	05/30/19	11/30/18	Methanol, Lot Methanol_00288	25 mL	HPNGTA_00061	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00058	1.25 mL	PETN	50 ug/mL
...HPNGTA_00061	08/31/23		Restek, Lot A0140953		(Purchased Reagent)		Nitroglycerin	1000 ug/mL
...HPPETNTA_00058	03/31/23		Restek, Lot A0136539		(Purchased Reagent)		PETN	1000 ug/mL
HP8330L1_00042	05/30/19	05/03/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0035	50 mL	HP8330L7_00036	0.5 mL	3,4-Dinitrotoluene	5 ng/mL
							3,5-Dinitroaniline	5 ng/mL
							1,3,5-Trinitrobenzene	5 ng/mL
							1,3-Dinitrobenzene	5 ng/mL
							2,4,6-Trinitrotoluene	5 ng/mL
							2,4-Dinitrotoluene	5 ng/mL
							2,6-Dinitrotoluene	5 ng/mL
							2-Amino-4,6-dinitrotoluene	5 ng/mL
							2-Nitrotoluene	5 ng/mL
							3-Nitrotoluene	5 ng/mL
							4-Amino-2,6-dinitrotoluene	5 ng/mL
							4-Nitrotoluene	5 ng/mL
							HMX	5 ng/mL
							Nitrobenzene	5 ng/mL
							RDX	5 ng/mL
							Tetryl	5 ng/mL
							Nitroglycerin	5 ng/mL
							PETN	5 ng/mL
.HP8330L7_00036	05/30/19	02/07/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0031	200 mL	HP34DNTSU_00109	2 mL	3,4-Dinitrotoluene	500 ng/mL
					HP8330SP_00108	2 mL	3,5-Dinitroaniline	500 ng/mL
							1,3,5-Trinitrobenzene	500 ng/mL
							1,3-Dinitrobenzene	500 ng/mL
							2,4,6-Trinitrotoluene	500 ng/mL
							2,4-Dinitrotoluene	500 ng/mL
							2,6-Dinitrotoluene	500 ng/mL
							2-Amino-4,6-dinitrotoluene	500 ng/mL
							2-Nitrotoluene	500 ng/mL
							3-Nitrotoluene	500 ng/mL
							4-Amino-2,6-dinitrotoluene	500 ng/mL
							4-Nitrotoluene	500 ng/mL
							HMX	500 ng/mL
							Nitrobenzene	500 ng/mL
							RDX	500 ng/mL
							Tetryl	500 ng/mL
					HPNGPETNSP_00071	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..HP34DNTSU_00109	07/29/19	01/29/19	Acetonitrile, Lot Acetonitrile_00109	25 mL	HP8330SU_00076	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
...HP8330SU_00076	05/26/27	AccuStandard, Lot 217051415			(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
..HP8330SP_00108	07/01/19	12/31/18	Acetonitrile, Lot Acetonitrile_00083	25 mL	HP35DNATA_00063	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00061	1.25 mL	1,3,5-Trinitrobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							2,4,6-Trinitrotoluene	50 ug/mL
							2,4-Dinitrotoluene	50 ug/mL
							2,6-Dinitrotoluene	50 ug/mL
							2-Amino-4,6-dinitrotoluene	50 ug/mL
							2-Nitrotoluene	50 ug/mL
							3-Nitrotoluene	50 ug/mL
							4-Amino-2,6-dinitrotoluene	50 ug/mL
							4-Nitrotoluene	50 ug/mL
							HMX	50 ug/mL
							Nitrobenzene	50 ug/mL
							RDX	50 ug/mL
							Tetryl	50 ug/mL
...HP35DNATA_00063	10/31/21	Restek, Lot A0136481			(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
...HP8330TA_00061	10/31/21	Restek, Lot A0136453			(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..HPNGPETNSP_00071	05/30/19	11/30/18	Methanol, Lot Methanol_00288	25 mL	HPNGTA_00061	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00058	1.25 mL	PETN	50 ug/mL
...HPNGTA_00061	08/31/23	Restek, Lot A0140953			(Purchased Reagent)		Nitroglycerin	1000 ug/mL
...HPPETNTA_00058	03/31/23	Restek, Lot A0136539			(Purchased Reagent)		PETN	1000 ug/mL
HP8330L2_00033	05/30/19	02/08/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0031	50 mL	HP8330L7_00036	1 mL	3,4-Dinitrotoluene	10 ng/mL
							3,5-Dinitroaniline	10 ng/mL
							1,3,5-Trinitrobenzene	10 ng/mL
							1,3-Dinitrobenzene	10 ng/mL
							2,4,6-Trinitrotoluene	10 ng/mL
							2,4-Dinitrotoluene	10 ng/mL
							2,6-Dinitrotoluene	10 ng/mL
							2-Amino-4,6-dinitrotoluene	10 ng/mL

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Nitrotoluene	10 ng/mL
							3-Nitrotoluene	10 ng/mL
							4-Amino-2,6-dinitrotoluene	10 ng/mL
							4-Nitrotoluene	10 ng/mL
							HMX	10 ng/mL
							Nitrobenzene	10 ng/mL
							RDX	10 ng/mL
							Tetryl	10 ng/mL
							Nitroglycerin	10 ng/mL
							PETN	10 ng/mL
.HP8330L7_00036	05/30/19	02/07/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0031	200 mL	HP34DNTSU_00109	2 mL	3,4-Dinitrotoluene	500 ng/mL
					HP8330SP_00108	2 mL	3,5-Dinitroaniline	500 ng/mL
							1,3,5-Trinitrobenzene	500 ng/mL
							1,3-Dinitrobenzene	500 ng/mL
							2,4,6-Trinitrotoluene	500 ng/mL
							2,4-Dinitrotoluene	500 ng/mL
							2,6-Dinitrotoluene	500 ng/mL
							2-Amino-4,6-dinitrotoluene	500 ng/mL
							2-Nitrotoluene	500 ng/mL
							3-Nitrotoluene	500 ng/mL
							4-Amino-2,6-dinitrotoluene	500 ng/mL
							4-Nitrotoluene	500 ng/mL
							HMX	500 ng/mL
							Nitrobenzene	500 ng/mL
							RDX	500 ng/mL
							Tetryl	500 ng/mL
					HPNGPETNSP_00071	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 ng/mL
..HP34DNTSU_00109	07/29/19	01/29/19	Acetonitrile, Lot Acetonitrile_00109	25 mL	HP8330SU_00076	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
...HP8330SU_00076	05/26/27	AccuStandard, Lot 217051415			(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
..HP8330SP_00108	07/01/19	12/31/18	Acetonitrile, Lot Acetonitrile_00083	25 mL	HP35DNATA_00063	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00061	1.25 mL	1,3,5-Trinitrobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							2,4,6-Trinitrotoluene	50 ug/mL
							2,4-Dinitrotoluene	50 ug/mL
							2,6-Dinitrotoluene	50 ug/mL
							2-Amino-4,6-dinitrotoluene	50 ug/mL
							2-Nitrotoluene	50 ug/mL
							3-Nitrotoluene	50 ug/mL
							4-Amino-2,6-dinitrotoluene	50 ug/mL
							4-Nitrotoluene	50 ug/mL
							HMX	50 ug/mL
							Nitrobenzene	50 ug/mL
							RDX	50 ug/mL
							Tetryl	50 ug/mL

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...HP35DNATA_00063	10/31/21		Restek, Lot A0136481		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
...HP8330TA_00061	10/31/21		Restek, Lot A0136453		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..HPNGPETNSP_00071	05/30/19	11/30/18	Methanol, Lot Methanol_00288	25 mL	HPNGTA_00061	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00058	1.25 mL	PETN	50 ug/mL
...HPNGTA_00061	08/31/23		Restek, Lot A0140953		(Purchased Reagent)		Nitroglycerin	1000 ug/mL
...HPPETNTA_00058	03/31/23		Restek, Lot A0136539		(Purchased Reagent)		PETN	1000 ug/mL
HP8330L3_00036	05/30/19	02/08/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0031	50 mL	HP8330L7_00036	2 mL	3,4-Dinitrotoluene	20 ng/mL
							3,5-Dinitroaniline	20 ng/mL
							1,3,5-Trinitrobenzene	20 ng/mL
							1,3-Dinitrobenzene	20 ng/mL
							2,4,6-Trinitrotoluene	20 ng/mL
							2,4-Dinitrotoluene	20 ng/mL
							2,6-Dinitrotoluene	20 ng/mL
							2-Amino-4,6-dinitrotoluene	20 ng/mL
							2-Nitrotoluene	20 ng/mL
							3-Nitrotoluene	20 ng/mL
							4-Amino-2,6-dinitrotoluene	20 ng/mL
							4-Nitrotoluene	20 ng/mL
							HMX	20 ng/mL
							Nitrobenzene	20 ng/mL
							RDX	20 ng/mL
							Tetryl	20 ng/mL
							Nitroglycerin	20 ng/mL
							PETN	20 ng/mL
.HP8330L7_00036	05/30/19	02/07/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0031	200 mL	HP34DNTSU_00109	2 mL	3,4-Dinitrotoluene	500 ng/mL
					HP8330SP_00108	2 mL	3,5-Dinitroaniline	500 ng/mL
							1,3,5-Trinitrobenzene	500 ng/mL
							1,3-Dinitrobenzene	500 ng/mL
							2,4,6-Trinitrotoluene	500 ng/mL
							2,4-Dinitrotoluene	500 ng/mL
							2,6-Dinitrotoluene	500 ng/mL
							2-Amino-4,6-dinitrotoluene	500 ng/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Nitrotoluene	500 ng/mL
							3-Nitrotoluene	500 ng/mL
							4-Amino-2,6-dinitrotoluene	500 ng/mL
							4-Nitrotoluene	500 ng/mL
							HMX	500 ng/mL
							Nitrobenzene	500 ng/mL
							RDX	500 ng/mL
							Tetryl	500 ng/mL
					HPNGPETNSP_00071	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 ng/mL
..HP34DNTSU_00109	07/29/19	01/29/19	Acetonitrile, Lot Acetonitrile_00109	25 mL	HP8330SU_00076	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
...HP8330SU_00076	05/26/27	AccuStandard, Lot 217051415			(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
..HP8330SP_00108	07/01/19	12/31/18	Acetonitrile, Lot Acetonitrile_00083	25 mL	HP35DNATA_00063	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00061	1.25 mL	1,3,5-Trinitrobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							2,4,6-Trinitrotoluene	50 ug/mL
							2,4-Dinitrotoluene	50 ug/mL
							2,6-Dinitrotoluene	50 ug/mL
							2-Amino-4,6-dinitrotoluene	50 ug/mL
							2-Nitrotoluene	50 ug/mL
							3-Nitrotoluene	50 ug/mL
							4-Amino-2,6-dinitrotoluene	50 ug/mL
							4-Nitrotoluene	50 ug/mL
							HMX	50 ug/mL
							Nitrobenzene	50 ug/mL
							RDX	50 ug/mL
							Tetryl	50 ug/mL
...HP35DNATA_00063	10/31/21	Restek, Lot A0136481			(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
...HP8330TA_00061	10/31/21	Restek, Lot A0136453			(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..HPNGPETNSP_00071	05/30/19	11/30/18	Methanol, Lot Methanol_00288	25 mL	HPNGTA_00061	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00058	1.25 mL	PETN	50 ug/mL
...HPNGTA_00061	08/31/23	Restek, Lot A0140953			(Purchased Reagent)		Nitroglycerin	1000 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...HPPETNTA_00058	03/31/23	Restek, Lot A0136539			(Purchased Reagent)		PETN	1000 ug/mL
HP8330L4_00061	05/30/19	02/08/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0031	200 mL	HP8330L7_00036	20 mL	3,4-Dinitrotoluene	50 ng/mL
							3,5-Dinitroaniline	50 ng/mL
							1,3,5-Trinitrobenzene	50 ng/mL
							1,3-Dinitrobenzene	50 ng/mL
							2,4,6-Trinitrotoluene	50 ng/mL
							2,4-Dinitrotoluene	50 ng/mL
							2,6-Dinitrotoluene	50 ng/mL
							2-Amino-4,6-dinitrotoluene	50 ng/mL
							2-Nitrotoluene	50 ng/mL
							3-Nitrotoluene	50 ng/mL
							4-Amino-2,6-dinitrotoluene	50 ng/mL
							4-Nitrotoluene	50 ng/mL
							HMX	50 ng/mL
							Nitrobenzene	50 ng/mL
							RDX	50 ng/mL
							Tetryl	50 ng/mL
							Nitroglycerin	50 ng/mL
							PETN	50 ng/mL
.HP8330L7_00036	05/30/19	02/07/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0031	200 mL	HP34DNTSU_00109	2 mL	3,4-Dinitrotoluene	500 ng/mL
					HP8330SP_00108	2 mL	3,5-Dinitroaniline	500 ng/mL
							1,3,5-Trinitrobenzene	500 ng/mL
							1,3-Dinitrobenzene	500 ng/mL
							2,4,6-Trinitrotoluene	500 ng/mL
							2,4-Dinitrotoluene	500 ng/mL
							2,6-Dinitrotoluene	500 ng/mL
							2-Amino-4,6-dinitrotoluene	500 ng/mL
							2-Nitrotoluene	500 ng/mL
							3-Nitrotoluene	500 ng/mL
							4-Amino-2,6-dinitrotoluene	500 ng/mL
							4-Nitrotoluene	500 ng/mL
							HMX	500 ng/mL
							Nitrobenzene	500 ng/mL
							RDX	500 ng/mL
							Tetryl	500 ng/mL
					HPNGPETNSP_00071	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 ng/mL
..HP34DNTSU_00109	07/29/19	01/29/19	Acetonitrile, Lot Acetonitrile_00109	25 mL	HP8330SU_00076	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
...HP8330SU_00076	05/26/27	AccuStandard, Lot 217051415			(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
..HP8330SP_00108	07/01/19	12/31/18	Acetonitrile, Lot Acetonitrile_00083	25 mL	HP35DNATA_00063	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00061	1.25 mL	1,3,5-Trinitrobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							2,4,6-Trinitrotoluene	50 ug/mL
							2,4-Dinitrotoluene	50 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,6-Dinitrotoluene	50 ug/mL
							2-Amino-4,6-dinitrotoluene	50 ug/mL
							2-Nitrotoluene	50 ug/mL
							3-Nitrotoluene	50 ug/mL
							4-Amino-2,6-dinitrotoluene	50 ug/mL
							4-Nitrotoluene	50 ug/mL
							HMX	50 ug/mL
							Nitrobenzene	50 ug/mL
							RDX	50 ug/mL
							Tetryl	50 ug/mL
...HP35DNATA_00063	10/31/21		Restek, Lot A0136481		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
...HP8330TA_00061	10/31/21		Restek, Lot A0136453		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..HPNGPETNSP_00071	05/30/19	11/30/18	Methanol, Lot Methanol_00288	25 mL	HPNGTA_00061	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00058	1.25 mL	PETN	50 ug/mL
...HPNGTA_00061	08/31/23		Restek, Lot A0140953		(Purchased Reagent)		Nitroglycerin	1000 ug/mL
...HPPETNTA_00058	03/31/23		Restek, Lot A0136539		(Purchased Reagent)		PETN	1000 ug/mL
HP8330L4_00062	05/30/19	04/17/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0035	200 mL	HP8330L7_00036	20 mL	3,4-Dinitrotoluene	50 ng/mL
							3,5-Dinitroaniline	50 ng/mL
							1,3,5-Trinitrobenzene	50 ng/mL
							1,3-Dinitrobenzene	50 ng/mL
							2,4,6-Trinitrotoluene	50 ng/mL
							2,4-Dinitrotoluene	50 ng/mL
							2,6-Dinitrotoluene	50 ng/mL
							2-Amino-4,6-dinitrotoluene	50 ng/mL
							2-Nitrotoluene	50 ng/mL
							3-Nitrotoluene	50 ng/mL
							4-Amino-2,6-dinitrotoluene	50 ng/mL
							4-Nitrotoluene	50 ng/mL
							HMX	50 ng/mL
							Nitrobenzene	50 ng/mL
							RDX	50 ng/mL
							Tetryl	50 ng/mL
							Nitroglycerin	50 ng/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PETN	50 ng/mL
.HP8330L7_00036	05/30/19	02/07/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0031	200 mL	HP34DNTSU_00109	2 mL	3,4-Dinitrotoluene	500 ng/mL
					HP8330SP_00108	2 mL	3,5-Dinitroaniline	500 ng/mL
							1,3,5-Trinitrobenzene	500 ng/mL
							1,3-Dinitrobenzene	500 ng/mL
							2,4,6-Trinitrotoluene	500 ng/mL
							2,4-Dinitrotoluene	500 ng/mL
							2,6-Dinitrotoluene	500 ng/mL
							2-Amino-4,6-dinitrotoluene	500 ng/mL
							2-Nitrotoluene	500 ng/mL
							3-Nitrotoluene	500 ng/mL
							4-Amino-2,6-dinitrotoluene	500 ng/mL
							4-Nitrotoluene	500 ng/mL
							HMX	500 ng/mL
							Nitrobenzene	500 ng/mL
							RDX	500 ng/mL
							Tetryl	500 ng/mL
					HPNGPETNSP_00071	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 ng/mL
..HP34DNTSU_00109	07/29/19	01/29/19	Acetonitrile, Lot Acetonitrile_00109	25 mL	HP8330SU_00076	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
...HP8330SU_00076	05/26/27		AccuStandard, Lot 217051415		(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
..HP8330SP_00108	07/01/19	12/31/18	Acetonitrile, Lot Acetonitrile_00083	25 mL	HP35DNATA_00063	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00061	1.25 mL	1,3,5-Trinitrobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							2,4,6-Trinitrotoluene	50 ug/mL
							2,4-Dinitrotoluene	50 ug/mL
							2,6-Dinitrotoluene	50 ug/mL
							2-Amino-4,6-dinitrotoluene	50 ug/mL
							2-Nitrotoluene	50 ug/mL
							3-Nitrotoluene	50 ug/mL
							4-Amino-2,6-dinitrotoluene	50 ug/mL
							4-Nitrotoluene	50 ug/mL
							HMX	50 ug/mL
							Nitrobenzene	50 ug/mL
							RDX	50 ug/mL
							Tetryl	50 ug/mL
...HP35DNATA_00063	10/31/21		Restek, Lot A0136481		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
...HP8330TA_00061	10/31/21		Restek, Lot A0136453		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..HPNGPETNSP_00071	05/30/19	11/30/18	Methanol, Lot Methanol_00288	25 mL	HPNGTA_00061	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00058	1.25 mL	PETN	50 ug/mL
...HPNGTA_00061	08/31/23		Restek, Lot A0140953		(Purchased Reagent)		Nitroglycerin	1000 ug/mL
...HPPETNTA_00058	03/31/23		Restek, Lot A0136539		(Purchased Reagent)		PETN	1000 ug/mL
HP8330L5_00069	05/30/19	02/08/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0031	100 mL	HP8330L7_00036	20 mL	3,4-Dinitrotoluene	100 ng/mL
							3,5-Dinitroaniline	100 ng/mL
							1,3,5-Trinitrobenzene	100 ng/mL
							1,3-Dinitrobenzene	100 ng/mL
							2,4,6-Trinitrotoluene	100 ng/mL
							2,4-Dinitrotoluene	100 ng/mL
							2,6-Dinitrotoluene	100 ng/mL
							2-Amino-4,6-dinitrotoluene	100 ng/mL
							2-Nitrotoluene	100 ng/mL
							3-Nitrotoluene	100 ng/mL
							4-Amino-2,6-dinitrotoluene	100 ng/mL
							4-Nitrotoluene	100 ng/mL
							HMX	100 ng/mL
							Nitrobenzene	100 ng/mL
							RDX	100 ng/mL
							Tetryl	100 ng/mL
							Nitroglycerin	100 ng/mL
							PETN	100 ng/mL
.HP8330L7_00036	05/30/19	02/07/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0031	200 mL	HP34DNTSU_00109	2 mL	3,4-Dinitrotoluene	500 ng/mL
					HP8330SP_00108	2 mL	3,5-Dinitroaniline	500 ng/mL
							1,3,5-Trinitrobenzene	500 ng/mL
							1,3-Dinitrobenzene	500 ng/mL
							2,4,6-Trinitrotoluene	500 ng/mL
							2,4-Dinitrotoluene	500 ng/mL
							2,6-Dinitrotoluene	500 ng/mL
							2-Amino-4,6-dinitrotoluene	500 ng/mL
							2-Nitrotoluene	500 ng/mL
							3-Nitrotoluene	500 ng/mL
							4-Amino-2,6-dinitrotoluene	500 ng/mL
							4-Nitrotoluene	500 ng/mL
							HMX	500 ng/mL
							Nitrobenzene	500 ng/mL
							RDX	500 ng/mL
							Tetryl	500 ng/mL
					HPNGPETNSP_00071	2 mL	Nitroglycerin	500 ng/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PETN	500 ng/mL
..HP34DNTSU_00109	07/29/19	01/29/19	Acetonitrile, Lot Acetonitrile_00109	25 mL	HP8330SU_00076	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
...HP8330SU_00076	05/26/27	AccuStandard, Lot 217051415			(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
..HP8330SP_00108	07/01/19	12/31/18	Acetonitrile, Lot Acetonitrile_00083	25 mL	HP35DNATA_00063	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00061	1.25 mL	1,3,5-Trinitrobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							2,4,6-Trinitrotoluene	50 ug/mL
							2,4-Dinitrotoluene	50 ug/mL
							2,6-Dinitrotoluene	50 ug/mL
							2-Amino-4,6-dinitrotoluene	50 ug/mL
							2-Nitrotoluene	50 ug/mL
							3-Nitrotoluene	50 ug/mL
							4-Amino-2,6-dinitrotoluene	50 ug/mL
							4-Nitrotoluene	50 ug/mL
							HMX	50 ug/mL
							Nitrobenzene	50 ug/mL
							RDX	50 ug/mL
							Tetryl	50 ug/mL
...HP35DNATA_00063	10/31/21	Restek, Lot A0136481			(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
...HP8330TA_00061	10/31/21	Restek, Lot A0136453			(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..HPNGPETNSP_00071	05/30/19	11/30/18	Methanol, Lot Methanol_00288	25 mL	HPNGTA_00061	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00058	1.25 mL	PETN	50 ug/mL
...HPNGTA_00061	08/31/23	Restek, Lot A0140953			(Purchased Reagent)		Nitroglycerin	1000 ug/mL
...HPPETNTA_00058	03/31/23	Restek, Lot A0136539			(Purchased Reagent)		PETN	1000 ug/mL
HP8330L5_00070	05/30/19	04/30/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0035	100 mL	HP8330L7_00036	20 mL	3,4-Dinitrotoluene	100 ng/mL
							3,5-Dinitroaniline	100 ng/mL
							1,3,5-Trinitrobenzene	100 ng/mL
							1,3-Dinitrobenzene	100 ng/mL
							2,4,6-Trinitrotoluene	100 ng/mL
							2,4-Dinitrotoluene	100 ng/mL
							2,6-Dinitrotoluene	100 ng/mL

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Amino-4,6-dinitrotoluene	100 ng/mL
							2-Nitrotoluene	100 ng/mL
							3-Nitrotoluene	100 ng/mL
							4-Amino-2,6-dinitrotoluene	100 ng/mL
							4-Nitrotoluene	100 ng/mL
							HMX	100 ng/mL
							Nitrobenzene	100 ng/mL
							RDX	100 ng/mL
							Tetryl	100 ng/mL
							Nitroglycerin	100 ng/mL
							PETN	100 ng/mL
.HP8330L7_00036	05/30/19	02/07/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0031	200 mL	HP34DNTSU_00109	2 mL	3,4-Dinitrotoluene	500 ng/mL
					HP8330SP_00108	2 mL	3,5-Dinitroaniline	500 ng/mL
							1,3,5-Trinitrobenzene	500 ng/mL
							1,3-Dinitrobenzene	500 ng/mL
							2,4,6-Trinitrotoluene	500 ng/mL
							2,4-Dinitrotoluene	500 ng/mL
							2,6-Dinitrotoluene	500 ng/mL
							2-Amino-4,6-dinitrotoluene	500 ng/mL
							2-Nitrotoluene	500 ng/mL
							3-Nitrotoluene	500 ng/mL
							4-Amino-2,6-dinitrotoluene	500 ng/mL
							4-Nitrotoluene	500 ng/mL
							HMX	500 ng/mL
							Nitrobenzene	500 ng/mL
							RDX	500 ng/mL
							Tetryl	500 ng/mL
					HPNGPETNSP_00071	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 ng/mL
..HP34DNTSU_00109	07/29/19	01/29/19	Acetonitrile, Lot Acetonitrile_00109	25 mL	HP8330SU_00076	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
...HP8330SU_00076	05/26/27	AccuStandard, Lot 217051415			(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
..HP8330SP_00108	07/01/19	12/31/18	Acetonitrile, Lot Acetonitrile_00083	25 mL	HP35DNATA_00063	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00061	1.25 mL	1,3,5-Trinitrobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							2,4,6-Trinitrotoluene	50 ug/mL
							2,4-Dinitrotoluene	50 ug/mL
							2,6-Dinitrotoluene	50 ug/mL
							2-Amino-4,6-dinitrotoluene	50 ug/mL
							2-Nitrotoluene	50 ug/mL
							3-Nitrotoluene	50 ug/mL
							4-Amino-2,6-dinitrotoluene	50 ug/mL
							4-Nitrotoluene	50 ug/mL
							HMX	50 ug/mL
							Nitrobenzene	50 ug/mL
							RDX	50 ug/mL

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Tetryl	50 ug/mL
...HP35DNATA_00063	10/31/21		Restek, Lot A0136481		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
...HP8330TA_00061	10/31/21		Restek, Lot A0136453		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..HPNGPETNSP_00071	05/30/19	11/30/18	Methanol, Lot Methanol_00288	25 mL	HPNGTA_00061	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00058	1.25 mL	PETN	50 ug/mL
...HPNGTA_00061	08/31/23		Restek, Lot A0140953		(Purchased Reagent)		Nitroglycerin	1000 ug/mL
...HPPETNTA_00058	03/31/23		Restek, Lot A0136539		(Purchased Reagent)		PETN	1000 ug/mL
HP8330L6_00050	05/30/19	02/08/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0031	25 mL	HP8330L7_00036	10 mL	3,4-Dinitrotoluene	200 ng/mL
							3,5-Dinitroaniline	200 ng/mL
							1,3,5-Trinitrobenzene	200 ng/mL
							1,3-Dinitrobenzene	200 ng/mL
							2,4,6-Trinitrotoluene	200 ng/mL
							2,4-Dinitrotoluene	200 ng/mL
							2,6-Dinitrotoluene	200 ng/mL
							2-Amino-4,6-dinitrotoluene	200 ng/mL
							2-Nitrotoluene	200 ng/mL
							3-Nitrotoluene	200 ng/mL
							4-Amino-2,6-dinitrotoluene	200 ng/mL
							4-Nitrotoluene	200 ng/mL
							HMX	200 ng/mL
							Nitrobenzene	200 ng/mL
							RDX	200 ng/mL
							Tetryl	200 ng/mL
							Nitroglycerin	200 ng/mL
							PETN	200 ng/mL
.HP8330L7_00036	05/30/19	02/07/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0031	200 mL	HP34DNTSU_00109	2 mL	3,4-Dinitrotoluene	500 ng/mL
					HP8330SP_00108	2 mL	3,5-Dinitroaniline	500 ng/mL
							1,3,5-Trinitrobenzene	500 ng/mL
							1,3-Dinitrobenzene	500 ng/mL
							2,4,6-Trinitrotoluene	500 ng/mL
							2,4-Dinitrotoluene	500 ng/mL
							2,6-Dinitrotoluene	500 ng/mL

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Amino-4,6-dinitrotoluene	500 ng/mL
							2-Nitrotoluene	500 ng/mL
							3-Nitrotoluene	500 ng/mL
							4-Amino-2,6-dinitrotoluene	500 ng/mL
							4-Nitrotoluene	500 ng/mL
							HMX	500 ng/mL
							Nitrobenzene	500 ng/mL
							RDX	500 ng/mL
							Tetryl	500 ng/mL
					HPNGPETNSP_00071	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 ng/mL
..HP34DNTSU_00109	07/29/19	01/29/19	Acetonitrile, Lot Acetonitrile_00109	25 mL	HP8330SU_00076	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
...HP8330SU_00076	05/26/27		AccuStandard, Lot 217051415		(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
..HP8330SP_00108	07/01/19	12/31/18	Acetonitrile, Lot Acetonitrile_00083	25 mL	HP35DNATA_00063	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00061	1.25 mL	1,3,5-Trinitrobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							2,4,6-Trinitrotoluene	50 ug/mL
							2,4-Dinitrotoluene	50 ug/mL
							2,6-Dinitrotoluene	50 ug/mL
							2-Amino-4,6-dinitrotoluene	50 ug/mL
							2-Nitrotoluene	50 ug/mL
							3-Nitrotoluene	50 ug/mL
							4-Amino-2,6-dinitrotoluene	50 ug/mL
							4-Nitrotoluene	50 ug/mL
							HMX	50 ug/mL
							Nitrobenzene	50 ug/mL
							RDX	50 ug/mL
							Tetryl	50 ug/mL
...HP35DNATA_00063	10/31/21		Restek, Lot A0136481		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
...HP8330TA_00061	10/31/21		Restek, Lot A0136453		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..HPNGPETNSP_00071	05/30/19	11/30/18	Methanol, Lot Methanol_00288	25 mL	HPNGTA_00061	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00058	1.25 mL	PETN	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...HPNGTA_00061	08/31/23		Restek, Lot A0140953		(Purchased Reagent)		Nitroglycerin	1000 ug/mL
...HPPETNTA_00058	03/31/23		Restek, Lot A0136539		(Purchased Reagent)		PETN	1000 ug/mL
HP8330L6_00051	05/30/19	05/03/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0035	25 mL	HP8330L7_00036	10 mL	3,4-Dinitrotoluene	200 ng/mL
							3,5-Dinitroaniline	200 ng/mL
							1,3,5-Trinitrobenzene	200 ng/mL
							1,3-Dinitrobenzene	200 ng/mL
							2,4,6-Trinitrotoluene	200 ng/mL
							2,4-Dinitrotoluene	200 ng/mL
							2,6-Dinitrotoluene	200 ng/mL
							2-Amino-4,6-dinitrotoluene	200 ng/mL
							2-Nitrotoluene	200 ng/mL
							3-Nitrotoluene	200 ng/mL
							4-Amino-2,6-dinitrotoluene	200 ng/mL
							4-Nitrotoluene	200 ng/mL
							HMX	200 ng/mL
							Nitrobenzene	200 ng/mL
							RDX	200 ng/mL
							Tetryl	200 ng/mL
							Nitroglycerin	200 ng/mL
							PETN	200 ng/mL
.HP8330L7_00036	05/30/19	02/07/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0031	200 mL	HP34DNTSU_00109	2 mL	3,4-Dinitrotoluene	500 ng/mL
					HP8330SP_00108	2 mL	3,5-Dinitroaniline	500 ng/mL
							1,3,5-Trinitrobenzene	500 ng/mL
							1,3-Dinitrobenzene	500 ng/mL
							2,4,6-Trinitrotoluene	500 ng/mL
							2,4-Dinitrotoluene	500 ng/mL
							2,6-Dinitrotoluene	500 ng/mL
							2-Amino-4,6-dinitrotoluene	500 ng/mL
							2-Nitrotoluene	500 ng/mL
							3-Nitrotoluene	500 ng/mL
							4-Amino-2,6-dinitrotoluene	500 ng/mL
							4-Nitrotoluene	500 ng/mL
							HMX	500 ng/mL
							Nitrobenzene	500 ng/mL
							RDX	500 ng/mL
							Tetryl	500 ng/mL
					HPNGPETNSP_00071	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 ng/mL
..HP34DNTSU_00109	07/29/19	01/29/19	Acetonitrile, Lot Acetonitrile_00109	25 mL	HP8330SU_00076	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
...HP8330SU_00076	05/26/27		AccuStandard, Lot 217051415		(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
..HP8330SP_00108	07/01/19	12/31/18	Acetonitrile, Lot Acetonitrile_00083	25 mL	HP35DNATA_00063	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00061	1.25 mL	1,3,5-Trinitrobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							2,4,6-Trinitrotoluene	50 ug/mL

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4-Dinitrotoluene	50 ug/mL
							2,6-Dinitrotoluene	50 ug/mL
							2-Amino-4,6-dinitrotoluene	50 ug/mL
							2-Nitrotoluene	50 ug/mL
							3-Nitrotoluene	50 ug/mL
							4-Amino-2,6-dinitrotoluene	50 ug/mL
							4-Nitrotoluene	50 ug/mL
							HMX	50 ug/mL
							Nitrobenzene	50 ug/mL
							RDX	50 ug/mL
							Tetryl	50 ug/mL
...HP35DNATA_00063	10/31/21		Restek, Lot A0136481		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
...HP8330TA_00061	10/31/21		Restek, Lot A0136453		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..HPNGPETNSP_00071	05/30/19	11/30/18	Methanol, Lot Methanol_00288	25 mL	HPNGTA_00061	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00058	1.25 mL	PETN	50 ug/mL
...HPNGTA_00061	08/31/23		Restek, Lot A0140953		(Purchased Reagent)		Nitroglycerin	1000 ug/mL
...HPPETNTA_00058	03/31/23		Restek, Lot A0136539		(Purchased Reagent)		PETN	1000 ug/mL
HP8330L7_00036	05/30/19	02/07/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0031	200 mL	HP34DNTSU_00109	2 mL	3,4-Dinitrotoluene	500 ng/mL
					HP8330SP_00108	2 mL	3,5-Dinitroaniline	500 ng/mL
							1,3,5-Trinitrobenzene	500 ng/mL
							1,3-Dinitrobenzene	500 ng/mL
							2,4,6-Trinitrotoluene	500 ng/mL
							2,4-Dinitrotoluene	500 ng/mL
							2,6-Dinitrotoluene	500 ng/mL
							2-Amino-4,6-dinitrotoluene	500 ng/mL
							2-Nitrotoluene	500 ng/mL
							3-Nitrotoluene	500 ng/mL
							4-Amino-2,6-dinitrotoluene	500 ng/mL
							4-Nitrotoluene	500 ng/mL
							HMX	500 ng/mL
							Nitrobenzene	500 ng/mL
							RDX	500 ng/mL
							Tetryl	500 ng/mL

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HPNGPETNSP_00071	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 ng/mL
.HP34DNTSU_00109	07/29/19	01/29/19	Acetonitrile, Lot Acetonitrile_00109	25 mL	HP8330SU_00076	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
..HP8330SU_00076	05/26/27	AccuStandard, Lot 217051415			(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
.HP8330SP_00108	07/01/19	12/31/18	Acetonitrile, Lot Acetonitrile_00083	25 mL	HP35DNATA_00063	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00061	1.25 mL	1,3,5-Trinitrobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							2,4,6-Trinitrotoluene	50 ug/mL
							2,4-Dinitrotoluene	50 ug/mL
							2,6-Dinitrotoluene	50 ug/mL
							2-Amino-4,6-dinitrotoluene	50 ug/mL
							2-Nitrotoluene	50 ug/mL
							3-Nitrotoluene	50 ug/mL
							4-Amino-2,6-dinitrotoluene	50 ug/mL
							4-Nitrotoluene	50 ug/mL
							HMX	50 ug/mL
							Nitrobenzene	50 ug/mL
							RDX	50 ug/mL
							Tetryl	50 ug/mL
..HP35DNATA_00063	10/31/21	Restek, Lot A0136481			(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
..HP8330TA_00061	10/31/21	Restek, Lot A0136453			(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
.HPNGPETNSP_00071	05/30/19	11/30/18	Methanol, Lot Methanol_00288	25 mL	HPNGTA_00061	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00058	1.25 mL	PETN	50 ug/mL
..HPNGTA_00061	08/31/23	Restek, Lot A0140953			(Purchased Reagent)		Nitroglycerin	1000 ug/mL
..HPPETNTA_00058	03/31/23	Restek, Lot A0136539			(Purchased Reagent)		PETN	1000 ug/mL
HP8330SP_00108	07/01/19	12/31/18	Acetonitrile, Lot Acetonitrile_00083	25 mL	HP35DNATA_00063	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00061	1.25 mL	1,3,5-Trinitrobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							2,4,6-Trinitrotoluene	50 ug/mL
							2,4-Dinitrotoluene	50 ug/mL
							2,6-Dinitrotoluene	50 ug/mL

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Amino-4,6-dinitrotoluene	50 ug/mL
							2-Nitrotoluene	50 ug/mL
							3-Nitrotoluene	50 ug/mL
							4-Amino-2,6-dinitrotoluene	50 ug/mL
							4-Nitrotoluene	50 ug/mL
							HMX	50 ug/mL
							Nitrobenzene	50 ug/mL
							RDX	50 ug/mL
							Tetryl	50 ug/mL
.HP35DNATA_00063	10/31/21		Restek, Lot A0136481		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
.HP8330TA_00061	10/31/21		Restek, Lot A0136453		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
HPMETABL2_00008	05/31/19	02/12/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0034	50 mL	HPMETSP_00054	10 uL	DNX	10.04 ng/mL
							MNX	11.7 ng/mL
							TNX	10.01 ng/mL
.HPMETSP_00054	05/31/19	12/21/18	Acetonitrile, Lot Acetonitrile_00106	10 mL	HPMETTA_00007	0.5 mL	DNX	50.2 ug/mL
							MNX	58.5 ug/mL
							TNX	50.05 ug/mL
..HPMETTA_00007	05/31/19		Ultra Scientific, Lot CS-2268		(Purchased Reagent)		DNX	1004 ug/mL
							MNX	1170 ug/mL
							TNX	1001 ug/mL
HPMETABL3_00020	05/31/19	02/12/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0034	25 mL	HPMETSP_00054	10 uL	DNX	20.08 ng/mL
							MNX	23.4 ng/mL
							TNX	20.02 ng/mL
.HPMETSP_00054	05/31/19	12/21/18	Acetonitrile, Lot Acetonitrile_00106	10 mL	HPMETTA_00007	0.5 mL	DNX	50.2 ug/mL
							MNX	58.5 ug/mL
							TNX	50.05 ug/mL
..HPMETTA_00007	05/31/19		Ultra Scientific, Lot CS-2268		(Purchased Reagent)		DNX	1004 ug/mL
							MNX	1170 ug/mL
							TNX	1001 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
HPMETABL4_00038	05/31/19	02/12/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0034	50 mL	HPMETSP_00054	50 uL	DNX	50.2 ng/mL
							MNX	58.5 ng/mL
							TNX	50.05 ng/mL
.HPMETSP_00054	05/31/19	12/21/18	Acetonitrile, Lot Acetonitrile_00106	10 mL	HPMETTA_00007	0.5 mL	DNX	50.2 ug/mL
							MNX	58.5 ug/mL
							TNX	50.05 ug/mL
..HPMETTA_00007	05/31/19	Ultra Scientific, Lot CS-2268			(Purchased Reagent)		DNX	1004 ug/mL
							MNX	1170 ug/mL
							TNX	1001 ug/mL
HPMETABL4_00039	05/31/19	03/29/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0034	100 mL	HPMETSP_00054	100 uL	MNX	58.5 ng/mL
.HPMETSP_00054	05/31/19	12/21/18	Acetonitrile, Lot Acetonitrile_00106	10 mL	HPMETTA_00007	0.5 mL	MNX	58.5 ug/mL
..HPMETTA_00007	05/31/19	Ultra Scientific, Lot CS-2268			(Purchased Reagent)		MNX	1170 ug/mL
HPMETABL4_00040	11/07/19	05/13/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0035	100 mL	HPMETSP_00055	100 uL	DNX	50.2 ng/mL
							MNX	58.5 ng/mL
							TNX	50 ng/mL
.HPMETSP_00055	11/07/19	05/07/19	Acetonitrile, Lot Acetonitrile_00123	10 mL	HPMETTA_00008	0.5 mL	DNX	50.2 ug/mL
							MNX	58.5 ug/mL
							TNX	50 ug/mL
..HPMETTA_00008	01/31/20	Agilent Technologies, Lot CS-6254			(Purchased Reagent)		DNX	1004 ug/mL
							MNX	1170 ug/mL
							TNX	1000 ug/mL
HPMETABL5_00040	05/31/19	02/12/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0034	50 mL	HPMETSP_00054	100 uL	DNX	100.4 ng/mL
							MNX	117 ng/mL
							TNX	100.1 ng/mL
.HPMETSP_00054	05/31/19	12/21/18	Acetonitrile, Lot Acetonitrile_00106	10 mL	HPMETTA_00007	0.5 mL	DNX	50.2 ug/mL
							MNX	58.5 ug/mL
							TNX	50.05 ug/mL
..HPMETTA_00007	05/31/19	Ultra Scientific, Lot CS-2268			(Purchased Reagent)		DNX	1004 ug/mL
							MNX	1170 ug/mL
							TNX	1001 ug/mL
HPMETABL5_00041	11/07/19	05/13/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0035	50 mL	HPMETSP_00055	100 uL	DNX	100.4 ng/mL
							MNX	117 ng/mL
							TNX	100 ng/mL
.HPMETSP_00055	11/07/19	05/07/19	Acetonitrile, Lot Acetonitrile_00123	10 mL	HPMETTA_00008	0.5 mL	DNX	50.2 ug/mL
							MNX	58.5 ug/mL
							TNX	50 ug/mL
..HPMETTA_00008	01/31/20	Agilent Technologies, Lot CS-6254			(Purchased Reagent)		DNX	1004 ug/mL
							MNX	1170 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							TNX	1000 ug/mL
HPMETABL6_00023	05/31/19	02/12/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0034	25 mL	HPMETSP_00054	100 uL	DNX	200.8 ng/mL
							MNX	234 ng/mL
							TNX	200.2 ng/mL
.HPMETSP_00054	05/31/19	12/21/18	Acetonitrile, Lot Acetonitrile_00106	10 mL	HPMETTA_00007	0.5 mL	DNX	50.2 ug/mL
							MNX	58.5 ug/mL
							TNX	50.05 ug/mL
..HPMETTA_00007	05/31/19	Ultra Scientific, Lot CS-2268			(Purchased Reagent)		DNX	1004 ug/mL
							MNX	1170 ug/mL
							TNX	1001 ug/mL
HPMETABL7_00022	05/31/19	02/12/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0034	25 mL	HPMETSP_00054	250 uL	DNX	502 ng/mL
							MNX	585 ng/mL
							TNX	500.5 ng/mL
.HPMETSP_00054	05/31/19	12/21/18	Acetonitrile, Lot Acetonitrile_00106	10 mL	HPMETTA_00007	0.5 mL	DNX	50.2 ug/mL
							MNX	58.5 ug/mL
							TNX	50.05 ug/mL
..HPMETTA_00007	05/31/19	Ultra Scientific, Lot CS-2268			(Purchased Reagent)		DNX	1004 ug/mL
							MNX	1170 ug/mL
							TNX	1001 ug/mL
HPMETIC_00023	05/10/19	02/13/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0034	50 mL	HPMETTA_00006	50 uL	MNX	117 ng/mL
.HPMETTA_00006	05/10/19	Ultra Scientific, Lot CS-2267			(Purchased Reagent)		MNX	117 ug/mL
HPMETSP_00054	05/31/19	12/21/18	Acetonitrile, Lot Acetonitrile_00106	10 mL	HPMETTA_00007	0.5 mL	DNX	50.2 ug/mL
							MNX	58.5 ug/mL
							TNX	50.05 ug/mL
.HPMETTA_00007	05/31/19	Ultra Scientific, Lot CS-2268			(Purchased Reagent)		DNX	1004 ug/mL
							MNX	1170 ug/mL
							TNX	1001 ug/mL

Reagent

1000 B_00017

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 18, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- December 18, 2021

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 - USA
inorganicventures.com

tel: 800.669.6799 - 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 — ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGB1
Lot Number:	M2-B663296
Matrix:	H2O
Value / Analyte(s):	1 000 µg/mL ea: Boron
Starting Material:	Recrystallized Boric Acid
Starting Material Lot#:	M2-B02142
Starting Material Purity:	100.0000%

4938584
ID: 1000 B_00017
Exp: 12/18/21 Prpd: SJS
1000 B IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1000 ± 5 µg/mL

Density: 1.001 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **998 ± 4 µg/mL**
ICP Assay NIST SRM 3107 Lot Number: 110830

Assay Method #2 **1004 ± 5 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\ (u_{char\ a})^2 + (w_b)^2\ (u_{char\ b})^2]^{½}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000108	M	Eu	<	0.000108	O	Na	<	0.006144	M	Se	<	0.001738	M	Zn		0.000509
O	Al	<	0.030720	M	Fe	<	0.004779	M	Nb	<	0.000108	O	Si		0.001028	M	Zr	<	0.000217
M	As	<	0.000869	M	Ga	<	0.000108	M	Nd	<	0.000108	M	Sm	<	0.000108				
M	Au	<	0.000108	M	Gd	<	0.000108	M	Ni	<	0.001303	M	Sn	<	0.000325				
s	B	<		M	Ge	<	0.000434	M	Os	<	0.003039	M	Sr	<	0.000108				
M	Ba	<	0.000217	M	Hf	<	0.000108	i	P	<	0.000001	M	Ta	<	0.000108				
O	Be	<	0.000409	M	Hg	<	0.000217	M	Pb	<	0.000108	M	Tb	<	0.000108				
M	Bi	<	0.000108	M	Ho	<	0.000108	M	Pd	<	0.000108	M	Te	<	0.000325				
O	Ca		0.000864	M	In	<	0.000108	M	Pr	<	0.000108	M	Th	<	0.000108				
M	Cd	<	0.000108	M	Ir	<	0.000108	M	Pt	<	0.000108	M	Ti	<	0.000651				
M	Ce	<	0.000108	O	K	<	0.010240	M	Rb	<	0.000108	M	Tl	<	0.000108				
M	Co	<	0.000108	M	La	<	0.000108	M	Re	<	0.000108	M	Tm	<	0.000108				
M	Cr	<	0.000434	M	Li	<	0.000108	M	Rh	<	0.000108	M	U	<	0.000108				
M	Cs	<	0.000108	M	Lu	<	0.000108	M	Ru	<	0.000108	M	V	<	0.004128				
M	Cu	<	0.000434	O	Mg		0.000019	i	S	<	0.000001	M	W	<	0.000108				
M	Dy	<	0.000108	M	Mn	<	0.000217	M	Sb	<	0.000434	M	Y	<	0.000108				
M	Er	<	0.000108	M	Mo	<	0.000217	M	Sc	<	0.001955	M	Yb	<	0.000108				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 10.81 +3 4 B(OH)3 and B(OH)4-1

Chemical Compatibility -Moderately soluble in HCl, HNO3, H2SO4 and HF aqueous matrices and very soluble in NH4OH . Stable with all metals and inorganic anions at low to moderate ppm levels.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-1,000 ppm solutions chemically stable for years in 1% HNO3 / LDPE container. 1000 -10,000 ppm stable for years in dilute NH4OH / LDPE container.

B Containing Samples (Preparation and Solution) -Metal (Crystalline form is scarcely attacked by acids or alkaline solutions; amorphous form is soluble in conc. HNO3 or H2SO4); B(OH)3 (water soluble); Ores(avoid acid digestions and use caustic fusions in PtE); Organic Matrices (dry ash mixed with Na2CO3 in PtE at 450EC then increase heat to 1000EC to fuse; or perform a Na2O2 fusion in a NiE crucible / Parr bomb).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 11 amu	700 ppt	N/A	
ICP-OES 208.959 nm	0.007/0.0005 µg/mL	1	Mo
ICP-OES 249.678 nm	0.004/0.003 µg/mL	1	Os, W, Co, Cr, Hf
ICP-OES 249.773 nm	0.003/0.001 µg/mL	1	W, Ce, Co, Th, Ta, Mn, Mo, Fe

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

Reagent

1000 Li_00040

CPI INTERNATIONAL

CERTIFICATE OF ANALYSIS

Single-Element Aqueous CRM

Product #: TA-1000291

SE Std Lithium (Li) – 1000 µg/mL

Lot #: 751942-43

Matrix: 5% HNO_3

5658289
ID: 1000 Li_00040
Exp:05/16/20 Prpd:CRR Opn:03/26/19
1000 Li CPI

Element	Certified Concentration & Uncertainty
Li	1002 ± 3 µg/mL (w/v)
	993 ± 3 µg/g (w/w)

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to a nominal concentration of 1000 µg/mL by gravimetric methods using 99.999% pure lithium carbonate (Li_2CO_3) dissolved in high purity nitric acid (HNO_3) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to **NIST SRM 3129a, lot #100714**. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Indicative Values: ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)

Ag	35	Co	<1	Ge	<0.5	Mg	<5	Pd	<0.5	Si	<100	V	<1
Al	9	Cs	7	Hf	<0.2	Mn	<1	Pr	<0.2	Sm	<0.2	W	<0.5
As	<2	Cr	<0.5	Hg	30	Mo	<0.5	Pt	<0.5	Sn	<0.5	Y	<0.5
Au	<0.5	Cu	<1	Ho	<0.2	Na	<25	Rb	2	Sr	<1	Yb	<0.2
B	<5	Dy	<0.2	In	nd	Nb	<0.5	Re	<0.2	Ta	<0.5	Zn	<2
Ba	2	Er	<0.2	Ir	<0.2	Nd	<0.2	Rh	<0.5	Tb	<0.5		
Bi	<0.2	Eu	<0.2	K	<25	Ni	<2	Ru	<0.5	Te	<1		
Ca	<25	Fe	<10	La	<0.5	Os	<0.5	Sb	<0.5	Ti	<2		
Cd	<0.5	Ga	<0.5	Li	MAJOR	P	<100	Sc	<5	Tl	<0.5		
Ce	<0.2	Gd	<0.2	Lu	<0.2	Pb	<1	Se	<2	Tm	<0.2		

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

November 16, 2018
Certification Date

Chuck Goudreau, Certifying Officer

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

USA
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Santa Rosa, CA 95403 P: 800.878.7654
F: 707.545.7901

Europe
Nieuwe Hemweg 7P P: +31 20 638 05 97
1013BG Amsterdam F: +31 20 420 28 36
The Netherlands

www.cpiinternational.com

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Quality Manual Rev: No. 5, 03/01/2013

Further Information: Please contact CPI International for further information about this CRM.

Quality Certifications: This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
    - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.

Reagent

1000 Mo_00013

INORGANIC VENTURES

CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 863.01

ACCREDITED Reference Material Producer Certificate 863.02

4938580
ID: 1000 As_00020
Exp: 05/24/21 Prpd: SJS
1000 As IV

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAS1
Lot Number:	M2-AS657780
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Arsenic
Starting Material:	As Metal
Starting Material Lot#:	1971 and 1851
Starting Material Purity:	99.9991%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 999 ± 5 µg/mL

Certified Density: 1.011 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 **999 ± 4 µg/mL**
ICP Assay NIST SRM 3103a Lot Number: 100818

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{½}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag	<	0.002234	M	Eu	<	0.000466	O	Na		0.000767	M	Se	<	0.002797	O	Zn		0.000370
O	Al		0.001986	O	Fe		0.000079	O	Nb	<	0.005585	O	Si		0.004236	M	Zr	<	0.001865
s	As	<		M	Ga	<	0.000466	M	Nd	<	0.000466	M	Sm	<	0.000466				
M	Au	<	0.002796	M	Gd	<	0.000466	M	Ni		0.000486	M	Sn	<	0.000932				
O	B		0.000556	M	Ge	<	0.000932	M	Os	<	0.000466	M	Sr	<	0.001865				
O	Ba	<	0.000670	M	Hf	<	0.000466	O	P	<	0.027925	M	Ta	<	0.000466				
O	Be	<	0.000111	M	Hg	<	0.009321	M	Pb	<	0.002797	M	Tb	<	0.000466				
M	Bi	<	0.000466	M	Ho	<	0.000466	M	Pd	<	0.000466	M	Te	<	0.004663				
O	Ca		0.000503	M	In	<	0.023315	M	Pr	<	0.000466	M	Th	<	0.000466				
M	Cd	<	0.000466	M	Ir	<	0.000466	M	Pt	<	0.000466	O	Ti		0.000052				
M	Ce	<	0.000466	O	K		0.000185	M	Rb	<	0.001865	M	Tl	<	0.000466				
M	Co	<	0.000466	M	La	<	0.000466	M	Re	<	0.000466	M	Tm	<	0.000466				
O	Cr	<	0.002122	O	Li	<	0.000111	M	Rh	<	0.000466	M	U	<	0.000466				
M	Cs	<	0.000932	M	Lu	<	0.000466	M	Ru	<	0.000466	M	V	<	0.001865				
O	Cu	<	0.002904	O	Mg		0.000034	O	S	<	0.017872	M	W	<	0.004663				
M	Dy	<	0.000466	O	Mn		0.000018	M	Sb	<	0.000466	O	Y	<	0.000558				
M	Er	<	0.000466	M	Mo	<	0.000466	O	Sc	<	0.001005	M	Yb	<	0.000466				

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 24, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- May 24, 2021

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Brenda Francis
Product Documentation Technician

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 74.92 ; mix of +3 and +5 ; 6 ; H_3AsO_4 and $HAsO_2$

Chemical Compatibility - Arsenic has no cationic chemistry. It is soluble in HCl, HNO_3,H_3PO_4, H_2SO_4 and HF aqueous matrices water and NH_4OH . It is stable with most inorganic anions (forms arsenate when boiled with chromate) but many cationic metals form the insoluble arsenates under pH neutral conditions. When fluorinated and / or under acidic conditions arsenate formation is typically not a problem at moderate to low concentrations.

Stability - 2-100 ppb levels stable for months alone or mixed with other elements at equivalent levels in 1% HNO_3 / LDPE container.

As Containing Samples (Preparation and Solution) - Metal (soluble in 1:1 H_2O / HNO_3); Oxides (the oxide exists in crystalline and amorphous forms where the amorphic form is more water soluble. The oxides typically dissolve in dilute acidic solutions when boiled); Minerals (one gram of powered sample is fused in a Ni crucible with 10 grams of a 1:1 mix of K_2CO_3 and KNO_3 and the melt extracted with hot water); Organic Matrices (0.2 to 0.5 grams of sample are fused with 15 grams of a 1:1 Na_2CO_3 / Na_2O_2 mix in a Ni crucible. The fuseate is extracted with water and acidified with HNO_3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 75 amu	20 ppt	N/A	40Ar35Cl, 59Co16O, 36Ar38Ar1H,8Ar37Cl,Ar39K, 150Nd2+,150Sm2+
ICP-OES 189.042 nm	0.05/0.005 µg/mL	1	Cr
ICP-OES 193.696 nm	0.1/0.01 µg/mL	1	V, Ge
ICP-OES 228.812 nm	0.1/0.01 µg/mL	1	Cd, Pt, Ir, Co

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{½}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

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u_{ts} = transport stability standard uncertainty

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k = coverage factor = 2 in all cases at Inorganic Ventures

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u_{bb} = bottle to bottle homogeneity standard uncertainty

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4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag	<	0.002234	M	Eu	<	0.000466	O	Na		0.000767	M	Se	<	0.002797	O	Zn		0.000370
O	Al		0.001986	O	Fe		0.000079	O	Nb	<	0.005585	O	Si		0.004236	M	Zr	<	0.001865
s	As	<		M	Ga	<	0.000466	M	Nd	<	0.000466	M	Sm	<	0.000466				
M	Au	<	0.002796	M	Gd	<	0.000466	M	Ni		0.000486	M	Sn	<	0.000932				
O	B		0.000556	M	Ge	<	0.000932	M	Os	<	0.000466	M	Sr	<	0.001865				
O	Ba	<	0.000670	M	Hf	<	0.000466	O	P	<	0.027925	M	Ta	<	0.000466				
O	Be	<	0.000111	M	Hg	<	0.009321	M	Pb	<	0.002797	M	Tb	<	0.000466				
M	Bi	<	0.000466	M	Ho	<	0.000466	M	Pd	<	0.000466	M	Te	<	0.004663				
O	Ca		0.000503	M	In	<	0.023315	M	Pr	<	0.000466	M	Th	<	0.000466				
M	Cd	<	0.000466	M	Ir	<	0.000466	M	Pt	<	0.000466	O	Ti		0.000052				
M	Ce	<	0.000466	O	K		0.000185	M	Rb	<	0.001865	M	Tl	<	0.000466				
M	Co	<	0.000466	M	La	<	0.000466	M	Re	<	0.000466	M	Tm	<	0.000466				
O	Cr	<	0.002122	O	Li	<	0.000111	M	Rh	<	0.000466	M	U	<	0.000466				
M	Cs	<	0.000932	M	Lu	<	0.000466	M	Ru	<	0.000466	M	V	<	0.001865				
O	Cu	<	0.002904	O	Mg		0.000034	O	S	<	0.017872	M	W	<	0.004663				
M	Dy	<	0.000466	O	Mn		0.000018	M	Sb	<	0.000466	O	Y	<	0.000558				
M	Er	<	0.000466	M	Mo	<	0.000466	O	Sc	<	0.001005	M	Yb	<	0.000466				

INORGANIC VENTURES

CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

4938580
ID: 1000 As_00020
Exp: 05/24/21 Prpd: SJS
1000 As IV

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAS1
Lot Number:	M2-AS657780
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Arsenic
Starting Material:	As Metal
Starting Material Lot#:	1971 and 1851
Starting Material Purity:	99.9991%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 999 ± 5 µg/mL

Certified Density: 1.011 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 **999 ± 4 µg/mL**
ICP Assay NIST SRM 3103a Lot Number: 100818

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Reagent

1000 Sb_00019

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 02, 2018

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- March 02, 2022

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES

CERTIFICATE OF ANALYSIS

[illegible]

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSB1
Lot Number:	N2-SB665459
Matrix:	1% (v/v) HNO3 3% (v/v) Tartaric Acid
Value / Analyte(s):	1 000 µg/mL ea: Antimony
Starting Material:	Sb Metal
Starting Material Lot#:	2382
Starting Material Purity:	99.9861%

5108868
ID: 1000 Sb_00019
Exp: 03/02/22 Prpd: SJS
1000 Sb IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1002 ± 7 µg/mL
Density: 1.020 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **1003 ± 4 µg/mL**
ICP Assay NIST SRM 3102a Lot Number: 140911

Assay Method #2 **999 ± 5 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

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- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

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- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

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- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000100	M	Eu	<	0.000100	O	Na		0.004839	M	Se	<	0.003417	M	Zn		0.000488
O	Al	<	0.003189	O	Fe		0.001979	M	Nb	<	0.004623	O	Si		0.004179	M	Zr	<	0.003417
M	As	<	0.011256	M	Ga	<	0.000100	M	Nd	<	0.000100	M	Sm	<	0.000100				
M	Au	<	0.001006	M	Gd	<	0.000100	M	Ni		0.000696	M	Sn	<	0.003015				
O	B		0.000879	M	Ge	<	0.000502	M	Os	<	0.000100	M	Sr	<	0.000100				
O	Ba	<	0.000956	M	Hf	<	0.001407	O	P		0.062145	M	Ta	<	0.003417				
O	Be	<	0.000212	M	Hg	<	0.000402	M	Pb	<	0.000402	M	Tb	<	0.000100				
M	Bi	<	0.000402	M	Ho	<	0.000100	M	Pd	<	0.000100	M	Te	<	0.000402				
O	Ca		0.000769	M	In	<	0.000100	M	Pr	<	0.000804	M	Th	<	0.000100				
M	Cd	<	0.000100	M	Ir	<	0.001006	M	Pt	<	0.000100	M	Ti		0.001279				
M	Ce	<	0.008241	O	K		0.056755	M	Rb	<	0.003216	M	Tl	<	0.000100				
M	Co	<	0.000100	O	La	<	0.004252	M	Re	<	0.000100	M	Tm	<	0.000100				
O	Cr		0.010229	O	Li	<	0.000053	M	Rh	<	0.000100	M	U	<	0.000100				
M	Cs	<	0.000603	M	Lu	<	0.000100	M	Ru	<	0.000402	M	V	<	0.000100				
M	Cu	<	0.000301	O	Mg		0.000219	n	S	<		M	W	<	0.001809				
M	Dy	<	0.000100	M	Mn		0.000187	s	Sb	<		M	Y	<	0.000100				
M	Er	<	0.000100	M	Mo		0.000332	O	Sc	<	0.000744	M	Yb	<	0.000100				

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 121.75 +3 6 Sb(O)C4H4O6-1
Chemical Compatibility -Stable in conc. HCl, dilute or conc. HF. Stable in dilute HNO3 as the fluoride or tartrate complex. Avoid basic media. Stable with most metals and inorganic anions in acidic media as the tartrate provided the acidity is not too high or the acid is oxidizing causing loss of the stabilizing tartrate ion. The fluoride complex of antimony is stable in strong acid but you should only mix with other metals that are fluorinated.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-2% HNO3 / LDPE container.
Sb Containing Samples (Preparation and Solution) -Metal and alloys (Soluble in H2O / HF / HNO3 mixture); Oxides (Soluble in HCl and tartaric acid or H2O / HF / HNO3 mixtures); Ores (fusion with Na2CO3 in Pt0 followed by dissolving the fuseate in a H2O / HF / HNO3 mixture); Organic based (sulfuric acid / hydrogen peroxide digestion)

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 121 amu	5 ppt	N/A	105Pd16O, 89Y16O2
ICP-OES 206.833 nm	0.03/0.003 µg/mL	1	Ta, Cr, Ge, Hf
ICP-OES 217.581 nm	0.05/0.005 µg/mL	1	Nb, W, Re, Fe
ICP-OES 231.147 nm	0.06/0.006 µg/mL	1	Ni, Co, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

Reagent

1000 Se_00020

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 17, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- November 17, 2021

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES

CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 — ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSE(4)1
Lot Number:	M2-SE663138
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Selenium
Starting Material:	Se pellets
Starting Material Lot#:	1962
Starting Material Purity:	99.9990%

5298123
ID: 1000 Se_00020
Exp: 11/17/21 Prpd: CML
1000 Se IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 999 ± 4 µg/mL

Density: 1.011 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **998 ± 5 µg/mL**
ICP Assay NIST SRM 3149 Lot Number: 100901

Assay Method #2 **1000 ± 6 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000740	M	Eu	<	0.000370	O	Na		0.001511	s	Se	<		O	Zn		0.000220
O	Al		0.000624	O	Fe		0.001173	O	Nb	<	0.001774	O	Si		0.002267	O	Zr	<	0.001664
O	As	<	0.022180	M	Ga	<	0.000370	M	Nd	<	0.000370	M	Sm	<	0.000370				
M	Au	<	0.000371	M	Gd	<	0.000370	O	Ni	<	0.001664	O	Sn	<	0.005545				
M	B	<	0.008878	M	Ge	<	0.001110	M	Os	<	0.000371	O	Sr	<	0.000222				
M	Ba	<	0.000740	M	Hf	<	0.000370	O	P	<	0.011090	M	Ta	<	0.000370				
O	Be	<	0.000333	M	Hg	<	0.002970	M	Pb		0.001008	M	Tb	<	0.000370				
M	Bi	<	0.000740	M	Ho	<	0.000370	M	Pd	<	0.000740	M	Te	<	0.018496				
O	Ca		0.000328	M	In	<	0.001480	M	Pr	<	0.000370	M	Th	<	0.000370				
O	Cd	<	0.000444	M	Ir	<	0.000371	M	Pt	<	0.001480	O	Ti	<	0.000555				
M	Ce	<	0.000370	O	K		0.000328	M	Rb	<	0.000370	M	Tl		0.000920				
M	Co	<	0.000370	O	La	<	0.000001	M	Re	<	0.000370	M	Tm	<	0.000370				
M	Cr		0.000274	O	Li		0.000006	M	Rh	<	0.000370	M	U	<	0.001480				
M	Cs	<	0.000370	M	Lu	<	0.000370	M	Ru	<	0.000371	O	V	<	0.000998				
O	Cu	<	0.004436	O	Mg		0.000078	O	S		0.001873	M	W	<	0.011098				
M	Dy	<	0.000370	O	Mn		0.000029	M	Sb	<	0.002220	M	Y	<	0.000370				
M	Er	<	0.000370	O	Mo	<	0.003327	O	Sc	<	0.000665	M	Yb	<	0.000370				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 78.96 +4 6 H2SeO3
Chemical Compatibility -Soluble in HCl, HNO3,H3PO4, H2SO4 and HF aqueous matrices and water. It is stable with most inorganic anions but many cationic metals form the insoluble selenites under pH neutral conditions. When fluorinated and/or under acidic conditions precipitation is typically not a problem at moderate to low concentrations.
Stability - 2-100 ppb levels stable for months alone or mixed with other elements at equivalent levels in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.
Se Containing Samples (Preparation and Solution) -Metal (soluble in HNO3); Oxides (readily soluble in water); Minerals and alloys (acid digestion with HNO3or HNO3 / HF); Organic Matrices (acid digestion with hot concentrated H2SO4 accompanied by the careful dropwise addition of H2O2 until clear).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 82 amu	200 ppt	N/A	12C35Cl2
ICP-OES 196.026 nm	0.08/0.006 µg/mL	1	Fe
ICP-OES 203.985 nm	0.2/0.05 µg/mL	1	Sb, Ir, Cr, Ta
ICP-OES 206.279 nm	0.3/0.16 µg/mL	1	Cr, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

Reagent

1000 Sn_00016

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 06, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- July 06, 2021

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

INORGANIC VENTURES

CERTIFICATE OF ANALYSIS

Christiansburg, VA 24073 - USA

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 — ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSN1
Lot Number:	M2-SN659324
Matrix:	tr. HNO3 tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Tin
Starting Material:	Sn shot
Starting Material Lot#:	1789
Starting Material Purity:	99.9976%

5298135
ID: 1000 Sn_00016
Exp: 07/06/21 Prpd: CML
1000 Sn IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 998 ± 6 µg/mL

Density: 1.001 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **998 ± 3 µg/mL**
ICP Assay NIST SRM 3161a Lot Number: 140917

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{½}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000100	M	Eu	<	0.000100	O	Na		0.000683	M	Se	<	0.005701	O	Zn	<	0.000308
O	Al	<	0.004116	O	Fe		0.000989	M	Nb	<	0.000200	O	Si		0.012513	O	Zr	<	0.000514
M	As	<	0.001100	M	Ga	<	0.000100	M	Nd	<	0.000100	M	Sm	<	0.000100				
M	Au	<	0.000199	M	Gd	<	0.000500	O	Ni	<	0.001234	s	Sn	<					
O	B	<	0.001296	M	Ge	<	0.000700	M	Os	<	0.000099	O	Sr	<	0.000025				
O	Ba	<	0.000246	M	Hf	<	0.001600	O	P	<	0.020580	O	Ta	<	0.009261				
O	Be	<	0.000102	M	Hg	<	0.000996	M	Pb		0.003700	M	Tb	<	0.000100				
M	Bi		0.000337	M	Ho	<	0.000100	M	Pd	<	0.000100	M	Te	<	0.001800				
O	Ca		0.000470	O	In		0.005468	M	Pr	<	0.006001	M	Th	<	0.000100				
O	Cd	<	0.000284	M	Ir	<	0.000099	M	Pt	<	0.000200	O	Ti	<	0.000514				
M	Ce	<	0.010001	O	K	<	0.003447	M	Rb	<	0.000500	M	Tl	<	0.000100				
O	Co	<	0.001337	O	La	<	0.001025	M	Re	<	0.000100	M	Tm	<	0.000100				
O	Cr	<	0.001029	O	Li	<	0.000077	M	Rh	<	0.000100	M	U	<	0.000100				
M	Cs	<	0.030005	M	Lu	<	0.000200	M	Ru	<	0.000099	M	V	<	0.000500				
O	Cu	<	0.002058	O	Mg		0.000037	n	S	<		M	W	<	0.000100				
M	Dy	<	0.000100	M	Mn	<	0.000100	O	Sb	<	0.020580	M	Y	<	0.000100				
M	Er	<	0.000100	M	Mo	<	0.000100	O	Sc	<	0.000164	M	Yb	<	0.000100				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 118.71 +4 4,5, 6,7,8 Sn(OH)xFy2-

Chemical Compatibility -Soluble in HCl and dilute HF / HNO3. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away. (i.e. Do not mix with Alkaline or Rare Earths or high levels of transition elements unless they are fluorinated.) Stable with most inorganic anions provided it is in the chemical form shown above.

Stability - 2-100 ppb levels stable (alone or mixed with all other metals that are at comparable levels) as the Sn(OH)xFy2- for 1 year in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the Sn(OH)xFy2- chemically stable for years in 2-5% HNO3 / trace HF in a LDPE container.

Sn Containing Samples (Preparation and Solution) - Metal (Soluble in HF / HNO3 or HCl); Oxides - SnO (soluble in HCl), SnO2 -very resistant to all acids including HF(Fusion with equal parts of Na2CO3 and S. It is then soluble in water or dilute acids as the thiostannate.); Alloys (Treat first 0.1 g with 10 mL conc. H2SO4 to boiling until the alloy disintegrates and nearly all of the sulfuric acid is expelled. Then add 100 mL O2 free water and 50 mL of conc HCl or transfer to a plastic container and add 1 mL HF in either case warming gently to bring about solution.); Organic Matrices (Volatility and precipitation of the insoluble stannic oxide are problems. Consultation of the literature should be made for individual matrices / Sn compounds.)

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 120 amu	5 ppt	N/A	120Te, 104Ru16O, 104Pd16O
ICP-OES 189.989 nm	0.03 / 0.003 µg/mL	1	
ICP-OES 242.949 nm	0.1 / 0.01 µg/mL	1	W, Mo, Rh ,Ta, Co

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

Reagent

1000 Sr_00011

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 14, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- June 14, 2021

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

INORGANIC VENTURES

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com
Fax: 540.585.3012
info@inorganicventures.com

CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 — ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSR1
Lot Number:	M2-SR658331
Matrix:	0.1% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Strontium
Starting Material:	SrCO3
Starting Material Lot#:	1716 1967 1966
Starting Material Purity:	99.9937%

4938582
ID: 1000 Sr_00011
Exp: 06/14/18 Prpd: SJS
1000 Sr IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value:	1002 ± 5 µg/mL
Density:	1.001 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**1002 ± 3 µg/mL** ICP Assay NIST SRM 3153a Lot Number: 990906
Assay Method #2	**1001 ± 3 µg/mL** EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag	<	0.003318	M	Eu	<	0.000995	O	Na		0.000474	M	Se	<	0.023047	O	Zn		0.000121
O	Al		0.000486	O	Fe		0.000826	M	Nb	<	0.000497	O	Si		0.001483	M	Zr	<	0.007967
M	As	<	0.001493	M	Ga	<	0.001991	M	Nd	<	0.000497	M	Sm	<	0.000497				
M	Au	<	0.005394	M	Gd	<	0.002987	M	Ni		0.001357	M	Sn		0.000306				
O	B	<	0.005530	M	Ge	<	0.004979	M	Os	<	0.000490	s	Sr	<					
M	Ba		0.104336	M	Hf	<	0.000497	O	P	<	0.033180	M	Ta	<	0.000497				
O	Be	<	0.000132	M	Hg	<	0.000980	M	Pb		0.001160	M	Tb	<	0.000497				
M	Bi		0.000350	M	Ho	<	0.000497	M	Pd	<	0.002451	O	Te	<	0.022120				
O	Ca		0.003185	M	In	<	0.000497	M	Pr	<	0.000995	M	Th	<	0.000497				
M	Cd		0.000153	M	Ir	<	0.000490	M	Pt	<	0.002987	M	Ti		0.000186				
M	Ce		0.001193	O	K		0.001945	M	Rb	<	0.006971	M	Tl	<	0.000497				
M	Co		0.000153	M	La	<	0.003983	M	Re	<	0.000497	M	Tm	<	0.000497				
O	Cr	<	0.005530	O	Li	<	0.004202	O	Rh	<	0.006636	M	U	<	0.000497				
M	Cs	<	0.001991	M	Lu	<	0.000497	M	Ru	<	0.000980	M	V	<	0.001991				
O	Cu	<	0.006636	O	Mg		0.000126	O	S	<	0.055300	M	W	<	0.001493				
M	Dy	<	0.000497	M	Mn		0.000120	M	Sb	<	0.003983	O	Y	<	0.003318				
M	Er	<	0.000497	M	Mo	<	0.006971	O	Sc	<	0.003318	M	Yb		0.000043				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 87.62 +2 6 Sr(H2O)6+2
Chemical Compatibility - Soluble in HCl, and HNO3. Avoid H2SO4, HF and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate and tungstate in neutral aqueous media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1 - 3.5% HNO3 / LDPE container.
Sr Containing Samples (Preparation and Solution) -Metal (Best dissolved in diluted HNO3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Dry ash and dissolution in dilute HCl).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 88 amu	1200 ppt	N/A	72Ge16O, 176Yb+2, 176Lu+2 , 176Hf+2
ICP-OES 407.771 nm	0.0004 / 0.00006 µg/mL	1	U, Ce
ICP-OES 421.552 nm	0.0008 / 0.00004 µg/mL	1	Rb
ICP-OES 460.733 nm	0.07 / 0.003 µg/mL	1	Ce

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

Reagent

1000 W IV_00014

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CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGW1
Lot Number:	N2-W664865
Matrix:	0.2% (v/v) HNO3 2% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: Tungsten
Starting Material:	W Powder
Starting Material Lot#:	1898
Starting Material Purity:	99.9941%

5204592
ID: 1000 W IV_00014
Exp:07/05/19 Prpd:LMT Opn:07/05/18
1000 Tungsten IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 998 ± 6 µg/mL

Density: 1.007 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **999 ± 6 µg/mL**
ICP Assay NIST SRM 3163 Lot Number: 140606

Assay Method #2 **997 ± 7 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001202	M	Eu	<	0.000200	O	Na		0.001960	M	Se	<	0.004000	M	Zn	0.002074
O	Al	<	0.033570	M	Fe	<	0.079372	M	Nb	<	0.180390	i	Si	<		O	Zr	< 0.005595
M	As	<	0.010422	M	Ga	<	0.000200	M	Nd	<	0.000200	M	Sm	<	0.000200			
M	Au	<	0.030804	M	Gd	<	0.000200	M	Ni	<	0.017638	M	Sn		0.000266			
M	B	<	0.003808	M	Ge	<	0.001403	M	Os	<	0.000200	M	Sr	<	0.000801			
M	Ba	<	0.002004	M	Hf		0.000288	i	P	<		M	Ta		0.011947			
M	Be	<	0.000601	i	Hg	<		M	Pb	<	0.005612	M	Tb	<	0.000200			
M	Bi	<	0.009219	M	Ho	<	0.000200	M	Pd	<	0.001800	M	Te	<	0.001603			
O	Ca		0.004290	M	In	<	0.000200	M	Pr	<	0.000601	M	Th	<	0.012426			
M	Cd	<	0.000200	M	Ir	<	0.000200	M	Pt	<	0.001603	M	Ti		0.004115			
M	Ce	<	0.000200	O	K		0.039229	M	Rb	<	0.001603	M	Tl	<	0.003206			
M	Co	<	0.000200	M	La	<	0.000200	M	Re	<	0.300651	M	Tm	<	0.000200			
O	Cr	<	0.011190	O	Li	<	0.000434	M	Rh	<	0.000200	M	U	<	0.001202			
M	Cs		0.000088	M	Lu	<	0.000200	M	Ru	<	0.000200	M	V	<	0.009219			
M	Cu	<	0.003607	M	Mg		0.000632	i	S	<		s	W	<				
M	Dy	<	0.000200	M	Mn	<	0.005211	M	Sb	<	0.008819	M	Y	<	0.000200			
M	Er	<	0.000200	M	Mo		0.000232	O	Sc	<	0.000543	M	Yb	<	0.000200			

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 183.85 +6 6,7,8,9 WOF5-2(chemical form as received)
Chemical Compatibility -W is very readily hydrolyzed requiring 0.1 to 1% HF solutions for stabile acidic solutions. The [WOF5]-2 is soluble in % levels of HCl and HNO3 provided it is in the [WOF5]-2 form. Stable at ppm levels with some metals provided it is fluorinated. <U>Do not mix with Alkaline or Rare Earths</U>. W is best to be mixed only with other fluorinated metals (Ti, Zr, Hf, Nb, Ta, Mo, Si, Sn, Ge). Look for yellow WO3 precipitate if mixed with other transitions at higher levels indicating instability. The yellow WO3 will form over a period of weeks even in trace HF, therefore, <U>HF levels of W multi-element blends should be ∼ 1%</U>.
Stability - 2-100 ppb levels stable (alone or mixed with all other metals that are at comparable levels) as the [WOF5]-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the [WOF5]-2 chemically stable for years in 1% HF in a LDPE container.
W Containing Samples (Preparation and Solution) -Metal (Soluble in HF / HNO3); Oxide (soluble in HF or NH4OH) ; Organic Matrices (dry ash at 450 0C in Pt0 and dissolve oxide with HF).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 182 amu	5 ppt	N/A	166Er16O
ICP-OES 207.911 nm	0.03/0.001 µg/mL	1	Ru, In
ICP-OES 209.475 nm	0.05/0.008 µg/mL	1	Mo
ICP-OES 224.875 nm	0.05/0.005 µg/mL	1	Co, Rh, Ag

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 19, 2018

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 19, 2022

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

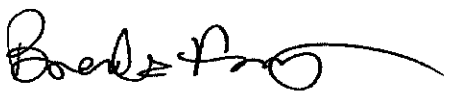
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Brenda Francis
Product Documentation Technician



Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

Reagent

1000 Zr_00019

CPI INTERNATIONAL

5448841
ID: 1000 Zr_00019
Exp: 05/29/19 Prpd: CRR
1000 Zr CPI

REPORT OF ANALYSIS

Single-Element Aqueous RM

Product #: S4400-1000691

Zirconium (Zr) – 1000 µg/mL

Lot #: 171418-22

Matrix: 2% HNO_3

Element	Certified Concentration
Zr	1001 µg/mL (w/v)
	996 µg/g (w/w)

Intended Use: This solution is intended for use as a reference material (RM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This RM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO Guide 34**, and **ISO/IEC 17025**. This RM was prepared to a nominal concentration of 1000 µg/mL by gravimetric methods using 99.994% pure zirconium dinitrate oxide hydrate ($N_2O_7Zr{\cdot}xH_2O$) dissolved in high purity nitric acid (HNO_3) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this RM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration was determined based upon gravimetric procedures. Secondary verification of the certified concentration was performed using ICP-OES and is traceable to **NIST SRM 3169**. The uncertainty associated with the certified concentration is ±0.5% relative, which is the sum of the estimated errors due to the purity of the raw materials, the gravimetric preparation of the solution, and transpiration through the container. This represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Indicative Values: ICP-MS was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)

Ag	8	Ce	<0.2	Gd	<0.2	Lu	2	Pb	<1	Se	<2	Tl	<0.5
Al	23	Co	<1	Ge	<0.5	Mg	<5	Pd	<0.5	Si	<100	Tm	<0.2
As	<2	Cs	<0.5	Hf	28	Mn	<1	Pr	<0.2	Sm	<0.2	U	<0.5
Au	<0.5	Cr	2	Hg	<0.5	Mo	<0.5	Pt	<0.5	Sn	<0.5	V	<1
B	<5	Cu	<1	Ho	<0.2	Na	<25	Rb	<0.5	Sr	<1	W	<0.5
Ba	<1	Dy	<0.2	In	nd	Nb	0.9	Re	<0.2	Ta	<0.5	Y	<0.5
Be	<0.5	Er	<0.2	Ir	<0.2	Nd	<0.2	Rh	<0.5	Tb	<0.5	Yb	<0.2
Bi	<0.2	Eu	<0.2	K	<25	Ni	<2	Ru	<0.5	Te	<1	Zn	<2
Ca	<25	Fe	22	La	<0.5	Os	<0.5	Sb	<0.5	Th	<0.5	Zr	MAJOR
Cd	<0.5	Ga	<0.5	Li	<2	P	<100	Sc	<10	Ti	<2		

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the RM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original RM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

November 16, 2018
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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The Netherlands

www.cpiinternational.com

Reagent

10000 Al_00019

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 08, 2016

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- November 08, 2020

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Donna Senn
Product Documentation Technician

Donna Senn

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

INORGANIC VENTURES

CERTIFICATE OF ANALYSIS

Christiansburg, VA 24073 USA

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 — ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAL10
Lot Number:	K2-AL653003
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Aluminum
Starting Material:	Al Shot
Starting Material Lot#:	1834
Starting Material Purity:	99.9965%

5203473
ID: 10000 Al_00019
Exp: 11/06/20 Prpd: SJS
10000 Al IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10030 ± 33 µg/mL

Certified Density: 1.083 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1	**10008 ± 39 µg/mL** ICP Assay NIST SRM 3101a Lot Number: 140903
Assay Method #2	**10039 ± 26 µg/mL** EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods ——— Characterization of CRM by one method

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\ (u_{char\ a})^2 + (w_b)^2\ (u_{char\ b})^2)^{½}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000521	M	Eu	<	0.000521	O	Na		0.039566	M	Se	<	0.003648	M	Zn	0.030987
s	Al	<		O	Fe		0.031494	M	Nb	<	0.000521	O	Si		0.185691	O	Zr	0.000399
M	As	<	0.012509	M	Ga		0.002264	M	Nd		0.004290	M	Sm	<	0.002085			
M	Au	<	0.000518	M	Gd	<	0.004170	O	Ni	<	0.012890	M	Sn	<	0.005212			
O	B		0.008253	M	Ge	<	0.002606	M	Os	<	0.000518	O	Sr		0.000202			
O	Ba	<	0.000659	M	Hf	<	0.000521	n	P	<		M	Ta	<	0.000521			
O	Be	<	0.000258	M	Hg	<	0.001555	M	Pb		0.001549	M	Tb	<	0.000521			
M	Bi	<	0.005212	M	Ho	<	0.000521	M	Pd	<	0.000521	M	Te	<	0.014072			
O	Ca		0.013185	M	In	<	0.002085	M	Pr		0.000953	M	Th	<	0.007297			
M	Cd	<	0.004170	M	Ir	<	0.000518	M	Pt	<	0.000521	O	Ti		0.001589			
M	Ce		0.011680	O	K		0.026175	M	Rb	<	0.000521	M	Tl		0.003099			
M	Co	<	0.000521	O	La		0.007115	M	Re	<	0.000521	M	Tm	<	0.000521			
O	Cr		0.001038	O	Li	<	0.000103	M	Rh	<	0.000521	M	U	<	0.005212			
M	Cs	<	0.000521	M	Lu	<	0.000521	M	Ru	<	0.000518	M	V		0.001549			
O	Cu		0.030608	O	Mg		0.016615	i	S	<		M	W	<	0.000521			
M	Dy	<	0.003127	O	Mn		0.000589	M	Sb	<	0.018763	O	Y	<	0.002578			
M	Er		0.000834	M	Mo	<	0.002085	O	Sc		0.000548	M	Yb	<	0.000521			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pippette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 26.98 +3 6 Al(H2O)6+3

Chemical Compatibility -Soluble in HCl, HNO3, HF and H2SO4. Avoid neutral media. Soluble in strongly basic NaOH forming the Al(OH)4(H2O)21- species. Stable with most metals and inorganic anions. The phosphate is insoluble in water and only slightly soluble in acid.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

Al Containing Samples (Preparation and Solution) -Metal (Best dissolved in HCl / HNO3); a- Al2O3 (Na2CO3 fusion in Pt0);

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 27 amu	30 ppt	N/A	12C15N, 13C14N, 1H12C14N, 11B16O, 54Cr2+, 54Fe2+
ICP-OES 167.078 nm	0.1/0.009 µg/mL	1	Fe
ICP-OES 394.401 nm	0.05/0.006 µg/mL	1	U, Ce
ICP-OES 396.152 nm	0.03/0.006 µg/mL	1	Mo, Zr, Ce

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

Reagent

10000 Fe_00021

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 12, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- July 12, 2021

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

INORGANIC VENTURES

CERTIFICATE OF ANALYSIS

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Fax: 540.585.3012
inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGFE10
Lot Number:	M2-FE659835
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Iron
Starting Material:	Iron Metal
Starting Material Lot#:	2031 & 2146
Starting Material Purity:	99.9919%

4954179
ID: 10000 Fe_00021
Exp: 07/12/21 Prpd: SJS
10000 Fe IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value:	9993 ± 25 µg/mL
Density:	1.040 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10014 ± 52 µg/mL** ICP Assay NIST SRM 3126a Lot Number: 140812
Assay Method #2	**9988 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000607	M	Eu	<	0.000607	O	Na		0.009866	M	Se	<	0.032805	O	Zn	0.119626
M	Al		0.009492	s	Fe	<		M	Nb	<	0.000607	O	Si		0.035517	M	Zr	< 0.002430
M	As		0.060562	M	Ga	<	0.048601	M	Nd	<	0.000607	M	Sm	<	0.000607			
M	Au	<	0.008508	M	Gd	<	0.000607	O	Ni		0.182522	M	Sn	<	0.012150			
M	B	<	0.015187	M	Ge		0.060202	M	Os	<	0.001215	O	Sr	<	0.000997			
O	Ba	<	0.002494	M	Hf	<	0.000607	i	P	<	0.000001	M	Ta	<	0.000607			
M	Be	<	0.000607	M	Hg	<	0.001215	M	Pb		0.001321	M	Tb	<	0.000607			
M	Bi	<	0.000607	M	Ho	<	0.000607	M	Pd	<	0.000607	M	Te	<	0.001822			
O	Ca		0.022445	M	In	<	0.000607	M	Pr	<	0.000607	M	Th	<	0.001215			
M	Cd	<	0.000607	M	Ir	<	0.006685	M	Pt	<	0.000607	M	Ti	<	0.009720			
M	Ce	<	0.000607	O	K		0.003453	M	Rb	<	0.000607	M	Tl	<	0.000607			
O	Co		0.254052	M	La	<	0.000607	M	Re	<	0.000607	M	Tm	<	0.000607			
O	Cr		0.034284	O	Li	<	0.000124	M	Rh	<	0.000607	M	U	<	0.002430			
M	Cs	<	0.000607	M	Lu	<	0.000607	M	Ru	<	0.000607	M	V	<	0.003645			
O	Cu		0.019732	O	Mg		0.001973	O	S		0.032064	M	W	<	0.003645			
M	Dy	<	0.000607	O	Mn		0.073995	M	Sb		0.043139	M	Y	<	0.000607			
M	Er	<	0.000607	M	Mo		0.012016	M	Sc	<	0.001822	M	Yb	<	0.000607			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 55.85 +3 6 Fe(H2O)63+
Chemical Compatibility -Stable in HCl, HNO3, H2SO4 ,HF and H3PO4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.
Fe Containing Samples (Preparation and Solution) - Metal (Soluble in HCl); Oxides (If the oxide has been at a high temperature then Na2CO3 fusion in Pt0 followed by HCl dissolution otherwise dissolve in dilute HCl); Ores (See Oxides above using only the fusion approach).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 56 amu	970 ppt	N/A	40Ar15N1H, 40Ar16O, 36Ar17O1H , 38Ar18O, 37Cl18O1H, 40Ca16O
ICP-OES 238.204 nm	0.005/0.001 µg/mL	1	Ru, Co
ICP-OES 239.562 nm	0.005/0.001 µg/mL	1	Co, W, Cr
ICP-OES 259.940 nm	0.006/0.001 µg/mL	1	Hf, Nb

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

Reagent

MS CALSTD-1_00132

Standard Verification Form

Standard Information			
Vendor Standard Name	ICP ICPMS CAL Mix 1		
Vendor	CPI		
Lot number	492731-1		
Initial Verification	☑	Re-Verification	☐

TALS "Reagent" Information	
TALS Standard ID MS CAL STD 1	5364523
COA Reviewed against what is in TALS	☑

Verification Information and Data			
Verified by	LMW	Instrument ID	078
Verification Date	12/26/18	Method Reference	6020
ID of Standard Used for Verification	5495405	Batch # / Chrom Work List #	442617

Attach to this form: formulary report , COA and data used for verification
Attach to standard in TALS: this form and all supporting documentation including the original CoA

See Acceptance Criteria Below:			
Approved for Use	☑	Not Approved for Use	☐

New expiration date can be no greater than ½ the designated standards shelf life from the date of re-verification. Standards can only be re-verified one time.

New Expiration Date:	4/10/20

1st Level Review LMW Date: 1/18/19

2nd Level Review DG Date: 1/22/19

QA Review (Re-verification only)		Date:
	MH	MH

Acceptance Criteria		
Department	**Standard Analytes**	**Poor Performers* and Esterified Analytes**
GC/HPLC	≤ 15 %D	≤ 35 %D or ≤ 50 %D for dinoseb
GCMS/LCMS	≤ 35 %D	≤ 55 %D
MSVOA	≤ 25 %D	≤ 55 %D
Metals	≤ 8 %D	NA
Wet Chemistry	≤ 5 %D	NA

*See analytical SOP for details on poor performing analytes.

CPI INTERNATIONAL

5364523
ID: MS CALSTD-1_00132
Exp:04/10/20 Prpd:LMT Opn:12/26/18
ICP-MS Cal Std 1 CPI new

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-CAL1

ICP ICPMS CAL Mix # 1

Lot #: 982731-1

Matrix: 5% HNO_3/tr. HF

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
As	100.0 ± 0.5 mg/L	Li	100.0 ± 0.5 mg/L ✓	Si	1000 ± 5 mg/L
Ba	100.0 ± 0.5 mg/L	Mn	100.0 ± 0.5 mg/L	Sn	100.0 ± 0.5 mg/L
Be	100.0 ± 0.5 mg/L ✓	Mo	100.0 ± 0.5 mg/L	Sr	100.0 ± 0.5 mg/L
Cd	100.0 ± 0.5 mg/L	Ni	100.0 ± 0.5 mg/L	Ti	100.0 ± 0.5 mg/L
Co	100.0 ± 0.5 mg/L	Pb	100.0 ± 0.5 mg/L	Tl	100.0 ± 0.5 mg/L
Cr	100.0 ± 0.5 mg/L	Sb	100.0 ± 0.5 mg/L	V	100.0 ± 0.5 mg/L
Cu	100.0 ± 0.5 mg/L	Se	100.0 ± 0.5 mg/L		

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see reverse side)**. The solution was stabilized using high purity nitric acid (HNO_3), trace hydrofluoric acid (HF) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

October 15, 2018
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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1013BG Amsterdam F: +31 20 420 28 36
The Netherlands

www.cpiinternational.com

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Quality Manual Rev: No. 5, 03/01/2013

Further Information: Please contact CPI International for further information about this CRM.

Quality Certifications: This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
    - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM	Analyte	Aq. SRM	MO SRM
Ag	3151	1077a	Hf	3122	—	S	3154	2770
Al	3101a	1075a	Hg	3133	3133	Sb	3102a	3102a
As	3103a	3103a	Ho	3123a	—	Sc	3148a	3148a
Au	3121	—	In	3124a	3124a	Se	3149	3149
B	3107	3107	K	3141a	3141a	Si	3150	1066a
Ba	3104a	1051b	La	3127a	3127a	Sm	3147a	—
Be	3105a	3105a	Li	3129a	3129a	Sn	3161a	1057b
Bi	3106	3106	Lu	3130a	—	SO_4^{-2}	3181	—
Br	3184	—	Mg	3131a	3131a	Sr	3153a	3153a
Ca	3109a	3109a	Mn	3132	3132	Ta	3155	—
Cd	3108	1053a	Mo	3134	3134	Tb	3157a	—
Ce	3110	3110	Na	3152a	3152a	Te	3156	—
Cl	3182	1818a	Nb	3137	—	Th	3159	—
Co	3113	3113	Nd	3135a	—	Ti	3162a	3162a
Cr	3112a	1078b	Ni	3136	1065b	Tl	3158	3158
Cs	3111a	—	NO_3^-	3185	—	Tm	3160a	—
Cu	3114	1080a	P	3139a	3139a	U	3164	—
Dy	3115a	—	Pb	3128	3128	V	3165	1052b
Er	3116a	—	Pd	3138	—	W	3163	3163
Eu	3117a	—	PO_4^{-3}	3186	—	Y	3167a	3167a
F	3183	—	Pr	3142a	—	Yb	3166a	—
Fe	3126a	1079b	Pt	3140	3140	Zn	3168a	3168a
Ga	3119a	—	Rb	3145a	—	Zr	3169	3169
Gd	3118a	—	Re	3143	—			
Ge	3120a	—	Rh	3144	3144			

Sample Report

Sample Table

Sample Name	cal1
Data File Name	177SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\122618.b
Acq Date Time	2018-12-26T21:08:53-07:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	164CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

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QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	3656.659	ppb	3656.659	0.97	178199631	40000	
Be	9	1	6	4104.053	ppb	4104.053	2.27	2518534	2000	
B	11	1	6	1.443	ppb	1.443	4.96	2157	100	
Na	23	2	45	-25.683	ppb	-25.683	-3.93	11114	400000	
Mg	24	2	45	11.194	ppb	11.194	5.15	1677	400000	
Al	27	2	45	2.536	ppb	2.536	94.42	140	400000	
K	39	2	45	-9.489	ppb	-9.489	-46.57	10160	400000	
Ca	44	2	45	19667.739	ppb	19667.739	0.99	49593	400000	
V	51	2	72	3850.769	ppb	3850.769	1.06	3549417	2000	
Cr	52	2	72	3947.393	ppb	3947.393	2.04	5055126	5000	
Mn	55	2	72	3973.583	ppb	3973.583	5.01	1778426	10000	
Fe	57	2	72	1.993	ppb	1.993	108.99	557	400000	
Co	59	2	72	4006.204	ppb	4006.204	1.12	8550236	2000	
Ni	60	2	72	3991.592	ppb	3991.592	2.74	2407006	5000	
Cu	63	2	72	3956.112	ppb	3956.112	1.44	6450613	5000	
Zn	66	2	72	1.671	ppb	1.671	60.92	660	5000	
As	75	2	72	3781.400	ppb	3781.400	1.01	403912	2000	
Se	78	1	72	3858.347	ppb	3858.347	2.18	984849	2000	
Sr	88	2	45	3810.250	ppb	3810.250	0.68	1300429	2000	
Zr	90	2	72	102.619	ppb	102.619	11.55	1013	1000	
Zr	90	1	72	89.059	ppb	89.059	6.20	8217	1000	
Nb	93	2	72	6.334	ppb	6.334	5.73	14663	200	
Mo	95	2	115	4101.023	ppb	4101.023	4.33	2627054	2000	
Pd	105	2	115	0.170	ppb	0.170	29.69	180	100	
Ag	107	2	115	0.038	ppb	0.038	56.18	117	100	
Cd	111	2	115	3904.623	ppb	3904.623	2.56	1123583	2000	
Sn	120	2	115	4152.508	ppb	4152.508	3.13	2889403	2000	
Sb	121	2	115	3857.277	ppb	3857.277	3.57	2118745	1000	
Ba	137	2	115	3955.072	ppb	3955.072	1.60	660045	5000	
W	182	2	165	0.176	ppb	0.176	26.98	4411	100	
Pt	195	2	165	0.012	ppb	0.012	73.88	57	100	
Tl	205	2	165	3768.212	ppb	3768.212	2.99	18233940	2000	
Pb	208	2	165	3883.063	ppb	3883.063	1.80	25197106	5000	
Th	232	2	165	0.179	ppb	0.179	26.01	1390	2000	
U	238	2	165	0.034	ppb	0.034	21.98	417	2000	

103
CA
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QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2277422	1.61	2264630	100.56	60	125	
Sc (IS)	45	2	HMI He	757188	1.10	770564	98.26	60	125	
Sc IS)	45	3	No Gas	61785173	2.25	62537764	98.80	60	120	
Ge Internal Standard	72	1	HMI H2	9382082	2.59	9691882	96.80	60	125	
Ge Internal Standard	72	2	HMI He	728700	0.48	743556	98.00	60	125	
In Internal standard	115	2	HMI He	2024639	2.69	2135768	94.80	60	125	
Ho-165	165	2	HMI He	9887949	3.02	10135539	97.56	60	125	

Sample Report

Sample Table

Sample Name	.5 cal1
Data File Name	176SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\122618.b
Acq Date Time	2018-12-26T21:05:34-07:00
Analyst	Denver Metals
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	164CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

50

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	3	45	1927.607	ppb	1927.607	1.91	98157988	40000	
Be	9	1	6	2162.993	ppb	2162.993	0.78	1299482	2000	
B	11	1	6	2.351	ppb	2.351	4.25	2844	100	
Na	23	2	45	1.780	ppb	1.780	105.22	19130	400000	
Mg	24	2	45	10.108	ppb	10.108	9.80	1560	400000	
Al	27	2	45	10.303	ppb	10.303	43.10	340	400000	
K	39	2	45	1.654	ppb	1.654	265.64	10800	400000	
Ca	44	2	45	10262.338	ppb	10262.338	2.78	26183	400000	
V	51	2	72	1926.097	ppb	1926.097	1.87	1801873	2000	
Cr	52	2	72	1984.423	ppb	1984.423	1.99	2577377	5000	
Mn	55	2	72	1967.446	ppb	1967.446	0.14	893162	10000	
Fe	57	2	72	10.043	ppb	10.043	27.74	757	400000	
Co	59	2	72	1997.099	ppb	1997.099	1.47	4322680	2000	
Ni	60	2	72	1943.056	ppb	1943.056	1.84	1188332	5000	
Cu	63	2	72	2037.175	ppb	2037.175	2.28	3369610	5000	
Zn	66	2	72	1.060	ppb	1.060	61.25	547	5000	
As	75	2	72	1901.973	ppb	1901.973	0.16	206065	2000	
Se	78	1	72	1951.779	ppb	1951.779	3.65	512950	2000	
Sr	88	2	45	1913.794	ppb	1913.794	1.32	660590	2000	
Zr	90	2	72	70.916	ppb	70.916	17.67	723	1000	
Zr	90	1	72	62.326	ppb	62.326	9.16	6958	1000	
Nb	93	2	72	18.706	ppb	18.706	2.67	40649	200	
Mo	95	2	115	1995.992	ppb	1995.992	0.83	1282919	2000	
Pd	105	2	115	0.113	ppb	0.113	22.29	120	100	
Ag	107	2	115	0.050	ppb	0.050	21.12	143	100	
Cd	111	2	115	2008.362	ppb	2008.362	1.01	579689	2000	
Sn	120	2	115	2029.472	ppb	2029.472	1.84	1416369	2000	
Sb	121	2	115	1935.049	ppb	1935.049	0.21	1066124	1000	
Ba	137	2	115	2024.602	ppb	2024.602	2.05	338820	5000	
W	182	2	165	0.025	ppb	0.025	325.32	4011	100	
Pt	195	2	165	0.042	ppb	0.042	32.38	130	100	
Tl	205	2	165	1937.107	ppb	1937.107	3.49	9432943	2000	
Pb	208	2	165	1989.796	ppb	1989.796	4.29	12990802	5000	
Th	232	2	165	0.362	ppb	0.362	11.34	2594	2000	
U	238	2	165	0.156	ppb	0.156	6.94	1380	2000	

96.3

95.6

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2229335	1.63	2264630	98.44	60	125	
Sc (IS)	45	2	HMI He	765674	0.83	770564	99.37	60	125	
Sc IS)	45	3	No Gas	60082696	0.95	62537764	96.07	60	120	
Ge Internal Standard	72	1	HMI H2	9660685	2.04	9691882	99.68	60	125	
Ge Internal Standard	72	2	HMI He	739034	0.62	743556	99.39	60	125	
In Internal standard	115	2	HMI He	2029970	0.90	2135768	95.05	60	125	
Ho-165	165	2	HMI He	9948227	1.43	10135539	98.15	60	125	

Reagent

MS CALSTD-1_00136

INORGANIC VENTURES
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inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	ICPMS-CALSTD-1
Lot Number:	P2-MEB675675
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	20 µg/mL ea:

Silver, Arsenic, Barium,
Beryllium, Cadmium, Cobalt,
Chromium, Copper, Manganese,
Nickel, Lead, Selenium,
Thorium, Thallium, Uranium,
Vanadium, Zinc

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	**20.01 ± 0.16 µg/mL**	**Barium, Ba**	**20.01 ± 0.10 µg/mL**
Beryllium, Be	**20.00 ± 0.12 µg/mL**	**Cadmium, Cd**	**20.00 ± 0.12 µg/mL**
Chromium, Cr	**20.01 ± 0.11 µg/mL**	**Cobalt, Co**	**20.01 ± 0.11 µg/mL**
Copper, Cu	**20.01 ± 0.10 µg/mL**	**Lead, Pb**	**20.01 ± 0.11 µg/mL**
Manganese, Mn	**20.01 ± 0.10 µg/mL**	**Nickel, Ni**	**20.01 ± 0.11 µg/mL**
Selenium, Se	**20.00 ± 0.12 µg/mL**	**Silver, Ag**	**20.00 ± 0.14 µg/mL**
Thallium, Tl	**20.00 ± 0.14 µg/mL**	**Thorium, Th**	**20.00 ± 0.10 µg/mL**
Uranium, U	**19.99 ± 0.10 µg/mL**	**Vanadium, V**	**20.01 ± 0.11 µg/mL**
Zinc, Zn	**20.01 ± 0.11 µg/mL**		

Density: 1.025 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999c	999c
As	ICP Assay	3103a	100818
As	Calculated		See Sec. 4.2
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr	ICP Assay	3112a	030730Cr3
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	011017
Cu	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Th	EDTA	928	928
Th	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	993012
Tl	Calculated		See Sec. 4.2
U	ICP Assay	3164	080521
U	Calculated		See Sec. 4.2
V	EDTA	928	928
V	ICP Assay	3165	992706
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.7 ± 0.1
Uranium 235U	0.28 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Low Silver Note: This solution contains “LOW” levels of Silver. Please store this entire bottle inside a sealed glass jar.

Uranium Note: If uranium is present in this standard, it is natural abundance unless specified in Section 3

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 21, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 21, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control



Certifying Officer:

Paul Gaines
CEO, Senior Technical Director



Reagent

MS ICSA STOCK_00032

Standard Verification Form

Standard Information			
Vendor Standard Name	ICPMS ICSA MIX		
Vendor	CPI		
Lot number	927746-1		
Initial Verification	☒	Re-Verification	☐

TALS "Reagent" Information	
TALS Standard ID MS ICSA STOCK	549631
COA Reviewed against what is in TALS	☒

Verification Information and Data			
Verified by	AMT	Instrument ID	077
Verification Date	1/2/19	Method Reference	6020
ID of Standard Used for Verification	5500268	Batch # / Chrom Work List #	443112

Attach to this form: formulary report , COA and data used for verification
Attach to standard in TALS: this form and all supporting documentation including the original CoA

See Acceptance Criteria Below:

Approved for Use	☒	Not Approved for Use	☐

New expiration date can be no greater than ½ the designated standards shelf life from the date of re-verification. Standards can only be re-verified one time.

New Expiration Date:	4/15/20

1st Level Review 1/10/19 Date: AMT

2nd Level Review 1/10/19 Date: DG

QA Review (Re-verification only)		Date: 1/11/19

Acceptance Criteria		
Department	**Standard Analytes**	**Poor Performers* and Esterified Analytes**
GC/HPLC	≤ 15 %D	≤ 35 %D or ≤ 50 %D for dinoseb
GCMS/LCMS	≤ 35 %D	≤ 55 %D
MSVOA	≤ 25 %D	≤ 55 %D
Metals	≤ 8 %D	NA
Wet Chemistry	≤ 5 %D	NA

*See analytical SOP for details on poor performing analytes.

CPI INTERNATIONAL

5496315
ID: MS ICSA STOCK_00032
Exp:04/15/20 Prpd:LMT Opn:12/26/18
ICP-MS ICS-0A STOCK SOLUT

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-ICPMS-ICSA

ICPMS ICSA Mix

Lot #: 982746-1

Matrix: 2% HNO_3

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
Al	1000 ± 5 mg/L	Fe	1000 ± 5 mg/L	Na	1000 ± 5 mg/L
C	2003 ± 10 mg/L	K	999.7 ± 5.0 mg/L	P	1000 ± 5 mg/L
Ca	1000 ± 5 mg/L	Mg	1000 ± 5 mg/L	S	1000 ± 5 mg/L
Cl	10,000 ± 50 mg/L	Mo	20.00 ± 0.10 mg/L	Ti	20.00 ± 0.10 mg/L

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to **ISO 9001, ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see reverse side)**. The solution was stabilized using high purity nitric acid (HNO_3) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

October 15, 2018
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

Co
Mn
Cr

Concern!

USA
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F: 707.545.7901

Europe
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1013BG Amsterdam F: +31 20 420 28 36
The Netherlands

www.cpiinternational.com

Sample Table

Sample Name	cpi icsa
Data File Name	080SMPL.d
Data Path Name	D:\MassHunter Data\li010219.b
Acq Date Time	2019-01-02T17:11:16-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	060CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-10.578	ppb	-10.578	-50.85	113702	500000	
Li	7	2	45	3.294	ppb	3.294	192.51	4558	500000	
Li	7	3	45	-4.586	ppb	-4.586	-52.31	6781308	50000	
Be	9	1	6	0.009	ppb	0.009	442.11	10	2000	
B	11	1	6	0.501	ppb	0.501	48.56	477	2000	
Na	23	1	45	102772.187	ppb	102772.187	0.95	275042723	2000	>LDR
Na	23	2	45	100821.957	ppb	100821.957	0.40	17059390	400000	
Mg	24	2	45	104852.636	ppb	104852.636	1.15	7756550	400000	
Al	27	2	45	106176.075	ppb	106176.075	0.85	2021342	400000	
K	39	1	45	102786.781	ppb	102786.781	0.36	261914076	400000	
K	39	2	45	104518.720	ppb	104518.720	1.66	3737867	400000	
Ca	40	1	45	103678.370	ppb	103678.370	1.04	388025594	400000	
Ca	44	2	45	94000.620	ppb	94000.620	0.21	179473	400000	
Ti	47	2	45	1879.477	ppb	1879.477	0.83	33650	4000	
V	51	2	72	-0.694	ppb	-0.694	-84.09	3657	2000	
Cr	52	2	72	1.227	ppb	1.227	25.60	1834	5000	
Mn	55	2	72	0.684	ppb	0.684	33.03	283	10000	
Fe	57	2	72	109106.026	ppb	109106.026	0.72	1776959	400000	
Co	59	2	72	0.249	ppb	0.249	18.77	417	2000	
Ni	60	2	72	0.062	ppb	0.062	136.52	230	5000	
Cu	63	2	72	0.026	ppb	0.026	332.86	1697	5000	
Zn	66	2	72	0.713	ppb	0.713	81.26	463	5000	
As	75	2	72	0.116	ppb	0.116	79.18	44	2000	
Se	78	1	72	0.100	ppb	0.100	89.75	53	2000	
Sr	88	2	72	1.911	ppb	1.911	16.38	597	4000	
Zr	90	2	72	317.911	ppb	317.911	10.91	1514	1000	
Nb	93	2	72	6.299	ppb	6.299	5.06	12326	200	
Mo	95	2	115	2199.951	ppb	2199.951	1.42	1086325	2000	
Pd	105	2	115	0.000	ppb	0.000	1641.18	3	100	
Ag	107	2	115	0.072	ppb	0.072	23.14	143	100	
Cd	111	2	115	0.193	ppb	0.193	82.63	57	2000	
Sn	120	2	115	0.260	ppb	0.260	51.10	267	2000	
Sb	121	2	115	0.419	ppb	0.419	20.52	327	1000	
Ba	137	2	115	0.684	ppb	0.684	58.20	103	5000	
W	182	2	165	0.539	ppb	0.539	12.40	1830	100	
Pt	195	2	165	0.034	ppb	0.034	33.00	100	100	
Tl	205	2	165	0.001	ppb	0.001	18.86	90	2000	
Pb	208	2	165	0.295	ppb	0.295	5.30	2410	5000	
Th	232	2	165	0.613	ppb	0.613	1.33	4411	2000	
U	238	2	165	0.024	ppb	0.024	27.92	257	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	831270	0.65	916378	90.71	60	120	
Sc (IS)	45	1	HMI H2	18025328	0.60	19585204	92.04	60	120	
Sc (IS)	45	2	HMI He	526616	1.78	580572	90.71	60	120	
Sc (IS)	45	3	No Gas	54560486	0.40	58883081	92.66	60	120	
Ge Internal Standard	72	1	HMI H2	6970214	0.85	7580333	91.95	60	120	
Ge Internal Standard	72	2	HMI He	588707	1.53	640198	91.96	60	120	
In Internal Standard	115	2	HMI He	1512751	2.30	1731804	87.35	60	120	
Ho-165	165	2	HMI He	7754578	0.80	8087692	95.88	60	120	

0 78

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	cpi ck
Data File Name	202ICSA.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\122618.b
Acq Date Time	2018-12-26T22:33:30-07:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	164CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	1	45	-15.763	ppb	-54.4	243304	10	
Li	7	3	45	-1.480	ppb	-363.2	14166222	10	
Be	9	1	6	0.019	ppb	50.0	15	1	
B	11	1	6	-0.170	ppb	-89.1	753	10	
V	51	2	72	-0.615	ppb	-32.7	1830	1	
Cr	52	2	72	1.000	ppb	7.8	1810	1	>RL or LOD
Mn	55	2	72	0.733	ppb	17.6	390	1	
Co	59	2	72	0.266	ppb	17.5	570	1	
Ni	60	2	72	0.219	ppb	24.1	243	1	
Cu	63	2	72	0.096	ppb	70.1	2220	1	
Zn	66	2	72	0.560	ppb	50.5	413	1	
As	75	2	72	0.027	ppb	502.6	33	1	
Se	78	1	72	0.591	ppb	29.9	165	1	
Sr	88	2	45	1.884	ppb	24.8	640	1	>RL or LOD
Nb	93	2	72	84.907	ppb	0.9	165052	1	>RL or LOD
Mo	95	2	115	1995.511	ppb	1.9	1201741	2000	
Pd	105	2	115	0.151	ppb	12.3	150	1	
Ag	107	2	115	30.799	ppb	15.0	66318	1	>RL or LOD
Cd	111	2	115	0.592	ppb	17.4	160	1	
Sn	120	2	115	0.129	ppb	148.3	153	1	
Sb	121	2	115	0.159	ppb	44.7	120	1	
Ba	137	2	115	0.586	ppb	22.4	107	1	
W	182	2	165	0.128	ppb	49.8	4197	1	
Pt	195	2	165	0.036	ppb	47.7	113	1	
Tl	205	2	165	0.015	ppb	47.3	163	1	
Pb	208	2	165	0.311	ppb	14.3	2520	1	
Th	232	2	165	0.306	ppb	4.6	2177	1	
U	238	2	165	0.026	ppb	20.2	350	1	

Mn
Cr
Co.

100

compare

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	2060930	2.00	2264630	91.01	60	125	
Sc (IS)	45	2	HMI He	719833	0.66	770564	93.42	60	125	
Sc IS)	45	3	No Gas	59393980	1.18	62537764	94.97	60	120	
Ge Internal Standard	72	1	HMI H2	9124685	1.21	9691882	94.15	60	125	
Ge Internal Standard	72	2	HMI He	683141	0.84	743556	91.87	60	125	
In Internal standard	115	2	HMI He	1902142	1.01	2135768	89.06	60	125	
Ho-165	165	2	HMI He	9708851	0.77	10135539	95.79	60	125	

Reagent

MS ICVMIX--4_00001

Standard Verification Form

Standard Information			
Vendor Standard Name	ECP ICPMS CAL 4 Solution A		
Vendor	CPI		
Lot number	10098633-10		
Initial Verification	☑	Re-Verification	☐

TALS "Reagent" Information	
TALS Standard ID MS ICVM x4	5499604
COA Reviewed against what is in TALS	☑

Verification Information and Data			
Verified by	LMT	Instrument ID	077
Verification Date	1/2/19, 1/3/19, 1/11/19	Method Reference	6020
ID of Standard Used for Verification	5500268, 5501313, 5499805	Batch # / Chrom Work List #	443117, 443253, 444142

Attach to this form: formulary report , COA and data used for verification
Attach to standard in TALS: this form and all supporting documentation including the original CoA

See Acceptance Criteria Below:

Approved for Use	☐	Not Approved for Use	☐

New expiration date can be no greater than ½ the designated standards shelf life from the date of re-verification. Standards can only be re-verified one time.

New Expiration Date:	1/15/20

1st Level Review: LMT Date: 1/15/19

2nd Level Review: DG Date: 1/22/19

QA Review (Re-verification only)	NA	Date: NA

Acceptance Criteria		
Department	**Standard Analytes**	**Poor Performers* and Esterified Analytes**
GC/HPLC	≤ 15 %D	≤ 35 %D or ≤ 50 %D for dinoseb
GCMS/LCMS	≤ 35 %D	≤ 55 %D
MSVOA	≤ 25 %D	≤ 55 %D
Metals	≤ 8 %D	NA
Wet Chemistry	≤ 5 %D	NA

*See analytical SOP for details on poor performing analytes.

CPI INTERNATIONAL

5499604
ID: MS ICVMIX-4_00001
Exp:05/15/20 Prpd:LMT Opn:11/15/18
ICP-MS ICV Std 4 CPI new

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-CM-OCT18-DEN9-A-SS

Custom ICP ICPMS Cal 4 Solution A

Lot #: 10088633-10

Matrix: 5% HNO_3

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
Ag	100.0 ± 0.5 µg/mL	Nd	100.0 ± 0.5 µg/mL	Th	100.1 ± 0.5 µg/mL
Dy	100.0 ± 0.5 µg/mL	Pd	100.0 ± 0.5 µg/mL	Zn	100.0 ± 0.5 µg/mL
Gd	100.1 ± 0.5 µg/mL	Sm	100.0 ± 0.5 µg/mL		
Li	100.1 ± 0.5 µg/mL	Sr	100.0 ± 0.5 µg/mL		

Intended Use: This solution is intended for use as a second source certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see reverse side)**. The solution was stabilized using high purity nitric acid (HNO_3) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

November 21, 2018
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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1013BG Amsterdam F: +31 20 420 28 36
The Netherlands

www.cpiinternational.com

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Quality Manual Rev: No. 5, 03/01/2013

Further Information: Please contact CPI International for further information about this CRM.

Quality Certifications: This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
    - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM		Analyte	Aq. SRM	MO SRM		Analyte	Aq. SRM	MO SRM
Ag	3151	1077a		Hf	3122	—		S	3154	2770
Al	3101a	1075a		Hg	3133	3133		Sb	3102a	3102a
As	3103a	3103a		Ho	3123a	—		Sc	3148a	3148a
Au	3121	—		In	3124a	3124a		Se	3149	3149
B	3107	3107		K	3141a	3141a		Si	3150	1066a
Ba	3104a	1051b		La	3127a	3127a		Sm	3147a	—
Be	3105a	3105a		Li	3129a	3129a		Sn	3161a	1057b
Bi	3106	3106		Lu	3130a	—		SO_4^{-2}	3181	—
Br^-	3184	—		Mg	3131a	3131a		Sr	3153a	3153a
Ca	3109a	3109a		Mn	3132	3132		Ta	3155	—
Cd	3108	1053a		Mo	3134	3134		Tb	3157a	—
Ce	3110	3110		Na	3152a	3152a		Te	3156	—
Cl^-	3182	1818a		Nb	3137	—		Th	3159	—
Co	3113	3113		Nd	3135a	—		Ti	3162a	3162a
Cr	3112a	1078b		Ni	3136	1065b		Tl	3158	3158
Cs	3111a	—		NO_3^-	3185	—		Tm	3160a	—
Cu	3114	1080a		P	3139a	3139a		U	3164	—
Dy	3115a	—		Pb	3128	3128		V	3165	1052b
Er	3116a	—		Pd	3138	—		W	3163	3163
Eu	3117a	—		PO_4^{-3}	3186	—		Y	3167a	3167a
F^-	3183	—		Pr	3142a	—		Yb	3166a	—
Fe	3126a	1079b		Pt	3140	3140		Zn	3168a	3168a
Ga	3119a	—		Rb	3145a	—		Zr	3169	3169
Gd	3118a	—		Re	3143	—				
Ge	3120a	—		Rh	3144	3144				

Sample Report

Sample Table

Sample Name	0.5 cal 4
Data File Name	079SMPL.d
Data Path Name	D:\MassHunter Data\I010319.b
Acq Date Time	2019-01-03T15:53:12-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	045CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	2235.052	ppb	2235.052	0.74	1206191	500000	
Li	7	2	45	1988.199	ppb	1988.199	4.16	43678	500000	
Li	7	3	45	1935.877	ppb	1935.877	1.40	66978526	50000	
Be	9	1	6	-0.013	ppb	-0.013	-194.39	7	2000	
B	11	1	6	-2.156	ppb	-2.156	-4.81	980	2000	
Na	23	1	45	-2.190	ppb	-2.190	-22.95	257447	2000	
Na	23	2	45	1.558	ppb	1.558	120.56	19000	400000	
Mg	24	2	45	5.800	ppb	5.800	29.64	863	400000	
Al	27	2	45	1.676	ppb	1.676	87.78	183	400000	
K	39	1	45	55.098	ppb	55.098	24.28	11113468	400000	
K	39	2	45	32.649	ppb	32.649	69.35	16140	400000	
Ca	40	1	45	14.395	ppb	14.395	1.30	157444	400000	
Ca	44	2	45	7512.628	ppb	7512.628	3.00	15736	400000	
Ti	47	2	45	0.347	ppb	0.347	86.64	7	4000	
V	51	2	72	0.484	ppb	0.484	13.35	4664	2000	
Cr	52	2	72	-0.047	ppb	-0.047	-85.59	613	5000	
Mn	55	2	72	0.065	ppb	0.065	180.71	130	10000	
Fe	57	2	72	1.669	ppb	1.669	145.13	153	400000	
Co	59	2	72	0.030	ppb	0.030	100.61	97	2000	
Ni	60	2	72	0.017	ppb	0.017	695.51	133	5000	
Cu	63	2	72	0.069	ppb	0.069	81.28	1650	5000	
Zn	66	2	72	1898.208	ppb	1898.208	1.88	368763	5000	
As	75	2	72	47.224	ppb	47.224	1.74	6328	2000	
Se	78	1	72	14.757	ppb	14.757	5.61	3308	2000	
Sr	88	2	72	1832.418	ppb	1832.418	1.46	624785	4000	
Zr	90	2	72	5.054	ppb	5.054	122.78	47	1000	
Nb	93	2	72	1.873	ppb	1.873	10.30	5081	200	
Mo	95	2	115	0.216	ppb	0.216	37.27	187	2000	
Pd	105	2	115	2124.068	ppb	2124.068	1.59	2033658	100	>LDR
Ag	107	2	115	320.338	ppb	320.338	42.18	676624	100	
Cd	111	2	115	0.041	ppb	0.041	101.30	10	2000	
Sn	120	2	115	0.164	ppb	0.164	18.56	197	2000	
Sb	121	2	115	0.183	ppb	0.183	36.72	207	1000	
Ba	137	2	115	0.170	ppb	0.170	54.21	50	5000	
W	182	2	165	0.227	ppb	0.227	13.74	1130	100	
Pt	195	2	165	0.025	ppb	0.025	42.47	87	100	
Tl	205	2	165	0.012	ppb	0.012	93.15	137	2000	
Pb	208	2	165	1.814	ppb	1.814	1.76	13455	5000	
Th	232	2	165	1985.702	ppb	1985.702	0.35	16643854	2000	
U	238	2	165	0.439	ppb	0.439	4.57	4098	2000	

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QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1341204	2.03	1460232	91.85	60	120	
Sc (IS)	45	1	HMI H2	21968819	0.28	23361340	94.04	60	120	
Sc (IS)	45	2	HMI He	609709	2.60	650472	93.73	60	120	
Sc (IS)	45	3	No Gas	58744191	1.43	59100497	99.40	60	120	
Ge Internal Standard	72	1	HMI H2	8439859	1.26	8906732	94.76	60	120	
Ge Internal Standard	72	2	HMI He	699773	2.64	726696	96.30	60	120	
In Internal Standard	115	2	HMI He	1897438	2.19	2021111	93.88	60	120	
Ho-165	165	2	HMI He	9657634	0.71	9971317	96.85	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	mix icv4
Data File Name	036_ICV.d
Data Path Name	D:\MassHunter Data\i011119.b
Acq Date Time	2019-01-11T12:14:08-07:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	101.040	ppb	2.028	145094	400	25.3	90	110	>+\-10%
Li	7	2	45	64.631	ppb	22.030	4908	400	16.2	90	110	>+\-10%
Li	7	3	45	102.135	ppb	5.522	6714897	400	25.5	90	110	>+\-10%
Be	9	1	6	36.475	ppb	3.259	15455	40	91.2	90	110	
B	11	1	6	0.992	ppb	14.143	673	40	2.5	90	110	>+\-10%
Na	23	1	45	796.792	ppb	1.576	2902103	4000	19.9	90	110	>+\-10%
Na	23	2	45	758.122	ppb	0.050	181885	4000	19.0	90	110	>+\-10%
Mg	24	2	45	785.126	ppb	2.200	75308	4000	19.6	90	110	>+\-10%
Al	27	2	45	803.056	ppb	3.708	20191	4000	20.1	90	110	>+\-10%
K	39	1	45	827.187	ppb	6.648	13275137	4000	20.7	90	110	>+\-10%
K	39	2	45	755.697	ppb	1.944	57848	4000	18.9	90	110	>+\-10%
Ca	40	1	45	797.681	ppb	0.292	3954537	4000	19.9	90	110	>+\-10%
Ca	44	2	45	1019.954	ppb	5.646	2637	4000	25.5	90	110	>+\-10%
Ti	47	2	45	40.374	ppb	20.032	823	40	100.9	90	110	
V	51	2	72	39.383	ppb	2.732	40414	40	98.5	90	110	
Cr	52	2	72	39.033	ppb	4.284	47907	40	97.6	90	110	
Mn	55	2	72	39.281	ppb	3.607	17575	40	98.2	90	110	
Fe	57	2	72	766.275	ppb	3.291	16714	4000	19.2	90	110	>+\-10%
Co	59	2	72	38.441	ppb	1.997	80876	40	96.1	90	110	
Ni	60	2	72	37.733	ppb	1.235	22542	40	94.3	90	110	
Cu	63	2	72	37.908	ppb	2.984	63956	40	94.8	90	110	
Zn	66	2	72	37.521	ppb	3.126	8730	40	93.8	90	110	
As	75	2	72	38.921	ppb	0.703	6273	40	97.3	90	110	
Se	78	1	72	38.237	ppb	0.310	9837	40	95.6	90	110	
Sr	88	2	72	74.761	ppb	0.814	31633	40	186.9	90	110	>+\-10%
Zr	90	2	72	12.166	ppb	67.581	163	40	30.4	90	110	>+\-10%
Nb	93	2	72	34.320	ppb	0.845	88077	80	42.9	90	110	>+\-10%
Mo	95	2	115	38.298	ppb	1.977	27361	40	95.7	90	110	
Pd	105	2	115	39.283	ppb	1.690	43368	40	98.2	90	110	
Ag	107	2	115	37.416	ppb	1.898	92934	40	93.5	90	110	
Cd	111	2	115	35.945	ppb	1.794	10608	40	89.9	90	110	>+\-10%
Sn	120	2	115	38.819	ppb	2.135	29573	40	97.0	90	110	
Sb	121	2	115	39.097	ppb	1.525	27919	40	97.7	90	110	
Ba	137	2	115	35.674	ppb	5.519	8123	40	89.2	90	110	>+\-10%
W	182	2	165	39.423	ppb	1.412	129976	40	98.6	90	110	
Pt	195	2	165	38.027	ppb	0.974	110386	40	95.1	90	110	
Tl	205	2	165	38.875	ppb	1.262	224845	40	97.2	90	110	
Pb	208	2	165	39.281	ppb	0.650	297886	40	98.2	90	110	
Th	232	2	165	39.391	ppb	0.920	345501	40	98.5	90	110	
U	238	2	165	38.466	ppb	1.225	364061	40	96.2	90	110	

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QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	765246	0.50	749074	102.16	60	120	
Sc (IS)	45	1	HMI H2	27061203	1.68	28055669	96.46	60	120	
Sc (IS)	45	2	HMI He	826154	0.84	868713	95.10	60	120	
Sc (IS)	45	3	No Gas	62668627	1.51	63264234	99.06	60	120	
Ge Internal Standard	72	1	HMI H2	10511209	0.94	10773765	97.56	60	120	
Ge Internal Standard	72	2	HMI He	929574	1.02	971069	95.73	60	120	
In Internal Standard	115	2	HMI He	2471344	1.52	2542617	97.20	60	120	
Ho-165	165	2	HMI He	11548876	0.38	11767270	98.14	60	120	

Reagent

MS icvMIX-1_00001

Standard Verification Form

Standard Information			
Vendor Standard Name	ICP-ICPMS CAL MIX #1 (55)		
Vendor	CPI		
Lot number	9822733-1		
Initial Verification	☒	Re-Verification	☐

TALS "Reagent" Information	
TALS Standard ID MSICVMIX 1	5499585
COA Reviewed against what is in TALS	☒

Verification Information and Data			
Verified by	LWR	Instrument ID	077
Verification Date	1/2/19 + 1/3/19	Method Reference	6020
ID of Standard Used for Verification	5500268, 5501313	Batch # / Chrom Work List #	443112, 443253

Attach to this form: formulary report , COA and data used for verification
Attach to standard in TALS: this form and all supporting documentation including the original CoA

See Acceptance Criteria Below:

Approved for Use	☒	Not Approved for Use	☐

New expiration date can be no greater than ½ the designated standards shelf life from the date of re-verification. Standards can only be re-verified one time.

New Expiration Date:	

1st Level Review 1/10/19 Date: LWR

2nd Level Review DG Date: 1/22/19

QA Review (Re-verification only)		Date:

Acceptance Criteria		
Department	**Standard Analytes**	**Poor Performers* and Esterified Analytes**
GC/HPLC	≤ 15 %D	≤ 35 %D or ≤ 50 %D for dinoseb
GCMS/LCMS	≤ 35 %D	≤ 55 %D
MSVOA	≤ 25 %D	≤ 55 %D
Metals	≤ 8 %D	NA
Wet Chemistry	≤ 5 %D	NA

*See analytical SOP for details on poor performing analytes.

CPI INTERNATIONAL

5499585
ID: MS icvMIX-1_00001
Exp:04/15/20 Prpd:LMT Opn:12/31/18
ICP-MS ICV Std 1 CPI new

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous CRM

Product #: TA-CAL1-SS

ICP ICPMS CAL Mix # 1

Lot #: 982733-1

Matrix: 5% HNO_3/tr. HF

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
As	100.0 ± 0.5 mg/L	Li	100.0 ± 0.5 mg/L	Si	1000 ± 5 mg/L
Ba	100.0 ± 0.5 mg/L	Mn	100.0 ± 0.5 mg/L	Sn	100.1 ± 0.5 mg/L
Be	100.0 ± 0.5 mg/L	Mo	100.0 ± 0.5 mg/L	Sr	100.0 ± 0.5 mg/L
Cd	100.1 ± 0.5 mg/L	Ni	100.0 ± 0.5 mg/L	Ti	100.1 ± 0.5 mg/L
Co	100.0 ± 0.5 mg/L	Pb	100.0 ± 0.5 mg/L	Tl	100.0 ± 0.5 mg/L
Cr	100.0 ± 0.5 mg/L	Sb	100.0 ± 0.5 mg/L	V	100.0 ± 0.5 mg/L
Cu	100.1 ± 0.5 mg/L	Se	100.0 ± 0.5 mg/L		

Intended Use: This solution is intended for use as a second source certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see reverse side)**. The solution was stabilized using high purity nitric acid (HNO_3), trace hydrofluoric acid (HF) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

October 15, 2018
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Quality Manual Rev: No. 5, 03/01/2013

Further Information: Please contact CPI International for further information about this CRM.

Quality Certifications: This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
    - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM		Analyte	Aq. SRM	MO SRM		Analyte	Aq. SRM	MO SRM
Ag	3151	1077a		Hf	3122	—		S	3154	2770
Al	3101a	1075a		Hg	3133	3133		Sb	3102a	3102a
As	3103a	3103a		Ho	3123a	—		Sc	3148a	3148a
Au	3121	—		In	3124a	3124a		Se	3149	3149
B	3107	3107		K	3141a	3141a		Si	3150	1066a
Ba	3104a	1051b		La	3127a	3127a		Sm	3147a	—
Be	3105a	3105a		Li	3129a	3129a		Sn	3161a	1057b
Bi	3106	3106		Lu	3130a	—		SO_4^{-2}	3181	—
Br	3184	—		Mg	3131a	3131a		Sr	3153a	3153a
Ca	3109a	3109a		Mn	3132	3132		Ta	3155	—
Cd	3108	1053a		Mo	3134	3134		Tb	3157a	—
Ce	3110	3110		Na	3152a	3152a		Te	3156	—
Cl	3182	1818a		Nb	3137	—		Th	3159	—
Co	3113	3113		Nd	3135a	—		Ti	3162a	3162a
Cr	3112a	1078b		Ni	3136	1065b		Tl	3158	3158
Cs	3111a	—		NO_3^-	3185	—		Tm	3160a	—
Cu	3114	1080a		P	3139a	3139a		U	3164	—
Dy	3115a	—		Pb	3128	3128		V	3165	1052b
Er	3116a	—		Pd	3138	—		W	3163	3163
Eu	3117a	—		PO_4^{-3}	3186	—		Y	3167a	3167a
F	3183	—		Pr	3142a	—		Yb	3166a	—
Fe	3126a	1079b		Pt	3140	3140		Zn	3168a	3168a
Ga	3119a	—		Rb	3145a	—		Zr	3169	3169
Gd	3118a	—		Re	3143	—				
Ge	3120a	—		Rh	3144	3144				

Sample Report

Sample Table

Sample Name	1/2 icv1
Data File Name	128SMPL.d
Data Path Name	D:\MassHunter Data\li010219.b
Acq Date Time	2019-01-02T20:13:16-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	123CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	2131.302	ppb	2131.302	0.52	893573	500000	
Li	7	2	45	2190.875	ppb	2190.875	0.73	36893	500000	
Li	7	3	45	2144.899	ppb	2144.899	0.61	55409866	50000	
Be	9	1	6	2181.610	ppb	2181.610	1.68	895435	2000	
B	11	1	6	0.537	ppb	0.537	25.76	467	2000	
Na	23	1	45	40.146	ppb	40.146	2.08	317607	2000	
Na	23	2	45	35.895	ppb	35.895	6.93	22244	400000	
Mg	24	2	45	24.298	ppb	24.298	4.69	2024	400000	
Al	27	2	45	3.653	ppb	3.653	78.66	153	400000	
K	39	1	45	143.486	ppb	143.486	16.77	12138795	400000	
K	39	2	45	39.408	ppb	39.408	35.25	20328	400000	
Ca	40	1	45	20.792	ppb	20.792	1.26	174568	400000	
Ca	44	2	45	7496.627	ppb	7496.627	3.91	13851	400000	
Ti	47	2	45	2081.178	ppb	2081.178	2.78	33844	4000	
V	51	2	72	2103.775	ppb	2103.775	0.61	1479396	2000	
Cr	52	2	72	2142.216	ppb	2142.216	0.75	1997199	5000	
Mn	55	2	72	2100.650	ppb	2100.650	0.53	683461	10000	
Fe	57	2	72	4.103	ppb	4.103	123.67	267	400000	
Co	59	2	72	2154.829	ppb	2154.829	0.33	3441202	2000	
Ni	60	2	72	2141.059	ppb	2141.059	0.45	985280	5000	
Cu	63	2	72	2177.279	ppb	2177.279	1.71	2761027	5000	
Zn	66	2	72	8.271	ppb	8.271	6.24	1794	5000	
As	75	2	72	2062.375	ppb	2062.375	0.26	270663	2000	
Se	78	1	72	2099.682	ppb	2099.682	1.29	442691	2000	
Sr	88	2	72	2010.297	ppb	2010.297	0.56	627849	4000	
Zr	90	2	72	194.763	ppb	194.763	28.66	1053	1000	
Nb	93	2	72	7.246	ppb	7.246	3.18	14875	200	
Mo	95	2	115	2092.001	ppb	2092.001	0.04	1107580	2000	
Pd	105	2	115	0.059	ppb	0.059	70.43	57	100	
Ag	107	2	115	0.012	ppb	0.012	157.41	57	100	
Cd	111	2	115	2031.378	ppb	2031.378	0.13	462568	2000	
Sn	120	2	115	2114.286	ppb	2114.286	0.12	1185309	2000	
Sb	121	2	115	1973.874	ppb	1973.874	0.84	1128911	1000	
Ba	137	2	115	2126.759	ppb	2126.759	1.43	350675	5000	
W	182	2	165	0.229	ppb	0.229	9.83	933	100	
Pt	195	2	165	0.008	ppb	0.008	228.63	57	100	
Tl	205	2	165	2072.703	ppb	2072.703	0.69	9287762	2000	
Pb	208	2	165	2157.692	ppb	2157.692	1.19	12763099	5000	
Th	232	2	165	0.389	ppb	0.389	0.47	2917	2000	
U	238	2	165	0.027	ppb	0.027	5.50	293	2000	

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QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	865332	1.45	940696	91.99	60	120	
Sc (IS)	45	1	HMI H2	18615746	0.90	19547458	95.23	60	120	
Sc (IS)	45	2	HMI He	541142	1.00	565551	95.68	60	120	
Sc (IS)	45	3	No Gas	57007854	0.56	58209461	97.94	60	120	
Ge Internal Standard	72	1	HMI H2	7252257	1.19	7625779	95.10	60	120	
Ge Internal Standard	72	2	HMI He	623330	1.66	643482	96.87	60	120	
In Internal Standard	115	2	HMI He	1653021	1.01	1772604	93.25	60	120	
Ho-165	165	2	HMI He	7947601	1.76	8323784	95.48	60	120	

Sample Report

Sample Table

Sample Name	0.5 cal 1
Data File Name	083SMPL.d
Data Path Name	D:\MassHunter Data\ii010319.b
Acq Date Time	2019-01-03T16:08:15-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	045CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	2295.818	ppb	2295.818	1.75	1232071	500000	
Li	7	2	45	1971.812	ppb	1971.812	2.64	42755	500000	
Li	7	3	45	1919.101	ppb	1919.101	1.00	65608362	50000	
Be	9	1	6	2075.180	ppb	2075.180	2.30	967801	2000	
B	11	1	6	-2.135	ppb	-2.135	-9.81	1007	2000	
Na	23	1	45	-23.273	ppb	-23.273	-2.60	188399	2000	
Na	23	2	45	-18.792	ppb	-18.792	-21.52	14751	400000	
Mg	24	2	45	2.716	ppb	2.716	37.25	590	400000	
Al	27	2	45	-2.073	ppb	-2.073	-137.36	100	400000	
K	39	1	45	45.662	ppb	45.662	9.96	11063136	400000	
K	39	2	45	48.866	ppb	48.866	46.17	16537	400000	
Ca	40	1	45	2.723	ppb	2.723	1.90	105594	400000	
Ca	44	2	45	7367.778	ppb	7367.778	3.96	15222	400000	
Ti	47	2	45	1823.088	ppb	1823.088	0.83	34174	4000	
V	51	2	72	1974.576	ppb	1974.576	0.86	1539982	2000	
Cr	52	2	72	1945.853	ppb	1945.853	0.17	1987045	5000	
Mn	55	2	72	1955.541	ppb	1955.541	0.71	699224	10000	
Fe	57	2	72	2.457	ppb	2.457	63.22	163	400000	
Co	59	2	72	2008.781	ppb	2008.781	0.90	3551515	2000	
Ni	60	2	72	1967.405	ppb	1967.405	1.00	1003576	5000	
Cu	63	2	72	1951.783	ppb	1951.783	0.79	2798080	5000	
Zn	66	2	72	0.706	ppb	0.706	80.36	480	5000	
As	75	2	72	1874.522	ppb	1874.522	0.46	243707	2000	
Se	78	1	72	1923.366	ppb	1923.366	0.71	424960	2000	
Sr	88	2	72	1867.184	ppb	1867.184	0.30	620403	4000	
Zr	90	2	72	165.973	ppb	165.973	17.88	697	1000	
Nb	93	2	72	12.919	ppb	12.919	1.84	29585	200	
Mo	95	2	115	1978.096	ppb	1978.096	1.67	1148225	2000	
Pd	105	2	115	0.591	ppb	0.591	8.95	563	100	
Ag	107	2	115	1.394	ppb	1.394	6.71	2970	100	
Cd	111	2	115	1934.200	ppb	1934.200	0.88	473412	2000	
Sn	120	2	115	1946.106	ppb	1946.106	1.35	1211542	2000	
Sb	121	2	115	1817.314	ppb	1817.314	1.24	1102340	1000	
Ba	137	2	115	1923.614	ppb	1923.614	1.48	349776	5000	
W	182	2	165	0.170	ppb	0.170	11.10	933	100	
Pt	195	2	165	0.008	ppb	0.008	111.52	37	100	
Tl	205	2	165	1971.565	ppb	1971.565	1.17	10286219	2000	
Pb	208	2	165	2020.165	ppb	2020.165	0.47	13893654	5000	
Th	232	2	165	6.843	ppb	6.843	3.31	60301	2000	
U	238	2	165	0.008	ppb	0.008	39.68	163	2000	

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QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1361493	1.40	1460232	93.24	60	120	
Sc (IS)	45	1	HMI H2	21922628	1.52	23361340	93.84	60	120	
Sc (IS)	45	2	HMI He	601201	1.64	650472	92.43	60	120	
Sc (IS)	45	3	No Gas	57965567	0.56	59100497	98.08	60	120	
Ge Internal Standard	72	1	HMI H2	8368218	1.63	8906732	93.95	60	120	
Ge Internal Standard	72	2	HMI He	681884	2.05	726696	93.83	60	120	
In Internal Standard	115	2	HMI He	1879428	2.71	2021111	92.99	60	120	
Ho-165	165	2	HMI He	9489083	1.49	9971317	95.16	60	120	

Sample Report

Sample Table

Sample Name	cal 1
Data File Name	085SMPL.d
Data Path Name	D:\MassHunter Data\li010319.b
Acq Date Time	2019-01-03T16:15:46-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	045CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	4523.704	ppb	4523.704	2.53	2210410	500000	
Li	7	2	45	3872.972	ppb	3872.972	0.19	77041	500000	
Li	7	3	45	3910.811	ppb	3910.811	0.94	121990722	50000	
Be	9	1	6	4470.593	ppb	4470.593	2.72	1957205	2000	
B	11	1	6	-2.081	ppb	-2.081	-4.83	977	2000	
Na	23	1	45	-22.814	ppb	-22.814	-4.59	184110	2000	
Na	23	2	45	-20.412	ppb	-20.412	-15.53	14274	400000	
Mg	24	2	45	7.162	ppb	7.162	3.67	957	400000	
Al	27	2	45	-0.321	ppb	-0.321	-331.32	137	400000	
K	39	1	45	13.199	ppb	13.199	238.86	10636370	400000	
K	39	2	45	76.322	ppb	76.322	27.65	17401	400000	
Ca	40	1	45	-1.282	ppb	-1.282	-7.19	85233	400000	
Ca	44	2	45	14541.255	ppb	14541.255	1.11	29661	400000	
Ti	47	2	45	3564.588	ppb	3564.588	2.04	66054	4000	
V	51	2	72	3974.955	ppb	3974.955	0.43	3018385	2000	
Cr	52	2	72	3816.843	ppb	3816.843	1.69	3798923	5000	
Mn	55	2	72	4081.935	ppb	4081.935	1.42	1422985	10000	
Fe	57	2	72	0.608	ppb	0.608	262.57	127	400000	
Co	59	2	72	3896.835	ppb	3896.835	1.08	6717539	2000	
Ni	60	2	72	3943.981	ppb	3943.981	1.12	1961473	5000	
Cu	63	2	72	3789.718	ppb	3789.718	1.46	5294789	5000	
Zn	66	2	72	0.636	ppb	0.636	62.97	457	5000	
As	75	2	72	3783.675	ppb	3783.675	0.59	479546	2000	
Se	78	1	72	3857.391	ppb	3857.391	1.59	829435	2000	
Sr	88	2	72	3760.189	ppb	3760.189	1.10	1218067	4000	
Zr	90	2	72	140.259	ppb	140.259	25.33	580	1000	
Nb	93	2	72	5.164	ppb	5.164	4.28	11976	200	
Mo	95	2	115	4068.248	ppb	4068.248	1.80	2279603	2000	
Pd	105	2	115	0.284	ppb	0.284	7.85	263	100	
Ag	107	2	115	0.850	ppb	0.850	12.87	1770	100	
Cd	111	2	115	3929.482	ppb	3929.482	1.77	928310	2000	
Sn	120	2	115	4031.035	ppb	4031.035	1.10	2422317	2000	
Sb	121	2	115	3795.231	ppb	3795.231	1.75	2222125	1000	
Ba	137	2	115	3856.448	ppb	3856.448	2.34	676896	5000	
W	182	2	165	0.341	ppb	0.341	9.30	1454	100	
Pt	195	2	165	0.000	ppb	0.000	638.43	17	100	
Tl	205	2	165	3888.170	ppb	3888.170	1.49	20175915	2000	
Pb	208	2	165	3928.308	ppb	3928.308	1.51	26867073	5000	
Th	232	2	165	1.111	ppb	1.111	5.17	13047	2000	
U	238	2	165	0.013	ppb	0.013	108.46	210	2000	

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QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1278779	1.92	1460232	87.57	60	120	
Sc (IS)	45	1	HMI H2	21255401	0.75	23361340	90.99	60	120	
Sc (IS)	45	2	HMI He	594445	1.89	650472	91.39	60	120	
Sc (IS)	45	3	No Gas	57135856	0.80	59100497	96.68	60	120	
Ge Internal Standard	72	1	HMI H2	8144118	0.44	8906732	91.44	60	120	
Ge Internal Standard	72	2	HMI He	664819	1.87	726696	91.49	60	120	
In Internal Standard	115	2	HMI He	1813792	0.34	2021111	89.74	60	120	
Ho-165	165	2	HMI He	9438284	2.23	9971317	94.65	60	120	

Reagent

MS LLCCV_00001

Standard Verification Form

Standard Information			
Vendor Standard Name	ICP-MS low level CCV		
Vendor	CPI		
Lot number	~~1007766~~ 10098633-8	m 1/10/19	
Initial Verification	☒	Re-Verification	☐

TALS "Reagent" Information	
TALS Standard ID MS LLCCV	5499633
COA Reviewed against what is in TALS	☐

Verification Information and Data			
Verified by	LMT	Instrument ID	077
Verification Date	1/2/19, 1/3/19	Method Reference	6020
ID of Standard Used for Verification	5500268, 5501313	Batch # / Chrom Work List #	443112, 443253

Attach to this form: formulary report , COA and data used for verification
Attach to standard in TALS: this form and all supporting documentation including the original CoA

See Acceptance Criteria Below:			
Approved for Use	☒	Not Approved for Use	☐

New expiration date can be no greater than ½ the designated standards shelf life from the date of re-verification. Standards can only be re-verified one time.

New Expiration Date:	5/5/20

1st Level Review LMT Date: 1/4/19

2nd Level Review DG Date: 1/22/19

QA Review (Re-verification only)		Date:

Acceptance Criteria		
Department	**Standard Analytes**	**Poor Performers* and Esterified Analytes**
GC/HPLC	≤ 15 %D	≤ 35 %D or ≤ 50 %D for dinoseb
GCMS/LCMS	≤ 35 %D	≤ 55 %D
MSVOA	≤ 25 %D	≤ 55 %D
Metals	≤ 8 %D	NA
Wet Chemistry	≤ 5 %D	NA

*See analytical SOP for details on poor performing analytes.

CPI INTERNATIONAL

5499633
ID: MS LLCCV_00001
Exp:05/15/20 Prpd:LMT Opn:12/31/19
LOW LEVEL CCV1 CPI

CERTIFICATE OF ANALYSIS

Multi-Element Aqueous RM

Product #: TA-CM-OCT18-DEN8-250

ICP-MS low level CCV

Lot #: 10088633-8

Matrix: 2% HNO_3/tr. HF

Element	Certified Concentration	Element	Certified Concentration	Element	Certified Concentration
Ag	0.5 µg/mL	Fe	5.0 µg/mL	Sn	1.0 µg/mL
Al	5.0 µg/mL	K	10.0 µg/mL	Sr	0.1 µg/mL
As	0.5 µg/mL	Li	1.0 µg/mL	Th	0.2 µg/mL
B	0.1 µg/mL	Mg	5.0 µg/mL	Ti	0.1 µg/mL
Ba	0.1 µg/mL	Mn	0.1 µg/mL	Tl	0.1 µg/mL
Be	0.1 µg/mL	Mo	0.2 µg/mL	U	0.1 µg/mL
Ca	5.0 µg/mL	Na	5.0 µg/mL	V	0.5 µg/mL
Cd	0.1 µg/mL	Ni	0.15 µg/mL	W	0.5 µg/mL
Co	0.1 µg/mL	Pb	0.1 µg/mL	Zn	1.0 µg/mL
Cr	0.2 µg/mL	Sb	0.2 µg/mL		
Cu	0.2 µg/mL	Se	0.5 µg/mL		

Intended Use: This solution is intended for use as a reference material (RM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This RM was manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO 17034**, and **ISO/IEC 17025**. This RM was prepared to the certified concentrations shown above by gravimetric methods using single-element concentrates, and was stabilized using high purity nitric acid (HNO_3), trace hydrofluoric acid (HF) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this RM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with the certified concentration is ±0.5% relative, which is the sum of the estimated errors due to the purity of the raw materials, the gravimetric preparation of the solution, and transpiration through the container. This represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the RM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original RM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

November 21, 2018
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

USA
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Europe
Nieuwe Hemweg 7P P: +31 20 638 05 97
1013BG Amsterdam F: +31 20 420 28 36
The Netherlands

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This RM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM		Analyte	Aq. SRM	MO SRM		Analyte	Aq. SRM	MO SRM
Ag	3151	1077a		Hf	3122	—		S	3154	2770
Al	3101a	1075a		Hg	3133	3133		Sb	3102a	3102a
As	3103a	3103a		Ho	3123a	—		Sc	3148a	3148a
Au	3121	—		In	3124a	3124a		Se	3149	3149
B	3107	3107		K	3141a	3141a		Si	3150	1066a
Ba	3104a	1051b		La	3127a	3127a		Sm	3147a	—
Be	3105a	3105a		Li	3129a	3129a		Sn	3161a	1057b
Bi	3106	3106		Lu	3130a	—		SO_4^{-2}	3181	—
Br	3184	—		Mg	3131a	3131a		Sr	3153a	3153a
Ca	3109a	3109a		Mn	3132	3132		Ta	3155	—
Cd	3108	1053a		Mo	3134	3134		Tb	3157a	—
Ce	3110	3110		Na	3152a	3152a		Te	3156	—
Cl	3182	1818a		Nb	3137	—		Th	3159	—
Co	3113	3113		Nd	3135a	—		Ti	3162a	3162a
Cr	3112a	1078b		Ni	3136	1065b		Tl	3158	3158
Cs	3111a	—		NO_3^-	3185	—		Tm	3160a	—
Cu	3114	1080a		P	3139a	3139a		U	3164	—
Dy	3115a	—		Pb	3128	3128		V	3165	1052b
Er	3116a	—		Pd	3138	—		W	3163	3163
Eu	3117a	—		PO_4^{-3}	3186	—		Y	3167a	3167a
F	3183	—		Pr	3142a	—		Yb	3166a	—
Fe	3126a	1079b		Pt	3140	3140		Zn	3168a	3168a
Ga	3119a	—		Rb	3145a	—		Zr	3169	3169
Gd	3118a	—		Re	3143	—				
Ge	3120a	—		Rh	3144	3144				

Sample Report

rerun Co, Ba, Pb

Sample Table

Sample Name	cpi ccvl
Data File Name	079SMPL.d
Data Path Name	D:\MassHunter Data\li010219.b
Acq Date Time	2019-01-02T17:07:26-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	060CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag	
Li	7	1	45	96.147	ppb	96.147	4.14	167064	500000		
Li	7	2	45	105.670	ppb	105.670	12.67	6625	500000		
Li	7	3	45	109.757	ppb	109.757	5.87	9716842	50000		
Be	9	1	6	9.675	ppb	9.675	7.08	4661	2000		97
B	11	1	6	7.494	ppb	7.494	7.33	4254	2000		
Na	23	1	45	552.697	ppb	552.697	2.49	1894750	2000		
Na	23	2	45	511.267	ppb	511.267	0.32	115761	400000		
Mg	24	2	45	519.361	ppb	519.361	2.74	42639	400000		
Al	27	2	45	504.216	ppb	504.216	2.19	10688	400000		101
K	39	1	45	824.296	ppb	824.296	1.47	15270916	400000		
K	39	2	45	1031.729	ppb	1031.729	5.03	61935	400000		
Ca	40	1	45	540.243	ppb	540.243	2.00	2333215	400000		
Ca	44	2	45	525.756	ppb	525.756	2.97	1180	400000		
Ti	47	2	45	7.783	ppb	7.783	27.48	157	4000		
V	51	2	72	53.728	ppb	53.728	0.38	44566	2000		107
Cr	52	2	72	21.503	ppb	21.503	6.01	21918	5000		
Mn	55	2	72	10.764	ppb	10.764	10.65	3774	10000		107.5
Fe	57	2	72	517.900	ppb	517.900	0.92	9407	400000		108
Co	59	2	72	10.983	ppb	10.983	3.62	18469	2000		109
Ni	60	2	72	15.793	ppb	15.793	1.42	7946	5000		105
Cu	63	2	72	21.536	ppb	21.536	3.14	31261	5000		109
Zn	66	2	72	108.325	ppb	108.325	4.55	20415	5000		108
As	75	2	72	51.507	ppb	51.507	2.47	7191	2000		103
Se	78	1	72	51.720	ppb	51.720	1.50	11736	2000		103
Sr	88	2	72	10.216	ppb	10.216	7.71	3341	4000		102
Zr	90	2	72	10.958	ppb	10.958	35.92	73	1000		
Nb	93	2	72	1.159	ppb	1.159	12.38	2884	200		
Mo	95	2	115	21.377	ppb	21.377	1.76	12239	2000		107
Pd	105	2	115	0.011	ppb	0.011	231.29	13	100		
Ag	107	2	115	52.289	ppb	52.289	2.36	103127	100		105
Cd	111	2	115	9.857	ppb	9.857	5.13	2347	2000		99
Sn	120	2	115	103.864	ppb	103.864	2.43	60392	2000		104
Sb	121	2	115	19.639	ppb	19.639	7.14	11966	1000		98
Ba	137	2	115	11.307	ppb	11.307	13.42	1987	5000		113
W	182	2	165	51.018	ppb	51.018	0.48	136563	100		102
Pt	195	2	165	0.005	ppb	0.005	43.83	37	100		
Tl	205	2	165	10.385	ppb	10.385	1.52	48289	2000		104
Pb	208	2	165	10.866	ppb	10.866	1.75	67022	5000		109
Th	232	2	165	21.061	ppb	21.061	1.21	151119	2000		105
U	238	2	165	10.568	ppb	10.568	1.13	80585	2000		106

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	929764	2.73	916378	101.46	60	120	
Sc (IS)	45	1	HMI H2	19911408	0.73	19585204	101.67	60	120	
Sc (IS)	45	2	HMI He	580698	1.77	580572	100.02	60	120	
Sc (IS)	45	3	No Gas	57455584	0.65	58883081	97.58	60	120	
Ge Internal Standard	72	1	HMI H2	7730261	1.28	7580333	101.98	60	120	
Ge Internal Standard	72	2	HMI He	642543	1.54	640198	100.37	60	120	
In Internal Standard	115	2	HMI He	1743624	1.50	1731804	100.68	60	120	
Ho-165	165	2	HMI He	8160846	0.49	8087692	100.90	60	120	

Sample Report

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Sample Table

Sample Name	cpi ccv!
Data File Name	072SMPL.d
Data Path Name	D:\MassHunter Data\li010319.b
Acq Date Time	2019-01-03T15:26:53-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	045CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag	
Li	7	1	45	935.927	ppb	935.927	0.59	620168	500000		
Li	7	2	45	905.191	ppb	905.191	1.72	24327	500000		
Li	7	3	45	934.659	ppb	934.659	1.45	37542571	50000		
Be	9	1	6	98.892	ppb	98.892	1.42	47111	2000		
B	11	1	6	63.809	ppb	63.809	1.00	40700	2000		
Na	23	1	45	4854.995	ppb	4854.995	0.52	16780336	2000		
Na	23	2	45	4581.226	ppb	4581.226	1.50	968948	400000		
Mg	24	2	45	4866.558	ppb	4866.558	0.87	438396	400000		
Al	27	2	45	4946.249	ppb	4946.249	2.21	112736	400000		
K	39	1	45	8070.188	ppb	8070.188	0.74	35519157	400000		
K	39	2	45	9756.666	ppb	9756.666	1.37	414267	400000		
Ca	40	1	45	4857.729	ppb	4857.729	0.58	22535366	400000		
Ca	44	2	45	5133.159	ppb	5133.159	2.89	11228	400000		
Tl	47	2	45	102.298	ppb	102.298	14.72	2030	4000		
V	51	2	72	486.537	ppb	486.537	0.39	399219	2000		
Cr	52	2	72	194.899	ppb	194.899	0.65	208265	5000		
Mn	55	2	72	96.555	ppb	96.555	3.55	36133	10000		
Fe	57	2	72	4956.037	ppb	4956.037	1.60	95456	400000		
Co	59	2	72	100.113	ppb	100.113	1.37	184748	2000		100
Ni	60	2	72	141.914	ppb	141.914	1.54	75665	5000		
Cu	63	2	72	199.770	ppb	199.770	1.37	300229	5000		
Zn	66	2	72	973.948	ppb	973.948	0.82	192596	5000		
As	75	2	72	478.667	ppb	478.667	1.10	64954	2000		
Se	78	1	72	491.255	ppb	491.255	0.71	113459	2000		
Sr	88	2	72	97.391	ppb	97.391	2.10	33785	4000		
Zr	90	2	72	24.419	ppb	24.419	100.11	130	1000		
Nb	93	2	72	0.649	ppb	0.649	14.17	2314	200		
Mo	95	2	115	203.276	ppb	203.276	0.93	122053	2000		
Pd	105	2	115	0.007	ppb	0.007	147.92	10	100		
Ag	107	2	115	493.404	ppb	493.404	0.59	1067058	100		
Cd	111	2	115	101.952	ppb	101.952	3.71	25791	2000		
Sn	120	2	115	967.040	ppb	967.040	1.26	622458	2000		
Sb	121	2	115	179.548	ppb	179.548	0.58	112680	1000		
Ba	137	2	115	95.653	ppb	95.653	1.28	17999	5000		96
W	182	2	165	503.021	ppb	503.021	0.20	1602375	100	>LDR	
Pt	195	2	165	0.017	ppb	0.017	102.68	67	100		
Tl	205	2	165	97.077	ppb	97.077	1.03	524983	2000		
Pb	208	2	165	101.550	ppb	101.550	1.30	724551	5000		102
Th	232	2	165	213.310	ppb	213.310	0.88	1824306	2000		
U	238	2	165	97.137	ppb	97.137	0.08	901420	2000		

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1390711	1.34	1460232	95.24	60	120	
Sc (IS)	45	1	HMI H2	22939901	0.18	23361340	98.20	60	120	
Sc (IS)	45	2	HMI He	635529	2.43	650472	97.70	60	120	
Sc (IS)	45	3	No Gas	59029641	1.27	59100497	99.88	60	120	
Ge Internal Standard	72	1	HMI H2	8745705	0.12	8906732	98.19	60	120	
Ge Internal Standard	72	2	HMI He	711479	0.83	726696	97.91	60	120	
In Internal Standard	115	2	HMI He	1942532	0.58	2021111	96.11	60	120	
Ho-165	165	2	HMI He	9834166	0.87	9971317	98.62	60	120	

Reagent

MV-569721.sec_00005

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569721.sec **Lot No.:** A0123880

Description : 8260 List 1/ Std #2 Ketones (2015)

8260 List 1/ Std #2 Ketones (2015) 12,500 µg/ml, P&T Methanol/Water (90:10), 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2020 **Storage:** 0°C or colder

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetone	12,501.6 µg/mL	+/- 73.1996 µg/mL	Gravimetric
	CAS # 67-64-1.SEC (Lot P14A572)		+/- 754.3267 µg/mL	Unstressed
	Purity 99%		+/- 756.1173 µg/mL	Stressed
2	2-Butanone (MEK)	12,503.6 µg/mL	+/- 73.2113 µg/mL	Gravimetric
	CAS # 78-93-3.SEC (Lot RA58J)		+/- 754.4473 µg/mL	Unstressed
	Purity 99%		+/- 756.2383 µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)	12,506.0 µg/mL	+/- 73.2254 µg/mL	Gravimetric
	CAS # 108-10-1.SEC (Lot E29T040)		+/- 754.5921 µg/mL	Unstressed
	Purity 99%		+/- 756.3834 µg/mL	Stressed
4	2-Hexanone	12,504.0 µg/mL	+/- 73.2137 µg/mL	Gravimetric
	CAS # 591-78-6.SEC (Lot V3NRA)		+/- 754.4715 µg/mL	Unstressed
	Purity 99%		+/- 756.2625 µg/mL	Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

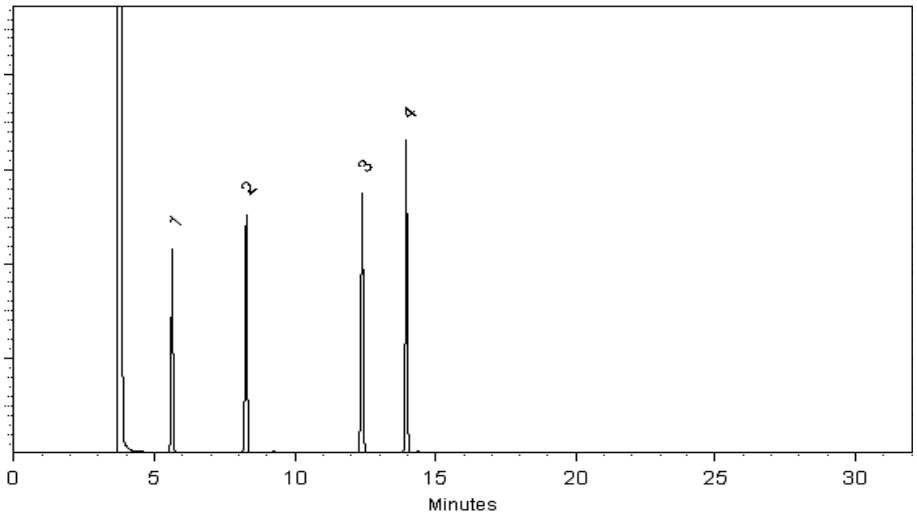
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael J Maye

Date Mixed: 03-Jan-2017 **Balance:** 1127510105

Jennifer L Pollino

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 05-Jan-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MV-569721_00006

Reagent

MV-569723_00005

Reagent

MV-569727_00008

Reagent

MV-571992.sec_00002

Reagent

MV-571992_00002

Reagent

mv-8260 IS/SS_00001

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570812 **Lot No.:** A0131478

Description : 8260 IS/Surrogate Mix (2016)

8260 IS/Surrogate Mix (2016) 250-5,000µg/mL, P&T Methanol, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : October 31, 2022 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	tert-Butyl-d9-alcohol **CAS #** 25725-11-5 **Purity** 98%	(Lot CD-107)	5,017.3 µg/mL	+/- 29.1695 µg/mL +/- 107.4207 µg/mL +/- 110.5436 µg/mL		Gravimetric Unstressed Stressed
2	Dibromofluoromethane **CAS #** 1868-53-7 **Purity** 99.8%	(Lot 0012017)	249.0 µg/mL	+/- 1.4511 µg/mL +/- 5.3320 µg/mL +/- 5.4870 µg/mL		Gravimetric Unstressed Stressed
3	1,2-Dichloroethane-d4 **CAS #** 17060-07-0 **Purity** 99%	(Lot PR-26748)	249.6 µg/mL	+/- 1.4545 µg/mL +/- 5.3449 µg/mL +/- 5.5002 µg/mL		Gravimetric Unstressed Stressed
4	1,4-Dioxane-d8 **CAS #** 17647-74-4 **Purity** 99%	(Lot I-19942)	4,979.2 µg/mL	+/- 28.9478 µg/mL +/- 106.6041 µg/mL +/- 109.7033 µg/mL		Gravimetric Unstressed Stressed
5	Fluorobenzene **CAS #** 462-06-6 **Purity** 99%	(Lot BCBK8171V)	250.0 µg/mL	+/- 1.4567 µg/mL +/- 5.3527 µg/mL +/- 5.5083 µg/mL		Gravimetric Unstressed Stressed
6	Toluene-d8 **CAS #** 2037-26-5 **Purity** 99%	(Lot PR-26623)	249.2 µg/mL	+/- 1.4522 µg/mL +/- 5.3363 µg/mL +/- 5.4914 µg/mL		Gravimetric Unstressed Stressed
7	Chlorobenzene-d5 **CAS #** 3114-55-4 **Purity** 99%	(Lot PR-23926)	249.6 µg/mL	+/- 1.4545 µg/mL +/- 5.3449 µg/mL +/- 5.5002 µg/mL		Gravimetric Unstressed Stressed

8	1-Bromo-4-fluorobenzene (BFB)		248.5	µg/mL	+/-	1.4481	µg/mL	Gravimetric
	CAS # 460-00-4	(Lot 20401KOV)			+/-	5.3213	µg/mL	Unstressed
	Purity 99%				+/-	5.4760	µg/mL	Stressed
9	1,4-Dichlorobenzene-d4		249.5	µg/mL	+/-	1.4540	µg/mL	Gravimetric
	CAS # 3855-82-1	(Lot PR-18488)			+/-	5.3427	µg/mL	Unstressed
	Purity 99%				+/-	5.4980	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

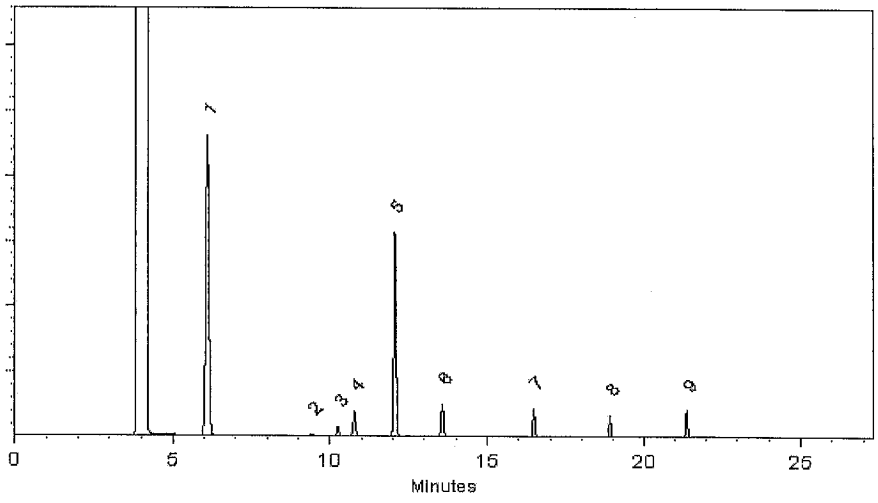
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cydnei L. Crust
Cydnei L. Crust - Mix Technician

Date Mixed: 09-Oct-2017 **Balance:** B707717271

Jennifer J Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 24-Oct-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MV-MegaMainA_00014

Reagent

MV-STS110N1_00066

Certificate of Analysis

4-Bromofluorobenzene Solution

Product Number: STS-110N **Page:** 1 of 1

Lot Number: CH-3248Z **Lot Issue Date:** 31-Aug-2016 **Expiration Date:** 31-Oct-2019

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
4-bromofluorobenzene	000460-00-4	RM03365	2005 ± 10 µg/mL

Matrix: methanol (methyl alcohol)

Storage: Store Frozen (-25° to -10°C).

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

John Russo
President

Vincent Wang, Ph.D.
Director of QA/RA

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Reagent

pH 7.0 Buffer_00257

ACCREDITED
Reference Materials Producer
Cert# 2495.01

ilac-MRA ACCREDITED
Chemical Testing
Cert#2495.02

SPEXertificate ®

Certificate of Reference Material

Catalog Number: PH-BUFF7-500 **Lot No.:** 1-53MJX
Description: Buffer Standard
Matrix: H2O

This certified material is intended primarily for use as a calibration standard or quality control standard for instrumentation employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Value:

Analyte	Certified (pH units at 25°C)	Uncertainty (pH units)	NIST SRM
pH	7.00	± 0.03	185i, 186g, 191d

Refer to side 2 for certification details

Balances are calibrated regularly with weight sets traceable to NIST 32856, 32867. This CRM is guaranteed stable to ± 0.03 pH units on the certified value for a period of one year from the date of certification. This includes components of uncertainty associated with measurement, homogeneity, short and long term stability. This guarantee is valid only when the material is unopened and stored under laboratory conditions.

Date of Certification: APR -- 2019 Certifying Officer: Katherine Cullinan

Katherine Cullinan, QC Manager

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Report of Certification

This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001 (certified by DQS), ISO 17025 (accredited by A2LA) and ISO 17034 (accredited by A2LA) quality system consistent with the following guides:

- ISO 9001: Quality management systems – Requirements
- ISO/IEC 17025: General requirements for the competence of testing and calibration laboratories
- ISO 17034: General requirements for the competence of reference material producers
- ISO Guide 30: Reference Materials – Selected terms and definitions
- ISO Guide 31: Reference Materials – Contents of certificates and labels
- ISO Guide 35: Reference Materials -- General and principals for certification
- Guide to the Expression of Uncertainty in Measurement, 2008
- EURACHEM/CITAC Guide: Qualifying Uncertainty in Analytical Measurement – Third Edition
- NIST Technical Note 1297

Material Source:

All analytes and matrix materials are obtained and verified by SPEX CertiPrep from pre-qualified vendors as per ISO 9001, ISO 17025, and ISO 17034 guidelines. Vendor identifications are proprietary; however, sources of all materials used in the preparation and testing of SPEX CertiPrep CRMs are tracked and documented. For further assistance, please contact Sales Support at crmsales@spexcsp.com.

Instructions for Use:

Primary usage of this CRM is in neat form or diluted serially with matrix of a purity at or greater than the purity of the original matrix solution. If dilution is required, the diluent must be compatible with all certified analytes and contain stabilizers appropriate for the period of intended use. The CRM can also be used as a spike or with a spike, again with appropriate compatibility considerations. All solutions should be thoroughly mixed, by shaking, prior to use and never pipetted directly from the bottle. Do not return excess solution to the bottle. All surfaces that come in contact with the solution must be thoroughly cleaned and leached prior to use. Dilutions should be performed only with Class A volumetric glassware. See SDS for health and safety information.

Method of Preparation:

Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, analytical instrumentation and personnel have been qualified prior to use. The highest purity acids applicable, 18 megohm, double deionized water, acid-leached triple-rinsed bottles (where appropriate), and Class A/calibrated volumetrics have been used in all preparations.

Homogeneity:

The homogeneity of the CRM has been confirmed by procedures consistent with ISO 17025, ISO 17034, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4600-HOMOGEN-1A. Since the product is highly homogeneous, any sample size taken for analysis would be within the uncertainty budget. This is consistent with the intended use of the CRM.

Statistical Estimator and Confidence Limits:

The certified value 'X' listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$ where X=certified value, U=expanded uncertainty, x=property value
- $U = ku_c$ where k=2 is the coverage factor at the 95% confidence level
- u_c=combined standard uncertainty obtained by combining the individual element standard uncertainty components u_i, and $u_c = \sqrt{\Sigma u_i^2}$

Certification Report:

All certified values reported were derived from the Certification Report, SPEX CertiPrep's traceability documentation, identified by the lot number of this CRM. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further assistance, please contact Sales Support at crmsales@spexcsp.com.

Legal Notice:

SPEX CertiPrep reference materials are not for any cosmetic, drug or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against SPEX CertiPrep, LLC. of any kind whatsoever, whether based on breach of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall SPEX CertiPrep, LLC. be liable for any loss of profits or any incidental, special, or consequential damages.

Reagent

TSS STD_00035

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CERTIFICATE OF ANALYSIS

Wet Chemistry Reference Standard

Catalog No: WC-SOL
Description: Solids
Lot: 217045086-01
Solvent: N/A
Hazards: *Refer to SDS for complete safety information*



Signal Word: Danger

Date Certified: Jun 13, 2018
Expiration: Jul 13, 2020
Sample Size: 1 Unit
Components: 3
Storage Condition: Ambient (>5 °C)

Included on ISO/IEC 17025 Scope of Accreditation: No

Included on ISO 17034 Scope of Accreditation: No

Component		SRM #	Prepared Concentration (µg/mL)
TS	Total Solids	N/A	2000
TDS	Total Dissolved Solids	N/A	1000
TSS	Total Suspended Solids	N/A	1000

The gravimetric uncertainty for this product is ±0.24%. The CRM uncertainty is ±2.4%.

Vial may contain either solid material or a combination of solid material with liquid. Empty contents of vial into 100 ml volumetric flask. Rinse vial and cap several times and pour into flask. Dilute to volume. Perform analysis according to currently accepted methodology.

All weights are traceable through NIST, Test No. 822-275872-11

All glassware used in preparation is Class A and calibrated regularly.

Use only cleaned Class A volumetric glassware. Keep bottle tightly capped.

Certified By: Meigan O'Leary

Meigan O'Leary, Inorganic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/INO-001
Rev. 5/18

Reagent

HP35DNATA_00063

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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Reference Material Producer
Certificate #3222.01

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31661 **Lot No.:** A0136481

Description : 3,5-Dinitroaniline Standard

3, 5-Dinitroaniline Std 1000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	3,5-Dinitroaniline **CAS #** 618-87-1 **Purity** 99%	(Lot 10311HS)	1,008.0 µg/mL	+/- 5.9872 µg/mL +/- 30.5148 µg/mL +/- 30.5148 µg/mL		Gravimetric Unstressed Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

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11/14/18

Column:
250mm x 4.6mm
Ultra C18 (cat.# 9174575)

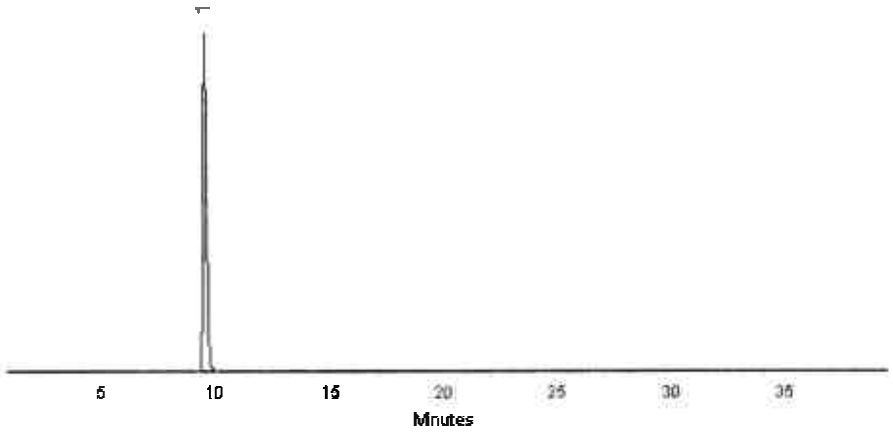
Flow Rate:
1.0 ml/min.

Mobile Phase A:
water:methanol (44:56 V/V)

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210 nm



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Kyle Retorick - Op. Technician I

Date Mixed: 23-Mar-2018 **Balance:** B442140311

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 28-Mar-2018

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

HP8330SU_00076

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

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Fax (203)786-5287
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CERTIFICATE OF ANALYSIS

Catalog No: M-8330-IS
Description: 3,4-Dinitrotoluene
Lot: 217051415
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*



Signal Word: Danger

Date Certified: May 26, 2017
Expiration: May 26, 2027
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Included on ISO/IEC 17025 Scope of Accreditation: Yes

Included on ISO Guide 34 Scope of Accreditation: Yes

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
3,4-Dinitrotoluene	610-39-9	100.0	1001	1001

REC'D
TJA
01/29/19

A product with a suffix (-1A, -2B, etc or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] All weights are traceable through NIST, Test No. 822-275872-11

[2] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the gravimetric values reported on this certificate is ±0.24%. This value is the expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

See reverse side for additional information

Certified By: _____
Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

Reagent

HP8330SU_00078

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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Reference Material Producer
Certificate #3222.01

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31452 **Lot No.:** A0131485

Description : 8330 Internal Standard Mix

8330 Internal Standard Mix 1000 µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L., K=2)		
1	3,4-Dinitrotoluene **CAS #** 610-39-9 **Purity** 99%	(Lot 1433716V)	1,000.0	µg/mL	+/- 5.9397 +/- 56.0822 +/- 57.3938	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

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11/14/18

Column:
250mm x 4.6mm
Ultra C18 (cat.# 9174575)

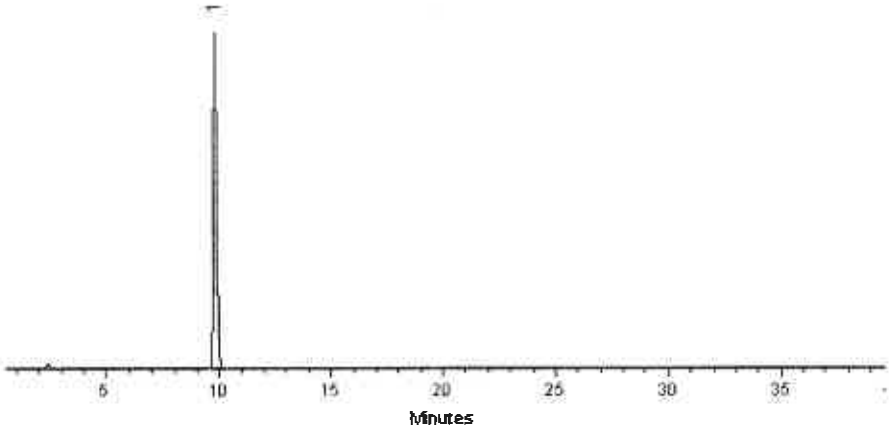
Flow Rate:
1.0 ml/min.

Mobile Phase A:
water:methanol (44:56 V/V)

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210 nm



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Greg Dawson - Mix Technician

Date Mixed: 09-Oct-2017 **Balance:** 1127510105

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 11-Oct-2017

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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Reference Material Producer
Certificate #3222 01

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222/02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 33905 **Lot No.:** A0136453

Description : 8330 Calibration Standard

Nitroaromatics and Nitramine Explosives by HPLC, 1mL/ampul 1000µg/mL Acetonitrile *PGI BOX REQUIRED* SHIP FED EX GROUND ONLY

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2021 **Storage:** 10°C or colder

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CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L., K=2)	
1	HMX **CAS #** 2691-41-0 **Purity** 98% (Lot 111005JLM)	999.6 µg/mL	+/- 5.9373 µg/mL +/- 54.7611 µg/mL +/- 63.8568 µg/mL	Gravimetric Unstressed Stressed
2	RDX **CAS #** 121-82-4 **Purity** 99% (Lot 080220JLM)	1,000.0 µg/mL	+/- 5.9397 µg/mL +/- 54.7830 µg/mL +/- 63.8824 µg/mL	Gravimetric Unstressed Stressed
3	1,3,5-Trinitrobenzene **CAS #** 99-35-4 **Purity** 97% (Lot DJ5QO)	999.1 µg/mL	+/- 5.9344 µg/mL +/- 54.7337 µg/mL +/- 63.8249 µg/mL	Gravimetric Unstressed Stressed
4	1,3-Dinitrobenzene **CAS #** 99-65-0 **Purity** 99% (Lot BCBN4329V)	1,002.0 µg/mL	+/- 5.9516 µg/mL +/- 54.8926 µg/mL +/- 64.0101 µg/mL	Gravimetric Unstressed Stressed
5	Nitrobenzene **CAS #** 98-95-3 **Purity** 99% (Lot SHBG5577V)	1,000.0 µg/mL	+/- 5.9397 µg/mL +/- 54.7830 µg/mL +/- 63.8824 µg/mL	Gravimetric Unstressed Stressed
6	Tetryl **CAS #** 479-45-8 **Purity** 99% (Lot 091120JLM)	1,004.0 µg/mL	+/- 5.9635 µg/mL +/- 55.0021 µg/mL +/- 64.1379 µg/mL	Gravimetric Unstressed Stressed
7	2,4,6-Trinitrotoluene **CAS #** 118-96-7 **Purity** 99% (Lot 2554100)	1,000.0 µg/mL	+/- 5.9397 µg/mL +/- 54.7830 µg/mL +/- 63.8824 µg/mL	Gravimetric Unstressed Stressed

8	2-Amino-4,6-dinitrotoluene **CAS #** 35572-78-2 **Purity** 98%	(Lot 29550-55)	999.6	µg/mL	+/- 5.9373 +/- 54.7611 +/- 63.8568	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	4-Amino-2,6-dinitrotoluene **CAS #** 19406-51-0 **Purity** 99%	(Lot ER070908-01)	1,000.0	µg/mL	+/- 5.9397 +/- 54.7830 +/- 63.8824	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	2,4-Dinitrotoluene **CAS #** 121-14-2 **Purity** 99%	(Lot MKAA0690V)	1,006.0	µg/mL	+/- 5.9753 +/- 55.1117 +/- 64.2657	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	2,6-Dinitrotoluene **CAS #** 606-20-2 **Purity** 99%	(Lot BCBB8606V)	1,000.0	µg/mL	+/- 5.9397 +/- 54.7830 +/- 63.8824	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	2-Nitrotoluene **CAS #** 88-72-2 **Purity** 99%	(Lot GA01)	1,006.0	µg/mL	+/- 5.9753 +/- 55.1117 +/- 64.2657	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	4-Nitrotoluene **CAS #** 99-99-0 **Purity** 99%	(Lot FAU01)	1,002.0	µg/mL	+/- 5.9516 +/- 54.8926 +/- 64.0101	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	3-Nitrotoluene **CAS #** 99-08-1 **Purity** 98%	(Lot 07329LG)	1,001.6	µg/mL	+/- 5.9490 +/- 54.8685 +/- 63.9820	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Column:
250mm x 4.6mm
Ultra C18 (cat.# 9174575)

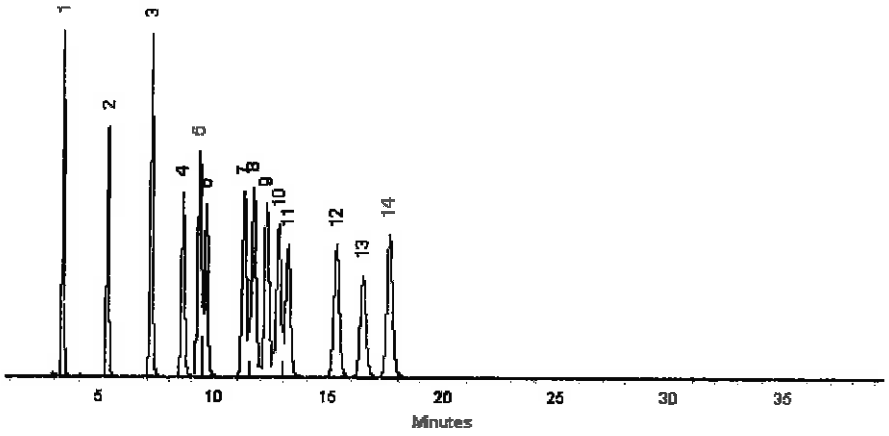
Flow Rate:
1.0 ml/min.

Mobile Phase A:
water:methanol (44:56 V/V)

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210 nm



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

F. Joseph Fallon - MS Technician

Date Mixed: 23-Mar-2018 **Balance:** B251644995

Jennifer J Pollino

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 28-Mar-2018

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
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- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

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10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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New Haven, CT 06513
USA

AccuStandard® Inc.

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Fax (203)786-5287
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CERTIFICATE OF ANALYSIS

Catalog No: M-8330-R-0.5X
Description: Method 8330 - Explosives by HPLC
Lot: 217101413
Solvent: Methanol (50%)
Acetonitrile (50%)
Hazards: *Refer to SDS for complete safety information*



Signal Word: Danger

Date Certified: Nov 6, 2017
Expiration: Dec 6, 2019
Sample Size: 1 mL
Components: 14

Storage Condition: Freeze (<-10 °C)

Included on ISO/IEC 17025 Scope of Accreditation: Yes

Included on ISO Guide 34 Scope of Accreditation: Yes

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
2-Amino-4,6-dinitrotoluene	35572-78-2	100.0	500.5	500.5
4-Amino-2,6-dinitrotoluene	19406-51-0	98.0	500.0	490.0
1,3-Dinitrobenzene	99-65-0	97.0	517.0*	501.5
2,4-Dinitrotoluene	121-14-2	100.0	501.0	501.0
2,6-Dinitrotoluene	606-20-2	100.0	500.5	500.5
HMX	2691-41-0	99.1	500.0	495.5
RDX	121-82-4	99.2	501.0	497.0
Nitrobenzene	98-95-3	99.8	501.0	500.0
2-Nitrotoluene	88-72-2	99.0	500.0	495.0
3-Nitrotoluene	99-08-1	98.7	500.5	494.0
4-Nitrotoluene	99-99-0	99.2	501.0	497.0
Tetryl	479-45-8	100.0	501.0	501.0
TNT	118-96-7	100.0	500.5	500.5
1,3,5-Trinitrobenzene	99-35-4	97.5	514.5*	501.6

* Weight compensated to 100% purity.

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] All weights are traceable through NIST. Test No. 822-275872-11

[2] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO Guide 34, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/INO-001
Rev. 4/17

Reagent

HPMETTA_00006

Certificate of Analysis

Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) Metabolites Mixture

Product Number: NAIM-240-1 **Page:** 1 of 1

Lot Number: CS-2267 **Lot Issue Date:** 02-May-2018 **Expiration Date:** 31-May-2019

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
1-nitro-3,5-dinitroso-1,3,5-triazacyclohexane		RM12428	100.1 ± 0.5 µg/mL
1-nitroso-3,5-dinitro-1,3,5-triazacyclohexane		RM12428	116.7 ± 0.6 µg/mL
1,3,5-trinitroso-1,3,5-triazacyclohexane (TNX)		RM12428	99.9 ± 0.5 µg/mL

Matrix: acetonitrile

Storage: Store at Room Temperature (15° to 30°C).

Rec'd
5/10/18

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

John Russo
President

Monica Bourgeois
Director of QA/RA

ISO 9001
Registered
TUV USA, Inc.

250 SMITH STREET • NORTH KINGSTOWN, RHODE ISLAND 02852 • WWW.ULTRASCI.COM

Reagent

HPMETTA_00007

Certificate of Analysis

Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) Metabolites Mixture

Product Number: NAIM-245-1 **Page:** 1 of 1

Lot Number: CS-2268 **Lot Issue Date:** 02-May-2018 **Expiration Date:** 31-May-2019

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
1-nitro-3,5-dinitroso-1,3,5-triazacyclohexane		RM12428	1004 ± 5 µg/mL
1-nitroso-3,5-dinitro-1,3,5-triazacyclohexane		RM12428	1170 ± 6 µg/mL
1,3,5-trinitroso-1,3,5-triazacyclohexane (TNX)		RM12426	1001 ± 5 µg/mL

Matrix: acetonitrile

Storage: Store at Room Temperature (15° to 30°C).

Rec'd 5/10/18

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

John Russo
President

Monica Bourgeois
Director of QA/RA

ISO 9001
Registered
TUV USA, Inc.

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Reagent

HPMETTA_00008

Agilent

Certificate of Analysis
ISO Guide 34

Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) Metabolite Standard

Product Number: NAIM-245-1 **Page:** 1 of 1

Lot Number: CS-6254 **Lot Issue Date:** 14-Jan-2019 **Expiration Date:** 31-Jan-2020

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with Agilent's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
1-nitro-3,5-dinitroso-1,3,5-triazacyclohexane		RM12428	1004 ± 5 µg/mL
1-nitroso-3,5-dinitro-1,3,5-triazacyclohexane		RM12428	1170 ± 6 µg/mL
1,3,5-trinitroso-1,3,5-triazacyclohexane (TNX)		RM12426	1000 ± 5 µg/mL

Matrix: acetonitrile

Storage: Store at Room Temperature (15° to 30°C).

Agilent uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

Monica Bourgeois
QMS Representative

RECEIVED BY TJA 01/16/19 TJA 01/16/19

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER
ISO Guide 34 Cert No. AR-1936

Produced in accordance with TUV USA Inc 56 100 18560026
registered ISO 9001 Quality Managment System

ANAB ACCREDITED TESTING LABORATORY
ISO17025 Cert No. AT-1937

Reagent

HPNGTA_00061

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31498 **Lot No.:** A0140953

Description : Nitroglycerin Standard

Nitroglycerin Standard 1,000µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : August 31, 2023 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (Weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Nitroglycerin **CAS #** 55-63-0 **Purity** 99%	(Lot 170616JLM)	1,002.0 µg/mL	+/- 5.9516 µg/mL +/- 54.8926 µg/mL +/- 64.0101 µg/mL		Gravimetric Unstressed Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

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11/26/18

Column:
250mm x 4.6mm
Ultra C18 (cat.# 9174575)

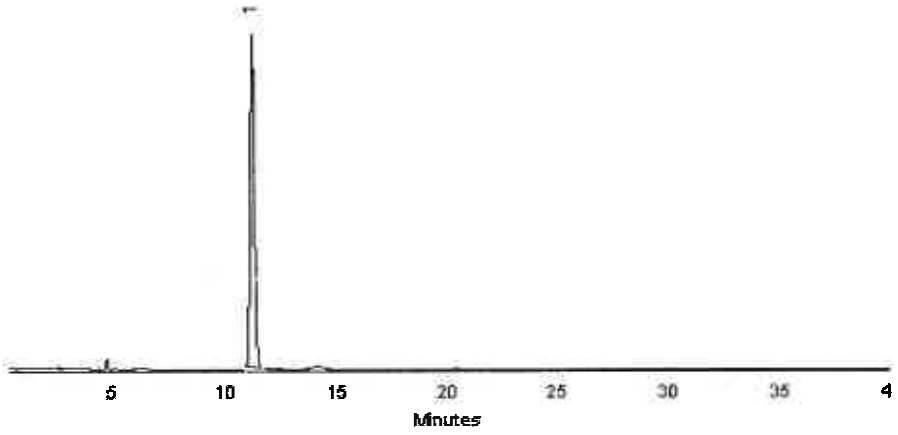
Flow Rate:
1.0 ml/min.

Mobile Phase A:
water:methanol (44:56 V/V)

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210 nm



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

F. Joseph Talbot - Mfg. Technician

Date Mixed: 22-Aug-2018 **Balance:** B251644995

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 28-Aug-2018

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

HPPETNTA_00058

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31600 **Lot No.:** A0136539

Description : PETN Standard

PETN Standard 1000µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2023 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L., K=2)		
1	PETN		1,006.0 µg/mL		+/- 5.9753	µg/mL	Gravimetric
	CAS # 78-11-5	(Lot 051108JLM)			+/- 55.1117	µg/mL	Unstressed
	Purity 99%				+/- 64.2657	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

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11/26/18

Column:
250mm x 4.6mm
Ultra C18 (cat.# 9174575)

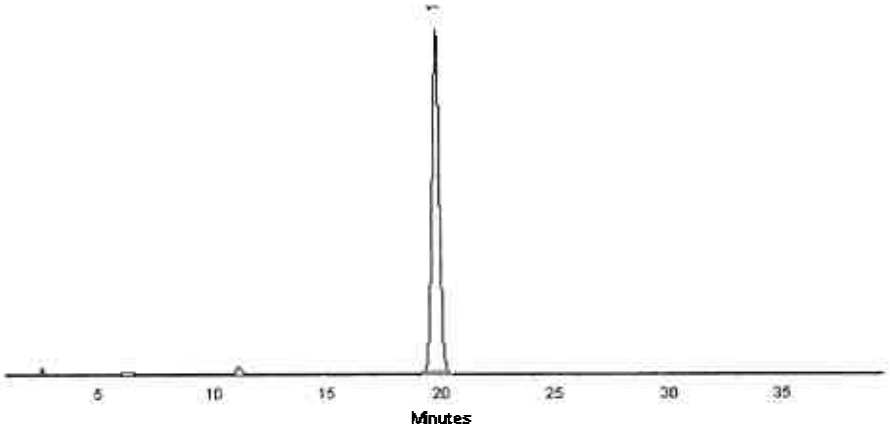
Flow Rate:
1.0 ml/min.

Mobile Phase A:
water:methanol (44:56 V/V)

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210 nm



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 26-Mar-2018 **Balance:** B707717271

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 28-Mar-2018

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
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0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Method 8260B

Volatile Organic Compounds (GC/MS) by Method 8260B

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 (60. ID: 0.25(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
SP-S2	280-123011-1	103	107	99	101
SP-E1	280-123011-2	103	107	98	101
SP-S22	280-123011-4	103	107	99	101
TB-1048	280-123011-5	103	107	99	101
	MB 280-457279/6	104	104	99	100
	LCS 280-457279/4	105	103	98	100

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	80-119
DCA = 1,2-Dichloroethane-d4 (Surr)	81-118
TOL = Toluene-d8 (Surr)	89-112
BFB = 4-Bromofluorobenzene (Surr)	85-114

Column to be used to flag recovery values

FORM II 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Matrix: Water Level: Low Lab File ID: g2_4927.D

Lab ID: LCS 280-457279/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1-Trichloroethane	25.0	23.8	95	74-131	
1,1,2,2-Tetrachloroethane	25.0	22.4	90	71-121	
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	24.2	97	70-136	
1,1,2-Trichloroethane	25.0	23.2	93	80-119	
1,1-Dichloroethane	25.0	24.4	98	77-125	
1,1-Dichloroethene	25.0	23.9	96	71-131	
1,2,3-Trichlorobenzene	25.0	24.3	97	69-129	
1,2,4-Trichlorobenzene	25.0	22.6	90	69-130	
1,2-Dibromo-3-Chloropropane	25.0	20.0	80	62-128	
1,2-Dichlorobenzene	25.0	22.2	89	80-119	
1,2-Dichloroethane	25.0	23.6	94	73-128	
1,2-Dichloropropane	25.0	23.5	94	78-122	
1,3-Dichlorobenzene	25.0	22.8	91	80-119	
1,4-Dichlorobenzene	25.0	22.0	88	79-118	
2-Butanone (MEK)	100	89.6	90	56-143	
2-Hexanone	100	87.4	87	57-139	
4-Methyl-2-pentanone (MIBK)	100	89.3	89	67-130	
Acetone	100	79.6	80	39-160	
Benzene	25.0	23.7	95	79-120	
Bromochloromethane	25.0	24.0	96	78-123	
Bromodichloromethane	25.0	22.2	89	79-125	
Bromoform	25.0	17.5	70	66-130	
Bromomethane	25.0	26.2	105	53-141	
Carbon disulfide	25.0	22.5	90	64-133	
Carbon tetrachloride	25.0	23.1	93	72-136	
Chlorobenzene	25.0	23.4	94	82-118	
Chloroethane	25.0	22.1	88	60-138	
Chloroform	25.0	24.0	96	79-124	
Chloromethane	25.0	21.9	87	50-139	
cis-1,2-Dichloroethene	25.0	23.5	94	78-123	
cis-1,3-Dichloropropene	25.0	23.5	94	75-124	
Cyclohexane	25.0	23.5	94	71-130	
Dibromochloromethane	25.0	19.7	79	74-126	
Dichlorodifluoromethane	25.0	23.7	95	32-152	
Ethylbenzene	25.0	22.9	92	79-121	
Ethylene Dibromide	25.0	23.1	92	77-121	
Isopropylbenzene	25.0	24.5	98	72-131	
Methyl acetate	50.0	47.4	95	56-136	
Methyl tert-butyl ether	25.0	23.4	94	71-124	
Methylcyclohexane	25.0	24.3	97	72-132	
Methylene Chloride	25.0	22.8	91	74-124	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Matrix: Water Level: Low Lab File ID: g2_4927.D

Lab ID: LCS 280-457279/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Styrene	25.0	23.2	93	78-123	
Tetrachloroethene	25.0	23.6	94	74-129	
Toluene	25.0	22.9	92	80-121	
trans-1,2-Dichloroethene	25.0	23.4	94	75-124	
trans-1,3-Dichloropropene	25.0	22.8	91	73-127	
Trichloroethene	25.0	23.4	93	79-123	
Trichlorofluoromethane	25.0	23.0	92	65-141	
Vinyl chloride	25.0	22.3	89	58-137	
Xylenes, Total	50.0	46.3	93	79-121	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Lab File ID: g2_4926.D Lab Sample ID: MB 280-457279/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: VMS_G2 Date Analyzed: 05/07/2019 11:29

GC Column: DB-624 (60.25) ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-457279/4	g2_4927.D	05/07/2019 11:51
SP-S2	280-123011-1	g2_4936.D	05/07/2019 15:02
SP-E1	280-123011-2	g2_4937.D	05/07/2019 15:23
SP-S22	280-123011-4	g2_4938.D	05/07/2019 15:45
TB-1048	280-123011-5	g2_4939.D	05/07/2019 16:06

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Lab File ID: g2_4865.D BFB Injection Date: 05/06/2019

Instrument ID: VMS_G2 BFB Injection Time: 12:50

Analysis Batch No.: 457190

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.3	
75	30.0 - 60.0 % of mass 95	51.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.4	
173	Less than 2.0 % of mass 174	0.4	(0.4) 1
174	50.0 - 120.00 % of mass 95	85.1	
175	5.0 - 9.0 % of mass 174	6.5	(7.7) 1
176	95.0 - 101.0 % of mass 174	81.0	(95.2) 1
177	5.0 - 9.0 % of mass 176	5.6	(7.0) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 280-457190/2	g2_4866.D	05/06/2019	13:12
	IC 280-457190/3	g2_4867.D	05/06/2019	13:33
	IC 280-457190/4	g2_4868.D	05/06/2019	13:54
	IC 280-457190/5	g2_4869.D	05/06/2019	14:15
	IC 280-457190/6	g2_4870.D	05/06/2019	14:37
	IC 280-457190/7	g2_4871.D	05/06/2019	14:58
	IC 280-457190/8	g2_4872.D	05/06/2019	15:19
	ICV 280-457190/9	g2_4873.D	05/06/2019	15:43
	IC 280-457190/10	g2_4874.D	05/06/2019	16:04
	IC 280-457190/11	g2_4875.D	05/06/2019	16:25
	ICIS 280-457190/12	g2_4876.D	05/06/2019	16:47
	IC 280-457190/13	g2_4877.D	05/06/2019	17:08
	IC 280-457190/14	g2_4878.D	05/06/2019	17:29
	IC 280-457190/15	g2_4879.D	05/06/2019	17:50
	IC 280-457190/16	g2_4880.D	05/06/2019	18:11
	IC 280-457190/17	g2_4881.D	05/06/2019	18:51
	ICV 280-457190/18	g2_4882.D	05/06/2019	19:13

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Lab File ID: g2_4922.D BFB Injection Date: 05/07/2019

Instrument ID: VMS_G2 BFB Injection Time: 10:15

Analysis Batch No.: 457279

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.7	
75	30.0 - 60.0 % of mass 95	52.3	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.4	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	79.0	
175	5.0 - 9.0 % of mass 174	5.5	(7.0) 1
176	95.0 - 101.0 % of mass 174	78.1	(98.9) 1
177	5.0 - 9.0 % of mass 176	5.5	(7.0) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 280-457279/2	g2_4923.D	05/07/2019	10:25
	CCV 280-457279/3	g2_4924.D	05/07/2019	10:47
	MB 280-457279/6	g2_4926.D	05/07/2019	11:29
	LCS 280-457279/4	g2_4927.D	05/07/2019	11:51
SP-S2	280-123011-1	g2_4936.D	05/07/2019	15:02
SP-E1	280-123011-2	g2_4937.D	05/07/2019	15:23
SP-S22	280-123011-4	g2_4938.D	05/07/2019	15:45
TB-1048	280-123011-5	g2_4939.D	05/07/2019	16:06
	CCVC 280-457279/32	g2_4952.D	05/07/2019	20:44

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Sample No.: ICIS 280-457190/12 Date Analyzed: 05/06/2019 16:47

Instrument ID: VMS_G2 GC Column: DB-624 (60.25) ID: 0.25(mm)

Lab File ID (Standard): g2_4876.D Heated Purge: (Y/N) N

Calibration ID: 36283

		TBAd9		FB		CBNZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		2495724	3.02	1712721	4.78	359161	7.28
UPPER LIMIT		4991448	3.52	3425442	5.28	718322	7.78
LOWER LIMIT		1247862	2.52	856361	4.28	179581	6.78
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-457190/18		2421659	3.02	1666440	4.78	354372	7.28
CCV 280-457279/2		2773416	3.03	1817990	4.78	405187	7.28
CCV 280-457279/3		2900041	3.03	1888958	4.78	409013	7.28
MB 280-457279/6		2840425	3.02	1844520	4.78	393378	7.28
LCS 280-457279/4		2783462	3.03	1843903	4.78	405375	7.28
280-123011-1	SP-S2	2511318	3.02	1695801	4.78	361130	7.28
280-123011-2	SP-E1	2538110	3.02	1668996	4.78	357436	7.28
280-123011-4	SP-S22	2516656	3.02	1675111	4.78	354891	7.28
280-123011-5	TB-1048	2458818	3.02	1684481	4.78	358315	7.28
CCVC 280-457279/32		2428980	3.03	1555133	4.78	345688	7.28

TBAd9 = TBA-d9 (IS)
FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Sample No.: ICIS 280-457190/12 Date Analyzed: 05/06/2019 16:47

Instrument ID: VMS_G2 GC Column: DB-624 (60.25) ID: 0.25(mm)

Lab File ID (Standard): g2_4876.D Heated Purge: (Y/N) N

Calibration ID: 36283

		DCBd4					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		584908	9.49				
UPPER LIMIT		1169816	9.99				
LOWER LIMIT		292454	8.99				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-457190/18		563459	9.49				
CCV 280-457279/2		673198	9.49				
CCV 280-457279/3		653593	9.49				
MB 280-457279/6		627703	9.49				
LCS 280-457279/4		635093	9.49				
280-123011-1	SP-S2	568195	9.49				
280-123011-2	SP-E1	560887	9.49				
280-123011-4	SP-S22	558051	9.49				
280-123011-5	TB-1048	567349	9.49				
CCVC 280-457279/32		545667	9.49				

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Client Sample ID: SP-S2 Lab Sample ID: 280-123011-1

Matrix: Water Lab File ID: g2_4936.D

Analysis Method: 8260B Date Collected: 04/24/2019 08:40

Sample wt/vol: 5(mL) Date Analyzed: 05/07/2019 15:02

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 457279 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.26	J	3.0	0.40	0.18
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.23
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.21
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.21
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.47
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.15
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.18
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.13
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	2.0
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	1.0	U Q	1.0	1.0	0.46
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	0.80	U	2.0	0.80	0.17
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
110-82-7	Cyclohexane	0.80	U	2.0	0.80	0.28
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Client Sample ID: SP-S2 Lab Sample ID: 280-123011-1

Matrix: Water Lab File ID: g2_4936.D

Analysis Method: 8260B Date Collected: 04/24/2019 08:40

Sample wt/vol: 5(mL) Date Analyzed: 05/07/2019 15:02

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 457279 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
106-93-4	Ethylene Dibromide	0.40	U	1.0	0.40	0.18
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
79-20-9	Methyl acetate	4.0	U	5.0	4.0	1.6
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
108-87-2	Methylcyclohexane	0.40	U	2.0	0.40	0.10
75-09-2	Methylene Chloride	2.0	U	5.0	2.0	0.94
100-42-5	Styrene	0.80	U	1.0	0.80	0.36
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	1.0	0.80	0.19

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	107		81-118
460-00-4	4-Bromofluorobenzene (Surr)	101		85-114
1868-53-7	Dibromofluoromethane (Surr)	103		80-119
2037-26-5	Toluene-d8 (Surr)	99		89-112

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\g2_4936.D
Lims ID: 280-123011-C-1
Client ID: SP-S2
Sample Type: Client
Inject. Date: 07-May-2019 15:02:30 ALS Bottle#: 14 Worklist Smp#: 17
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 280-123011-C-1
Misc. Info.: 280-0081637-017
Operator ID: meierg Instrument ID: VMS_G2

Method: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 11-May-2019 11:09:43 Calib Date: 06-May-2019 18:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4881.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0311

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
*	1 TBA-d9 (IS)	65	3.018	3.031	-0.013	82	2511318	1000.0	
*	2 Fluorobenzene	96	4.777	4.777	0.000	99	1695801	50.0	
*	3 Chlorobenzene-d5	119	7.279	7.279	0.000	87	361130	50.0	
*	4 1,4-Dichlorobenzene-d4	152	9.488	9.488	0.000	96	568195	50.0	
$	6 Dibromofluoromethane (Surr	111	4.288	4.288	0.000	93	378080	51.3	
$	7 1,2-Dichloroethane-d4 (Sur	65	4.540	4.540	0.000	99	525304	53.7	
$	8 Toluene-d8 (Surr)	98	6.021	6.020	0.001	93	1579754	49.7	
$	9 4-Bromofluorobenzene (Surr	95	8.373	8.373	0.000	89	540936	50.4	
	12 Dichlorodifluoromethane	85		1.495				ND	
	14 Chloromethane	50		1.663				ND	
	15 Vinyl chloride	62		1.746				ND	
	17 Bromomethane	94		1.998				ND	
	18 Chloroethane	64		2.096				ND	
	20 Trichlorofluoromethane	101		2.291				ND	
	26 1,1,2-Trichloro-1,2,2-trif	151	2.682	2.682	0.000	7	1865	0.2592	
	25 1,1-Dichloroethene	96		2.682				ND	
	27 Acetone	43		2.696				ND	
	30 Carbon disulfide	76		2.850				ND	
	32 Methyl acetate	43		2.920				ND	
	35 Methylene Chloride	84		3.031				ND	
	41 Methyl tert-butyl ether	73		3.213				ND	
	40 trans-1,2-Dichloroethene	96		3.227				ND	
	45 1,1-Dichloroethane	63		3.534				ND	
	52 2-Butanone (MEK)	43		3.911				ND	
	51 cis-1,2-Dichloroethene	96		3.939				ND	
	56 Chlorobromomethane	128		4.107				ND	
	59 Chloroform	83		4.163				ND	
	60 1,1,1-Trichloroethane	97		4.302				ND	
	61 Cyclohexane	56		4.358				ND	
	62 Carbon tetrachloride	117		4.414				ND	
	64 Benzene	78		4.568				ND	
	65 1,2-Dichloroethane	62		4.596				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
69 Trichloroethene	95		5.042				ND	
71 Methylcyclohexane	55		5.224				ND	
72 1,2-Dichloropropane	63		5.252				ND	
76 Dichlorobromomethane	83		5.447				ND	
79 cis-1,3-Dichloropropene	75		5.797				ND	
81 4-Methyl-2-pentanone (MIBK	43		5.894				ND	
82 Toluene	91		6.078				ND	
83 trans-1,3-Dichloropropene	75		6.264				ND	
85 1,1,2-Trichloroethane	97		6.428				ND	
86 Tetrachloroethene	164		6.514				ND	
88 2-Hexanone	43		6.600				ND	
89 Chlorodibromomethane	129		6.764				ND	
90 Ethylene Dibromide	107		6.878				ND	
92 Chlorobenzene	112		7.307				ND	
94 Ethylbenzene	106		7.386				ND	
95 m-Xylene & p-Xylene	106		7.501				ND	
96 o-Xylene	106		7.858				ND	
97 Styrene	104		7.879				ND	
98 Bromoform	173		8.051				ND	
99 Isopropylbenzene	105		8.201				ND	
102 1,1,2,2-Tetrachloroethane	83		8.487				ND	
113 1,3-Dichlorobenzene	146		9.410				ND	
115 1,4-Dichlorobenzene	146		9.510				ND	
118 1,2-Dichlorobenzene	146		9.860				ND	
119 1,2-Dibromo-3-Chloropropan	157		10.639				ND	
121 1,2,4-Trichlorobenzene	180		11.447				ND	
124 1,2,3-Trichlorobenzene	180		11.934				ND	
S 143 Xylenes, Total	106		0.000				ND	

Reagents:

mv-Cent IS/SS_00002 Amount Added: 5.00 Units: uL Run Reagent

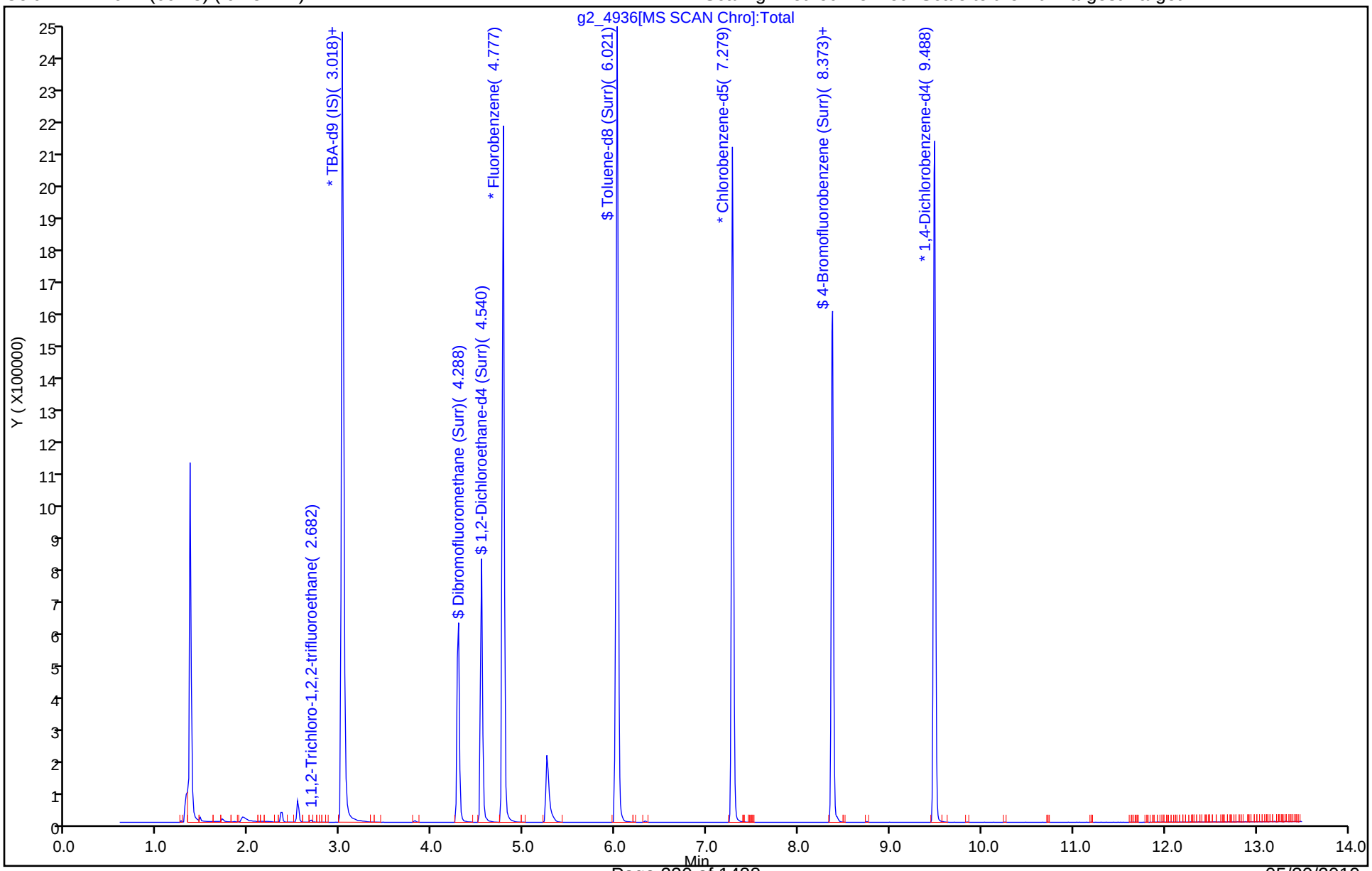
Report Date: 11-May-2019 11:09:44 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\g2_4936.D

Injection Date:	07-May-2019 15:02:30	Instrument ID:	VMS_G2	Operator ID:	meierg
Lims ID:	280-123011-C-1	Lab Sample ID:	280-123011-1	Worklist Smp#:	17
Client ID:	SP-S2				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Recovery Report

Data File: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\g2_4936.D
Lims ID: 280-123011-C-1
Client ID: SP-S2
Sample Type: Client
Inject. Date: 07-May-2019 15:02:30 ALS Bottle#: 14 Worklist Smp#: 17
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 280-123011-C-1
Misc. Info.: 280-0081637-017
Operator ID: meierg Instrument ID: VMS_G2

Method: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 11-May-2019 11:09:43 Calib Date: 06-May-2019 18:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4881.D

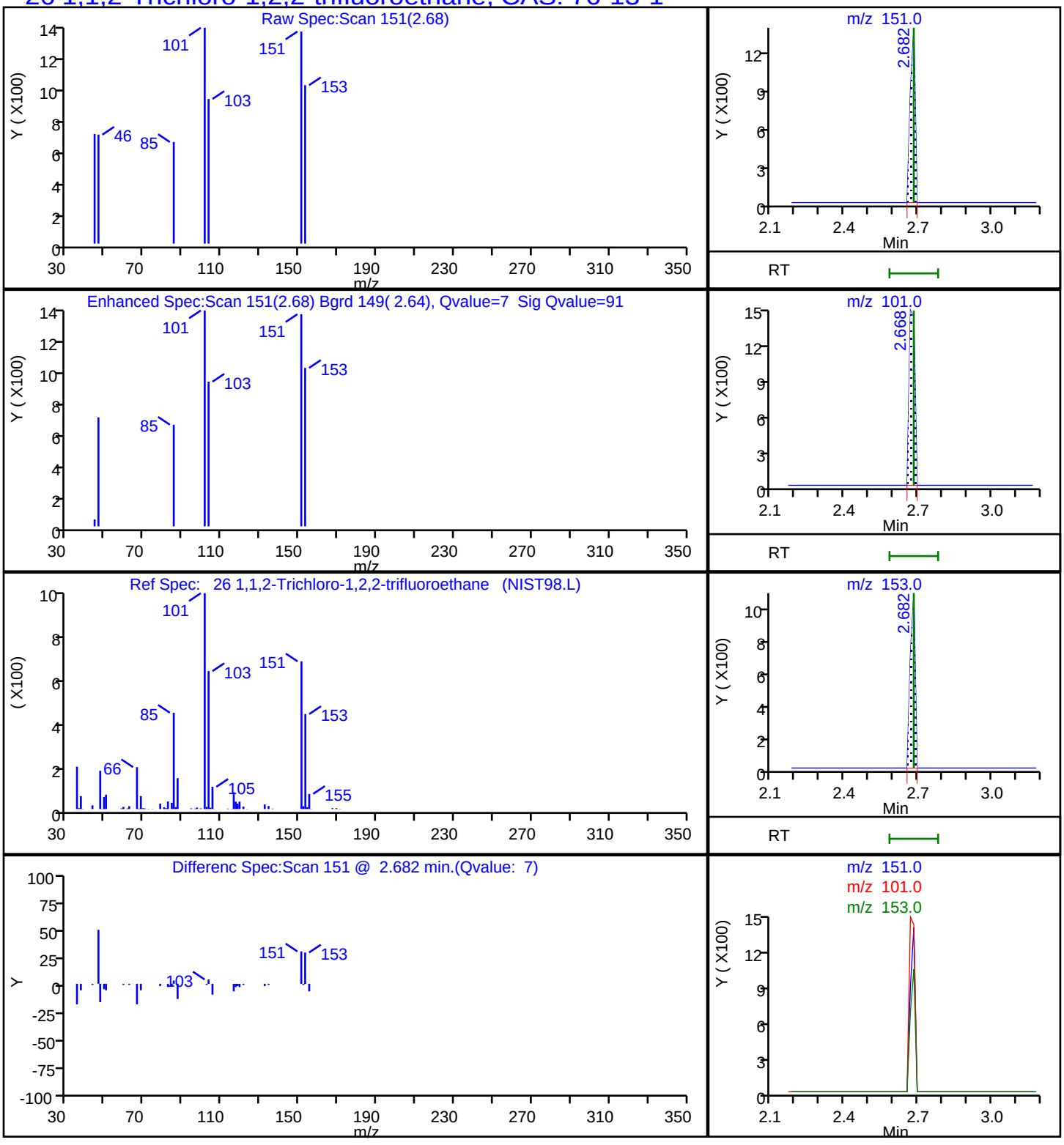
Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0311

Compound	Amount Added	Amount Recovered	% Rec.
$ 6 Dibromofluoromethane (Surr)	50.0	51.3	102.64
$ 7 1,2-Dichloroethane-d4 (Surr)	50.0	53.7	107.42
$ 8 Toluene-d8 (Surr)	50.0	49.7	99.30
$ 9 4-Bromofluorobenzene (Surr)	50.0	50.4	100.73

Eurofins TestAmerica, Denver

Data File:	\\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\g2_4936.D				
Injection Date:	07-May-2019 15:02:30	Instrument ID:	VMS_G2		
Lims ID:	280-123011-C-1	Lab Sample ID:	280-123011-1		
Client ID:	SP-S2				
Operator ID:	meierg	ALS Bottle#:	14	Worklist Smp#:	17
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

26 1,1,2-Trichloro-1,2,2-trifluoroethane, CAS: 76-13-1



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Client Sample ID: SP-E1 Lab Sample ID: 280-123011-2

Matrix: Water Lab File ID: g2_4937.D

Analysis Method: 8260B Date Collected: 04/24/2019 08:51

Sample wt/vol: 5(mL) Date Analyzed: 05/07/2019 15:23

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 457279 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.58	J	3.0	0.40	0.18
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.23
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.21
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.21
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.47
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.15
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.18
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.13
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	2.0
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	1.0	U Q	1.0	1.0	0.46
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	0.80	U	2.0	0.80	0.17
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
110-82-7	Cyclohexane	0.80	U	2.0	0.80	0.28
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Client Sample ID: SP-E1 Lab Sample ID: 280-123011-2

Matrix: Water Lab File ID: g2_4937.D

Analysis Method: 8260B Date Collected: 04/24/2019 08:51

Sample wt/vol: 5(mL) Date Analyzed: 05/07/2019 15:23

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 457279 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
106-93-4	Ethylene Dibromide	0.40	U	1.0	0.40	0.18
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
79-20-9	Methyl acetate	4.0	U	5.0	4.0	1.6
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
108-87-2	Methylcyclohexane	0.40	U	2.0	0.40	0.10
75-09-2	Methylene Chloride	2.0	U	5.0	2.0	0.94
100-42-5	Styrene	0.80	U	1.0	0.80	0.36
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	1.0	0.80	0.19

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	107		81-118
460-00-4	4-Bromofluorobenzene (Surr)	101		85-114
1868-53-7	Dibromofluoromethane (Surr)	103		80-119
2037-26-5	Toluene-d8 (Surr)	98		89-112

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\g2_4937.D
Lims ID: 280-123011-A-2
Client ID: SP-E1
Sample Type: Client
Inject. Date: 07-May-2019 15:23:30 ALS Bottle#: 15 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 280-123011-A-2
Misc. Info.: 280-0081637-018
Operator ID: meierg Instrument ID: VMS_G2

Method: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 11-May-2019 11:09:41 Calib Date: 06-May-2019 18:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4881.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0311

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.017	3.031	-0.014	82	2538110	1000.0	
* 2 Fluorobenzene	96	4.777	4.777	0.000	99	1668996	50.0	
* 3 Chlorobenzene-d5	119	7.279	7.279	0.000	87	357436	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.488	9.488	0.000	96	560887	50.0	
$ 6 Dibromofluoromethane (Surr	111	4.288	4.288	0.000	93	372896	51.4	
$ 7 1,2-Dichloroethane-d4 (Sur	65	4.540	4.540	0.000	99	516593	53.7	
$ 8 Toluene-d8 (Surr)	98	6.020	6.020	0.000	93	1546083	49.1	
$ 9 4-Bromofluorobenzene (Surr	95	8.373	8.373	0.000	88	535934	50.5	
12 Dichlorodifluoromethane	85		1.495				ND	
14 Chloromethane	50		1.663				ND	
15 Vinyl chloride	62		1.746				ND	
17 Bromomethane	94		1.998				ND	
18 Chloroethane	64		2.096				ND	
20 Trichlorofluoromethane	101		2.291				ND	
26 1,1,2-Trichloro-1,2,2-trif	151	2.682	2.682	0.000	89	4014	0.5833	
25 1,1-Dichloroethene	96		2.682				ND	
27 Acetone	43		2.696				ND	
30 Carbon disulfide	76		2.850				ND	
32 Methyl acetate	43		2.920				ND	
35 Methylene Chloride	84		3.031				ND	
41 Methyl tert-butyl ether	73		3.213				ND	
40 trans-1,2-Dichloroethene	96		3.227				ND	
45 1,1-Dichloroethane	63		3.534				ND	
52 2-Butanone (MEK)	43		3.911				ND	
51 cis-1,2-Dichloroethene	96		3.939				ND	
56 Chlorobromomethane	128		4.107				ND	
59 Chloroform	83		4.163				ND	
60 1,1,1-Trichloroethane	97		4.302				ND	
61 Cyclohexane	56		4.358				ND	
62 Carbon tetrachloride	117		4.414				ND	
64 Benzene	78		4.568				ND	
65 1,2-Dichloroethane	62		4.596				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
69 Trichloroethene	95		5.042				ND	
71 Methylcyclohexane	55		5.224				ND	
72 1,2-Dichloropropane	63		5.252				ND	
76 Dichlorobromomethane	83		5.447				ND	
79 cis-1,3-Dichloropropene	75		5.797				ND	
81 4-Methyl-2-pentanone (MIBK	43		5.894				ND	
82 Toluene	91		6.078				ND	
83 trans-1,3-Dichloropropene	75		6.264				ND	
85 1,1,2-Trichloroethane	97		6.428				ND	
86 Tetrachloroethene	164		6.514				ND	
88 2-Hexanone	43		6.600				ND	
89 Chlorodibromomethane	129		6.764				ND	
90 Ethylene Dibromide	107		6.878				ND	
92 Chlorobenzene	112		7.307				ND	
94 Ethylbenzene	106		7.386				ND	
95 m-Xylene & p-Xylene	106		7.501				ND	
96 o-Xylene	106		7.858				ND	
97 Styrene	104		7.879				ND	
98 Bromoform	173		8.051				ND	
99 Isopropylbenzene	105		8.201				ND	
102 1,1,2,2-Tetrachloroethane	83		8.487				ND	
113 1,3-Dichlorobenzene	146		9.410				ND	
115 1,4-Dichlorobenzene	146		9.510				ND	
118 1,2-Dichlorobenzene	146		9.860				ND	
119 1,2-Dibromo-3-Chloropropan	157		10.639				ND	
121 1,2,4-Trichlorobenzene	180		11.447				ND	
124 1,2,3-Trichlorobenzene	180		11.934				ND	
S 143 Xylenes, Total	106		0.000				ND	

Reagents:

mv-Cent IS/SS_00002 Amount Added: 5.00 Units: uL Run Reagent

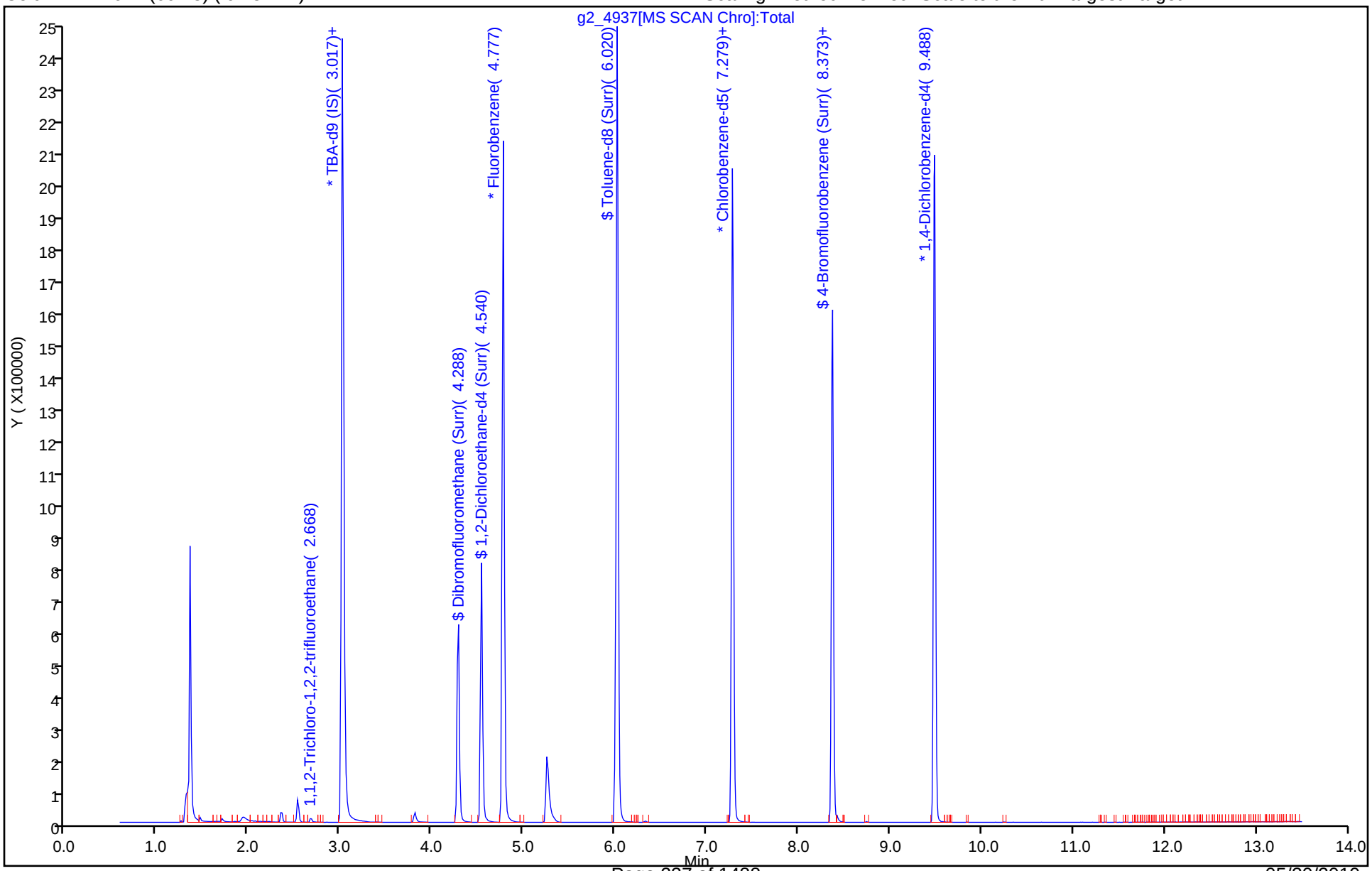
Report Date: 11-May-2019 11:09:41 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\g2_4937.D

Injection Date:	07-May-2019 15:23:30	Instrument ID:	VMS_G2	Operator ID:	meierg
Lims ID:	280-123011-A-2	Lab Sample ID:	280-123011-2	Worklist Smp#:	18
Client ID:	SP-E1				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Recovery Report

Data File: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\g2_4937.D
Lims ID: 280-123011-A-2
Client ID: SP-E1
Sample Type: Client
Inject. Date: 07-May-2019 15:23:30 ALS Bottle#: 15 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 280-123011-A-2
Misc. Info.: 280-0081637-018
Operator ID: meierg Instrument ID: VMS_G2

Method: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 11-May-2019 11:09:41 Calib Date: 06-May-2019 18:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4881.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0311

Compound	Amount Added	Amount Recovered	% Rec.
$ 6 Dibromofluoromethane (Surr)	50.0	51.4	102.86
$ 7 1,2-Dichloroethane-d4 (Surr)	50.0	53.7	107.34
$ 8 Toluene-d8 (Surr)	50.0	49.1	98.19
$ 9 4-Bromofluorobenzene (Surr)	50.0	50.5	101.10

Report Date: 11-May-2019 11:09:41 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\g2_4937.D

Injection Date: 07-May-2019 15:23:30 Instrument ID: VMS_G2

Lims ID: 280-123011-A-2 Lab Sample ID: 280-123011-2

Client ID: SP-E1

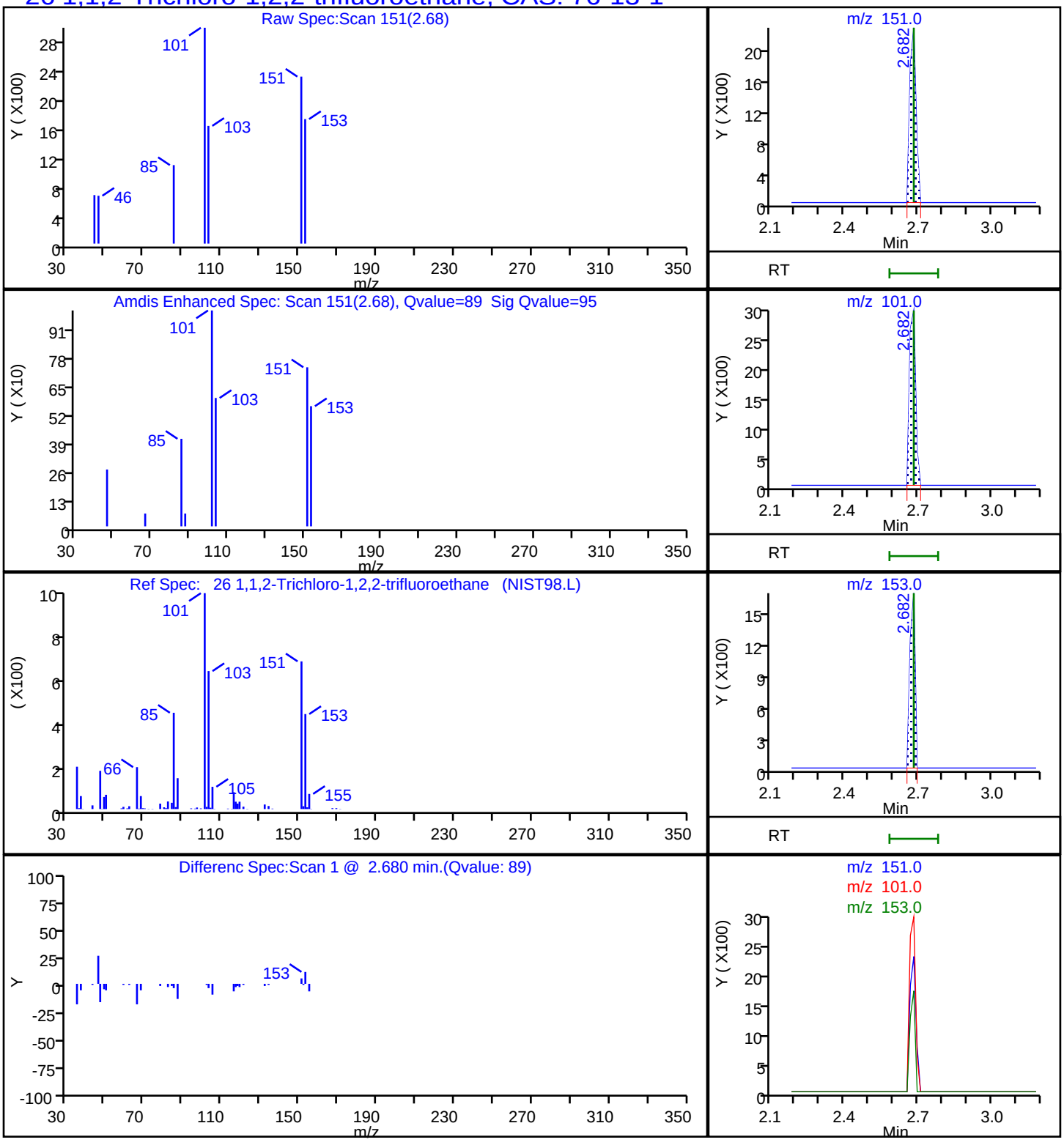
Operator ID: meierg ALS Bottle#: 15 Worklist Smp#: 18

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: AQ_VMSG2_8260 Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

26 1,1,2-Trichloro-1,2,2-trifluoroethane, CAS: 76-13-1



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Client Sample ID: SP-S22 Lab Sample ID: 280-123011-4

Matrix: Water Lab File ID: g2_4938.D

Analysis Method: 8260B Date Collected: 04/24/2019 08:43

Sample wt/vol: 5(mL) Date Analyzed: 05/07/2019 15:45

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 457279 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.25	J	3.0	0.40	0.18
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.23
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.21
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.21
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.47
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.15
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.18
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.13
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	2.0
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	1.0	U Q	1.0	1.0	0.46
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	0.80	U	2.0	0.80	0.17
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
110-82-7	Cyclohexane	0.80	U	2.0	0.80	0.28
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Client Sample ID: SP-S22 Lab Sample ID: 280-123011-4

Matrix: Water Lab File ID: g2_4938.D

Analysis Method: 8260B Date Collected: 04/24/2019 08:43

Sample wt/vol: 5(mL) Date Analyzed: 05/07/2019 15:45

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 457279 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
106-93-4	Ethylene Dibromide	0.40	U	1.0	0.40	0.18
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
79-20-9	Methyl acetate	4.0	U	5.0	4.0	1.6
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
108-87-2	Methylcyclohexane	0.40	U	2.0	0.40	0.10
75-09-2	Methylene Chloride	2.0	U	5.0	2.0	0.94
100-42-5	Styrene	0.80	U	1.0	0.80	0.36
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	1.0	0.80	0.19

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	107		81-118
460-00-4	4-Bromofluorobenzene (Surr)	101		85-114
1868-53-7	Dibromofluoromethane (Surr)	103		80-119
2037-26-5	Toluene-d8 (Surr)	99		89-112

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\g2_4938.D
Lims ID: 280-123011-A-4
Client ID: SP-S22
Sample Type: Client
Inject. Date: 07-May-2019 15:45:30 ALS Bottle#: 16 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 280-123011-A-4
Misc. Info.: 280-0081637-019
Operator ID: meierg Instrument ID: VMS_G2

Method: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 11-May-2019 11:09:38 Calib Date: 06-May-2019 18:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4881.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0311

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.017	3.031	-0.014	81	2516656	1000.0	
* 2 Fluorobenzene	96	4.777	4.777	0.000	99	1675111	50.0	
* 3 Chlorobenzene-d5	119	7.279	7.279	0.000	87	354891	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.488	9.488	0.000	97	558051	50.0	
$ 6 Dibromofluoromethane (Surr	111	4.288	4.288	0.000	93	374457	51.5	
$ 7 1,2-Dichloroethane-d4 (Sur	65	4.540	4.540	0.000	99	515414	53.4	
$ 8 Toluene-d8 (Surr)	98	6.020	6.020	0.000	93	1552768	49.7	
$ 9 4-Bromofluorobenzene (Surr	95	8.373	8.373	0.000	88	535260	50.7	
12 Dichlorodifluoromethane	85		1.495				ND	
14 Chloromethane	50		1.663				ND	
15 Vinyl chloride	62		1.746				ND	
17 Bromomethane	94		1.998				ND	
18 Chloroethane	64		2.096				ND	
20 Trichlorofluoromethane	101		2.291				ND	
26 1,1,2-Trichloro-1,2,2-trif	151	2.682	2.682	0.000	5	1787	0.2510	
25 1,1-Dichloroethene	96		2.682				ND	
27 Acetone	43		2.696				ND	
30 Carbon disulfide	76		2.850				ND	
32 Methyl acetate	43		2.920				ND	
35 Methylene Chloride	84		3.031				ND	
41 Methyl tert-butyl ether	73		3.213				ND	
40 trans-1,2-Dichloroethene	96		3.227				ND	
45 1,1-Dichloroethane	63		3.534				ND	
52 2-Butanone (MEK)	43		3.911				ND	
51 cis-1,2-Dichloroethene	96		3.939				ND	
56 Chlorobromomethane	128		4.107				ND	
59 Chloroform	83		4.163				ND	
60 1,1,1-Trichloroethane	97		4.302				ND	
61 Cyclohexane	56		4.358				ND	
62 Carbon tetrachloride	117		4.414				ND	
64 Benzene	78		4.568				ND	
65 1,2-Dichloroethane	62		4.596				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
69 Trichloroethene	95		5.042				ND	
71 Methylcyclohexane	55		5.224				ND	
72 1,2-Dichloropropane	63		5.252				ND	
76 Dichlorobromomethane	83		5.447				ND	
79 cis-1,3-Dichloropropene	75		5.797				ND	
81 4-Methyl-2-pentanone (MIBK	43		5.894				ND	
82 Toluene	91		6.078				ND	
83 trans-1,3-Dichloropropene	75		6.264				ND	
85 1,1,2-Trichloroethane	97		6.428				ND	
86 Tetrachloroethene	164		6.514				ND	
88 2-Hexanone	43		6.600				ND	
89 Chlorodibromomethane	129		6.764				ND	
90 Ethylene Dibromide	107		6.878				ND	
92 Chlorobenzene	112		7.307				ND	
94 Ethylbenzene	106		7.386				ND	
95 m-Xylene & p-Xylene	106		7.501				ND	
96 o-Xylene	106		7.858				ND	
97 Styrene	104		7.879				ND	
98 Bromoform	173		8.051				ND	
99 Isopropylbenzene	105		8.201				ND	
102 1,1,2,2-Tetrachloroethane	83		8.487				ND	
113 1,3-Dichlorobenzene	146		9.410				ND	
115 1,4-Dichlorobenzene	146		9.510				ND	
118 1,2-Dichlorobenzene	146		9.860				ND	
119 1,2-Dibromo-3-Chloropropan	157		10.639				ND	
121 1,2,4-Trichlorobenzene	180		11.447				ND	
124 1,2,3-Trichlorobenzene	180		11.934				ND	
S 143 Xylenes, Total	106		0.000				ND	

Reagents:

mv-Cent IS/SS_00002 Amount Added: 5.00 Units: uL Run Reagent

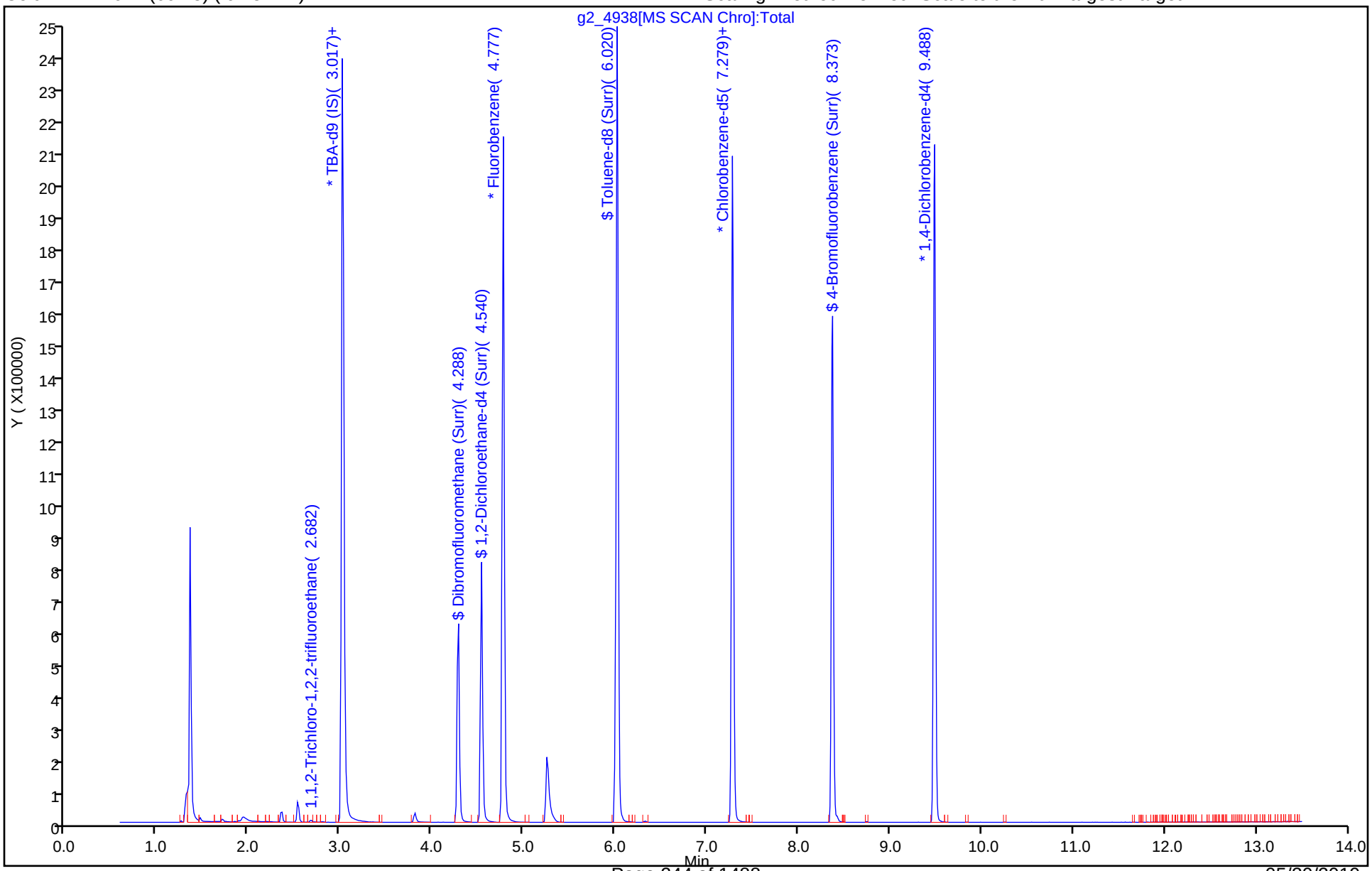
Report Date: 11-May-2019 11:09:39 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\g2_4938.D

Injection Date:	07-May-2019 15:45:30	Instrument ID:	VMS_G2	Operator ID:	meierg
Lims ID:	280-123011-A-4	Lab Sample ID:	280-123011-4	Worklist Smp#:	19
Client ID:	SP-S22				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Recovery Report

Data File: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\g2_4938.D
Lims ID: 280-123011-A-4
Client ID: SP-S22
Sample Type: Client
Inject. Date: 07-May-2019 15:45:30 ALS Bottle#: 16 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 280-123011-A-4
Misc. Info.: 280-0081637-019
Operator ID: meierg Instrument ID: VMS_G2

Method: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 11-May-2019 11:09:38 Calib Date: 06-May-2019 18:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4881.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0311

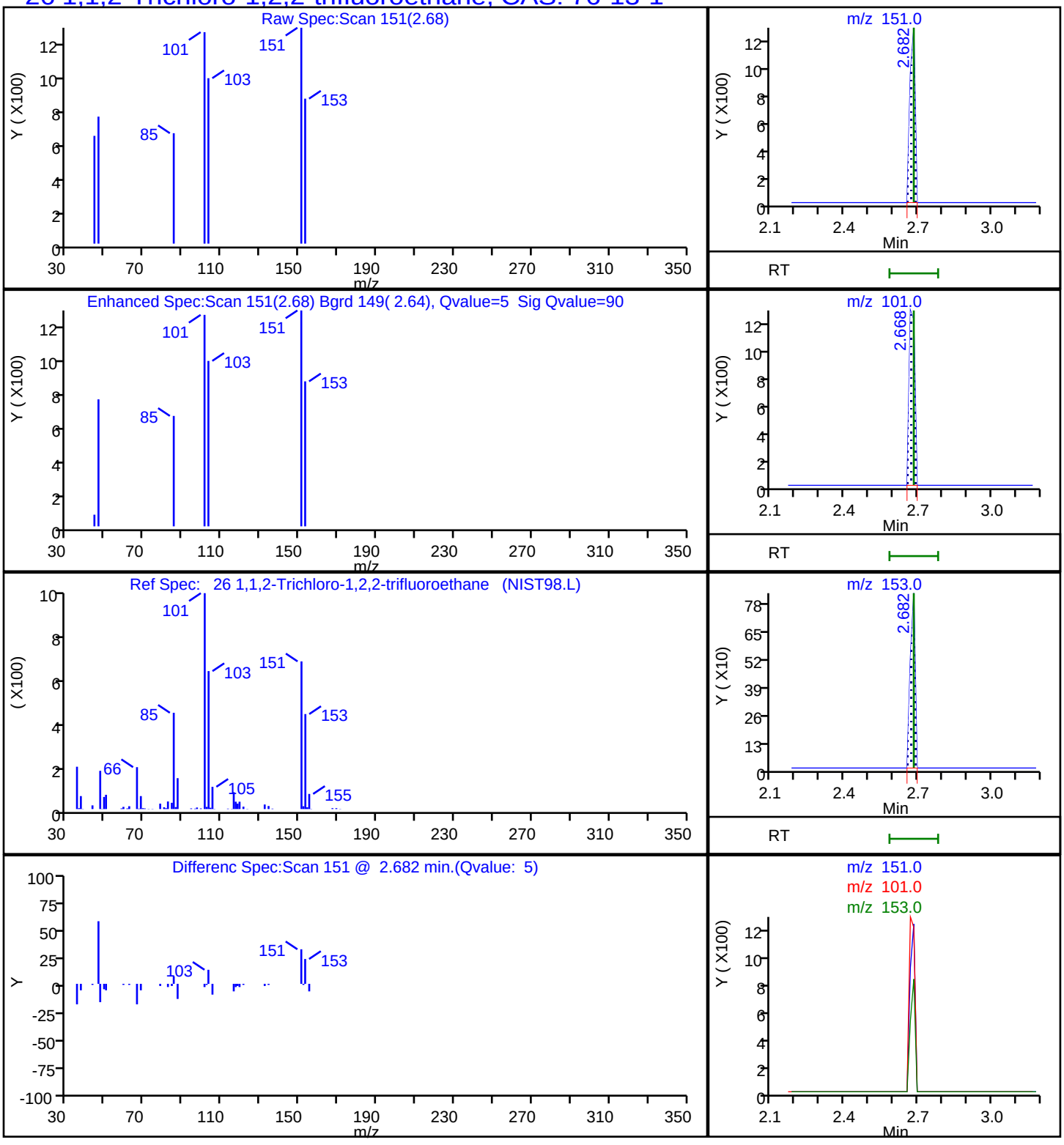
Compound	Amount Added	Amount Recovered	% Rec.
$ 6 Dibromofluoromethane (Surr)	50.0	51.5	102.91
$ 7 1,2-Dichloroethane-d4 (Surr)	50.0	53.4	106.70
$ 8 Toluene-d8 (Surr)	50.0	49.7	99.32
$ 9 4-Bromofluorobenzene (Surr)	50.0	50.7	101.48

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\g2_4938.D

Injection Date:	07-May-2019 15:45:30	Instrument ID:	VMS_G2		
Lims ID:	280-123011-A-4	Lab Sample ID:	280-123011-4		
Client ID:	SP-S22				
Operator ID:	meierg	ALS Bottle#:	16	Worklist Smp#:	19
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

26 1,1,2-Trichloro-1,2,2-trifluoroethane, CAS: 76-13-1



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Client Sample ID: TB-1048 Lab Sample ID: 280-123011-5

Matrix: Water Lab File ID: g2_4939.D

Analysis Method: 8260B Date Collected: 04/24/2019 08:40

Sample wt/vol: 5(mL) Date Analyzed: 05/07/2019 16:06

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 457279 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.40	U	3.0	0.40	0.18
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.23
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.21
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.21
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.47
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.15
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.18
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.13
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	2.0
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	1.0	U Q	1.0	1.0	0.46
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	0.80	U	2.0	0.80	0.17
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
110-82-7	Cyclohexane	0.80	U	2.0	0.80	0.28
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Client Sample ID: TB-1048 Lab Sample ID: 280-123011-5

Matrix: Water Lab File ID: g2_4939.D

Analysis Method: 8260B Date Collected: 04/24/2019 08:40

Sample wt/vol: 5(mL) Date Analyzed: 05/07/2019 16:06

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 457279 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
106-93-4	Ethylene Dibromide	0.40	U	1.0	0.40	0.18
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
79-20-9	Methyl acetate	4.0	U	5.0	4.0	1.6
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
108-87-2	Methylcyclohexane	0.40	U	2.0	0.40	0.10
75-09-2	Methylene Chloride	2.0	U	5.0	2.0	0.94
100-42-5	Styrene	0.80	U	1.0	0.80	0.36
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	1.0	0.80	0.19

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	107		81-118
460-00-4	4-Bromofluorobenzene (Surr)	101		85-114
1868-53-7	Dibromofluoromethane (Surr)	103		80-119
2037-26-5	Toluene-d8 (Surr)	99		89-112

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\g2_4939.D
Lims ID: 280-123011-B-5
Client ID: TB-1048
Sample Type: Client
Inject. Date: 07-May-2019 16:06:30 ALS Bottle#: 17 Worklist Smp#: 20
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 280-123011-B-5
Misc. Info.: 280-0081637-020
Operator ID: meierg Instrument ID: VMS_G2

Method: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 11-May-2019 11:09:36 Calib Date: 06-May-2019 18:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4881.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0311

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
*	1 TBA-d9 (IS)	65	3.017	3.031	-0.014	81	2458818	1000.0	
*	2 Fluorobenzene	96	4.777	4.777	0.000	99	1684481	50.0	
*	3 Chlorobenzene-d5	119	7.279	7.279	0.000	87	358315	50.0	
*	4 1,4-Dichlorobenzene-d4	152	9.488	9.488	0.000	96	567349	50.0	
$	6 Dibromofluoromethane (Surr	111	4.288	4.288	0.000	93	375743	51.3	
$	7 1,2-Dichloroethane-d4 (Sur	65	4.540	4.540	0.000	98	521068	53.6	
$	8 Toluene-d8 (Surr)	98	6.020	6.020	0.000	93	1564763	49.6	
$	9 4-Bromofluorobenzene (Surr	95	8.373	8.373	0.000	89	541575	50.5	
	12 Dichlorodifluoromethane	85		1.495				ND	
	14 Chloromethane	50		1.663				ND	
	15 Vinyl chloride	62		1.746				ND	
	17 Bromomethane	94		1.998				ND	
	18 Chloroethane	64		2.096				ND	
	20 Trichlorofluoromethane	101		2.291				ND	
	26 1,1,2-Trichloro-1,2,2-trif	151		2.682				ND	
	25 1,1-Dichloroethene	96		2.682				ND	
	27 Acetone	43		2.696				ND	
	30 Carbon disulfide	76		2.850				ND	
	32 Methyl acetate	43		2.920				ND	
	35 Methylene Chloride	84		3.031				ND	
	41 Methyl tert-butyl ether	73		3.213				ND	
	40 trans-1,2-Dichloroethene	96		3.227				ND	
	45 1,1-Dichloroethane	63		3.534				ND	
	52 2-Butanone (MEK)	43		3.911				ND	
	51 cis-1,2-Dichloroethene	96		3.939				ND	
	56 Chlorobromomethane	128		4.107				ND	
	59 Chloroform	83		4.163				ND	
	60 1,1,1-Trichloroethane	97		4.302				ND	
	61 Cyclohexane	56		4.358				ND	
	62 Carbon tetrachloride	117		4.414				ND	
	64 Benzene	78		4.568				ND	
	65 1,2-Dichloroethane	62		4.596				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
69 Trichloroethene	95		5.042				ND	
71 Methylcyclohexane	55		5.224				ND	
72 1,2-Dichloropropane	63		5.252				ND	
76 Dichlorobromomethane	83		5.447				ND	
79 cis-1,3-Dichloropropene	75		5.797				ND	
81 4-Methyl-2-pentanone (MIBK	43		5.894				ND	
82 Toluene	91		6.078				ND	
83 trans-1,3-Dichloropropene	75		6.264				ND	
85 1,1,2-Trichloroethane	97		6.428				ND	
86 Tetrachloroethene	164		6.514				ND	
88 2-Hexanone	43		6.600				ND	
89 Chlorodibromomethane	129		6.764				ND	
90 Ethylene Dibromide	107		6.878				ND	
92 Chlorobenzene	112		7.307				ND	
94 Ethylbenzene	106		7.386				ND	
95 m-Xylene & p-Xylene	106		7.501				ND	
96 o-Xylene	106		7.858				ND	
97 Styrene	104		7.879				ND	
98 Bromoform	173		8.051				ND	
99 Isopropylbenzene	105		8.201				ND	
102 1,1,2,2-Tetrachloroethane	83		8.487				ND	
113 1,3-Dichlorobenzene	146		9.410				ND	
115 1,4-Dichlorobenzene	146		9.510				ND	
118 1,2-Dichlorobenzene	146		9.860				ND	
119 1,2-Dibromo-3-Chloropropan	157		10.639				ND	
121 1,2,4-Trichlorobenzene	180		11.447				ND	
124 1,2,3-Trichlorobenzene	180		11.934				ND	
S 143 Xylenes, Total	106		0.000				ND	

Reagents:

mv-Cent IS/SS_00002 Amount Added: 5.00 Units: uL Run Reagent

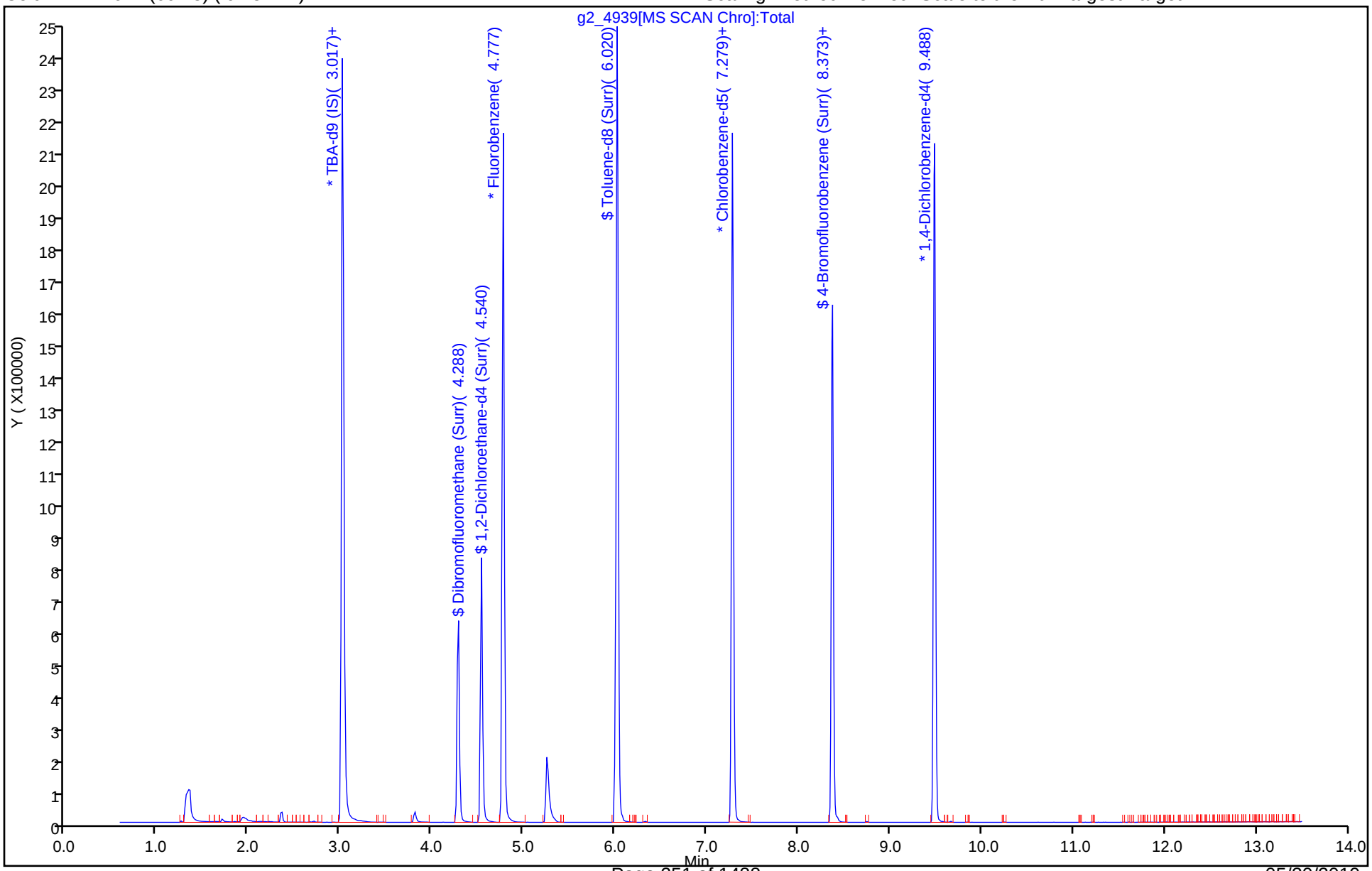
Report Date: 11-May-2019 11:09:36 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\g2_4939.D

Injection Date:	07-May-2019 16:06:30	Instrument ID:	VMS_G2	Operator ID:	meierg
Lims ID:	280-123011-B-5	Lab Sample ID:	280-123011-5	Worklist Smp#:	20
Client ID:	TB-1048				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Recovery Report

Data File: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\g2_4939.D
Lims ID: 280-123011-B-5
Client ID: TB-1048
Sample Type: Client
Inject. Date: 07-May-2019 16:06:30 ALS Bottle#: 17 Worklist Smp#: 20
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 280-123011-B-5
Misc. Info.: 280-0081637-020
Operator ID: meierg Instrument ID: VMS_G2

Method: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 11-May-2019 11:09:36 Calib Date: 06-May-2019 18:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4881.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0311

Compound	Amount Added	Amount Recovered	% Rec.
$ 6 Dibromofluoromethane (Surr)	50.0	51.3	102.69
$ 7 1,2-Dichloroethane-d4 (Surr)	50.0	53.6	107.27
$ 8 Toluene-d8 (Surr)	50.0	49.6	99.13
$ 9 4-Bromofluorobenzene (Surr)	50.0	50.5	101.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1 Analy Batch No.: 457190

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/06/2019 13:12 Calibration End Date: 05/06/2019 18:51 Calibration ID: 36283

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-457190/8	g2_4872.D
Level 2	IC 280-457190/16	g2_4880.D
Level 3	IC 280-457190/7	g2_4871.D
Level 4	IC 280-457190/15	g2_4879.D
Level 5	IC 280-457190/6	g2_4870.D
Level 6	IC 280-457190/14	g2_4878.D
Level 7	IC 280-457190/5	g2_4869.D
Level 8	IC 280-457190/13	g2_4877.D
Level 9	IC 280-457190/4	g2_4868.D
Level 10	ICIS 280-457190/12	g2_4876.D
Level 11	IC 280-457190/17	g2_4881.D
Level 12	IC 280-457190/3	g2_4867.D
Level 13	IC 280-457190/11	g2_4875.D
Level 14	IC 280-457190/2	g2_4866.D
Level 15	IC 280-457190/10	g2_4874.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7 LVL 12	LVL 3 LVL 8 LVL 13	LVL 4 LVL 9 LVL 14	LVL 5 LVL 10 LVL 15		B	M1	M2								
Dichlorodifluoromethane	0.2797 0.3031	+++++	0.2863 0.2956	0.2773	0.2867 0.2889	Ave		0.2882				3.1		15.0			
Chloromethane	0.2925 0.2992	+++++	0.2970 0.2938	0.3143	0.2952 0.2806	Ave		0.2961			0.1000	3.4		15.0			
Vinyl chloride	0.2916 0.2958	+++++	0.2938 0.2917	0.2929	0.2931 0.2878	Ave		0.2924				0.8		30.0			
Bromomethane	0.1598 0.1110	+++++	0.1497 +++++	0.1667	0.1299 +++++	Lin1	0.0746	0.1190							0.9910		0.9900
Chloroethane	0.1831 0.1696	+++++	0.1792 0.1617	0.1670	0.1692 +++++	Ave		0.1716				4.7		15.0			
Dichlorofluoromethane	0.4399 0.4591	0.4473	0.4510 0.4461	0.4421	0.4470 0.4271	Ave		0.4450				2.1		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1 Analy Batch No.: 457190

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/06/2019 13:12 Calibration End Date: 05/06/2019 18:51 Calibration ID: 36283

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7 LVL 12	LVL 3 LVL 8 LVL 13	LVL 4 LVL 9 LVL 14	LVL 5 LVL 10 LVL 15		B	M1	M2								
Trichlorofluoromethane	0.4379 0.4601	+++++	0.4574 0.4446	0.4296	0.4471 0.4345	Ave		0.4444				2.6		15.0			
Ethyl ether	0.2230	0.2322 0.2457	0.2249	0.2334 0.2194	0.1964	Ave		0.2250				6.8		15.0			
Acrolein	0.0630	0.0737 0.0765	0.0683	0.0730 0.0660	0.0646	Ave		0.0693				7.4		15.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	0.2081	0.2039 0.2181	0.2082	0.2058 0.1920	0.1836	Lin1	0.0028	0.2013							0.9970		0.9900
1,1-Dichloroethene	0.2521	0.2422 0.2555	0.2336	0.2410 0.2257	0.1980	Lin1	-0.002	0.2364							0.9970		0.9900
Acetone	1.5099	0.2150 0.1617	0.8259	0.1558 0.1422	0.4827	Lin2	2.7277	0.1449							0.9980		0.9900
Iodomethane	+++++	0.1954 0.2299	0.1948	0.2169 0.2003	0.1695	Lin1	-0.036	0.2110							0.9960		0.9900
Carbon disulfide	0.7167	0.7141 0.7980	0.7281	0.7373 0.7055	0.6274	Lin1	-0.034	0.7358							0.9970		0.9900
Methyl acetate	0.3918	0.3126 0.3336	0.3629	0.3121 0.2914	0.3030	Lin2	0.0842	0.3078							0.9960		0.9900
3-Chloro-1-propene	0.4595	0.4217 0.3762	0.4357	0.4013 0.3469	0.3858	Lin2	0.0401	0.3830							0.9950		0.9900
Methylene Chloride	+++++	0.2649 0.2783	0.2894	0.2634 0.2445	0.2586	Ave		0.2665				5.9		15.0			
t-Butyl alcohol	0.0798	0.0795 0.0838	0.0921	0.0782 0.0740	0.0950	Ave		0.0832				9.2		15.0			
Acrylonitrile	0.1522	0.1593 0.1591	0.1567	0.1550 0.1330	0.1505	Ave		0.1523				6.0		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1 Analy Batch No.: 457190

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/06/2019 13:12 Calibration End Date: 05/06/2019 18:51 Calibration ID: 36283

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7 LVL 12	LVL 3 LVL 8 LVL 13	LVL 4 LVL 9 LVL 14	LVL 5 LVL 10 LVL 15		B	M1	M2								
Methyl tert-butyl ether	0.9171	0.8418 0.8982	0.8965	0.8482 0.7968	0.7696	Ave		0.8526				6.5		15.0			
trans-1,2-Dichloroethene	0.2697	0.2610 0.2837	0.2544	0.2633 0.2550	0.2332	Lin2	0.0002	0.2599							0.9950		0.9900
Hexane	+++++	2.0237 2.0096	2.2645	1.9783 1.7456	1.8186	Lin1	0.4434	1.8526							0.9950		0.9900
Vinyl acetate	0.5247	0.6009 0.6656	0.5260	0.6264 0.5846	0.5062	Lin1	-0.144	0.6138							0.9960		0.9900
1,1-Dichloroethane	0.4757	0.4490 0.4676	0.4684	0.4396 0.4104	0.4098	Lin2	0.0191	0.4358			0.1000				0.9960		0.9900
2-Butanone (MEK)	0.4401	0.2417 0.2439	0.3431	0.2315 0.2126	0.2890	Lin2	0.4276	0.2305							0.9980		0.9900
cis-1,2-Dichloroethene	0.2644	0.2879 0.3079	0.2856	0.2929 0.2780	0.2547	Lin2	-0.013	0.2882							0.9960		0.9900
2,2-Dichloropropane	+++++	0.4029 0.4525	0.3667	0.4183 0.4078	0.3510	Lin2	-0.069	0.4187							0.9960		0.9900
sec-Butyl Alcohol	+++++	0.0592 0.0593	0.0592	0.0569 0.0508	0.0653	Ave		0.0584				8.0		15.0			
Bromochloromethane	0.0984	0.1176 0.1260	0.1226	0.1201 0.1126	0.1084	Lin2	-0.009	0.1195							0.9950		0.9900
Tetrahydrofuran	0.2358	0.1696 0.1676	0.2004	0.1606 0.1485	0.1792	Lin2	0.0765	0.1604							0.9980		0.9900
Chloroform	0.7088	0.4749 0.4942	0.5889	0.4612 0.4406	0.4741	Lin2	0.1233	0.4564							0.9960		0.9900
1,1,1-Trichloroethane	0.4072	0.4106 0.4496	0.4157	0.4212 0.4036	0.3837	Lin1	-0.011	0.4191							0.9980		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1 Analy Batch No.: 457190

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/06/2019 13:12 Calibration End Date: 05/06/2019 18:51 Calibration ID: 36283

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7 LVL 12	LVL 3 LVL 8 LVL 13	LVL 4 LVL 9 LVL 14	LVL 5 LVL 10 LVL 15		B	M1	M2								
Cyclohexane	0.5134	0.5064 0.5206	0.5261	0.4978 0.4625	0.4667	Lin2	0.0119	0.4929							0.9970		0.9900
1,1-Dichloropropene	0.3685	0.3832 0.4153	0.3931	0.3863 0.3749	0.3521	Lin2	-0.009	0.3865							0.9970		0.9900
Carbon tetrachloride	0.2628	0.3011 0.3707	0.2825	0.3353 0.3384	0.2623	Lin2	-0.040	0.3286							0.9900		0.9900
Isobutyl alcohol	+++++	0.0219 0.0236	0.0273	0.0223 0.0206	0.0254	Lin1	0.1719	0.0216							0.9960		0.9900
Benzene	1.1837	1.1377 1.1820	1.2225	1.1079 1.0228	1.0690	Lin2	0.0479	1.1073							0.9960		0.9900
1,2-Dichloroethane	0.4246	0.3584 0.3777	0.3754	0.3524 0.3421	0.3433	Ave		0.3677				7.8		15.0			
Trichloroethene	0.2725	0.2752 0.2935	0.2867	0.2750 0.2647	0.2590	Lin2	-0.001	0.2756							0.9980		0.9900
2-Pentanone	0.3897	0.3832 0.3900	0.3950	0.3681 0.3354	0.4050	Ave		0.3809				6.0		15.0			
Methylcyclohexane	0.4024	0.3910 0.4066	0.4145	0.3915 0.3639	0.3597	Lin1	0.0192	0.3800							0.9970		0.9900
1,2-Dichloropropane	+++++	0.2838 0.2807	0.4420	0.2653 0.2503	0.3345	Lin2	0.1731	0.2623							0.9970		0.9900
1,4-Dioxane	0.0057	0.0073 0.0076	0.0076	0.0070 0.0069	0.0075	Lin2	-0.012	0.0074							0.9940		0.9900
Dibromomethane	0.1563	0.1517 0.1691	0.1497	0.1526 0.1527	0.1281	Lin2	-0.001	0.1520							0.9920		0.9900
Bromodichloromethane	+++++	0.3000 0.3578	0.2584	0.3219 0.3326	0.2464	Lin2	-0.088	0.3269							0.9930		0.9900

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FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1 Analy Batch No.: 457190

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/06/2019 13:12 Calibration End Date: 05/06/2019 18:51 Calibration ID: 36283

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7 LVL 12	LVL 3 LVL 8 LVL 13	LVL 4 LVL 9 LVL 14	LVL 5 LVL 10 LVL 15		B	M1	M2								
2-Chloroethyl vinyl ether	 0.0962 0.1309	+++++	 0.1199 0.1371	0.0747	 0.1325 0.1380	Lin2	-0.062	0.1331							0.9980		0.9900
cis-1,3-Dichloropropene	1.5801	 1.8837 2.0854	1.6597	 1.9788 1.8460	1.6108	Lin2	-0.202	1.9115							0.9950		0.9900
4-Methyl-2-pentanone (MIBK)	0.4047	 0.4243 0.4373	0.4443	 0.4230 0.3675	0.4620	Ave		0.4233				7.2		15.0			
Toluene	1.2303	 1.1198 1.1805	1.1965	 1.1094 1.0383	1.0619	Ave		1.1338				6.3		30.0			
trans-1,3-Dichloropropene	0.2580	 0.3408 0.4089	0.2940	 0.3699 0.3727	0.2819	Lin2	-0.062	0.3646							0.9910		0.9900
Ethyl methacrylate	1.3614	 1.8047 1.9590	1.4758	 1.8703 1.7696	1.6307	Lin2	-0.268	1.8352							0.9970		0.9900
1,1,2-Trichloroethane	0.2184	 0.2197 0.2442	0.2097	 0.2245 0.2223	0.2152	Lin2	-0.007	0.2255							0.9980		0.9900
Tetrachloroethene	1.1096	 1.0165 1.0478	1.0193	 1.0071 0.9442	0.9268	Lin2	0.0495	0.9845							0.9970		0.9900
1,3-Dichloropropane	1.8170	 1.8813 1.9389	1.9437	 1.8630 1.7272	1.8107	Lin2	-0.001	1.8553							0.9980		0.9900
2-Hexanone	1.3575	 1.5213 1.4653	1.5600	 1.4620 1.2474	1.7040	Ave		1.4739				9.9		15.0			
Dibromochloromethane	+++++	 0.8004 1.0469	0.6159	 0.9282 0.9846	0.6914	Lin1	-0.554	0.9954							0.9980		0.9900
Ethylene Dibromide	0.8628	 1.0283 1.1077	1.0365	 1.0501 1.0141	0.9676	Lin1	-0.070	1.0461							0.9980		0.9900
1-Chlorohexane	+++++	 1.7540 1.7859	2.1515	 1.7488 1.6188	1.7997	Ave		1.8098				9.9		15.0			

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FORM VI
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CURVE EVALUATION

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SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

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ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7 LVL 12	LVL 3 LVL 8 LVL 13	LVL 4 LVL 9 LVL 14	LVL 5 LVL 10 LVL 15		B	M1	M2								
Chlorobenzene	3.5636	3.3230 3.3797	3.6514	3.2434 3.0121	3.1799	Lin2	0.2039	3.2303			0.3000				0.9970		0.9900
1,1,1,2-Tetrachloroethane	0.7930	0.9881 1.1276	0.8542	1.0417 1.0385	0.8769	Lin2	-0.141	1.0331							0.9960		0.9900
Ethylbenzene	1.7931	1.8216 1.9315	1.8778	1.8354 1.7588	1.7450	Lin1	0.0089	1.8187							0.9980		0.9900
m-Xylene & p-Xylene	2.3954	2.2588 2.3367	2.3689	2.2417 2.1071	2.1017	Lin2	0.0904	2.2117							0.9970		0.9900
o-Xylene	2.0814	2.1370 2.2445	2.2559	2.1560 2.0222	2.0925	Lin2	-0.009	2.1459							0.9980		0.9900
Styrene	3.6662	3.6681 3.8879	3.7425	3.7134 3.4650	3.4516	Lin2	0.0021	3.6553							0.9980		0.9900
Bromoform	+++++	0.4489 0.6655	0.3640	0.5551 0.6418	0.4058	Lin1	-0.451	0.6365			0.1000				0.9960		0.9900
Isopropylbenzene	3.8276	3.6702 3.7037	3.8805	3.5541 3.3235	3.5161	Lin1	0.3335	3.4662							0.9980		0.9900
Cyclohexanone	0.1942	0.1920 0.1697	0.2168	0.1717 +++++	0.2306	Ave		0.1958				12.4		15.0			
1,1,2,2-Tetrachloroethane	0.9131	0.9355 1.0536	1.0338	0.9569 0.9411	1.0683	Lin2	-0.018	0.9956			0.3000				0.9950		0.9900
Bromobenzene	0.8213	0.8156 0.8745	0.8355	0.7991 0.8054	0.8274	Lin2	0.0004	0.8253							0.9990		0.9900
trans-1,4-Dichloro-2-butene	0.2239	0.3146 0.3749	0.2504	0.3350 0.3449	0.2916	Lin1	-0.090	0.3520							0.9980		0.9900
1,2,3-Trichloropropane	0.2691	0.3374 0.3679	0.3571	0.3349 0.3369	0.3925	Lin2	-0.032	0.3587							0.9910		0.9900

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ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7 LVL 12	LVL 3 LVL 8 LVL 13	LVL 4 LVL 9 LVL 14	LVL 5 LVL 10 LVL 15		B	M1	M2								
N-Propylbenzene	0.9477	1.0118 1.0564	1.0509	0.9880 0.9750	0.9509	Lin2	-0.020	1.0075							0.9980		0.9900
2-Chlorotoluene	0.8365	0.8137 0.8592	0.8630	0.8085 0.7923	0.7877	Lin2	0.0143	0.8156							0.9980		0.9900
1,3,5-Trimethylbenzene	3.0424	2.9459 3.0876	3.1633	2.9284 2.7692	2.8540	Lin2	0.0820	2.9275							0.9980		0.9900
4-Chlorotoluene	0.9097	0.8497 0.9031	0.8960	0.8395 0.8286	0.8456	Lin2	0.0297	0.8521							0.9990		0.9900
tert-Butylbenzene	2.8424	2.6643 2.7348	2.9118	2.5967 2.4616	2.5886	Lin2	0.1441	2.6109							0.9980		0.9900
1,2,4-Trimethylbenzene	3.1017	3.0197 3.1051	3.0981	2.9634 2.7726	2.9323	Lin2	0.0808	2.9570							0.9980		0.9900
sec-Butylbenzene	0.7907	0.7685 0.8059	0.7906	0.7717 0.7372	0.7456	Lin2	0.0117	0.7668							0.9990		0.9900
1,3-Dichlorobenzene	1.7099	1.5522 1.6675	1.6744	1.5480 1.4944	1.6075	Lin2	0.0784	1.5670							0.9980		0.9900
4-Isopropyltoluene	3.4514	3.3998 3.5092	3.5795	3.3756 3.1077	3.2603	Lin2	0.0807	3.3415							0.9970		0.9900
1,4-Dichlorobenzene	1.8934	1.6523 1.7225	1.8151	1.5968 1.5257	1.7372	Ave		1.7061				7.4		15.0			
n-Butylbenzene	3.2370	3.0720 3.1264	3.1614	3.0232 2.7408	2.9674	Lin2	0.1353	2.9766							0.9980		0.9900
1,2-Dichlorobenzene	1.6162	1.4888 1.5622	1.6836	1.4448 1.3877	1.5552	Ave		1.5341				6.6		15.0			
1,2-Dibromo-3-Chloropropane	+++++	0.2165 0.2596	0.1696	0.2368 0.2507	0.2144	Lin1	-0.099	0.2515							0.9990		0.9900

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ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7 LVL 12	LVL 3 LVL 8 LVL 13	LVL 4 LVL 9 LVL 14	LVL 5 LVL 10 LVL 15		B	M1	M2								
1,2,4-Trichlorobenzene	1.0955	0.9981 0.9827	1.0927	0.9461 0.9050	1.0770	Ave		1.0138				7.5		15.0			
Hexachlorobutadiene	0.5180	0.4999 0.4929	0.5458	0.4852 0.4585	0.4813	Lin2	0.0242	0.4848							0.9970		0.9900
Naphthalene	3.6834	3.4153 3.3273	3.8275	3.2035 2.9970	3.8688	Lin2	0.2823	3.3281							0.9920		0.9900
1,2,3-Trichlorobenzene	+++++	0.9265 0.9165	1.0839	0.8674 0.8259	1.0438	Lin1	0.3232	0.8559							0.9980		0.9900
Dibromofluoromethane (Surr)	0.2144 0.2167	0.2152	0.2183 0.2182	0.2170	0.2179 0.2201	Ave		0.2172				0.8		15.0			
1,2-Dichloroethane-d4 (Surr)	0.2850 0.2928	0.2887	0.2890 0.2866	0.2886	0.2871 0.2891	Ave		0.2884				0.8		15.0			
Toluene-d8 (Surr)	4.3766 4.4096	4.4297	4.3990 4.4198	4.3584	4.4478 4.4017	Ave		4.4053				0.6		15.0			
4-Bromofluorobenzene (Surr)	0.9451 0.9568	0.9497	0.9340 0.9532	0.9463	0.9378 0.9381	Ave		0.9451				0.9		15.0			

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FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1 Analy Batch No.: 457190

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/06/2019 13:12 Calibration End Date: 05/06/2019 18:51 Calibration ID: 36283

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-457190/8	g2_4872.D
Level 2	IC 280-457190/16	g2_4880.D
Level 3	IC 280-457190/7	g2_4871.D
Level 4	IC 280-457190/15	g2_4879.D
Level 5	IC 280-457190/6	g2_4870.D
Level 6	IC 280-457190/14	g2_4878.D
Level 7	IC 280-457190/5	g2_4869.D
Level 8	IC 280-457190/13	g2_4877.D
Level 9	IC 280-457190/4	g2_4868.D
Level 10	ICIS 280-457190/12	g2_4876.D
Level 11	IC 280-457190/17	g2_4881.D
Level 12	IC 280-457190/3	g2_4867.D
Level 13	IC 280-457190/11	g2_4875.D
Level 14	IC 280-457190/2	g2_4866.D
Level 15	IC 280-457190/10	g2_4874.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7 LVL 12	LVL 3 LVL 8 LVL 13	LVL 4 LVL 9 LVL 14	LVL 5 LVL 10 LVL 15	LVL 6 LVL 11	LVL 2 LVL 7 LVL 12	LVL 3 LVL 8 LVL 13	LVL 4 LVL 9 LVL 14	LVL 5 LVL 10 LVL 15
Dichlorodifluoromethane	FB	Ave		+++++		9364			+++++		1.00	
			19129		99480		491039	2.00		10.0		50.0
			755451		1031101		1983140	75.0		100		200
Chloromethane	FB	Ave		+++++		10613			+++++		1.00	
			20005		103185		505556	2.00		10.0		50.0
			745704		1024861		1926214	75.0		100		200
Vinyl chloride	FB	Ave		+++++		9889			+++++		1.00	
			19944		102076		501963	2.00		10.0		50.0
			737266		1017576		1975926	75.0		100		200
Bromomethane	FB	Lin1		+++++		5628			+++++		1.00	
			10927		51998		222443	2.00		10.0		50.0
			276569		+++++		+++++	75.0		+++++		+++++
Chloroethane	FB	Ave		+++++		5638			+++++		1.00	
			12523		62272		289782	2.00		10.0		50.0
			422629		563875		+++++	75.0		100		+++++
Dichlorofluoromethane	FB	Ave		7458		14929			0.500		1.00	
			30089		156696		765516	2.00		10.0		50.0
			1144348		1556089		2932214	75.0		100		200
Trichlorofluoromethane	FB	Ave		+++++		14505			+++++		1.00	
			29947		158931		765789	2.00		10.0		50.0
			1146776		1550706		2982476	75.0		100		200

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SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

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ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7 LVL 12	LVL 3 LVL 8 LVL 13	LVL 4 LVL 9 LVL 14	LVL 5 LVL 10 LVL 15	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7 LVL 12	LVL 3 LVL 8 LVL 13	LVL 4 LVL 9 LVL 14	LVL 5 LVL 10 LVL 15
Ethyl ether	FB	Ave	3877	81625 863975	7853	408107 1652824	13828	0.500	10.0 100	1.00	50.0 200	2.00
Acrolein	FB	Ave	10812	255733 2655307	23551	1260914 4910711	44918	4.94	98.8 988	9.88	494 1975	19.8
1,1,2-Trichloro-1,2,2-trifluoroethane	FB	Lin1	3618	71647 766950	7269	359979 1445905	12929	0.500	10.0 100	1.00	50.0 200	2.00
1,1-Dichloroethene	FB	Lin1	4383	85128 898746	8155	421514 1699861	13943	0.500	10.0 100	1.00	50.0 200	2.00
Acetone	FB	Lin2	105015	302200 2274125	115352	1089941 4284998	135945	2.00	40.0 400	4.00	200 800	8.00
Iodomethane	FB	Lin1	+++++	68680 808504	6800	379353 1508982	11935	+++++	10.0 100	1.00	50.0 200	2.00
Carbon disulfide	FB	Lin1	12462	250967 2806359	25423	1289351 5314220	44173	0.500	10.0 100	1.00	50.0 200	2.00
Methyl acetate	FB	Lin2	13625	219706 2346690	25344	1091689 4390702	42662	1.00	20.0 200	2.00	100 400	4.00
3-Chloro-1-propene	FB	Lin2	7990	148195 1323052	15214	701734 2612687	27166	0.500	10.0 100	1.00	50.0 200	2.00
Methylene Chloride	FB	Ave	+++++	93107 978668	10105	460592 1841771	18211	+++++	10.0 100	1.00	50.0 200	2.00
t-Butyl alcohol	FB	Ave	13869	279305 2946019	32167	1367707 5575328	66858	5.00	100 1000	10.0	500 2000	20.0
Acrylonitrile	FB	Ave	26461	559826 5594683	54719	2711548 10019676	105979	5.00	100 1000	10.0	500 2000	20.0
Methyl tert-butyl ether	FB	Ave	15946	295848 3158841	31301	1483412 6002149	54186	0.500	10.0 100	1.00	50.0 200	2.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1 Analy Batch No.: 457190

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/06/2019 13:12 Calibration End Date: 05/06/2019 18:51 Calibration ID: 36283

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7 LVL 12	LVL 3 LVL 8 LVL 13	LVL 4 LVL 9 LVL 14	LVL 5 LVL 10 LVL 15	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7 LVL 12	LVL 3 LVL 8 LVL 13	LVL 4 LVL 9 LVL 14	LVL 5 LVL 10 LVL 15
trans-1,2-Dichloroethene	FB	Lin2	4690	91727 997839	8883	460487 1920530	16422	0.500	10.0 100	1.00	50.0 200	2.00
Hexane	CBNZ d5	Lin1	+++++	152153 1597472	16637	756197 3012369	27178	+++++	10.0 100	1.00	50.0 200	2.00
Vinyl acetate	FB	Lin1	18246	422406 4681631	36731	2191094 8807717	71284	1.00	20.0 200	2.00	100 400	4.00
1,1-Dichloroethane	FB	Lin2	8271	157816 1644529	16353	768865 3091541	28852	0.500	10.0 100	1.00	50.0 200	2.00
2-Butanone (MEK)	FB	Lin2	30611	339797 3431633	47915	1619501 6404835	81403	2.00	40.0 400	4.00	200 800	8.00
cis-1,2-Dichloroethene	FB	Lin2	4597	101199 1082747	9971	512194 2094293	17931	0.500	10.0 100	1.00	50.0 200	2.00
2,2-Dichloropropane	FB	Lin2	+++++	141618 1591435	12803	731527 3072152	24717	+++++	10.0 100	1.00	50.0 200	2.00
sec-Butyl Alcohol	FB	Ave	+++++	624317 6254547	62012	2985433 11485893	137876	+++++	300 3000	30.0	1500 6000	60.0
Bromochloromethane	FB	Lin2	1711	41334 443030	4282	210063 848211	7635	0.500	10.0 100	1.00	50.0 200	2.00
Tetrahydrofuran	FB	Lin2	8201	119214 1179091	13995	561839 2236516	25230	1.00	20.0 200	2.00	100 400	4.00
Chloroform	FB	Lin2	12325	166920 1738086	20561	806536 3318921	33378	0.500	10.0 100	1.00	50.0 200	2.00
1,1,1-Trichloroethane	FB	Lin1	7081	144326 1581335	14514	736628 3040429	27014	0.500	10.0 100	1.00	50.0 200	2.00
Cyclohexane	FB	Lin2	8926	177996 1830757	18369	870647 3484046	32857	0.500	10.0 100	1.00	50.0 200	2.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1 Analy Batch No.: 457190

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/06/2019 13:12 Calibration End Date: 05/06/2019 18:51 Calibration ID: 36283

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7 LVL 12	LVL 3 LVL 8 LVL 13	LVL 4 LVL 9 LVL 14	LVL 5 LVL 10 LVL 15	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7 LVL 12	LVL 3 LVL 8 LVL 13	LVL 4 LVL 9 LVL 14	LVL 5 LVL 10 LVL 15
1,1-Dichloropropene	FB	Lin2	6408	134681 1460494	13727	675656 2823933	24792	0.500	10.0 100	1.00	50.0 200	2.00
Carbon tetrachloride	FB	Lin2	4570	105841 1303564	9865	586422 2548911	18470	0.500	10.0 100	1.00	50.0 200	2.00
Isobutyl alcohol	FB	Lin1	+++++	192541 2075839	23820	972941 3887818	44762	+++++	250 2500	25.0	1250 5000	50.0
Benzene	FB	Lin2	20581	399852 4157068	42684	1937505 7704145	75267	0.500	10.0 100	1.00	50.0 200	2.00
1,2-Dichloroethane	FB	Ave	7383	125979 1328270	13106	616284 2576766	24175	0.500	10.0 100	1.00	50.0 200	2.00
Trichloroethene	FB	Lin2	4738	96730 1032297	10011	481015 1993999	18238	0.500	10.0 100	1.00	50.0 200	2.00
2-Pentanone	FB	Ave	27104	538738 5486902	55165	2575267 10105568	114059	2.00	40.0 400	4.00	200 800	8.00
Methylcyclohexane	FB	Lin1	6997	137438 1429989	14472	684599 2741010	25323	0.500	10.0 100	1.00	50.0 200	2.00
1,2-Dichloropropane	FB	Lin2	+++++	99742 987282	15434	463984 1885411	23555	+++++	10.0 100	1.00	50.0 200	2.00
1,4-Dioxane	FB	Lin2	1971	51076 533258	5284	245388 1036392	10626	10.0	200 2000	20.0	1000 4000	40.0
Dibromomethane	FB	Lin2	2718	53299 594672	5228	266818 1150328	9017	0.500	10.0 100	1.00	50.0 200	2.00
Bromodichloromethane	FB	Lin2	+++++	105426 1258185	9021	563006 2504989	17351	+++++	10.0 100	1.00	50.0 200	2.00
2-Chloroethyl vinyl ether	FB	Lin2	6577 326292	+++++	41660 478104	2522	226997 947475	2.00 75.0	+++++	10.0 100	1.00	50.0 200

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1 Analy Batch No.: 457190

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/06/2019 13:12 Calibration End Date: 05/06/2019 18:51 Calibration ID: 36283

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7 LVL 12	LVL 3 LVL 8 LVL 13	LVL 4 LVL 9 LVL 14	LVL 5 LVL 10 LVL 15	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7 LVL 12	LVL 3 LVL 8 LVL 13	LVL 4 LVL 9 LVL 14	LVL 5 LVL 10 LVL 15
cis-1,3-Dichloropropene	CBNZ d5	Lin2	5743	141630 1657740	12194	756396 3185509	24072	0.500	10.0 100	1.00	50.0 200	2.00
4-Methyl-2-pentanone (MIBK)	FB	Ave	28144	596517 6151477	62049	2959314 11072015	130107	2.00	40.0 400	4.00	200 800	8.00
Toluene	FB	Ave	21392	393577 4151759	41778	1940159 7821019	74766	0.500	10.0 100	1.00	50.0 200	2.00
trans-1,3-Dichloropropene	FB	Lin2	4486	119778 1438102	10266	646824 2807440	19848	0.500	10.0 100	1.00	50.0 200	2.00
Ethyl methacrylate	CBNZ d5	Lin2	4948	135688 1557296	10843	714944 3053749	24370	0.500	10.0 100	1.00	50.0 200	2.00
1,1,2-Trichloroethane	FB	Lin2	3797	77215 858761	7321	392606 1674288	15154	0.500	10.0 100	1.00	50.0 200	2.00
Tetrachloroethene	CBNZ d5	Lin2	4033	76427 832966	7489	384954 1629380	13851	0.500	10.0 100	1.00	50.0 200	2.00
1,3-Dichloropropane	CBNZ d5	Lin2	6604	141448 1541329	14280	712155 2980517	27060	0.500	10.0 100	1.00	50.0 200	2.00
2-Hexanone	CBNZ d5	Ave	19736	457528 4659151	45846	2235371 8610592	101859	2.00	40.0 400	4.00	200 800	8.00
Dibromochloromethane	CBNZ d5	Lin1	+++++	60183 832219	4525	354827 1699064	10332	+++++	10.0 100	1.00	50.0 200	2.00
Ethylene Dibromide	CBNZ d5	Lin1	3136	77316 880547	7615	401415 1749926	14460	0.500	10.0 100	1.00	50.0 200	2.00
1-Chlorohexane	CBNZ d5	Ave	+++++	131881 1419676	15807	668477 2793515	26896	+++++	10.0 100	1.00	50.0 200	2.00
Chlorobenzene	CBNZ d5	Lin2	12952	249847 2686612	26827	1239813 5197884	47522	0.500	10.0 100	1.00	50.0 200	2.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1 Analy Batch No.: 457190

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/06/2019 13:12 Calibration End Date: 05/06/2019 18:51 Calibration ID: 36283

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7 LVL 12	LVL 3 LVL 8 LVL 13	LVL 4 LVL 9 LVL 14	LVL 5 LVL 10 LVL 15	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7 LVL 12	LVL 3 LVL 8 LVL 13	LVL 4 LVL 9 LVL 14	LVL 5 LVL 10 LVL 15
1,1,1,2-Tetrachloroethane	CBNZ d5	Lin2	2882	74293 896397	6276	398189 1792094	13105	0.500	10.0 100	1.00	50.0 200	2.00
Ethylbenzene	CBNZ d5	Lin1	6517	136960 1535372	13796	701571 3035086	26078	0.500	10.0 100	1.00	50.0 200	2.00
m-Xylene & p-Xylene	CBNZ d5	Lin2	8706	169832 1857547	17404	856915 3636084	31409	0.500	10.0 100	1.00	50.0 200	2.00
o-Xylene	CBNZ d5	Lin2	7565	160672 1784223	16574	824123 3489640	31272	0.500	10.0 100	1.00	50.0 200	2.00
Styrene	CBNZ d5	Lin2	13325	275793 3090598	27496	1419455 5979406	51582	0.500	10.0 100	1.00	50.0 200	2.00
Bromoform	CBNZ d5	Lin1	+++++	33748 529043	2674	212177 1107598	6065	+++++	10.0 100	1.00	50.0 200	2.00
Isopropylbenzene	DCBd 4	Lin1	22669	445967 4758335	45746	2238471 9065240	84318	0.500	10.0 100	1.00	50.0 200	2.00
Cyclohexanone	CBNZ d5	Ave	28228	577584 5397229	63699	2625237 +++++	137874	20.0	400 4000	40.0	2000 +++++	80.0
1,1,2,2-Tetrachloroethane	DCBd 4	Lin2	5408	113677 1353579	12187	602687 2566894	25619	0.500	10.0 100	1.00	50.0 200	2.00
Bromobenzene	DCBd 4	Lin2	4864	99108 1123506	9849	503300 2196728	19841	0.500	10.0 100	1.00	50.0 200	2.00
trans-1,4-Dichloro-2-butene	DCBd 4	Lin1	1326	38223 481631	2952	211007 940752	6992	0.500	10.0 100	1.00	50.0 200	2.00
1,2,3-Trichloropropane	DCBd 4	Lin2	1594	41003 472623	4210	210913 918904	9412	0.500	10.0 100	1.00	50.0 200	2.00
N-Propylbenzene	DCBd 4	Lin2	5613	122941 1357151	12389	622306 2659332	22804	0.500	10.0 100	1.00	50.0 200	2.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1 Analy Batch No.: 457190

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/06/2019 13:12 Calibration End Date: 05/06/2019 18:51 Calibration ID: 36283

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7 LVL 12	LVL 3 LVL 8 LVL 13	LVL 4 LVL 9 LVL 14	LVL 5 LVL 10 LVL 15	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7 LVL 12	LVL 3 LVL 8 LVL 13	LVL 4 LVL 9 LVL 14	LVL 5 LVL 10 LVL 15
2-Chlorotoluene	DCBd 4	Lin2	4954	98870 1103923	10174	509242 2161115	18890	0.500	10.0 100	1.00	50.0 200	2.00
1,3,5-Trimethylbenzene	DCBd 4	Lin2	18019	357958 3966761	37291	1844440 7553385	68440	0.500	10.0 100	1.00	50.0 200	2.00
4-Chlorotoluene	DCBd 4	Lin2	5388	103250 1160219	10563	528725 2260093	20278	0.500	10.0 100	1.00	50.0 200	2.00
tert-Butylbenzene	DCBd 4	Lin2	16834	323738 3513510	34326	1635505 6714335	62077	0.500	10.0 100	1.00	50.0 200	2.00
1,2,4-Trimethylbenzene	DCBd 4	Lin2	18370	366928 3989271	36522	1866460 7562605	70318	0.500	10.0 100	1.00	50.0 200	2.00
sec-Butylbenzene	DCBd 4	Lin2	4683	93376 1035321	9320	486061 2010871	17880	0.500	10.0 100	1.00	50.0 200	2.00
1,3-Dichlorobenzene	DCBd 4	Lin2	10127	188603 2142272	19739	974957 4076225	38550	0.500	10.0 100	1.00	50.0 200	2.00
4-Isopropyltoluene	DCBd 4	Lin2	20441	413114 4508481	42197	2126045 8476615	78183	0.500	10.0 100	1.00	50.0 200	2.00
1,4-Dichlorobenzene	DCBd 4	Ave	11214	200773 2212948	21398	1005707 4161394	41658	0.500	10.0 100	1.00	50.0 200	2.00
n-Butylbenzene	DCBd 4	Lin2	19171	373274 4016701	37268	1904143 7475786	71160	0.500	10.0 100	1.00	50.0 200	2.00
1,2-Dichlorobenzene	DCBd 4	Ave	9572	180902 2007095	19847	909961 3785146	37295	0.500	10.0 100	1.00	50.0 200	2.00
1,2-Dibromo-3-Chloropropane	DCBd 4	Lin1	+++++	26308 333524	1999	149147 683766	5141	+++++	10.0 100	1.00	50.0 200	2.00
1,2,4-Trichlorobenzene	DCBd 4	Ave	6488	121277 1262514	12881	595865 2468354	25826	0.500	10.0 100	1.00	50.0 200	2.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1 Analy Batch No.: 457190

SDG No.:

Instrument ID: VMS_G2 GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/06/2019 13:12 Calibration End Date: 05/06/2019 18:51 Calibration ID: 36283

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6 LVL 11	LVL 2 LVL 7 LVL 12	LVL 3 LVL 8 LVL 13	LVL 4 LVL 9 LVL 14	LVL 5 LVL 10 LVL 15	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7 LVL 12	LVL 3 LVL 8 LVL 13	LVL 4 LVL 9 LVL 14	LVL 5 LVL 10 LVL 15
Hexachlorobutadiene	DCBd 4	Lin2	3068 366523 360111	 60743 633303 358704 481372 1545090 532062	6434 379182 380507 502075 499873 1594003 1619733 546260 562020	 305571 1250478 366317 487294 1538972 537682	11542 373283 377773 491693 496083 1597467 1620205 548505 560451	0.500 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0	 10.0 100 50.0 50.0 50.0 50.0	1.00 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0	 50.0 200 50.0 50.0 50.0 50.0	2.00 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0
Naphthalene	DCBd 4	Lin2	21815 487258 486560	 414986 4274734 	45121 502075 499873 	 2017695 8174611 	92776 491693 496083 	0.500 50.0 50.0 	 10.0 100 	1.00 50.0 50.0 	 50.0 200 	2.00 50.0 50.0
1,2,3-Trichlorobenzene	DCBd 4	Lin1	+++++ 1569020 1542332	 112575 1177490 	12778 1594003 1619733 	 546328 2252737 	25030 1597467 1620205 	+++++ 50.0 50.0 	 10.0 100 	1.00 50.0 50.0 	 50.0 200 	2.00 50.0 50.0
Dibromofluoromethane (Surr)	FB	Ave	 540782 533039	358704 	 546260 562020	366317 	 548505 560451	50.0 50.0 50.0	50.0 	 50.0 50.0	50.0 	 50.0 50.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	 487258 486560	481372 	 502075 499873	487294 	 491693 496083	50.0 50.0 50.0	50.0 	 50.0 50.0	50.0 	 50.0 50.0
Toluene-d8 (Surr)	CBNZ d5	Ave	 1569020 1542332	1545090 	 1594003 1619733	1538972 	 1597467 1620205	50.0 50.0 50.0	50.0 	 50.0 50.0	50.0 	 50.0 50.0
4-Bromofluorobenzene (Surr)	DCBd 4	Ave	 540782 533039	532062 	 546260 562020	537682 	 548505 560451	50.0 50.0 50.0	50.0 	 50.0 50.0	50.0 	 50.0 50.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4866.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 06-May-2019 13:12:30 ALS Bottle#: 1 Worklist Smp#: 2
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Operator ID: meierg Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub90

Method: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-May-2019 11:35:11 Calib Date: 06-May-2019 18:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4881.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0324

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.045	3.017	0.028	92	2801646	1000.0	1000.0	
* 2 Fluorobenzene	96	4.777	4.777	0.000	99	1883147	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.279	7.279	0.000	89	431414	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.488	9.488	0.000	95	681900	50.0	50.0	
22 Ethyl ether	59	2.501	2.501	0.000	90	1652824	200.0	195.0	
24 Acrolein	56	2.598	2.598	0.000	99	4910711	1975.0	1881.7	
26 1,1,2-Trichloro-1,2,2-trif	151	2.668	2.682	-0.014	80	1445905	200.0	190.7	
25 1,1-Dichloroethene	96	2.668	2.682	-0.014	98	1699861	200.0	190.9	
27 Acetone	43	2.710	2.696	0.014	100	4284998	800.0	766.3	
28 Iodomethane	142	2.794	2.794	0.000	100	1508982	200.0	190.0	
30 Carbon disulfide	76	2.836	2.850	-0.014	99	5314220	200.0	191.8	
32 Methyl acetate	43	2.920	2.920	0.000	97	4390702	400.0	378.5	
33 3-Chloro-1-propene	41	2.934	2.934	0.000	91	2612687	200.0	181.0	
35 Methylene Chloride	84	3.031	3.031	0.000	91	1841771	200.0	183.5	
37 2-Methyl-2-propanol	59	3.101	3.087	0.014	99	5575328	2000.0	1779.5	
39 Acrylonitrile	53	3.185	3.185	0.000	97	10019676	2000.0	1747.2	
41 Methyl tert-butyl ether	73	3.213	3.213	0.000	95	6002149	200.0	186.9	
40 trans-1,2-Dichloroethene	96	3.213	3.227	-0.014	99	1920530	200.0	196.2	
42 Hexane	57	3.408	3.408	0.000	92	3012369	200.0	188.2	
46 Vinyl acetate	43	3.506	3.520	-0.014	97	8807717	400.0	381.2	
45 1,1-Dichloroethane	63	3.534	3.534	0.000	97	3091541	200.0	188.3	
52 2-Butanone (MEK)	43	3.911	3.911	0.000	99	6404835	800.0	736.0	
51 cis-1,2-Dichloroethene	96	3.925	3.939	-0.014	82	2094293	200.0	193.0	
50 2,2-Dichloropropane	77	3.939	3.939	0.000	87	3072152	200.0	195.0	
55 sec-Butyl Alcohol	45	4.051	4.023	0.028	98	11485893	6000.0	5217.6	
56 Chlorobromomethane	128	4.107	4.107	0.000	91	848211	200.0	188.5	
57 Tetrahydrofuran	42	4.121	4.121	0.000	85	2236516	400.0	369.8	
59 Chloroform	83	4.163	4.163	0.000	93	3318921	200.0	192.8	
60 1,1,1-Trichloroethane	97	4.302	4.302	0.000	97	3040429	200.0	192.7	
61 Cyclohexane	56	4.358	4.358	0.000	89	3484046	200.0	187.7	
63 1,1-Dichloropropene	75	4.414	4.414	0.000	96	2823933	200.0	194.0	
62 Carbon tetrachloride	117	4.414	4.414	0.000	91	2548911	200.0	206.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
66 Isobutyl alcohol	41	4.456	4.442	0.014	94	3887818	5000.0	4760.2	
64 Benzene	78	4.568	4.568	0.000	96	7704145	200.0	184.7	
65 1,2-Dichloroethane	62	4.596	4.596	0.000	98	2576766	200.0	186.1	
67 n-Heptane	43	4.749	4.749	0.000	90	3056894	200.0	191.8	
69 Trichloroethene	95	5.042	5.042	0.000	98	1993999	200.0	192.1	
70 2-Pentanone	43	5.154	5.154	0.000	98	10105568	800.0	704.4	
71 Methylcyclohexane	55	5.224	5.224	0.000	91	2741010	200.0	191.5	
72 1,2-Dichloropropane	63	5.252	5.252	0.000	93	1885411	200.0	190.2	
74 1,4-Dioxane	88	5.308	5.294	0.014	93	1036392	4000.0	3724.0	
75 Dibromomethane	93	5.322	5.322	0.000	95	1150328	200.0	201.0	
76 Dichlorobromomethane	83	5.448	5.447	0.001	100	2504989	200.0	203.7	
79 cis-1,3-Dichloropropene	75	5.797	5.797	0.000	96	3185509	200.0	193.3	
81 4-Methyl-2-pentanone (MIBK	43	5.894	5.894	0.000	94	11072015	800.0	694.5	
82 Toluene	91	6.078	6.078	0.000	99	7821019	200.0	183.1	
83 trans-1,3-Dichloropropene	75	6.264	6.264	0.000	94	2807440	200.0	204.6	
84 Ethyl methacrylate	69	6.285	6.285	0.000	88	3053749	200.0	193.0	
85 1,1,2-Trichloroethane	97	6.428	6.428	0.000	92	1674288	200.0	197.2	
86 Tetrachloroethene	164	6.514	6.514	0.000	97	1629380	200.0	191.8	
87 1,3-Dichloropropane	76	6.571	6.571	0.000	92	2980517	200.0	186.2	
88 2-Hexanone	43	6.607	6.600	0.007	94	8610592	800.0	677.1	
89 Chlorodibromomethane	129	6.764	6.764	0.000	90	1699064	200.0	198.4	
90 Ethylene Dibromide	107	6.878	6.878	0.000	99	1749926	200.0	193.9	
91 1-Chlorohexane	91	7.272	7.272	0.000	98	2793515	200.0	178.9	
92 Chlorobenzene	112	7.308	7.307	0.001	94	5197884	200.0	186.4	
93 1,1,1,2-Tetrachloroethane	131	7.379	7.379	0.000	94	1792094	200.0	201.2	
94 Ethylbenzene	106	7.386	7.386	0.000	98	3035086	200.0	193.4	
95 m-Xylene & p-Xylene	106	7.501	7.501	0.000	99	3636084	200.0	190.5	
96 o-Xylene	106	7.858	7.858	0.000	96	3489640	200.0	188.5	
97 Styrene	104	7.880	7.879	0.001	95	5979406	200.0	189.6	
98 Bromoform	173	8.051	8.051	0.000	96	1107598	200.0	202.4	
99 Isopropylbenzene	105	8.201	8.201	0.000	96	9065240	200.0	191.7	
100 Cyclohexanone	55	8.294	8.294	0.000	91	9663891	8000.0	5719.1	
102 1,1,2,2-Tetrachloroethane	83	8.494	8.487	0.007	95	2566894	200.0	189.1	
103 Bromobenzene	156	8.509	8.509	0.000	96	2196728	200.0	195.2	
105 trans-1,4-Dichloro-2-buten	53	8.530	8.530	0.000	85	940752	200.0	196.2	
104 1,2,3-Trichloropropane	110	8.552	8.552	0.000	81	918904	200.0	187.9	
106 N-Propylbenzene	120	8.595	8.595	0.000	98	2659332	200.0	193.6	
107 2-Chlorotoluene	126	8.687	8.687	0.000	96	2161115	200.0	194.3	
108 1,3,5-Trimethylbenzene	105	8.766	8.766	0.000	96	7553385	200.0	189.2	
109 4-Chlorotoluene	126	8.802	8.802	0.000	97	2260093	200.0	194.5	
110 tert-Butylbenzene	119	9.074	9.074	0.000	93	6714335	200.0	188.5	
111 1,2,4-Trimethylbenzene	105	9.131	9.131	0.000	97	7562605	200.0	187.5	
112 sec-Butylbenzene	134	9.288	9.288	0.000	95	2010871	200.0	192.3	
113 1,3-Dichlorobenzene	146	9.410	9.410	0.000	97	4076225	200.0	190.7	
114 4-Isopropyltoluene	119	9.438	9.438	0.000	96	8476615	200.0	186.0	
115 1,4-Dichlorobenzene	146	9.510	9.510	0.000	96	4161394	200.0	178.8	
117 n-Butylbenzene	91	9.839	9.839	0.000	97	7475786	200.0	184.1	
118 1,2-Dichlorobenzene	146	9.860	9.860	0.000	97	3785146	200.0	180.9	
119 1,2-Dibromo-3-Chloropropan	157	10.640	10.639	0.001	86	683766	200.0	199.7	
121 1,2,4-Trichlorobenzene	180	11.455	11.447	0.008	94	2468354	200.0	178.5	
122 Hexachlorobutadiene	225	11.598	11.590	0.008	99	1250478	200.0	189.1	
123 Naphthalene	128	11.712	11.712	0.000	97	8174611	200.0	180.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
124 1,2,3-Trichlorobenzene	180	11.934	11.934	0.000	95	2252737	200.0	192.6	
S 137 1,2-Dichloroethene, Total	96				0		400.0	389.1	
S 140 1,3-Dichloropropene, Total	1				0		400.0	397.9	
S 142 Trihalomethanes, Total	1				0		800.0	797.3	
S 139 Total BTEX	1				0			940.2	
S 144 1,2-Dichloroethene, Total	1				0		400.0	389.1	
S 138 Xylenes, Total (URS)	1				0		400.0	379.0	
S 143 Xylenes, Total	106				0		400.0	379.0	

Reagents:

mv-Cent IS_00002 Amount Added: 5.00 Units: uL
MV-MegaMainA_00014 Amount Added: 200.00 Units: uL

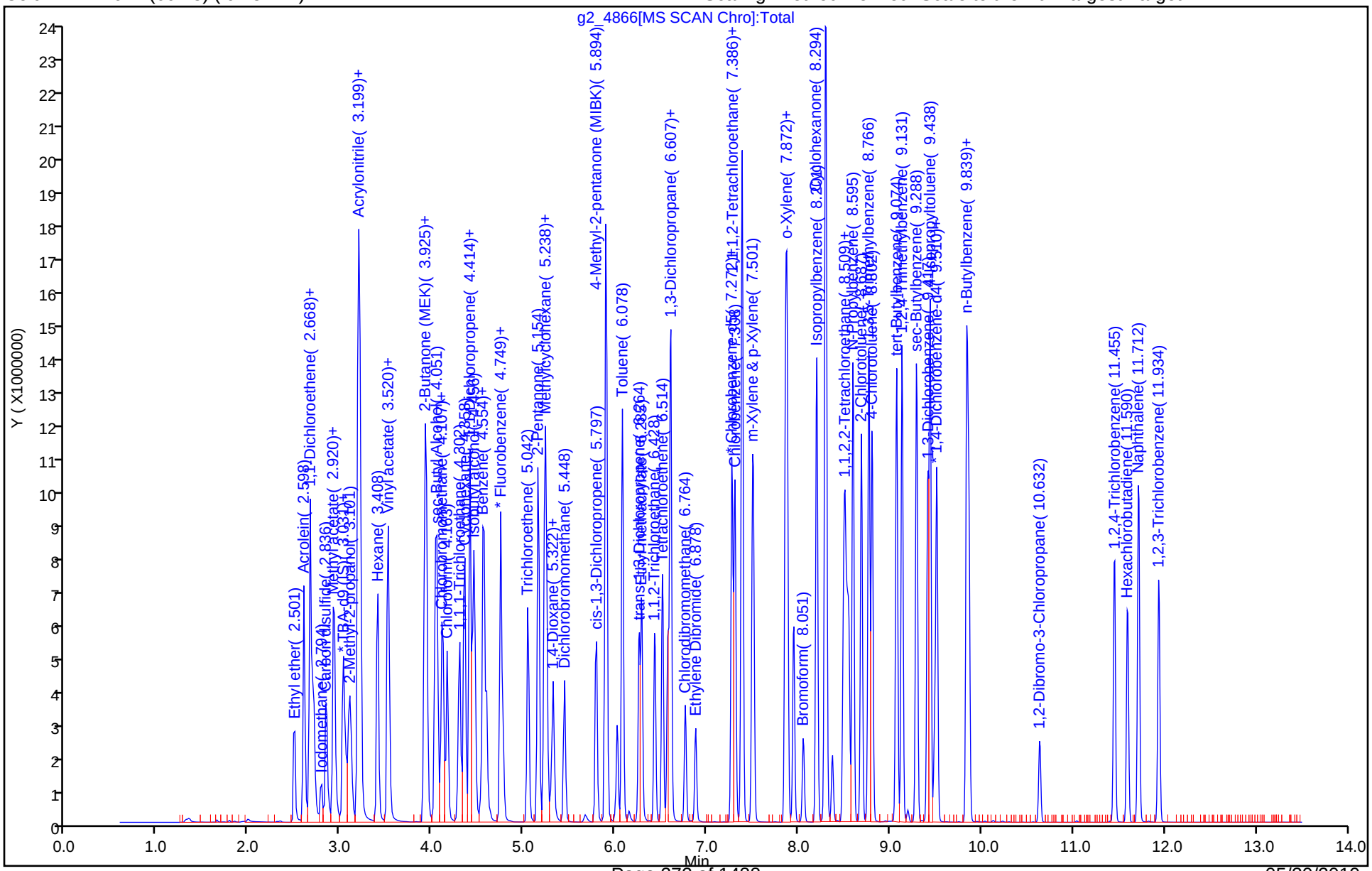
Report Date: 10-May-2019 11:35:15 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4866.D

Injection Date:	06-May-2019 13:12:30	Instrument ID:	VMS_G2	Operator ID:	meierg
Lims ID:	ic			Worklist Smp#:	2
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4867.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 06-May-2019 13:33:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 280-0081613-003
Operator ID: meierg Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub90

Method: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-May-2019 11:35:25 Calib Date: 06-May-2019 18:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4881.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0324

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65		3.017				1000.0	ND	
* 2 Fluorobenzene	96	4.777	4.777	0.000	99	1758462	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.279	7.279	0.000	85	397465	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.488	9.488	0.000	95	642376	50.0	50.0	
22 Ethyl ether	59	2.501	2.501	0.000	90	863975	100.0	109.2	
24 Acrolein	56	2.598	2.598	0.000	99	2655307	987.5	1089.6	
26 1,1,2-Trichloro-1,2,2-trif	151	2.668	2.682	-0.014	79	766950	100.0	108.3	
25 1,1-Dichloroethene	96	2.668	2.682	-0.014	98	898746	100.0	108.1	
27 Acetone	43	2.696	2.696	0.000	100	2274125	400.0	427.4	
28 Iodomethane	142	2.794	2.794	0.000	100	808504	100.0	109.1	
30 Carbon disulfide	76	2.850	2.850	0.000	99	2806359	100.0	108.5	
32 Methyl acetate	43	2.920	2.920	0.000	97	2346690	200.0	216.5	
33 3-Chloro-1-propene	41	2.934	2.934	0.000	91	1323052	100.0	98.1	
35 Methylene Chloride	84	3.031	3.031	0.000	69	978668	100.0	104.4	
37 2-Methyl-2-propanol	59	3.087	3.087	0.000	99	2946019	1000.0	1007.0	
39 Acrylonitrile	53	3.185	3.185	0.000	98	5594683	1000.0	1044.8	
41 Methyl tert-butyl ether	73	3.213	3.213	0.000	95	3158841	100.0	105.3	
40 trans-1,2-Dichloroethene	96	3.227	3.227	0.000	99	997839	100.0	109.1	
42 Hexane	57	3.408	3.408	0.000	92	1597472	100.0	108.2	
46 Vinyl acetate	43	3.520	3.520	0.000	97	4681631	200.0	217.1	
45 1,1-Dichloroethane	63	3.534	3.534	0.000	96	1644529	100.0	107.2	
52 2-Butanone (MEK)	43	3.911	3.911	0.000	99	3431633	400.0	421.5	
51 cis-1,2-Dichloroethene	96	3.939	3.939	0.000	82	1082747	100.0	106.9	
50 2,2-Dichloropropane	77	3.939	3.939	0.000	86	1591435	100.0	108.2	
55 sec-Butyl Alcohol	45	4.037	4.023	0.014	99	6254547	3000.0	3042.6	
56 Chlorobromomethane	128	4.107	4.107	0.000	92	443030	100.0	105.4	
57 Tetrahydrofuran	42	4.121	4.121	0.000	87	1179091	200.0	208.6	
59 Chloroform	83	4.163	4.163	0.000	93	1738086	100.0	108.0	
60 1,1,1-Trichloroethane	97	4.302	4.302	0.000	98	1581335	100.0	107.3	
61 Cyclohexane	56	4.358	4.358	0.000	89	1830757	100.0	105.6	
63 1,1-Dichloropropene	75	4.414	4.414	0.000	94	1460494	100.0	107.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
62 Carbon tetrachloride	117	4.414	4.414	0.000	96	1303564	100.0	112.9	
66 Isobutyl alcohol	41	4.442	4.442	0.000	94	2075839	2500.0	2718.4	
64 Benzene	78	4.568	4.568	0.000	95	4157068	100.0	106.7	
65 1,2-Dichloroethane	62	4.596	4.596	0.000	98	1328270	100.0	102.7	
67 n-Heptane	43	4.749	4.749	0.000	91	1594515	100.0	106.8	
69 Trichloroethene	95	5.042	5.042	0.000	98	1032297	100.0	106.5	
70 2-Pentanone	43	5.154	5.154	0.000	98	5486902	400.0	409.6	
71 Methylcyclohexane	55	5.224	5.224	0.000	91	1429989	100.0	107.0	
72 1,2-Dichloropropane	63	5.252	5.252	0.000	93	987282	100.0	106.4	
74 1,4-Dioxane	88	5.308	5.294	0.014	92	533258	2000.0	2052.7	
75 Dibromomethane	93	5.322	5.322	0.000	95	594672	100.0	111.3	
76 Dichlorobromomethane	83	5.447	5.447	0.000	100	1258185	100.0	109.7	
79 cis-1,3-Dichloropropene	75	5.797	5.797	0.000	96	1657740	100.0	109.2	
81 4-Methyl-2-pentanone (MIBK	43	5.894	5.894	0.000	96	6151477	400.0	413.2	
82 Toluene	91	6.078	6.078	0.000	99	4151759	100.0	104.1	
83 trans-1,3-Dichloropropene	75	6.264	6.264	0.000	94	1438102	100.0	112.3	
84 Ethyl methacrylate	69	6.285	6.285	0.000	88	1557296	100.0	106.9	
85 1,1,2-Trichloroethane	97	6.428	6.428	0.000	91	858761	100.0	108.3	
86 Tetrachloroethene	164	6.514	6.514	0.000	97	832966	100.0	106.4	
87 1,3-Dichloropropane	76	6.571	6.571	0.000	91	1541329	100.0	104.5	
88 2-Hexanone	43	6.600	6.600	0.000	95	4659151	400.0	397.7	
89 Chlorodibromomethane	129	6.764	6.764	0.000	90	832219	100.0	105.7	
90 Ethylene Dibromide	107	6.878	6.878	0.000	99	880547	100.0	106.0	
91 1-Chlorohexane	91	7.272	7.272	0.000	98	1419676	100.0	98.7	
92 Chlorobenzene	112	7.307	7.307	0.000	94	2686612	100.0	104.6	
93 1,1,1,2-Tetrachloroethane	131	7.379	7.379	0.000	94	896397	100.0	109.3	
94 Ethylbenzene	106	7.386	7.386	0.000	98	1535372	100.0	106.2	
95 m-Xylene & p-Xylene	106	7.501	7.501	-0.001	99	1857547	100.0	105.6	
96 o-Xylene	106	7.858	7.858	0.000	96	1784223	100.0	104.6	
97 Styrene	104	7.879	7.879	0.000	95	3090598	100.0	106.4	
98 Bromoform	173	8.051	8.051	0.000	96	529043	100.0	105.3	
99 Isopropylbenzene	105	8.201	8.201	0.000	96	4758335	100.0	106.8	
100 Cyclohexanone	55	8.294	8.294	0.000	92	5397229	4000.0	3466.9	
102 1,1,2,2-Tetrachloroethane	83	8.487	8.487	0.000	95	1353579	100.0	105.8	
103 Bromobenzene	156	8.509	8.509	0.000	95	1123506	100.0	106.0	
105 trans-1,4-Dichloro-2-buten	53	8.530	8.530	0.000	80	481631	100.0	106.8	
104 1,2,3-Trichloropropane	110	8.552	8.552	0.000	84	472623	100.0	102.6	
106 N-Propylbenzene	120	8.594	8.595	-0.001	98	1357151	100.0	104.9	
107 2-Chlorotoluene	126	8.687	8.687	0.000	96	1103923	100.0	105.3	
108 1,3,5-Trimethylbenzene	105	8.766	8.766	0.000	96	3966761	100.0	105.4	
109 4-Chlorotoluene	126	8.802	8.802	0.000	97	1160219	100.0	106.0	
110 tert-Butylbenzene	119	9.074	9.074	0.000	93	3513510	100.0	104.7	
111 1,2,4-Trimethylbenzene	105	9.131	9.131	0.000	97	3989271	100.0	105.0	
112 sec-Butylbenzene	134	9.288	9.288	0.000	94	1035321	100.0	105.1	
113 1,3-Dichlorobenzene	146	9.410	9.410	0.000	97	2142272	100.0	106.4	
114 4-Isopropyltoluene	119	9.438	9.438	0.000	97	4508481	100.0	105.0	
115 1,4-Dichlorobenzene	146	9.510	9.510	0.000	94	2212948	100.0	101.0	
117 n-Butylbenzene	91	9.839	9.839	0.000	98	4016701	100.0	105.0	
118 1,2-Dichlorobenzene	146	9.860	9.860	0.000	97	2007095	100.0	101.8	
119 1,2-Dibromo-3-Chloropropan	157	10.639	10.639	0.000	84	333524	100.0	103.6	
121 1,2,4-Trichlorobenzene	180	11.455	11.447	0.008	94	1262514	100.0	96.9	
122 Hexachlorobutadiene	225	11.598	11.590	0.008	98	633303	100.0	101.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
123 Naphthalene	128	11.712	11.712	0.000	97	4274734	100.0	99.9	
124 1,2,3-Trichlorobenzene	180	11.934	11.934	0.000	95	1177490	100.0	106.7	
S 137 1,2-Dichloroethene, Total	96				0		200.0	216.0	
S 143 Xylenes, Total	106				0		200.0	210.2	
S 138 Xylenes, Total (URS)	1				0		200.0	210.2	
S 144 1,2-Dichloroethene, Total	1				0		200.0	216.0	
S 139 Total BTEX	1				0			527.2	
S 142 Trihalomethanes, Total	1				0		400.0	428.7	
S 140 1,3-Dichloropropene, Total	1				0		200.0	221.5	

Reagents:

mv-Cent IS_00002	Amount Added: 5.00	Units: uL
MV-MegaMainA_00014	Amount Added: 100.00	Units: uL

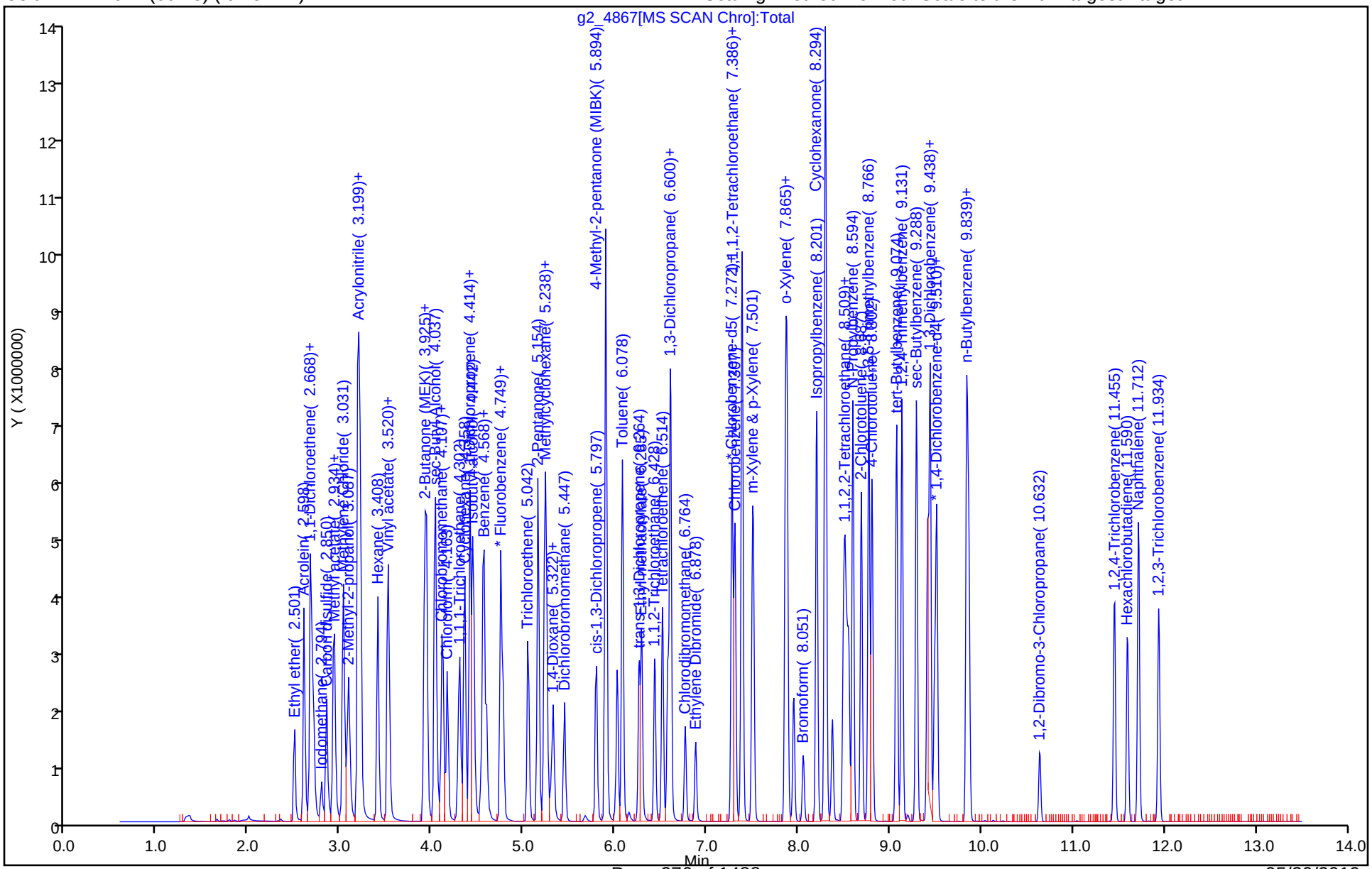
Report Date: 10-May-2019 11:35:28 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4867.D

Injection Date:	06-May-2019 13:33:30	Instrument ID:	VMS_G2	Operator ID:	meierg
Lims ID:	ic			Worklist Smp#:	3
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4868.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 06-May-2019 13:54:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 280-0081613-004
Operator ID: meierg Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub90

Method: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-May-2019 11:35:39 Calib Date: 06-May-2019 18:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4881.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0324

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.017	3.017	0.000	96	2677141	1000.0	1000.0	
* 2 Fluorobenzene	96	4.777	4.777	0.000	99	1748829	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.279	7.279	0.000	86	382254	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.488	9.488	0.000	95	629836	50.0	50.0	
22 Ethyl ether	59	2.501	2.501	0.000	90	408107	50.0	51.9	
24 Acrolein	56	2.598	2.598	0.000	99	1260914	493.8	520.3	
26 1,1,2-Trichloro-1,2,2-trif	151	2.682	2.682	0.000	77	359979	50.0	51.1	
25 1,1-Dichloroethene	96	2.682	2.682	0.000	98	421514	50.0	51.0	
27 Acetone	43	2.696	2.696	0.000	100	1089941	200.0	196.2	
28 Iodomethane	142	2.794	2.794	0.000	99	379353	50.0	51.6	
30 Carbon disulfide	76	2.850	2.850	0.000	99	1289351	50.0	50.1	
32 Methyl acetate	43	2.920	2.920	0.000	97	1091689	100.0	101.1	
33 3-Chloro-1-propene	41	2.934	2.934	0.000	91	701734	50.0	52.3	
35 Methylene Chloride	84	3.031	3.031	0.000	91	460592	50.0	49.4	
37 2-Methyl-2-propanol	59	3.087	3.087	0.000	99	1367707	500.0	470.1	
39 Acrylonitrile	53	3.185	3.185	0.000	99	2711548	500.0	509.1	
41 Methyl tert-butyl ether	73	3.213	3.213	0.000	95	1483412	50.0	49.7	
40 trans-1,2-Dichloroethene	96	3.227	3.227	0.000	99	460487	50.0	50.6	
42 Hexane	57	3.408	3.408	0.000	92	756197	50.0	53.2	
46 Vinyl acetate	43	3.520	3.520	0.000	97	2191094	100.0	102.3	
45 1,1-Dichloroethane	63	3.534	3.534	0.000	96	768865	50.0	50.4	
52 2-Butanone (MEK)	43	3.911	3.911	0.000	99	1619501	200.0	199.0	
51 cis-1,2-Dichloroethene	96	3.939	3.939	0.000	83	512194	50.0	50.9	
50 2,2-Dichloropropane	77	3.939	3.939	0.000	86	731527	50.0	50.1	
55 sec-Butyl Alcohol	45	4.023	4.023	0.000	99	2985433	1500.0	1460.3	
56 Chlorobromomethane	128	4.107	4.107	0.000	93	210063	50.0	50.3	
57 Tetrahydrofuran	42	4.121	4.121	0.000	87	561839	100.0	99.7	
59 Chloroform	83	4.163	4.163	0.000	93	806536	50.0	50.3	
60 1,1,1-Trichloroethane	97	4.302	4.302	0.000	97	736628	50.0	50.3	
61 Cyclohexane	56	4.358	4.358	0.000	89	870647	50.0	50.5	
63 1,1-Dichloropropene	75	4.414	4.414	0.000	95	675656	50.0	50.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
62 Carbon tetrachloride	117	4.414	4.414	0.000	96	586422	50.0	51.1	
66 Isobutyl alcohol	41	4.442	4.442	0.000	93	972941	1250.0	1276.9	
64 Benzene	78	4.568	4.568	0.000	96	1937505	50.0	50.0	
65 1,2-Dichloroethane	62	4.596	4.596	0.000	97	616284	50.0	47.9	
67 n-Heptane	43	4.749	4.749	0.000	92	764874	50.0	51.2	
69 Trichloroethene	95	5.042	5.042	0.000	99	481015	50.0	49.9	
70 2-Pentanone	43	5.154	5.154	0.000	99	2575267	200.0	193.3	
71 Methylcyclohexane	55	5.224	5.224	0.000	91	684599	50.0	51.5	
72 1,2-Dichloropropane	63	5.252	5.252	0.000	91	463984	50.0	49.9	
74 1,4-Dioxane	88	5.294	5.294	0.000	92	245388	1000.0	950.7	
75 Dibromomethane	93	5.322	5.322	0.000	95	266818	50.0	50.2	
76 Dichlorobromomethane	83	5.447	5.447	0.000	100	563006	50.0	49.5	
79 cis-1,3-Dichloropropene	75	5.797	5.797	0.000	95	756396	50.0	51.9	
81 4-Methyl-2-pentanone (MIBK	43	5.894	5.894	0.000	96	2959314	200.0	199.9	
82 Toluene	91	6.078	6.078	0.000	99	1940159	50.0	48.9	
83 trans-1,3-Dichloropropene	75	6.264	6.264	0.000	94	646824	50.0	50.9	
84 Ethyl methacrylate	69	6.285	6.285	0.000	89	714944	50.0	51.1	
85 1,1,2-Trichloroethane	97	6.428	6.428	0.000	91	392606	50.0	49.8	
86 Tetrachloroethene	164	6.514	6.514	0.000	97	384954	50.0	51.1	
87 1,3-Dichloropropane	76	6.571	6.571	0.000	91	712155	50.0	50.2	
88 2-Hexanone	43	6.600	6.600	0.000	96	2235371	200.0	198.4	
89 Chlorodibromomethane	129	6.764	6.764	0.000	90	354827	50.0	47.2	
90 Ethylene Dibromide	107	6.878	6.878	0.000	99	401415	50.0	50.3	
91 1-Chlorohexane	91	7.272	7.272	0.000	99	668477	50.0	48.3	
92 Chlorobenzene	112	7.307	7.307	0.000	95	1239813	50.0	50.1	
93 1,1,1,2-Tetrachloroethane	131	7.379	7.379	0.000	94	398189	50.0	50.6	
94 Ethylbenzene	106	7.386	7.386	0.000	98	701571	50.0	50.5	
95 m-Xylene & p-Xylene	106	7.501	7.501	0.000	100	856915	50.0	50.6	
96 o-Xylene	106	7.858	7.858	0.000	97	824123	50.0	50.2	
97 Styrene	104	7.879	7.879	0.000	95	1419455	50.0	50.8	
98 Bromoform	173	8.051	8.051	0.000	96	212177	50.0	44.3	
99 Isopropylbenzene	105	8.201	8.201	0.000	96	2238471	50.0	51.2	
100 Cyclohexanone	55	8.294	8.294	0.000	93	2625237	2000.0	1753.4	
102 1,1,2,2-Tetrachloroethane	83	8.487	8.487	0.000	95	602687	50.0	48.1	
103 Bromobenzene	156	8.509	8.509	0.000	95	503300	50.0	48.4	
105 trans-1,4-Dichloro-2-buten	53	8.530	8.530	0.000	75	211007	50.0	47.8	
104 1,2,3-Trichloropropane	110	8.552	8.552	0.000	84	210913	50.0	46.8	
106 N-Propylbenzene	120	8.595	8.595	0.000	99	622306	50.0	49.1	
107 2-Chlorotoluene	126	8.687	8.687	0.000	96	509242	50.0	49.6	
108 1,3,5-Trimethylbenzene	105	8.766	8.766	0.000	94	1844440	50.0	50.0	
109 4-Chlorotoluene	126	8.802	8.802	0.000	97	528725	50.0	49.2	
110 tert-Butylbenzene	119	9.074	9.074	0.000	93	1635505	50.0	49.7	
111 1,2,4-Trimethylbenzene	105	9.131	9.131	0.000	97	1866460	50.0	50.1	
112 sec-Butylbenzene	134	9.288	9.288	0.000	94	486061	50.0	50.3	
113 1,3-Dichlorobenzene	146	9.410	9.410	0.000	98	974957	50.0	49.3	
114 4-Isopropyltoluene	119	9.438	9.438	0.000	97	2126045	50.0	50.5	
115 1,4-Dichlorobenzene	146	9.510	9.510	0.000	94	1005707	50.0	46.8	
117 n-Butylbenzene	91	9.839	9.839	0.000	98	1904143	50.0	50.7	
118 1,2-Dichlorobenzene	146	9.860	9.860	0.000	97	909961	50.0	47.1	
119 1,2-Dibromo-3-Chloropropan	157	10.639	10.639	0.000	83	149147	50.0	47.5	
121 1,2,4-Trichlorobenzene	180	11.447	11.447	0.000	94	595865	50.0	46.7	
122 Hexachlorobutadiene	225	11.590	11.590	0.000	98	305571	50.0	50.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
123 Naphthalene	128	11.712	11.712	0.000	97	2017695	50.0	48.0	
124 1,2,3-Trichlorobenzene	180	11.934	11.934	0.000	95	546328	50.0	50.3	
S 137 1,2-Dichloroethene, Total	96				0		100.0	101.5	
S 140 1,3-Dichloropropene, Total	1				0		100.0	102.8	
S 142 Trihalomethanes, Total	1				0		200.0	191.3	
S 144 1,2-Dichloroethene, Total	1				0		100.0	101.5	
S 138 Xylenes, Total (URS)	1				0		100.0	100.9	
S 143 Xylenes, Total	106				0		100.0	100.9	

Reagents:

mv-Cent IS_00002 Amount Added: 5.00 Units: uL
MV-MegaMainA_00014 Amount Added: 50.00 Units: uL

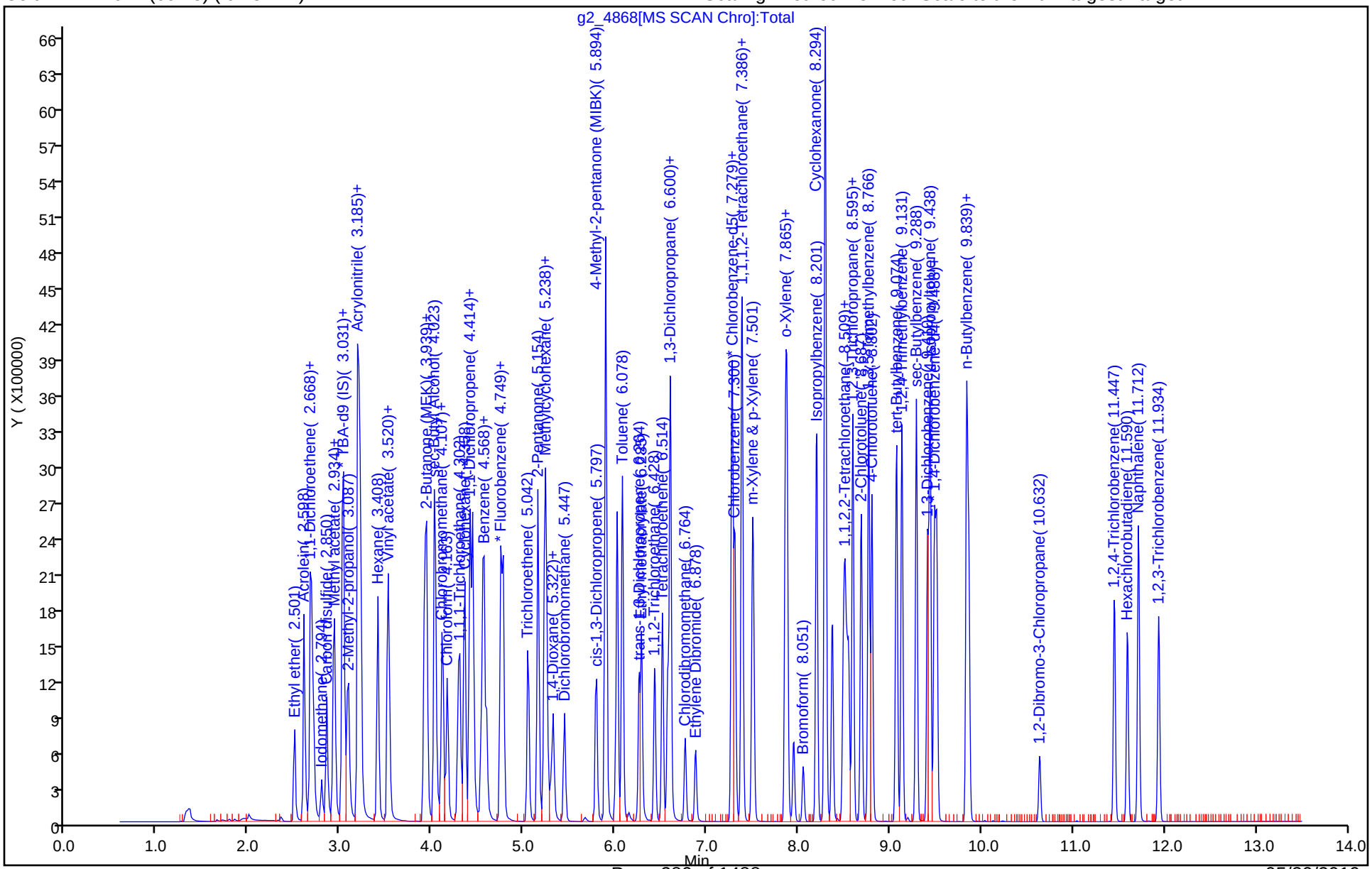
Report Date: 10-May-2019 11:35:42 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4868.D

Injection Date:	06-May-2019 13:54:30	Instrument ID:	VMS_G2	Operator ID:	meierg
Lims ID:	ic			Worklist Smp#:	4
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4869.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 06-May-2019 14:15:30 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 280-0081613-005
Operator ID: meierg Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub90

Method: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-May-2019 11:35:53 Calib Date: 06-May-2019 18:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4881.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0324

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.017	3.017	0.000	84	2709595	1000.0	1000.0	
* 2 Fluorobenzene	96	4.777	4.777	0.000	99	1757297	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.279	7.279	0.000	87	375937	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.488	9.488	0.000	95	607548	50.0	50.0	
22 Ethyl ether	59	2.501	2.501	0.000	91	81625	10.0	10.3	
24 Acrolein	56	2.598	2.598	0.000	99	255733	98.8	105.0	
26 1,1,2-Trichloro-1,2,2-trif	151	2.682	2.682	0.000	77	71647	10.0	10.1	
25 1,1-Dichloroethene	96	2.682	2.682	0.000	98	85128	10.0	10.3	
27 Acetone	43	2.696	2.696	0.000	100	302200	40.0	40.5	
28 Iodomethane	142	2.794	2.794	0.000	99	68680	10.0	9.43	
30 Carbon disulfide	76	2.850	2.850	0.000	99	250967	10.0	9.75	
32 Methyl acetate	43	2.920	2.920	0.000	97	219706	20.0	20.0	
33 3-Chloro-1-propene	41	2.934	2.934	0.000	91	148195	10.0	10.9	
35 Methylene Chloride	84	3.031	3.031	0.000	90	93107	10.0	9.94	
37 2-Methyl-2-propanol	59	3.073	3.087	-0.014	99	279305	100.0	95.5	
39 Acrylonitrile	53	3.185	3.185	0.000	99	559826	100.0	104.6	
41 Methyl tert-butyl ether	73	3.213	3.213	0.000	94	295848	10.0	9.87	
40 trans-1,2-Dichloroethene	96	3.227	3.227	0.000	97	91727	10.0	10.0	
42 Hexane	57	3.408	3.408	0.000	93	152153	10.0	10.7	
46 Vinyl acetate	43	3.520	3.520	0.000	97	422406	20.0	19.8	
45 1,1-Dichloroethane	63	3.534	3.534	0.000	96	157816	10.0	10.3	
52 2-Butanone (MEK)	43	3.911	3.911	0.000	100	339797	40.0	40.1	
51 cis-1,2-Dichloroethene	96	3.939	3.939	0.000	83	101199	10.0	10.0	
50 2,2-Dichloropropane	77	3.939	3.939	0.000	80	141618	10.0	9.79	
55 sec-Butyl Alcohol	45	4.023	4.023	0.000	99	624317	300.0	303.9	
56 Chlorobromomethane	128	4.107	4.107	0.000	96	41334	10.0	9.91	
57 Tetrahydrofuran	42	4.121	4.121	0.000	86	119214	20.0	20.7	
59 Chloroform	83	4.163	4.163	0.000	93	166920	10.0	10.1	
60 1,1,1-Trichloroethane	97	4.302	4.302	0.000	97	144326	10.0	9.83	
61 Cyclohexane	56	4.358	4.358	0.000	90	177996	10.0	10.3	
63 1,1-Dichloropropene	75	4.414	4.414	0.000	95	134681	10.0	9.94	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
62 Carbon tetrachloride	117	4.414	4.414	0.000	84	105841	10.0	9.29	
66 Isobutyl alcohol	41	4.442	4.442	0.000	95	192541	250.0	245.1	
64 Benzene	78	4.568	4.568	0.000	95	399852	10.0	10.2	
65 1,2-Dichloroethane	62	4.596	4.596	0.000	97	125979	10.0	9.75	
67 n-Heptane	43	4.749	4.749	0.000	94	162681	10.0	10.3	
69 Trichloroethene	95	5.043	5.042	0.001	97	96730	10.0	9.99	
70 2-Pentanone	43	5.154	5.154	0.000	99	538738	40.0	40.2	
71 Methylcyclohexane	55	5.224	5.224	0.000	91	137438	10.0	10.2	
72 1,2-Dichloropropane	63	5.252	5.252	0.000	92	99742	10.0	10.2	
74 1,4-Dioxane	88	5.294	5.294	0.000	92	51076	200.0	198.2	
75 Dibromomethane	93	5.322	5.322	0.000	96	53299	10.0	9.99	
76 Dichlorobromomethane	83	5.448	5.447	0.001	100	105426	10.0	9.45	
79 cis-1,3-Dichloropropene	75	5.797	5.797	0.000	95	141630	10.0	9.96	
81 4-Methyl-2-pentanone (MIBK	43	5.894	5.894	0.000	97	596517	40.0	40.1	
82 Toluene	91	6.078	6.078	0.000	98	393577	10.0	9.88	
83 trans-1,3-Dichloropropene	75	6.264	6.264	0.000	94	119778	10.0	9.52	
84 Ethyl methacrylate	69	6.285	6.285	0.000	88	135688	10.0	9.98	
85 1,1,2-Trichloroethane	97	6.428	6.428	0.000	92	77215	10.0	9.77	
86 Tetrachloroethene	164	6.514	6.514	0.000	97	76427	10.0	10.3	
87 1,3-Dichloropropane	76	6.571	6.571	0.000	91	141448	10.0	10.1	
88 2-Hexanone	43	6.600	6.600	0.000	96	457528	40.0	41.3	
89 Chlorodibromomethane	129	6.764	6.764	0.000	91	60183	10.0	8.60	
90 Ethylene Dibromide	107	6.879	6.878	0.001	99	77316	10.0	9.90	
91 1-Chlorohexane	91	7.272	7.272	0.000	97	131881	10.0	9.69	
92 Chlorobenzene	112	7.308	7.307	0.001	95	249847	10.0	10.2	
93 1,1,1,2-Tetrachloroethane	131	7.379	7.379	0.000	92	74293	10.0	9.70	
94 Ethylbenzene	106	7.386	7.386	0.000	98	136960	10.0	10.0	
95 m-Xylene & p-Xylene	106	7.508	7.501	0.007	99	169832	10.0	10.2	
96 o-Xylene	106	7.858	7.858	0.000	96	160672	10.0	9.96	
97 Styrene	104	7.880	7.879	0.001	95	275793	10.0	10.0	
98 Bromoform	173	8.051	8.051	0.000	95	33748	10.0	7.76	
99 Isopropylbenzene	105	8.201	8.201	0.000	95	445967	10.0	10.5	
100 Cyclohexanone	55	8.294	8.294	0.000	93	577584	400.0	392.3	
102 1,1,2,2-Tetrachloroethane	83	8.487	8.487	0.000	95	113677	10.0	9.42	
103 Bromobenzene	156	8.509	8.509	0.000	95	99108	10.0	9.88	
105 trans-1,4-Dichloro-2-buten	53	8.530	8.530	0.000	75	38223	10.0	9.19	
104 1,2,3-Trichloropropane	110	8.552	8.552	0.000	81	41003	10.0	9.50	
106 N-Propylbenzene	120	8.595	8.595	0.000	99	122941	10.0	10.1	
107 2-Chlorotoluene	126	8.688	8.687	0.001	96	98870	10.0	9.96	
108 1,3,5-Trimethylbenzene	105	8.766	8.766	0.000	94	357958	10.0	10.0	
109 4-Chlorotoluene	126	8.802	8.802	0.000	97	103250	10.0	9.94	
110 tert-Butylbenzene	119	9.074	9.074	0.000	93	323738	10.0	10.1	
111 1,2,4-Trimethylbenzene	105	9.131	9.131	0.000	97	366928	10.0	10.2	
112 sec-Butylbenzene	134	9.288	9.288	0.000	94	93376	10.0	10.0	
113 1,3-Dichlorobenzene	146	9.410	9.410	0.000	98	188603	10.0	9.86	
114 4-Isopropyltoluene	119	9.438	9.438	0.000	98	413114	10.0	10.2	
115 1,4-Dichlorobenzene	146	9.510	9.510	0.000	96	200773	10.0	9.68	
117 n-Butylbenzene	91	9.839	9.839	0.000	98	373274	10.0	10.3	
118 1,2-Dichlorobenzene	146	9.860	9.860	0.000	97	180902	10.0	9.70	
119 1,2-Dibromo-3-Chloropropan	157	10.632	10.639	-0.007	79	26308	10.0	9.00	
121 1,2,4-Trichlorobenzene	180	11.448	11.447	0.001	95	121277	10.0	9.84	
122 Hexachlorobutadiene	225	11.591	11.590	0.001	98	60743	10.0	10.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
123 Naphthalene	128	11.712	11.712	0.000	97	414986	10.0	10.2	
124 1,2,3-Trichlorobenzene	180	11.934	11.934	0.000	94	112575	10.0	10.4	
S 137 1,2-Dichloroethene, Total	96				0		20.0	20.1	
S 143 Xylenes, Total	106				0		20.0	20.1	
S 138 Xylenes, Total (URS)	1				0		20.0	20.1	
S 144 1,2-Dichloroethene, Total	1				0		20.0	20.1	
S 139 Total BTEX	1				0			50.3	
S 142 Trihalomethanes, Total	1				0		40.0	35.9	
S 140 1,3-Dichloropropene, Total	1				0		20.0	19.5	

Reagents:

mv-Cent IS_00002	Amount Added:	5.00	Units: uL
MV-MegaMainA_00014	Amount Added:	10.00	Units: uL

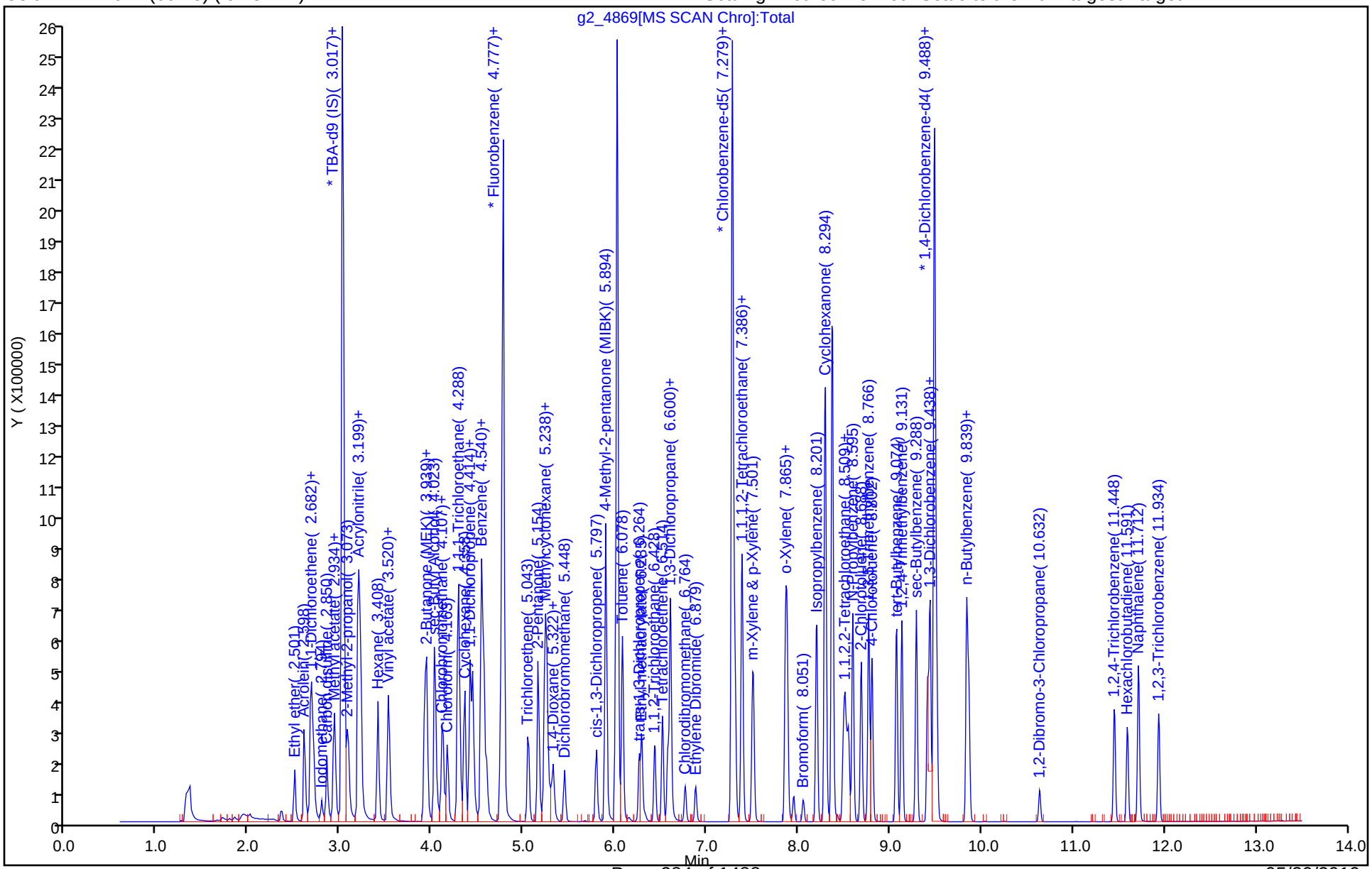
Report Date: 10-May-2019 11:35:55 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4869.D

Injection Date:	06-May-2019 14:15:30	Instrument ID:	VMS_G2	Operator ID:	meierg
Lims ID:	ic			Worklist Smp#:	5
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4870.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 06-May-2019 14:37:30 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 280-0081613-006
Operator ID: meierg Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub90

Method: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-May-2019 11:36:05 Calib Date: 06-May-2019 18:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4881.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0324

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.017	3.017	0.000	82	2589913	1000.0	1000.0	
* 2 Fluorobenzene	96	4.777	4.777	0.000	99	1760241	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.279	7.279	0.000	87	373612	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.488	9.488	0.000	96	599515	50.0	50.0	
22 Ethyl ether	59	2.501	2.501	0.000	90	13828	2.00	1.75	
24 Acrolein	56	2.612	2.598	0.014	98	44918	19.8	18.4	
26 1,1,2-Trichloro-1,2,2-trif	151	2.682	2.682	0.000	78	12929	2.00	1.81	
25 1,1-Dichloroethene	96	2.682	2.682	0.000	97	13943	2.00	1.68	
27 Acetone	43	2.710	2.696	0.014	100	135945	8.00	7.82	
28 Iodomethane	142	2.794	2.794	0.000	97	11935	2.00	1.78	
30 Carbon disulfide	76	2.850	2.850	0.000	99	44173	2.00	1.75	
32 Methyl acetate	43	2.920	2.920	0.000	98	42662	4.00	3.66	
33 3-Chloro-1-propene	41	2.934	2.934	0.000	89	27166	2.00	1.91	
35 Methylene Chloride	84	3.031	3.031	0.000	79	18211	2.00	1.94	
37 2-Methyl-2-propanol	59	3.073	3.087	-0.014	99	66858	20.0	22.8	
39 Acrylonitrile	53	3.199	3.185	0.014	99	105979	20.0	19.8	
41 Methyl tert-butyl ether	73	3.213	3.213	0.000	95	54186	2.00	1.81	
40 trans-1,2-Dichloroethene	96	3.227	3.227	0.000	98	16422	2.00	1.79	
42 Hexane	57	3.408	3.408	0.000	92	27178	2.00	1.72	
46 Vinyl acetate	43	3.520	3.520	0.000	97	71284	4.00	3.53	
45 1,1-Dichloroethane	63	3.534	3.534	0.000	95	28852	2.00	1.84	
52 2-Butanone (MEK)	43	3.911	3.911	0.000	100	81403	8.00	8.18	
51 cis-1,2-Dichloroethene	96	3.939	3.939	0.000	82	17931	2.00	1.81	
50 2,2-Dichloropropane	77	3.939	3.939	0.000	80	24717	2.00	1.84	
55 sec-Butyl Alcohol	45	4.037	4.023	0.014	98	137876	60.0	67.0	
56 Chlorobromomethane	128	4.107	4.107	0.000	96	7635	2.00	1.89	
57 Tetrahydrofuran	42	4.121	4.121	0.000	89	25230	4.00	3.99	
59 Chloroform	83	4.163	4.163	0.000	93	33378	2.00	1.81	
60 1,1,1-Trichloroethane	97	4.302	4.302	0.000	98	27014	2.00	1.86	
61 Cyclohexane	56	4.358	4.358	0.000	91	32857	2.00	1.87	
63 1,1-Dichloropropene	75	4.414	4.414	0.000	96	24792	2.00	1.84	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
62 Carbon tetrachloride	117	4.414	4.414	0.000	82	18470	2.00	1.72	
66 Isobutyl alcohol	41	4.442	4.442	0.000	94	44762	50.0	50.8	
64 Benzene	78	4.568	4.568	0.000	95	75267	2.00	1.89	
65 1,2-Dichloroethane	62	4.596	4.596	0.000	96	24175	2.00	1.87	
67 n-Heptane	43	4.749	4.749	0.000	92	38744	2.00	1.90	
69 Trichloroethene	95	5.042	5.042	0.000	97	18238	2.00	1.88	
70 2-Pentanone	43	5.154	5.154	0.000	99	114059	8.00	8.51	
71 Methylcyclohexane	55	5.224	5.224	0.000	90	25323	2.00	1.84	
72 1,2-Dichloropropane	63	5.252	5.252	0.000	86	23555	2.00	1.89	
74 1,4-Dioxane	88	5.294	5.294	0.000	92	10626	40.0	42.5	
75 Dibromomethane	93	5.322	5.322	0.000	94	9017	2.00	1.69	
76 Dichlorobromomethane	83	5.447	5.447	0.000	99	17351	2.00	1.78	
79 cis-1,3-Dichloropropene	75	5.797	5.797	0.000	94	24072	2.00	1.79	
81 4-Methyl-2-pentanone (MIBK	43	5.894	5.894	0.000	97	130107	8.00	8.73	
82 Toluene	91	6.078	6.078	0.000	98	74766	2.00	1.87	
83 trans-1,3-Dichloropropene	75	6.264	6.264	0.000	92	19848	2.00	1.72	
84 Ethyl methacrylate	69	6.292	6.285	0.007	89	24370	2.00	1.92	
85 1,1,2-Trichloroethane	97	6.428	6.428	0.000	91	15154	2.00	1.94	
86 Tetrachloroethene	164	6.514	6.514	0.000	97	13851	2.00	1.83	
87 1,3-Dichloropropane	76	6.578	6.571	0.007	89	27060	2.00	1.95	
88 2-Hexanone	43	6.607	6.600	0.007	97	101859	8.00	9.25	
89 Chlorodibromomethane	129	6.764	6.764	0.000	89	10332	2.00	1.95	
90 Ethylene Dibromide	107	6.878	6.878	0.000	96	14460	2.00	1.92	
91 1-Chlorohexane	91	7.272	7.272	0.000	95	26896	2.00	1.99	
92 Chlorobenzene	112	7.307	7.307	0.000	94	47522	2.00	1.91	
93 1,1,1,2-Tetrachloroethane	131	7.379	7.379	0.000	89	13105	2.00	1.83	
94 Ethylbenzene	106	7.386	7.386	0.000	99	26078	2.00	1.91	
95 m-Xylene & p-Xylene	106	7.508	7.501	0.007	99	31409	2.00	1.86	
96 o-Xylene	106	7.858	7.858	0.000	95	31272	2.00	1.95	
97 Styrene	104	7.879	7.879	0.000	95	51582	2.00	1.89	
98 Bromoform	173	8.051	8.051	0.000	93	6065	2.00	1.98	
99 Isopropylbenzene	105	8.201	8.201	0.000	96	84318	2.00	1.93	
100 Cyclohexanone	55	8.294	8.294	0.000	93	137874	80.0	94.2	
102 1,1,2,2-Tetrachloroethane	83	8.487	8.487	0.000	94	25619	2.00	2.16	
103 Bromobenzene	156	8.509	8.509	0.000	95	19841	2.00	2.00	
105 trans-1,4-Dichloro-2-buten	53	8.530	8.530	0.000	74	6992	2.00	1.91	
104 1,2,3-Trichloropropane	110	8.544	8.552	-0.008	84	9412	2.00	2.28	
106 N-Propylbenzene	120	8.594	8.595	-0.001	99	22804	2.00	1.91	
107 2-Chlorotoluene	126	8.687	8.687	0.000	96	18890	2.00	1.91	
108 1,3,5-Trimethylbenzene	105	8.766	8.766	0.000	95	68440	2.00	1.92	
109 4-Chlorotoluene	126	8.809	8.802	0.007	97	20278	2.00	1.95	
110 tert-Butylbenzene	119	9.074	9.074	0.000	93	62077	2.00	1.93	
111 1,2,4-Trimethylbenzene	105	9.131	9.131	0.000	97	70318	2.00	1.96	
112 sec-Butylbenzene	134	9.288	9.288	0.000	94	17880	2.00	1.93	
113 1,3-Dichlorobenzene	146	9.410	9.410	0.000	97	38550	2.00	2.00	
114 4-Isopropyltoluene	119	9.438	9.438	0.000	97	78183	2.00	1.93	
115 1,4-Dichlorobenzene	146	9.510	9.510	0.000	96	41658	2.00	2.04	
117 n-Butylbenzene	91	9.839	9.839	0.000	98	71160	2.00	1.95	
118 1,2-Dichlorobenzene	146	9.860	9.860	0.000	96	37295	2.00	2.03	
119 1,2-Dibromo-3-Chloropropan	157	10.639	10.639	0.000	76	5141	2.00	2.10	
121 1,2,4-Trichlorobenzene	180	11.455	11.447	0.008	93	25826	2.00	2.12	
122 Hexachlorobutadiene	225	11.598	11.590	0.008	96	11542	2.00	1.94	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
123 Naphthalene	128	11.712	11.712	0.000	97	92776	2.00	2.24	
124 1,2,3-Trichlorobenzene	180	11.934	11.934	0.000	95	25030	2.00	2.06	
S 137 1,2-Dichloroethene, Total	96				0		4.00	3.60	
S 140 1,3-Dichloropropene, Total	1				0		4.00	3.51	
S 142 Trihalomethanes, Total	1				0		8.00	7.51	
S 139 Total BTEX	1				0			9.49	
S 144 1,2-Dichloroethene, Total	1				0		4.00	3.60	
S 138 Xylenes, Total (URS)	1				0		4.00	3.81	
S 143 Xylenes, Total	106				0		4.00	3.81	

Reagents:

mv-Cent IS_00002	Amount Added:	5.00	Units: uL
MV-MegaMainA_00014	Amount Added:	2.00	Units: uL

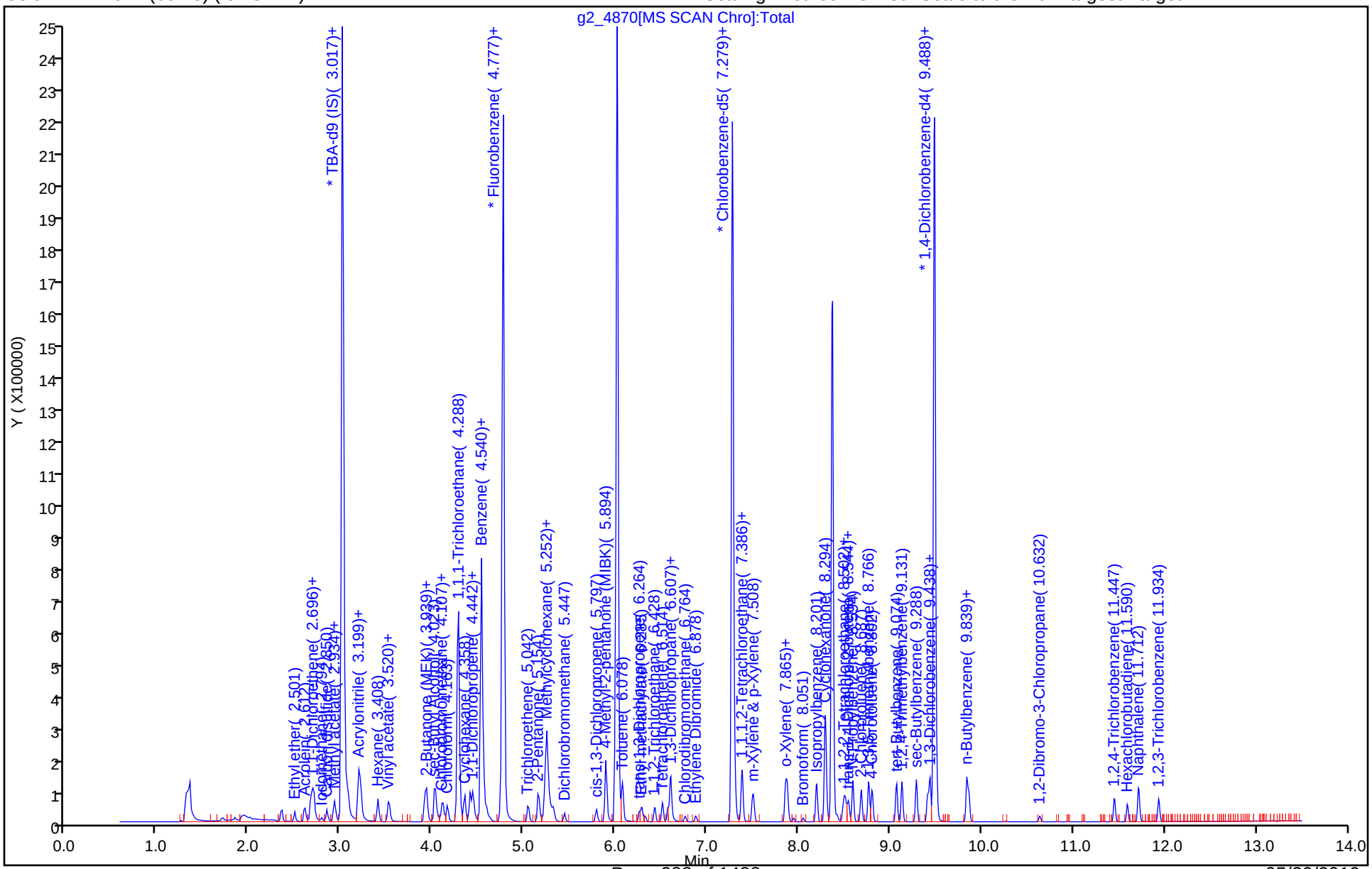
Report Date: 10-May-2019 11:36:07 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4870.D

Injection Date:	06-May-2019 14:37:30	Instrument ID:	VMS_G2	Operator ID:	meierg
Lims ID:	ic			Worklist Smp#:	6
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4871.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 06-May-2019 14:58:30 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 280-0081613-007
Operator ID: meierg Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub90

Method: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-May-2019 11:36:15 Calib Date: 06-May-2019 18:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4881.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0324

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.017	3.017	0.000	82	2520386	1000.0	1000.0	
* 2 Fluorobenzene	96	4.777	4.777	0.000	99	1745808	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.279	7.279	0.000	87	367348	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.488	9.488	0.000	96	589429	50.0	50.0	
22 Ethyl ether	59	2.501	2.501	0.000	91	7853	1.00	1.00	
24 Acrolein	56	2.612	2.598	0.014	98	23551	9.88	9.73	
26 1,1,2-Trichloro-1,2,2-trif	151	2.682	2.682	0.000	75	7269	1.00	1.02	
25 1,1-Dichloroethene	96	2.682	2.682	0.000	97	8155	1.00	1.00	
27 Acetone	43	2.710	2.696	0.014	99	115352	4.00	3.97	
28 Iodomethane	142	2.794	2.794	0.000	96	6800	1.00	1.10	
30 Carbon disulfide	76	2.850	2.850	0.000	99	25423	1.00	1.04	
32 Methyl acetate	43	2.920	2.920	0.000	98	25344	2.00	2.08	
33 3-Chloro-1-propene	41	2.934	2.934	0.000	91	15214	1.00	1.03	
35 Methylene Chloride	84	3.031	3.031	0.000	58	10105	1.00	1.09	
37 2-Methyl-2-propanol	59	3.073	3.087	-0.014	97	32167	10.0	11.1	
39 Acrylonitrile	53	3.199	3.185	0.014	98	54719	10.0	10.3	
41 Methyl tert-butyl ether	73	3.213	3.213	0.000	95	31301	1.00	1.05	
40 trans-1,2-Dichloroethene	96	3.227	3.227	0.000	95	8883	1.00	0.9779	
42 Hexane	57	3.409	3.408	0.000	89	16637	1.00	0.9830	
46 Vinyl acetate	43	3.520	3.520	0.000	98	36731	2.00	1.95	
45 1,1-Dichloroethane	63	3.534	3.534	0.000	94	16353	1.00	1.03	
52 2-Butanone (MEK)	43	3.925	3.911	0.014	100	47915	4.00	4.10	
51 cis-1,2-Dichloroethene	96	3.939	3.939	0.000	84	9971	1.00	1.03	
50 2,2-Dichloropropane	77	3.939	3.939	0.000	90	12803	1.00	1.04	
55 sec-Butyl Alcohol	45	4.037	4.023	0.014	98	62012	30.0	30.4	
56 Chlorobromomethane	128	4.107	4.107	0.000	94	4282	1.00	1.10	
57 Tetrahydrofuran	42	4.121	4.121	0.000	90	13995	2.00	2.02	
59 Chloroform	83	4.163	4.163	0.000	93	20561	1.00	1.02	
60 1,1,1-Trichloroethane	97	4.302	4.302	0.000	95	14514	1.00	1.02	
61 Cyclohexane	56	4.358	4.358	0.000	90	18369	1.00	1.04	
63 1,1-Dichloropropene	75	4.414	4.414	0.000	93	13727	1.00	1.04	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
62 Carbon tetrachloride	117	4.414	4.414	0.000	80	9865	1.00	0.9829	
66 Isobutyl alcohol	41	4.442	4.442	0.000	94	23820	25.0	23.6	
64 Benzene	78	4.568	4.568	0.000	92	42684	1.00	1.06	
65 1,2-Dichloroethane	62	4.596	4.596	0.000	95	13106	1.00	1.02	a
67 n-Heptane	43	4.749	4.749	0.000	91	24753	1.00	0.9716	
69 Trichloroethene	95	5.043	5.042	0.001	98	10011	1.00	1.04	
70 2-Pentanone	43	5.154	5.154	0.000	99	55165	4.00	4.15	
71 Methylcyclohexane	55	5.224	5.224	0.000	87	14472	1.00	1.04	
72 1,2-Dichloropropane	63	5.252	5.252	0.000	47	15434	1.00	1.03	
74 1,4-Dioxane	88	5.294	5.294	0.000	41	5284	20.0	22.1	
75 Dibromomethane	93	5.322	5.322	0.000	93	5228	1.00	0.99	
76 Dichlorobromomethane	83	5.448	5.447	0.001	96	9021	1.00	1.06	
79 cis-1,3-Dichloropropene	75	5.797	5.797	0.000	93	12194	1.00	0.9742	
81 4-Methyl-2-pentanone (MIBK	43	5.895	5.894	0.000	97	62049	4.00	4.20	
82 Toluene	91	6.078	6.078	0.000	98	41778	1.00	1.06	
83 trans-1,3-Dichloropropene	75	6.264	6.264	0.000	91	10266	1.00	0.9769	
84 Ethyl methacrylate	69	6.292	6.285	0.007	88	10843	1.00	0.9503	
85 1,1,2-Trichloroethane	97	6.428	6.428	0.000	88	7321	1.00	0.9599	
86 Tetrachloroethene	164	6.514	6.514	0.000	91	7489	1.00	0.9851	
87 1,3-Dichloropropane	76	6.578	6.571	0.007	92	14280	1.00	1.05	
88 2-Hexanone	43	6.607	6.600	0.007	96	45846	4.00	4.23	
89 Chlorodibromomethane	129	6.764	6.764	0.000	85	4525	1.00	1.17	
90 Ethylene Dibromide	107	6.879	6.878	0.001	94	7615	1.00	1.06	
91 1-Chlorohexane	91	7.272	7.272	0.000	34	15807	1.00	1.19	
92 Chlorobenzene	112	7.308	7.307	0.001	95	26827	1.00	1.07	
93 1,1,1,2-Tetrachloroethane	131	7.379	7.379	0.000	85	6276	1.00	0.9631	
94 Ethylbenzene	106	7.386	7.386	0.000	98	13796	1.00	1.03	
95 m-Xylene & p-Xylene	106	7.508	7.501	0.007	99	17404	1.00	1.03	
96 o-Xylene	106	7.858	7.858	0.000	96	16574	1.00	1.06	
97 Styrene	104	7.880	7.879	0.001	95	27496	1.00	1.02	
98 Bromoform	173	8.058	8.051	0.007	86	2674	1.00	1.28	a
99 Isopropylbenzene	105	8.201	8.201	0.000	95	45746	1.00	1.02	
100 Cyclohexanone	55	8.294	8.294	0.000	94	63699	40.0	44.3	
102 1,1,2,2-Tetrachloroethane	83	8.487	8.487	0.000	93	12187	1.00	1.06	
103 Bromobenzene	156	8.509	8.509	0.000	95	9849	1.00	1.01	
105 trans-1,4-Dichloro-2-buten	53	8.530	8.530	0.000	76	2952	1.00	0.9683	
104 1,2,3-Trichloropropane	110	8.552	8.552	0.000	81	4210	1.00	1.08	
106 N-Propylbenzene	120	8.595	8.595	0.000	98	12389	1.00	1.06	
107 2-Chlorotoluene	126	8.688	8.687	0.001	96	10174	1.00	1.04	
108 1,3,5-Trimethylbenzene	105	8.766	8.766	0.000	94	37291	1.00	1.05	
109 4-Chlorotoluene	126	8.809	8.802	0.007	96	10563	1.00	1.02	
110 tert-Butylbenzene	119	9.074	9.074	0.000	93	34326	1.00	1.06	
111 1,2,4-Trimethylbenzene	105	9.131	9.131	0.000	97	36522	1.00	1.02	
112 sec-Butylbenzene	134	9.288	9.288	0.000	94	9320	1.00	1.02	
113 1,3-Dichlorobenzene	146	9.410	9.410	0.000	96	19739	1.00	1.02	
114 4-Isopropyltoluene	119	9.438	9.438	0.000	98	42197	1.00	1.05	
115 1,4-Dichlorobenzene	146	9.510	9.510	0.000	90	21398	1.00	1.06	
117 n-Butylbenzene	91	9.839	9.839	0.000	98	37268	1.00	1.02	
118 1,2-Dichlorobenzene	146	9.860	9.860	0.000	95	19847	1.00	1.10	
119 1,2-Dibromo-3-Chloropropan	157	10.640	10.639	0.001	68	1999	1.00	1.07	
121 1,2,4-Trichlorobenzene	180	11.455	11.447	0.008	93	12881	1.00	1.08	
122 Hexachlorobutadiene	225	11.598	11.590	0.008	92	6434	1.00	1.08	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
123 Naphthalene	128	11.719	11.712	0.007	97	45121	1.00	1.07	
124 1,2,3-Trichlorobenzene	180	11.934	11.934	0.000	94	12778	1.00	0.8888	
S 137 1,2-Dichloroethene, Total	96				0		2.00	2.01	
S 143 Xylenes, Total	106				0		2.00	2.09	
S 138 Xylenes, Total (URS)	1				0		2.00	2.09	
S 144 1,2-Dichloroethene, Total	1				0		2.00	2.01	
S 139 Total BTEX	1				0			5.23	
S 142 Trihalomethanes, Total	1				0		4.00	4.54	
S 140 1,3-Dichloropropene, Total	1				0		2.00	1.95	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

mv-Cent IS_00002	Amount Added:	5.00	Units: uL
MV-MegaMainA_00014	Amount Added:	1.00	Units: uL

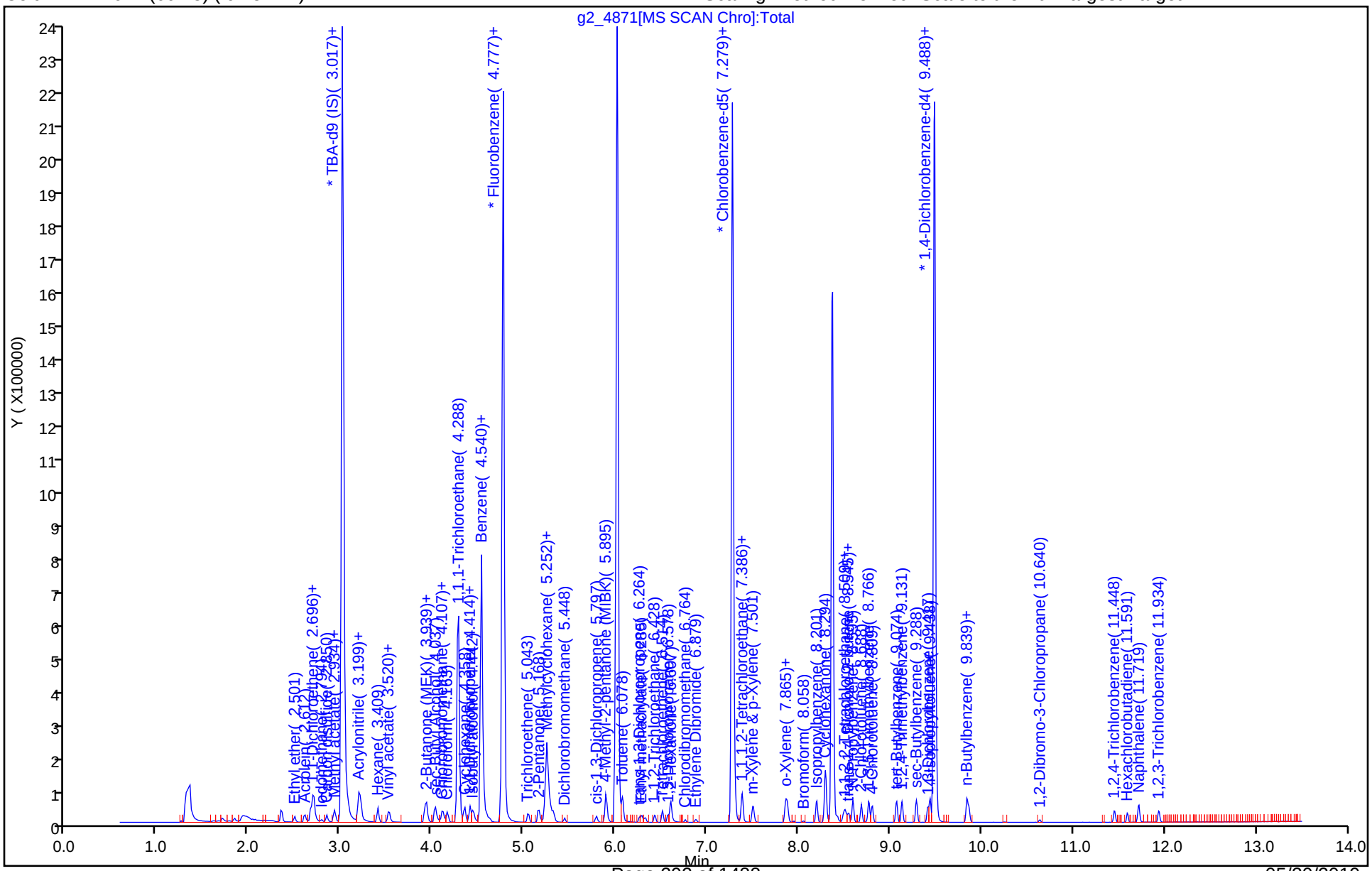
Report Date: 10-May-2019 11:36:18 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4871.D

Injection Date:	06-May-2019 14:58:30	Instrument ID:	VMS_G2	Operator ID:	meierg
Lims ID:	ic			Worklist Smp#:	7
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

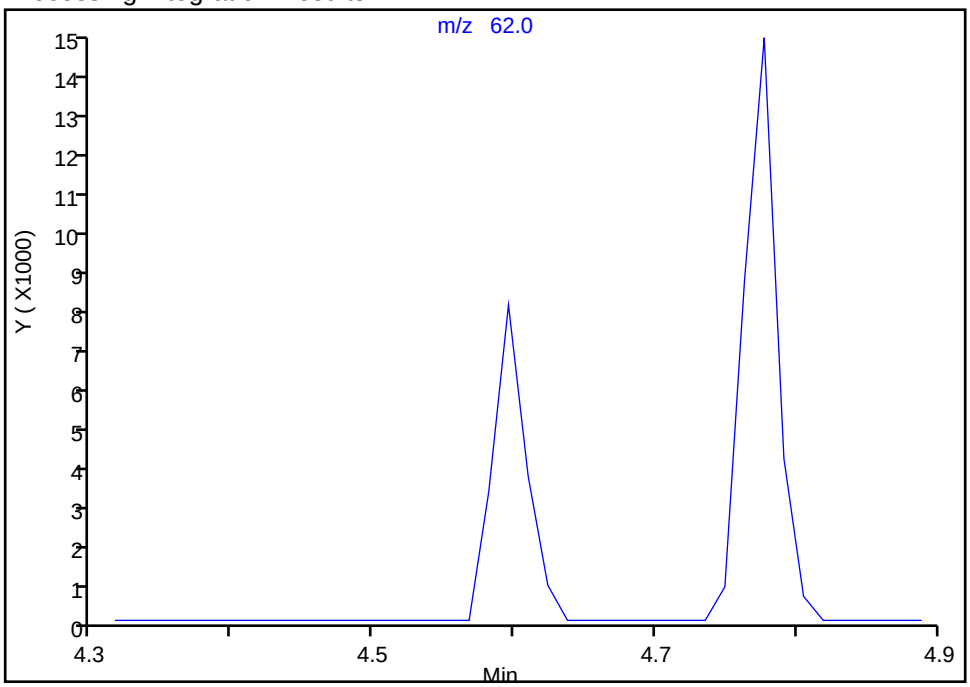
Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4871.D
Injection Date: 06-May-2019 14:58:30 Instrument ID: VMS_G2
Lims ID: ic
Client ID:
Operator ID: meierg ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG2_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

65 1,2-Dichloroethane, CAS: 107-06-2

Signal: 1

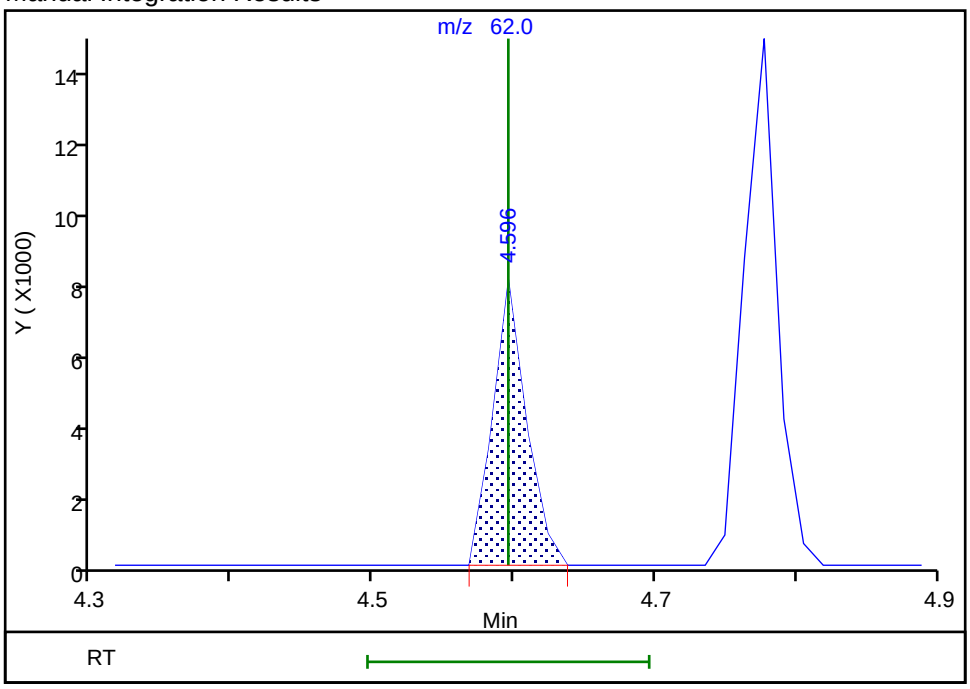
Not Detected
Expected RT: 4.60

Processing Integration Results



Manual Integration Results

RT: 4.60
Area: 13106
Amount: 1.020815
Amount Units: ug/l



Reviewer: meierg, 10-May-2019 11:13:52
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

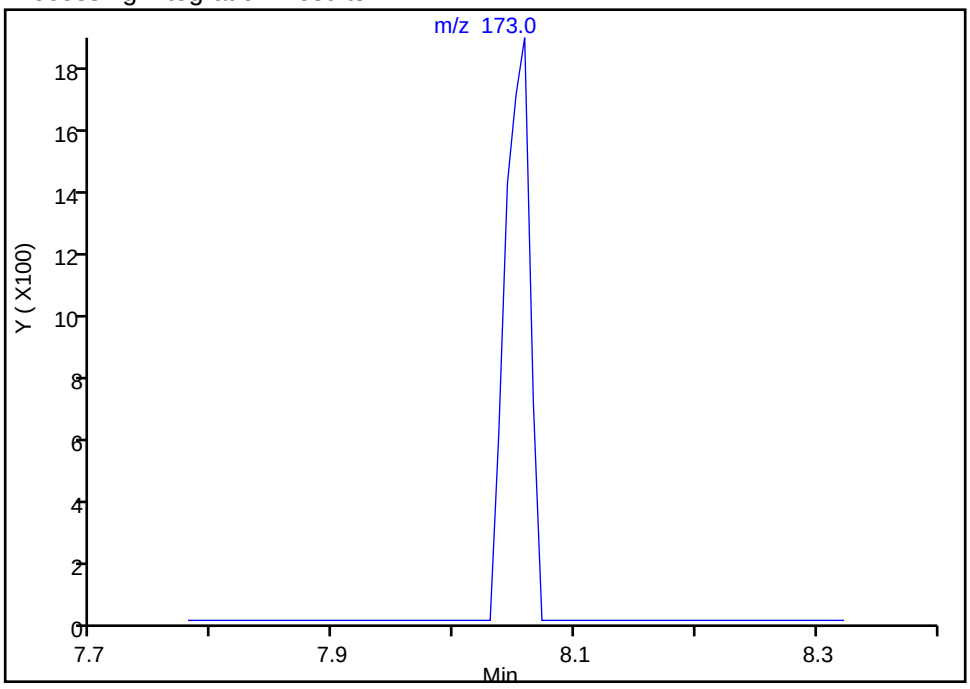
Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4871.D
Injection Date: 06-May-2019 14:58:30 Instrument ID: VMS_G2
Lims ID: ic
Client ID:
Operator ID: meierg ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG2_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

98 Bromoform, CAS: 75-25-2

Signal: 1

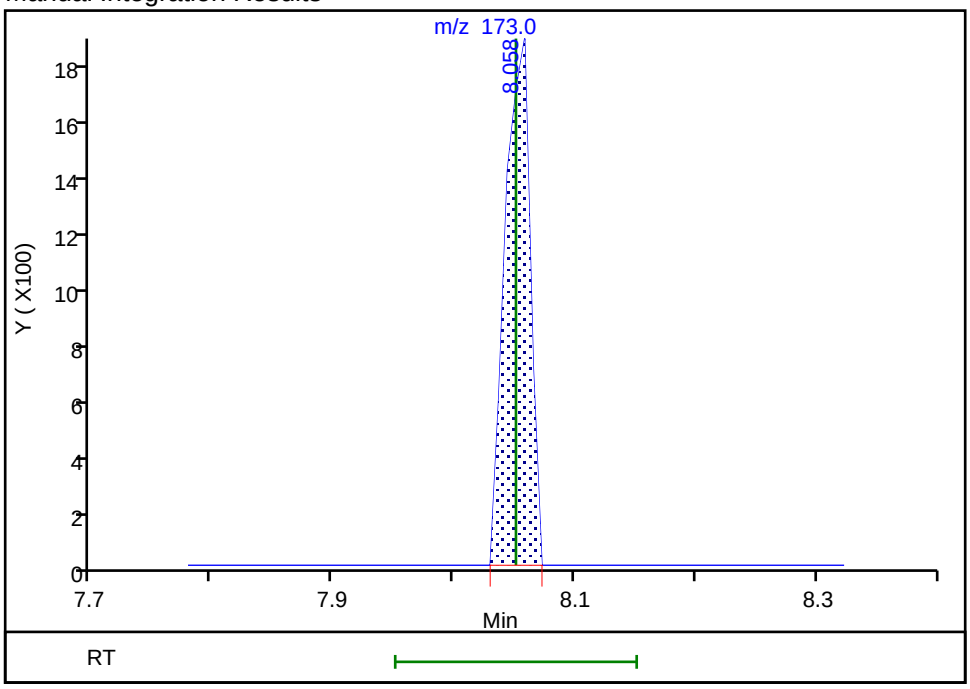
Not Detected
Expected RT: 8.05

Processing Integration Results



Manual Integration Results

RT: 8.06
Area: 2674
Amount: 1.280854
Amount Units: ug/l



Reviewer: meierg, 10-May-2019 11:14:10
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4872.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 06-May-2019 15:19:30 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 280-0081613-008
Operator ID: meierg Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub90

Method: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-May-2019 11:36:26 Calib Date: 06-May-2019 18:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4881.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0324

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.017	3.017	0.000	82	2535253	1000.0	1000.0	
* 2 Fluorobenzene	96	4.777	4.777	0.000	99	1738774	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.279	7.279	0.000	87	363452	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.488	9.488	0.000	96	592253	50.0	50.0	
22 Ethyl ether	59	2.501	2.501	0.000	86	3877	0.5000	0.4955	
24 Acrolein	56	2.612	2.598	0.014	97	10812	4.94	4.49	
26 1,1,2-Trichloro-1,2,2-trif	151	2.682	2.682	0.000	72	3618	0.5000	0.5028	
25 1,1-Dichloroethene	96	2.682	2.682	0.000	97	4383	0.5000	0.5409	
27 Acetone	43	2.710	2.696	0.014	99	105015	2.00	2.02	
28 Iodomethane	142		2.794				ND	ND	
30 Carbon disulfide	76	2.850	2.850	0.000	99	12462	0.5000	0.5333	
32 Methyl acetate	43	2.920	2.920	0.000	95	13625	1.00	1.00	
33 3-Chloro-1-propene	41	2.934	2.934	0.000	89	7990	0.5000	0.4951	
35 Methylene Chloride	84	3.031	3.031	0.000	37	5918	0.5000	0.6385	
37 2-Methyl-2-propanol	59	3.087	3.087	0.000	98	13869	5.00	4.79	
39 Acrylonitrile	53	3.199	3.185	0.014	99	26461	5.00	5.00	
41 Methyl tert-butyl ether	73	3.213	3.213	0.000	96	15946	0.5000	0.5378	
40 trans-1,2-Dichloroethene	96	3.227	3.227	0.000	93	4690	0.5000	0.5180	
42 Hexane	57	3.408	3.408	0.000	92	7767	0.5000	0.3375	
46 Vinyl acetate	43	3.520	3.520	0.000	95	18246	1.00	1.09	
45 1,1-Dichloroethane	63	3.534	3.534	0.000	88	8271	0.5000	0.5018	
52 2-Butanone (MEK)	43	3.925	3.911	0.014	100	30611	2.00	1.96	
51 cis-1,2-Dichloroethene	96	3.939	3.939	0.000	80	4597	0.5000	0.5028	
50 2,2-Dichloropropane	77		3.939				ND	ND	
55 sec-Butyl Alcohol	45	4.037	4.023	0.014	96	24683	15.0	12.1	
56 Chlorobromomethane	128	4.107	4.107	0.000	45	1711	0.5000	0.4830	
57 Tetrahydrofuran	42	4.121	4.121	0.000	84	8201	1.00	0.99	
59 Chloroform	83	4.163	4.163	0.000	93	12325	0.5000	0.5065	
60 1,1,1-Trichloroethane	97	4.302	4.302	0.000	95	7081	0.5000	0.5132	
61 Cyclohexane	56	4.358	4.358	0.000	89	8926	0.5000	0.4966	
63 1,1-Dichloropropene	75	4.414	4.414	0.000	95	6408	0.5000	0.4997	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
62 Carbon tetrachloride	117	4.414	4.414	0.000	78	4570	0.5000	0.5231	
66 Isobutyl alcohol	41	4.442	4.442	0.000	88	8890	12.5	3.87	
64 Benzene	78	4.568	4.568	0.000	91	20581	0.5000	0.4912	
65 1,2-Dichloroethane	62	4.596	4.596	0.000	95	7383	0.5000	0.5774	a
67 n-Heptane	43		4.749				ND	ND	
69 Trichloroethene	95	5.042	5.042	0.000	95	4738	0.5000	0.4966	
70 2-Pentanone	43	5.168	5.154	0.014	99	27104	2.00	2.05	
71 Methylcyclohexane	55	5.224	5.224	0.000	89	6997	0.5000	0.4791	
72 1,2-Dichloropropane	63	5.252	5.252	0.000	49	11569	0.5000	0.6083	
74 1,4-Dioxane	88	5.294	5.294	0.000	28	1971	10.0	9.32	
75 Dibromomethane	93	5.322	5.322	0.000	97	2718	0.5000	0.5210	
76 Dichlorobromomethane	83	5.447	5.447	0.000	93	4433	0.5000	0.6598	
79 cis-1,3-Dichloropropene	75	5.797	5.797	0.000	90	5743	0.5000	0.5192	
81 4-Methyl-2-pentanone (MIBK	43	5.894	5.894	0.000	96	28144	2.00	1.91	
82 Toluene	91	6.078	6.078	0.000	98	21392	0.5000	0.5425	
83 trans-1,3-Dichloropropene	75	6.264	6.264	0.000	83	4486	0.5000	0.5243	
84 Ethyl methacrylate	69	6.292	6.285	0.007	84	4948	0.5000	0.5170	
85 1,1,2-Trichloroethane	97	6.435	6.428	0.007	85	3797	0.5000	0.5143	
86 Tetrachloroethene	164	6.521	6.514	0.007	93	4033	0.5000	0.5133	
87 1,3-Dichloropropane	76	6.578	6.571	0.007	87	6604	0.5000	0.4905	
88 2-Hexanone	43	6.607	6.600	0.007	97	19736	2.00	1.84	
89 Chlorodibromomethane	129	6.764	6.764	0.000	76	2443	0.5000	0.8938	
90 Ethylene Dibromide	107	6.878	6.878	0.000	94	3136	0.5000	0.4797	
91 1-Chlorohexane	91	7.272	7.272	0.000	33	8807	0.5000	0.6695	
92 Chlorobenzene	112	7.307	7.307	0.000	91	12952	0.5000	0.4885	
93 1,1,1,2-Tetrachloroethane	131	7.379	7.379	0.000	39	2882	0.5000	0.5201	
94 Ethylbenzene	106	7.393	7.386	0.007	98	6517	0.5000	0.4881	
95 m-Xylene & p-Xylene	106	7.508	7.501	0.007	98	8706	0.5000	0.5006	
96 o-Xylene	106	7.858	7.858	0.000	96	7565	0.5000	0.4890	
97 Styrene	104	7.879	7.879	0.000	93	13325	0.5000	0.5009	
98 Bromoform	173	8.051	8.051	0.000	1	1002	0.5000	0.9256	a
99 Isopropylbenzene	105	8.201	8.201	0.000	95	22669	0.5000	0.4559	
100 Cyclohexanone	55	8.294	8.294	0.000	94	28228	20.0	19.8	
102 1,1,2,2-Tetrachloroethane	83	8.487	8.487	0.000	89	5408	0.5000	0.4771	
103 Bromobenzene	156	8.509	8.509	0.000	92	4864	0.5000	0.4971	
105 trans-1,4-Dichloro-2-buten	53	8.530	8.530	0.000	1	1326	0.5000	0.5749	
104 1,2,3-Trichloropropane	110	8.552	8.552	0.000	82	1594	0.5000	0.4633	
106 N-Propylbenzene	120	8.595	8.595	0.000	99	5613	0.5000	0.4900	
107 2-Chlorotoluene	126	8.687	8.687	0.000	95	4954	0.5000	0.4953	
108 1,3,5-Trimethylbenzene	105	8.766	8.766	0.000	95	18019	0.5000	0.4916	
109 4-Chlorotoluene	126	8.809	8.802	0.007	95	5388	0.5000	0.4990	
110 tert-Butylbenzene	119	9.074	9.074	0.000	92	16834	0.5000	0.4891	
111 1,2,4-Trimethylbenzene	105	9.131	9.131	0.000	96	18370	0.5000	0.4971	
112 sec-Butylbenzene	134	9.288	9.288	0.000	94	4683	0.5000	0.5003	
113 1,3-Dichlorobenzene	146	9.410	9.410	0.000	95	10127	0.5000	0.4956	
114 4-Isopropyltoluene	119	9.438	9.438	0.000	96	20441	0.5000	0.4923	
115 1,4-Dichlorobenzene	146	9.510	9.510	0.000	91	11214	0.5000	0.5549	
117 n-Butylbenzene	91	9.839	9.839	0.000	97	19171	0.5000	0.4983	
118 1,2-Dichlorobenzene	146	9.860	9.860	0.000	91	9572	0.5000	0.5268	
119 1,2-Dibromo-3-Chloropropan	157		10.639				ND	ND	
121 1,2,4-Trichlorobenzene	180	11.455	11.447	0.008	91	6488	0.5000	0.5403	
122 Hexachlorobutadiene	225	11.590	11.590	0.000	84	3068	0.5000	0.4844	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
123 Naphthalene	128	11.712	11.712	0.000	97	21815	0.5000	0.4686	
124 1,2,3-Trichlorobenzene	180	11.941	11.934	0.007	89	5917	0.5000	0.2060	
S 137 1,2-Dichloroethene, Total	96				0		1.00	1.02	
S 140 1,3-Dichloropropene, Total	1				0		1.00	1.04	
S 142 Trihalomethanes, Total	1				0		2.00	2.99	
S 139 Total BTEX	1				0			2.51	
S 144 1,2-Dichloroethene, Total	1				0		1.00	1.02	
S 138 Xylenes, Total (URS)	1				0		1.00	0.9897	
S 143 Xylenes, Total	106				0		1.00	0.9897	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

a - User Assigned ID

Reagents:

mv-Cent IS_00002	Amount Added:	5.00	Units: uL
MV-MegaMainA_00014	Amount Added:	0.50	Units: uL

Report Date: 10-May-2019 11:36:28 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4872.D

Injection Date: 06-May-2019 15:19:30 Instrument ID: VMS_G2 Operator ID: meierg

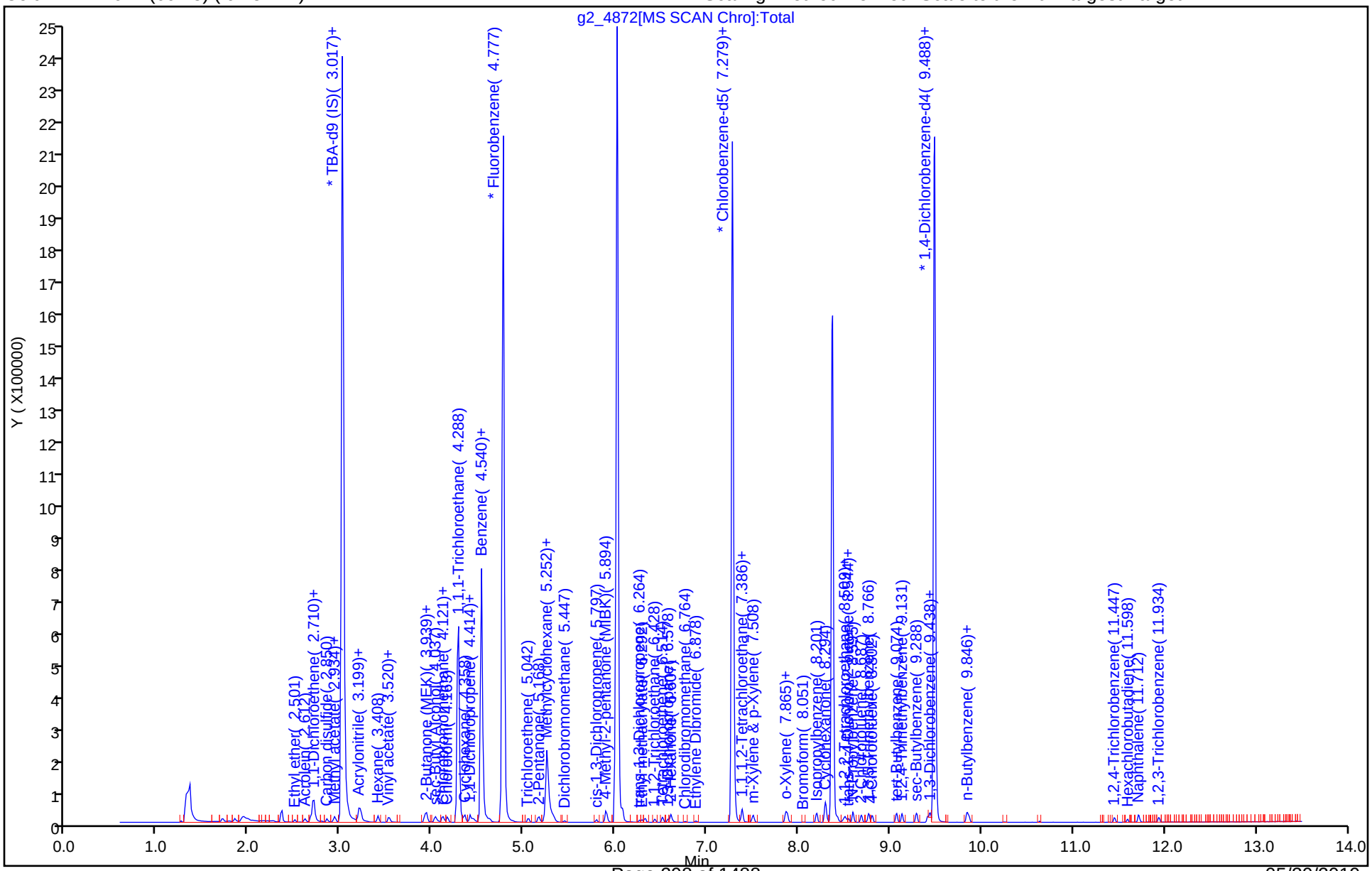
Lims ID: ic Worklist Smp#: 8

Client ID:

Purge Vol: 5.000 mL Dil. Factor: 1.0000 ALS Bottle#: 7

Method: AQ_VMSG2_8260 Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

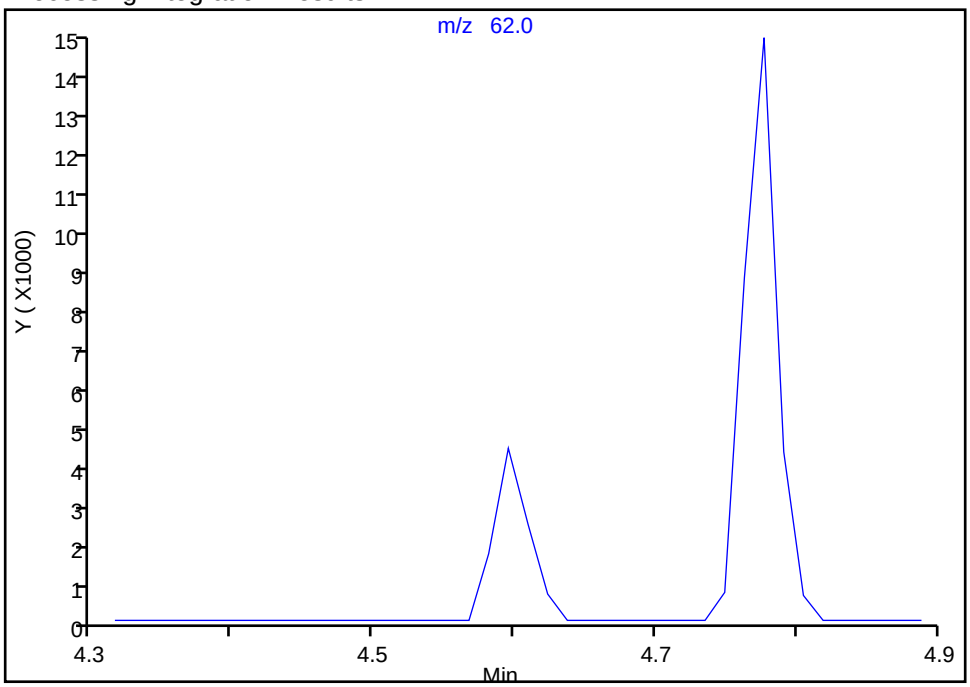
Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4872.D
Injection Date: 06-May-2019 15:19:30 Instrument ID: VMS_G2
Lims ID: ic
Client ID:
Operator ID: meierg ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG2_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

65 1,2-Dichloroethane, CAS: 107-06-2

Signal: 1

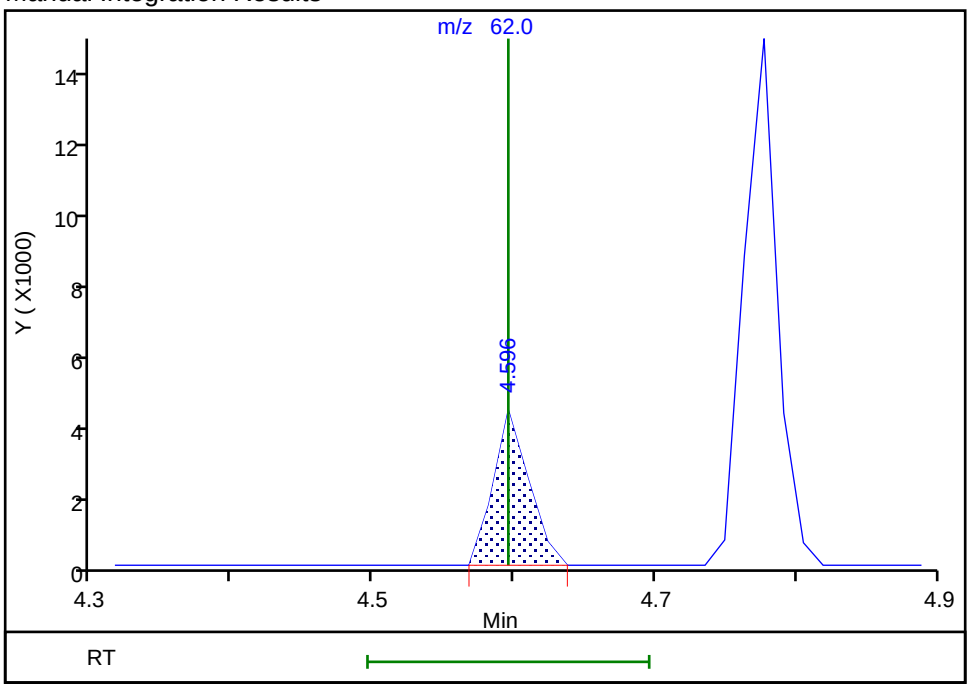
Not Detected
Expected RT: 4.60

Processing Integration Results



Manual Integration Results

RT: 4.60
Area: 7383
Amount: 0.577382
Amount Units: ug/l



Reviewer: meierg, 10-May-2019 11:04:26
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

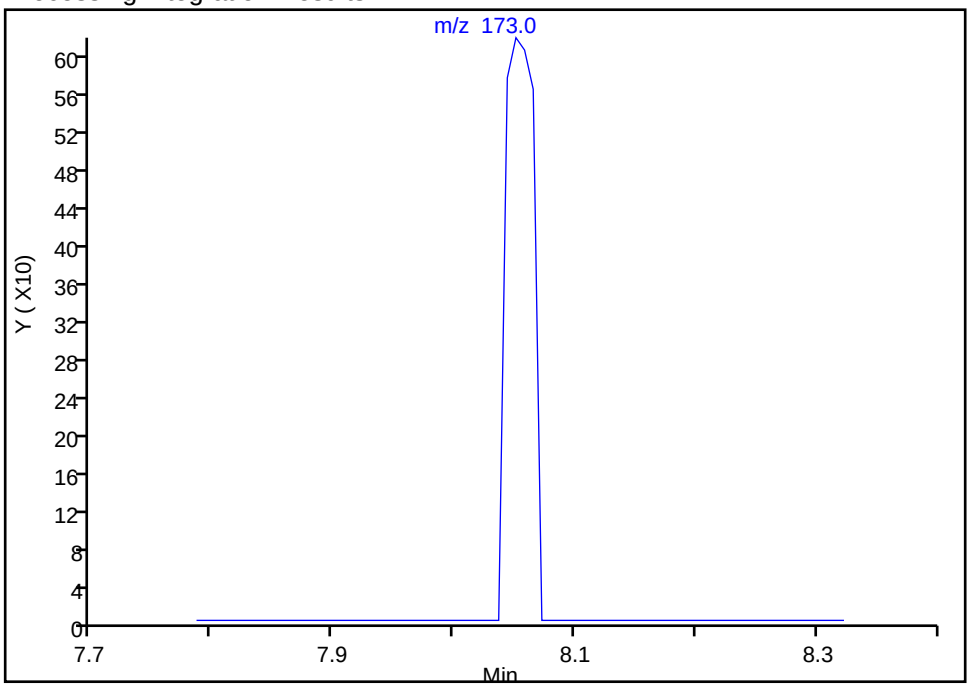
Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4872.D
Injection Date: 06-May-2019 15:19:30 Instrument ID: VMS_G2
Lims ID: ic
Client ID:
Operator ID: meierg ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG2_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

98 Bromoform, CAS: 75-25-2

Signal: 1

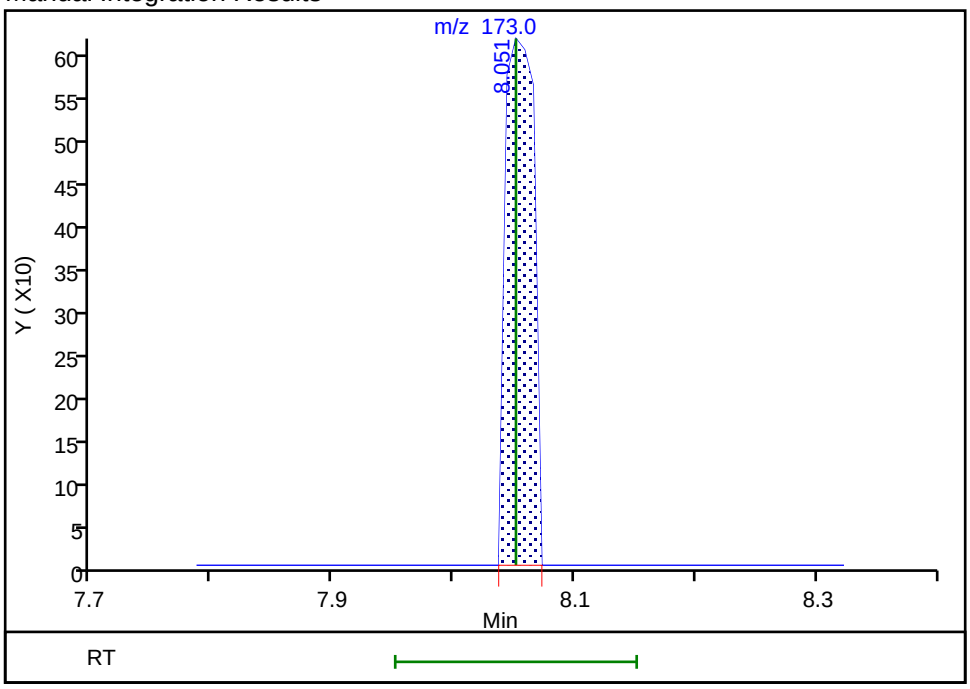
Not Detected
Expected RT: 8.05

Processing Integration Results



Manual Integration Results

RT: 8.05
Area: 1002
Amount: 0.925601
Amount Units: ug/l



Reviewer: meierg, 10-May-2019 11:04:13
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4874.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 06-May-2019 16:04:30 ALS Bottle#: 9 Worklist Smp#: 10
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 280-0081613-010
Operator ID: meierg Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub90

Method: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-May-2019 11:26:42 Calib Date: 06-May-2019 18:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4881.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0324

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.031	3.017	0.014	82	2511690	1000.0	1000.0	
* 2 Fluorobenzene	96	4.777	4.777	0.000	99	1716232	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.279	7.279	0.000	87	368088	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.488	9.488	0.000	96	597440	50.0	50.0	
$ 6 Dibromofluoromethane (Surr	111	4.274	4.288	-0.014	93	377773	50.0	50.7	
$ 7 1,2-Dichloroethane-d4 (Sur	65	4.540	4.540	0.000	98	496083	50.0	50.1	
$ 8 Toluene-d8 (Surr)	98	6.020	6.020	0.000	93	1620205	50.0	50.0	
$ 9 4-Bromofluorobenzene (Surr	95	8.366	8.366	0.000	88	560451	50.0	49.6	
12 Dichlorodifluoromethane	85	1.495	1.495	0.000	100	1983140	200.0	200.4	
14 Chloromethane	50	1.663	1.663	0.000	99	1926214	200.0	189.5	
15 Vinyl chloride	62	1.746	1.746	0.000	98	1975926	200.0	196.9	
17 Bromomethane	94	1.998	1.998	0.000	91	269658	200.0	65.4	
18 Chloroethane	64	2.068	2.096	-0.028	99	840107	200.0	142.6	
19 Dichlorofluoromethane	67	2.249	2.263	-0.014	97	2932214	200.0	192.0	
20 Trichlorofluoromethane	101	2.277	2.291	-0.014	98	2982476	200.0	195.5	
78 2-Chloroethyl vinyl ether	63	5.657	5.657	0.000	93	947475	200.0	207.9	

Reagents:

MV-Gas A_00023 Amount Added: 200.00 Units: uL
mv-Cent IS/SS_00002 Amount Added: 5.00 Units: uL Run Reagent

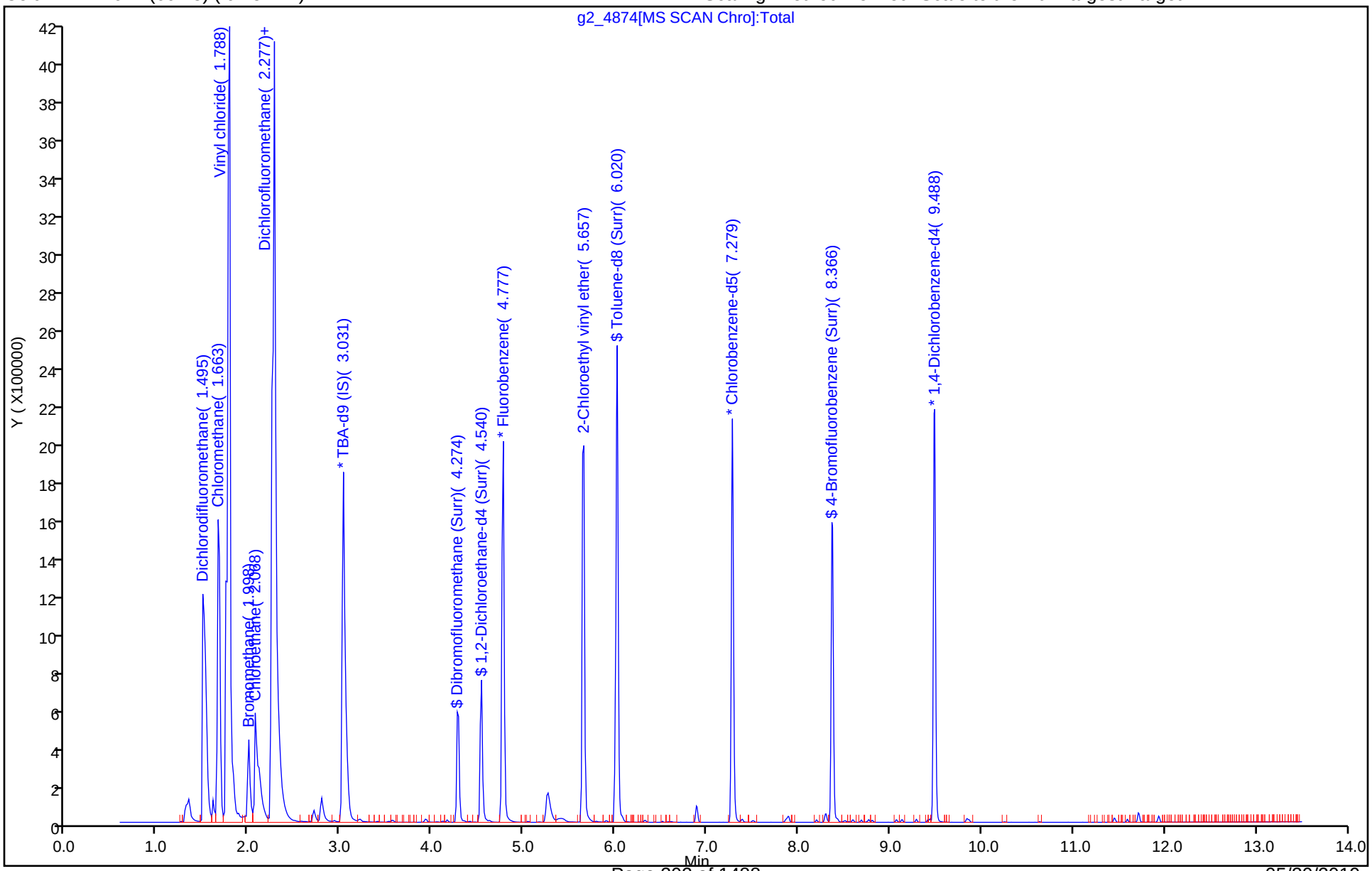
Report Date: 10-May-2019 11:26:42 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4874.D

Injection Date:	06-May-2019 16:04:30	Instrument ID:	VMS_G2	Operator ID:	meierg
Lims ID:	ic			Worklist Smp#:	10
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4875.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 06-May-2019 16:25:30 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 280-0081613-011
Operator ID: meierg Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub90

Method: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-May-2019 11:26:45 Calib Date: 06-May-2019 18:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4881.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0324

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.031	3.017	0.014	82	2551867	1000.0	1000.0	
* 2 Fluorobenzene	96	4.777	4.777	0.000	99	1744028	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.279	7.279	0.000	87	366475	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.488	9.488	0.000	96	589588	50.0	50.0	
$ 6 Dibromofluoromethane (Surr	111	4.274	4.288	-0.014	94	380507	50.0	50.2	
$ 7 1,2-Dichloroethane-d4 (Sur	65	4.540	4.540	0.000	98	499873	50.0	49.7	
$ 8 Toluene-d8 (Surr)	98	6.020	6.020	0.000	93	1619733	50.0	50.2	
$ 9 4-Bromofluorobenzene (Surr	95	8.366	8.366	0.000	88	562020	50.0	50.4	
12 Dichlorodifluoromethane	85	1.495	1.495	0.000	99	1031101	100.0	102.6	
14 Chloromethane	50	1.663	1.663	0.000	99	1024861	100.0	99.2	
15 Vinyl chloride	62	1.746	1.746	0.000	98	1017576	100.0	99.8	
17 Bromomethane	94	1.998	1.998	0.000	90	290418	100.0	69.3	
18 Chloroethane	64	2.082	2.096	-0.014	99	563875	100.0	94.2	
19 Dichlorofluoromethane	67	2.263	2.263	0.000	97	1556089	100.0	100.3	
20 Trichlorofluoromethane	101	2.291	2.291	0.000	99	1550706	100.0	100.0	
78 2-Chloroethyl vinyl ether	63	5.657	5.657	0.000	92	478104	100.0	103.5	

Reagents:

MV-Gas A_00023 Amount Added: 100.00 Units: uL
mv-Cent IS/SS_00002 Amount Added: 5.00 Units: uL Run Reagent

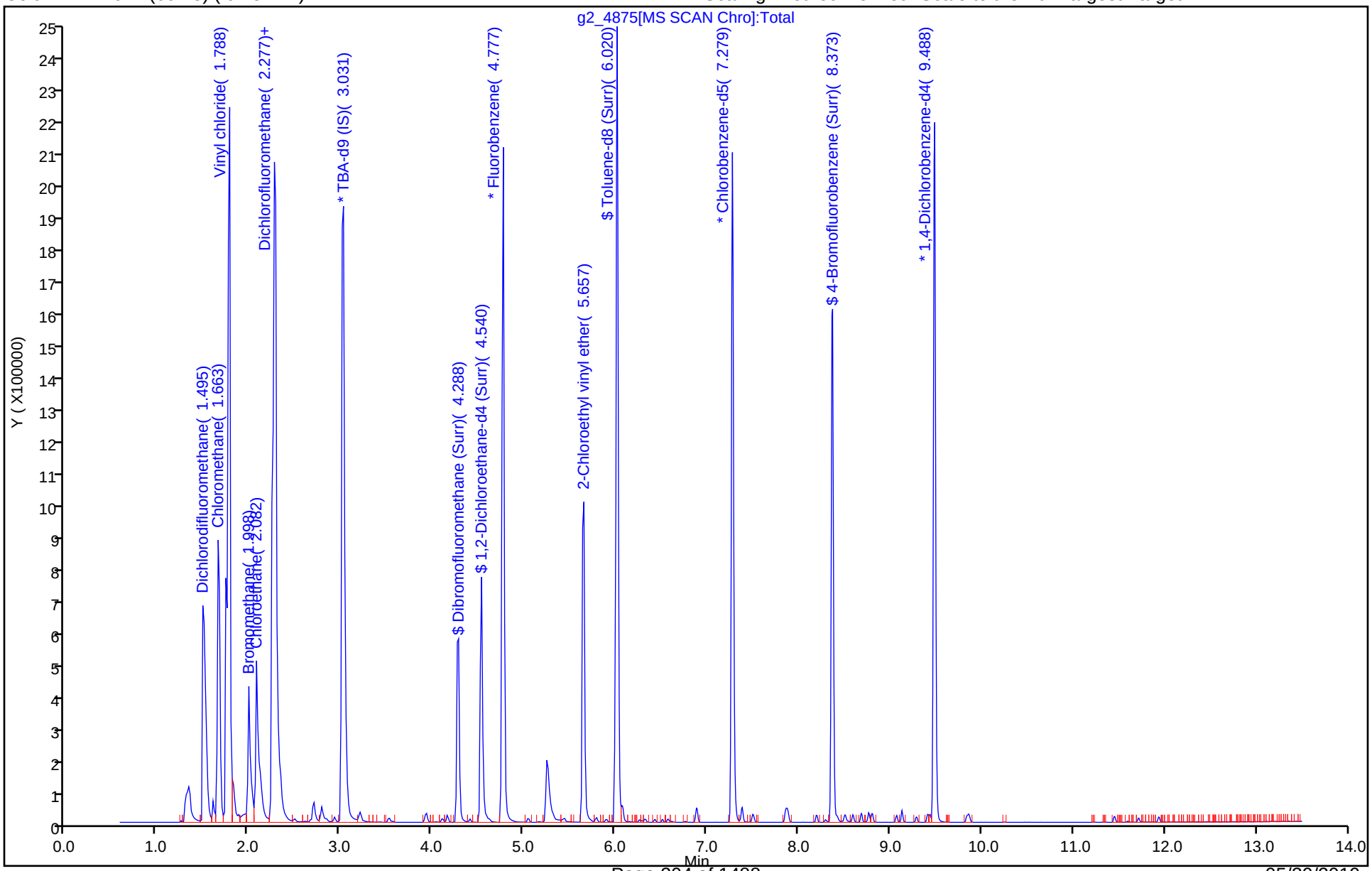
Report Date: 10-May-2019 11:26:46 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4875.D

Injection Date:	06-May-2019 16:25:30	Instrument ID:	VMS_G2	Operator ID:	meierg
Lims ID:	ic			Worklist Smp#:	11
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4876.D
Lims ID: icis
Client ID:
Sample Type: ICIS Calib Level: 5
Inject. Date: 06-May-2019 16:47:30 ALS Bottle#: 11 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: icis
Misc. Info.: 280-0081613-012
Operator ID: meierg Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub90

Method: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-May-2019 11:26:49 Calib Date: 06-May-2019 18:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4881.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0324

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.017	3.017	0.000	82	2495724	1000.0	1000.0	
* 2 Fluorobenzene	96	4.777	4.777	0.000	99	1712721	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.279	7.279	0.000	87	359161	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.488	9.488	0.000	96	584908	50.0	50.0	
$ 6 Dibromofluoromethane (Surr	111	4.288	4.288	0.000	93	373283	50.0	50.2	
$ 7 1,2-Dichloroethane-d4 (Sur	65	4.540	4.540	0.000	98	491693	50.0	49.8	
$ 8 Toluene-d8 (Surr)	98	6.020	6.020	0.000	93	1597467	50.0	50.5	
$ 9 4-Bromofluorobenzene (Surr	95	8.366	8.366	0.000	88	548505	50.0	49.6	
12 Dichlorodifluoromethane	85	1.495	1.495	0.000	100	491039	50.0	49.7	
14 Chloromethane	50	1.663	1.663	0.000	99	505556	50.0	49.8	
15 Vinyl chloride	62	1.746	1.746	0.000	98	501963	50.0	50.1	
17 Bromomethane	94	1.998	1.998	0.000	90	222443	50.0	53.9	
18 Chloroethane	64	2.096	2.096	0.000	100	289782	50.0	49.3	
19 Dichlorofluoromethane	67	2.263	2.263	0.000	96	765516	50.0	50.2	
20 Trichlorofluoromethane	101	2.291	2.291	0.000	98	765789	50.0	50.3	
78 2-Chloroethyl vinyl ether	63	5.657	5.657	0.000	93	226997	50.0	50.3	

Reagents:

MV-Gas A_00023 Amount Added: 50.00 Units: uL
mv-Cent IS/SS_00002 Amount Added: 5.00 Units: uL Run Reagent

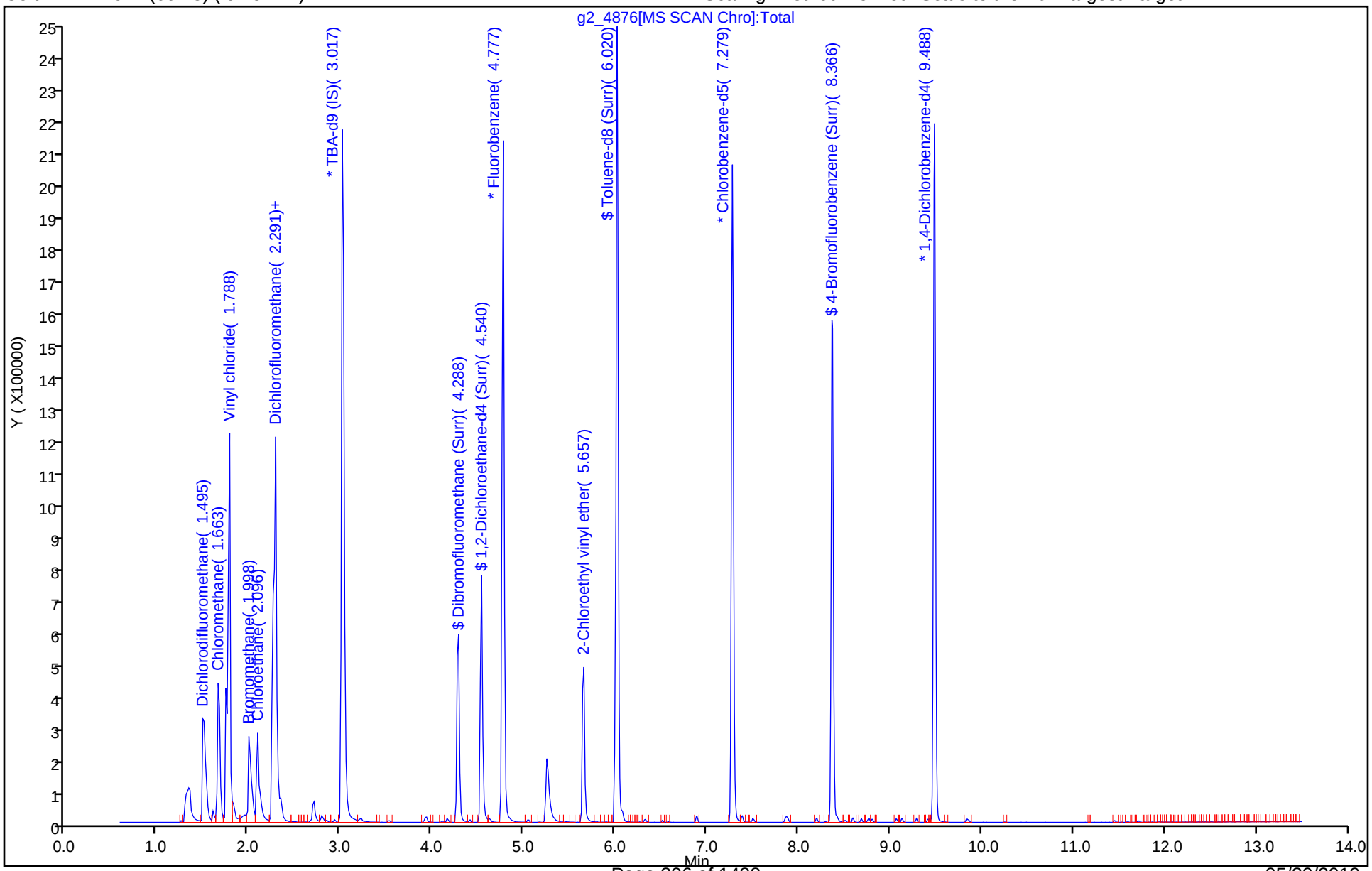
Report Date: 10-May-2019 11:26:50 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4876.D

Injection Date:	06-May-2019 16:47:30	Instrument ID:	VMS_G2	Operator ID:	meierg
Lims ID:	icis			Worklist Smp#:	12
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4877.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 06-May-2019 17:08:30 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 280-0081613-013
Operator ID: meierg Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub90

Method: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-May-2019 11:26:53 Calib Date: 06-May-2019 18:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4881.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0324

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.017	3.017	0.000	82	2456256	1000.0	1000.0	
* 2 Fluorobenzene	96	4.777	4.777	0.000	99	1737247	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.279	7.279	0.000	87	362356	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.488	9.488	0.000	96	584865	50.0	50.0	
$ 6 Dibromofluoromethane (Surr	111	4.288	4.288	0.000	93	379182	50.0	50.2	
$ 7 1,2-Dichloroethane-d4 (Sur	65	4.540	4.540	0.000	98	502075	50.0	50.1	
$ 8 Toluene-d8 (Surr)	98	6.020	6.020	0.000	93	1594003	50.0	49.9	
$ 9 4-Bromofluorobenzene (Surr	95	8.366	8.366	0.000	88	546260	50.0	49.4	
12 Dichlorodifluoromethane	85	1.509	1.495	0.014	99	99480	10.0	9.93	
14 Chloromethane	50	1.663	1.663	0.000	99	103185	10.0	10.0	
15 Vinyl chloride	62	1.746	1.746	0.000	98	102076	10.0	10.0	
17 Bromomethane	94	2.012	1.998	0.014	90	51998	10.0	11.9	
18 Chloroethane	64	2.096	2.096	0.000	100	62272	10.0	10.4	
19 Dichlorofluoromethane	67	2.263	2.263	0.000	96	156696	10.0	10.1	
20 Trichlorofluoromethane	101	2.291	2.291	0.000	98	158931	10.0	10.3	
78 2-Chloroethyl vinyl ether	63	5.657	5.657	0.000	92	41660	10.0	9.48	

Reagents:

MV-Gas A_00023 Amount Added: 10.00 Units: uL
mv-Cent IS/SS_00002 Amount Added: 5.00 Units: uL Run Reagent

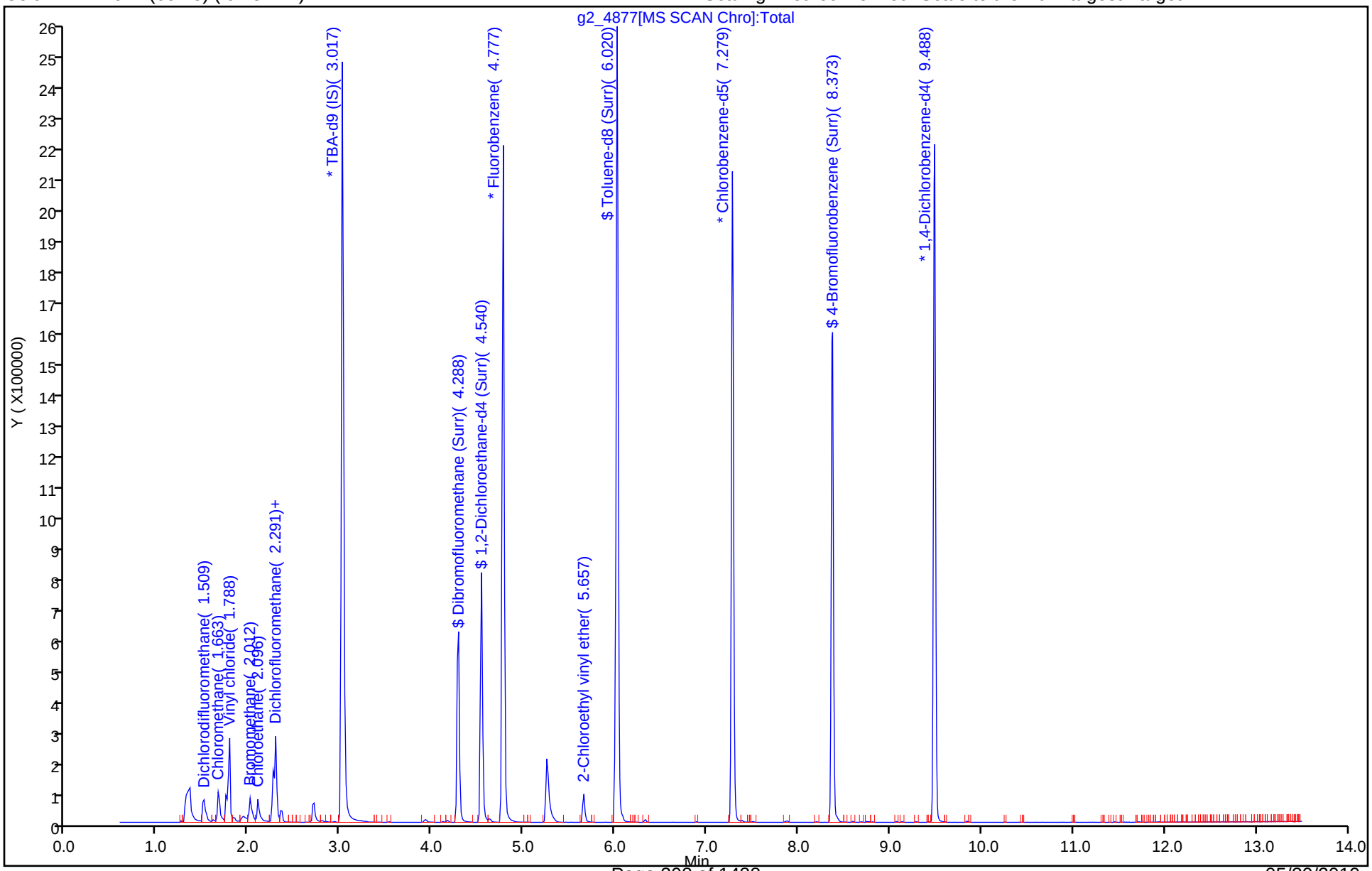
Report Date: 10-May-2019 11:26:54 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4877.D

Injection Date:	06-May-2019 17:08:30	Instrument ID:	VMS_G2	Operator ID:	meierg
Lims ID:	ic			Worklist Smp#:	13
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4878.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 06-May-2019 17:29:30 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 280-0081613-014
Operator ID: meierg Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub90

Method: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-May-2019 11:26:56 Calib Date: 06-May-2019 18:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4881.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0324

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.017	3.017	0.000	82	2445628	1000.0	1000.0	
* 2 Fluorobenzene	96	4.777	4.777	0.000	99	1709802	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.279	7.279	0.000	87	358499	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.488	9.488	0.000	96	572176	50.0	50.0	
$ 6 Dibromofluoromethane (Surr	111	4.288	4.288	0.000	93	366523	50.0	49.3	
$ 7 1,2-Dichloroethane-d4 (Sur	65	4.540	4.540	0.000	98	487258	50.0	49.4	
$ 8 Toluene-d8 (Surr)	98	6.020	6.020	0.000	93	1569020	50.0	49.7	
$ 9 4-Bromofluorobenzene (Surr	95	8.373	8.366	0.007	89	540782	50.0	50.0	
12 Dichlorodifluoromethane	85	1.509	1.495	0.014	98	19129	2.00	1.94	
14 Chloromethane	50	1.663	1.663	0.000	98	20005	2.00	1.98	
15 Vinyl chloride	62	1.746	1.746	0.000	97	19944	2.00	1.99	
17 Bromomethane	94	2.012	1.998	0.014	91	10927	2.00	2.06	
18 Chloroethane	64	2.096	2.096	0.000	98	12523	2.00	2.13	
19 Dichlorofluoromethane	67	2.263	2.263	0.000	96	30089	2.00	1.98	
20 Trichlorofluoromethane	101	2.291	2.291	0.000	97	29947	2.00	1.97	
78 2-Chloroethyl vinyl ether	63	5.657	5.657	0.000	88	6577	2.00	1.91	

Reagents:

MV-Gas A_00023 Amount Added: 2.00 Units: uL
mv-Cent IS/SS_00002 Amount Added: 5.00 Units: uL Run Reagent

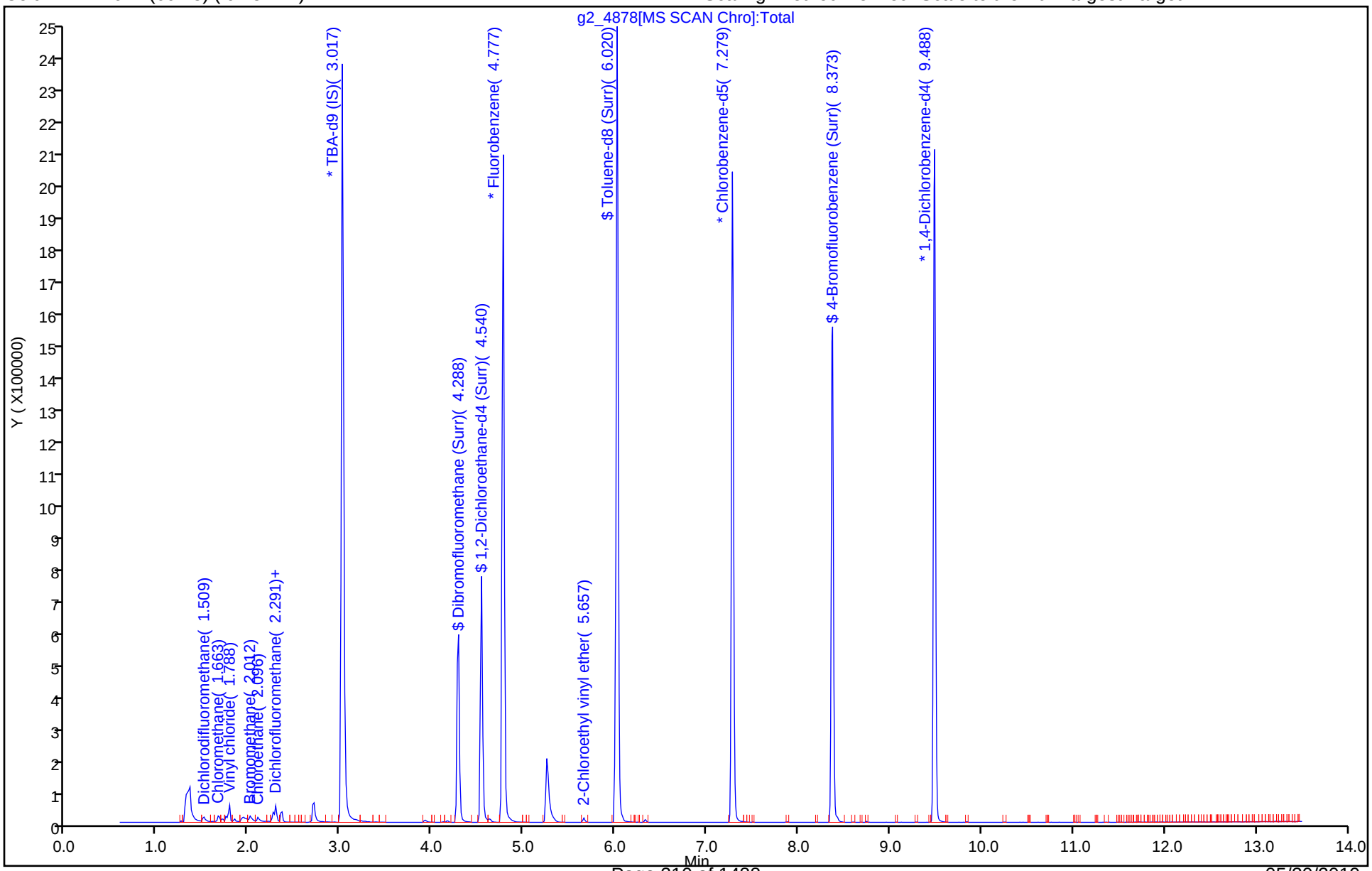
Report Date: 10-May-2019 11:26:56 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4878.D

Injection Date:	06-May-2019 17:29:30	Instrument ID:	VMS_G2	Operator ID:	meierg
Lims ID:	ic			Worklist Smp#:	14
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4879.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 06-May-2019 17:50:30 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 280-0081613-015
Operator ID: meierg Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub90

Method: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-May-2019 11:26:59 Calib Date: 06-May-2019 18:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4881.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0324

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.017	3.017	0.000	82	2450571	1000.0	1000.0	
* 2 Fluorobenzene	96	4.777	4.777	0.000	99	1688353	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.279	7.279	0.000	87	353106	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.488	9.488	0.000	96	568175	50.0	50.0	
$ 6 Dibromofluoromethane (Surr	111	4.288	4.288	0.000	93	366317	50.0	49.9	
$ 7 1,2-Dichloroethane-d4 (Sur	65	4.540	4.540	0.000	98	487294	50.0	50.0	
$ 8 Toluene-d8 (Surr)	98	6.020	6.020	0.000	93	1538972	50.0	49.5	
$ 9 4-Bromofluorobenzene (Surr	95	8.373	8.366	0.007	88	537682	50.0	50.1	
12 Dichlorodifluoromethane	85	1.509	1.495	0.014	95	9364	1.00	0.9621	
14 Chloromethane	50	1.663	1.663	0.000	97	10613	1.00	1.06	
15 Vinyl chloride	62	1.746	1.746	0.000	95	9889	1.00	1.00	
17 Bromomethane	94	2.012	1.998	0.014	90	5628	1.00	0.7738	
18 Chloroethane	64	2.096	2.096	0.000	98	5638	1.00	0.9729	
19 Dichlorofluoromethane	67	2.263	2.263	0.000	95	14929	1.00	0.99	
20 Trichlorofluoromethane	101	2.291	2.291	0.000	99	14505	1.00	0.9665	
78 2-Chloroethyl vinyl ether	63	5.657	5.657	0.000	0	2522	1.00	1.03	

Reagents:

MV-Gas A_00023 Amount Added: 1.00 Units: uL
mv-Cent IS/SS_00002 Amount Added: 5.00 Units: uL Run Reagent

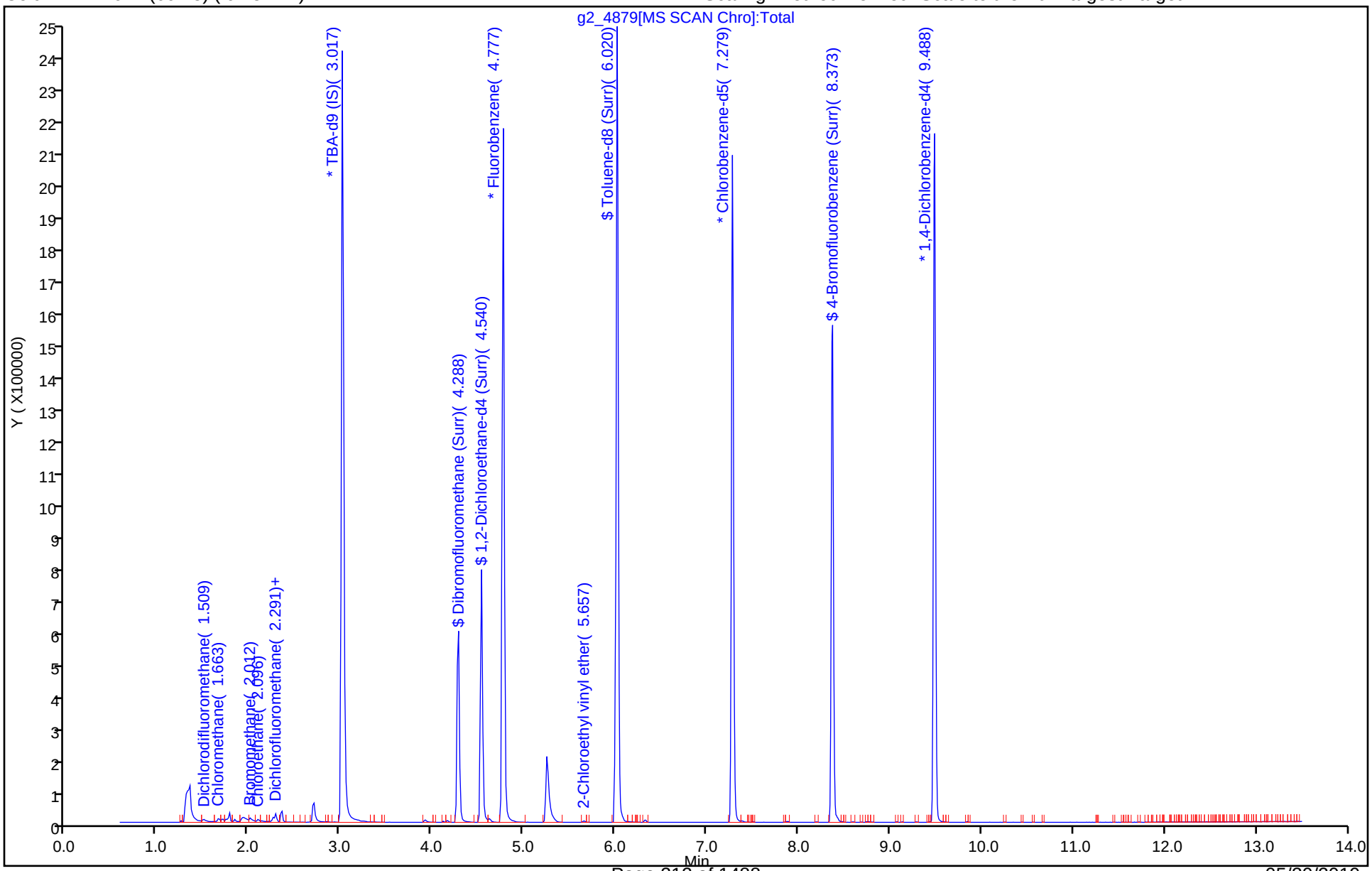
Report Date: 10-May-2019 11:26:59 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4879.D

Injection Date:	06-May-2019 17:50:30	Instrument ID:	VMS_G2	Operator ID:	meierg
Lims ID:	ic			Worklist Smp#:	15
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4880.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 06-May-2019 18:11:30 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 280-0081613-016
Operator ID: meierg Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub90

Method: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-May-2019 11:27:02 Calib Date: 06-May-2019 18:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4881.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0324

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 TBA-d9 (IS)	65	3.018	3.017	0.001	82	2481612	1000.0	1000.0	
*	2 Fluorobenzene	96	4.777	4.777	0.000	99	1667167	50.0	50.0	
*	3 Chlorobenzene-d5	119	7.279	7.279	0.000	87	348805	50.0	50.0	
*	4 1,4-Dichlorobenzene-d4	152	9.488	9.488	0.000	96	560213	50.0	50.0	
$	6 Dibromofluoromethane (Surr	111	4.288	4.288	0.000	93	358704	50.0	49.5	
$	7 1,2-Dichloroethane-d4 (Sur	65	4.540	4.540	0.000	98	481372	50.0	50.1	
$	8 Toluene-d8 (Surr)	98	6.021	6.020	0.001	93	1545090	50.0	50.3	
$	9 4-Bromofluorobenzene (Surr	95	8.366	8.366	0.000	88	532062	50.0	50.2	
	12 Dichlorodifluoromethane	85		1.495				ND	ND	
	14 Chloromethane	50		1.663				ND	ND	
	15 Vinyl chloride	62		1.746				ND	ND	
	17 Bromomethane	94	2.012	1.998	0.014	84	3346	0.5000	0.2167	
	18 Chloroethane	64		2.096				ND	ND	
	19 Dichlorofluoromethane	67	2.263	2.263	0.000	93	7458	0.5000	0.5027	
	20 Trichlorofluoromethane	101		2.291				ND	ND	
	78 2-Chloroethyl vinyl ether	63		5.657				ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

MV-Gas A_00023 Amount Added: 0.50 Units: uL
mv-Cent IS/SS_00002 Amount Added: 5.00 Units: uL Run Reagent

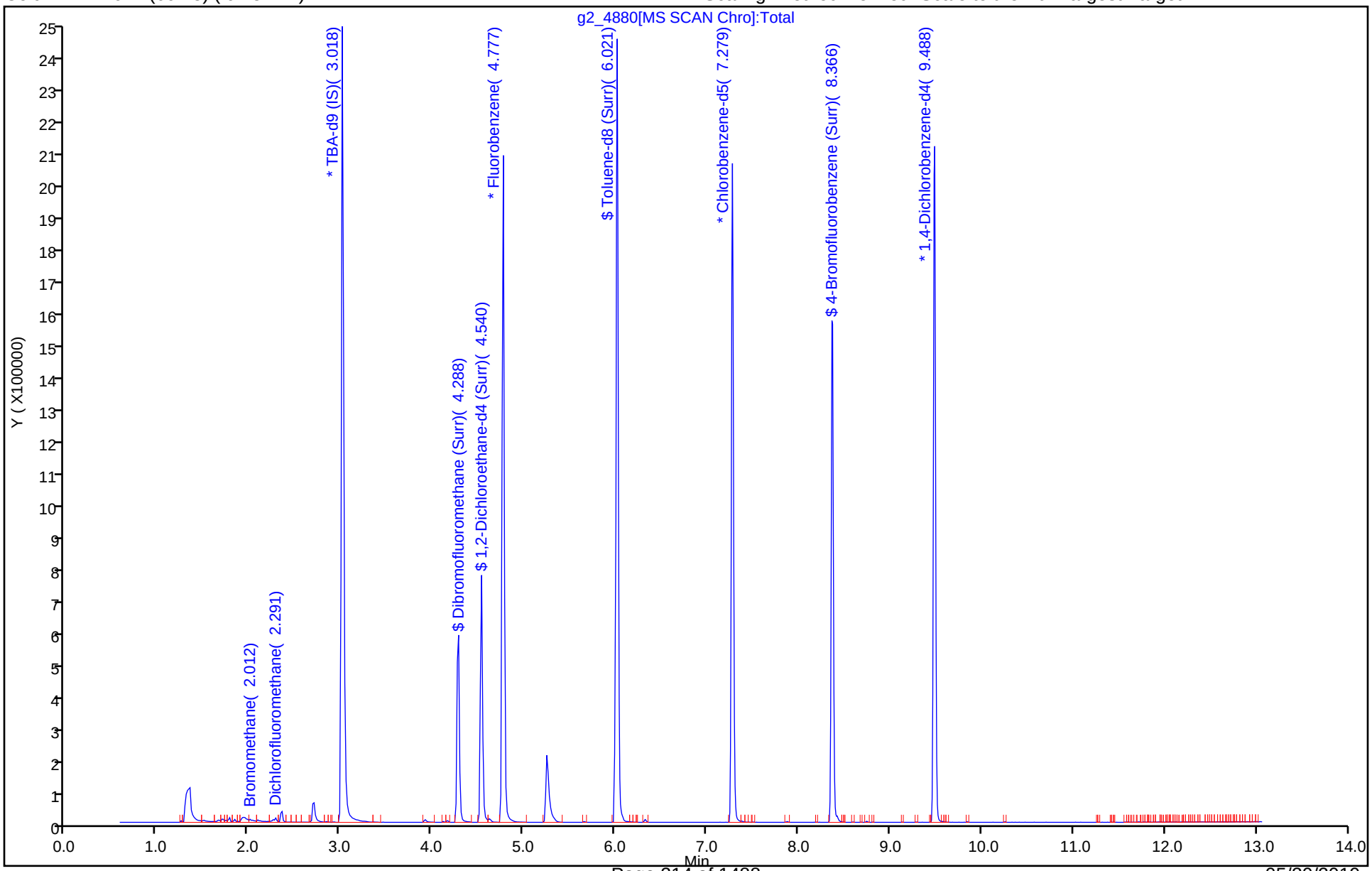
Report Date: 10-May-2019 11:27:03 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4880.D

Injection Date:	06-May-2019 18:11:30	Instrument ID:	VMS_G2	Operator ID:	meierg
Lims ID:	ic			Worklist Smp#:	16
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4881.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 06-May-2019 18:51:30 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 280-0081613-017
Operator ID: meierg Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub90

Method: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-May-2019 11:27:04 Calib Date: 06-May-2019 18:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4881.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0324

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.017	3.017	0.000	82	2384559	1000.0	1000.0	
* 2 Fluorobenzene	96	4.777	4.777	0.000	99	1661553	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.279	7.279	0.000	87	349768	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.488	9.488	0.000	96	557078	50.0	50.0	
$ 6 Dibromofluoromethane (Surr	111	4.288	4.288	0.000	93	360111	50.0	49.9	
$ 7 1,2-Dichloroethane-d4 (Sur	65	4.540	4.540	0.000	98	486560	50.0	50.8	
$ 8 Toluene-d8 (Surr)	98	6.020	6.020	0.000	93	1542332	50.0	50.0	
$ 9 4-Bromofluorobenzene (Surr	95	8.373	8.366	0.007	88	533039	50.0	50.6	
12 Dichlorodifluoromethane	85	1.509	1.495	0.014	99	755451	75.0	78.9	
14 Chloromethane	50	1.663	1.663	0.000	99	745704	75.0	75.8	
15 Vinyl chloride	62	1.746	1.746	0.000	98	737266	75.0	75.9	
17 Bromomethane	94	1.998	1.998	0.000	90	276569	75.0	69.3	
18 Chloroethane	64	2.082	2.096	-0.014	100	422629	75.0	74.1	
19 Dichlorofluoromethane	67	2.263	2.263	0.000	97	1144348	75.0	77.4	
20 Trichlorofluoromethane	101	2.291	2.291	0.000	98	1146776	75.0	77.6	
78 2-Chloroethyl vinyl ether	63	5.657	5.657	0.000	93	326292	75.0	74.3	

Reagents:

MV-Gas A_00023 Amount Added: 75.00 Units: uL
mv-Cent IS/SS_00002 Amount Added: 5.00 Units: uL Run Reagent

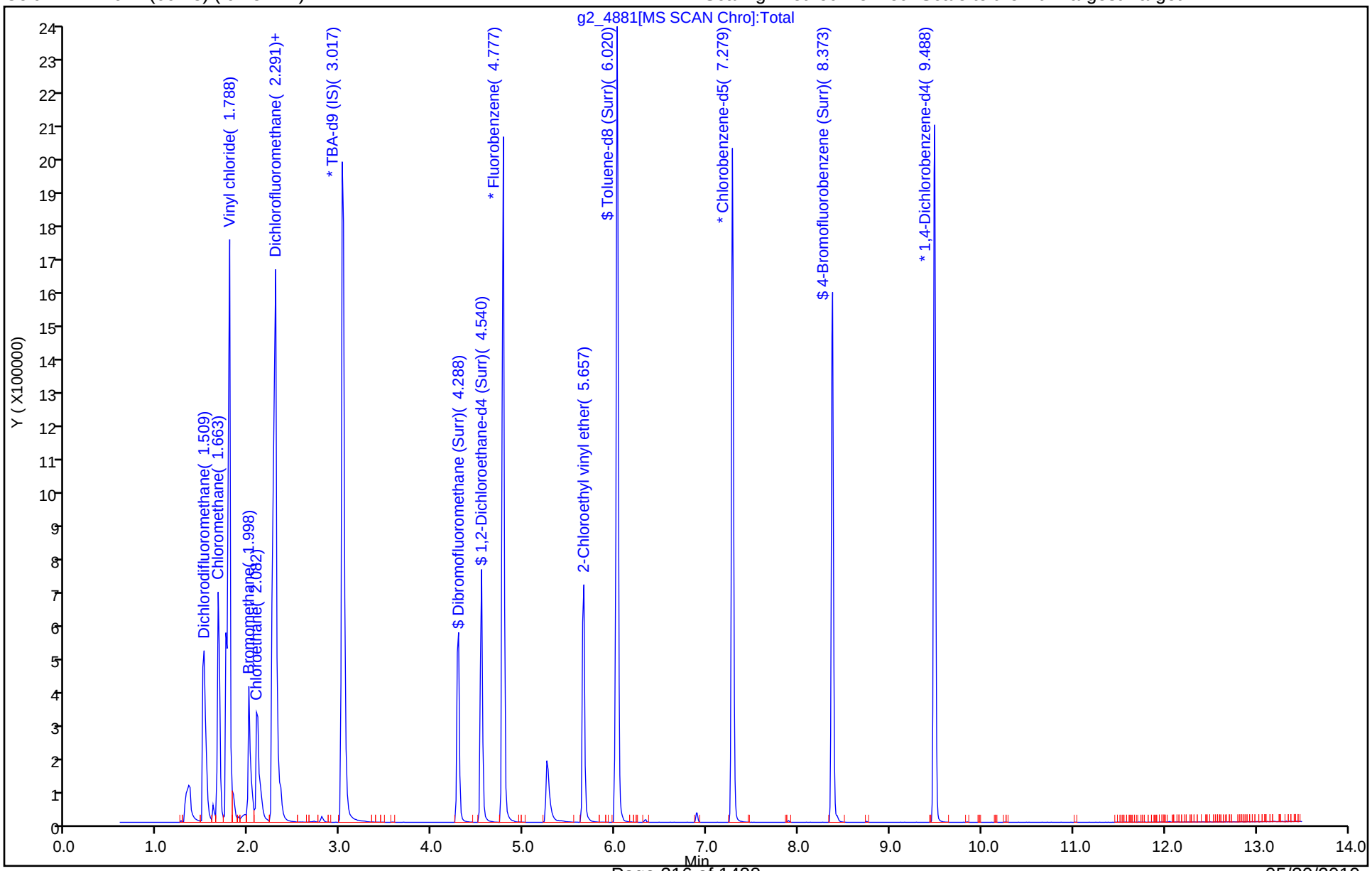
Report Date: 10-May-2019 11:27:05 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4881.D

Injection Date:	06-May-2019 18:51:30	Instrument ID:	VMS_G2	Operator ID:	meierg
Lims ID:	ic			Worklist Smp#:	17
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Lab Sample ID: ICV 280-457190/9 Calibration Date: 05/06/2019 15:43

Instrument ID: VMS_G2 Calib Start Date: 05/06/2019 13:12

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 05/06/2019 18:51

Lab File ID: g2_4873.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethyl ether	Ave	0.2250	0.2372		52.7	50.0	5.4	20.0
Acrolein	Ave	0.0693	0.0600		433	500	-13.4	20.0
1,1-Dichloroethene	Lin1		0.2501		52.9	50.0	5.8	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Lin1		0.2127		52.8	50.0	5.6	20.0
Acetone	Lin2		0.1545		194	200	-2.8	20.0
Iodomethane	Lin1		0.2250		53.5	50.0	7.0	20.0
Carbon disulfide	Lin1		0.7680		52.2	50.0	4.5	20.0
Methyl acetate	Lin2		0.3189		103	100	3.3	20.0
3-Chloro-1-propene	Lin2		0.4268		55.6	50.0	11.2	20.0
Methylene Chloride	Ave	0.2665	0.2668		50.1	50.0	0.1	20.0
t-Butyl alcohol	Ave	0.0832	0.0773		465	500	-7.0	20.0
Acrylonitrile	Ave	0.1523	0.1583		520	500	4.0	20.0
Methyl tert-butyl ether	Ave	0.8526	0.8573		50.3	50.0	0.6	20.0
trans-1,2-Dichloroethene	Lin2		0.2704		52.0	50.0	4.0	20.0
Hexane	Lin1		2.109		56.7	50.0	13.3	20.0
Vinyl acetate	Lin1		0.6550		107	100	6.9	20.0
1,1-Dichloroethane	Lin2		0.4596	0.1000	52.7	50.0	5.4	20.0
2-Butanone (MEK)	Lin2		0.2308		198	200	-0.8	20.0
2,2-Dichloropropane	Lin2		0.4430		53.1	50.0	6.1	20.0
cis-1,2-Dichloroethene	Lin2		0.2993		52.0	50.0	3.9	20.0
sec-Butyl Alcohol	Ave	0.0584	0.0573		1470	1500	-1.9	20.0
Bromochloromethane	Lin2		0.1240		51.9	50.0	3.8	20.0
Tetrahydrofuran	Lin2		0.1627		101	100	1.0	20.0
Chloroform	Lin2		0.4778		52.1	50.0	4.1	20.0
1,1,1-Trichloroethane	Lin1		0.4318		51.6	50.0	3.1	20.0
Cyclohexane	Lin2		0.5152		52.2	50.0	4.5	20.0
1,1-Dichloropropene	Lin2		0.4008		51.9	50.0	3.7	20.0
Carbon tetrachloride	Lin2		0.3397		51.8	50.0	3.6	20.0
Isobutyl alcohol	Lin1		0.0224		1290	1250	3.0	20.0
Benzene	Lin2		1.135		51.2	50.0	2.4	20.0
1,2-Dichloroethane	Ave	0.3677	0.3587		48.8	50.0	-2.5	20.0
Trichloroethene	Lin2		0.2790		50.6	50.0	1.3	20.0
2-Pentanone	Ave	0.3809	0.3737		196	200	-1.9	20.0
Methylcyclohexane	Lin1		0.4062		53.4	50.0	6.8	20.0
1,2-Dichloropropane	Lin2		0.2746		51.7	50.0	3.4	20.0
1,4-Dioxane	Lin2		0.0070		952	1000	-4.8	20.0
Dibromomethane	Lin2		0.1570		51.7	50.0	3.3	20.0
Bromodichloromethane	Lin2		0.3216		49.5	50.0	-1.1	20.0
cis-1,3-Dichloropropene	Lin2		2.016		52.8	50.0	5.7	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4233	0.4162		197	200	-1.7	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Lab Sample ID: ICV 280-457190/9 Calibration Date: 05/06/2019 15:43

Instrument ID: VMS_G2 Calib Start Date: 05/06/2019 13:12

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 05/06/2019 18:51

Lab File ID: g2_4873.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toluene	Ave	1.134	1.140		50.3	50.0	0.6	20.0
trans-1,3-Dichloropropene	Lin2		0.3736		51.4	50.0	2.8	20.0
Ethyl methacrylate	Lin2		1.863		50.9	50.0	1.8	20.0
1,1,2-Trichloroethane	Lin2		0.2270		50.4	50.0	0.7	20.0
Tetrachloroethene	Lin2		1.041		52.8	50.0	5.7	20.0
1,3-Dichloropropane	Lin2		1.880		50.7	50.0	1.3	20.0
2-Hexanone	Ave	1.474	1.440		195	200	-2.3	20.0
Dibromochloromethane	Lin1		0.9090		46.2	50.0	-7.6	20.0
Ethylene Dibromide	Lin1		1.067		51.1	50.0	2.2	20.0
1-Chlorohexane	Ave	1.810	1.766		48.8	50.0	-2.4	20.0
Chlorobenzene	Lin2		3.317	0.3000	51.3	50.0	2.6	20.0
1,1,1,2-Tetrachloroethane	Lin2		1.049		50.9	50.0	1.8	20.0
Ethylbenzene	Lin1		1.879		51.7	50.0	3.3	20.0
m-Xylene & p-Xylene	Lin2		2.300		52.0	50.0	3.9	20.0
o-Xylene	Lin2		2.205		51.4	50.0	2.8	20.0
Styrene	Lin2		3.784		51.8	50.0	3.5	20.0
Bromoform	Lin1		0.5405	0.1000	43.2	50.0	-13.7	20.0
Isopropylbenzene	Lin1		3.712		53.5	50.0	6.9	20.0
Cyclohexanone	Ave	0.1958	0.2363		2410	2000	20.6*	20.0
1,1,2,2-Tetrachloroethane	Lin2		0.995	0.3000	50.0	50.0	-0.0	20.0
Bromobenzene	Lin2		0.8370		50.7	50.0	1.4	20.0
trans-1,4-Dichloro-2-butene	Lin1		0.3520		50.3	50.0	0.5	20.0
1,2,3-Trichloropropane	Lin2		0.3456		48.3	50.0	-3.5	20.0
N-Propylbenzene	Lin2		1.032		51.2	50.0	2.5	20.0
2-Chlorotoluene	Lin2		0.8428		51.7	50.0	3.3	20.0
1,3,5-Trimethylbenzene	Lin2		3.062		52.3	50.0	4.5	20.0
4-Chlorotoluene	Lin2		0.8773		51.4	50.0	2.9	20.0
tert-Butylbenzene	Lin2		2.721		52.0	50.0	4.1	20.0
1,2,4-Trimethylbenzene	Lin2		3.077		52.0	50.0	4.0	20.0
sec-Butylbenzene	Lin2		0.8015		52.2	50.0	4.5	20.0
1,3-Dichlorobenzene	Lin2		1.599		51.0	50.0	2.0	20.0
4-Isopropyltoluene	Lin2		3.529		52.8	50.0	5.6	20.0
1,4-Dichlorobenzene	Ave	1.706	1.671		49.0	50.0	-2.1	20.0
n-Butylbenzene	Lin2		3.186		53.5	50.0	7.0	20.0
1,2-Dichlorobenzene	Ave	1.534	1.505		49.1	50.0	-1.9	20.0
1,2-Dibromo-3-Chloropropane	Lin1		0.2339		46.9	50.0	-6.2	20.0
1,2,4-Trichlorobenzene	Ave	1.014	0.9477		46.7	50.0	-6.5	20.0
Hexachlorobutadiene	Lin2		0.4871		50.2	50.0	0.4	20.0
Naphthalene	Lin2		3.109		46.6	50.0	-6.8	20.0
1,2,3-Trichlorobenzene	Lin1		0.8474		49.1	50.0	-1.8	20.0

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4873.D
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 06-May-2019 15:43:30 ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: icv
Misc. Info.: 280-0081613-009
Operator ID: meierg Instrument ID: VMS_G2
Sublist:

Method: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-May-2019 11:36:37 Calib Date: 06-May-2019 18:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4881.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0324

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.018	3.017	0.001	97	2671507	1000.0	1000.0	
* 2 Fluorobenzene	96	4.777	4.777	0.000	99	1800218	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.279	7.279	0.000	86	394792	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.488	9.488	0.000	95	635313	50.0	50.0	
22 Ethyl ether	59	2.501	2.501	0.000	91	426939	50.0	52.7	
24 Acrolein	56	2.599	2.598	0.001	99	1080232	500.1	433.0	
26 1,1,2-Trichloro-1,2,2-trif	151	2.682	2.682	0.000	77	382969	50.0	52.8	
25 1,1-Dichloroethene	96	2.668	2.682	-0.014	98	450143	50.0	52.9	
27 Acetone	43	2.696	2.696	0.000	100	1112145	200.0	194.3	
28 Iodomethane	142	2.794	2.794	0.000	99	405034	50.0	53.5	
30 Carbon disulfide	76	2.850	2.850	0.000	99	1382582	50.0	52.2	
32 Methyl acetate	43	2.920	2.920	0.000	97	1148143	100.0	103.3	
33 3-Chloro-1-propene	41	2.934	2.934	0.000	91	768327	50.0	55.6	
35 Methylene Chloride	84	3.032	3.031	0.001	89	480325	50.0	50.1	
37 2-Methyl-2-propanol	59	3.087	3.087	0.000	99	1392151	500.0	464.8	
39 Acrylonitrile	53	3.185	3.185	0.000	99	2849747	500.0	519.8	
41 Methyl tert-butyl ether	73	3.213	3.213	0.000	95	1543353	50.0	50.3	
40 trans-1,2-Dichloroethene	96	3.227	3.227	0.000	99	486843	50.0	52.0	
42 Hexane	57	3.409	3.408	0.001	93	832454	50.0	56.7	
46 Vinyl acetate	43	3.506	3.520	-0.014	97	2358342	100.0	106.9	
45 1,1-Dichloroethane	63	3.534	3.534	0.000	96	827390	50.0	52.7	
52 2-Butanone (MEK)	43	3.911	3.911	0.000	100	1661804	200.0	198.4	
51 cis-1,2-Dichloroethene	96	3.939	3.939	0.000	83	538783	50.0	52.0	
50 2,2-Dichloropropane	77	3.939	3.939	0.000	87	797529	50.0	53.1	
55 sec-Butyl Alcohol	45	4.023	4.023	0.000	99	3096464	1500.0	1471.4	
56 Chlorobromomethane	128	4.107	4.107	0.000	93	223162	50.0	51.9	
57 Tetrahydrofuran	42	4.121	4.121	0.000	87	585926	100.0	101.0	
59 Chloroform	83	4.163	4.163	0.000	93	860050	50.0	52.1	
60 1,1,1-Trichloroethane	97	4.302	4.302	0.000	98	777392	50.0	51.6	
61 Cyclohexane	56	4.358	4.358	0.000	90	927496	50.0	52.2	
63 1,1-Dichloropropene	75	4.414	4.414	0.000	95	721489	50.0	51.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
62 Carbon tetrachloride	117	4.414	4.414	0.000	96	611586	50.0	51.8	
66 Isobutyl alcohol	41	4.442	4.442	0.000	94	1009574	1250.0	1287.3	
64 Benzene	78	4.568	4.568	0.000	96	2043146	50.0	51.2	
65 1,2-Dichloroethane	62	4.596	4.596	0.000	97	645651	50.0	48.8	
67 n-Heptane	43	4.749	4.749	0.000	92	820635	50.0	53.4	
69 Trichloroethene	95	5.043	5.042	0.001	98	502289	50.0	50.6	
70 2-Pentanone	43	5.154	5.154	0.000	99	2690892	200.0	196.2	
71 Methylcyclohexane	55	5.224	5.224	0.000	91	731251	50.0	53.4	
72 1,2-Dichloropropane	63	5.252	5.252	0.000	91	494267	50.0	51.7	
74 1,4-Dioxane	88	5.294	5.294	0.000	91	252893	1000.0	951.8	
75 Dibromomethane	93	5.322	5.322	0.000	96	282709	50.0	51.7	
76 Dichlorobromomethane	83	5.448	5.447	0.001	100	578955	50.0	49.5	
79 cis-1,3-Dichloropropene	75	5.797	5.797	0.000	95	795970	50.0	52.8	
81 4-Methyl-2-pentanone (MIBK	43	5.895	5.894	0.001	96	2997041	200.0	196.7	
82 Toluene	91	6.078	6.078	0.000	99	2052817	50.0	50.3	
83 trans-1,3-Dichloropropene	75	6.264	6.264	0.000	94	672474	50.0	51.4	
84 Ethyl methacrylate	69	6.285	6.285	0.000	88	735590	50.0	50.9	
85 1,1,2-Trichloroethane	97	6.428	6.428	0.000	92	408601	50.0	50.4	
86 Tetrachloroethene	164	6.514	6.514	0.000	97	411154	50.0	52.8	
87 1,3-Dichloropropane	76	6.571	6.571	0.000	91	742089	50.0	50.7	
88 2-Hexanone	43	6.600	6.600	0.000	96	2273697	200.0	195.4	
89 Chlorodibromomethane	129	6.764	6.764	0.000	90	358859	50.0	46.2	
90 Ethylene Dibromide	107	6.879	6.878	0.001	98	421371	50.0	51.1	
91 1-Chlorohexane	91	7.272	7.272	0.000	98	697010	50.0	48.8	
92 Chlorobenzene	112	7.308	7.307	0.001	95	1309604	50.0	51.3	
93 1,1,1,2-Tetrachloroethane	131	7.379	7.379	0.000	93	414021	50.0	50.9	
94 Ethylbenzene	106	7.386	7.386	0.000	98	741844	50.0	51.7	
95 m-Xylene & p-Xylene	106	7.501	7.501	0.000	99	907960	50.0	52.0	
96 o-Xylene	106	7.858	7.858	0.000	96	870450	50.0	51.4	
97 Styrene	104	7.880	7.879	0.001	95	1493894	50.0	51.8	
98 Bromoform	173	8.051	8.051	0.000	96	213396	50.0	43.2	
99 Isopropylbenzene	105	8.201	8.201	0.000	96	2358570	50.0	53.5	
100 Cyclohexanone	55	8.294	8.294	0.000	92	3730936	2000.0	2412.8	
102 1,1,2,2-Tetrachloroethane	83	8.487	8.487	0.000	95	632201	50.0	50.0	
103 Bromobenzene	156	8.509	8.509	0.000	94	531776	50.0	50.7	
105 trans-1,4-Dichloro-2-buten	53	8.530	8.530	0.000	76	223643	50.0	50.3	
104 1,2,3-Trichloropropane	110	8.545	8.552	-0.007	84	219567	50.0	48.3	
106 N-Propylbenzene	120	8.595	8.595	0.000	99	655732	50.0	51.2	
107 2-Chlorotoluene	126	8.688	8.687	0.001	96	535460	50.0	51.7	
108 1,3,5-Trimethylbenzene	105	8.766	8.766	0.000	94	1945347	50.0	52.3	
109 4-Chlorotoluene	126	8.802	8.802	0.000	97	557361	50.0	51.4	
110 tert-Butylbenzene	119	9.074	9.074	0.000	93	1728549	50.0	52.0	
111 1,2,4-Trimethylbenzene	105	9.131	9.131	0.000	97	1955084	50.0	52.0	
112 sec-Butylbenzene	134	9.288	9.288	0.000	94	509176	50.0	52.2	
113 1,3-Dichlorobenzene	146	9.410	9.410	0.000	97	1016084	50.0	51.0	
114 4-Isopropyltoluene	119	9.438	9.438	0.000	97	2241900	50.0	52.8	
115 1,4-Dichlorobenzene	146	9.510	9.510	0.000	94	1061585	50.0	49.0	
117 n-Butylbenzene	91	9.839	9.839	0.000	98	2024278	50.0	53.5	
118 1,2-Dichlorobenzene	146	9.860	9.860	0.000	97	956431	50.0	49.1	
119 1,2-Dibromo-3-Chloropropan	157	10.640	10.639	0.001	82	148575	50.0	46.9	
121 1,2,4-Trichlorobenzene	180	11.455	11.447	0.008	94	602055	50.0	46.7	
122 Hexachlorobutadiene	225	11.598	11.590	0.008	98	309446	50.0	50.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
123 Naphthalene	128	11.712	11.712	0.000	97	1974942	50.0	46.6	
124 1,2,3-Trichlorobenzene	180	11.934	11.934	0.000	95	538362	50.0	49.1	
S 137 1,2-Dichloroethene, Total	96				0		100.0	104.0	
S 143 Xylenes, Total	106				0		100.0	103.3	
S 138 Xylenes, Total (URS)	1				0		100.0	103.3	
S 144 1,2-Dichloroethene, Total	1				0		100.0	104.0	
S 142 Trihalomethanes, Total	1				0		200.0	190.9	
S 140 1,3-Dichloropropene, Total	1				0		100.0	104.2	

Reagents:

mv-Cent IS_00002 Amount Added: 5.00 Units: uL
MV-MegaMain B_00012 Amount Added: 50.00 Units: uL

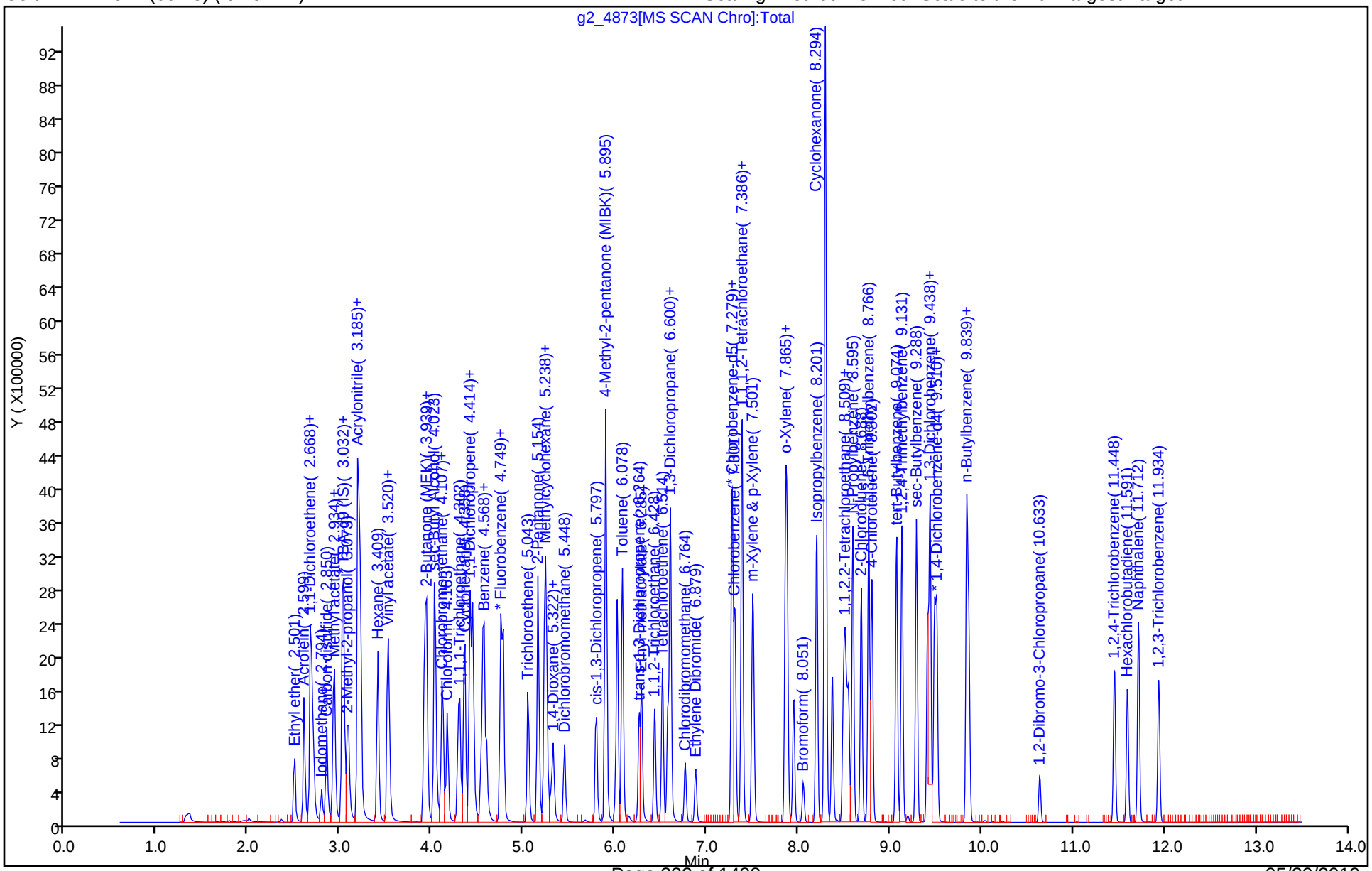
Report Date: 10-May-2019 11:36:40 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4873.D

Injection Date:	06-May-2019 15:43:30	Instrument ID:	VMS_G2	Operator ID:	meierg
Lims ID:	icv			Worklist Smp#:	9
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Lab Sample ID: ICV 280-457190/18 Calibration Date: 05/06/2019 19:13

Instrument ID: VMS_G2 Calib Start Date: 05/06/2019 13:12

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 05/06/2019 18:51

Lab File ID: g2_4882.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2882	0.2976		51.6	50.0	3.3	20.0
Chloromethane	Ave	0.2961	0.3010	0.1000	50.8	50.0	1.7	20.0
Vinyl chloride	Ave	0.2924	0.2966		50.7	50.0	1.4	20.0
Bromomethane	Lin1		0.1381		57.4	50.0	14.8	20.0
Chloroethane	Ave	0.1716	0.1718		50.1	50.0	0.1	20.0
Dichlorofluoromethane	Ave	0.4450	0.4622		51.9	50.0	3.9	20.0
Trichlorofluoromethane	Ave	0.4444	0.4616		51.9	50.0	3.8	20.0
2-Chloroethyl vinyl ether	Lin2		0.1305		49.5	50.0	-1.0	20.0
Dibromofluoromethane (Surr)	Ave	0.2172	0.2176		50.1	50.0	0.2	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2884	0.2953		51.2	50.0	2.4	20.0
Toluene-d8 (Surr)	Ave	4.405	4.389		49.8	50.0	-0.4	20.0
4-Bromofluorobenzene (Surr)	Ave	0.9451	0.9432		49.9	50.0	-0.2	20.0

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4882.D
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 06-May-2019 19:13:30 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: icv
Misc. Info.: 280-0081613-018
Operator ID: meierg Instrument ID: VMS_G2
Sublist:

Method: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-May-2019 11:27:07 Calib Date: 06-May-2019 18:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4881.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0324

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.017	3.017	0.000	82	2421659	1000.0	1000.0	
* 2 Fluorobenzene	96	4.777	4.777	0.000	99	1666440	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.279	7.279	0.000	87	354372	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.488	9.488	0.000	96	563459	50.0	50.0	
$ 6 Dibromofluoromethane (Surr	111	4.288	4.288	0.000	93	362666	50.0	50.1	
$ 7 1,2-Dichloroethane-d4 (Sur	65	4.540	4.540	0.000	98	492126	50.0	51.2	
$ 8 Toluene-d8 (Surr)	98	6.020	6.020	0.000	93	1555310	50.0	49.8	
$ 9 4-Bromofluorobenzene (Surr	95	8.366	8.366	0.000	88	531439	50.0	49.9	
12 Dichlorodifluoromethane	85	1.509	1.495	0.014	99	496006	50.0	51.6	
14 Chloromethane	50	1.663	1.663	0.000	99	501608	50.0	50.8	
15 Vinyl chloride	62	1.746	1.746	0.000	98	494227	50.0	50.7	
17 Bromomethane	94	1.998	1.998	0.000	90	230105	50.0	57.4	
18 Chloroethane	64	2.096	2.096	0.000	100	286364	50.0	50.1	
19 Dichlorofluoromethane	67	2.263	2.263	0.000	96	770237	50.0	51.9	
20 Trichlorofluoromethane	101	2.291	2.291	0.000	98	769152	50.0	51.9	
78 2-Chloroethyl vinyl ether	63	5.657	5.657	0.000	92	217382	50.0	49.5	

Reagents:

MV-Gas B_00026 Amount Added: 50.00 Units: uL
mv-Cent IS/SS_00002 Amount Added: 5.00 Units: uL Run Reagent

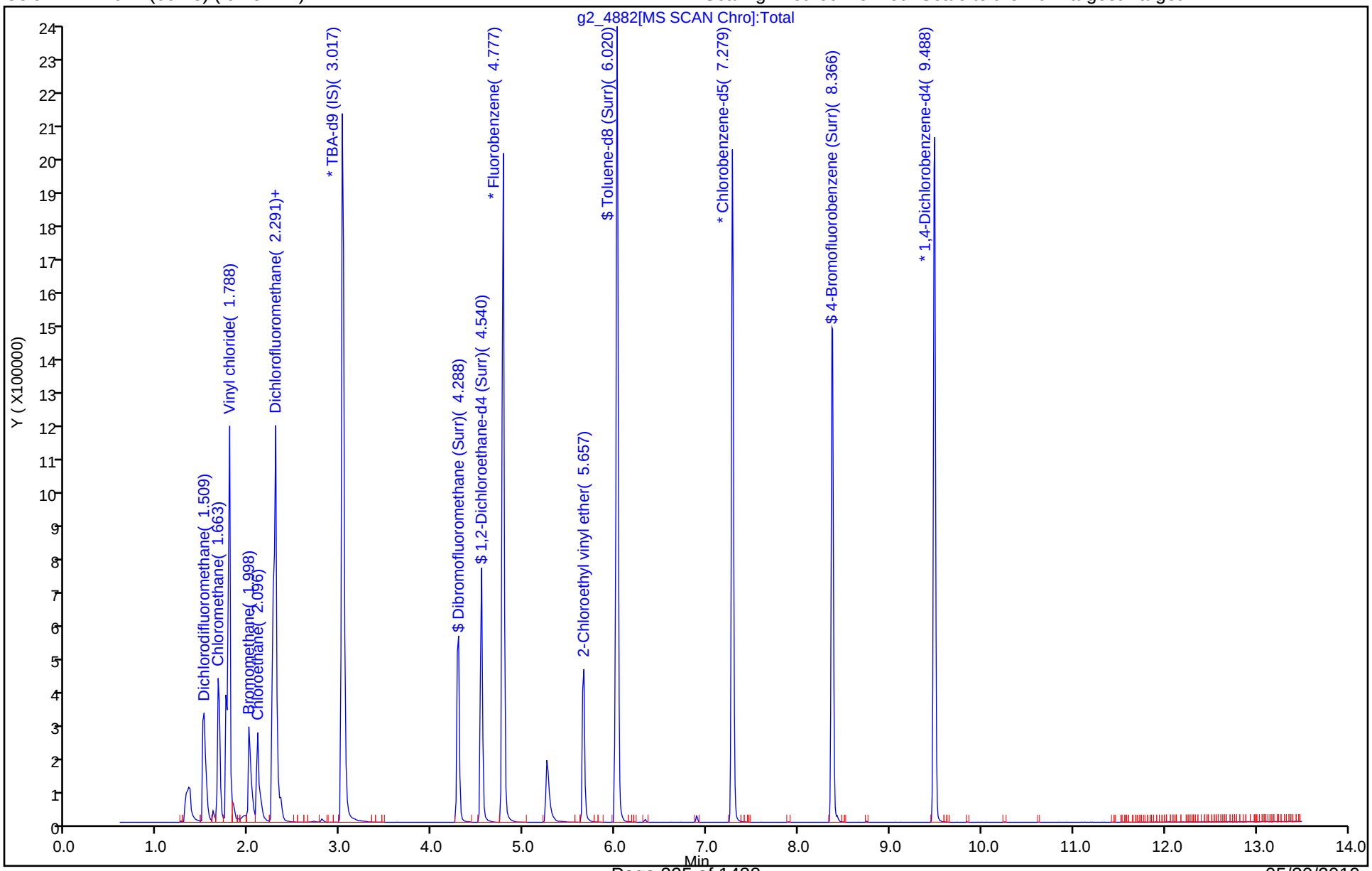
Report Date: 10-May-2019 11:27:08 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4882.D

Injection Date:	06-May-2019 19:13:30	Instrument ID:	VMS_G2	Operator ID:	meierg
Lims ID:	icv			Worklist Smp#:	18
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 280-457279/2 Calibration Date: 05/07/2019 10:25

Instrument ID: VMS_G2 Calib Start Date: 05/06/2019 13:12

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 05/06/2019 18:51

Lab File ID: g2_4923.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethyl ether	Ave	0.2250	0.2196		48.8	50.0	-2.4	20.0
Acrolein	Ave	0.0693	0.0607		433	494	-12.4	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Lin1		0.1960		48.7	50.0	-2.7	20.0
1,1-Dichloroethene	Lin1		0.2215		46.9	50.0	-6.3	20.0
Acetone	Lin2		0.1451		181	200	-9.3	20.0
Iodomethane	Lin1		0.2348		55.8	50.0	11.6	20.0
Carbon disulfide	Lin1		0.6687		45.5	50.0	-9.0	20.0
Methyl acetate	Lin2		0.2905		94.1	100	-5.9	20.0
3-Chloro-1-propene	Lin2		0.3691		48.1	50.0	-3.8	20.0
Methylene Chloride	Ave	0.2665	0.2426		45.5	50.0	-9.0	20.0
t-Butyl alcohol	Ave	0.0832	0.0720		433	500	-13.4	20.0
Acrylonitrile	Ave	0.1523	0.1418		465	500	-6.9	20.0
Methyl tert-butyl ether	Ave	0.8526	0.8008		47.0	50.0	-6.1	20.0
trans-1,2-Dichloroethene	Lin2		0.2473		47.6	50.0	-4.9	20.0
Hexane	Lin1		1.768		47.5	50.0	-5.1	20.0
Vinyl acetate	Lin1		0.5828		95.2	100	-4.8	20.0
1,1-Dichloroethane	Lin2		0.4197	0.1000	48.1	50.0	-3.8	20.0
2-Butanone (MEK)	Lin2		0.2117		182	200	-9.1	20.0
2,2-Dichloropropane	Lin2		0.4120		49.4	50.0	-1.3	20.0
cis-1,2-Dichloroethene	Lin2		0.2711		47.1	50.0	-5.8	20.0
sec-Butyl Alcohol	Ave	0.0584	0.0503		1290	1500	-14.0	20.0
Bromochloromethane	Lin2		0.1144		47.9	50.0	-4.2	20.0
Tetrahydrofuran	Lin2		0.1457		90.3	100	-9.7	20.0
Chloroform	Lin2		0.4425		48.2	50.0	-3.6	20.0
1,1,1-Trichloroethane	Lin1		0.4036		48.2	50.0	-3.6	20.0
Cyclohexane	Lin2		0.4618		46.8	50.0	-6.4	20.0
1,1-Dichloropropene	Lin2		0.3652		47.3	50.0	-5.5	20.0
Carbon tetrachloride	Lin2		0.3156		48.1	50.0	-3.7	20.0
Isobutyl alcohol	Lin1		0.0199		1140	1250	-8.7	20.0
Benzene	Lin2		1.031		46.5	50.0	-7.0	20.0
1,2-Dichloroethane	Ave	0.3677	0.3426		46.6	50.0	-6.8	20.0
Trichloroethene	Lin2		0.2604		47.3	50.0	-5.5	20.0
2-Pentanone	Ave	0.3809	0.3339		175	200	-12.3	20.0
Methylcyclohexane	Lin1		0.3554		46.7	50.0	-6.6	20.0
1,2-Dichloropropane	Lin2		0.2502		47.0	50.0	-5.9	20.0
1,4-Dioxane	Lin2		0.0065		886	1000	-11.4	20.0
Dibromomethane	Lin2		0.1458		48.0	50.0	-4.1	20.0
Bromodichloromethane	Lin2		0.2999		46.1	50.0	-7.7	20.0
cis-1,3-Dichloropropene	Lin2		1.816		47.6	50.0	-4.8	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4233	0.3773		178	200	-10.9	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 280-457279/2 Calibration Date: 05/07/2019 10:25

Instrument ID: VMS_G2 Calib Start Date: 05/06/2019 13:12

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 05/06/2019 18:51

Lab File ID: g2_4923.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toluene	Ave	1.134	1.016		44.8	50.0	-10.3	20.0
trans-1,3-Dichloropropene	Lin2		0.3466		47.7	50.0	-4.6	20.0
Ethyl methacrylate	Lin2		1.657		45.3	50.0	-9.4	20.0
1,1,2-Trichloroethane	Lin2		0.2098		46.5	50.0	-6.9	20.0
Tetrachloroethene	Lin2		0.9059		46.0	50.0	-8.1	20.0
1,3-Dichloropropane	Lin2		1.711		46.1	50.0	-7.8	20.0
2-Hexanone	Ave	1.474	1.316		179	200	-10.7	20.0
Dibromochloromethane	Lin1		0.8187		41.7	50.0	-16.6	20.0
Ethylene Dibromide	Lin1		0.9567		45.8	50.0	-8.4	20.0
1-Chlorohexane	Ave	1.810	1.596		44.1	50.0	-11.8	20.0
Chlorobenzene	Lin2		2.973	0.3000	45.9	50.0	-8.1	20.0
1,1,1,2-Tetrachloroethane	Lin2		0.9225		44.8	50.0	-10.4	20.0
Ethylbenzene	Lin1		1.689		46.4	50.0	-7.1	20.0
m-Xylene & p-Xylene	Lin2		2.084		47.1	50.0	-5.8	20.0
o-Xylene	Lin2		1.983		46.2	50.0	-7.6	20.0
Styrene	Lin2		3.420		46.8	50.0	-6.4	20.0
Bromoform	Lin1		0.4654	0.1000	37.3	50.0	-25.5*	20.0
Isopropylbenzene	Lin1		3.237		46.6	50.0	-6.8	20.0
Cyclohexanone	Ave	0.1958	0.1672		1710	2000	-14.6	20.0
1,1,2,2-Tetrachloroethane	Lin2		0.8253	0.3000	41.5	50.0	-17.1	20.0
Bromobenzene	Lin2		0.7262		44.0	50.0	-12.0	20.0
trans-1,4-Dichloro-2-butene	Lin1		0.2932		41.9	50.0	-16.2	20.0
1,2,3-Trichloropropane	Lin2		0.2985		41.7	50.0	-16.6	20.0
N-Propylbenzene	Lin2		0.9046		44.9	50.0	-10.2	20.0
2-Chlorotoluene	Lin2		0.7372		45.2	50.0	-9.6	20.0
1,3,5-Trimethylbenzene	Lin2		2.720		46.4	50.0	-7.2	20.0
4-Chlorotoluene	Lin2		0.7823		45.9	50.0	-8.3	20.0
tert-Butylbenzene	Lin2		2.394		45.8	50.0	-8.4	20.0
1,2,4-Trimethylbenzene	Lin2		2.716		45.9	50.0	-8.2	20.0
sec-Butylbenzene	Lin2		0.6939		45.2	50.0	-9.5	20.0
1,3-Dichlorobenzene	Lin2		1.425		45.4	50.0	-9.2	20.0
4-Isopropyltoluene	Lin2		3.101		46.4	50.0	-7.3	20.0
1,4-Dichlorobenzene	Ave	1.706	1.473		43.2	50.0	-13.7	20.0
n-Butylbenzene	Lin2		2.801		47.0	50.0	-6.0	20.0
1,2-Dichlorobenzene	Ave	1.534	1.349		44.0	50.0	-12.1	20.0
1,2-Dibromo-3-Chloropropane	Lin1		0.2088		41.9	50.0	-16.2	20.0
1,2,4-Trichlorobenzene	Ave	1.014	0.8782		43.3	50.0	-13.4	20.0
Hexachlorobutadiene	Lin2		0.4502		46.4	50.0	-7.2	20.0
Naphthalene	Lin2		2.838		42.6	50.0	-14.9	20.0
1,2,3-Trichlorobenzene	Lin1		0.7984		46.3	50.0	-7.5	20.0
Dibromofluoromethane (Surr)	Ave	0.2172	0.2371		54.6	50.0	9.1	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 280-457279/2 Calibration Date: 05/07/2019 10:25

Instrument ID: VMS_G2 Calib Start Date: 05/06/2019 13:12

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 05/06/2019 18:51

Lab File ID: g2_4923.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichloroethane-d4 (Surr)	Ave	0.2884	0.3048		52.9	50.0	5.7	20.0
Toluene-d8 (Surr)	Ave	4.405	4.262		48.4	50.0	-3.3	20.0
4-Bromofluorobenzene (Surr)	Ave	0.9451	0.9160		48.5	50.0	-3.1	20.0

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\g2_4923.D
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 07-May-2019 10:25:30 ALS Bottle#: 1 Worklist Smp#: 2
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ccv
Operator ID: meierg Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub172

Method: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 11-May-2019 11:08:19 Calib Date: 06-May-2019 18:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4881.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0311

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 TBA-d9 (IS)	65	3.031	3.031	0.000	93	2773416	1000.0	1000.0	
*	2 Fluorobenzene	96	4.777	4.777	0.000	99	1817990	50.0	50.0	
*	3 Chlorobenzene-d5	119	7.279	7.279	0.000	86	405187	50.0	50.0	
*	4 1,4-Dichlorobenzene-d4	152	9.488	9.488	0.000	95	673198	50.0	50.0	
$	6 Dibromofluoromethane (Surr	111	4.288	4.288	0.000	93	430977	50.0	54.6	
$	7 1,2-Dichloroethane-d4 (Sur	65	4.540	4.540	0.000	97	554184	50.0	52.9	
$	8 Toluene-d8 (Surr)	98	6.020	6.020	0.000	93	1726857	50.0	48.4	
$	9 4-Bromofluorobenzene (Surr	95	8.373	8.373	0.000	87	616644	50.0	48.5	
	22 Ethyl ether	59	2.501	2.501	0.000	90	399297	50.0	48.8	
	24 Acrolein	56	2.598	2.598	0.000	99	1090342	493.8	432.8	
	26 1,1,2-Trichloro-1,2,2-trif	151	2.682	2.682	0.000	78	356293	50.0	48.7	
	25 1,1-Dichloroethene	96	2.682	2.682	0.000	97	402751	50.0	46.9	
	27 Acetone	43	2.710	2.710	0.000	99	1054775	200.0	181.4	
	28 Iodomethane	142	2.794	2.794	0.000	100	426778	50.0	55.8	
	30 Carbon disulfide	76	2.850	2.850	0.000	99	1215677	50.0	45.5	
	32 Methyl acetate	43	2.920	2.920	0.000	97	1056287	100.0	94.1	
	33 3-Chloro-1-propene	41	2.933	2.933	0.000	90	671040	50.0	48.1	
	35 Methylene Chloride	84	3.031	3.031	0.000	46	441063	50.0	45.5	
	37 2-Methyl-2-propanol	59	3.087	3.087	0.000	99	1309326	500.0	432.9	
	39 Acrylonitrile	53	3.185	3.185	0.000	99	2576972	500.0	465.5	
	41 Methyl tert-butyl ether	73	3.213	3.213	0.000	94	1455752	50.0	47.0	
	40 trans-1,2-Dichloroethene	96	3.227	3.227	0.000	99	449581	50.0	47.6	
	42 Hexane	57	3.408	3.408	0.000	93	716166	50.0	47.5	
	46 Vinyl acetate	43	3.520	3.520	0.000	97	2119172	100.0	95.2	
	45 1,1-Dichloroethane	63	3.534	3.534	0.000	96	762991	50.0	48.1	
	52 2-Butanone (MEK)	43	3.911	3.911	0.000	100	1539726	200.0	181.9	
	51 cis-1,2-Dichloroethene	96	3.939	3.939	0.000	82	492881	50.0	47.1	
	50 2,2-Dichloropropane	77	3.939	3.939	0.000	87	748993	50.0	49.4	
	55 sec-Butyl Alcohol	45	4.037	4.037	0.000	99	2742269	1500.0	1290.3	
	56 Chlorobromomethane	128	4.107	4.107	0.000	94	207980	50.0	47.9	
	57 Tetrahydrofuran	42	4.121	4.121	0.000	87	529588	100.0	90.3	
	59 Chloroform	83	4.163	4.163	0.000	93	804498	50.0	48.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
60 1,1,1-Trichloroethane	97	4.302	4.302	0.000	97	733805	50.0	48.2	
61 Cyclohexane	56	4.358	4.358	0.000	89	839514	50.0	46.8	
63 1,1-Dichloropropene	75	4.414	4.414	0.000	95	663968	50.0	47.3	
62 Carbon tetrachloride	117	4.414	4.414	0.000	87	573725	50.0	48.1	
66 Isobutyl alcohol	41	4.442	4.442	0.000	94	904392	1250.0	1141.0	
64 Benzene	78	4.568	4.568	0.000	95	1874959	50.0	46.5	
65 1,2-Dichloroethane	62	4.595	4.595	0.000	98	622893	50.0	46.6	
67 n-Heptane	43	4.749	4.749	0.000	92	717362	50.0	46.1	
69 Trichloroethene	95	5.042	5.042	0.000	98	473459	50.0	47.3	
70 2-Pentanone	43	5.154	5.154	0.000	99	2428427	200.0	175.3	
71 Methylcyclohexane	55	5.224	5.224	0.000	91	646108	50.0	46.7	
72 1,2-Dichloropropane	63	5.252	5.252	0.000	92	454778	50.0	47.0	
74 1,4-Dioxane	88	5.308	5.308	0.000	91	237671	1000.0	885.9	
75 Dibromomethane	93	5.322	5.322	0.000	96	265033	50.0	48.0	
76 Dichlorobromomethane	83	5.447	5.447	0.000	99	545253	50.0	46.1	
79 cis-1,3-Dichloropropene	75	5.797	5.797	0.000	95	735883	50.0	47.6	
81 4-Methyl-2-pentanone (MIBK	43	5.894	5.894	0.000	97	2743528	200.0	178.3	
82 Toluene	91	6.078	6.078	0.000	99	1847951	50.0	44.8	
83 trans-1,3-Dichloropropene	75	6.263	6.263	0.000	94	630168	50.0	47.7	
84 Ethyl methacrylate	69	6.285	6.285	0.000	88	671471	50.0	45.3	
85 1,1,2-Trichloroethane	97	6.428	6.428	0.000	92	381316	50.0	46.5	
86 Tetrachloroethene	164	6.514	6.514	0.000	97	367069	50.0	46.0	
87 1,3-Dichloropropane	76	6.578	6.578	0.000	91	693278	50.0	46.1	
88 2-Hexanone	43	6.600	6.600	0.000	96	2133318	200.0	178.6	
89 Chlorodibromomethane	129	6.764	6.764	0.000	90	331741	50.0	41.7	
90 Ethylene Dibromide	107	6.878	6.878	0.000	98	387652	50.0	45.8	
91 1-Chlorohexane	91	7.272	7.272	0.000	98	646600	50.0	44.1	
92 Chlorobenzene	112	7.307	7.307	0.000	94	1204493	50.0	45.9	
93 1,1,1,2-Tetrachloroethane	131	7.379	7.379	0.000	93	373766	50.0	44.8	
94 Ethylbenzene	106	7.386	7.386	0.000	98	684510	50.0	46.4	
95 m-Xylene & p-Xylene	106	7.500	7.500	0.000	100	844585	50.0	47.1	
96 o-Xylene	106	7.858	7.858	0.000	96	803471	50.0	46.2	
97 Styrene	104	7.879	7.879	0.000	95	1385798	50.0	46.8	
98 Bromoform	173	8.051	8.051	0.000	96	188581	50.0	37.3	
99 Isopropylbenzene	105	8.201	8.201	0.000	96	2179021	50.0	46.6	
100 Cyclohexanone	55	8.294	8.294	0.000	93	2709931	2000.0	1707.5	
102 1,1,2,2-Tetrachloroethane	83	8.487	8.487	0.000	95	555564	50.0	41.5	
103 Bromobenzene	156	8.509	8.509	0.000	97	488856	50.0	44.0	
105 trans-1,4-Dichloro-2-buten	53	8.530	8.530	0.000	75	197347	50.0	41.9	
104 1,2,3-Trichloropropane	110	8.552	8.552	0.000	84	200954	50.0	41.7	
106 N-Propylbenzene	120	8.594	8.594	0.000	99	608973	50.0	44.9	
107 2-Chlorotoluene	126	8.687	8.687	0.000	96	496253	50.0	45.2	
108 1,3,5-Trimethylbenzene	105	8.766	8.766	0.000	94	1830792	50.0	46.4	
109 4-Chlorotoluene	126	8.802	8.802	0.000	97	526627	50.0	45.9	
110 tert-Butylbenzene	119	9.074	9.074	0.000	94	1611723	50.0	45.8	
111 1,2,4-Trimethylbenzene	105	9.131	9.131	0.000	97	1828464	50.0	45.9	
112 sec-Butylbenzene	134	9.288	9.288	0.000	94	467140	50.0	45.2	
113 1,3-Dichlorobenzene	146	9.410	9.410	0.000	97	959248	50.0	45.4	
114 4-Isopropyltoluene	119	9.438	9.438	0.000	97	2087285	50.0	46.4	
115 1,4-Dichlorobenzene	146	9.510	9.510	0.000	94	991379	50.0	43.2	
117 n-Butylbenzene	91	9.839	9.839	0.000	98	1885690	50.0	47.0	
118 1,2-Dichlorobenzene	146	9.860	9.860	0.000	97	907969	50.0	44.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
119 1,2-Dibromo-3-Chloropropan	157	10.632	10.632	0.000	82	140587	50.0	41.9	
121 1,2,4-Trichlorobenzene	180	11.455	11.455	0.000	94	591195	50.0	43.3	
122 Hexachlorobutadiene	225	11.598	11.598	0.000	98	303076	50.0	46.4	
123 Naphthalene	128	11.712	11.712	0.000	97	1910766	50.0	42.6	
124 1,2,3-Trichlorobenzene	180	11.934	11.934	0.000	95	537455	50.0	46.3	
S 137 1,2-Dichloroethene, Total	96				0		100.0	94.6	
S 143 Xylenes, Total	106				0		100.0	93.3	
S 138 Xylenes, Total (URS)	1				0		100.0	93.3	
S 144 1,2-Dichloroethene, Total	1				0		100.0	94.6	
S 142 Trihalomethanes, Total	1				0		200.0	173.3	
S 140 1,3-Dichloropropene, Total	1				0		100.0	95.3	

Reagents:

MV-MegaMainA_00014	Amount Added:	50.00	Units: uL	
mv-Cent IS/SS_00002	Amount Added:	5.00	Units: uL	Run Reagent

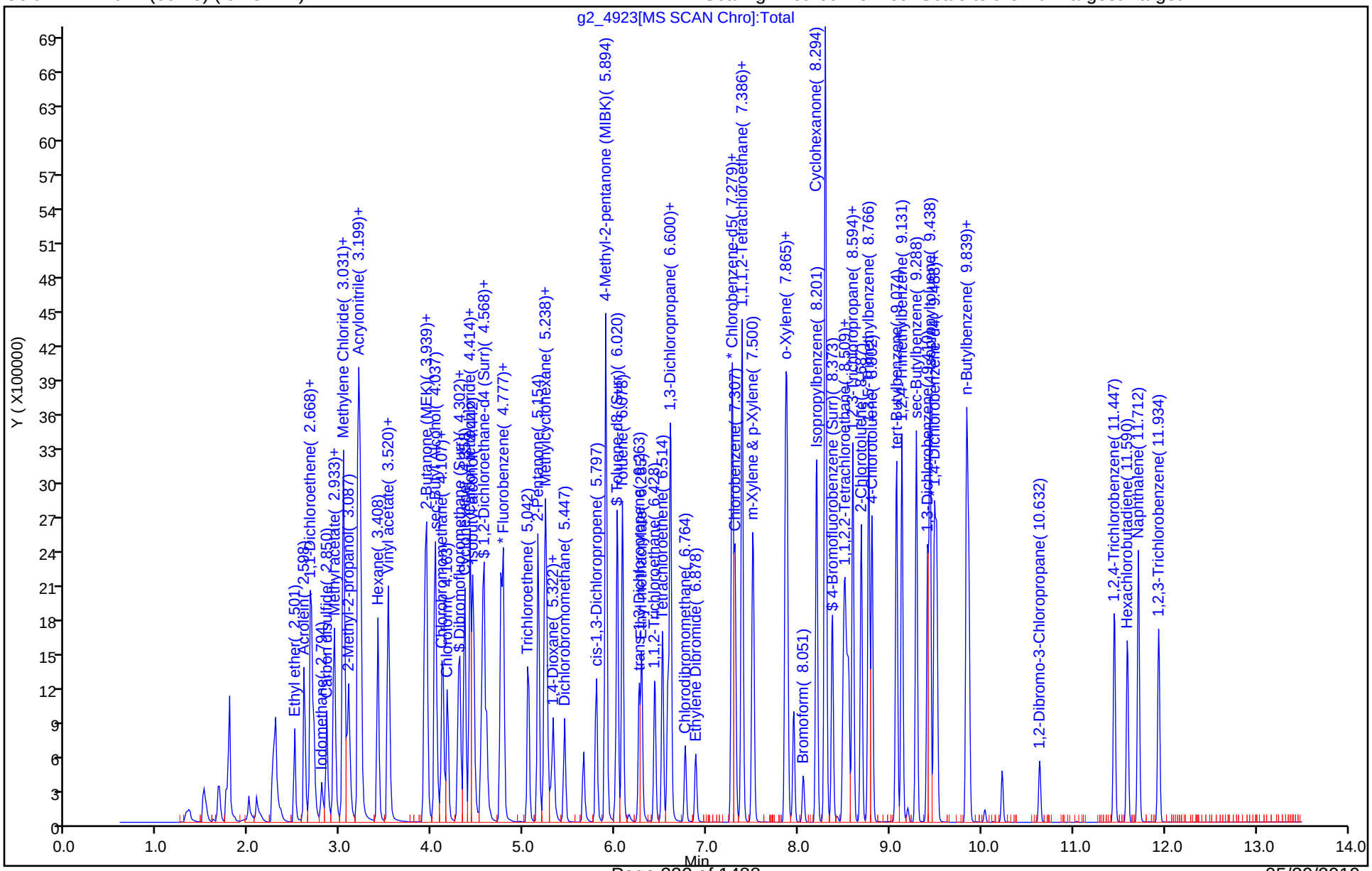
Report Date: 11-May-2019 11:08:21 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\g2_4923.D

Injection Date:	07-May-2019 10:25:30	Instrument ID:	VMS_G2	Operator ID:	meierg
Lims ID:	ccv			Worklist Smp#:	2
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 280-457279/3 Calibration Date: 05/07/2019 10:47

Instrument ID: VMS_G2 Calib Start Date: 05/06/2019 13:12

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 05/06/2019 18:51

Lab File ID: g2_4924.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2882	0.2689		23.3	25.0	-6.7	20.0
Chloromethane	Ave	0.2961	0.2556	0.1000	21.6	25.0	-13.7	20.0
Vinyl chloride	Ave	0.2924	0.2575		22.0	25.0	-11.9	20.0
Bromomethane	Lin1		0.1319		27.1	25.0	8.3	20.0
Chloroethane	Ave	0.1716	0.1490		21.7	25.0	-13.2	20.0
Dichlorofluoromethane	Ave	0.4450	0.4120		23.2	25.0	-7.4	20.0
Trichlorofluoromethane	Ave	0.4444	0.4088		23.0	25.0	-8.0	20.0
2-Chloroethyl vinyl ether	Lin2		0.1426		27.3	25.0	9.0	20.0
Dibromofluoromethane (Surr)	Ave	0.2172	0.2294		52.8	50.0	5.6	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2884	0.2917		50.6	50.0	1.2	20.0
Toluene-d8 (Surr)	Ave	4.405	4.346		49.3	50.0	-1.4	20.0
4-Bromofluorobenzene (Surr)	Ave	0.9451	0.9396		49.7	50.0	-0.6	20.0

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\g2_4924.D
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 07-May-2019 10:47:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ccv
Operator ID: meierg Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub168

Method: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 11-May-2019 11:08:27 Calib Date: 06-May-2019 18:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4881.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0311

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 TBA-d9 (IS)	65	3.031	3.031	0.000	88	2900041	1000.0	1000.0	
*	2 Fluorobenzene	96	4.777	4.777	0.000	99	1888958	50.0	50.0	
*	3 Chlorobenzene-d5	119	7.279	7.279	0.000	87	409013	50.0	50.0	
*	4 1,4-Dichlorobenzene-d4	152	9.488	9.488	0.000	96	653593	50.0	50.0	
$	6 Dibromofluoromethane (Surr	111	4.288	4.288	0.000	93	433243	50.0	52.8	
$	7 1,2-Dichloroethane-d4 (Sur	65	4.540	4.540	0.000	98	551041	50.0	50.6	
$	8 Toluene-d8 (Surr)	98	6.021	6.021	0.000	93	1777488	50.0	49.3	
$	9 4-Bromofluorobenzene (Surr	95	8.373	8.373	0.000	88	614121	50.0	49.7	
	12 Dichlorodifluoromethane	85	1.509	1.509	0.000	99	253973	25.0	23.3	
	14 Chloromethane	50	1.677	1.677	0.000	99	241392	25.0	21.6	
	15 Vinyl chloride	62	1.747	1.747	0.000	98	243189	25.0	22.0	
	17 Bromomethane	94	1.998	1.998	0.000	89	124591	25.0	27.1	
	18 Chloroethane	64	2.096	2.096	0.000	100	140713	25.0	21.7	
	19 Dichlorofluoromethane	67	2.263	2.263	0.000	97	389165	25.0	23.2	
	20 Trichlorofluoromethane	101	2.291	2.291	0.000	98	386054	25.0	23.0	
	78 2-Chloroethyl vinyl ether	63	5.657	5.657	0.000	93	134689	25.0	27.3	

Reagents:

MV-Gas A_00023 Amount Added: 25.00 Units: uL
mv-Cent IS/SS_00002 Amount Added: 5.00 Units: uL Run Reagent

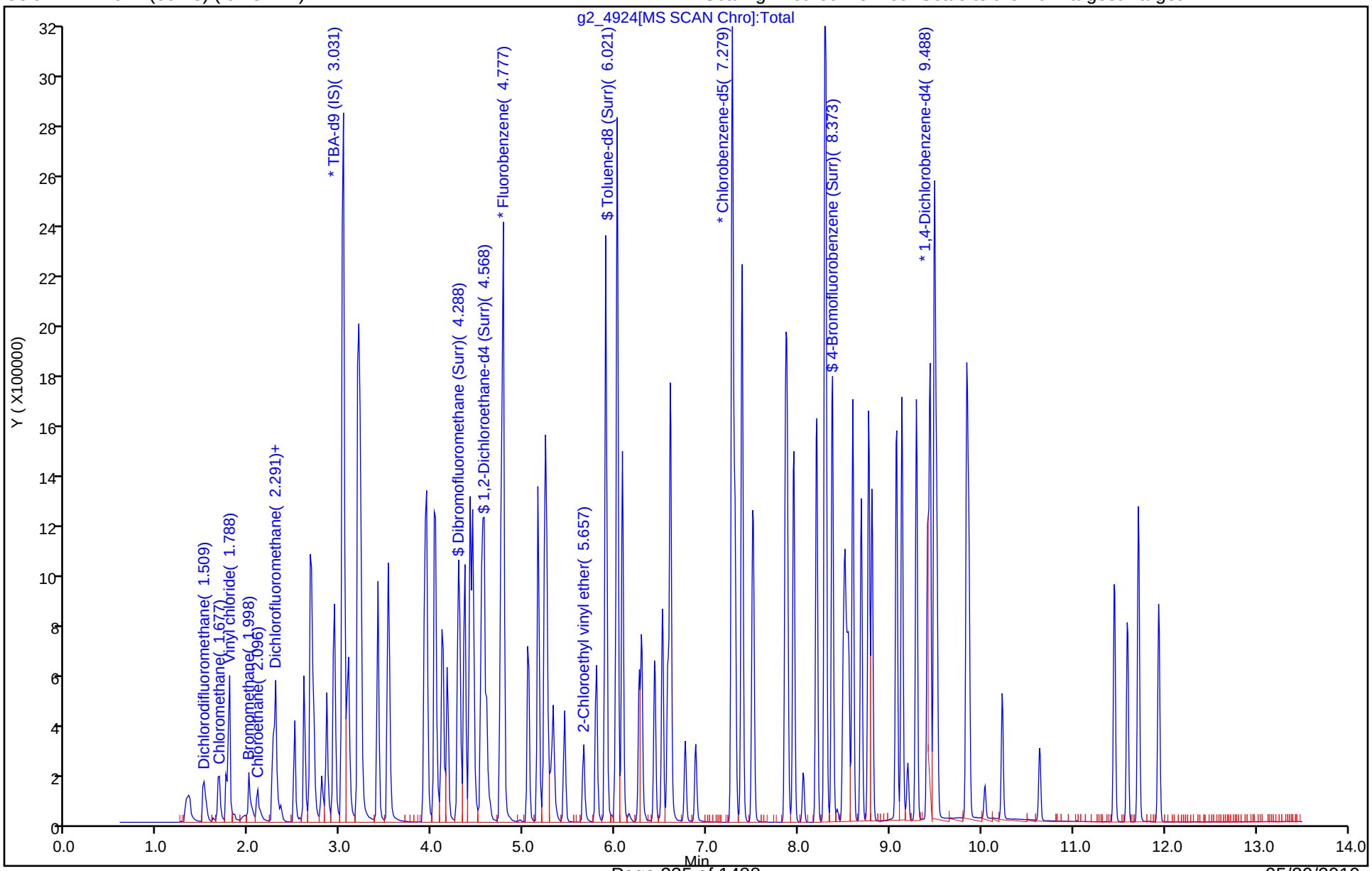
Report Date: 11-May-2019 11:08:28 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\g2_4924.D

Injection Date:	07-May-2019 10:47:30	Instrument ID:	VMS_G2	Operator ID:	meierg
Lims ID:	ccv			Worklist Smp#:	3
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCVC 280-457279/32 Calibration Date: 05/07/2019 20:44

Instrument ID: VMS_G2 Calib Start Date: 05/06/2019 13:12

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 05/06/2019 18:51

Lab File ID: g2_4952.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2882	0.2619		45.4	50.0	-9.1	50.0
Chloromethane	Ave	0.2961	0.2419	0.1000	40.9	50.0	-18.3	50.0
Vinyl chloride	Ave	0.2924	0.2437		41.7	50.0	-16.7	50.0
Bromomethane	Lin1		0.0837		34.5	50.0	-30.9	50.0
Chloroethane	Ave	0.1716	0.1468		42.8	50.0	-14.5	50.0
Dichlorofluoromethane	Ave	0.4450	0.4249		47.7	50.0	-4.5	50.0
Trichlorofluoromethane	Ave	0.4444	0.4294		48.3	50.0	-3.4	50.0
Ethyl ether	Ave	0.2250	0.2332		51.8	50.0	3.6	50.0
Acrolein	Ave	0.0693	0.0569		406	494	-17.8	50.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Lin1		0.1889		46.9	50.0	-6.2	50.0
1,1-Dichloroethene	Lin1		0.2230		47.2	50.0	-5.7	50.0
Acetone	Lin2		0.1624		205	200	2.6	50.0
Iodomethane	Lin1		0.2059		48.9	50.0	-2.1	50.0
Carbon disulfide	Lin1		0.6366		43.3	50.0	-13.4	50.0
Methyl acetate	Lin2		0.3208		104	100	4.0	50.0
3-Chloro-1-propene	Lin2		0.3354		43.7	50.0	-12.7	50.0
Methylene Chloride	Ave	0.2665	0.2496		46.8	50.0	-6.3	50.0
t-Butyl alcohol	Ave	0.0832	0.0788		474	500	-5.3	50.0
Acrylonitrile	Ave	0.1523	0.1525		501	500	0.1	50.0
Methyl tert-butyl ether	Ave	0.8526	0.8581		50.3	50.0	0.6	50.0
trans-1,2-Dichloroethene	Lin2		0.2433		46.8	50.0	-6.4	50.0
Hexane	Lin1		1.557		41.8	50.0	-16.4	50.0
Vinyl acetate	Lin1		0.2603		42.6	100	-57.4*	50.0
1,1-Dichloroethane	Lin2		0.4416	0.1000	50.6	50.0	1.2	50.0
2-Butanone (MEK)	Lin2		0.2344		202	200	0.8	50.0
2,2-Dichloropropane	Lin2		0.3009		36.1	50.0	-27.8	50.0
cis-1,2-Dichloroethene	Lin2		0.2739		47.6	50.0	-4.9	50.0
sec-Butyl Alcohol	Ave	0.0584	0.0551		1410	1500	-5.8	50.0
Bromochloromethane	Lin2		0.1165		48.8	50.0	-2.4	50.0
Tetrahydrofuran	Lin2		0.1578		97.9	100	-2.1	50.0
Chloroform	Lin2		0.4639		50.6	50.0	1.1	50.0
1,1,1-Trichloroethane	Lin1		0.4202		50.2	50.0	0.3	50.0
Cyclohexane	Lin2		0.4599		46.6	50.0	-6.7	50.0
1,1-Dichloropropene	Lin2		0.3734		48.3	50.0	-3.4	50.0
Carbon tetrachloride	Lin2		0.3207		48.9	50.0	-2.2	50.0
Isobutyl alcohol	Lin1		0.0224		1280	1250	2.6	50.0
Benzene	Lin2		1.058		47.7	50.0	-4.6	50.0
1,2-Dichloroethane	Ave	0.3677	0.3815		51.9	50.0	3.8	50.0
Trichloroethene	Lin2		0.2910		52.8	50.0	5.6	50.0
2-Pentanone	Ave	0.3809	0.3713		195	200	-2.5	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCVC 280-457279/32 Calibration Date: 05/07/2019 20:44

Instrument ID: VMS_G2 Calib Start Date: 05/06/2019 13:12

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 05/06/2019 18:51

Lab File ID: g2_4952.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Lin1		0.3591		47.2	50.0	-5.6	50.0
1,2-Dichloropropane	Lin2		0.2607		49.0	50.0	-1.9	50.0
1,4-Dioxane	Lin2		0.0072		975	1000	-2.5	50.0
Dibromomethane	Lin2		0.1546		50.9	50.0	1.7	50.0
Bromodichloromethane	Lin2		0.3100		47.7	50.0	-4.6	50.0
2-Chloroethyl vinyl ether	Lin2		0.1326		50.3	50.0	0.6	50.0
cis-1,3-Dichloropropene	Lin2		1.788		46.9	50.0	-6.3	50.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4233	0.4189		198	200	-1.0	50.0
Toluene	Ave	1.134	1.059		46.7	50.0	-6.6	50.0
trans-1,3-Dichloropropene	Lin2		0.3459		47.6	50.0	-4.8	50.0
Ethyl methacrylate	Lin2		1.791		48.9	50.0	-2.1	50.0
1,1,2-Trichloroethane	Lin2		0.2223		49.3	50.0	-1.4	50.0
Tetrachloroethene	Lin2		0.9172		46.5	50.0	-6.9	50.0
1,3-Dichloropropane	Lin2		1.852		49.9	50.0	-0.2	50.0
2-Hexanone	Ave	1.474	1.426		193	200	-3.3	50.0
Dibromochloromethane	Lin1		0.8323		42.4	50.0	-15.3	50.0
Ethylene Dibromide	Lin1		1.032		49.4	50.0	-1.2	50.0
1-Chlorohexane	Ave	1.810	1.560		43.1	50.0	-13.8	50.0
Chlorobenzene	Lin2		3.097	0.3000	47.9	50.0	-4.2	50.0
1,1,1,2-Tetrachloroethane	Lin2		0.9806		47.6	50.0	-4.8	50.0
Ethylbenzene	Lin1		1.713		47.1	50.0	-5.8	50.0
m-Xylene & p-Xylene	Lin2		2.076		46.9	50.0	-6.2	50.0
o-Xylene	Lin2		2.011		46.9	50.0	-6.3	50.0
Styrene	Lin2		3.449		47.2	50.0	-5.6	50.0
Bromoform	Lin1		0.4734	0.1000	37.9	50.0	-24.2	50.0
Isopropylbenzene	Lin1		3.430		49.4	50.0	-1.2	50.0
Cyclohexanone	Ave	0.1958	0.0938		958	2000	-52.1*	50.0
1,1,2,2-Tetrachloroethane	Lin2		0.8145	0.3000	40.9	50.0	-18.2	50.0
Bromobenzene	Lin2		0.7821		47.4	50.0	-5.2	50.0
trans-1,4-Dichloro-2-butene	Lin1		0.2839		40.6	50.0	-18.8	50.0
1,2,3-Trichloropropane	Lin2		0.3521		49.2	50.0	-1.7	50.0
N-Propylbenzene	Lin2		0.9308		46.2	50.0	-7.6	50.0
2-Chlorotoluene	Lin2		0.7703		47.2	50.0	-5.6	50.0
1,3,5-Trimethylbenzene	Lin2		2.822		48.2	50.0	-3.7	50.0
4-Chlorotoluene	Lin2		0.8005		46.9	50.0	-6.1	50.0
tert-Butylbenzene	Lin2		2.503		47.9	50.0	-4.2	50.0
1,2,4-Trimethylbenzene	Lin2		2.843		48.1	50.0	-3.9	50.0
sec-Butylbenzene	Lin2		0.7091		46.2	50.0	-7.6	50.0
1,3-Dichlorobenzene	Lin2		1.473		47.0	50.0	-6.1	50.0
4-Isopropyltoluene	Lin2		3.163		47.3	50.0	-5.4	50.0
1,4-Dichlorobenzene	Ave	1.706	1.515		44.4	50.0	-11.2	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCVC 280-457279/32 Calibration Date: 05/07/2019 20:44

Instrument ID: VMS_G2 Calib Start Date: 05/06/2019 13:12

GC Column: DB-624 (60.25) ID: 0.25(mm) Calib End Date: 05/06/2019 18:51

Lab File ID: g2_4952.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
n-Butylbenzene	Lin2		2.759		46.3	50.0	-7.4	50.0
1,2-Dichlorobenzene	Ave	1.534	1.418		46.2	50.0	-7.6	50.0
1,2-Dibromo-3-Chloropropane	Lin1		0.2176		43.7	50.0	-12.7	50.0
1,2,4-Trichlorobenzene	Ave	1.014	0.9254		45.6	50.0	-8.7	50.0
Hexachlorobutadiene	Lin2		0.4391		45.2	50.0	-9.5	50.0
Naphthalene	Lin2		3.259		48.9	50.0	-2.3	50.0
1,2,3-Trichlorobenzene	Lin1		0.8789		51.0	50.0	1.9	50.0
Dibromofluoromethane (Surr)	Ave	0.2172	0.2337		53.8	50.0	7.6	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2884	0.3207		55.6	50.0	11.2	50.0
Toluene-d8 (Surr)	Ave	4.405	4.303		48.8	50.0	-2.3	50.0
4-Bromofluorobenzene (Surr)	Ave	0.9451	0.9486		50.2	50.0	0.4	50.0

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\g2_4952.D
Lims ID: ccvc
Client ID:
Sample Type: CCVC
Inject. Date: 07-May-2019 20:44:30 ALS Bottle#: 30 Worklist Smp#: 32
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCVC
Misc. Info.: 280-0081637-032
Operator ID: meierg Instrument ID: VMS_G2
Sublist: chrom-AQ_VMSG2_8260*sub90

Method: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 11-May-2019 11:08:40 Calib Date: 06-May-2019 18:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4881.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0311

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.031	3.031	0.000	92	2428980	1000.0	1000.0	a
* 2 Fluorobenzene	96	4.777	4.777	0.000	99	1555133	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.279	7.279	0.000	87	345688	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.488	9.488	0.000	95	545667	50.0	50.0	
$ 6 Dibromofluoromethane (Surr	111	4.288	4.288	0.000	93	363385	50.0	53.8	
$ 7 1,2-Dichloroethane-d4 (Sur	65	4.540	4.540	0.000	97	498659	50.0	55.6	
$ 8 Toluene-d8 (Surr)	98	6.021	6.020	0.001	93	1487366	50.0	48.8	
$ 9 4-Bromofluorobenzene (Surr	95	8.373	8.373	0.000	87	517643	50.0	50.2	
12 Dichlorodifluoromethane	85	1.509	1.495	0.014	99	407272	50.0	45.4	
14 Chloromethane	50	1.677	1.663	0.014	99	376231	50.0	40.9	
15 Vinyl chloride	62	1.747	1.746	0.001	98	378939	50.0	41.7	
17 Bromomethane	94	1.998	1.998	0.000	90	130222	50.0	34.5	
18 Chloroethane	64	2.082	2.096	-0.014	100	228296	50.0	42.8	
19 Dichlorofluoromethane	67	2.263	2.263	0.000	97	660844	50.0	47.7	
20 Trichlorofluoromethane	101	2.291	2.291	0.000	98	667701	50.0	48.3	
22 Ethyl ether	59	2.501	2.501	0.000	91	362639	50.0	51.8	
24 Acrolein	56	2.598	2.598	0.000	99	874236	493.8	405.6	
26 1,1,2-Trichloro-1,2,2-trif	151	2.668	2.682	-0.014	76	293806	50.0	46.9	
25 1,1-Dichloroethene	96	2.668	2.682	-0.014	96	346771	50.0	47.2	
27 Acetone	43	2.710	2.696	0.014	99	1009932	200.0	205.3	
28 Iodomethane	142	2.794	2.794	0.000	99	320153	50.0	48.9	
30 Carbon disulfide	76	2.850	2.850	0.000	99	990010	50.0	43.3	
32 Methyl acetate	43	2.920	2.920	0.000	97	997849	100.0	104.0	
33 3-Chloro-1-propene	41	2.934	2.934	0.000	89	521528	50.0	43.7	
35 Methylene Chloride	84	3.031	3.031	0.000	45	388178	50.0	46.8	
37 2-Methyl-2-propanol	59	3.087	3.087	0.000	99	1225156	500.0	473.5	
39 Acrylonitrile	53	3.185	3.185	0.000	98	2371345	500.0	500.7	
41 Methyl tert-butyl ether	73	3.213	3.213	0.000	95	1334498	50.0	50.3	
40 trans-1,2-Dichloroethene	96	3.227	3.227	0.000	98	378402	50.0	46.8	
42 Hexane	57	3.409	3.408	0.000	93	538134	50.0	41.8	
46 Vinyl acetate	43	3.520	3.520	0.000	97	809616	100.0	42.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
45 1,1-Dichloroethane	63	3.534	3.534	0.000	96	686760	50.0	50.6	
52 2-Butanone (MEK)	43	3.911	3.911	0.000	100	1458365	200.0	201.6	
51 cis-1,2-Dichloroethene	96	3.939	3.939	0.000	83	425996	50.0	47.6	
50 2,2-Dichloropropane	77	3.939	3.939	0.000	87	467945	50.0	36.1	
55 sec-Butyl Alcohol	45	4.037	4.023	0.014	98	2569615	1500.0	1413.5	
56 Chlorobromomethane	128	4.107	4.107	0.000	94	181208	50.0	48.8	
57 Tetrahydrofuran	42	4.121	4.121	0.000	86	490925	100.0	97.9	
59 Chloroform	83	4.163	4.163	0.000	93	721407	50.0	50.6	
60 1,1,1-Trichloroethane	97	4.302	4.302	0.000	97	653487	50.0	50.2	
61 Cyclohexane	56	4.358	4.358	0.000	90	715158	50.0	46.6	
63 1,1-Dichloropropene	75	4.414	4.414	0.000	94	580653	50.0	48.3	
62 Carbon tetrachloride	117	4.414	4.414	0.000	88	498670	50.0	48.9	
66 Isobutyl alcohol	41	4.442	4.442	0.000	92	869124	1250.0	1282.8	
64 Benzene	78	4.568	4.568	0.000	97	1645109	50.0	47.7	
65 1,2-Dichloroethane	62	4.596	4.596	0.000	98	593316	50.0	51.9	
67 n-Heptane	43	4.749	4.749	0.000	91	501763	50.0	37.6	
69 Trichloroethene	95	5.043	5.042	0.001	97	452503	50.0	52.8	
70 2-Pentanone	43	5.154	5.154	0.000	99	2309924	200.0	195.0	
71 Methylcyclohexane	55	5.224	5.224	0.000	91	558406	50.0	47.2	
72 1,2-Dichloropropane	63	5.252	5.252	0.000	89	405430	50.0	49.0	
74 1,4-Dioxane	88	5.308	5.294	0.014	93	223896	1000.0	975.4	
75 Dibromomethane	93	5.322	5.322	0.000	96	240449	50.0	50.9	
76 Dichlorobromomethane	83	5.448	5.447	0.001	100	482075	50.0	47.7	
78 2-Chloroethyl vinyl ether	63	5.657	5.657	0.000	93	206171	50.0	50.3	
79 cis-1,3-Dichloropropene	75	5.797	5.797	0.000	95	617972	50.0	46.9	
81 4-Methyl-2-pentanone (MIBK	43	5.894	5.894	0.000	97	2605904	200.0	197.9	
82 Toluene	91	6.078	6.078	0.000	98	1646848	50.0	46.7	
83 trans-1,3-Dichloropropene	75	6.264	6.264	0.000	94	537840	50.0	47.6	
84 Ethyl methacrylate	69	6.285	6.285	0.000	89	618963	50.0	48.9	
85 1,1,2-Trichloroethane	97	6.428	6.428	0.000	93	345735	50.0	49.3	
86 Tetrachloroethene	164	6.514	6.514	0.000	95	317065	50.0	46.5	
87 1,3-Dichloropropane	76	6.571	6.571	0.000	92	640066	50.0	49.9	
88 2-Hexanone	43	6.600	6.600	0.000	97	1971287	200.0	193.4	
89 Chlorodibromomethane	129	6.764	6.764	0.000	90	287704	50.0	42.4	
90 Ethylene Dibromide	107	6.879	6.878	0.001	98	356913	50.0	49.4	
91 1-Chlorohexane	91	7.272	7.272	0.000	98	539120	50.0	43.1	
92 Chlorobenzene	112	7.308	7.307	0.001	94	1070737	50.0	47.9	
93 1,1,1,2-Tetrachloroethane	131	7.379	7.379	0.000	92	338972	50.0	47.6	
94 Ethylbenzene	106	7.386	7.386	0.000	98	592274	50.0	47.1	
95 m-Xylene & p-Xylene	106	7.501	7.501	0.000	99	717730	50.0	46.9	
96 o-Xylene	106	7.858	7.858	0.000	97	695332	50.0	46.9	
97 Styrene	104	7.880	7.879	0.001	95	1192308	50.0	47.2	
98 Bromoform	173	8.051	8.051	0.000	95	163660	50.0	37.9	
99 Isopropylbenzene	105	8.201	8.201	0.000	96	1871430	50.0	49.4	
100 Cyclohexanone	55	8.294	8.294	0.000	93	1297551	2000.0	958.3	
102 1,1,2,2-Tetrachloroethane	83	8.487	8.487	0.000	96	444468	50.0	40.9	
103 Bromobenzene	156	8.509	8.509	0.000	95	426743	50.0	47.4	
105 trans-1,4-Dichloro-2-buten	53	8.530	8.530	0.000	79	154897	50.0	40.6	
104 1,2,3-Trichloropropane	110	8.552	8.552	0.000	85	192135	50.0	49.2	
106 N-Propylbenzene	120	8.595	8.595	0.000	99	507925	50.0	46.2	
107 2-Chlorotoluene	126	8.688	8.687	0.001	96	420335	50.0	47.2	
108 1,3,5-Trimethylbenzene	105	8.766	8.766	0.000	95	1540006	50.0	48.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
109 4-Chlorotoluene	126	8.802	8.802	0.000	97	436782	50.0	46.9	
110 tert-Butylbenzene	119	9.074	9.074	0.000	93	1365774	50.0	47.9	
111 1,2,4-Trimethylbenzene	105	9.131	9.131	0.000	98	1551569	50.0	48.1	
112 sec-Butylbenzene	134	9.288	9.288	0.000	95	386941	50.0	46.2	
113 1,3-Dichlorobenzene	146	9.410	9.410	0.000	97	803795	50.0	47.0	
114 4-Isopropyltoluene	119	9.438	9.438	0.000	97	1726082	50.0	47.3	
115 1,4-Dichlorobenzene	146	9.510	9.510	0.000	93	826858	50.0	44.4	
117 n-Butylbenzene	91	9.839	9.839	0.000	98	1505391	50.0	46.3	
118 1,2-Dichlorobenzene	146	9.860	9.860	0.000	96	773608	50.0	46.2	
119 1,2-Dibromo-3-Chloropropan	157	10.640	10.639	0.001	80	118759	50.0	43.7	
121 1,2,4-Trichlorobenzene	180	11.455	11.447	0.008	94	504933	50.0	45.6	
122 Hexachlorobutadiene	225	11.598	11.590	0.008	98	239626	50.0	45.2	
123 Naphthalene	128	11.712	11.712	0.000	97	1778205	50.0	48.9	
124 1,2,3-Trichlorobenzene	180	11.934	11.934	0.000	95	479610	50.0	51.0	
S 137 1,2-Dichloroethene, Total	96				0		100.0	94.4	
S 143 Xylenes, Total	106				0		100.0	93.8	
S 138 Xylenes, Total (URS)	1				0		100.0	93.8	
S 144 1,2-Dichloroethene, Total	1				0		100.0	94.4	
S 139 Total BTEX	1				0			235.3	
S 142 Trihalomethanes, Total	1				0		200.0	178.5	
S 140 1,3-Dichloropropene, Total	1				0		100.0	94.5	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

MV-MegaMainA_00014	Amount Added: 50.00	Units: uL		
MV-Gas A_00023	Amount Added: 50.00	Units: uL		
mv-Cent IS/SS_00002	Amount Added: 5.00	Units: uL	Run Reagent	

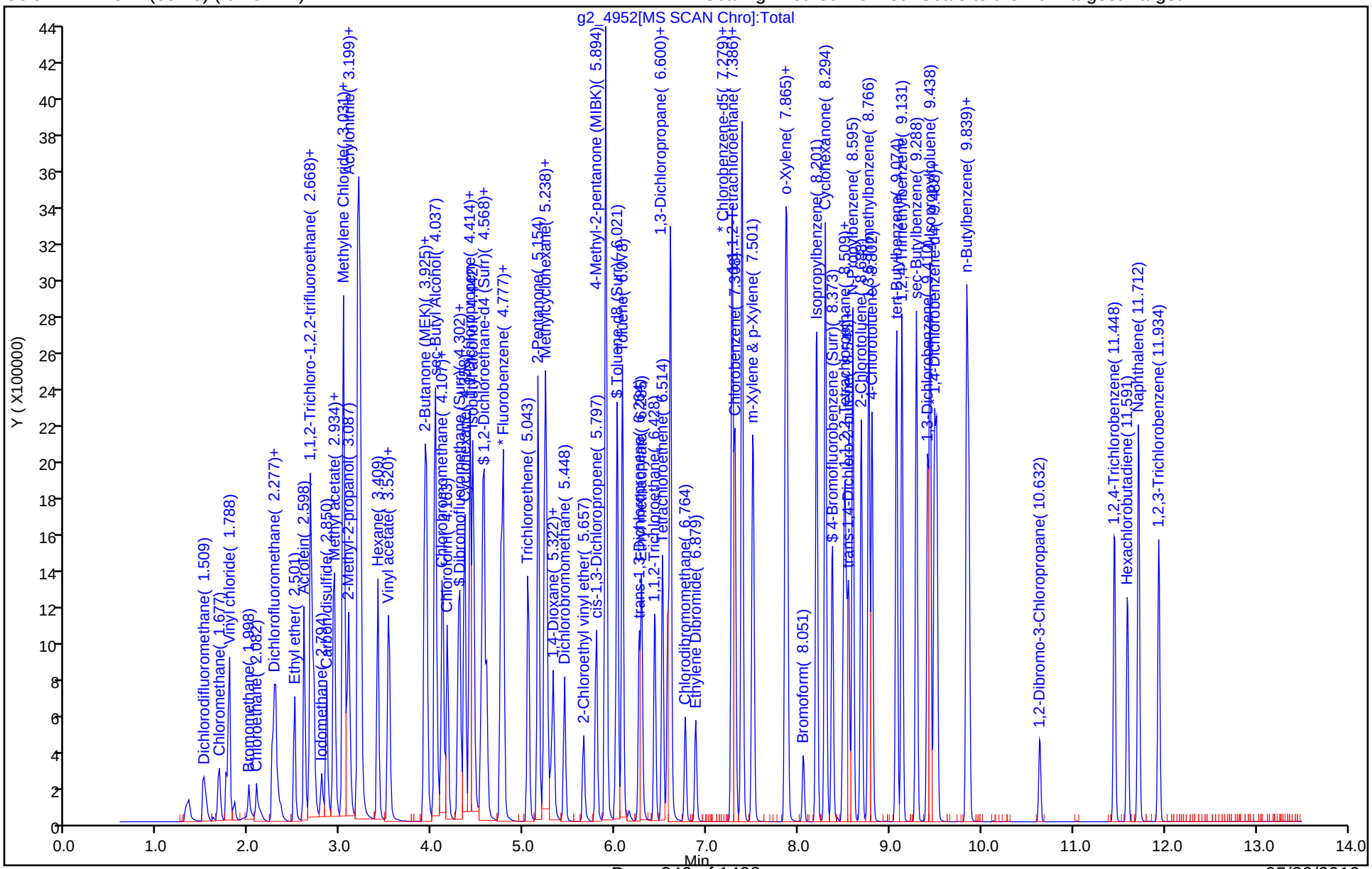
Report Date: 11-May-2019 11:08:42 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\g2_4952.D

Injection Date:	07-May-2019 20:44:30	Instrument ID:	VMS_G2	Operator ID:	meierg
Lims ID:	ccvc			Worklist Smp#:	32
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	30
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

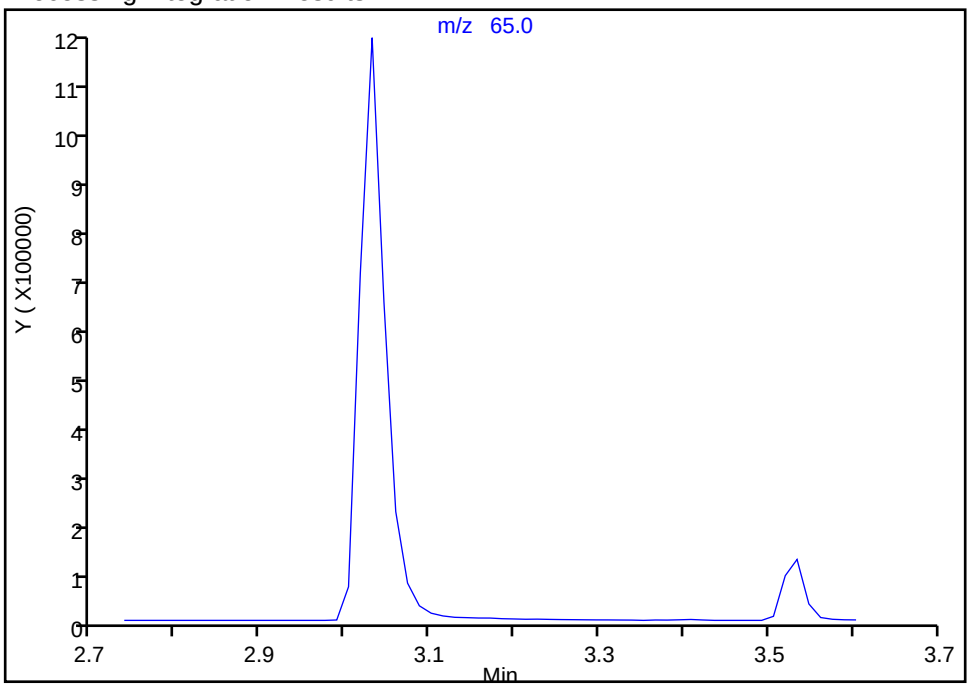
Data File:	\\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\g2_4952.D				
Injection Date:	07-May-2019 20:44:30	Instrument ID:	VMS_G2		
Lims ID:	ccvc				
Client ID:					
Operator ID:	meierg	ALS Bottle#:	30	Worklist Smp#:	32
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (60.25) (0.25 mm)	Detector	MS SCAN		

* 1 TBA-d9 (IS), CAS: 25725-11-5

Signal: 1

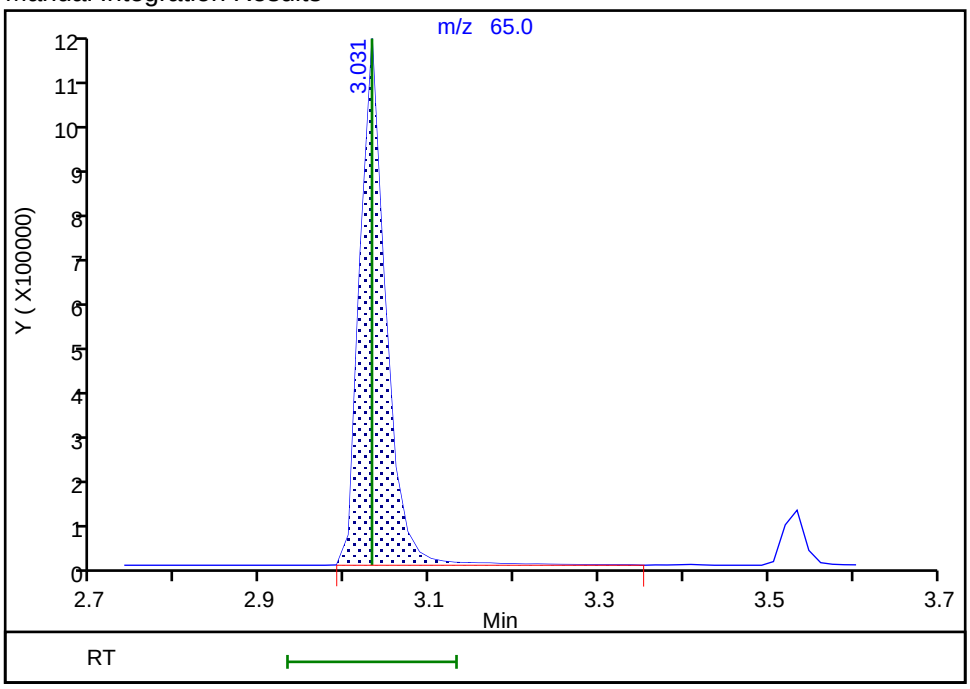
Processing Integration Results

Not Detected
Expected RT: 3.03



Manual Integration Results

RT: 3.03
Area: 2428980
Amount: 1000.0000
Amount Units: ug/l



Reviewer: meierg, 08-May-2019 08:44:14
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4865.D
Lims ID: bfb
Client ID:
Sample Type: BFB
Inject. Date: 06-May-2019 12:50:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: bfb
Operator ID: meierg Instrument ID: VMS_G2

Method: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 10-May-2019 11:41:34 Calib Date: 06-May-2019 18:51:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4881.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0324

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 11 BFB	95	3.135	3.135	0.000	79	24123	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

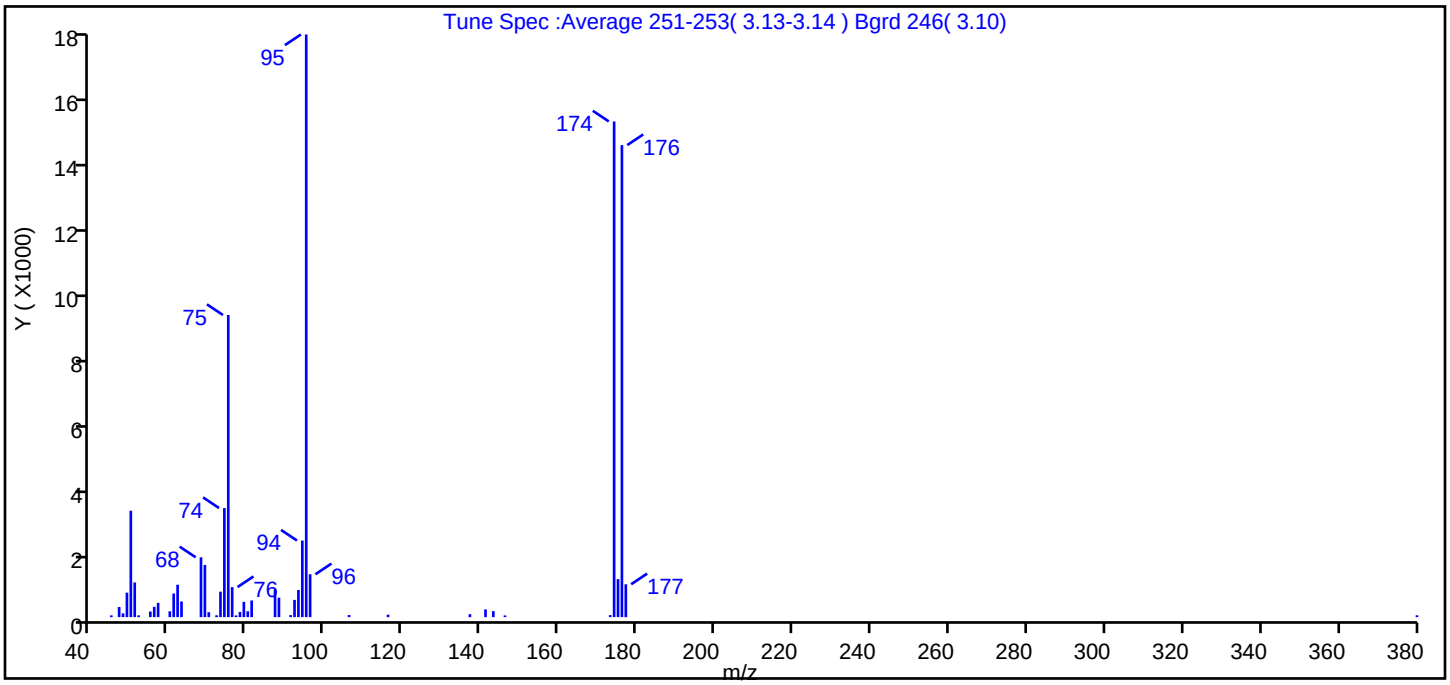
MV-BFB_00028 Amount Added: 2.00 Units: uL

MS Tune Report

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4865.D
Injection Date: 06-May-2019 12:50:30 Instrument ID: VMS_G2
Lims ID: bfb
Client ID:
Operator ID: meierg ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSG2_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 11 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	18.3
75	30 to 60% of m/z 95	51.9
96	5 to 9% of m/z 95	7.4
173	Less than 2% of m/z 174	0.4 (0.4)
174	50 to 120% of m/z 95	85.1
175	5 to 9% of m/z 174	6.5 (7.7)
176	Greater than 95% but less than 101% of m/z 174	81.0 (95.2)
177	5 to 9% of m/z 176	5.6 (7.0)

Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4865.D\AQ_VMSG2_8260.rslt\spectra.d
Injection Date: 06-May-2019 12:50:30
Spectrum: Tune Spec :Average 251-253(3.13-3.14) Bgrd 246(3.10)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 47

m/z	Y	m/z	Y	m/z	Y	m/z	Y
45.00	52	62.00	950	79.00	449	116.00	73
47.00	297	63.00	459	80.00	172	137.00	87
48.00	112	68.00	1755	81.00	489	141.00	227
49.00	718	69.00	1530	87.00	810	143.00	176
50.00	3121	70.00	144	88.00	570	146.00	50
51.00	1017	72.00	55	91.00	60	173.00	60
52.00	52	73.00	747	92.00	506	174.00	14538
55.00	165	74.00	3199	93.00	796	175.00	1116
56.00	302	75.00	8861	94.00	2246	176.00	13844
57.00	419	76.00	881	95.00	17088	177.00	964
60.00	171	77.00	50	96.00	1258	380.00	54
61.00	693	78.00	152	106.00	62		

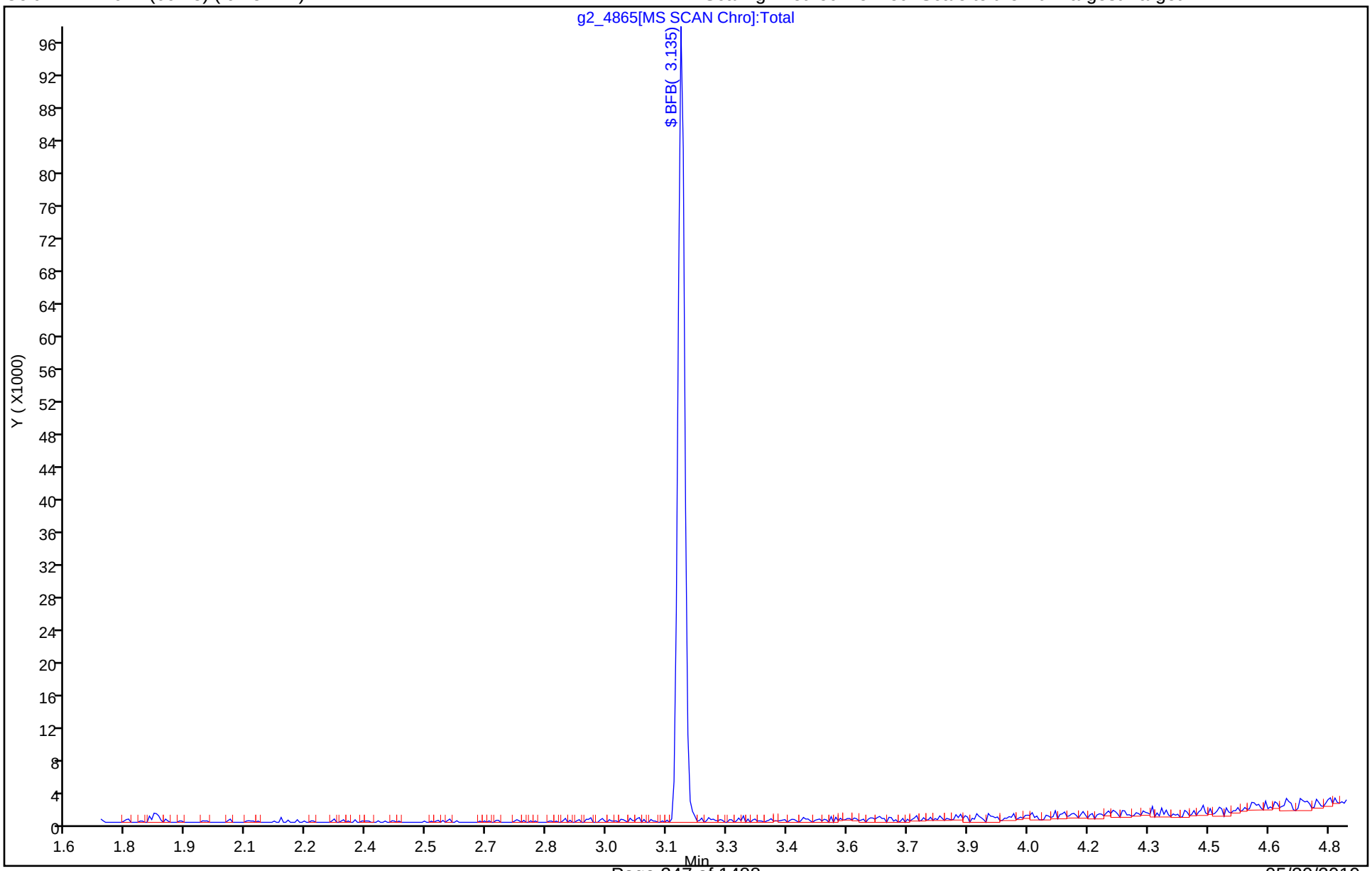
Report Date: 10-May-2019 11:41:34 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4865.D

Injection Date:	06-May-2019 12:50:30	Instrument ID:	VMS_G2	Operator ID:	meierg
Lims ID:	bfb			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File:	\\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\g2_4922.D				
Lims ID:	bfb				
Client ID:					
Sample Type:	BFB				
Inject. Date:	07-May-2019 10:15:30	ALS Bottle#:	100	Worklist Smp#:	1
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	bfb				
Operator ID:	meierg	Instrument ID:	VMS_G2		
Method:	\\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\AQ_VMSG2_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	11-May-2019 11:08:14	Calib Date:	06-May-2019 18:51:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4881.D				
Column 1 :	DB-624 (60.25) (0.25 mm)		Det: MS SCAN		
Process Host:	CTX0311				

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 11 BFB	95	3.135	3.135	0.000	82	28995	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

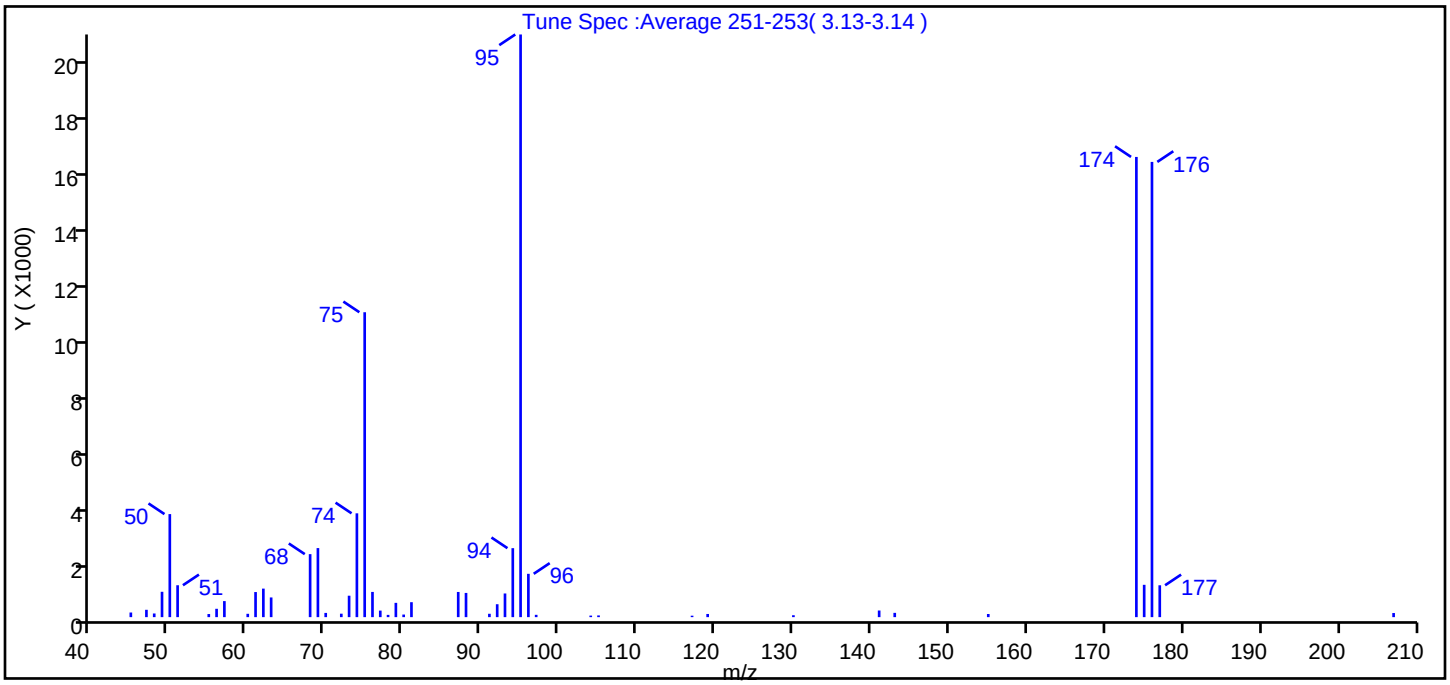
MV-BFB_00028 Amount Added: 2.00 Units: uL

MS Tune Report

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\g2_4922.D
Injection Date: 07-May-2019 10:15:30 Instrument ID: VMS_G2
Lims ID: bfb
Client ID:
Operator ID: meierg ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSG2_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 11 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	17.7
75	30 to 60% of m/z 95	52.3
96	5 to 9% of m/z 95	7.4
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	79.0
175	5 to 9% of m/z 174	5.5 (7.0)
176	Greater than 95% but less than 101% of m/z 174	78.1 (98.9)
177	5 to 9% of m/z 176	5.5 (7.0)

Data File: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\g2_4922.D\AQ_VMSG2_8260.rslt\spectra.d
Injection Date: 07-May-2019 10:15:30
Spectrum: Tune Spec :Average 251-253(3.13-3.14)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 48

m/z	Y	m/z	Y	m/z	Y	m/z	Y
45.00	162	63.00	689	80.00	91	105.00	60
47.00	257	68.00	2204	81.00	523	117.00	51
48.00	128	69.00	2416	87.00	881	119.00	111
49.00	887	70.00	148	88.00	847	130.00	67
50.00	3605	72.00	121	91.00	118	141.00	232
51.00	1116	73.00	750	92.00	452	143.00	150
55.00	109	74.00	3632	93.00	828	155.00	110
56.00	292	75.00	10667	94.00	2413	174.00	16100
57.00	561	76.00	882	95.00	20384	175.00	1131
60.00	117	77.00	229	96.00	1516	176.00	15926
61.00	878	78.00	79	97.00	81	177.00	1115
62.00	998	79.00	500	104.00	54	207.00	144

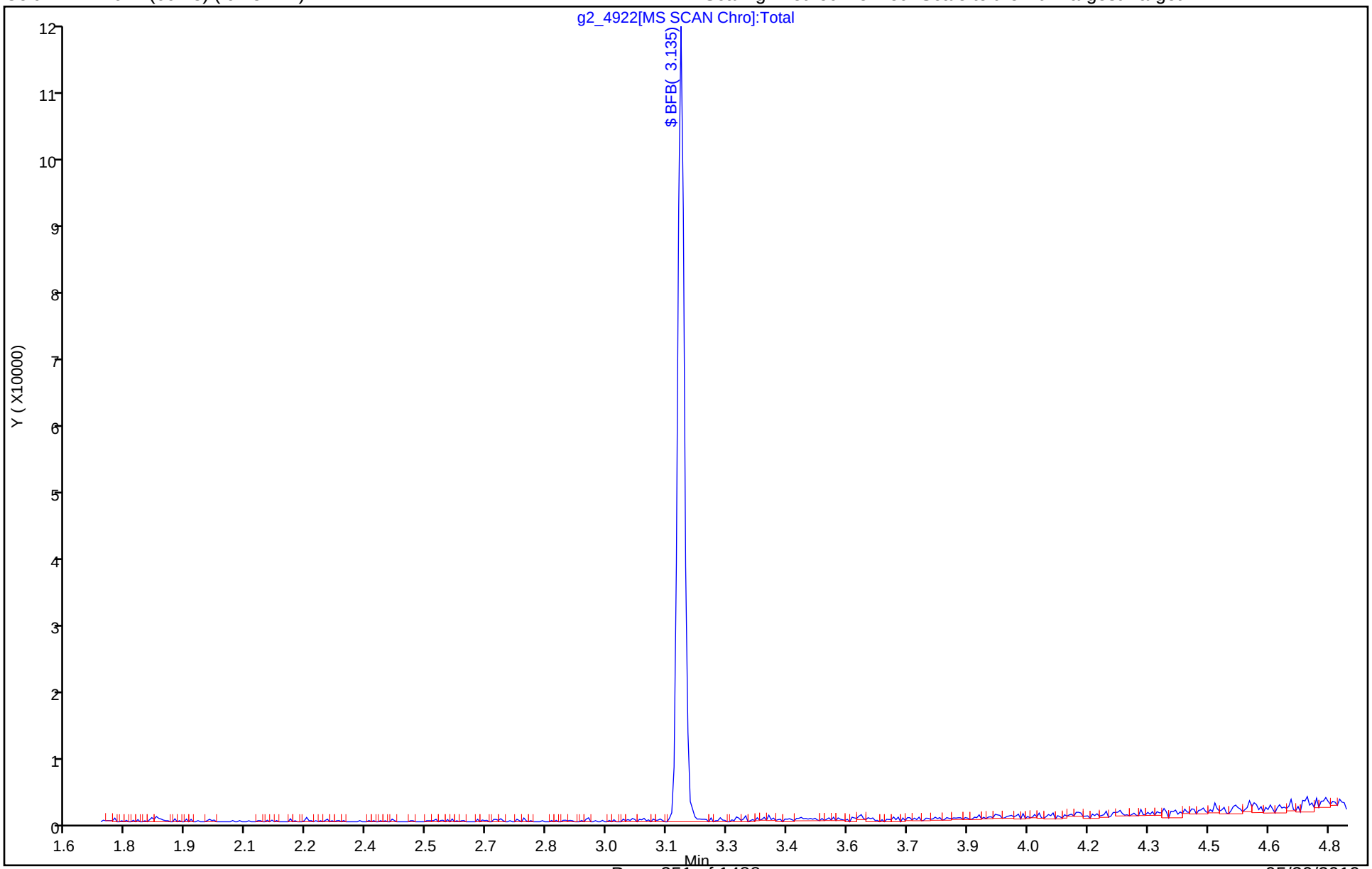
Report Date: 11-May-2019 11:08:15 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\g2_4922.D

Injection Date:	07-May-2019 10:15:30	Instrument ID:	VMS_G2	Operator ID:	meierg
Lims ID:	bfb			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 280-457279/6

Matrix: Water Lab File ID: g2_4926.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/07/2019 11:29

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 457279 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.40	U	3.0	0.40	0.18
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.23
87-61-6	1,2,3-Trichlorobenzene	0.80	U	1.0	0.80	0.21
120-82-1	1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.21
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U	5.0	1.6	0.47
95-50-1	1,2-Dichlorobenzene	0.40	U	1.0	0.40	0.15
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.18
541-73-1	1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.13
106-46-7	1,4-Dichlorobenzene	0.40	U	1.0	0.40	0.16
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	2.0
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	1.0	U	1.0	1.0	0.46
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	0.80	U	2.0	0.80	0.17
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
110-82-7	Cyclohexane	0.80	U	2.0	0.80	0.28
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	0.80	U	2.0	0.80	0.31
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 280-457279/6

Matrix: Water Lab File ID: g2_4926.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/07/2019 11:29

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 457279 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
106-93-4	Ethylene Dibromide	0.40	U	1.0	0.40	0.18
98-82-8	Isopropylbenzene	0.40	U	1.0	0.40	0.19
79-20-9	Methyl acetate	4.0	U	5.0	4.0	1.6
1634-04-4	Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25
108-87-2	Methylcyclohexane	0.40	U	2.0	0.40	0.10
75-09-2	Methylene Chloride	2.0	U	5.0	2.0	0.94
100-42-5	Styrene	0.80	U	1.0	0.80	0.36
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	0.40	U	1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	0.80	U	2.0	0.80	0.29
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	1.0	0.80	0.19

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	104		81-118
460-00-4	4-Bromofluorobenzene (Surr)	100		85-114
1868-53-7	Dibromofluoromethane (Surr)	104		80-119
2037-26-5	Toluene-d8 (Surr)	99		89-112

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\g2_4926.D
Lims ID: mb
Client ID:
Sample Type: MB
Inject. Date: 07-May-2019 11:29:30 ALS Bottle#: 4 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: mb
Operator ID: meierg Instrument ID: VMS_G2

Method: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 11-May-2019 11:10:09 Calib Date: 06-May-2019 18:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4881.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0311

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.018	3.031	-0.013	82	2840425	1000.0	1000.0	
* 2 Fluorobenzene	96	4.777	4.777	0.000	99	1844520	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.279	7.279	0.000	87	393378	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.488	9.488	0.000	96	627703	50.0	50.0	
$ 6 Dibromofluoromethane (Surr	111	4.288	4.288	0.000	93	417156	50.0	52.1	
$ 7 1,2-Dichloroethane-d4 (Sur	65	4.540	4.540	0.000	99	555382	50.0	52.2	
$ 8 Toluene-d8 (Surr)	98	6.021	6.020	0.001	93	1718519	50.0	49.6	
$ 9 4-Bromofluorobenzene (Surr	95	8.366	8.373	-0.007	88	594456	50.0	50.1	
$ 10 Trifluorotoluene (Surr)	1		0.000					ND	
$ 11 BFB	95		3.135					ND	
12 Dichlorodifluoromethane	85		1.495					ND	
14 Chloromethane	50		1.663					ND	
34 Chlorotrifluoroethene	116		1.677					ND	
15 Vinyl chloride	62		1.746					ND	
36 1,2-Dichloro-1,1,2,2-tetra	85		1.830					ND	
17 Bromomethane	94		1.998					ND	
16 Ethylene oxide	43		1.998					ND	
18 Chloroethane	64		2.096					ND	
38 2-Chloro-1,1,1-Trifluoroet	118		2.110					ND	
19 Dichlorofluoromethane	67		2.263					ND	
20 Trichlorofluoromethane	101		2.291					ND	
21 Ethanol	45		2.431					ND	
22 Ethyl ether	59		2.501					ND	
23 Propene oxide	58		2.543					ND	
24 Acrolein	56		2.598					ND	U
26 1,1,2-Trichloro-1,2,2-trif	151		2.682					ND	
25 1,1-Dichloroethene	96		2.682					ND	
27 Acetone	43		2.696					ND	
28 Iodomethane	142		2.794					ND	
29 Isopropyl alcohol	45		2.794					ND	
30 Carbon disulfide	76		2.850					ND	
32 Methyl acetate	43		2.920					ND	
31 Acetonitrile	41		2.920					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
33 3-Chloro-1-propene	41		2.934					ND	U
35 Methylene Chloride	84		3.031					ND	
37 2-Methyl-2-propanol	59		3.087					ND	
43 1,2-Dichloro-1,1,2-trifluo	117		3.129					ND	
39 Acrylonitrile	53		3.185					ND	
41 Methyl tert-butyl ether	73		3.213					ND	
44 1,1,1-Trifluoro-2,2-dichlo	83		3.213					ND	
40 trans-1,2-Dichloroethene	96		3.227					ND	
42 Hexane	57		3.408					ND	
46 Vinyl acetate	43		3.520					ND	
45 1,1-Dichloroethane	63		3.534					ND	
47 Isopropyl ether	87		3.548					ND	
48 2-Chloro-1,3-butadiene	53		3.590					ND	
49 Tert-butyl ethyl ether	59		3.800					ND	
52 2-Butanone (MEK)	43		3.911					ND	
51 cis-1,2-Dichloroethene	96		3.939					ND	
50 2,2-Dichloropropane	77		3.939					ND	
53 Ethyl acetate	43		3.939					ND	U
54 Propionitrile	54		3.967					ND	
55 sec-Butyl Alcohol	45		4.023					ND	
58 Methacrylonitrile	41		4.079					ND	
56 Chlorobromomethane	128		4.107					ND	
57 Tetrahydrofuran	42		4.121					ND	
59 Chloroform	83		4.163					ND	
60 1,1,1-Trichloroethane	97		4.302					ND	
61 Cyclohexane	56		4.358					ND	
63 1,1-Dichloropropene	75		4.414					ND	
62 Carbon tetrachloride	117		4.414					ND	
66 Isobutyl alcohol	41		4.442					ND	
64 Benzene	78		4.568					ND	
65 1,2-Dichloroethane	62		4.596					ND	
68 Tert-amyl methyl ether	73		4.638					ND	
67 n-Heptane	43		4.749					ND	
73 n-Butanol	56		4.931					ND	
69 Trichloroethene	95		5.042					ND	
70 2-Pentanone	43		5.154					ND	
71 Methylcyclohexane	55		5.224					ND	
72 1,2-Dichloropropane	63		5.252					ND	
77 Methyl methacrylate	100		5.266					ND	
74 1,4-Dioxane	88		5.294					ND	
75 Dibromomethane	93		5.322					ND	
76 Dichlorobromomethane	83		5.447					ND	
80 2-Nitropropane	41		5.615					ND	
78 2-Chloroethyl vinyl ether	63		5.657					ND	
79 cis-1,3-Dichloropropene	75		5.797					ND	
81 4-Methyl-2-pentanone (MIBK	43		5.894					ND	
82 Toluene	91		6.078					ND	
83 trans-1,3-Dichloropropene	75		6.264					ND	
84 Ethyl methacrylate	69		6.285					ND	
85 1,1,2-Trichloroethane	97		6.428					ND	
86 Tetrachloroethene	164		6.514					ND	
87 1,3-Dichloropropane	76		6.571					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
88 2-Hexanone	43		6.600					ND	
13 Tetrahydrothiophene	60		6.757					ND	
89 Chlorodibromomethane	129		6.764					ND	
90 Ethylene Dibromide	107		6.878					ND	
91 1-Chlorohexane	91		7.272					ND	
92 Chlorobenzene	112		7.307					ND	
93 1,1,1,2-Tetrachloroethane	131		7.379					ND	
94 Ethylbenzene	106		7.386					ND	
95 m-Xylene & p-Xylene	106		7.501					ND	
96 o-Xylene	106		7.858					ND	
97 Styrene	104		7.879					ND	
98 Bromoform	173		8.051					ND	
99 Isopropylbenzene	105		8.201					ND	
101 cis-1,4-Dichloro-2-butene	53		8.259					ND	
100 Cyclohexanone	55		8.294					ND	U
102 1,1,2,2-Tetrachloroethane	83		8.487					ND	
103 Bromobenzene	156		8.509					ND	
105 trans-1,4-Dichloro-2-buten	53		8.530					ND	
104 1,2,3-Trichloropropane	110		8.552					ND	
106 N-Propylbenzene	120		8.595					ND	
107 2-Chlorotoluene	126		8.687					ND	
108 1,3,5-Trimethylbenzene	105		8.766					ND	
109 4-Chlorotoluene	126		8.802					ND	
110 tert-Butylbenzene	119		9.074					ND	
111 1,2,4-Trimethylbenzene	105		9.131					ND	
112 sec-Butylbenzene	134		9.288					ND	
113 1,3-Dichlorobenzene	146		9.410					ND	
114 4-Isopropyltoluene	119		9.438					ND	
115 1,4-Dichlorobenzene	146		9.510					ND	
116 1,2,3-Trimethylbenzene	105		9.531					ND	
117 n-Butylbenzene	91		9.839					ND	
118 1,2-Dichlorobenzene	146		9.860					ND	
119 1,2-Dibromo-3-Chloropropan	157		10.639					ND	
120 1,3,5-Trichlorobenzene	180		10.826					ND	
121 1,2,4-Trichlorobenzene	180		11.447					ND	
122 Hexachlorobutadiene	225		11.590					ND	
123 Naphthalene	128		11.712					ND	
124 1,2,3-Trichlorobenzene	180		11.934					ND	
135 3,3-Dimethylpentane	1		0.000					ND	
133 2,3-Dimethylpentane	1		0.000					ND	
130 2,2,3-Trimethylbutane	1		0.000					ND	
136 2,4-Dimethylpentane	1		0.000					ND	
127 n-Nonyl Aldehyde	1		0.000					ND	
131 2-Methylhexane	1		0.000					ND	
126 2,2-Dimethylpentane	1		0.000					ND	
129 Dimethyl disulfide	1		0.000					ND	
132 Pentachloroethane	167		0.000					ND	
134 3-Methylhexane	1		0.000					ND	
125 1-Chlorohexane TIC	1		0.000					ND	
128 3-Ethylpentane	1		0.000					ND	
161 1-Chloro-1-fluoroethane TI	1		0.000					ND	
S 137 1,2-Dichloroethene, Total	96		2.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
S 143 Xylenes, Total	106		0.000				ND		
S 138 Xylenes, Total (URS)	1		0.000				ND		
S 144 1,2-Dichloroethene, Total	1		0.000				ND		
S 141 TAH	1				0			0	7
S 139 Total BTEX	1		0.000				ND		
S 142 Trihalomethanes, Total	1		0.000				ND		
S 140 1,3-Dichloropropene, Total	1		0.000				ND		

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

mv-Cent IS/SS_00002 Amount Added: 5.00 Units: uL Run Reagent

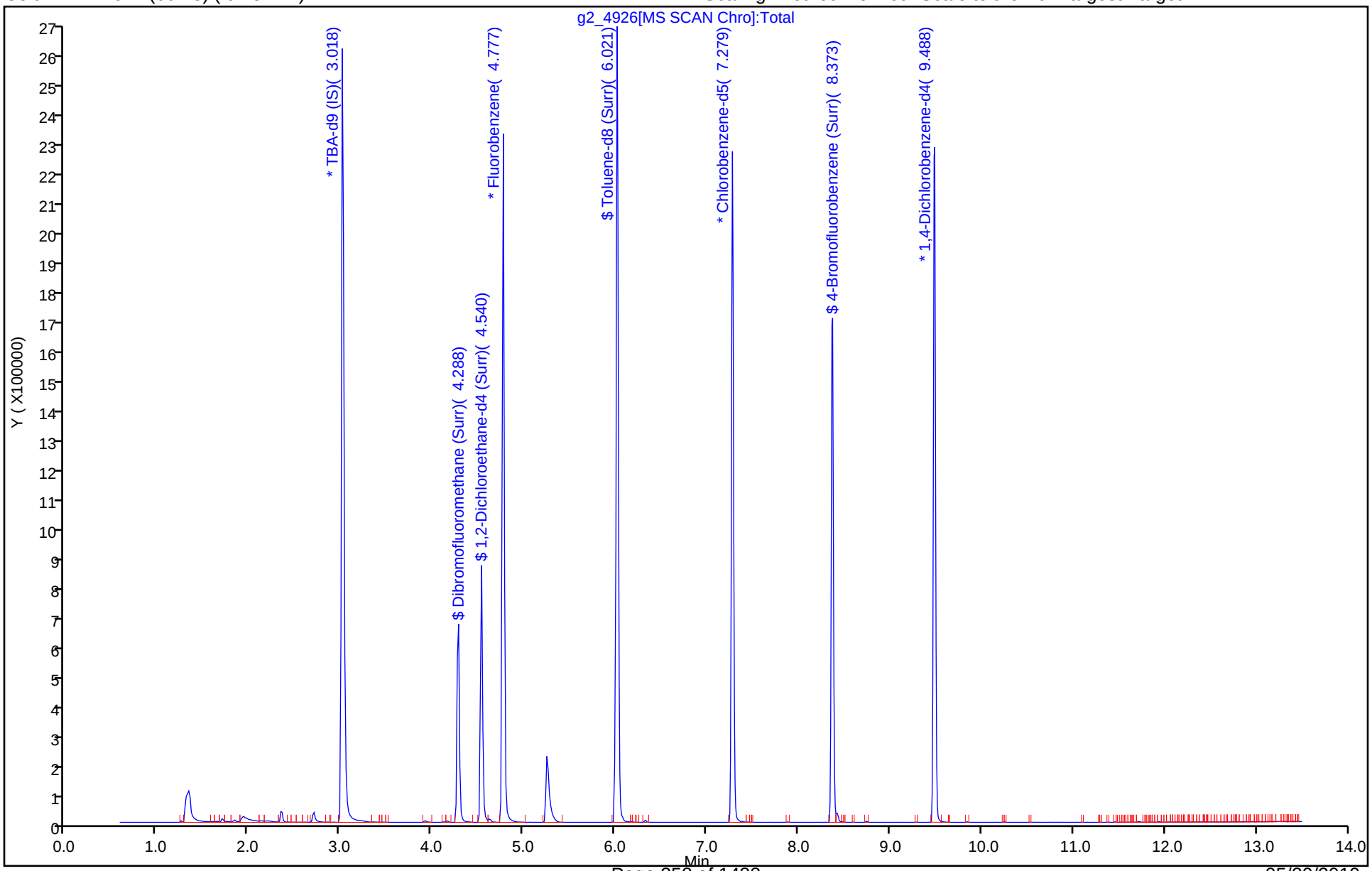
Report Date: 11-May-2019 11:10:10 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\g2_4926.D

Injection Date:	07-May-2019 11:29:30	Instrument ID:	VMS_G2	Operator ID:	meierg
Lims ID:	mb			Worklist Smp#:	6
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Recovery Report

Data File: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\g2_4926.D
Lims ID: mb
Client ID:
Sample Type: MB
Inject. Date: 07-May-2019 11:29:30 ALS Bottle#: 4 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: mb
Operator ID: meierg Instrument ID: VMS_G2

Method: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 11-May-2019 11:10:09 Calib Date: 06-May-2019 18:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4881.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0311

Compound	Amount Added	Amount Recovered	% Rec.
$ 6 Dibromofluoromethane (Surr)	50.0	52.1	104.12
$ 7 1,2-Dichloroethane-d4 (Surr)	50.0	52.2	104.42
$ 8 Toluene-d8 (Surr)	50.0	49.6	99.17
$ 9 4-Bromofluorobenzene (Surr)	50.0	50.1	100.20

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 280-457279/4

Matrix: Water Lab File ID: g2_4927.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/07/2019 11:51

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 457279 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-55-6	1,1,1-Trichloroethane	23.8		1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	22.4		1.0	0.80	0.21
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	24.2		3.0	0.40	0.18
79-00-5	1,1,2-Trichloroethane	23.2		1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	24.4		1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	23.9		1.0	0.80	0.23
87-61-6	1,2,3-Trichlorobenzene	24.3		1.0	0.80	0.21
120-82-1	1,2,4-Trichlorobenzene	22.6		1.0	0.80	0.21
96-12-8	1,2-Dibromo-3-Chloropropane	20.0		5.0	1.6	0.47
95-50-1	1,2-Dichlorobenzene	22.2		1.0	0.40	0.15
107-06-2	1,2-Dichloroethane	23.6		1.0	0.40	0.13
78-87-5	1,2-Dichloropropane	23.5		1.0	0.40	0.18
541-73-1	1,3-Dichlorobenzene	22.8		1.0	0.40	0.13
106-46-7	1,4-Dichlorobenzene	22.0		1.0	0.40	0.16
78-93-3	2-Butanone (MEK)	89.6		6.0	4.0	2.0
591-78-6	2-Hexanone	87.4		5.0	4.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	89.3		5.0	3.2	0.98
67-64-1	Acetone	79.6		10	6.4	1.9
71-43-2	Benzene	23.7		1.0	0.40	0.16
74-97-5	Bromochloromethane	24.0		1.0	0.20	0.10
75-27-4	Bromodichloromethane	22.2		1.0	0.40	0.17
75-25-2	Bromoform	17.5		1.0	1.0	0.46
74-83-9	Bromomethane	26.2		2.0	0.80	0.21
75-15-0	Carbon disulfide	22.5		2.0	0.80	0.17
56-23-5	Carbon tetrachloride	23.1		2.0	0.40	0.19
108-90-7	Chlorobenzene	23.4		1.0	0.40	0.17
75-00-3	Chloroethane	22.1		2.0	1.6	0.41
67-66-3	Chloroform	24.0		1.0	0.40	0.16
74-87-3	Chloromethane	21.9		2.0	0.80	0.30
156-59-2	cis-1,2-Dichloroethene	23.5		1.0	0.40	0.15
10061-01-5	cis-1,3-Dichloropropene	23.5		1.0	0.40	0.16
110-82-7	Cyclohexane	23.5		2.0	0.80	0.28
124-48-1	Dibromochloromethane	19.7		1.0	0.40	0.17
75-71-8	Dichlorodifluoromethane	23.7		2.0	0.80	0.31
100-41-4	Ethylbenzene	22.9		1.0	0.40	0.16

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 280-457279/4

Matrix: Water Lab File ID: g2_4927.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/07/2019 11:51

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 (60.25) ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 457279 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
106-93-4	Ethylene Dibromide	23.1		1.0	0.40	0.18
98-82-8	Isopropylbenzene	24.5		1.0	0.40	0.19
79-20-9	Methyl acetate	47.4		5.0	4.0	1.6
1634-04-4	Methyl tert-butyl ether	23.4		5.0	0.80	0.25
108-87-2	Methylcyclohexane	24.3		2.0	0.40	0.10
75-09-2	Methylene Chloride	22.8		5.0	2.0	0.94
100-42-5	Styrene	23.2		1.0	0.80	0.36
127-18-4	Tetrachloroethene	23.6		1.0	0.40	0.20
108-88-3	Toluene	22.9		1.0	0.40	0.17
156-60-5	trans-1,2-Dichloroethene	23.4		1.0	0.40	0.15
10061-02-6	trans-1,3-Dichloropropene	22.8		1.0	0.40	0.19
79-01-6	Trichloroethene	23.4		1.0	0.40	0.16
75-69-4	Trichlorofluoromethane	23.0		2.0	0.80	0.29
75-01-4	Vinyl chloride	22.3		1.5	0.20	0.10
1330-20-7	Xylenes, Total	46.3		1.0	0.80	0.19

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		81-118
460-00-4	4-Bromofluorobenzene (Surr)	100		85-114
1868-53-7	Dibromofluoromethane (Surr)	105		80-119
2037-26-5	Toluene-d8 (Surr)	98		89-112

Eurofins TestAmerica, Denver
Target Compound Quantitation Report

Data File: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\g2_4927.D
Lims ID: lcs
Client ID:
Sample Type: LCS
Inject. Date: 07-May-2019 11:51:30 ALS Bottle#: 5 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: lcs
Operator ID: meierg Instrument ID: VMS_G2

Method: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 13-May-2019 13:31:46 Calib Date: 06-May-2019 18:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4881.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0329

First Level Reviewer: sabsinc Date: 13-May-2019 13:31:46

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.031	3.031	0.000	87	2783462	1000.0	1000.0	a
* 2 Fluorobenzene	96	4.777	4.777	0.000	99	1843903	50.0	50.0	
* 3 Chlorobenzene-d5	119	7.279	7.279	0.000	87	405375	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	9.488	9.488	0.000	96	635093	50.0	50.0	
$ 6 Dibromofluoromethane (Surr	111	4.288	4.288	0.000	93	421921	50.0	52.7	
$ 7 1,2-Dichloroethane-d4 (Sur	65	4.540	4.540	0.000	98	549635	50.0	51.7	
$ 8 Toluene-d8 (Surr)	98	6.020	6.020	0.000	93	1751563	50.0	49.0	
$ 9 4-Bromofluorobenzene (Surr	95	8.366	8.373	-0.007	88	598663	50.0	49.9	
12 Dichlorodifluoromethane	85	1.509	1.495	0.014	99	252060	25.0	23.7	
14 Chloromethane	50	1.677	1.663	0.014	99	238713	25.0	21.9	
15 Vinyl chloride	62	1.746	1.746	0.000	98	240540	25.0	22.3	
17 Bromomethane	94	1.998	1.998	0.000	89	117912	25.0	26.2	
18 Chloroethane	64	2.096	2.096	0.000	100	139967	25.0	22.1	
19 Dichlorofluoromethane	67	2.263	2.263	0.000	97	389101	25.0	23.7	
20 Trichlorofluoromethane	101	2.291	2.291	0.000	98	377545	25.0	23.0	
22 Ethyl ether	59	2.501	2.501	0.000	91	206925	25.0	24.9	
24 Acrolein	56	2.598	2.598	0.000	99	462107	250.0	180.8	
26 1,1,2-Trichloro-1,2,2-trif	151	2.682	2.682	0.000	77	179513	25.0	24.2	
25 1,1-Dichloroethene	96	2.682	2.682	0.000	97	208363	25.0	23.9	
27 Acetone	43	2.696	2.696	0.000	99	526239	100.0	79.6	
28 Iodomethane	142	2.794	2.794	0.000	99	203767	25.0	26.4	
30 Carbon disulfide	76	2.850	2.850	0.000	99	609863	25.0	22.5	
32 Methyl acetate	43	2.920	2.920	0.000	97	541481	50.0	47.4	
33 3-Chloro-1-propene	41	2.934	2.934	0.000	90	349282	25.0	24.6	
35 Methylene Chloride	84	3.031	3.031	0.000	37	224302	25.0	22.8	
37 2-Methyl-2-propanol	59	3.087	3.087	0.000	99	663048	250.0	216.1	
39 Acrylonitrile	53	3.185	3.185	0.000	99	1338569	250.0	238.4	
41 Methyl tert-butyl ether	73	3.213	3.213	0.000	95	736947	25.0	23.4	
40 trans-1,2-Dichloroethene	96	3.227	3.227	0.000	99	224714	25.0	23.4	
42 Hexane	57	3.408	3.408	0.000	93	383486	25.0	25.3	
46 Vinyl acetate	43	3.520	3.520	0.000	97	1064696	50.0	47.3	
45 1,1-Dichloroethane	63	3.534	3.534	0.000	96	392846	25.0	24.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
52 2-Butanone (MEK)	43	3.911	3.911	0.000	100	777495	100.0	89.6	
51 cis-1,2-Dichloroethene	96	3.939	3.939	0.000	83	248914	25.0	23.5	
50 2,2-Dichloropropane	77	3.939	3.939	0.000	87	368448	25.0	24.0	
55 sec-Butyl Alcohol	45	4.023	4.023	0.000	99	1383605	750.0	641.9	
56 Chlorobromomethane	128	4.107	4.107	0.000	94	105352	25.0	24.0	
57 Tetrahydrofuran	42	4.121	4.121	0.000	87	270470	50.0	45.3	
59 Chloroform	83	4.163	4.163	0.000	93	408843	25.0	24.0	
60 1,1,1-Trichloroethane	97	4.302	4.302	0.000	98	366933	25.0	23.8	
61 Cyclohexane	56	4.358	4.358	0.000	89	427882	25.0	23.5	
63 1,1-Dichloropropene	75	4.414	4.414	0.000	96	340008	25.0	23.9	
62 Carbon tetrachloride	117	4.414	4.414	0.000	85	278928	25.0	23.1	
66 Isobutyl alcohol	41	4.442	4.442	0.000	94	459158	625.0	567.2	
64 Benzene	78	4.568	4.568	0.000	96	970396	25.0	23.7	
65 1,2-Dichloroethane	62	4.596	4.596	0.000	97	319635	25.0	23.6	
67 n-Heptane	43	4.749	4.749	0.000	92	377495	25.0	23.6	
69 Trichloroethene	95	5.042	5.042	0.000	97	237313	25.0	23.4	
70 2-Pentanone	43	5.154	5.154	0.000	99	1239781	100.0	88.3	
71 Methylcyclohexane	55	5.224	5.224	0.000	91	341063	25.0	24.3	
72 1,2-Dichloropropane	63	5.252	5.252	0.000	87	233945	25.0	23.5	
74 1,4-Dioxane	88	5.308	5.294	0.014	90	122488	500.0	451.0	
75 Dibromomethane	93	5.322	5.322	0.000	96	133687	25.0	23.9	
76 Dichlorobromomethane	83	5.447	5.447	0.000	100	264063	25.0	22.2	
78 2-Chloroethyl vinyl ether	63	5.657	5.657	0.000	93	127822	25.0	26.5	
79 cis-1,3-Dichloropropene	75	5.797	5.797	0.000	95	363032	25.0	23.5	
81 4-Methyl-2-pentanone (MIBK	43	5.894	5.894	0.000	96	1394302	100.0	89.3	
82 Toluene	91	6.078	6.078	0.000	98	958958	25.0	22.9	
83 trans-1,3-Dichloropropene	75	6.264	6.264	0.000	94	303932	25.0	22.8	
84 Ethyl methacrylate	69	6.285	6.285	0.000	88	337919	25.0	22.9	
85 1,1,2-Trichloroethane	97	6.428	6.428	0.000	92	192890	25.0	23.2	
86 Tetrachloroethene	164	6.514	6.514	0.000	96	188942	25.0	23.6	
87 1,3-Dichloropropane	76	6.578	6.571	0.007	92	347518	25.0	23.1	
88 2-Hexanone	43	6.600	6.600	0.000	96	1044092	100.0	87.4	
89 Chlorodibromomethane	129	6.764	6.764	0.000	90	154404	25.0	19.7	
90 Ethylene Dibromide	107	6.878	6.878	0.000	98	194948	25.0	23.1	
91 1-Chlorohexane	91	7.272	7.272	0.000	99	322319	25.0	22.0	
92 Chlorobenzene	112	7.307	7.307	0.000	95	613959	25.0	23.4	
93 1,1,1,2-Tetrachloroethane	131	7.379	7.379	0.000	93	186508	25.0	22.4	
94 Ethylbenzene	106	7.386	7.386	0.000	98	338315	25.0	22.9	
95 m-Xylene & p-Xylene	106	7.501	7.501	0.000	100	416095	25.0	23.2	
96 o-Xylene	106	7.858	7.858	0.000	97	400977	25.0	23.1	
97 Styrene	104	7.879	7.879	0.000	96	687057	25.0	23.2	
98 Bromoform	173	8.051	8.051	0.000	96	86681	25.0	17.5	
99 Isopropylbenzene	105	8.201	8.201	0.000	96	1081746	25.0	24.5	
100 Cyclohexanone	55	8.294	8.294	0.000	93	1607194	1000.0	1012.2	
102 1,1,2,2-Tetrachloroethane	83	8.487	8.487	0.000	95	283126	25.0	22.4	
103 Bromobenzene	156	8.509	8.509	0.000	95	239459	25.0	22.8	
105 trans-1,4-Dichloro-2-buten	53	8.530	8.530	0.000	74	98295	25.0	22.2	
104 1,2,3-Trichloropropane	110	8.552	8.552	0.000	84	101939	25.0	22.5	
106 N-Propylbenzene	120	8.595	8.595	-0.001	99	295000	25.0	23.1	
107 2-Chlorotoluene	126	8.687	8.687	0.000	96	241202	25.0	23.3	
108 1,3,5-Trimethylbenzene	105	8.766	8.766	0.000	94	883404	25.0	23.7	
109 4-Chlorotoluene	126	8.802	8.802	0.000	97	251675	25.0	23.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
110 tert-Butylbenzene	119	9.074	9.074	0.000	93	781482	25.0	23.5	
111 1,2,4-Trimethylbenzene	105	9.131	9.131	0.000	97	889386	25.0	23.7	
112 sec-Butylbenzene	134	9.288	9.288	0.000	95	226012	25.0	23.2	
113 1,3-Dichlorobenzene	146	9.410	9.410	0.000	97	455722	25.0	22.8	
114 4-Isopropyltoluene	119	9.438	9.438	0.000	97	1004754	25.0	23.6	
115 1,4-Dichlorobenzene	146	9.510	9.510	0.000	94	475908	25.0	22.0	
117 n-Butylbenzene	91	9.839	9.839	0.000	98	901870	25.0	23.8	
118 1,2-Dichlorobenzene	146	9.860	9.860	0.000	97	433034	25.0	22.2	
119 1,2-Dibromo-3-Chloropropan	157	10.639	10.639	0.000	80	62585	25.0	20.0	
121 1,2,4-Trichlorobenzene	180	11.455	11.447	0.008	94	290449	25.0	22.6	
122 Hexachlorobutadiene	225	11.598	11.590	0.008	98	145229	25.0	23.5	
123 Naphthalene	128	11.712	11.712	0.000	97	970799	25.0	22.9	
124 1,2,3-Trichlorobenzene	180	11.934	11.934	0.000	95	268668	25.0	24.3	
S 137 1,2-Dichloroethene, Total	96				0		50.0	46.9	
S 143 Xylenes, Total	106				0		50.0	46.2	
S 138 Xylenes, Total (URS)	1				0		50.0	46.2	
S 144 1,2-Dichloroethene, Total	1				0		50.0	46.9	
S 142 Trihalomethanes, Total	1				0		100.0	83.4	
S 140 1,3-Dichloropropene, Total	1				0		50.0	46.3	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

MV-MegaMain B_00012	Amount Added:	25.00	Units: uL	
MV-Gas B_00026	Amount Added:	25.00	Units: uL	
mv-Cent IS/SS_00002	Amount Added:	5.00	Units: uL	Run Reagent

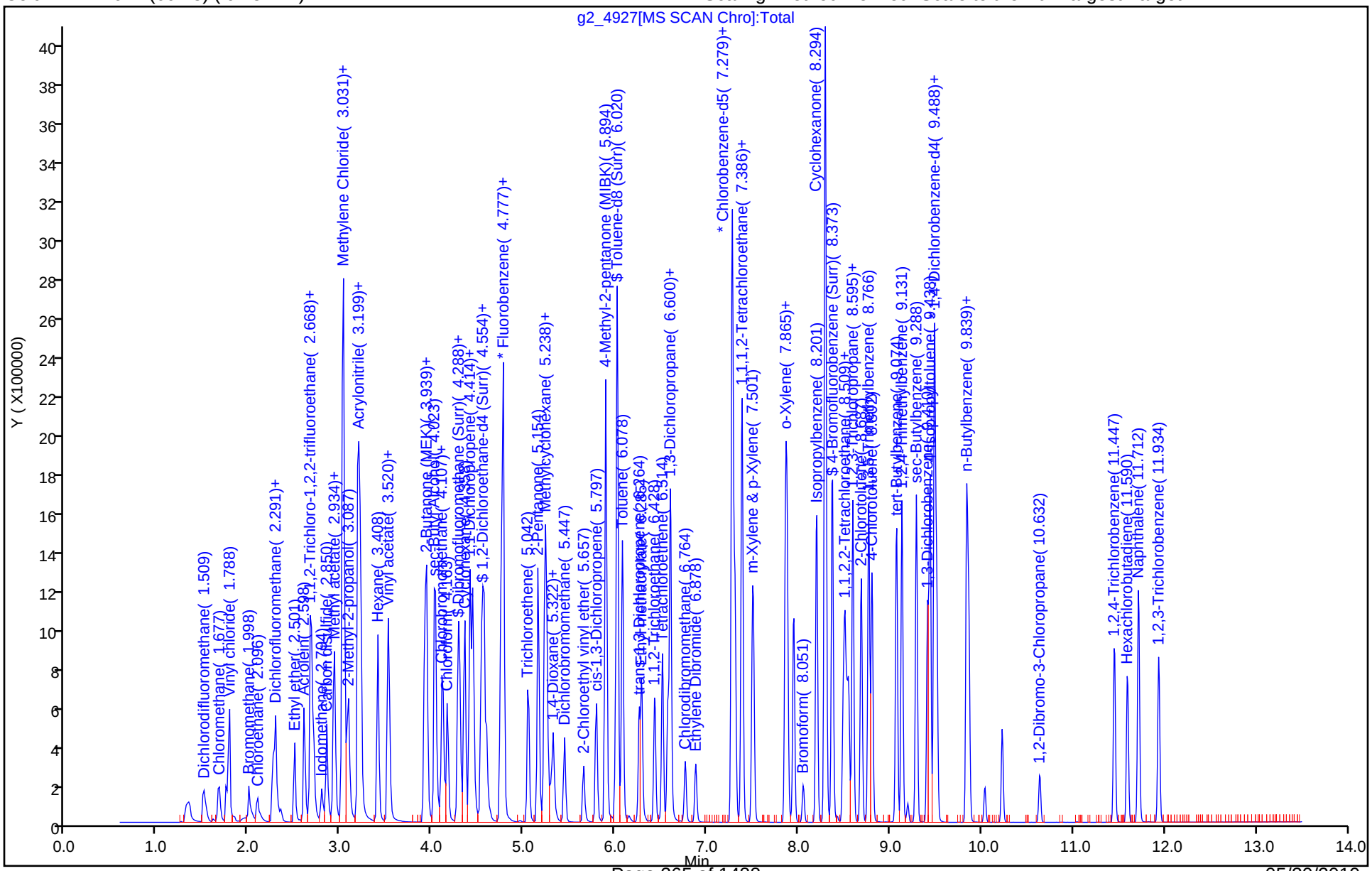
Report Date: 13-May-2019 13:31:48 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Denver

Data File: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\g2_4927.D

Injection Date:	07-May-2019 11:51:30	Instrument ID:	VMS_G2	Operator ID:	meierg
Lims ID:	lcs			Worklist Smp#:	4
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	AQ_VMSG2_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (60.25) (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Eurofins TestAmerica, Denver
Recovery Report

Data File: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\g2_4927.D
Lims ID: lcs
Client ID:
Sample Type: LCS
Inject. Date: 07-May-2019 11:51:30 ALS Bottle#: 5 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: lcs
Operator ID: meierg Instrument ID: VMS_G2

Method: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\AQ_VMSG2_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 13-May-2019 13:31:46 Calib Date: 06-May-2019 18:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b\g2_4881.D

Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: CTX0329

First Level Reviewer: sabsinc Date: 13-May-2019 13:31:46

Compound	Amount Added	Amount Recovered	% Rec.
$ 6 Dibromofluoromethane (Surr)	50.0	52.7	105.34
$ 7 1,2-Dichloroethane-d4 (Surr)	50.0	51.7	103.37
$ 8 Toluene-d8 (Surr)	50.0	49.0	98.08
$ 9 4-Bromofluorobenzene (Surr)	50.0	49.9	99.73

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Denver

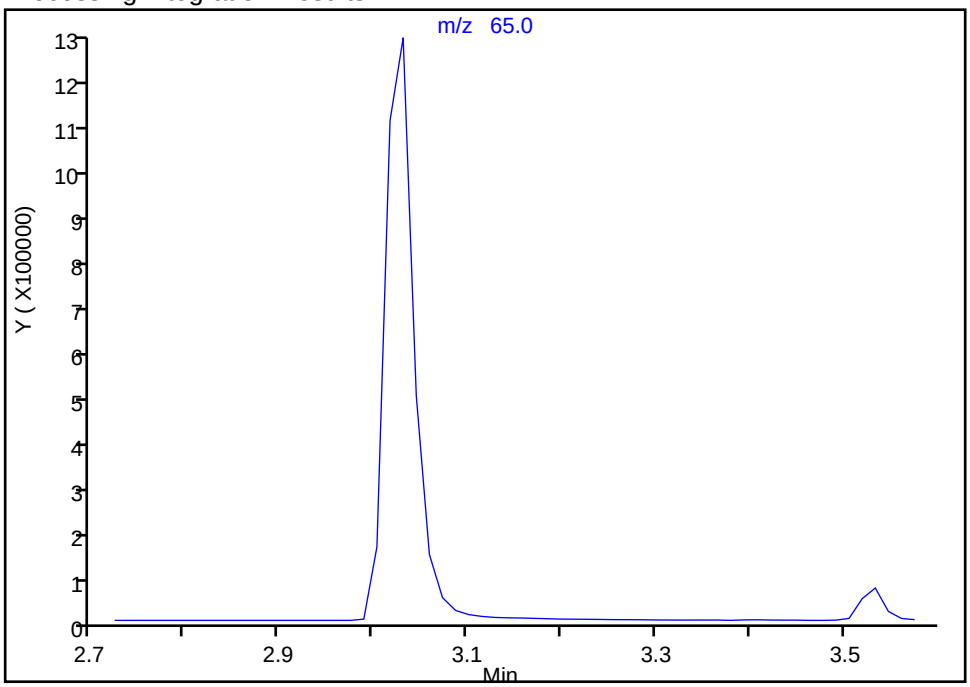
Data File: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b\g2_4927.D
Injection Date: 07-May-2019 11:51:30 Instrument ID: VMS_G2
Lims ID: lcs
Client ID:
Operator ID: meierg ALS Bottle#: 5 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG2_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector MS SCAN

* 1 TBA-d9 (IS), CAS: 25725-11-5

Signal: 1

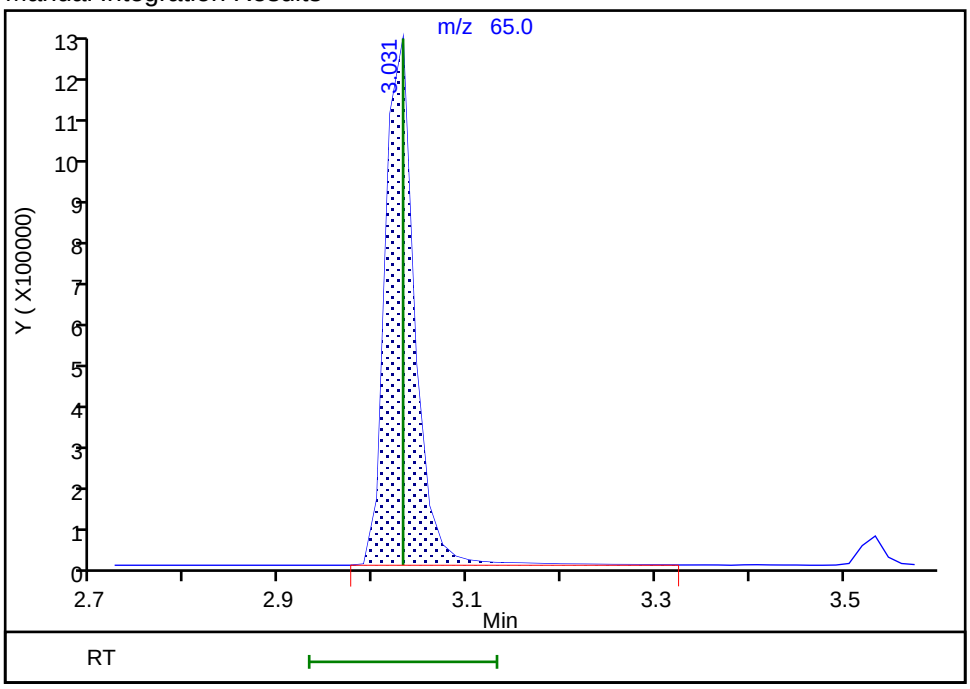
Not Detected
Expected RT: 3.03

Processing Integration Results



RT: 3.03
Area: 2783462
Amount: 1000.0000
Amount Units: ug/l

Manual Integration Results



Reviewer: sabsinc, 13-May-2019 13:31:16
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Instrument ID: VMS_G2 Start Date: 05/06/2019 12:50

Analysis Batch Number: 457190 End Date: 05/06/2019 19:13

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-457190/1		05/06/2019 12:50	1	g2_4865.D	DB-624 (60.25) 0.25(mm)
IC 280-457190/2		05/06/2019 13:12	1	g2_4866.D	DB-624 (60.25) 0.25(mm)
IC 280-457190/3		05/06/2019 13:33	1	g2_4867.D	DB-624 (60.25) 0.25(mm)
IC 280-457190/4		05/06/2019 13:54	1	g2_4868.D	DB-624 (60.25) 0.25(mm)
IC 280-457190/5		05/06/2019 14:15	1	g2_4869.D	DB-624 (60.25) 0.25(mm)
IC 280-457190/6		05/06/2019 14:37	1	g2_4870.D	DB-624 (60.25) 0.25(mm)
IC 280-457190/7		05/06/2019 14:58	1	g2_4871.D	DB-624 (60.25) 0.25(mm)
IC 280-457190/8		05/06/2019 15:19	1	g2_4872.D	DB-624 (60.25) 0.25(mm)
ICV 280-457190/9		05/06/2019 15:43	1	g2_4873.D	DB-624 (60.25) 0.25(mm)
IC 280-457190/10		05/06/2019 16:04	1	g2_4874.D	DB-624 (60.25) 0.25(mm)
IC 280-457190/11		05/06/2019 16:25	1	g2_4875.D	DB-624 (60.25) 0.25(mm)
ICIS 280-457190/12		05/06/2019 16:47	1	g2_4876.D	DB-624 (60.25) 0.25(mm)
IC 280-457190/13		05/06/2019 17:08	1	g2_4877.D	DB-624 (60.25) 0.25(mm)
IC 280-457190/14		05/06/2019 17:29	1	g2_4878.D	DB-624 (60.25) 0.25(mm)
IC 280-457190/15		05/06/2019 17:50	1	g2_4879.D	DB-624 (60.25) 0.25(mm)
IC 280-457190/16		05/06/2019 18:11	1	g2_4880.D	DB-624 (60.25) 0.25(mm)
IC 280-457190/17		05/06/2019 18:51	1	g2_4881.D	DB-624 (60.25) 0.25(mm)
ICV 280-457190/18		05/06/2019 19:13	1	g2_4882.D	DB-624 (60.25) 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Instrument ID: VMS_G2 Start Date: 05/07/2019 10:15

Analysis Batch Number: 457279 End Date: 05/07/2019 20:44

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-457279/1		05/07/2019 10:15	1	g2_4922.D	DB-624 (60.25) 0.25(mm)
CCV 280-457279/2		05/07/2019 10:25	1	g2_4923.D	DB-624 (60.25) 0.25(mm)
CCV 280-457279/3		05/07/2019 10:47	1	g2_4924.D	DB-624 (60.25) 0.25(mm)
MB 280-457279/6		05/07/2019 11:29	1	g2_4926.D	DB-624 (60.25) 0.25(mm)
LCS 280-457279/4		05/07/2019 11:51	1	g2_4927.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		05/07/2019 12:33	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/07/2019 12:55	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/07/2019 13:16	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/07/2019 13:37	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/07/2019 13:59	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/07/2019 14:20	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/07/2019 14:41	100		DB-624 (60.25) 0.25(mm)
280-123011-1		05/07/2019 15:02	1	g2_4936.D	DB-624 (60.25) 0.25(mm)
280-123011-2		05/07/2019 15:23	1	g2_4937.D	DB-624 (60.25) 0.25(mm)
280-123011-4		05/07/2019 15:45	1	g2_4938.D	DB-624 (60.25) 0.25(mm)
280-123011-5		05/07/2019 16:06	1	g2_4939.D	DB-624 (60.25) 0.25(mm)
ZZZZZ		05/07/2019 16:27	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/07/2019 16:49	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/07/2019 17:10	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/07/2019 17:53	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/07/2019 18:14	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/07/2019 18:35	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/07/2019 18:57	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/07/2019 19:18	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/07/2019 19:39	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/07/2019 20:01	1		DB-624 (60.25) 0.25(mm)
ZZZZZ		05/07/2019 20:22	1		DB-624 (60.25) 0.25(mm)
CCVC 280-457279/32		05/07/2019 20:44	1	g2_4952.D	DB-624 (60.25) 0.25(mm)

Sequence Name: C:¥msdchem¥1¥sequence¥050719am.s
Comment:
Operator: meierg
Data Path: C:¥MSDCHEM¥1¥DATA¥050719AM¥
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Test America Denver
Instrument: 62
OV-MS-0010 (8260B/624) (Circle)
Purge Volume: (20mL/5mL/5g) (Circle)
Tune Time: 1015/2044
Lims Batch: 457279

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

Sequence Barcode Options
(X) On Mismatch, Inject Anyway
( ) On Mismatch, Don't Inject
( ) Barcode Disabled

Line					Sample Name/Misc Info		
1)	Sample	100	g2_4922	BFB	bfb		
2)	Sample	1	g2_4923	8260	ccv		
3)	Sample	2	g2_4924	8260	lcs		
4)	Sample	3	g2_4925	8260	blk		
5)	Sample	4	g2_4926	8260	mb		
6)	Sample	5	g2_4927	8260	lcs		
7)	Sample	6	g2_4928	8260	blk		
8)	Sample	7	g2_4929	8260	280-122917-C-1		
9)	Sample	8	g2_4930	8260	280-122917-C-2		
10)	Sample	9	g2_4931	8260	280-122917-A-3		
11)	Sample	10	g2_4932	8260	280-122917-B-4		
12)	Sample	11	g2_4933	8260	280-122917-C-5		
13)	Sample	12	g2_4934	8260	280-122917-B-6		
14)	Sample	13	g2_4935	8260	280-122976-B-42 100x ph<2		
15)	Sample	14	g2_4936	8260	280-123011-C-1		
16)	Sample	15	g2_4937	8260	280-123011-A-2		
17)	Sample	16	g2_4938	8260	280-123011-A-4		
18)	Sample	17	g2_4939	8260	280-123011-B-5		
19)	Sample	18	g2_4940	8260	280-123107-A-1		
20)	Sample	19	g2_4941	8260	280-123107-A-1 MS		
21)	Sample	20	g2_4942	8260	280-123107-A-1 MSD		
22)	Sample	21	g2_4943	8260	blk		
23)	Sample	22	g2_4944	8260	280-123107-B-2		
24)	Sample	23	g2_4945	8260	280-123107-A-3		
25)	Sample	24	g2_4946	8260	280-123107-A-4		
26)	Sample	25	g2_4947	8260	280-123107-A-5		
27)	Sample	26	g2_4948	8260	280-123107-C-6		
28)	Sample	27	g2_4949	8260	280-123107-C-7		
29)	Sample	28	g2_4950	8260	280-123107-A-8		
30)	Sample	29	g2_4951	8260	280-123107-A-9		
31)	Sample	30	g2_4952	8260	CCVC		

pH grab 5/7/19
<2
<2
<2
<2
<2
<2
–
7 *HCl preserved
4
<2
<2
<2
<2
<2
–
<2
<2
<2
<2
<2
<2
<2
<2

Last Modified: Tue May 07 19:42:59 2019 Page: 1

TestAmerica Laboratories
Worklist Report

Worklist Name: 050719am
Worklist Number: 81637
Instrument Name: VMS_G2
Chrom Method: AQ_VMSG2_8260
Purge Volume: 5.000
Units: mL
Analysis Type: VOA
Batch Directory: \\chromna\Denver\ChromData\VMS_G2\20190507-81637.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_G2
Run Reagent: mv-Cent IS/SS_00002
Amount Added: 5.000, Units: uL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0081637-001	# 1 bfb	MV-BFB_00028	BFB	voaWater	1.000	uL	1.000
280-0081637-002	# 2 ccv	MV-MegaMainA_00014	CCV	voaWater	5.000	mL	1.000
280-0081637-003	# 3 ccv	MV-Gas A_00023	CCV	voaWater	5.000	mL	1.000
280-0081637-004	# 4 lcs	MV-MegaMain B_00012 MV-Gas B_00026	LCS	voaWater	5.000	mL	1.000
280-0081637-005	# 5 lcsd	MV-MegaMain B_00012 MV-Gas B_00026	LCSD	voaWater	5.000	mL	1.000
280-0081637-006	# 6 mb		MB	voaWater	5.000	mL	1.000
280-0081637-007	# 7 280-121232-A-1		Client	voaWater	5.000	mL	1.000
280-0081637-008	# 8 280-121232-A-2		Client	voaWater	5.000	mL	1.000
280-0081637-009	# 9 280-121232-A-3		Client	voaWater	5.000	mL	1.000
280-0081637-010	#10 280-122917-C-1		Client	voaWater	5.000	mL	1.000
280-0081637-011	#11 280-122917-C-2		Client	voaWater	5.000	mL	1.000
280-0081637-012	#12 280-122917-A-3		Client	voaWater	5.000	mL	1.000
280-0081637-013	#13 280-122917-B-4		Client	voaWater	5.000	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0081637-032	#32 ccvc	MV-MegaMainA_00014 MV-Gas A_00023	CCVC	voaWater	5.000	mL	1.000

Sample Request Form: 55678

den_msvoa_totalbacklog 5/7/2019 11:24:59 AM Assigned to:Meier, Greg P

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
280-122917-1	U4QPMR919002		8260B_DOD5	8260B_DOD5	05/07 23:59	05/06/19	DFB	UT	Mtls-Strge & 239 & MS-Strge & GC-Strge	Unconfirmed
280-122917-2	U4QPMR919003		8260B_DOD5	8260B_DOD5	05/07 23:59	05/06/19	DFB	UT	MS-Strge & Mtls-Strge & 239 & GC-Strge	Unconfirmed
280-122917-3	U4QPMR919004		8260B_DOD5	8260B_DOD5	05/07 23:59	05/06/19	DFB	UT	GC-Strge & 239 & MS-Strge & Mtls-Strge	Unconfirmed
280-122917-4	U4QPMR919005		8260B_DOD5	8260B_DOD5	05/07 23:59	05/06/19	DFB	UT	Mtls-Strge & MS-Strge & WC Dpt & GC-Strge & 239	Unconfirmed
280-122917-5	U4QPMR919006		8260B_DOD5	8260B_DOD5	05/07 23:59	05/06/19	DFB	UT	WC Dpt & MS-Strge & 239 & Mtls-Strge & GC-Strge	Unconfirmed
280-122917-6	U4QPMR919303		8260B_DOD5	8260B_DOD5	05/07 23:59	05/06/19	DFB	UT	MS-Strge	Unconfirmed
280-122976-42	MW-6B	100X	8260B	8260B	05/07 23:59	05/13/19	DTB	KS	MS-Strge	Unconfirmed
M	DIL3_8260 Supp Spk									
280-123011-1	SP-S2		8260B_DOD5	8260B_DOD5	05/08 23:59	05/11/19	PJM	NE	WC Dpt & MS-Strge	Unconfirmed
M	Q5Rev3.1-12212015_Std Var App_60day disposal_DIL3									
280-123011-2	SP-E1		8260B_DOD5	8260B_DOD5	05/08 23:59	05/11/19	PJM	NE	Mtls-Strge & WC Dpt & MS-Strge	Unconfirmed
M	Q5Rev3.1-12212015_Std Var App_60day disposal_DIL3									
280-123011-4	SP-S22		8260B_DOD5	8260B_DOD5	05/08 23:59	05/11/19	PJM	NE	MS-Strge & WC Dpt	Unconfirmed
M	Q5Rev3.1-12212015_Std Var App_60day disposal_DIL3									
280-123011-5	TB-1048		8260B_DOD5	8260B_DOD5	05/08 23:59	05/11/19	PJM	NE	MS-Strge	Unconfirmed
M	Q5Rev3.1-12212015_Std Var App_60day disposal_DIL3									
280-123107-1	LF003_266_20190424		8260B_DOD5	8260B_DOD5	05/08 23:59	05/08/19	KZ1	TN	MS-Strge	Unconfirmed
Q	Q5_Rev May 7, 2014 Revsion 2_DIL1_Use DF									

Sample Request Form: 55677

den_msvoa_totalbacklog 5/7/2019 11:23:56 AM Assigned to:Meier, Greg P

Sample	Client Sample ID	Container	Method	Analytical Method	Hold Time	Due	PM	State Code	Storage	Hazard Level
280-123107-1MS	LF003_266_20190424 MS		8260B_DOD5	8260B_DOD5	05/08 23:59	05/08/19	KZ1	TN	MS-Strge	Unconfirmed
M Q5_Rev May 7, 2014 Revsion 2_DIL1_Use DF										
280-123107-1MSD	LF003_266_20190424 MSD		8260B_DOD5	8260B_DOD5	05/08 23:59	05/08/19	KZ1	TN	MS-Strge	Unconfirmed
M Q5_Rev May 7, 2014 Revsion 2_DIL1_Use DF										
280-123107-2	LF003_746_20190424		8260B_DOD5	8260B_DOD5	05/08 23:59	05/08/19	KZ1	TN	MS-Strge	Unconfirmed
M Q5_Rev May 7, 2014 Revsion 2_DIL1_Use DF										
280-123107-3	LF003_745_20190424		8260B_DOD5	8260B_DOD5	05/08 23:59	05/08/19	KZ1	TN	MS-Strge	Unconfirmed
M Q5_Rev May 7, 2014 Revsion 2_DIL1_Use DF										
280-123107-4	LF003_744_20190424		8260B_DOD5	8260B_DOD5	05/08 23:59	05/08/19	KZ1	TN	MS-Strge	Unconfirmed
M Q5_Rev May 7, 2014 Revsion 2_DIL1_Use DF										
280-123107-5	LF003_258_20190424		8260B_DOD5	8260B_DOD5	05/08 23:59	05/08/19	KZ1	TN	MS-Strge	Unconfirmed
M Q5_Rev May 7, 2014 Revsion 2_DIL1_Use DF										
280-123107-6	LF003_371_20190424		8260B_DOD5	8260B_DOD5	05/08 23:59	05/08/19	KZ1	TN	MS-Strge	Unconfirmed
M Q5_Rev May 7, 2014 Revsion 2_DIL1_Use DF										
280-123107-7	LF003_371_20190424 FD		8260B_DOD5	8260B_DOD5	05/08 23:59	05/08/19	KZ1	TN	MS-Strge	Unconfirmed
M Q5_Rev May 7, 2014 Revsion 2_DIL1_Use DF										
280-123107-8	LF003_575_20190424		8260B_DOD5	8260B_DOD5	05/08 23:59	05/08/19	KZ1	TN	MS-Strge	Unconfirmed
M Q5_Rev May 7, 2014 Revsion 2_DIL1_Use DF										
280-123107-9	LF003_555_20190424		8260B_DOD5	8260B_DOD5	05/08 23:59	05/08/19	KZ1	TN	MS-Strge	Unconfirmed
M Q5_Rev May 7, 2014 Revsion 2_DIL1_Use DF										

Sequence Name: C:¥msdchem¥1¥sequence¥050619i.s
Comment:
Operator: meierg
Data Path: C:¥MSDCHEM¥1¥DATA¥050619i¥
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Test America Denver
Instrument: G2
DV-MS-0010 (8260B/624) (Circle) (524)
Purge Volume: (20mL/5mL/5g)
(Circle)
Tune Time: 1250/1913
Lims Batch: 457190 → 8260B

1 → 524 not processed.
2 → 624

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

Sequence Barcode Options
(X) On Mismatch, Inject Anyway
( ) On Mismatch, Don't Inject
( ) Barcode Disabled

G.onla 5/6/19

Line			Sample Name/Misc Info		
1)	Sample	100	g2_4865	BFB	bfb
2)	Sample	1	g2_4866	8260	ic
3)	Sample	2	g2_4867	8260	ic
4)	Sample	3	g2_4868	8260	ic
5)	Sample	4	g2_4869	8260	ic
6)	Sample	5	g2_4870	8260	ic
7)	Sample	6	g2_4871	8260	ic
8)	Sample	7	g2_4872	8260	ic
9)	Sample	8	g2_4873	8260	icv
10)	Sample	9	g2_4874	8260	ic
11)	Sample	10	g2_4875	8260	ic
12)	Sample	11	g2_4876	8260	icis
13)	Sample	12	g2_4877	8260	ic
14)	Sample	13	g2_4878	8260	ic
15)	Sample	14	g2_4879	8260	ic
16)	Sample	15	g2_4880	8260	ic
17)	Sample	16	g2_4881	8260	ic
18)	Sample	17	g2_4882	8260	icv

624 Calibration ID: 36266 Main
36269 Gas/surr/ICIS

457192/9 ICV Main
457192/12 ICIS
457192/18 ICV Surr/Gases

8260B Calibration ID: 36264 Main
36267 Gas/surr/ICIS

457190/9 ICV Main
457190/12 ICIS
457190/18 ICV Surr/Gases

Analyte	Calibration Limit (ug/L)
Bromoethane	75
Chloroethane	100

ICAL good for Q4/Q5 except Cyclohexanone @ 20.6 Q5

1st Review smla 5/6/19

2nd Review Jaw 05/06/19

Last Modified: Mon May 06 18:39:34 2019 Page: 1

TestAmerica Laboratories
Worklist Report

Worklist Name: 050619ic Worklist Number: 81613
Instrument Name: VMS_G2 Chrom Method: AQ_VMSG2_8260
Purge Volume: 5.000 Units: mL
Analysis Type: VOA
Batch Directory: \\chromna\Denver\ChromData\VMS_G2\20190506-81613.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_G2
Run Reagent: mv-Cent IS/SS_00002 Amount Added: 5.000, Units: uL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0081613-001	# 1 bfb	MV-BFB_00028	BFB		voaWater	1.000	uL	1.000
280-0081613-002	# 2 ic	mv-Cent IS_00002 MV-MegaMainA_00014	IC	7	voaWater	5.000	mL	1.000
280-0081613-003	# 3 ic	mv-Cent IS_00002 MV-MegaMainA_00014	IC	6	voaWater	5.000	mL	1.000
280-0081613-004	# 4 ic	mv-Cent IS_00002 MV-MegaMainA_00014	IC	5	voaWater	5.000	mL	1.000
280-0081613-005	# 5 ic	mv-Cent IS_00002 MV-MegaMainA_00014	IC	4	voaWater	5.000	mL	1.000
280-0081613-006	# 6 ic	mv-Cent IS_00002 MV-MegaMainA_00014	IC	3	voaWater	5.000	mL	1.000
280-0081613-007	# 7 ic	mv-Cent IS_00002 MV-MegaMainA_00014	IC	2	voaWater	5.000	mL	1.000
280-0081613-008	# 8 ic	mv-Cent IS_00002 MV-MegaMainA_00014	IC	1	voaWater	5.000	mL	1.000
280-0081613-009	# 9 icv	mv-Cent IS_00002 MV-MegaMain B_00012	ICV		voaWater	5.000	mL	1.000
280-0081613-010	#10 ic	MV-Gas A_00023	IC	7	voaWater	5.000	mL	1.000
280-0081613-011	#11 ic	MV-Gas A_00023	IC	6	voaWater	5.000	mL	1.000
280-0081613-012	#12 icis	MV-Gas A_00023	ICIS	5	voaWater	5.000	mL	1.000
280-0081613-013	#13 ic	MV-Gas A_00023	IC	4	voaWater	5.000	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0081613-014	#14 ic	MV-Gas A_00023	IC	3	voaWater	5.000	mL	1.000
280-0081613-015	#15 ic	MV-Gas A_00023	IC	2	voaWater	5.000	mL	1.000
280-0081613-016	#16 ic	MV-Gas A_00023	IC	1	voaWater	5.000	mL	1.000
280-0081613-017	#17 icv	MV-Gas B_00026	ICV		voaWater	5.000	mL	1.000

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Batch Number: 457190 Batch Start Date: 05/06/19 12:50 Batch Analyst: Meier, Greg P

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MV-BFB 00028	mv-Cent IS 00002	mv-Cent IS/SS 00002	MV-Gas A 00023
BFB 280-457190/1		8260B		1 uL	1 uL	2 uL			
IC 280-457190/2		8260B		5 mL	5 mL		5 uL		
IC 280-457190/3		8260B		5 mL	5 mL		5 uL		
IC 280-457190/4		8260B		5 mL	5 mL		5 uL		
IC 280-457190/5		8260B		5 mL	5 mL		5 uL		
IC 280-457190/6		8260B		5 mL	5 mL		5 uL		
IC 280-457190/7		8260B		5 mL	5 mL		5 uL		
IC 280-457190/8		8260B		5 mL	5 mL		5 uL		
ICV 280-457190/9		8260B		5 mL	5 mL		5 uL		
IC 280-457190/10		8260B		5 mL	5 mL			5 uL	200 uL
IC 280-457190/11		8260B		5 mL	5 mL			5 uL	100 uL
ICIS 280-457190/12		8260B		5 mL	5 mL			5 uL	50 uL
IC 280-457190/13		8260B		5 mL	5 mL			5 uL	10 uL
IC 280-457190/14		8260B		5 mL	5 mL			5 uL	2 uL
IC 280-457190/15		8260B		5 mL	5 mL			5 uL	1 uL
IC 280-457190/16		8260B		5 mL	5 mL			5 uL	0.5 uL
IC 280-457190/17		8260B		5 mL	5 mL			5 uL	75 uL
ICV 280-457190/18		8260B		5 mL	5 mL			5 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-Gas B 00026	MV-MegaMain B 00012	MV-MegaMainA 00014			
BFB 280-457190/1		8260B							
IC 280-457190/2		8260B				200 uL			
IC 280-457190/3		8260B				100 uL			
IC 280-457190/4		8260B				50 uL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Batch Number: 457190 Batch Start Date: 05/06/19 12:50 Batch Analyst: Meier, Greg P

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-Gas B 00026	MV-MegaMain B 00012	MV-MegaMainA 00014			
IC 280-457190/5		8260B				10 uL			
IC 280-457190/6		8260B				2 uL			
IC 280-457190/7		8260B				1 uL			
IC 280-457190/8		8260B				0.5 uL			
ICV 280-457190/9		8260B			50 uL				
IC 280-457190/10		8260B							
IC 280-457190/11		8260B							
ICIS 280-457190/12		8260B							
IC 280-457190/13		8260B							
IC 280-457190/14		8260B							
IC 280-457190/15		8260B							
IC 280-457190/16		8260B							
IC 280-457190/17		8260B							
ICV 280-457190/18		8260B		50 uL					

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Batch Number: 457279 Batch Start Date: 05/07/19 10:15 Batch Analyst: Meier, Greg P

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MV-BFB 00028	mv-Cent IS/SS 00002	MV-Gas A 00023	MV-Gas B 00026
BFB 280-457279/1		8260B		1 uL	1 uL	2 uL			
CCV 280-457279/2		8260B		5 mL	5 mL		5 uL		
CCV 280-457279/3		8260B		5 mL	5 mL		5 uL	25 uL	
LCS 280-457279/4		8260B		5 mL	5 mL		5 uL		25 uL
MB 280-457279/6		8260B		5 mL	5 mL		5 uL		
280-123011-C-1	SP-S2	8260B	T	5 mL	5 mL		5 uL		
280-123011-A-2	SP-E1	8260B	T	5 mL	5 mL		5 uL		
280-123011-A-4	SP-S22	8260B	T	5 mL	5 mL		5 uL		
280-123011-B-5	TB-1048	8260B	T	5 mL	5 mL		5 uL		
CCVC 280-457279/32		8260B		5 mL	5 mL		5 uL	50 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-MegaMain B 00012	MV-MegaMainA 00014				
BFB 280-457279/1		8260B							
CCV 280-457279/2		8260B			50 uL				
CCV 280-457279/3		8260B							
LCS 280-457279/4		8260B		25 uL					
MB 280-457279/6		8260B							
280-123011-C-1	SP-S2	8260B	T						
280-123011-A-2	SP-E1	8260B	T						
280-123011-A-4	SP-S22	8260B	T						
280-123011-B-5	TB-1048	8260B	T						
CCVC 280-457279/32		8260B			50 uL				

Batch Notes	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Batch Number: 457279 Batch Start Date: 05/07/19 10:15 Batch Analyst: Meier, Greg P

Batch Method: 8260B Batch End Date:

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

8330A_DOD5

Nitroaromatics and Nitramines (HPLC)

FORM II
HPLC/IC SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): Synergi C18 ID: 4.6 (mm) GC Column (2): Synergi C18 4.6 (mm)

Client Sample ID	Lab Sample ID	DNT1	#	DNT2	#
SP-S2	280-123009-1	89			
SP-S2	280-123009-1			84	
SP-S2 DL	280-123009-1 DL	94	M		
SP-S2 DL	280-123009-1 DL			92	
SP-S6	280-123009-2	94			
SP-S6	280-123009-2			91	
SP-S8	280-123009-3	97			
SP-S8	280-123009-3			89	M
SP-E1	280-123009-4	94			
SP-E1	280-123009-4			86	M
SP-S22	280-123009-5	99			
SP-S22	280-123009-5			86	
SP-S22 DL	280-123009-5 DL	89	M		
SP-S22 DL	280-123009-5 DL			93	
	MB 320-291065/1-A	95			
	MB 320-291065/1-A			94	
	LCS 320-291065/2-A			93	M
	LCS 320-291065/2-A	89			
	LCSD 320-291065/3-A			94	
	LCSD 320-291065/3-A	88			

	QC LIMITS
DNT = 3,4-Dinitrotoluene	79-111

Column to be used to flag recovery values

FORM II 8330A

FORM III
HPLC/IC LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Matrix: Water Level: Low Lab File ID: F0000015.D

Lab ID: LCS 320-291065/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,3,5-Trinitrobenzene	1.00	0.957	96	73-125	
1,3-Dinitrobenzene	1.00	0.977	98	78-120	
2,4,6-Trinitrotoluene	1.00	0.873	87	71-123	
2,4-Dinitrotoluene	1.00	0.953	95	78-120	
2,6-Dinitrotoluene	1.00	0.940	94	77-127	
2-Amino-4,6-dinitrotoluene	1.00	0.977	98	79-120	
2-Nitrotoluene	1.00	0.931	93	70-127	
3-Nitrotoluene	1.00	0.932	93	73-125	
4-Amino-2,6-dinitrotoluene	1.00	1.01	101	76-125	M
4-Nitrotoluene	1.00	0.918	92	71-127	
HMX	1.00	0.984	98	65-135	
MNX	4.68	5.15	110	57-132	
Nitrobenzene	1.00	0.977	98	65-134	
RDX	1.00	1.08	108	68-130	
Tetryl	1.00	0.872	87	64-128	

Column to be used to flag recovery and RPD values

FORM III 8330A

FORM III
HPLC/IC LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Matrix: Water Level: Low Lab File ID: F0000018.D

Lab ID: LCSD 320-291065/3-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,3,5-Trinitrobenzene	1.00	0.968	97	1	20	73-125	
1,3-Dinitrobenzene	1.00	0.984	98	1	20	78-120	
2,4,6-Trinitrotoluene	1.00	0.879	88	1	20	71-123	
2,4-Dinitrotoluene	1.00	0.960	96	1	20	78-120	
2,6-Dinitrotoluene	1.00	0.951	95	1	20	77-127	
2-Amino-4,6-dinitrotoluene	1.00	0.974	97	0	20	79-120	
2-Nitrotoluene	1.00	0.962	96	3	20	70-127	
3-Nitrotoluene	1.00	0.936	94	0	20	73-125	
4-Amino-2,6-dinitrotoluene	1.00	0.940	94	7	20	76-125	
4-Nitrotoluene	1.00	0.930	93	1	20	71-127	
HMX	1.00	1.02	102	3	20	65-135	
MNX	4.68	5.23	112	2	20	57-132	
Nitrobenzene	1.00	0.979	98	0	20	65-134	
RDX	1.00	1.08	108	0	20	68-130	
Tetryl	1.00	0.880	88	1	20	64-128	

Column to be used to flag recovery and RPD values

FORM III 8330A

FORM IV
HPLC/IC METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: MB 320-291065/1-A

Matrix: Water Date Extracted: 04/29/2019 06:59

Lab File ID:(1) ZD0000059.D Lab File ID:(2) U000053.D

Date Analyzed:(1) 05/02/2019 17:15 Date Analyzed:(2) 05/23/2019 16:57

Instrument ID:(1) LC11 Instrument ID:(2) LC11

GC Column:(1) Synergi C18 ID: 4.6(mm) GC Column:(2) Synergi C18 ID: 4.6(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
SP-S2	280-123009-1	05/03/2019 05:46	05/24/2019 06:24
SP-S6	280-123009-2	05/03/2019 06:40	05/24/2019 07:21
SP-S8	280-123009-3	05/03/2019 09:21	05/24/2019 08:19
SP-E1	280-123009-4	05/03/2019 10:14	05/24/2019 09:16
SP-S22	280-123009-5	05/03/2019 11:08	05/24/2019 10:14
SP-S2 DL	280-123009-1 DL	05/24/2019 14:35	05/24/2019 11:12
SP-S22 DL	280-123009-5 DL	05/24/2019 15:28	05/24/2019 12:09

FORM VIII
HPLC/IC ANALYTICAL SEQUENCE

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Sample No.: CCVRT 320-291526/3 Date Analyzed: 04/30/2019 13:05

Instrument ID: LC11 GC Column: Synergi C18 ID: 4.6(mm)

Lab File ID (Standard): ZD0000002.D Heated Purge: (Y/N) N

Calibration ID: 43973

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				DNT RT #		
CONTINUING CALIBRATION SURROGATE				29.48		
UPPER LIMIT				29.73		
LOWER LIMIT				29.23		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 320-291526/3		04/30/2019 13:05	ZD0000002.D	29.48		
CCV 320-291526/51		05/02/2019 09:12	ZD0000050.D	29.47		
MB 320-291065/1-A		05/02/2019 17:15	ZD0000059.D	29.41		
CCV 320-291526/63		05/02/2019 20:49	ZD0000063.D	29.44		
280-123009-1	SP-S2	05/03/2019 05:46	ZD0000073.D	29.52		
280-123009-2	SP-S6	05/03/2019 06:40	ZD0000074.D	29.53		
CCV 320-291526/75		05/03/2019 07:33	ZD0000075.D	29.52		
280-123009-3	SP-S8	05/03/2019 09:21	ZD0000077.D	29.49		
280-123009-4	SP-E1	05/03/2019 10:14	ZD0000078.D	29.45		
280-123009-5	SP-S22	05/03/2019 11:08	ZD0000079.D	29.43		
CCV 320-291526/84		05/03/2019 12:55	ZD0000081.D	29.40		

DNT = 3,4-Dinitrotoluene

DNT RT Limit = ± 0.25 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII 8330A

FORM VIII
HPLC/IC ANALYTICAL SEQUENCE

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Sample No.: CCVRT 320-292661/3 Date Analyzed: 05/06/2019 15:04

Instrument ID: LC11 GC Column: Synergi C18 ID: 4.6(mm)

Lab File ID (Standard): F0000003.D Heated Purge: (Y/N) N

Calibration ID: 43973

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				DNT RT #		
CONTINUING CALIBRATION SURROGATE				29.66		
UPPER LIMIT				29.91		
LOWER LIMIT				29.41		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 320-292661/3		05/06/2019 15:04	F0000003.D	29.66		
LCS 320-291065/2-A		05/07/2019 01:48	F0000015.D	29.51		
LCSD 320-291065/3-A		05/07/2019 04:29	F0000018.D	29.52		

DNT = 3,4-Dinitrotoluene

DNT RT Limit = ± 0.25 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII 8330A

FORM VIII
HPLC/IC ANALYTICAL SEQUENCE

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Sample No.: CCVRT 320-296662/1 Date Analyzed: 05/23/2019 18:55

Instrument ID: LC11 GC Column: Synergi C18 ID: 4.6(mm)

Lab File ID (Standard): T0000087.D Heated Purge: (Y/N) N

Calibration ID: 43973

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				DNT RT #		
CONTINUING CALIBRATION SURROGATE				29.37		
UPPER LIMIT				29.62		
LOWER LIMIT				29.12		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 320-296662/1		05/23/2019 18:55	T0000087.D	29.37		
CCV 320-296662/13		05/24/2019 05:39	T0000099.D	29.42		
280-123009-1 DL	SP-S2 DL	05/24/2019 14:35	T0000109.D	29.38		
280-123009-5 DL	SP-S22 DL	05/24/2019 15:28	T0000110.D	29.35		

DNT = 3,4-Dinitrotoluene

DNT RT Limit = ± 0.25 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII 8330A

FORM VIII
HPLC/IC ANALYTICAL SEQUENCE

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Sample No.: CCVRT 320-295993/3 Date Analyzed: 05/21/2019 18:53

Instrument ID: LC12 GC Column: Zorbax CN ID: 4.6(mm)

Lab File ID (Standard): U000003.D Heated Purge: (Y/N) N

Calibration ID: 45338

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				DNT		
				RT #		
CONTINUING CALIBRATION SURROGATE				34.85		
UPPER LIMIT				35.10		
LOWER LIMIT				34.60		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 320-295993/3		05/21/2019 18:53	U000003.D	34.85		
CCV 320-295993/47		05/23/2019 13:08	U000049.D	34.84		
MB 320-291065/1-A		05/23/2019 16:57	U000053.D	34.84		
LCS 320-291065/2-A		05/23/2019 17:55	U000054.D	34.86		
LCSD 320-291065/3-A		05/23/2019 18:53	U000055.D	34.84		
CCV 320-295993/51		05/24/2019 01:36	U000062.D	34.82		
280-123009-1	SP-S2	05/24/2019 06:24	U000067.D	34.81		
280-123009-2	SP-S6	05/24/2019 07:21	U000068.D	34.81		
280-123009-3	SP-S8	05/24/2019 08:19	U000069.D	34.81		
280-123009-4	SP-E1	05/24/2019 09:16	U000070.D	34.80		
280-123009-5	SP-S22	05/24/2019 10:14	U000071.D	34.80		
280-123009-1 DL	SP-S2 DL	05/24/2019 11:12	U000072.D	34.80		
280-123009-5 DL	SP-S22 DL	05/24/2019 12:09	U000073.D	34.79		
CCV 320-295993/72		05/24/2019 13:07	U000074.D	34.78		

DNT = 3,4-Dinitrotoluene

DNT RT Limit = ± 0.25 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII 8330A

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Client Sample ID: SP-S2 Lab Sample ID: 280-123009-1

Instrument ID (1): LC11 Instrument ID (2): LC11

Date Analyzed (1): 05/03/2019 05:46 Date Analyzed (2): 05/24/2019 06:24

GC Column (1): Synergi C18 ID: 4.6(mm) GC Column (2): Synergi C18 ID: 4.6(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
HMX	1		18.09	17.72	18.22	0.47		12.8
	2		36.23	35.99	36.49	0.41		
RDX	1		20.62	20.30	20.80	0.60		24.9
	2		31.35	31.14	31.64	0.47		
1,3,5-Trinitrobenzene	1		22.39	22.09	22.59	19		10.2
	2		26.63	26.27	26.95	17		
1,3-Dinitrobenzene	1		24.67	24.37	24.87	0.058		13.8
	2		24.43	24.27	24.77	0.051		
2,4,6-Trinitrotoluene	1		28.34	28.01	28.51	6.7		11.1
	2		35.38	35.15	35.65	6.0		
4-Amino-2,6-dinitrotoluene	1		29.21	28.71	29.39	1.5		2.6
	2		34.16	33.92	34.42	1.5		
2-Amino-4,6-dinitrotoluene	1		29.90	29.34	30.10	1.6		6.2
	2		33.91	33.67	34.17	1.6		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Client Sample ID: SP-S2 DL Lab Sample ID: 280-123009-1 DL

Instrument ID (1): LC11 Instrument ID (2): LC11

Date Analyzed (1): 05/24/2019 14:35 Date Analyzed (2): 05/24/2019 11:12

GC Column (1): Synergi C18 ID: 4.6(mm) GC Column (2): Synergi C18 ID: 4.6(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
HMX	1		18.02	17.82	18.32	0.49		8.9
	2		36.21	35.99	36.49	0.54		
1,3,5-Trinitrobenzene	1		22.35	22.09	22.59	20		12.2
	2		26.62	26.27	26.95	18		
2,4,6-Trinitrotoluene	1		28.21	27.98	28.48	6.9		8.2
	2		35.37	35.15	35.65	6.4		
4-Amino-2,6-dinitrotoluene	1		29.04	28.77	29.45	1.6		16.1
	2		34.14	33.92	34.42	1.9		
2-Amino-4,6-dinitrotoluene	1		29.73	29.41	30.17	1.8		5.6
	2		33.90	33.67	34.17	1.7		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Client Sample ID: SP-S6 Lab Sample ID: 280-123009-2

Instrument ID (1): LC11 Instrument ID (2): LC11

Date Analyzed (1): 05/03/2019 06:40 Date Analyzed (2): 05/24/2019 07:21

GC Column (1): Synergi C18 ID: 4.6(mm) GC Column (2): Synergi C18 ID: 4.6(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
HMX	1		18.08	17.78	18.28	0.21		0.6
	2		36.22	35.99	36.49	0.21		
RDX	1		20.63	20.32	20.82	0.37		28.7
	2		31.35	31.14	31.64	0.28		
1,3,5-Trinitrobenzene	1		22.39	22.12	22.62	5.1		5.7
	2		26.64	26.27	26.95	4.8		
2,4,6-Trinitrotoluene	1		28.35	28.04	28.54	1.0		6.1
	2		35.38	35.15	35.65	0.96		
4-Amino-2,6-dinitrotoluene	1		29.21	28.73	29.41	0.27		7.8
	2		34.15	33.92	34.42	0.29		
2-Amino-4,6-dinitrotoluene	1		29.90	29.37	30.13	0.24		10.3
	2		33.92	33.67	34.17	0.22		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Client Sample ID: SP-S8 Lab Sample ID: 280-123009-3

Instrument ID (1): LC11 Instrument ID (2): LC11

Date Analyzed (1): 05/03/2019 09:21 Date Analyzed (2): 05/24/2019 08:19

GC Column (1): Synergi C18 ID: 4.6(mm) GC Column (2): Synergi C18 ID: 4.6(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
HMX	1		18.08	17.72	18.22	0.053		16.4
	2		36.23	35.99	36.49	0.062		
RDX	1		20.61	20.30	20.80	0.16		18.1
	2		31.42	31.14	31.64	0.13		
1,3,5-Trinitrobenzene	1		22.37	22.09	22.59	0.49		9.2
	2		26.67	26.27	26.95	0.54		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Client Sample ID: SP-E1 Lab Sample ID: 280-123009-4

Instrument ID (1): LC11 Instrument ID (2): LC11

Date Analyzed (1): 05/03/2019 10:14 Date Analyzed (2): 05/24/2019 09:16

GC Column (1): Synergi C18 ID: 4.6(mm) GC Column (2): Synergi C18 ID: 4.6(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
HMX	1		18.05	17.72	18.22	0.044		39.0
	2		36.33	35.95	36.45	0.065		
RDX	1		20.58	20.30	20.80	0.15		4.0
	2		31.29	31.00	31.50	0.14		
1,3,5-Trinitrobenzene	1		22.36	22.09	22.59	0.41		12.9
	2		26.64	26.27	26.95	0.47		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Client Sample ID: SP-S22 Lab Sample ID: 280-123009-5

Instrument ID (1): LC11 Instrument ID (2): LC11

Date Analyzed (1): 05/03/2019 11:08 Date Analyzed (2): 05/24/2019 10:14

GC Column (1): Synergi C18 ID: 4.6(mm) GC Column (2): Synergi C18 ID: 4.6(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
HMX	1		18.02	17.81	18.31	0.49		19.9
	2		36.22	35.99	36.49	0.40		
RDX	1		20.57	20.36	20.86	0.61		38.4
	2		31.34	31.14	31.64	0.41		
1,3,5-Trinitrobenzene	1		22.35	22.13	22.63	20		14.5
	2		26.62	26.27	26.95	17		
2,4,6-Trinitrotoluene	1		28.27	28.09	28.59	7.4		18.0
	2		35.37	35.15	35.65	6.1		
4-Amino-2,6-dinitrotoluene	1		29.09	28.86	29.54	1.6		0.7
	2		34.14	33.92	34.42	1.6		
2-Amino-4,6-dinitrotoluene	1		29.76	29.52	30.28	1.8		13.0
	2		33.89	33.67	34.17	1.6		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Client Sample ID: SP-S22 DL Lab Sample ID: 280-123009-5 DL

Instrument ID (1): LC11 Instrument ID (2): LC11

Date Analyzed (1): 05/24/2019 15:28 Date Analyzed (2): 05/24/2019 12:09

GC Column (1): Synergi C18 ID: 4.6(mm) GC Column (2): Synergi C18 ID: 4.6(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
HMX	1		18.01	17.82	18.32	0.50		10.0
	2		36.23	35.99	36.49	0.55		
1,3,5-Trinitrobenzene	1		22.34	22.09	22.59	20		12.4
	2		26.60	26.27	26.95	17		
2,4,6-Trinitrotoluene	1		28.20	27.98	28.48	6.7		8.3
	2		35.36	35.15	35.65	6.2		
4-Amino-2,6-dinitrotoluene	1		29.03	28.77	29.45	1.5		16.7
	2		34.13	33.92	34.42	1.7		
2-Amino-4,6-dinitrotoluene	1		29.68	29.41	30.17	1.7		1.8
	2		33.88	33.67	34.17	1.7		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 320-291065/2-A

Instrument ID (1): LC11 Instrument ID (2): LC12

Date Analyzed (1): 05/23/2019 17:55 Date Analyzed (2): 05/07/2019 01:48

GC Column (1): Synergi C18 ID: 4.6(mm) GC Column (2): Zorbax CN ID: 4.6(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
Nitrobenzene	1		22.21	21.89	22.39	1.04		6.5
	2		26.29	26.02	26.52	0.977		
1,3-Dinitrobenzene	1		24.56	24.27	24.77	0.989		1.2
	2		24.70	24.43	24.93	0.977		
1,3,5-Trinitrobenzene	1		26.66	26.27	26.95	1.18		20.7
	2		22.39	22.14	22.64	0.957		
MNX	1		27.58	27.25	27.81	4.78		7.5
	2		19.19	19.03	19.53	5.15		
2-Nitrotoluene	1		29.23	28.92	29.42	0.936		0.5
	2		34.80	34.43	35.09	0.931		
4-Nitrotoluene	1		29.23	28.92	29.42	0.936		1.9
	2		36.35	35.94	36.66	0.918		
3-Nitrotoluene	1		29.81	29.49	29.99	0.925		0.8
	2		37.98	37.54	38.34	0.932		
RDX	1		31.41	31.14	31.64	1.05		2.2
	2		20.63	20.37	20.87	1.08		
2,4-Dinitrotoluene	1		32.23	31.97	32.47	0.971		1.8
	2		31.69	31.36	31.98	0.953		
2,6-Dinitrotoluene	1		32.93	32.64	33.14	0.983		4.5
	2		31.25	30.92	31.52	0.940		
2-Amino-4,6-dinitrotoluene	1		33.95	33.67	34.17	0.949		2.9
	2		29.89	29.49	30.25	0.977		
4-Amino-2,6-dinitrotoluene	1		34.19	33.92	34.42	0.972		3.3
	2		29.20	28.84	29.52	1.01		
2,4,6-Trinitrotoluene	1		35.41	35.15	35.65	0.839		4.0
	2		28.34	28.10	28.60	0.873		
HMX	1		36.26	35.99	36.49	0.886		10.5
	2		18.09	17.87	18.37	0.984		
Tetryl	1		37.89	37.62	38.12	0.821		6.0
	2		26.96	26.73	27.23	0.872		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 320-291065/3-A

Instrument ID (1): LC11 Instrument ID (2): LC12

Date Analyzed (1): 05/23/2019 18:53 Date Analyzed (2): 05/07/2019 04:29

GC Column (1): Synergi C18 ID: 4.6(mm) GC Column (2): Zorbax CN ID: 4.6(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
Nitrobenzene	1		22.19	21.89	22.39	1.02		4.0
	2		26.31	26.02	26.52	0.979		
1,3-Dinitrobenzene	1		24.56	24.27	24.77	0.973		1.2
	2		24.71	24.43	24.93	0.984		
1,3,5-Trinitrobenzene	1		26.67	26.27	26.95	1.02		5.4
	2		22.39	22.14	22.64	0.968		
MNX	1		27.57	27.25	27.81	4.69		11.0
	2		19.20	18.94	19.44	5.23		
2-Nitrotoluene	1		29.22	28.92	29.42	0.946		1.6
	2		34.83	34.43	35.09	0.962		
4-Nitrotoluene	1		29.22	28.92	29.42	0.946		1.7
	2		36.37	35.94	36.66	0.930		
3-Nitrotoluene	1		29.81	29.49	29.99	0.946		1.0
	2		38.00	37.54	38.34	0.936		
RDX	1		31.40	31.14	31.64	1.06		2.2
	2		20.64	20.37	20.87	1.08		
2,4-Dinitrotoluene	1		32.24	31.97	32.47	0.973		1.2
	2		31.71	31.36	31.98	0.960		
2,6-Dinitrotoluene	1		32.92	32.64	33.14	0.954		0.4
	2		31.28	30.92	31.52	0.951		
2-Amino-4,6-dinitrotoluene	1		33.93	33.67	34.17	0.923		5.4
	2		29.91	29.49	30.25	0.974		
4-Amino-2,6-dinitrotoluene	1		34.18	33.92	34.42	0.943		0.3
	2		29.22	28.84	29.52	0.940		
2,4,6-Trinitrotoluene	1		35.40	35.15	35.65	0.819		7.1
	2		28.35	28.10	28.60	0.879		
HMX	1		36.26	35.99	36.49	0.861		16.8
	2		18.11	17.87	18.37	1.02		
Tetryl	1		37.88	37.62	38.12	0.799		9.6
	2		26.97	26.73	27.23	0.880		

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Client Sample ID: SP-S2 Lab Sample ID: 280-123009-1

Matrix: Water Lab File ID: ZD0000073.D

Analysis Method: 8330A Date Collected: 04/24/2019 08:40

Extraction Method: 8330-Prep Date Extracted: 04/29/2019 06:59

Sample wt/vol: 986.8(mL) Date Analyzed: 05/03/2019 05:46

Con. Extract Vol.: 20(mL) Dilution Factor: 1

Injection Volume: 500(uL) GC Column: Synergi C18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 291526 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-65-0	1,3-Dinitrobenzene	0.058	J	0.15	0.10	0.051
118-96-7	2,4,6-Trinitrotoluene	6.7		0.15	0.10	0.051
121-14-2	2,4-Dinitrotoluene	0.10	U	0.13	0.10	0.051
606-20-2	2,6-Dinitrotoluene	0.10	U	0.13	0.10	0.051
35572-78-2	2-Amino-4,6-dinitrotoluene	1.6		0.15	0.10	0.030
88-72-2	2-Nitrotoluene	0.20	U	0.51	0.20	0.089
99-08-1	3-Nitrotoluene	0.20	U	0.51	0.20	0.058
19406-51-0	4-Amino-2,6-dinitrotoluene	1.5		0.15	0.10	0.051
99-99-0	4-Nitrotoluene	0.20	U	0.51	0.20	0.089
2691-41-0	HMX	0.47	M	0.15	0.10	0.036
5755-27-1	MNX	0.10	U	0.51	0.10	0.028
98-95-3	Nitrobenzene	0.10	U	0.15	0.10	0.051
121-82-4	RDX	0.60	M	0.15	0.10	0.036
479-45-8	Tetryl	0.10	U	0.15	0.10	0.051

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	89		79-111

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000073.D
Lims ID: 280-123009-A-1-A
Client ID: SP-S2
Sample Type: Client
Inject. Date: 03-May-2019 05:46:30 ALS Bottle#: 72 Worklist Smp#: 73
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 320-0075622-073
Operator ID: AO Instrument ID: LC11

Method: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 03-May-2019 14:28:46 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0325

First Level Reviewer: cartiera Date: 08-May-2019 16:37:08

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
2 DNX						M
1	16.648	16.679	-0.031	107H	1.65	M
3 HMX						M
1	18.085	18.027	0.058	1872H	23.2	M
5 Ethylene glycol dinitrate						M
2	20.218	20.030	0.188	15913	12.5	M
6 RDX						M
1	20.618	20.573	0.045	2932H	29.6	M
8 1,3,5-Trinitrobenzene						M
1	22.388	22.367	0.021	217006H	926.3	EM
9 1,3-Dinitrobenzene						
1	24.665	24.643	0.022	600H	2.87	
10 3,5-Dinitroaniline						
1	25.748	25.640	0.108	99347H	626.3	E
13 Nitroglycerin						
2	27.908	27.667	0.241	296H	2.94	
14 2,4,6-Trinitrotoluene						
1	28.342	28.290	0.052	38302H	332.8	
15 4-Amino-2,6-dinitrotoluene						
1	29.205	29.073	0.132	6311H	72.5	
$ 16 3,4-Dinitrotoluene						
1	29.515	29.437	0.078	8171H	111.6	
2	29.515	29.437	0.078	17195H		
17 2-Amino-4,6-dinitrotoluene						
1	29.895	29.747	0.148	9237H	81.4	
19 2,4-Dinitrotoluene						
1	31.692	31.590	0.102	325H	2.40	
21 p-Nitrotoluene						
1	36.172	36.197	-0.025	386H	5.37	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

H - Response Measured by Height

Review Flags

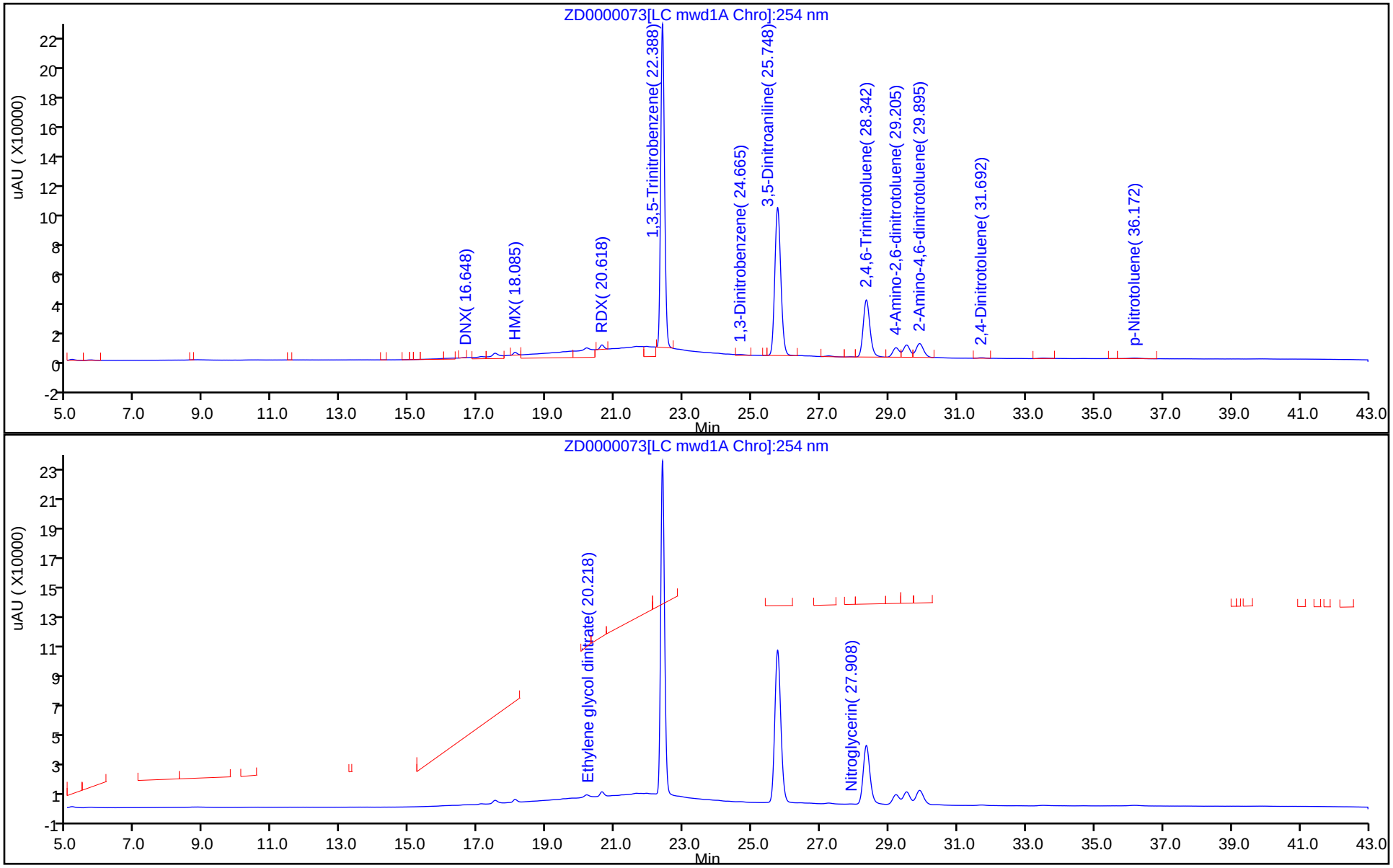
M - Manually Integrated

Report Date: 08-May-2019 16:37:09 Chrom Revision: 2.3 03-May-2019 15:47:48

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000073.D				
Injection Date:	03-May-2019 05:46:30	Instrument ID:	LC11	Operator ID:	AO
Lims ID:	280-123009-A-1-A	Lab Sample ID:	320-123009-1	Worklist Smp#:	73
Client ID:	SP-S2				
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	72
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins TestAmerica, Sacramento

Recovery Report

Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000073.D				
Lims ID:	280-123009-A-1-A				
Client ID:	SP-S2				
Sample Type:	Client				
Inject. Date:	03-May-2019 05:46:30	ALS Bottle#:	72	Worklist Smp#:	73
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Sample Info:	320-0075622-073				
Operator ID:	AO	Instrument ID:	LC11		
Method:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\8330 Metab LC11.m				
Limit Group:	LC 8330A ICAL				
Last Update:	03-May-2019 14:28:46	Calib Date:	28-Feb-2019 10:01:13		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D				
Column 1 :	Synergi Hydro-RP C18 (4.60 mm)		Det: LC mwd1A, 250 nm		
Process Host:	CTX0325				
First Level Reviewer: cartiera		Date:	08-May-2019 16:37:08		

Compound	Amount Added	Amount Recovered	% Rec.
$ 16 3,4-Dinitrotoluene	125.0	111.6	89.30

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

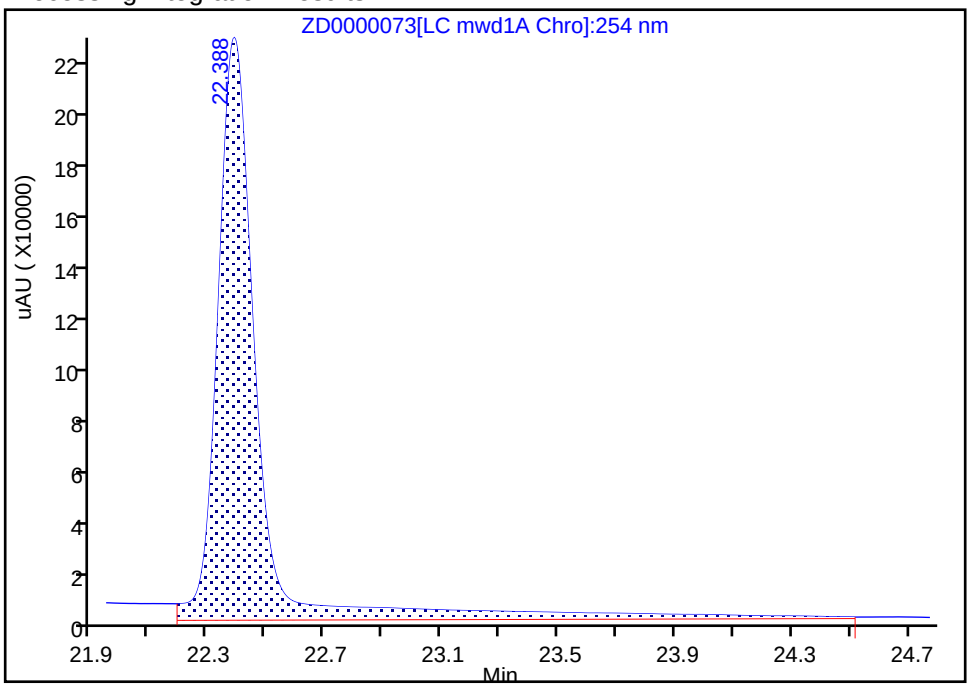
Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000073.D				
Injection Date:	03-May-2019 05:46:30	Instrument ID:	LC11		
Lims ID:	280-123009-A-1-A	Lab Sample ID:	320-123009-1		
Client ID:	SP-S2				
Operator ID:	AO	ALS Bottle#:	72	Worklist Smp#:	73
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

8 1,3,5-Trinitrobenzene, CAS: 99-35-4

Signal: 1

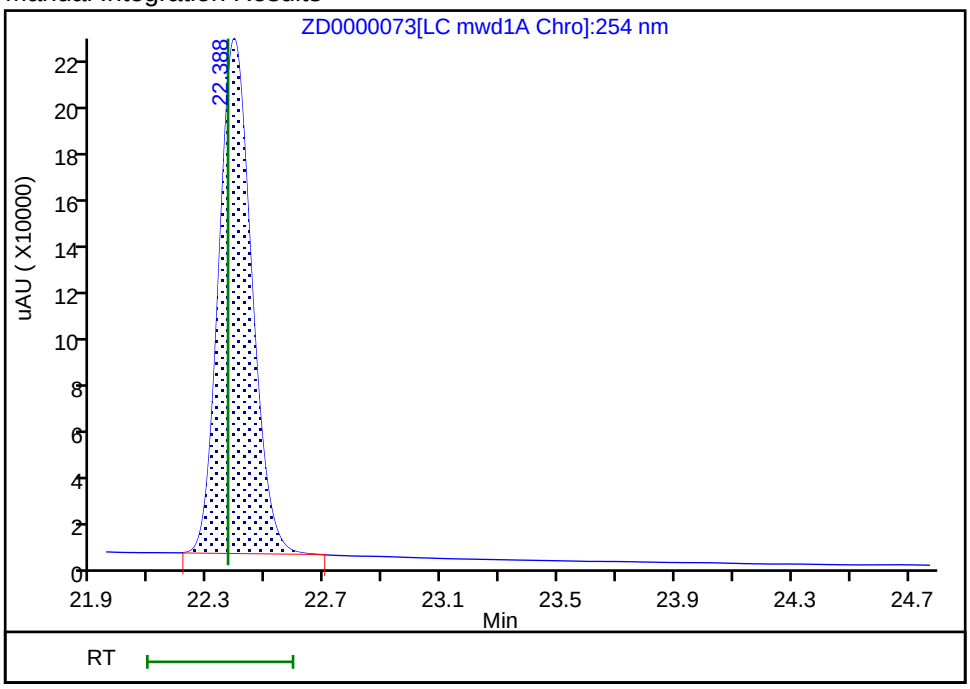
Processing Integration Results

RT: 22.39
Height: 223014
Amount: 951.9546
Amount Units: ng/ml



Manual Integration Results

RT: 22.39
Height: 217006
Amount: 926.3089
Amount Units: ng/ml



Reviewer: ortizam, 03-May-2019 09:31:59

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

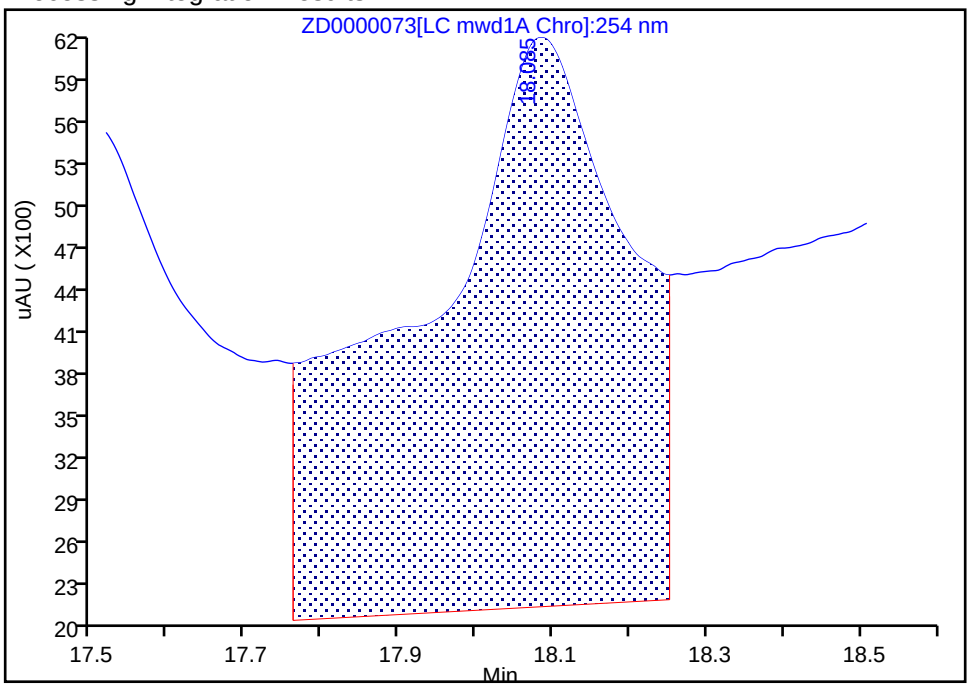
Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000073.D				
Injection Date:	03-May-2019 05:46:30	Instrument ID:	LC11		
Lims ID:	280-123009-A-1-A	Lab Sample ID:	320-123009-1		
Client ID:	SP-S2				
Operator ID:	AO	ALS Bottle#:	72	Worklist Smp#:	73
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

3 HMX, CAS: 2691-41-0

Signal: 1

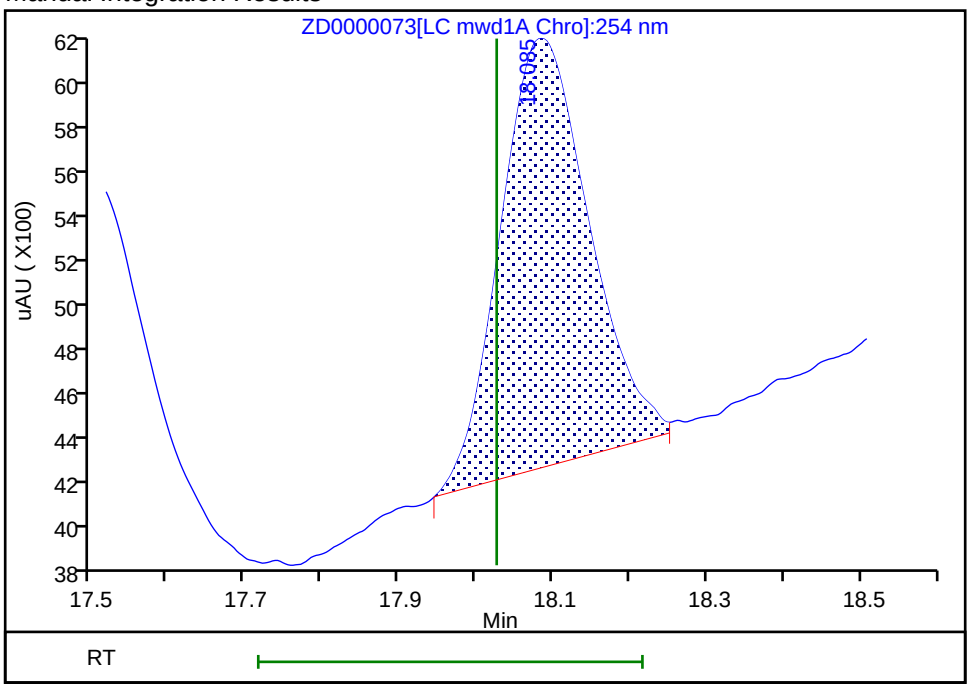
Processing Integration Results

RT: 18.09
Height: 4014
Amount: 49.769997
Amount Units: ng/ml



Manual Integration Results

RT: 18.09
Height: 1872
Amount: 23.211120
Amount Units: ng/ml



Reviewer: ortizam, 03-May-2019 09:31:44

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

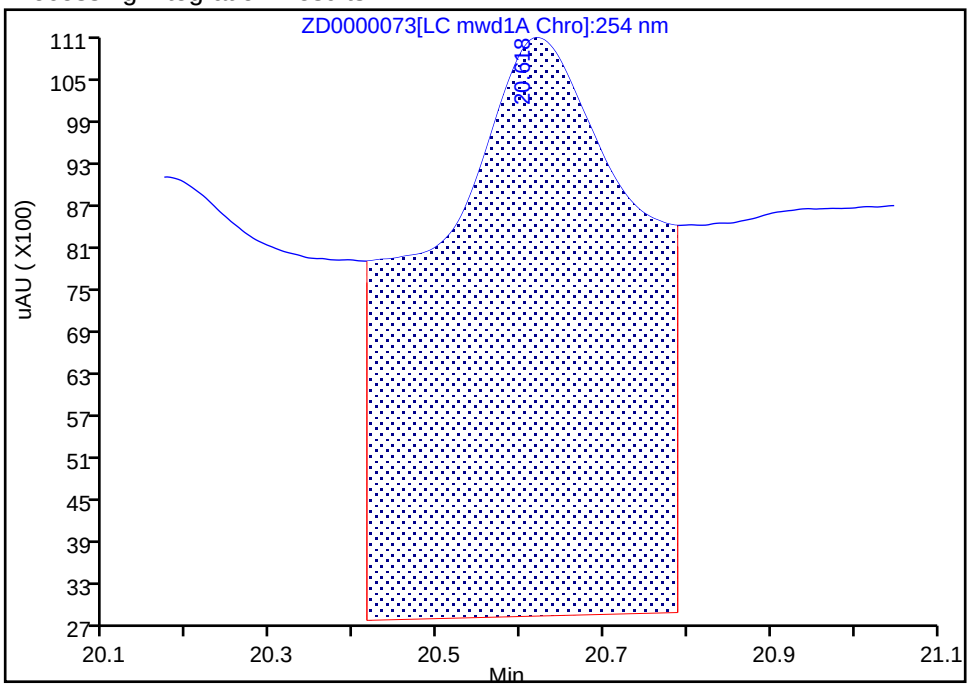
Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000073.D				
Injection Date:	03-May-2019 05:46:30	Instrument ID:	LC11		
Lims ID:	280-123009-A-1-A	Lab Sample ID:	320-123009-1		
Client ID:	SP-S2				
Operator ID:	AO	ALS Bottle#:	72	Worklist Smp#:	73
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

6 RDX, CAS: 121-82-4

Signal: 1

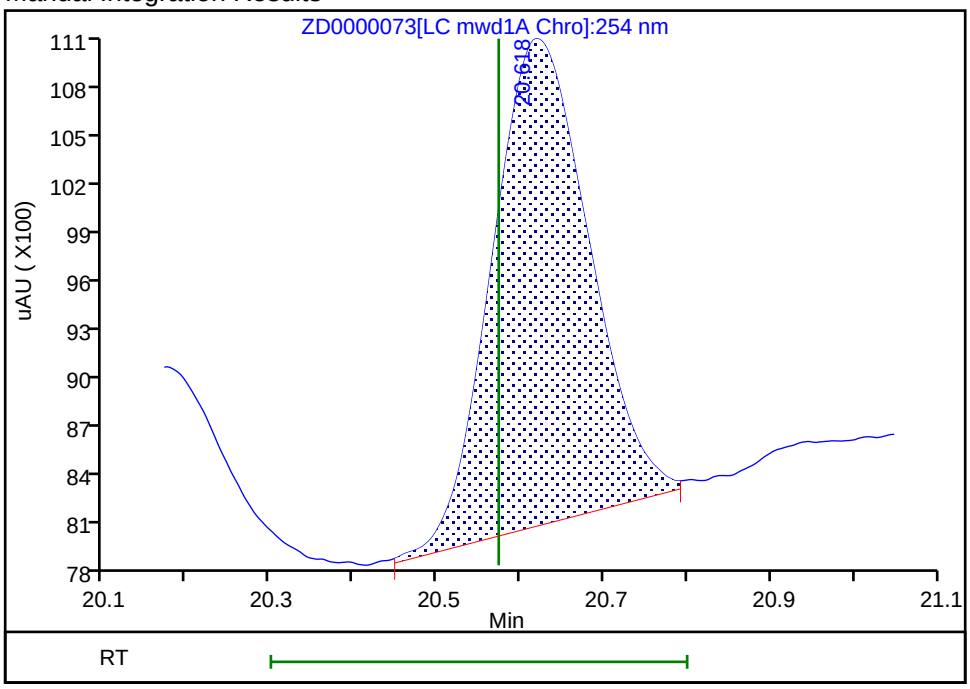
Processing Integration Results

RT: 20.62
Height: 8193
Amount: 82.691828
Amount Units: ng/ml



Manual Integration Results

RT: 20.62
Height: 2932
Amount: 29.592633
Amount Units: ng/ml



Reviewer: ortizam, 03-May-2019 09:31:51

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Client Sample ID: SP-S2 Lab Sample ID: 280-123009-1

Matrix: Water Lab File ID: U000067.D

Analysis Method: 8330A Date Collected: 04/24/2019 08:40

Extraction Method: 8330-Prep Date Extracted: 04/29/2019 06:59

Sample wt/vol: 986.8(mL) Date Analyzed: 05/24/2019 06:24

Con. Extract Vol.: 20(mL) Dilution Factor: 1

Injection Volume: 500(uL) GC Column: Zorbax CN ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 295993 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	84		79-111

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000067.D
Lims ID: 280-123009-A-1-A
Client ID: SP-S2
Sample Type: Client
Inject. Date: 24-May-2019 06:24:04 ALS Bottle#: 58 Worklist Smp#: 65
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 280-123009-a-1-a
Operator ID: AO Instrument ID: LC12

Method: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 24-May-2019 10:28:12 Calib Date: 15-May-2019 07:09:15
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0337

First Level Reviewer: cartiera Date: 24-May-2019 10:28:12

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
6 1,3-Dinitrobenzene						
1	24.427	24.515	-0.088	292H	2.50	
7 1,3,5-Trinitrobenzene						
1	26.630	26.612	0.018	78451H	836.8	E
13 RDX						
1	31.353	31.385	-0.032	1294H	23.1	
15 2,6-Dinitrotoluene						
1	32.857	32.892	-0.035	378H	3.97	
16 2-Amino-4,6-dinitrotoluene						
1	33.907	33.922	-0.015	15479H	76.5	
17 4-Amino-2,6-dinitrotoluene						
1	34.157	34.168	-0.011	134596	74.4	
$ 18 3,4-Dinitrotoluene						
1	34.810	34.822	-0.012	14635H	104.5	
19 2,4,6-Trinitrotoluene						
1	35.377	35.395	-0.018	61690H	297.9	
20 HMX						
1	36.227	36.235	-0.008	3205H	20.4	

QC Flag Legend

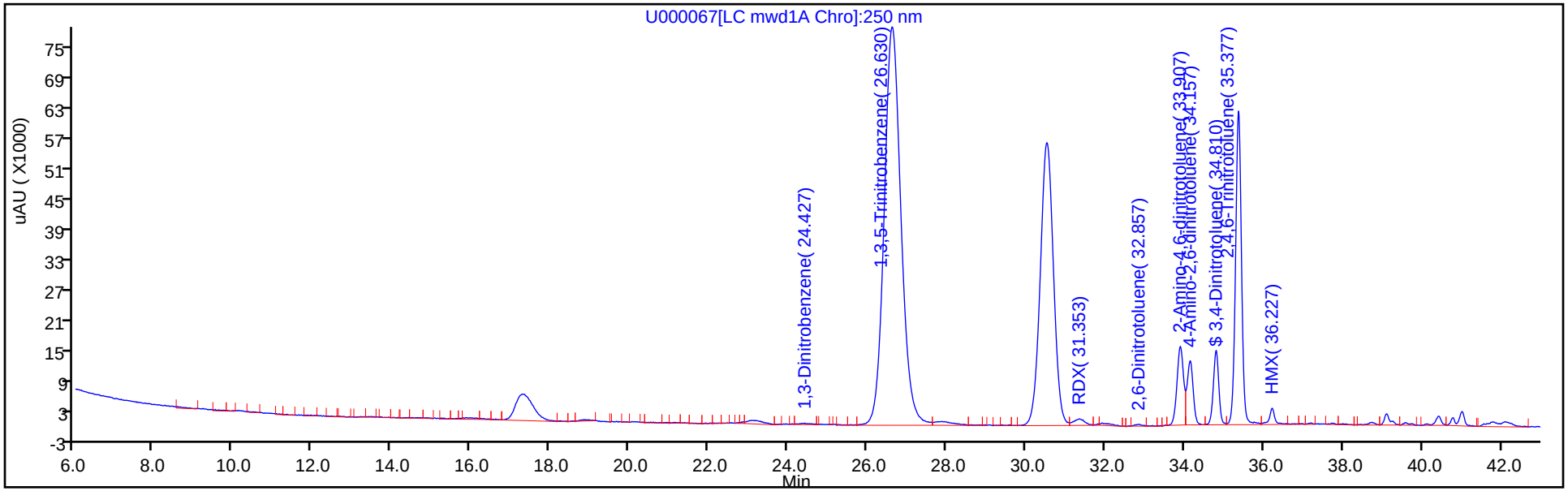
Processing Flags
E - Exceeded Maximum Amount
H - Response Measured by Height

Report Date: 24-May-2019 10:28:12 Chrom Revision: 2.3 12-May-2019 16:28:34

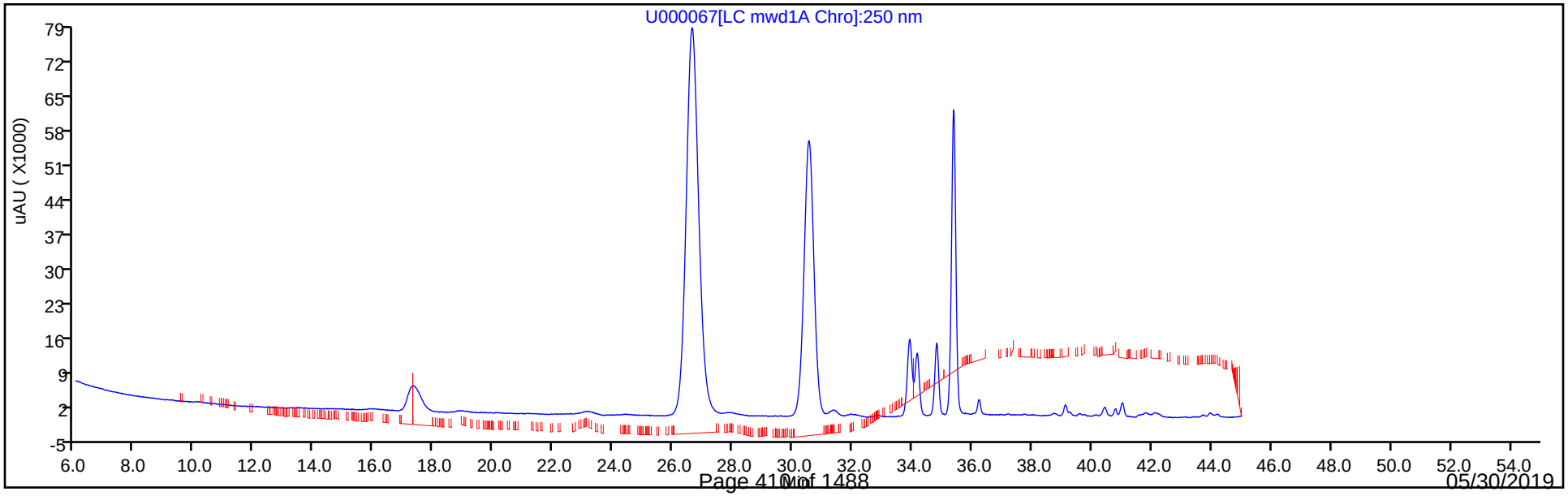
Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000067.D				
Injection Date:	24-May-2019 06:24:04	Instrument ID:	LC12	Operator ID:	AO
Lims ID:	280-123009-A-1-A	Lab Sample ID:	320-123009-1	Worklist Smp#:	65
Client ID:	SP-S2				
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	58
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



Eurofins TestAmerica, Sacramento
Recovery Report

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000067.D				
Lims ID:	280-123009-A-1-A				
Client ID:	SP-S2				
Sample Type:	Client				
Inject. Date:	24-May-2019 06:24:04	ALS Bottle#:	58	Worklist Smp#:	65
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-123009-a-1-a				
Operator ID:	AO	Instrument ID:	LC12		
Method:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\LC12_Conf_8330.m				
Limit Group:	LC 8330A ICAL				
Last Update:	24-May-2019 10:28:12	Calib Date:	15-May-2019 07:09:15		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D				
Column 1 :	Zorbax Cyano CN (4.60 mm)		Det: LC mwd1A, 250 nm		
Process Host:	CTX0337				

First Level Reviewer: cartiera Date: 24-May-2019 10:28:12

Compound	Amount Added	Amount Recovered	% Rec.
$ 18 3,4-Dinitrotoluene	125.0	104.5	83.62

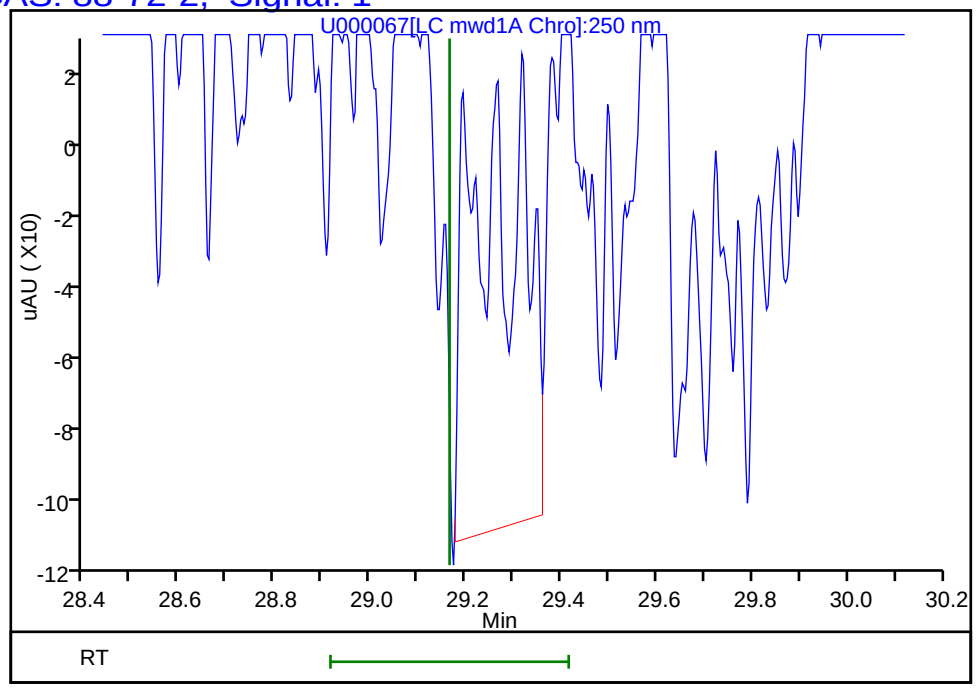
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000067.D				
Injection Date:	24-May-2019 06:24:04	Instrument ID:	LC12		
Lims ID:	280-123009-A-1-A	Lab Sample ID:	320-123009-1		
Client ID:	SP-S2				
Operator ID:	AO	ALS Bottle#:	58	Worklist Smp#:	65
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

10 o-Nitrotoluene, CAS: 88-72-2, Signal: 1

RT: 29.27
Response: 115
Amount: 1.618429



Reviewer: cartiera, 24-May-2019 10:28:12
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

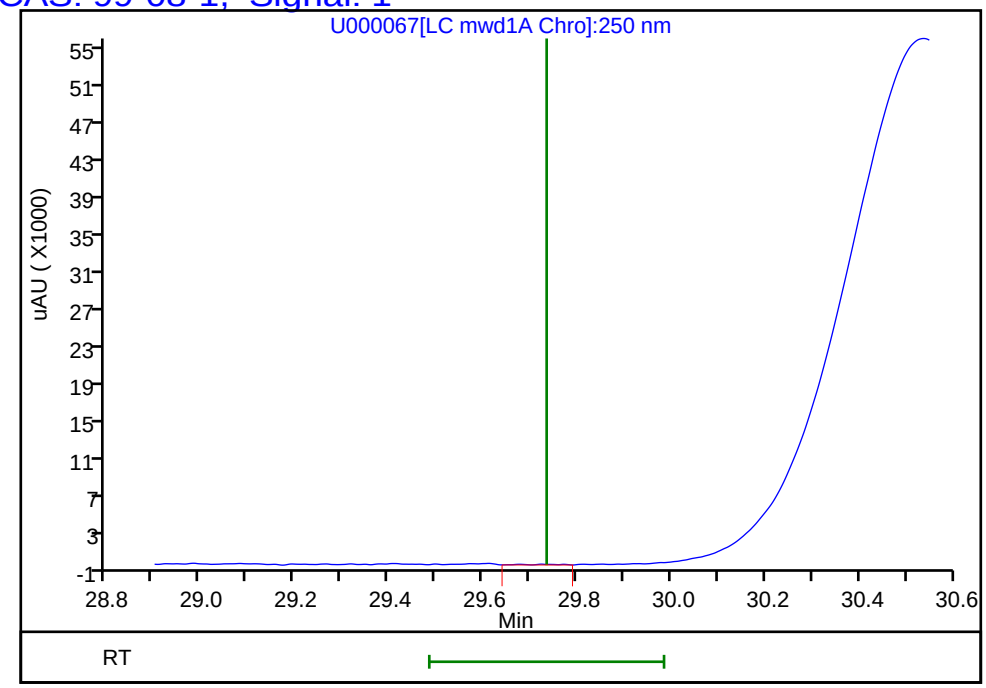
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000067.D				
Injection Date:	24-May-2019 06:24:04	Instrument ID:	LC12		
Lims ID:	280-123009-A-1-A	Lab Sample ID:	320-123009-1		
Client ID:	SP-S2				
Operator ID:	AO	ALS Bottle#:	58	Worklist Smp#:	65
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

11 m-Nitrotoluene, CAS: 99-08-1, Signal: 1

RT: 29.72
Response: 87
Amount: -0.231141



Reviewer: cartiera, 24-May-2019 10:28:12
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

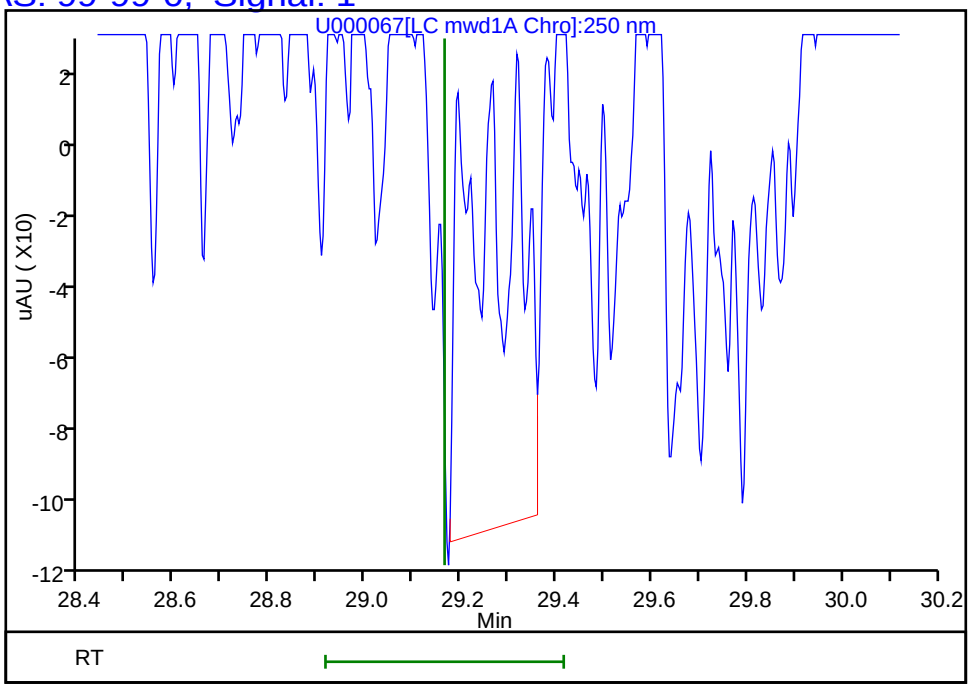
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000067.D				
Injection Date:	24-May-2019 06:24:04	Instrument ID:	LC12		
Lims ID:	280-123009-A-1-A	Lab Sample ID:	320-123009-1		
Client ID:	SP-S2				
Operator ID:	AO	ALS Bottle#:	58	Worklist Smp#:	65
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

9 p-Nitrotoluene, CAS: 99-99-0, Signal: 1

RT: 29.27
Response: 115
Amount: 1.618429



Reviewer: cartiera, 24-May-2019 10:28:12
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

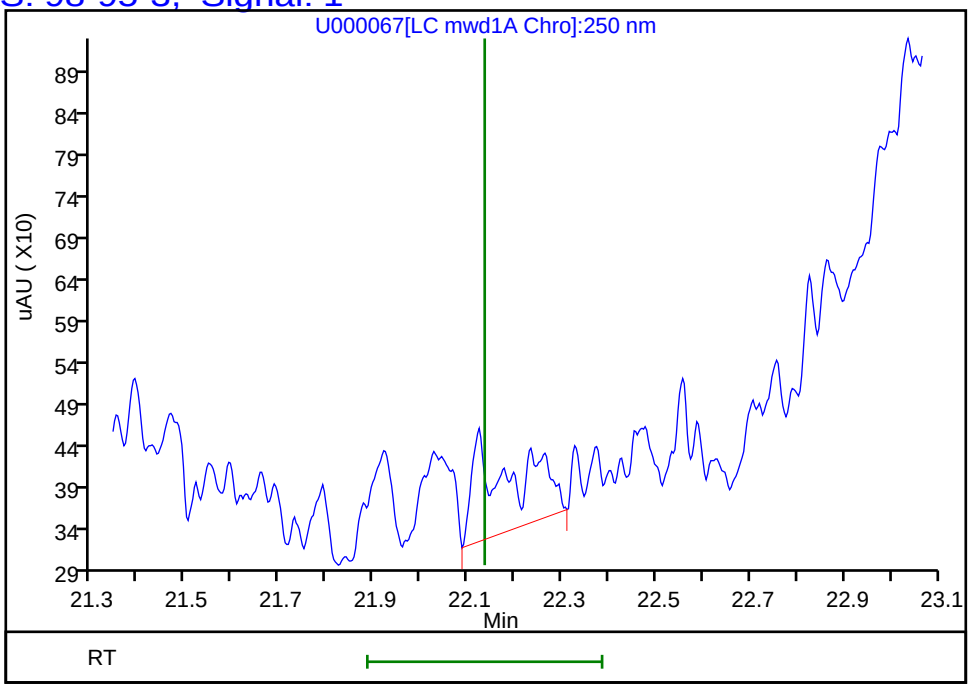
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000067.D				
Injection Date:	24-May-2019 06:24:04	Instrument ID:	LC12		
Lims ID:	280-123009-A-1-A	Lab Sample ID:	320-123009-1		
Client ID:	SP-S2				
Operator ID:	AO	ALS Bottle#:	58	Worklist Smp#:	65
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

3 Nitrobenzene, CAS: 98-95-3, Signal: 1

RT: 22.12
Response: 137
Amount: 2.412997



Reviewer: cartiera, 24-May-2019 10:28:12
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

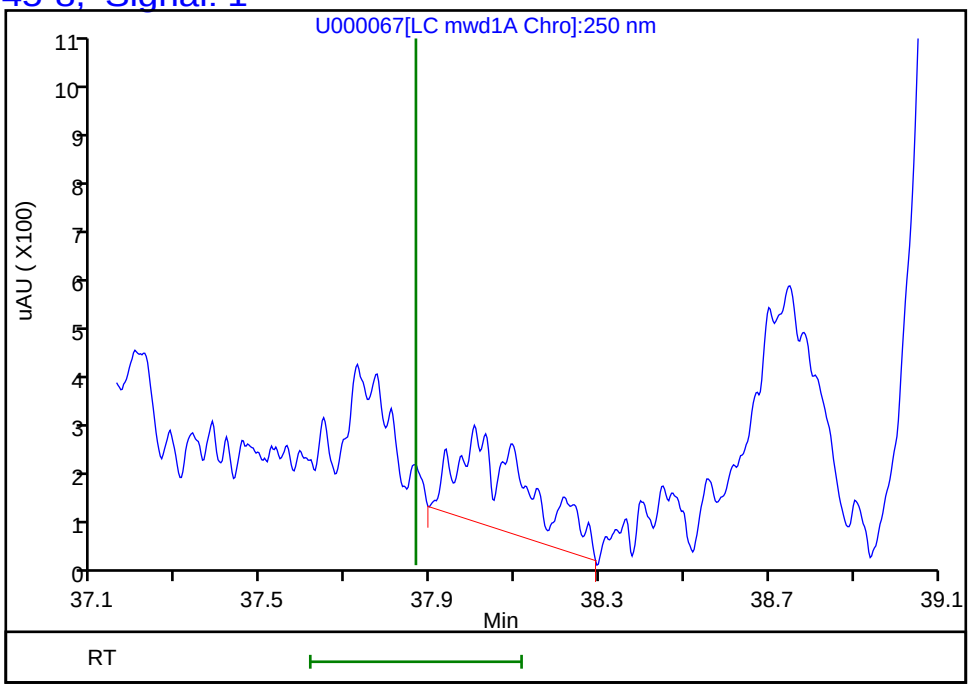
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000067.D				
Injection Date:	24-May-2019 06:24:04	Instrument ID:	LC12		
Lims ID:	280-123009-A-1-A	Lab Sample ID:	320-123009-1		
Client ID:	SP-S2				
Operator ID:	AO	ALS Bottle#:	58	Worklist Smp#:	65
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

22 Tetryl, CAS: 479-45-8, Signal: 1

RT: 38.00
Response: 190
Amount: 0.807906



Reviewer: cartiera, 24-May-2019 10:28:12
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Client Sample ID: SP-S2 DL Lab Sample ID: 280-123009-1 DL

Matrix: Water Lab File ID: U000072.D

Analysis Method: 8330A Date Collected: 04/24/2019 08:40

Extraction Method: 8330-Prep Date Extracted: 04/29/2019 06:59

Sample wt/vol: 986.8(mL) Date Analyzed: 05/24/2019 11:12

Con. Extract Vol.: 20(mL) Dilution Factor: 5

Injection Volume: 500(uL) GC Column: Zorbax CN ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 295993 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	92		79-111

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000072.D
Lims ID: 280-123009-A-1-A
Client ID: SP-S2
Sample Type: Client
Inject. Date: 24-May-2019 11:12:09 ALS Bottle#: 63 Worklist Smp#: 70
Injection Vol: 500.0 ul Dil. Factor: 5.0000
Sample Info: 280-123009-1 5X
Operator ID: AO Instrument ID: LC12

Method: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 24-May-2019 13:14:53 Calib Date: 15-May-2019 07:09:15
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0337

First Level Reviewer: cartiera Date: 24-May-2019 13:14:25

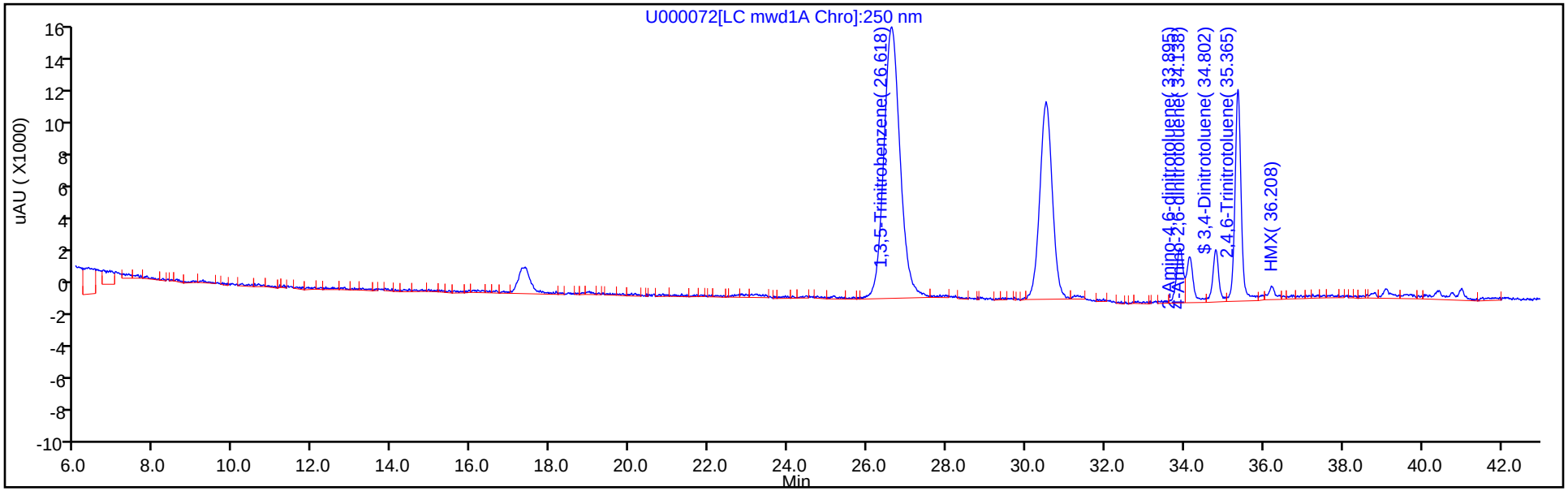
Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
7 1,3,5-Trinitrobenzene						
1	26.618	26.612	0.006	16655	177.7	H
16 2-Amino-4,6-dinitrotoluene						
1	33.895	33.922	-0.027	3339	16.5	H
17 4-Amino-2,6-dinitrotoluene						
1	34.138	34.168	-0.030	33717	18.3	
$ 18 3,4-Dinitrotoluene						
1	34.802	34.822	-0.020	3207	22.9	H
19 2,4,6-Trinitrotoluene						
1	35.365	35.395	-0.030	12982	62.7	H
20 HMX						
1	36.208	36.235	-0.027	832	5.30	H

Report Date: 24-May-2019 13:15:06 Chrom Revision: 2.3 12-May-2019 16:28:34

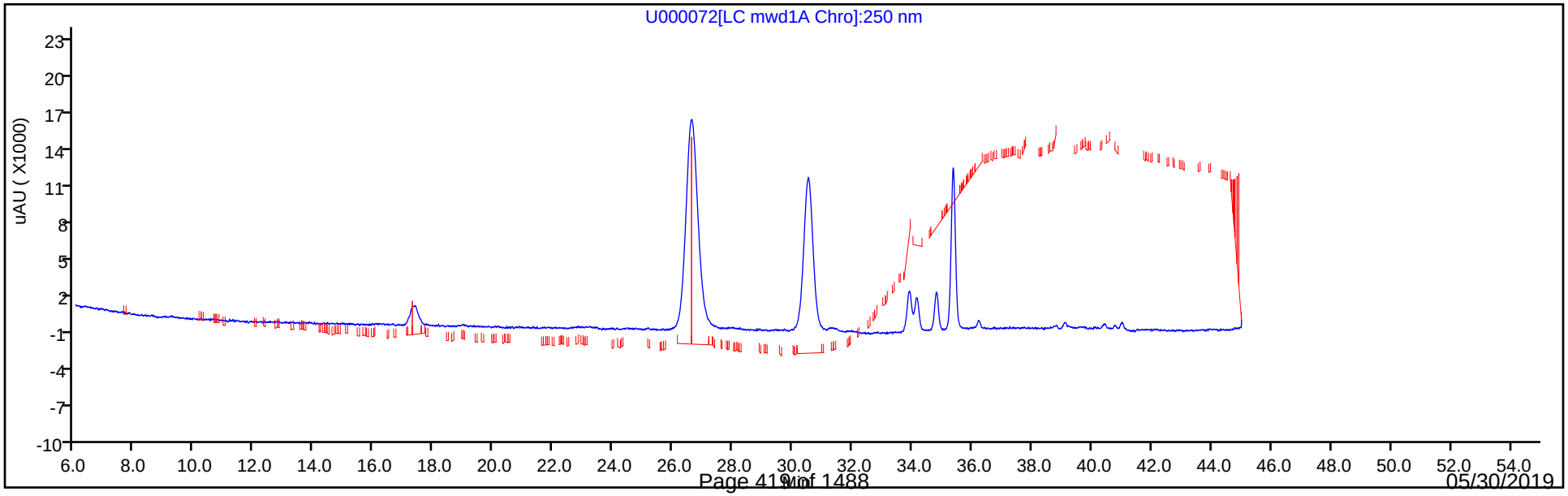
Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000072.D				
Injection Date:	24-May-2019 11:12:09	Instrument ID:	LC12	Operator ID:	AO
Lims ID:	280-123009-A-1-A	Lab Sample ID:	320-123009-1	Worklist Smp#:	70
Client ID:	SP-S2				
Injection Vol:	500.0 ul	Dil. Factor:	5.0000	ALS Bottle#:	63
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



Eurofins TestAmerica, Sacramento
Recovery Report

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000072.D				
Lims ID:	280-123009-A-1-A				
Client ID:	SP-S2				
Sample Type:	Client				
Inject. Date:	24-May-2019 11:12:09	ALS Bottle#:	63	Worklist Smp#:	70
Injection Vol:	500.0 ul	Dil. Factor:	5.0000		
Sample Info:	280-123009-1 5X				
Operator ID:	AO	Instrument ID:	LC12		
Method:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\LC12_Conf_8330.m				
Limit Group:	LC 8330A ICAL				
Last Update:	24-May-2019 13:14:53	Calib Date:	15-May-2019 07:09:15		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D				
Column 1 :	Zorbax Cyano CN (4.60 mm)		Det: LC mwd1A, 250 nm		
Process Host:	CTX0337				

First Level Reviewer: cartiera Date: 24-May-2019 13:14:25

Compound	Amount Added	Amount Recovered	% Rec.
$ 18 3,4-Dinitrotoluene	125.0	22.9	91.61

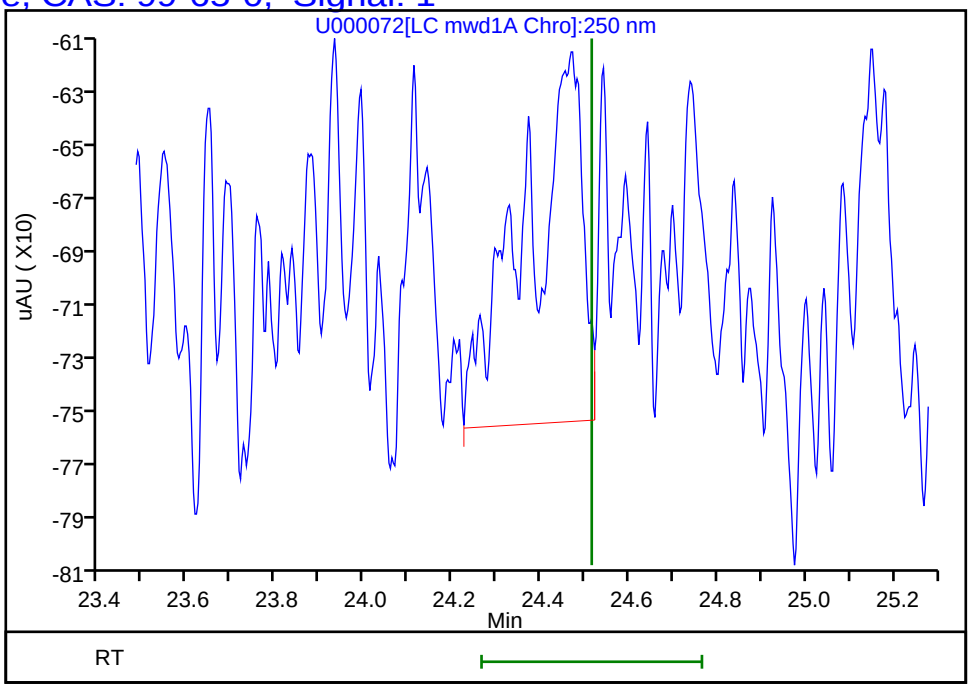
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000072.D				
Injection Date:	24-May-2019 11:12:09	Instrument ID:	LC12		
Lims ID:	280-123009-A-1-A	Lab Sample ID:	320-123009-1		
Client ID:	SP-S2				
Operator ID:	AO	ALS Bottle#:	63	Worklist Smp#:	70
Injection Vol:	500.0 ul	Dil. Factor:	5.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

6 1,3-Dinitrobenzene, CAS: 99-65-0, Signal: 1

RT: 24.33
Response: 81
Amount: 0.693654



Reviewer: cartiera, 24-May-2019 13:14:25
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

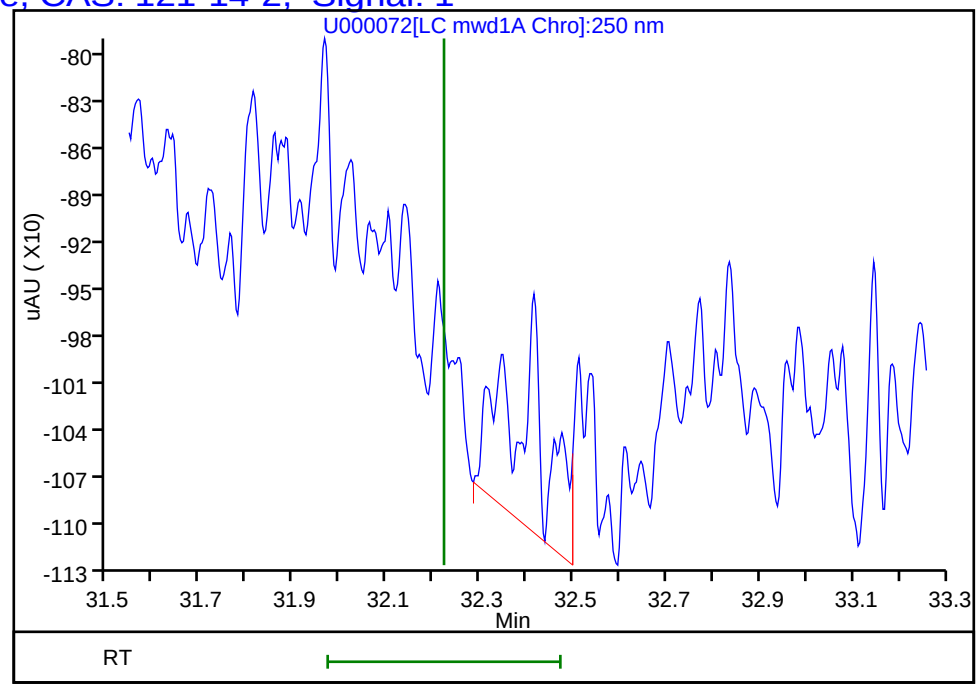
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000072.D				
Injection Date:	24-May-2019 11:12:09	Instrument ID:	LC12		
Lims ID:	280-123009-A-1-A	Lab Sample ID:	320-123009-1		
Client ID:	SP-S2				
Operator ID:	AO	ALS Bottle#:	63	Worklist Smp#:	70
Injection Vol:	500.0 ul	Dil. Factor:	5.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

14 2,4-Dinitrotoluene, CAS: 121-14-2, Signal: 1

RT: 32.35
Response: 95
Amount: 0.753448



Reviewer: cartiera, 24-May-2019 13:14:25
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

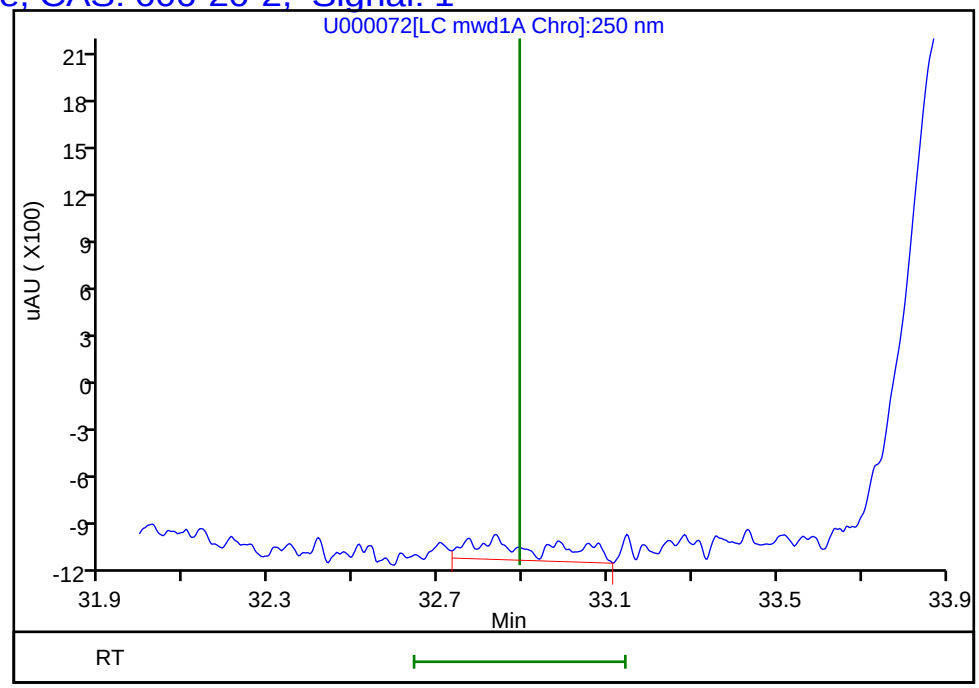
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000072.D				
Injection Date:	24-May-2019 11:12:09	Instrument ID:	LC12		
Lims ID:	280-123009-A-1-A	Lab Sample ID:	320-123009-1		
Client ID:	SP-S2				
Operator ID:	AO	ALS Bottle#:	63	Worklist Smp#:	70
Injection Vol:	500.0 ul	Dil. Factor:	5.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

15 2,6-Dinitrotoluene, CAS: 606-20-2, Signal: 1

RT: 32.84
Response: 154
Amount: 1.619098



Reviewer: cartiera, 24-May-2019 13:14:25
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

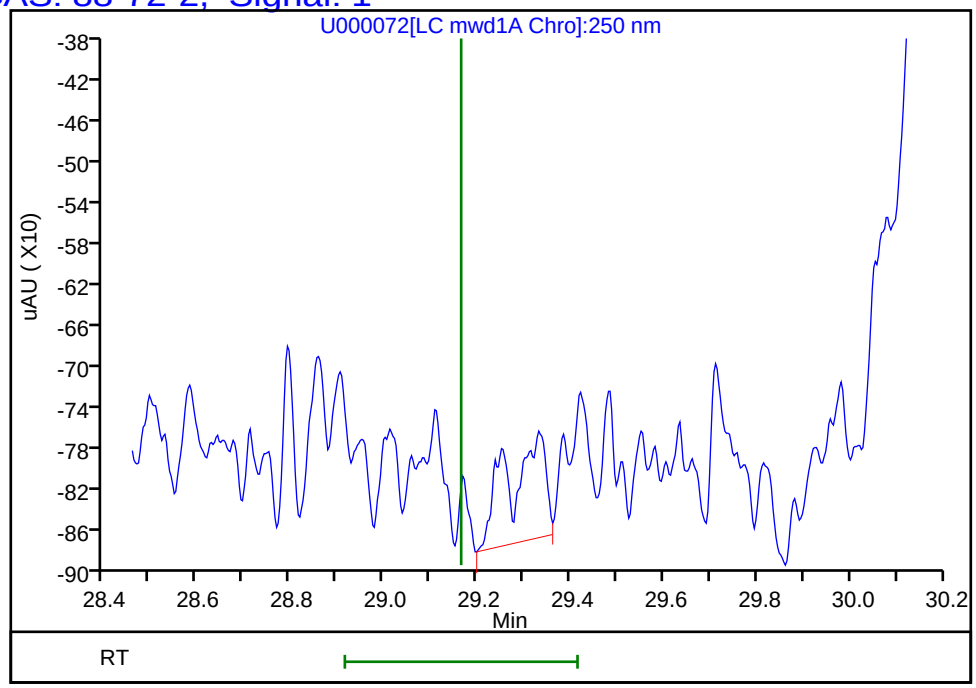
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000072.D				
Injection Date:	24-May-2019 11:12:09	Instrument ID:	LC12		
Lims ID:	280-123009-A-1-A	Lab Sample ID:	320-123009-1		
Client ID:	SP-S2				
Operator ID:	AO	ALS Bottle#:	63	Worklist Smp#:	70
Injection Vol:	500.0 ul	Dil. Factor:	5.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

10 o-Nitrotoluene, CAS: 88-72-2, Signal: 1

RT: 29.33
Response: 104
Amount: 1.463623



Reviewer: cartiera, 24-May-2019 13:14:25
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

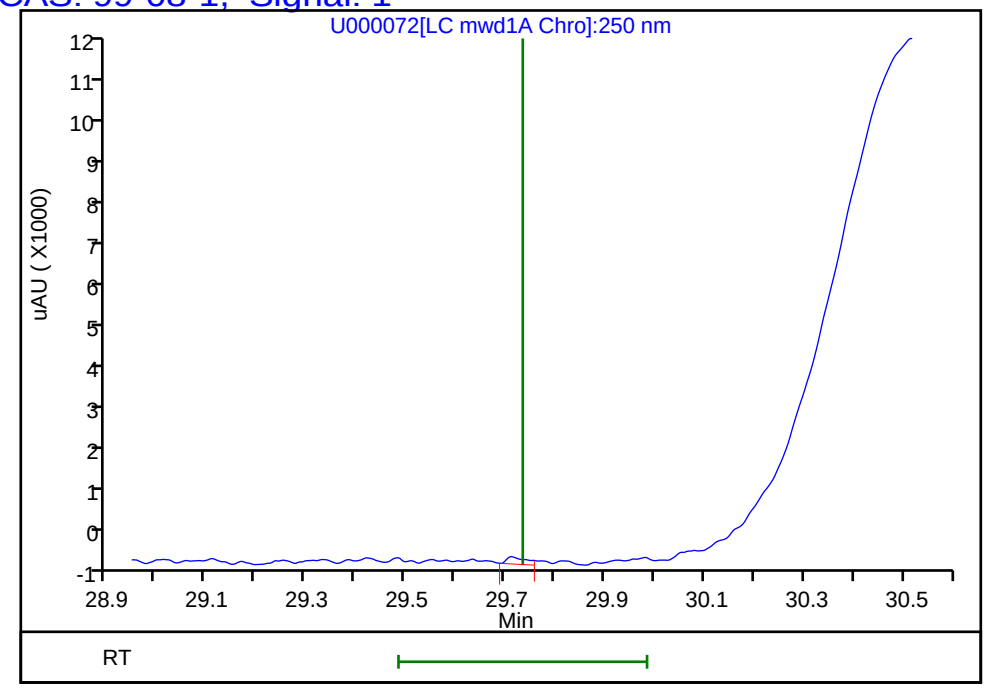
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000072.D				
Injection Date:	24-May-2019 11:12:09	Instrument ID:	LC12		
Lims ID:	280-123009-A-1-A	Lab Sample ID:	320-123009-1		
Client ID:	SP-S2				
Operator ID:	AO	ALS Bottle#:	63	Worklist Smp#:	70
Injection Vol:	500.0 ul	Dil. Factor:	5.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

11 m-Nitrotoluene, CAS: 99-08-1, Signal: 1

RT: 29.71
Response: 168
Amount: 1.675265



Reviewer: cartiera, 24-May-2019 13:14:25
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

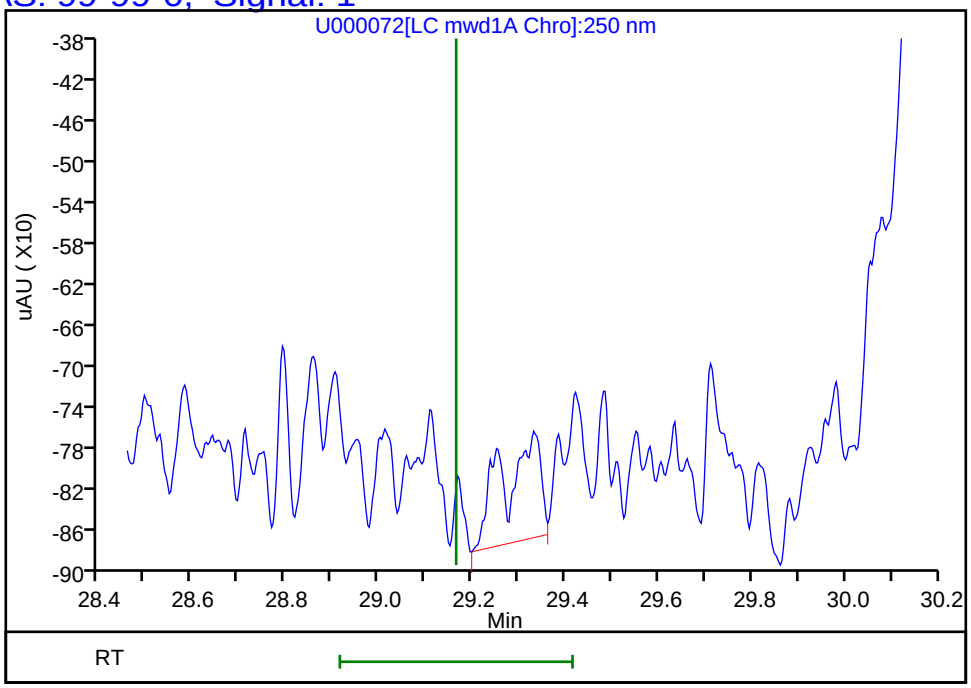
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000072.D				
Injection Date:	24-May-2019 11:12:09	Instrument ID:	LC12		
Lims ID:	280-123009-A-1-A	Lab Sample ID:	320-123009-1		
Client ID:	SP-S2				
Operator ID:	AO	ALS Bottle#:	63	Worklist Smp#:	70
Injection Vol:	500.0 ul	Dil. Factor:	5.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

9 p-Nitrotoluene, CAS: 99-99-0, Signal: 1

RT: 29.33
Response: 104
Amount: 1.463623



Reviewer: cartiera, 24-May-2019 13:14:25
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

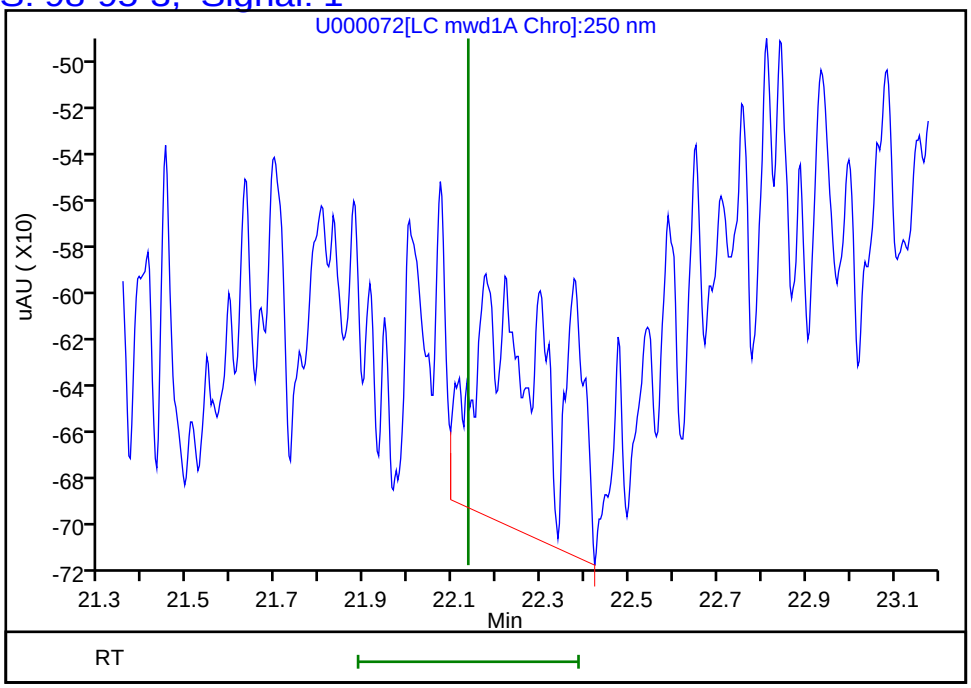
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000072.D				
Injection Date:	24-May-2019 11:12:09	Instrument ID:	LC12		
Lims ID:	280-123009-A-1-A	Lab Sample ID:	320-123009-1		
Client ID:	SP-S2				
Operator ID:	AO	ALS Bottle#:	63	Worklist Smp#:	70
Injection Vol:	500.0 ul	Dil. Factor:	5.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

3 Nitrobenzene, CAS: 98-95-3, Signal: 1

RT: 22.18
Response: 99
Amount: 1.743699



Reviewer: cartiera, 24-May-2019 13:14:25
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

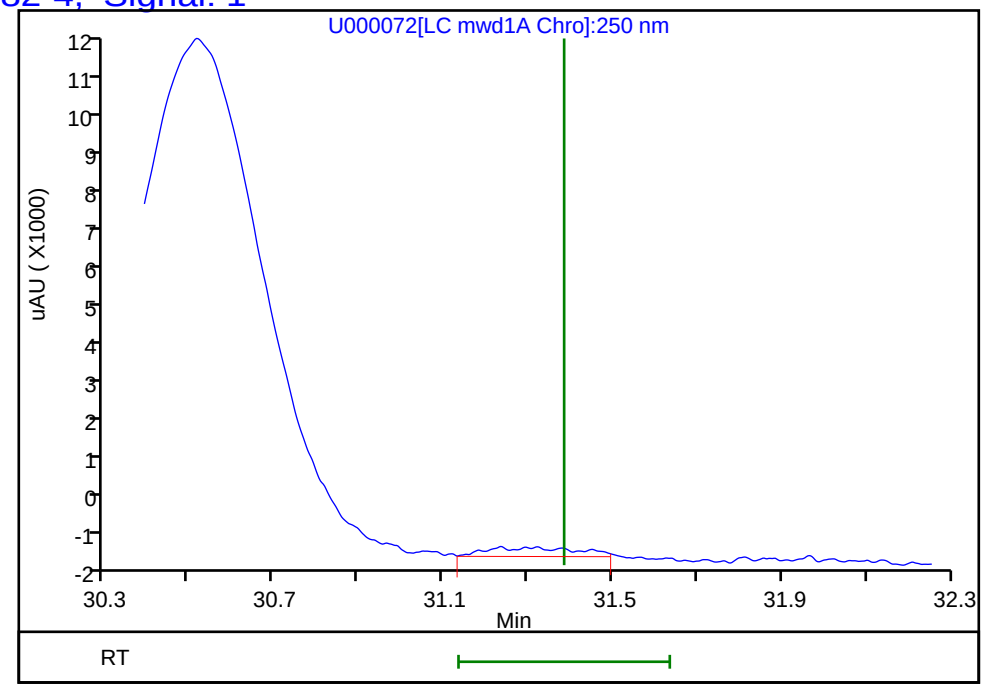
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000072.D				
Injection Date:	24-May-2019 11:12:09	Instrument ID:	LC12		
Lims ID:	280-123009-A-1-A	Lab Sample ID:	320-123009-1		
Client ID:	SP-S2				
Operator ID:	AO	ALS Bottle#:	63	Worklist Smp#:	70
Injection Vol:	500.0 ul	Dil. Factor:	5.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

13 RDX, CAS: 121-82-4, Signal: 1

RT: 31.24
Response: 233
Amount: 2.742321



Reviewer: cartiera, 24-May-2019 13:14:25
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

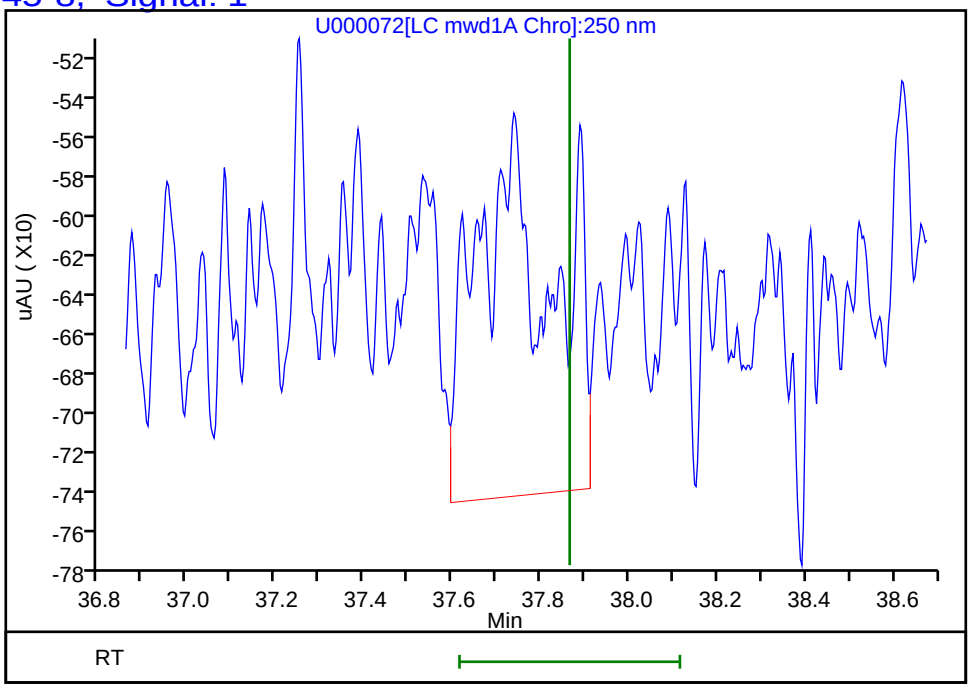
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000072.D				
Injection Date:	24-May-2019 11:12:09	Instrument ID:	LC12		
Lims ID:	280-123009-A-1-A	Lab Sample ID:	320-123009-1		
Client ID:	SP-S2				
Operator ID:	AO	ALS Bottle#:	63	Worklist Smp#:	70
Injection Vol:	500.0 ul	Dil. Factor:	5.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

22 Tetryl, CAS: 479-45-8, Signal: 1

RT: 37.74
Response: 189
Amount: 0.803654



Reviewer: cartiera, 24-May-2019 13:14:25
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Client Sample ID: SP-S2 DL Lab Sample ID: 280-123009-1 DL

Matrix: Water Lab File ID: T0000109.D

Analysis Method: 8330A Date Collected: 04/24/2019 08:40

Extraction Method: 8330-Prep Date Extracted: 04/29/2019 06:59

Sample wt/vol: 986.8(mL) Date Analyzed: 05/24/2019 14:35

Con. Extract Vol.: 20(mL) Dilution Factor: 5

Injection Volume: 500(uL) GC Column: Synergi C18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 296662 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	20	D M	0.76	0.51	0.16

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	94	M	79-111

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190523-76793.b\T0000109.D
Lims ID: 280-123009-A-1-A
Client ID: SP-S2
Sample Type: Client
Inject. Date: 24-May-2019 14:35:14 ALS Bottle#: 95 Worklist Smp#: 23
Injection Vol: 500.0 ul Dil. Factor: 5.0000
Sample Info: 320-0076793-023
Operator ID: AO Instrument ID: LC11

Method: \\chromna\Sacramento\ChromData\LC11\20190523-76793.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 24-May-2019 15:36:26 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0313

First Level Reviewer: ortizam Date: 24-May-2019 15:36:26

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
3 HMX						M
1	18.022	18.066	-0.044	391H	4.85	M
6 RDX						M
1	20.585	20.590	-0.005	614H	6.20	M
8 1,3,5-Trinitrobenzene						M
1	22.345	22.343	0.002	47036H	200.8	M
10 3,5-Dinitroaniline						
1	25.642	25.680	-0.038	20997H	132.4	
14 2,4,6-Trinitrotoluene						
1	28.208	28.233	-0.025	7835H	68.1	
15 4-Amino-2,6-dinitrotoluene						a
1	29.035	29.110	-0.075	1353H	15.5	a
$ 16 3,4-Dinitrotoluene						a
1	29.375	29.420	-0.045	1729H	23.6	a
2	29.375	29.420	-0.045	3727H		
17 2-Amino-4,6-dinitrotoluene						
1	29.728	29.793	-0.065	1975H	17.5	

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

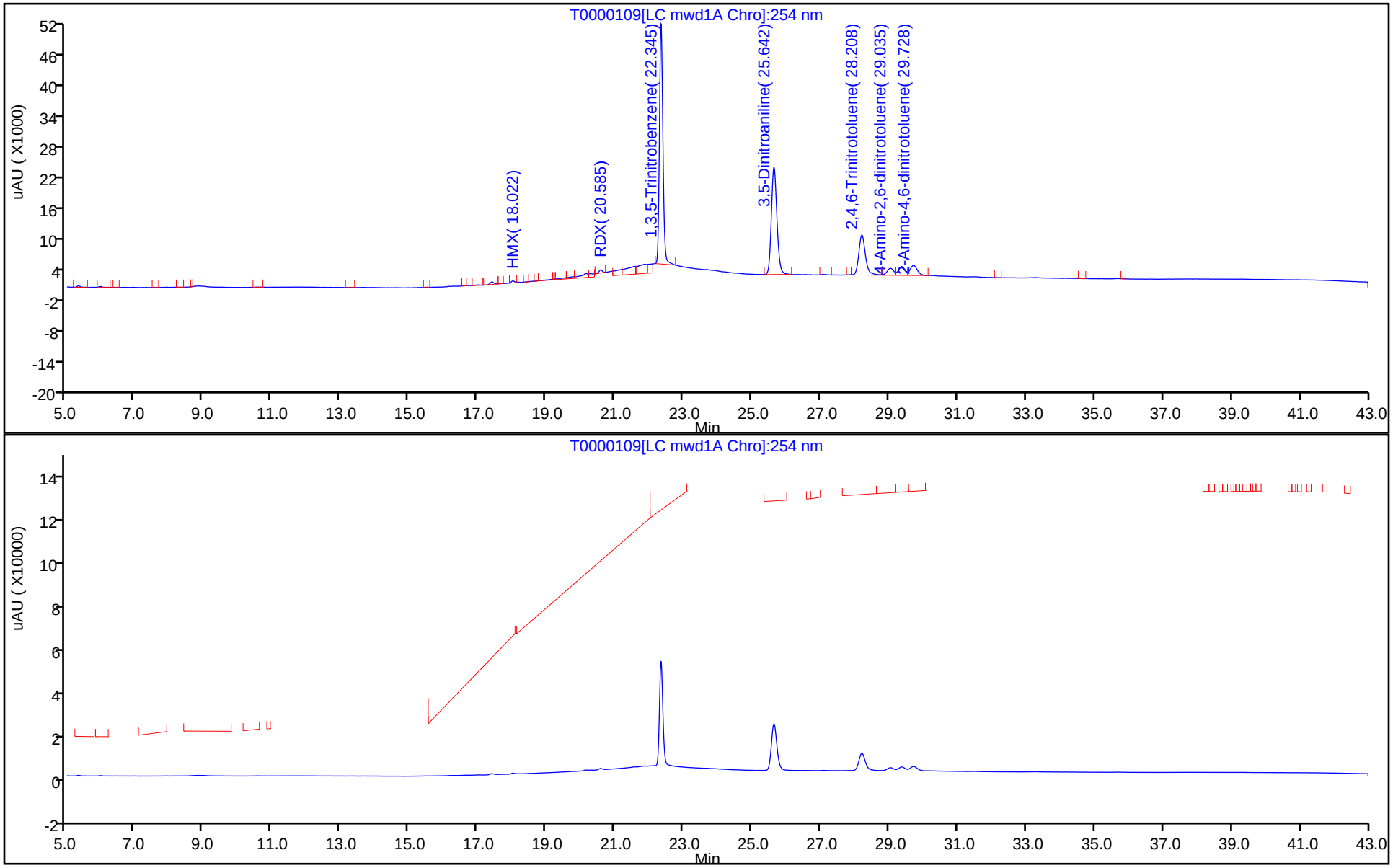
Report Date: 24-May-2019 15:36:26 Chrom Revision: 2.3 12-May-2019 16:28:34

Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190523-76793.b\T0000109.D

Injection Date:	24-May-2019 14:35:14	Instrument ID:	LC11	Operator ID:	AO
Lims ID:	280-123009-A-1-A	Lab Sample ID:	320-123009-1	Worklist Smp#:	23
Client ID:	SP-S2				
Injection Vol:	500.0 ul	Dil. Factor:	5.0000	ALS Bottle#:	95
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins TestAmerica, Sacramento
Recovery Report

Data File:	\\chromna\Sacramento\ChromData\LC11\20190523-76793.b\T0000109.D				
Lims ID:	280-123009-A-1-A				
Client ID:	SP-S2				
Sample Type:	Client				
Inject. Date:	24-May-2019 14:35:14	ALS Bottle#:	95	Worklist Smp#:	23
Injection Vol:	500.0 ul	Dil. Factor:	5.0000		
Sample Info:	320-0076793-023				
Operator ID:	AO	Instrument ID:	LC11		
Method:	\\chromna\Sacramento\ChromData\LC11\20190523-76793.b\8330 Metab LC11.m				
Limit Group:	LC 8330A ICAL				
Last Update:	24-May-2019 15:36:26	Calib Date:	28-Feb-2019 10:01:13		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D				
Column 1 :	Synergi Hydro-RP C18 (4.60 mm)		Det: LC mwd1A, 250 nm		
Process Host:	CTX0313				
First Level Reviewer: ortizam		Date:	24-May-2019 15:36:26		

Compound	Amount Added	Amount Recovered	% Rec.
$ 16 3,4-Dinitrotoluene	125.0	23.6	94.48

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

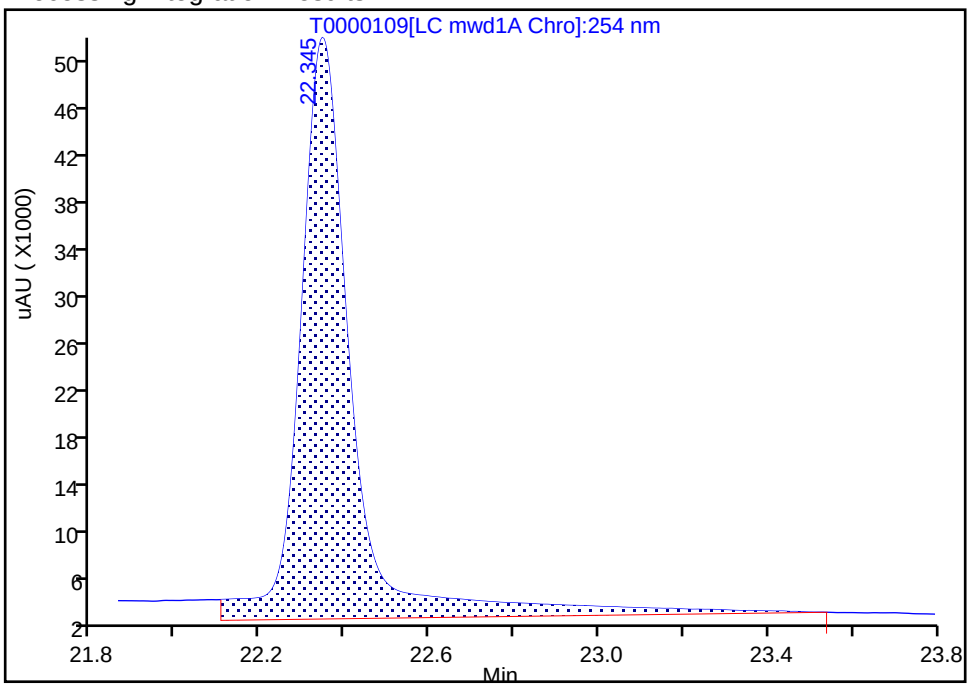
Data File:	\\chromna\Sacramento\ChromData\LC11\20190523-76793.b\T0000109.D				
Injection Date:	24-May-2019 14:35:14	Instrument ID:	LC11		
Lims ID:	280-123009-A-1-A	Lab Sample ID:	320-123009-1		
Client ID:	SP-S2				
Operator ID:	AO	ALS Bottle#:	95	Worklist Smp#:	23
Injection Vol:	500.0 ul	Dil. Factor:	5.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

8 1,3,5-Trinitrobenzene, CAS: 99-35-4

Signal: 1

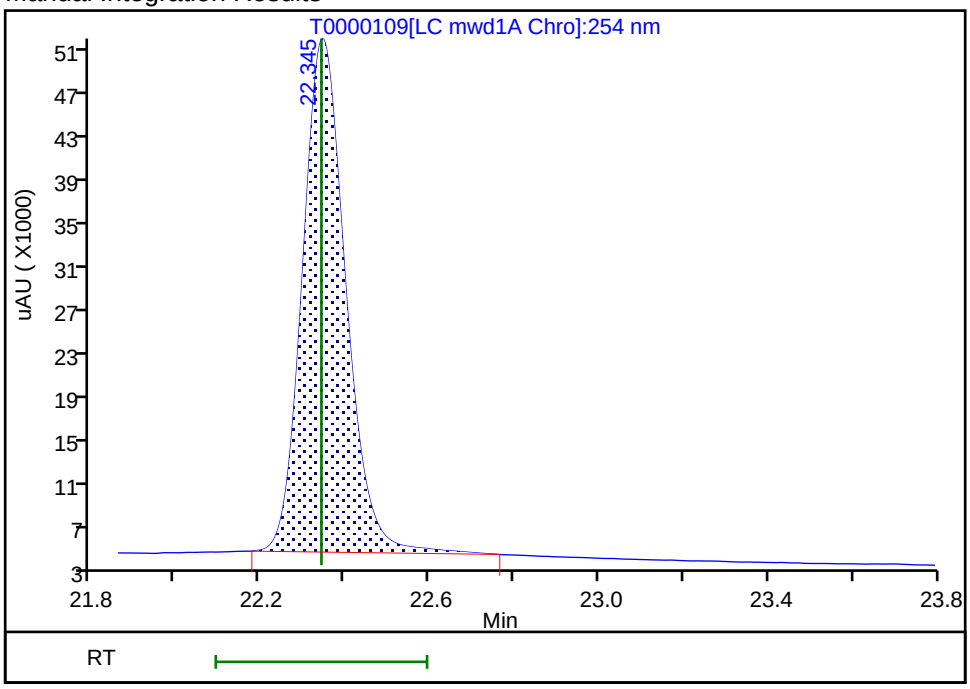
Processing Integration Results

RT: 22.34
Height: 48651
Amount: 207.6710
Amount Units: ng/ml



Manual Integration Results

RT: 22.34
Height: 47036
Amount: 200.7772
Amount Units: ng/ml



Reviewer: ortizam, 24-May-2019 15:35:00

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

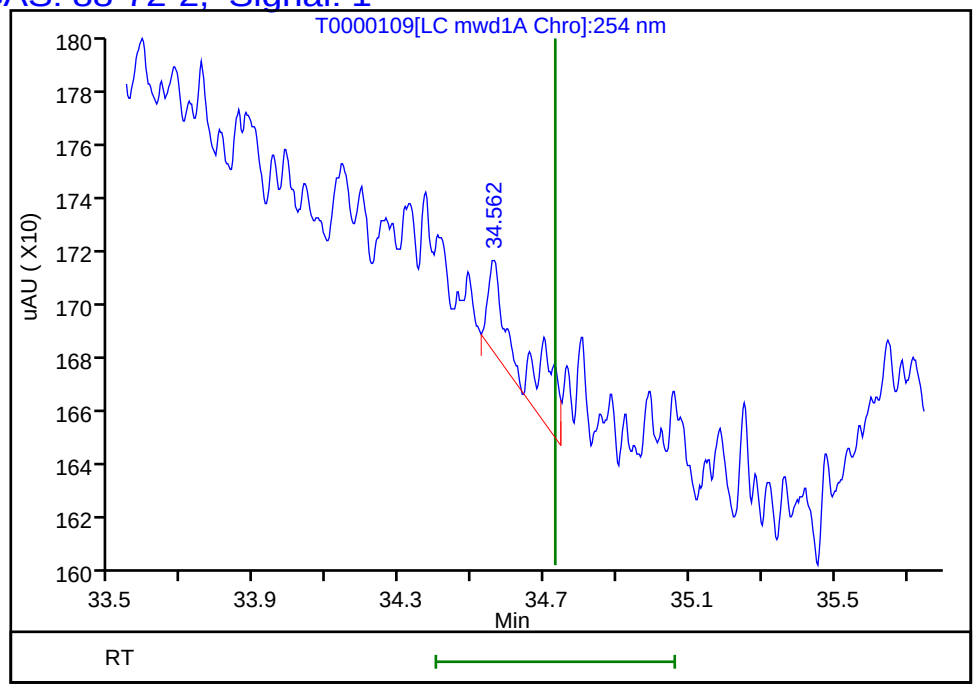
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC11\20190523-76793.b\T0000109.D				
Injection Date:	24-May-2019 14:35:14	Instrument ID:	LC11		
Lims ID:	280-123009-A-1-A	Lab Sample ID:	320-123009-1		
Client ID:	SP-S2				
Operator ID:	AO	ALS Bottle#:	95	Worklist Smp#:	23
Injection Vol:	500.0 ul	Dil. Factor:	5.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

20 o-Nitrotoluene, CAS: 88-72-2, Signal: 1

RT: 34.56
Response: 33
Amount: 0.571465



Reviewer: ortizam, 24-May-2019 15:36:26

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

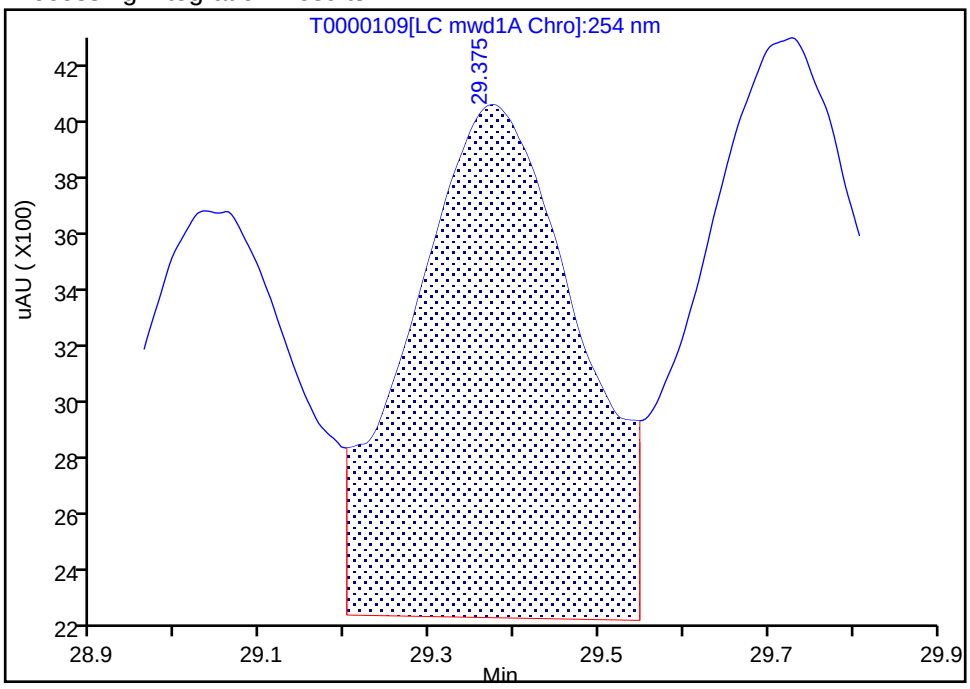
Data File:	\\chromna\Sacramento\ChromData\LC11\20190523-76793.b\T0000109.D				
Injection Date:	24-May-2019 14:35:14	Instrument ID:	LC11		
Lims ID:	280-123009-A-1-A	Lab Sample ID:	320-123009-1		
Client ID:	SP-S2				
Operator ID:	AO	ALS Bottle#:	95	Worklist Smp#:	23
Injection Vol:	500.0 ul	Dil. Factor:	5.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

$ 16 3,4-Dinitrotoluene, CAS: 610-39-9

Signal: 1

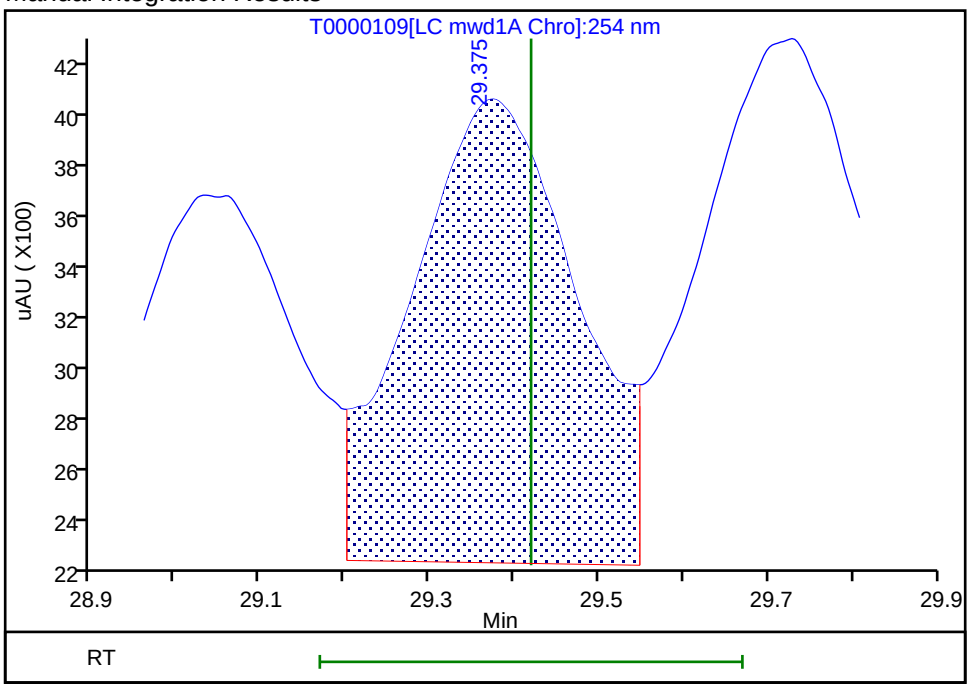
Processing Integration Results

RT: 29.37
Height: 1729
Amount: 23.620449
Amount Units: ng/ml



Manual Integration Results

RT: 29.37
Height: 1729
Amount: 23.620449
Amount Units: ng/ml



Reviewer: ortizam, 24-May-2019 15:34:49

Audit Action: Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

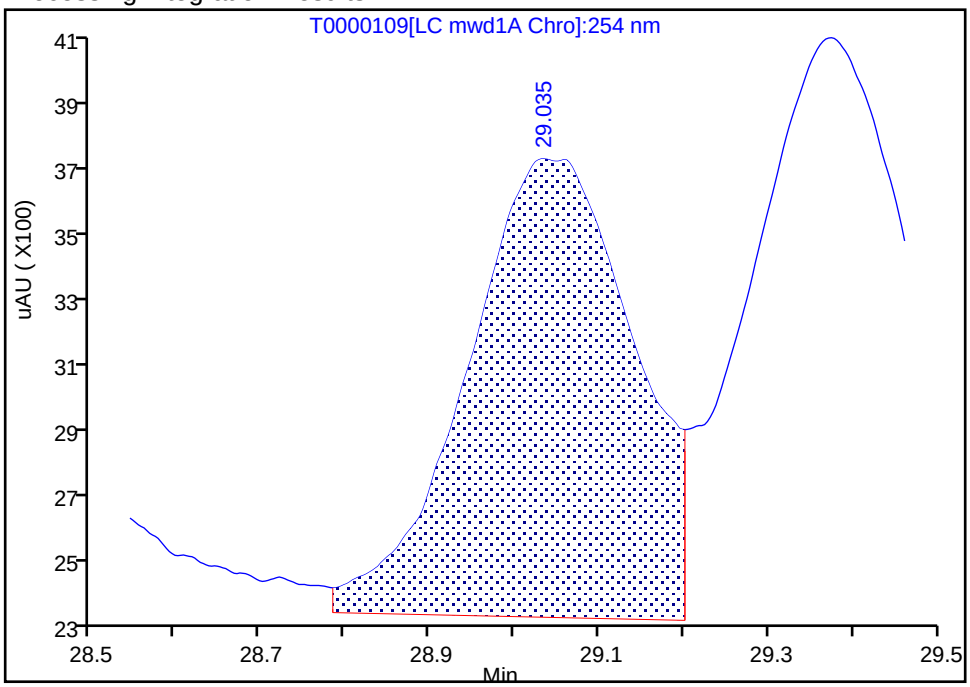
Data File:	\\chromna\Sacramento\ChromData\LC11\20190523-76793.b\T0000109.D				
Injection Date:	24-May-2019 14:35:14	Instrument ID:	LC11		
Lims ID:	280-123009-A-1-A	Lab Sample ID:	320-123009-1		
Client ID:	SP-S2				
Operator ID:	AO	ALS Bottle#:	95	Worklist Smp#:	23
Injection Vol:	500.0 ul	Dil. Factor:	5.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

15 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

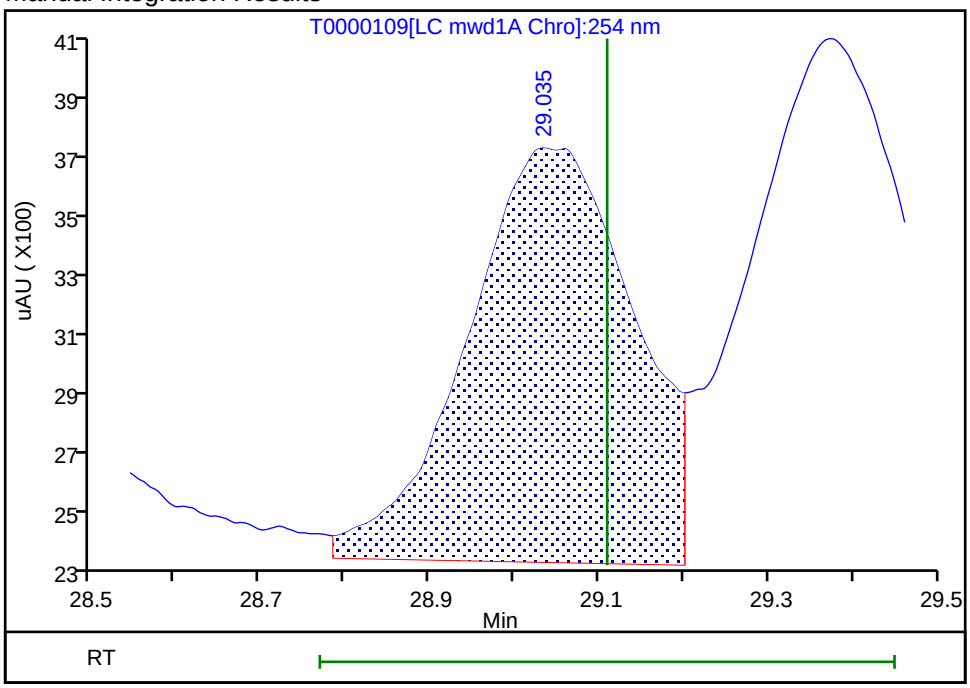
Processing Integration Results

RT: 29.03
Height: 1353
Amount: 15.548307
Amount Units: ng/ml



Manual Integration Results

RT: 29.03
Height: 1353
Amount: 15.548307
Amount Units: ng/ml



Reviewer: ortizam, 24-May-2019 15:34:53

Audit Action: Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

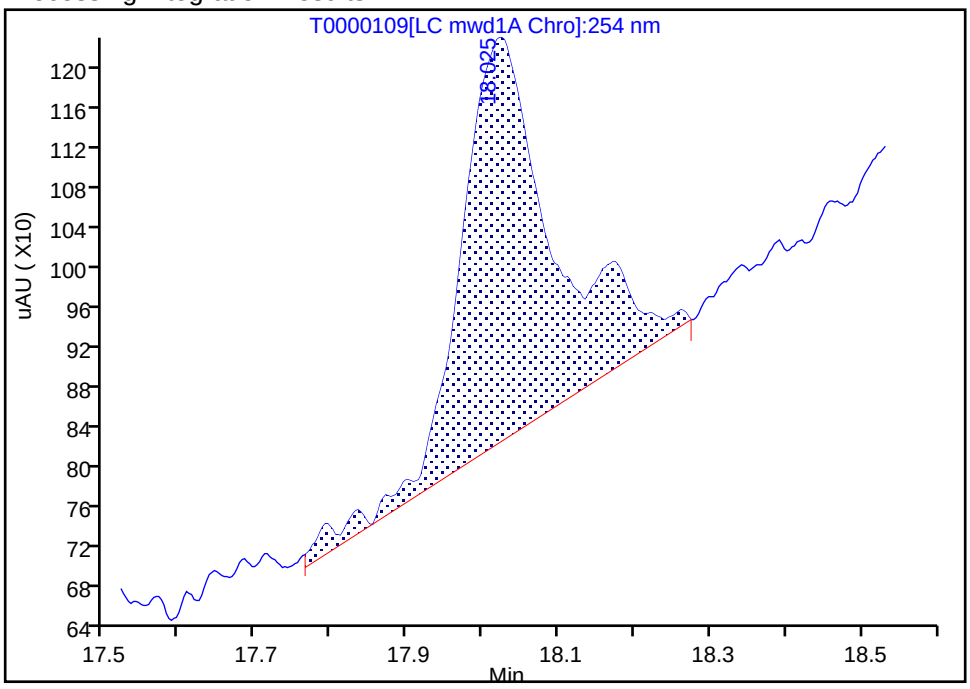
Data File:	\\chromna\Sacramento\ChromData\LC11\20190523-76793.b\T0000109.D				
Injection Date:	24-May-2019 14:35:14	Instrument ID:	LC11		
Lims ID:	280-123009-A-1-A	Lab Sample ID:	320-123009-1		
Client ID:	SP-S2				
Operator ID:	AO	ALS Bottle#:	95	Worklist Smp#:	23
Injection Vol:	500.0 ul	Dil. Factor:	5.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

3 HMX, CAS: 2691-41-0

Signal: 1

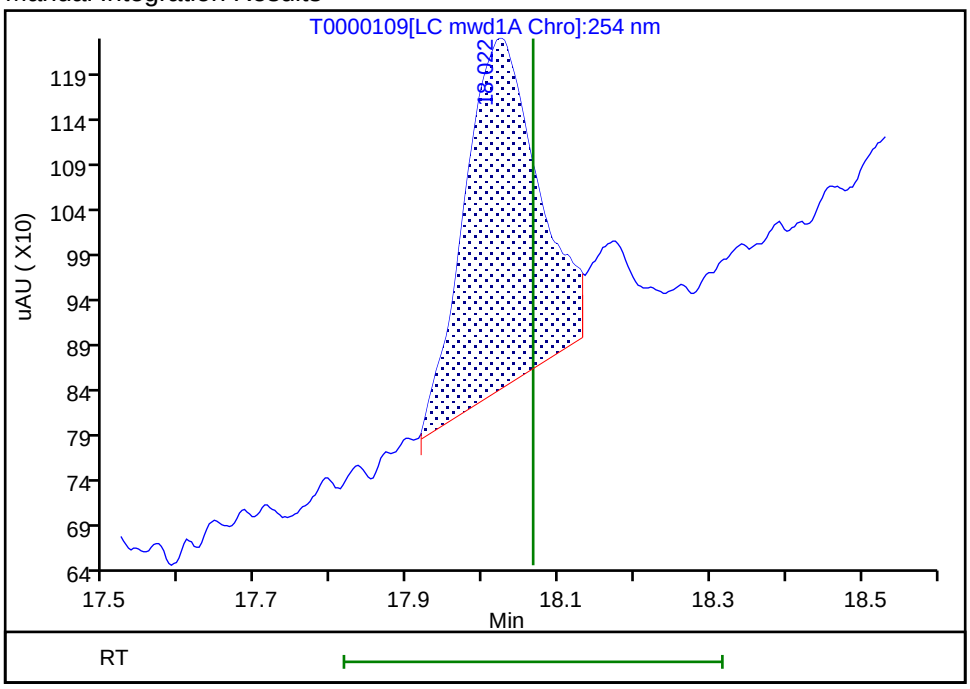
Processing Integration Results

RT: 18.02
Height: 406
Amount: 5.034036
Amount Units: ng/ml



Manual Integration Results

RT: 18.02
Height: 391
Amount: 4.848049
Amount Units: ng/ml



Reviewer: ortizam, 24-May-2019 15:35:35

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

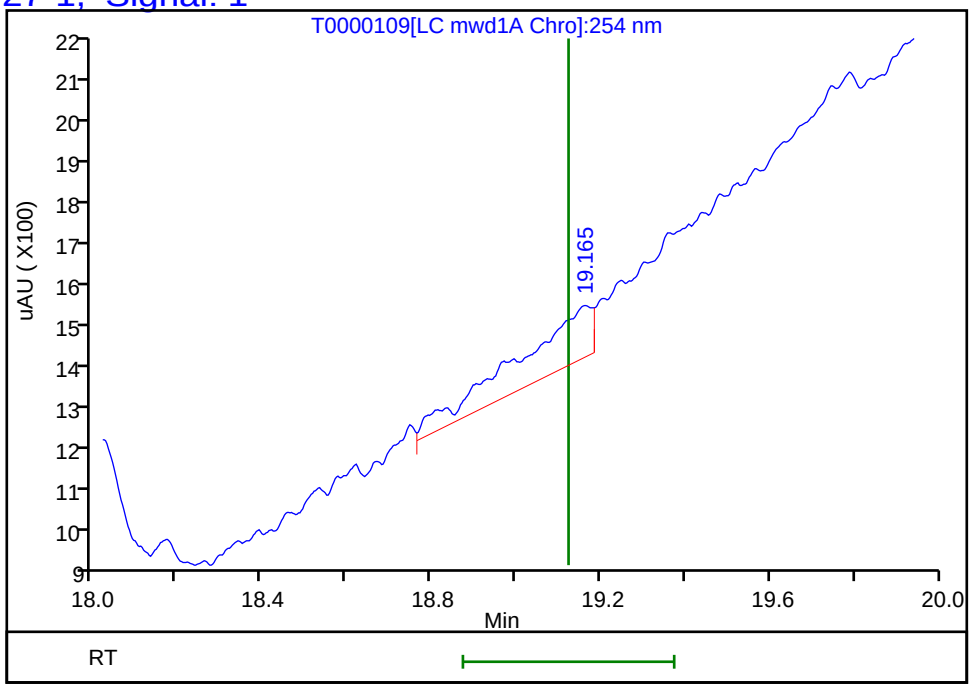
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC11\20190523-76793.b\T0000109.D				
Injection Date:	24-May-2019 14:35:14	Instrument ID:	LC11		
Lims ID:	280-123009-A-1-A	Lab Sample ID:	320-123009-1		
Client ID:	SP-S2				
Operator ID:	AO	ALS Bottle#:	95	Worklist Smp#:	23
Injection Vol:	500.0 ul	Dil. Factor:	5.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

4 MNX, CAS: 5755-27-1, Signal: 1

RT: 19.16
Response: 116
Amount: 1.158146



Reviewer: ortizam, 24-May-2019 15:36:26

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

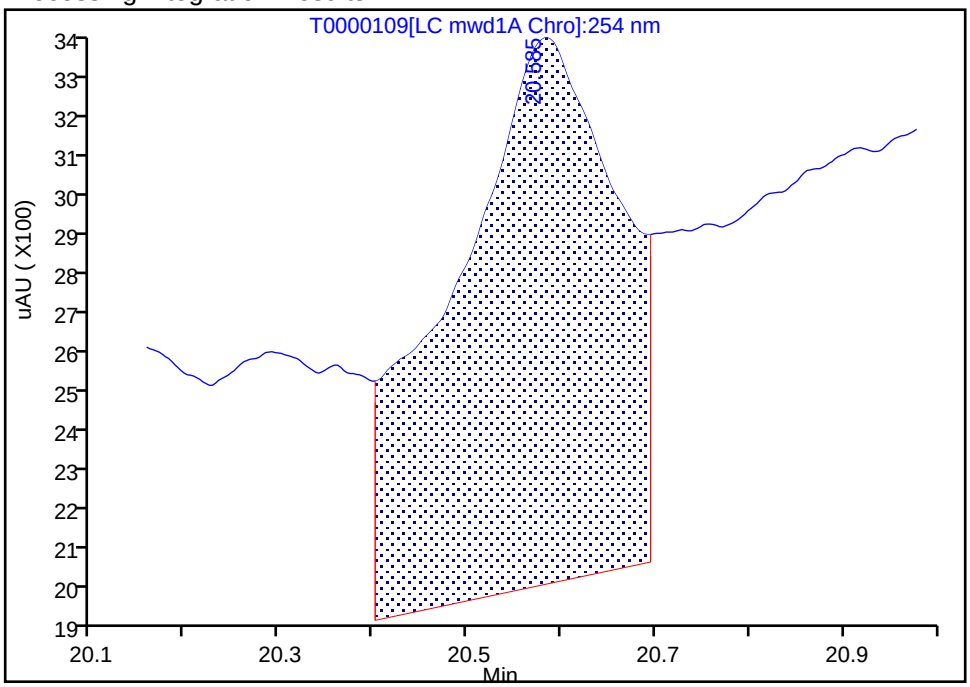
Data File:	\\chromna\Sacramento\ChromData\LC11\20190523-76793.b\T0000109.D				
Injection Date:	24-May-2019 14:35:14	Instrument ID:	LC11		
Lims ID:	280-123009-A-1-A	Lab Sample ID:	320-123009-1		
Client ID:	SP-S2				
Operator ID:	AO	ALS Bottle#:	95	Worklist Smp#:	23
Injection Vol:	500.0 ul	Dil. Factor:	5.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

6 RDX, CAS: 121-82-4

Signal: 1

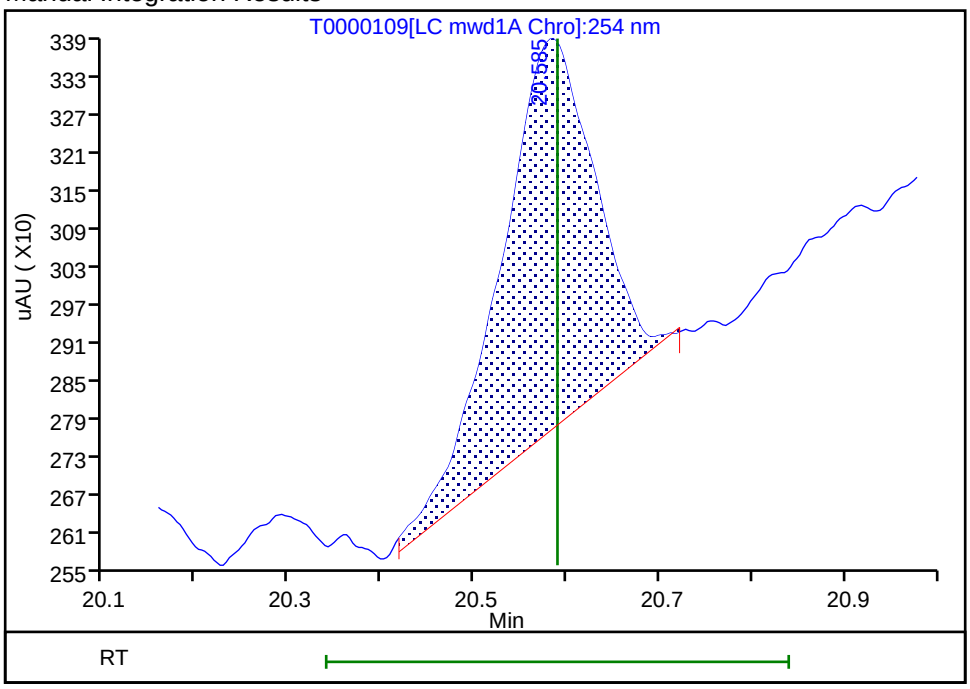
Processing Integration Results

RT: 20.58
Height: 1302
Amount: 13.141067
Amount Units: ng/ml



Manual Integration Results

RT: 20.58
Height: 614
Amount: 6.197093
Amount Units: ng/ml



Reviewer: ortizam, 24-May-2019 15:35:53

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

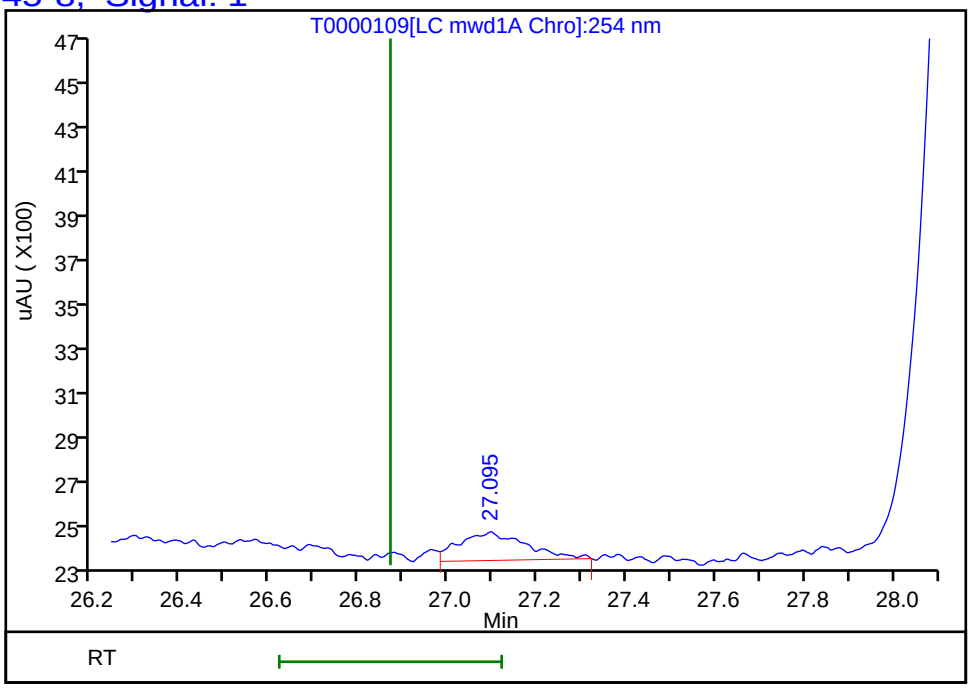
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC11\20190523-76793.b\T0000109.D				
Injection Date:	24-May-2019 14:35:14	Instrument ID:	LC11		
Lims ID:	280-123009-A-1-A	Lab Sample ID:	320-123009-1		
Client ID:	SP-S2				
Operator ID:	AO	ALS Bottle#:	95	Worklist Smp#:	23
Injection Vol:	500.0 ul	Dil. Factor:	5.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

12 Tetryl, CAS: 479-45-8, Signal: 1

RT: 27.09
Response: 123
Amount: 1.172062



Reviewer: ortizam, 24-May-2019 15:36:26

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Client Sample ID: SP-S6 Lab Sample ID: 280-123009-2

Matrix: Water Lab File ID: ZD0000074.D

Analysis Method: 8330A Date Collected: 04/24/2019 08:45

Extraction Method: 8330-Prep Date Extracted: 04/29/2019 06:59

Sample wt/vol: 1019.5(mL) Date Analyzed: 05/03/2019 06:40

Con. Extract Vol.: 20(mL) Dilution Factor: 1

Injection Volume: 500(uL) GC Column: Synergi C18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 291526 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	5.1	M	0.15	0.098	0.030
99-65-0	1,3-Dinitrobenzene	0.098	U	0.15	0.098	0.049
118-96-7	2,4,6-Trinitrotoluene	1.0		0.15	0.098	0.049
121-14-2	2,4-Dinitrotoluene	0.098	U	0.13	0.098	0.049
606-20-2	2,6-Dinitrotoluene	0.098	U	0.13	0.098	0.049
35572-78-2	2-Amino-4,6-dinitrotoluene	0.24		0.15	0.098	0.029
88-72-2	2-Nitrotoluene	0.20	U	0.49	0.20	0.086
99-08-1	3-Nitrotoluene	0.20	U	0.49	0.20	0.056
19406-51-0	4-Amino-2,6-dinitrotoluene	0.27		0.15	0.098	0.049
99-99-0	4-Nitrotoluene	0.20	U	0.49	0.20	0.086
2691-41-0	HMX	0.21	M	0.15	0.098	0.035
5755-27-1	MNX	0.098	U M	0.49	0.098	0.027
98-95-3	Nitrobenzene	0.098	U M	0.15	0.098	0.049
121-82-4	RDX	0.37	M	0.15	0.098	0.035
479-45-8	Tetryl	0.098	U	0.15	0.098	0.049

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	94		79-111

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000074.D
Lims ID: 280-123009-A-2-A
Client ID: SP-S6
Sample Type: Client
Inject. Date: 03-May-2019 06:40:05 ALS Bottle#: 73 Worklist Smp#: 74
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 320-0075622-074
Operator ID: AO Instrument ID: LC11

Method: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 03-May-2019 09:53:17 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0325

First Level Reviewer: ortizam Date: 03-May-2019 09:57:47

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
3 HMX						M
1	18.080	18.027	0.053	859H	10.7	M
6 RDX						M
1	20.627	20.573	0.054	1887H	19.0	M
8 1,3,5-Trinitrobenzene						M
1	22.390	22.367	0.023	60974H	260.3	M
10 3,5-Dinitroaniline						M
1	25.753	25.640	0.113	17248H	108.7	M
14 2,4,6-Trinitrotoluene						
1	28.347	28.290	0.057	5983H	52.0	
15 4-Amino-2,6-dinitrotoluene						
1	29.213	29.073	0.140	1183H	13.6	
$ 16 3,4-Dinitrotoluene						
1	29.527	29.437	0.090	8630H	117.9	
2	29.527	29.437	0.090	16888H		
17 2-Amino-4,6-dinitrotoluene						
1	29.900	29.747	0.153	1396H	12.4	

QC Flag Legend

Review Flags
M - Manually Integrated

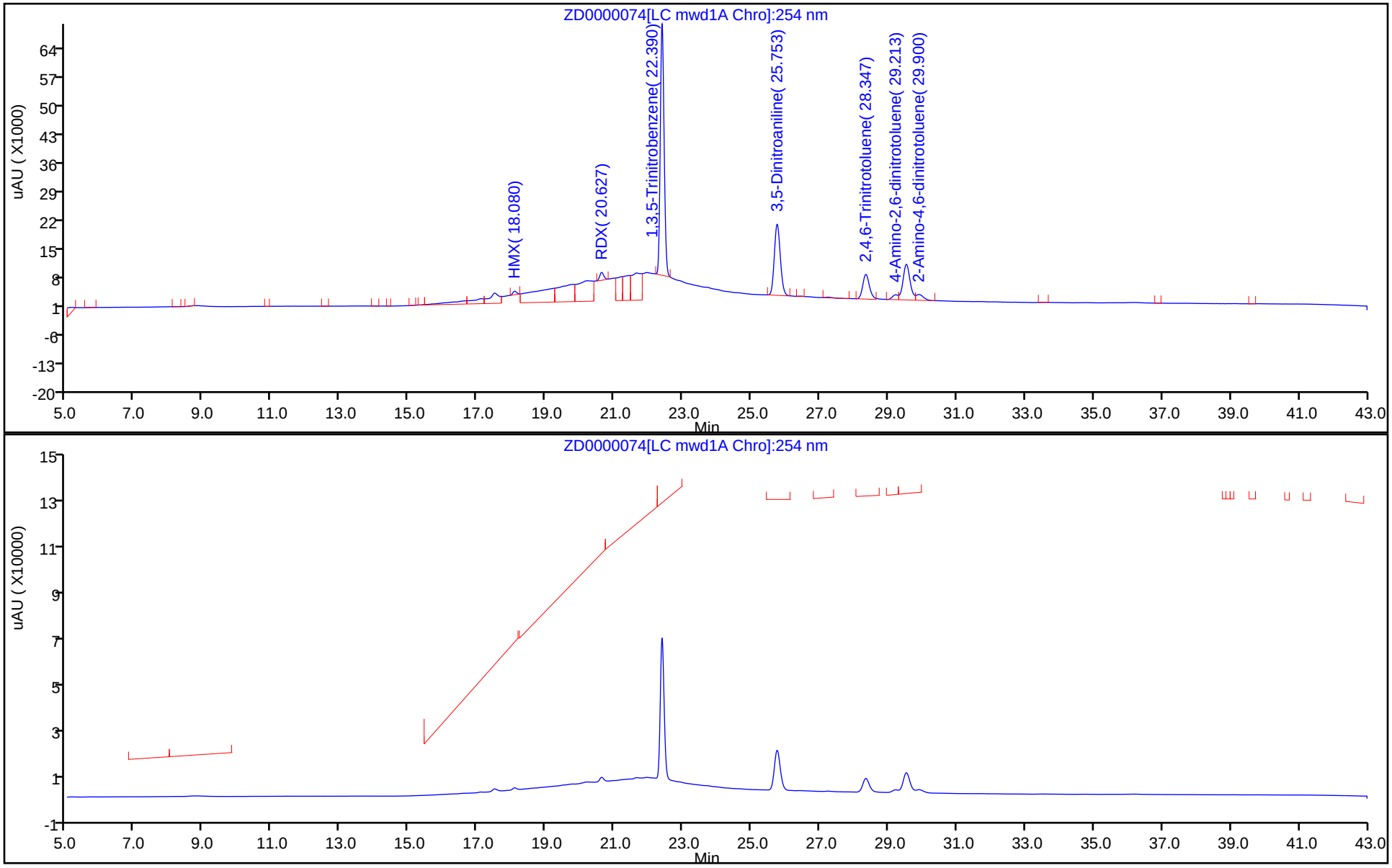
Report Date: 03-May-2019 09:57:47 Chrom Revision: 2.3 01-May-2019 12:41:30

Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000074.D

Injection Date:	03-May-2019 06:40:05	Instrument ID:	LC11	Operator ID:	AO
Lims ID:	280-123009-A-2-A	Lab Sample ID:	320-123009-2	Worklist Smp#:	74
Client ID:	SP-S6				
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	73
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins TestAmerica, Sacramento

Recovery Report

Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000074.D				
Lims ID:	280-123009-A-2-A				
Client ID:	SP-S6				
Sample Type:	Client				
Inject. Date:	03-May-2019 06:40:05	ALS Bottle#:	73	Worklist Smp#:	74
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Sample Info:	320-0075622-074				
Operator ID:	AO	Instrument ID:	LC11		
Method:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\8330 Metab LC11.m				
Limit Group:	LC 8330A ICAL				
Last Update:	03-May-2019 09:53:17	Calib Date:	28-Feb-2019 10:01:13		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D				
Column 1 :	Synergi Hydro-RP C18 (4.60 mm)		Det: LC mwd1A, 250 nm		
Process Host:	CTX0325				
First Level Reviewer: ortizam		Date:	03-May-2019 09:57:47		

Compound	Amount Added	Amount Recovered	% Rec.
$ 16 3,4-Dinitrotoluene	125.0	117.9	94.32

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

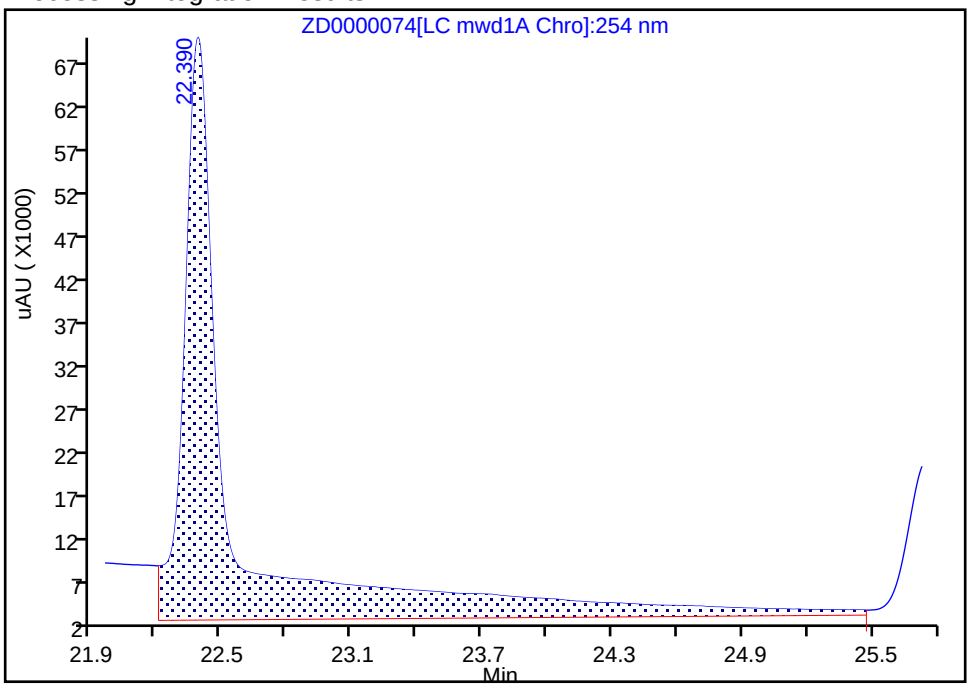
Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000074.D				
Injection Date:	03-May-2019 06:40:05	Instrument ID:	LC11		
Lims ID:	280-123009-A-2-A	Lab Sample ID:	320-123009-2		
Client ID:	SP-S6				
Operator ID:	AO	ALS Bottle#:	73	Worklist Smp#:	74
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

8 1,3,5-Trinitrobenzene, CAS: 99-35-4

Signal: 1

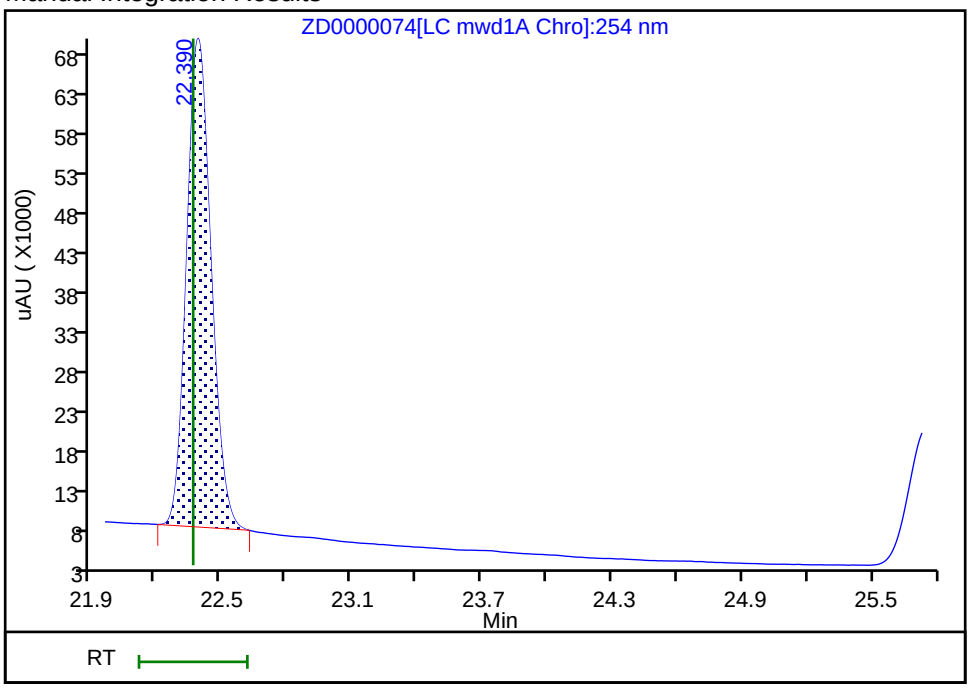
Processing Integration Results

RT: 22.39
Height: 66884
Amount: 285.5002
Amount Units: ng/ml



Manual Integration Results

RT: 22.39
Height: 60974
Amount: 260.2728
Amount Units: ng/ml



Reviewer: ortizam, 03-May-2019 09:43:11

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

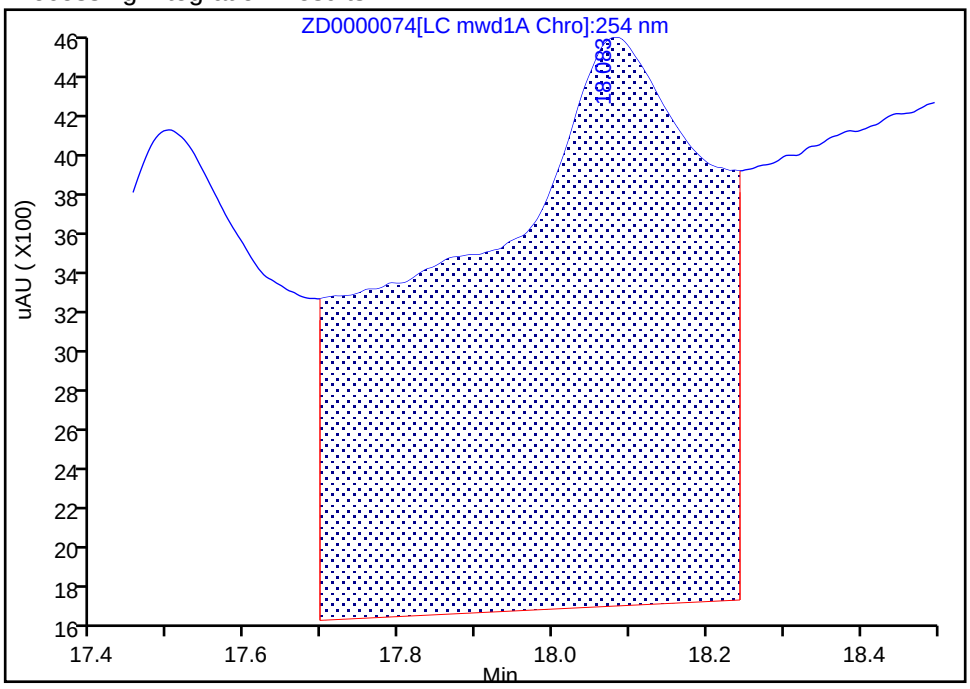
Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000074.D				
Injection Date:	03-May-2019 06:40:05	Instrument ID:	LC11		
Lims ID:	280-123009-A-2-A	Lab Sample ID:	320-123009-2		
Client ID:	SP-S6				
Operator ID:	AO	ALS Bottle#:	73	Worklist Smp#:	74
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

3 HMX, CAS: 2691-41-0

Signal: 1

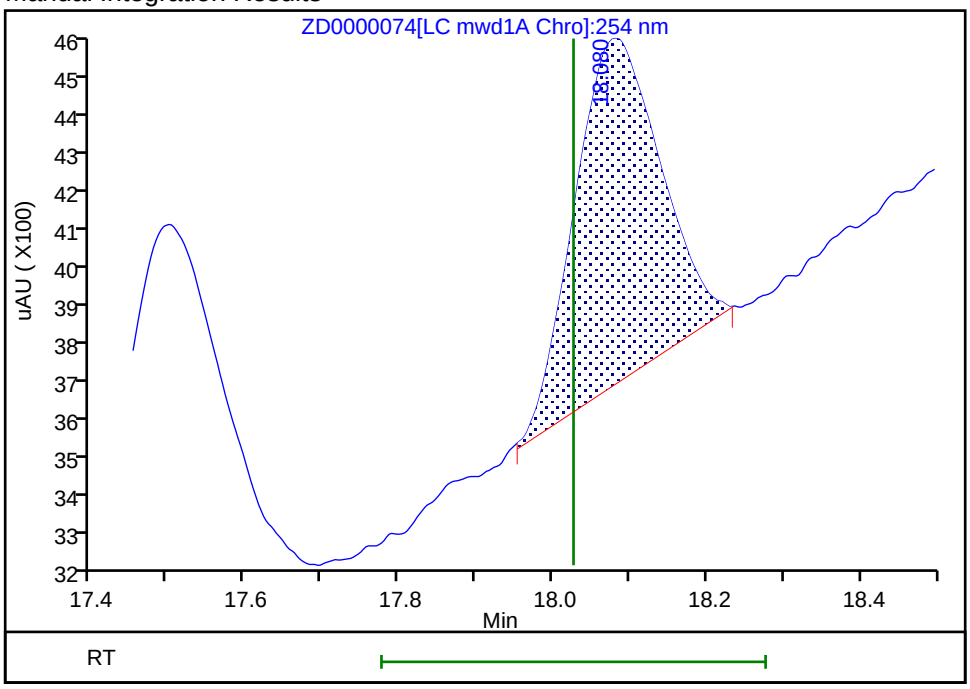
Processing Integration Results

RT: 18.08
Height: 2842
Amount: 35.238249
Amount Units: ng/ml



Manual Integration Results

RT: 18.08
Height: 859
Amount: 10.650829
Amount Units: ng/ml



Reviewer: ortizam, 03-May-2019 09:42:26

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

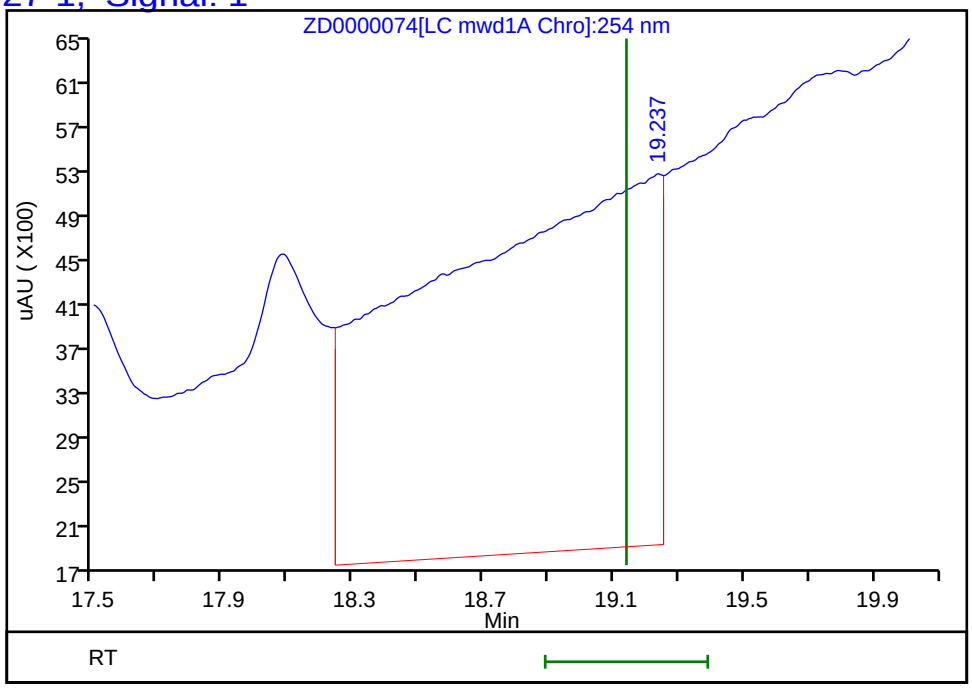
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000074.D				
Injection Date:	03-May-2019 06:40:05	Instrument ID:	LC11		
Lims ID:	280-123009-A-2-A	Lab Sample ID:	320-123009-2		
Client ID:	SP-S6				
Operator ID:	AO	ALS Bottle#:	73	Worklist Smp#:	74
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

4 MNX, CAS: 5755-27-1, Signal: 1

RT: 19.24
Response: 3356
Amount: 33.506352



Reviewer: ortizam, 03-May-2019 09:43:30
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

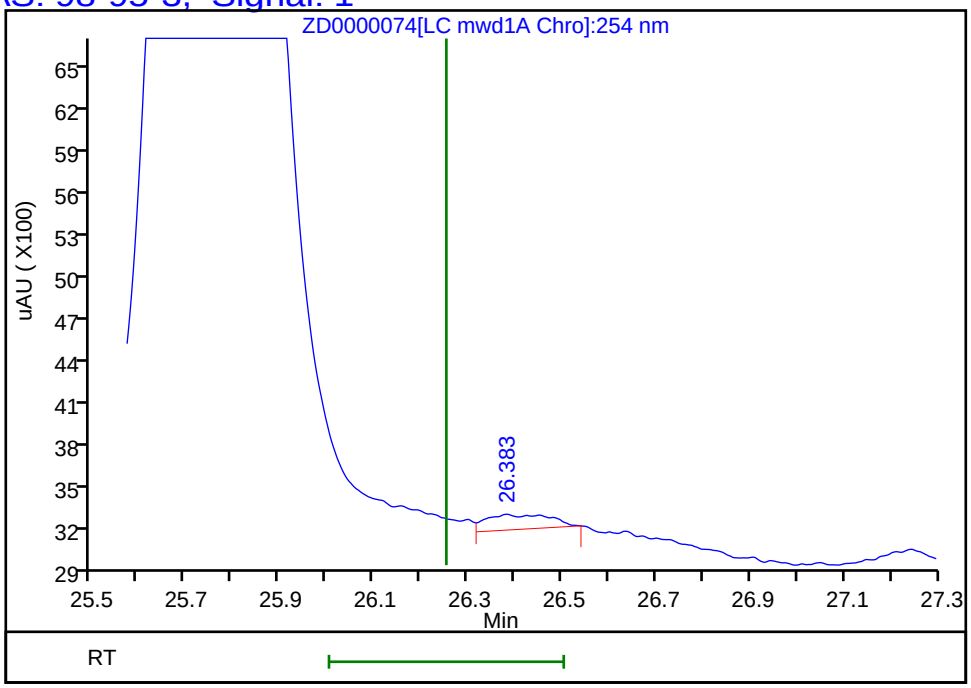
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000074.D				
Injection Date:	03-May-2019 06:40:05	Instrument ID:	LC11		
Lims ID:	280-123009-A-2-A	Lab Sample ID:	320-123009-2		
Client ID:	SP-S6				
Operator ID:	AO	ALS Bottle#:	73	Worklist Smp#:	74
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

11 Nitrobenzene, CAS: 98-95-3, Signal: 1

RT: 26.38
Response: 111
Amount: 0.948607



Reviewer: ortizam, 03-May-2019 09:43:30
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

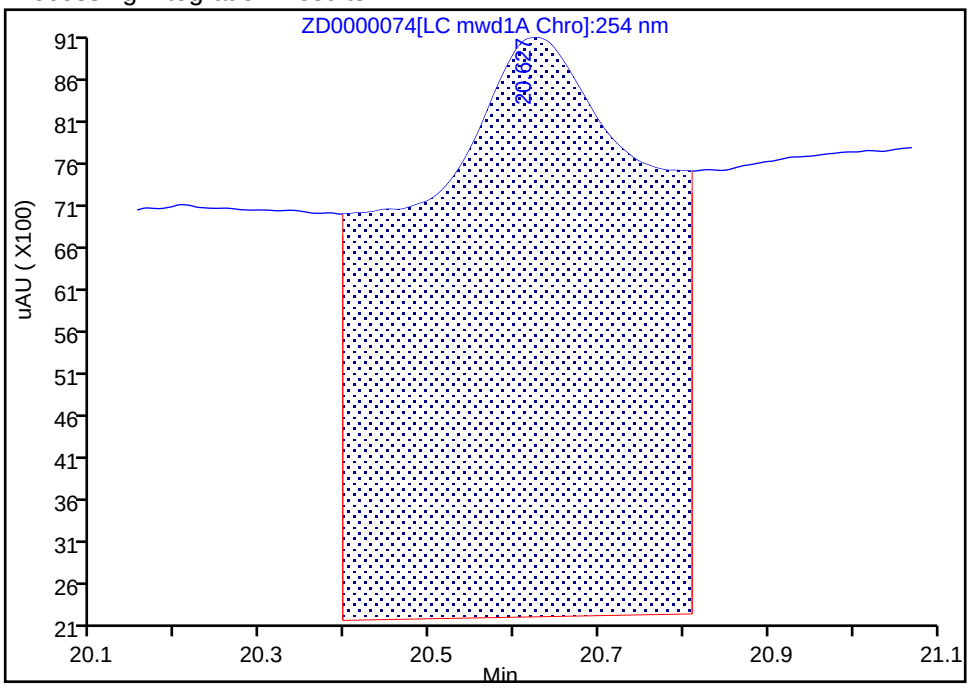
Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000074.D				
Injection Date:	03-May-2019 06:40:05	Instrument ID:	LC11		
Lims ID:	280-123009-A-2-A	Lab Sample ID:	320-123009-2		
Client ID:	SP-S6				
Operator ID:	AO	ALS Bottle#:	73	Worklist Smp#:	74
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

6 RDX, CAS: 121-82-4

Signal: 1

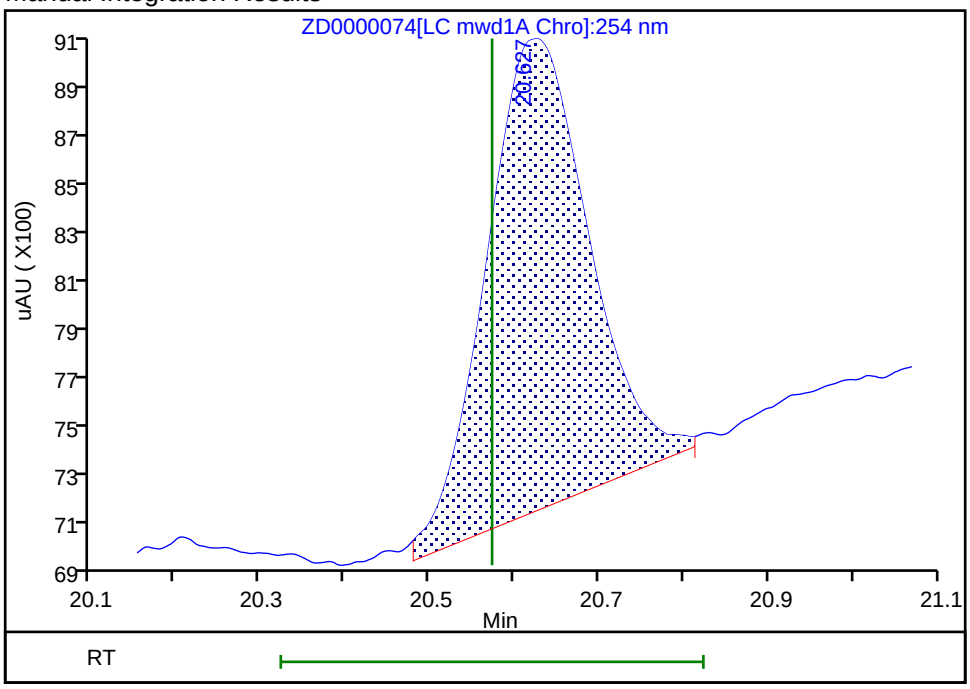
Processing Integration Results

RT: 20.63
Height: 6912
Amount: 69.762714
Amount Units: ng/ml



Manual Integration Results

RT: 20.63
Height: 1887
Amount: 19.045463
Amount Units: ng/ml



Reviewer: ortizam, 03-May-2019 09:42:40

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Client Sample ID: SP-S6 Lab Sample ID: 280-123009-2

Matrix: Water Lab File ID: U000068.D

Analysis Method: 8330A Date Collected: 04/24/2019 08:45

Extraction Method: 8330-Prep Date Extracted: 04/29/2019 06:59

Sample wt/vol: 1019.5(mL) Date Analyzed: 05/24/2019 07:21

Con. Extract Vol.: 20(mL) Dilution Factor: 1

Injection Volume: 500(uL) GC Column: Zorbax CN ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 295993 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	91		79-111

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000068.D
Lims ID: 280-123009-A-2-A
Client ID: SP-S6
Sample Type: Client
Inject. Date: 24-May-2019 07:21:42 ALS Bottle#: 59 Worklist Smp#: 66
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 280-123009-a-2-a
Operator ID: AO Instrument ID: LC12

Method: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 24-May-2019 10:29:01 Calib Date: 15-May-2019 07:09:15
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0337

First Level Reviewer: cartiera Date: 24-May-2019 10:29:01

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
7 1,3,5-Trinitrobenzene						
1	26.642	26.612	0.030	23047H	245.8	
13 RDX						
1	31.352	31.385	-0.033	835H	14.3	
16 2-Amino-4,6-dinitrotoluene						
1	33.915	33.922	-0.007	2256H	11.2	
17 4-Amino-2,6-dinitrotoluene						
1	34.148	34.168	-0.020	27280	14.7	
$ 18 3,4-Dinitrotoluene						
1	34.812	34.822	-0.010	15940H	113.8	
19 2,4,6-Trinitrotoluene						
1	35.382	35.395	-0.013	10129H	48.9	
20 HMX						M
1	36.222	36.235	-0.013	1682H	10.7	M

QC Flag Legend

Review Flags
M - Manually Integrated

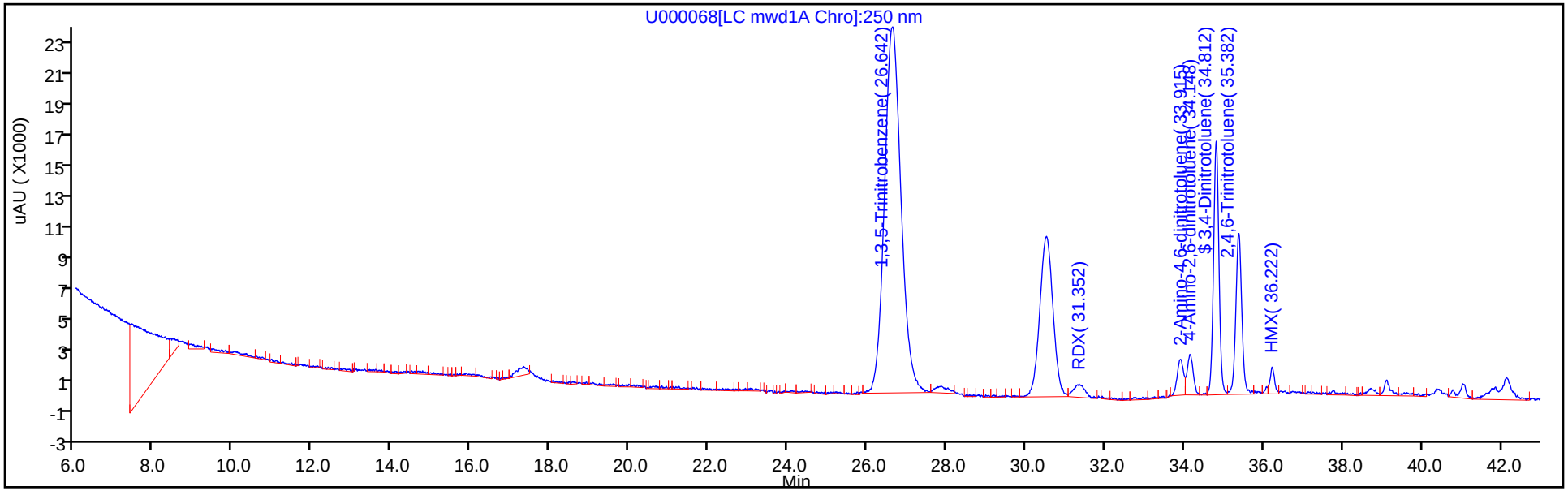
Report Date: 24-May-2019 10:29:02 Chrom Revision: 2.3 12-May-2019 16:28:34

Eurofins TestAmerica, Sacramento

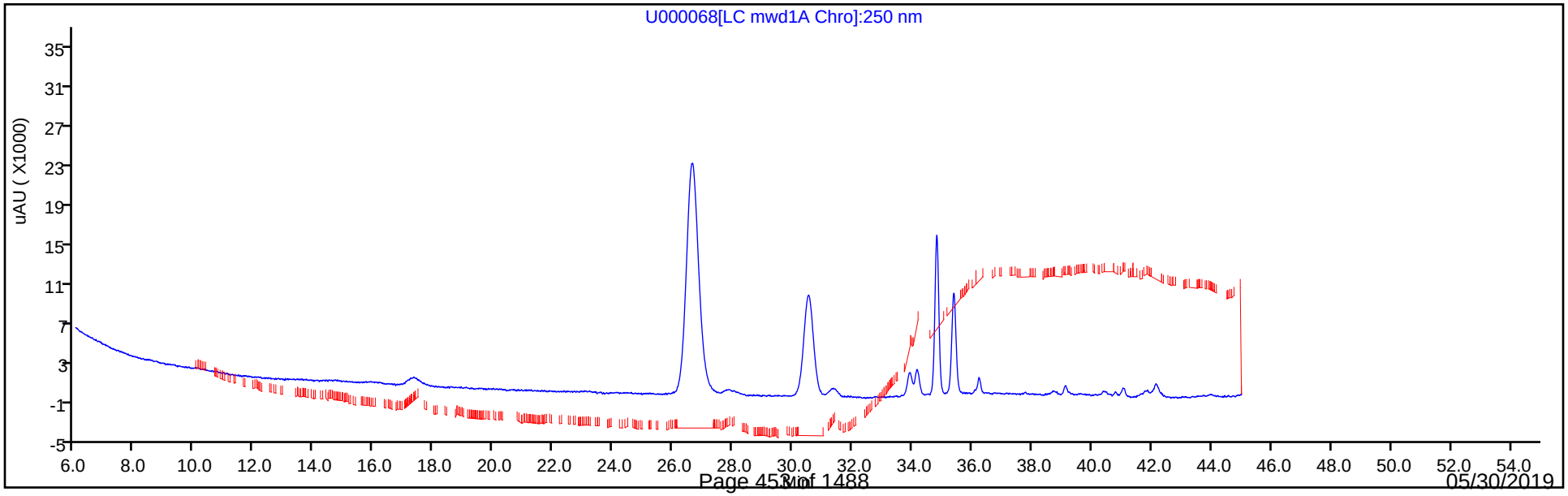
Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000068.D

Injection Date:	24-May-2019 07:21:42	Instrument ID:	LC12	Operator ID:	AO
Lims ID:	280-123009-A-2-A	Lab Sample ID:	320-123009-2	Worklist Smp#:	66
Client ID:	SP-S6				
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	59
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



Eurofins TestAmerica, Sacramento
Recovery Report

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000068.D				
Lims ID:	280-123009-A-2-A				
Client ID:	SP-S6				
Sample Type:	Client				
Inject. Date:	24-May-2019 07:21:42	ALS Bottle#:	59	Worklist Smp#:	66
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-123009-a-2-a				
Operator ID:	AO	Instrument ID:	LC12		
Method:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\LC12_Conf_8330.m				
Limit Group:	LC 8330A ICAL				
Last Update:	24-May-2019 10:29:01	Calib Date:	15-May-2019 07:09:15		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D				
Column 1 :	Zorbax Cyano CN (4.60 mm)		Det: LC mwd1A, 250 nm		
Process Host:	CTX0337				

First Level Reviewer: cartiera Date: 24-May-2019 10:29:01

Compound	Amount Added	Amount Recovered	% Rec.
$ 18 3,4-Dinitrotoluene	125.0	113.8	91.07

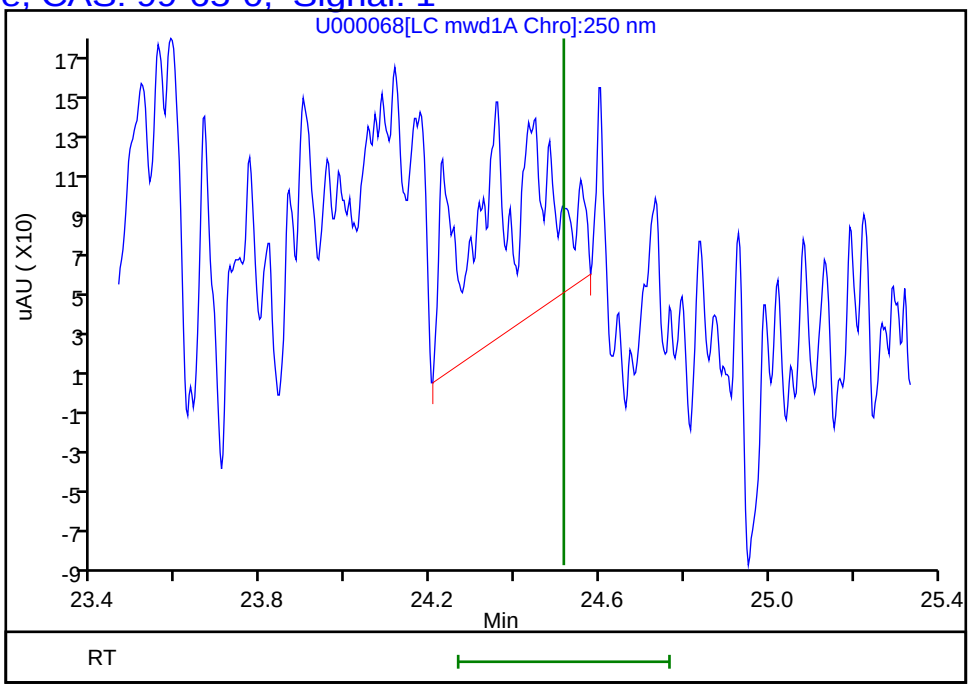
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000068.D				
Injection Date:	24-May-2019 07:21:42	Instrument ID:	LC12		
Lims ID:	280-123009-A-2-A	Lab Sample ID:	320-123009-2		
Client ID:	SP-S6				
Operator ID:	AO	ALS Bottle#:	59	Worklist Smp#:	66
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

6 1,3-Dinitrobenzene, CAS: 99-65-0, Signal: 1

RT: 24.36
Response: 116
Amount: 0.993382



Reviewer: cartiera, 24-May-2019 10:29:01
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

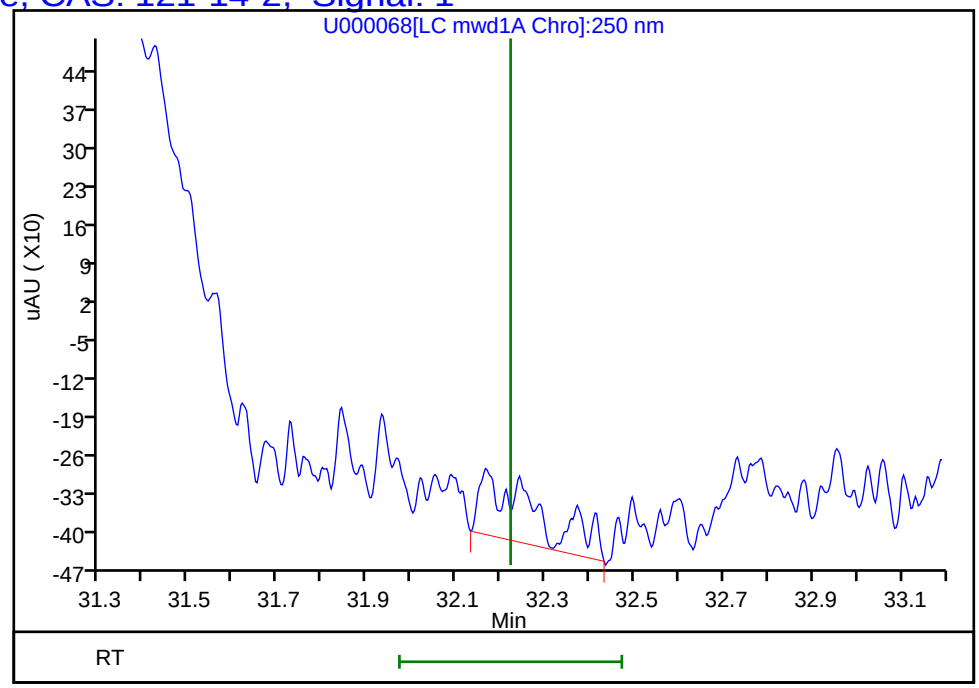
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000068.D				
Injection Date:	24-May-2019 07:21:42	Instrument ID:	LC12		
Lims ID:	280-123009-A-2-A	Lab Sample ID:	320-123009-2		
Client ID:	SP-S6				
Operator ID:	AO	ALS Bottle#:	59	Worklist Smp#:	66
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

14 2,4-Dinitrotoluene, CAS: 121-14-2, Signal: 1

RT: 32.17
Response: 120
Amount: 0.951724



Reviewer: cartiera, 24-May-2019 10:29:01
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

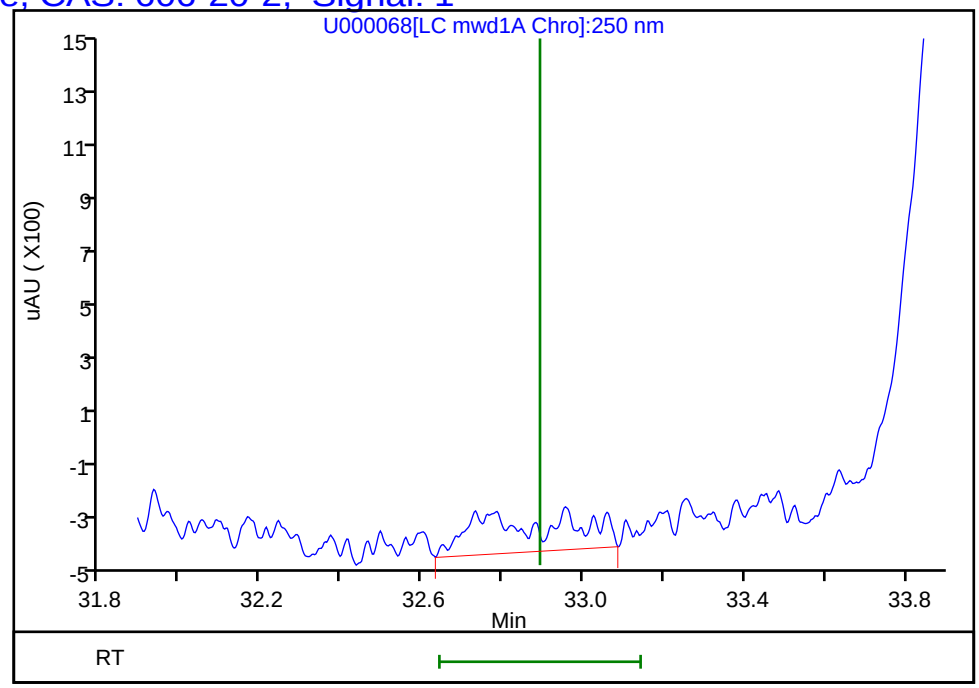
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000068.D				
Injection Date:	24-May-2019 07:21:42	Instrument ID:	LC12		
Lims ID:	280-123009-A-2-A	Lab Sample ID:	320-123009-2		
Client ID:	SP-S6				
Operator ID:	AO	ALS Bottle#:	59	Worklist Smp#:	66
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

15 2,6-Dinitrotoluene, CAS: 606-20-2, Signal: 1

RT: 32.73
Response: 160
Amount: 1.682179



Reviewer: cartiera, 24-May-2019 10:29:01
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

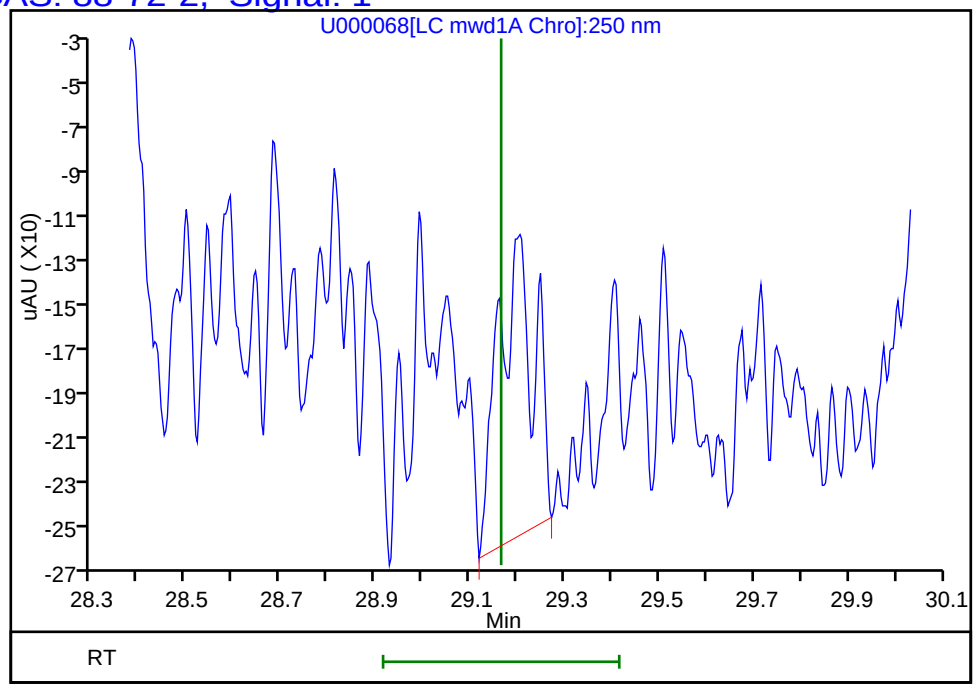
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000068.D				
Injection Date:	24-May-2019 07:21:42	Instrument ID:	LC12		
Lims ID:	280-123009-A-2-A	Lab Sample ID:	320-123009-2		
Client ID:	SP-S6				
Operator ID:	AO	ALS Bottle#:	59	Worklist Smp#:	66
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

10 o-Nitrotoluene, CAS: 88-72-2, Signal: 1

RT: 29.21
Response: 131
Amount: 1.843601



Reviewer: cartiera, 24-May-2019 10:29:01
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

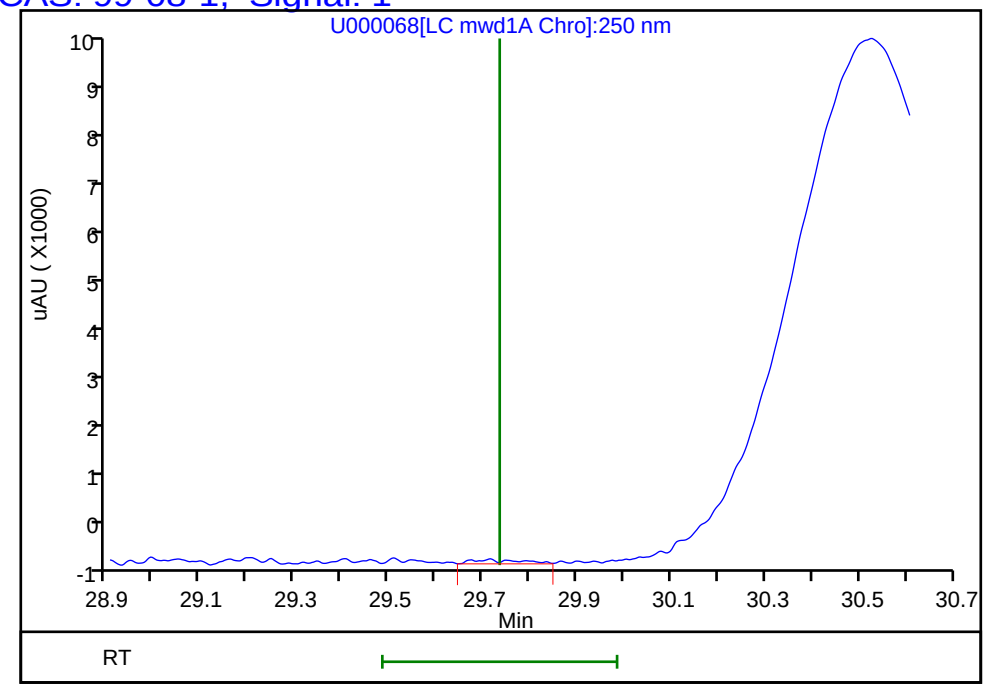
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000068.D				
Injection Date:	24-May-2019 07:21:42	Instrument ID:	LC12		
Lims ID:	280-123009-A-2-A	Lab Sample ID:	320-123009-2		
Client ID:	SP-S6				
Operator ID:	AO	ALS Bottle#:	59	Worklist Smp#:	66
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

11 m-Nitrotoluene, CAS: 99-08-1, Signal: 1

RT: 29.72
Response: 98
Amount: 0.027754



Reviewer: cartiera, 24-May-2019 10:29:01
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

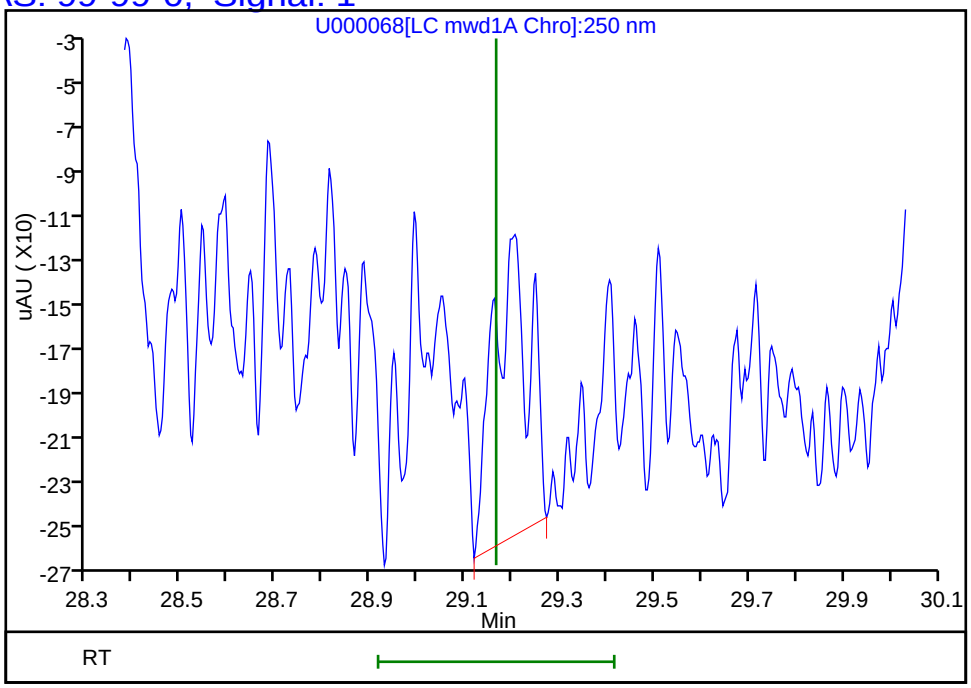
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000068.D				
Injection Date:	24-May-2019 07:21:42	Instrument ID:	LC12		
Lims ID:	280-123009-A-2-A	Lab Sample ID:	320-123009-2		
Client ID:	SP-S6				
Operator ID:	AO	ALS Bottle#:	59	Worklist Smp#:	66
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

9 p-Nitrotoluene, CAS: 99-99-0, Signal: 1

RT: 29.21
Response: 131
Amount: 1.843601



Reviewer: cartiera, 24-May-2019 10:29:01
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

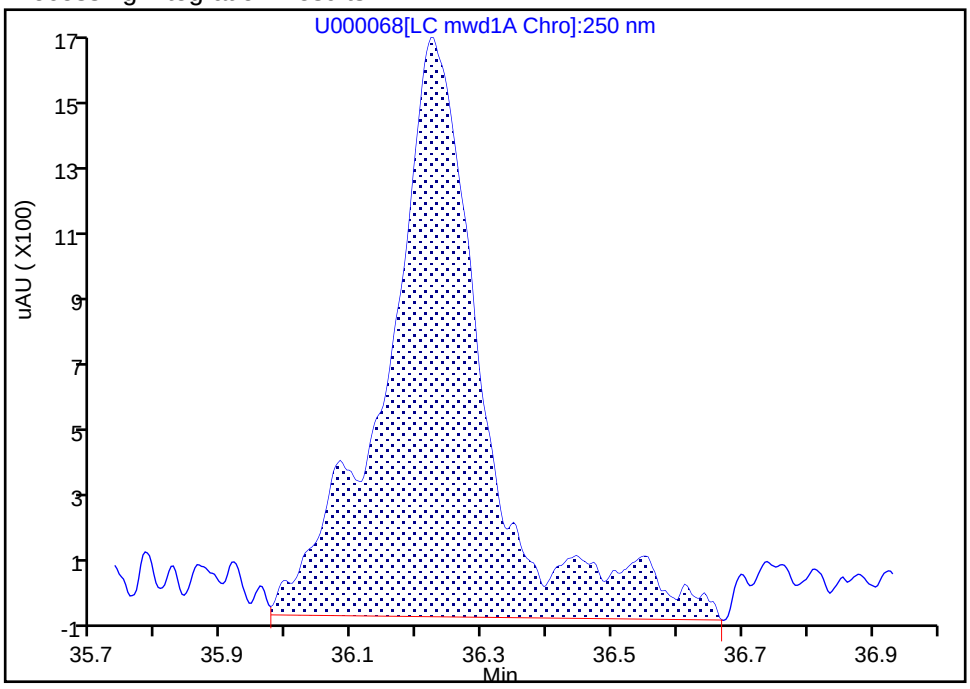
Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000068.D				
Injection Date:	24-May-2019 07:21:42	Instrument ID:	LC12		
Lims ID:	280-123009-A-2-A	Lab Sample ID:	320-123009-2		
Client ID:	SP-S6				
Operator ID:	AO	ALS Bottle#:	59	Worklist Smp#:	66
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

20 HMX, CAS: 2691-41-0

Signal: 1

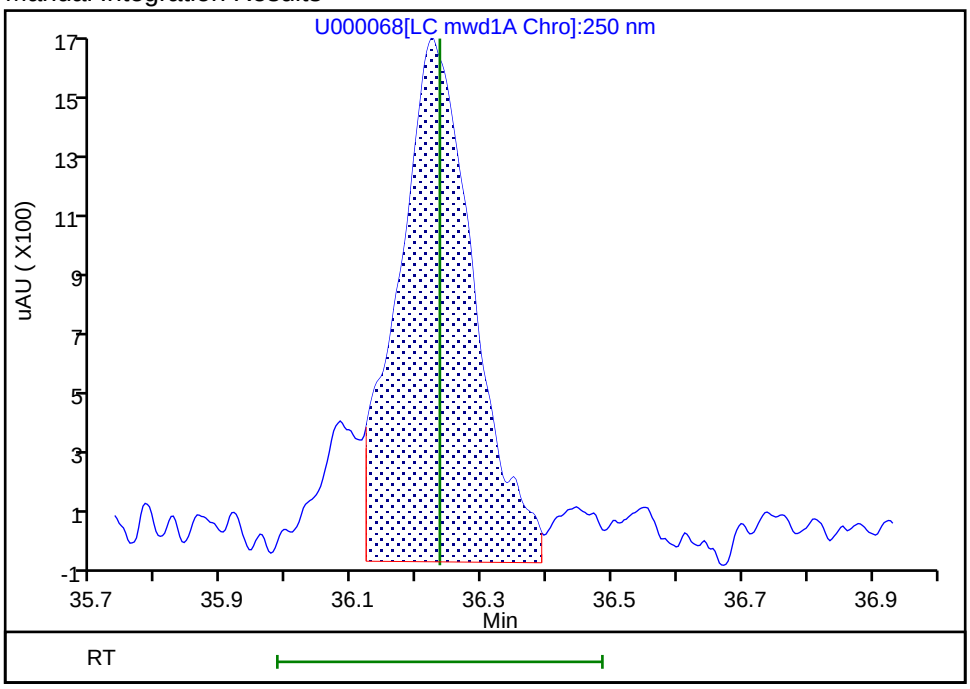
Processing Integration Results

RT: 36.22
Height: 1683
Amount: 10.721609
Amount Units: ng/ml



Manual Integration Results

RT: 36.22
Height: 1682
Amount: 10.715238
Amount Units: ng/ml



Reviewer: cartiera, 24-May-2019 10:28:56

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

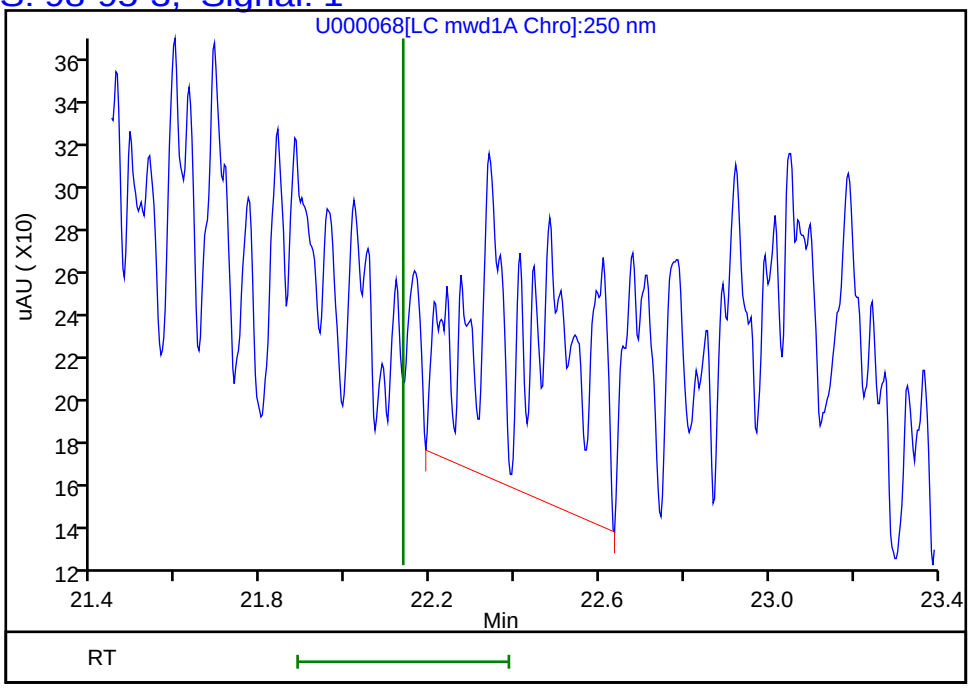
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000068.D				
Injection Date:	24-May-2019 07:21:42	Instrument ID:	LC12		
Lims ID:	280-123009-A-2-A	Lab Sample ID:	320-123009-2		
Client ID:	SP-S6				
Operator ID:	AO	ALS Bottle#:	59	Worklist Smp#:	66
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

3 Nitrobenzene, CAS: 98-95-3, Signal: 1

RT: 22.34
Response: 147
Amount: 2.589129



Reviewer: cartiera, 24-May-2019 10:29:01
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

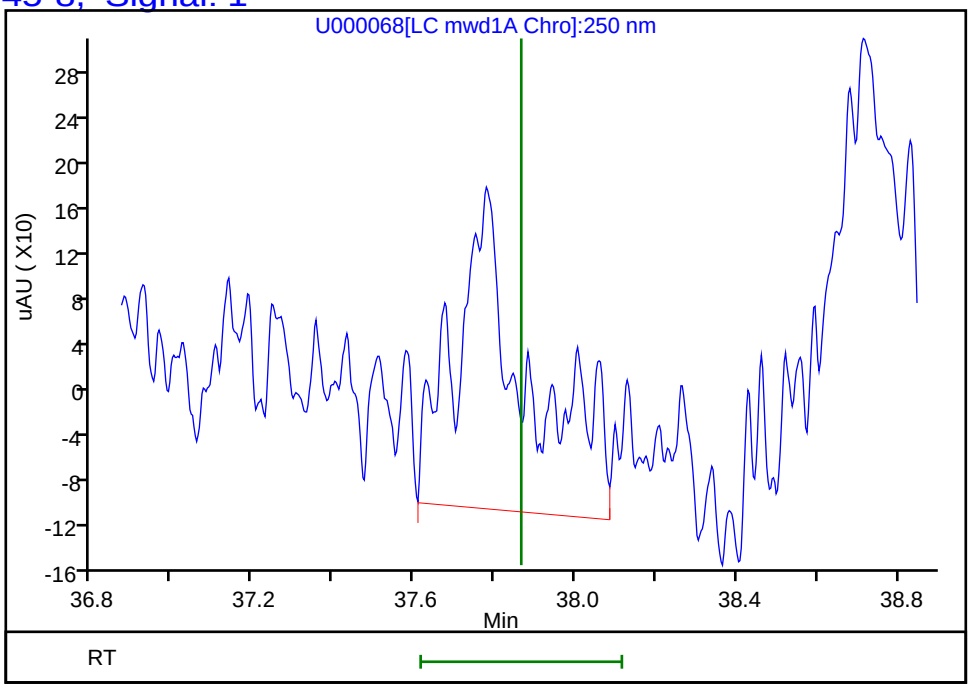
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000068.D				
Injection Date:	24-May-2019 07:21:42	Instrument ID:	LC12		
Lims ID:	280-123009-A-2-A	Lab Sample ID:	320-123009-2		
Client ID:	SP-S6				
Operator ID:	AO	ALS Bottle#:	59	Worklist Smp#:	66
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

22 Tetryl, CAS: 479-45-8, Signal: 1

RT: 37.78
Response: 283
Amount: 1.203355



Reviewer: cartiera, 24-May-2019 10:29:01
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Client Sample ID: SP-S8 Lab Sample ID: 280-123009-3

Matrix: Water Lab File ID: ZD0000077.D

Analysis Method: 8330A Date Collected: 04/24/2019 08:48

Extraction Method: 8330-Prep Date Extracted: 04/29/2019 06:59

Sample wt/vol: 1005.9(mL) Date Analyzed: 05/03/2019 09:21

Con. Extract Vol.: 20(mL) Dilution Factor: 1

Injection Volume: 500(uL) GC Column: Synergi C18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 291526 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	0.49	M	0.15	0.099	0.031
99-65-0	1,3-Dinitrobenzene	0.099	U	0.15	0.099	0.050
118-96-7	2,4,6-Trinitrotoluene	0.099	U M	0.15	0.099	0.050
121-14-2	2,4-Dinitrotoluene	0.099	U	0.13	0.099	0.050
606-20-2	2,6-Dinitrotoluene	0.099	U	0.13	0.099	0.050
35572-78-2	2-Amino-4,6-dinitrotoluene	0.099	U	0.15	0.099	0.030
88-72-2	2-Nitrotoluene	0.20	U	0.50	0.20	0.087
99-08-1	3-Nitrotoluene	0.20	U	0.50	0.20	0.057
19406-51-0	4-Amino-2,6-dinitrotoluene	0.099	U	0.15	0.099	0.050
99-99-0	4-Nitrotoluene	0.20	U	0.50	0.20	0.087
2691-41-0	HMX	0.053	J M	0.15	0.099	0.036
5755-27-1	MNX	0.099	U M	0.50	0.099	0.028
98-95-3	Nitrobenzene	0.099	U	0.15	0.099	0.050
121-82-4	RDX	0.16	M	0.15	0.099	0.036
479-45-8	Tetryl	0.099	U	0.15	0.099	0.050

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	97		79-111

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000077.D
Lims ID: 280-123009-A-3-A
Client ID: SP-S8
Sample Type: Client
Inject. Date: 03-May-2019 09:21:00 ALS Bottle#: 74 Worklist Smp#: 77
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 320-0075622-077
Operator ID: AO Instrument ID: LC11

Method: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 03-May-2019 14:27:31 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0325

First Level Reviewer: ortizam Date: 03-May-2019 14:27:31

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
3 HMX						M
1	18.084	18.062	0.022	215H	2.67	M
6 RDX						M
1	20.607	20.612	-0.005	792H	7.99	M
8 1,3,5-Trinitrobenzene						M
1	22.374	22.382	-0.008	5822H	24.9	M
10 3,5-Dinitroaniline						M
1	25.707	25.746	-0.039	879H	5.54	M
$ 16 3,4-Dinitrotoluene						
1	29.491	29.516	-0.025	8851H	120.9	
2	29.487	29.516	-0.029	18054H		

QC Flag Legend

Review Flags
M - Manually Integrated

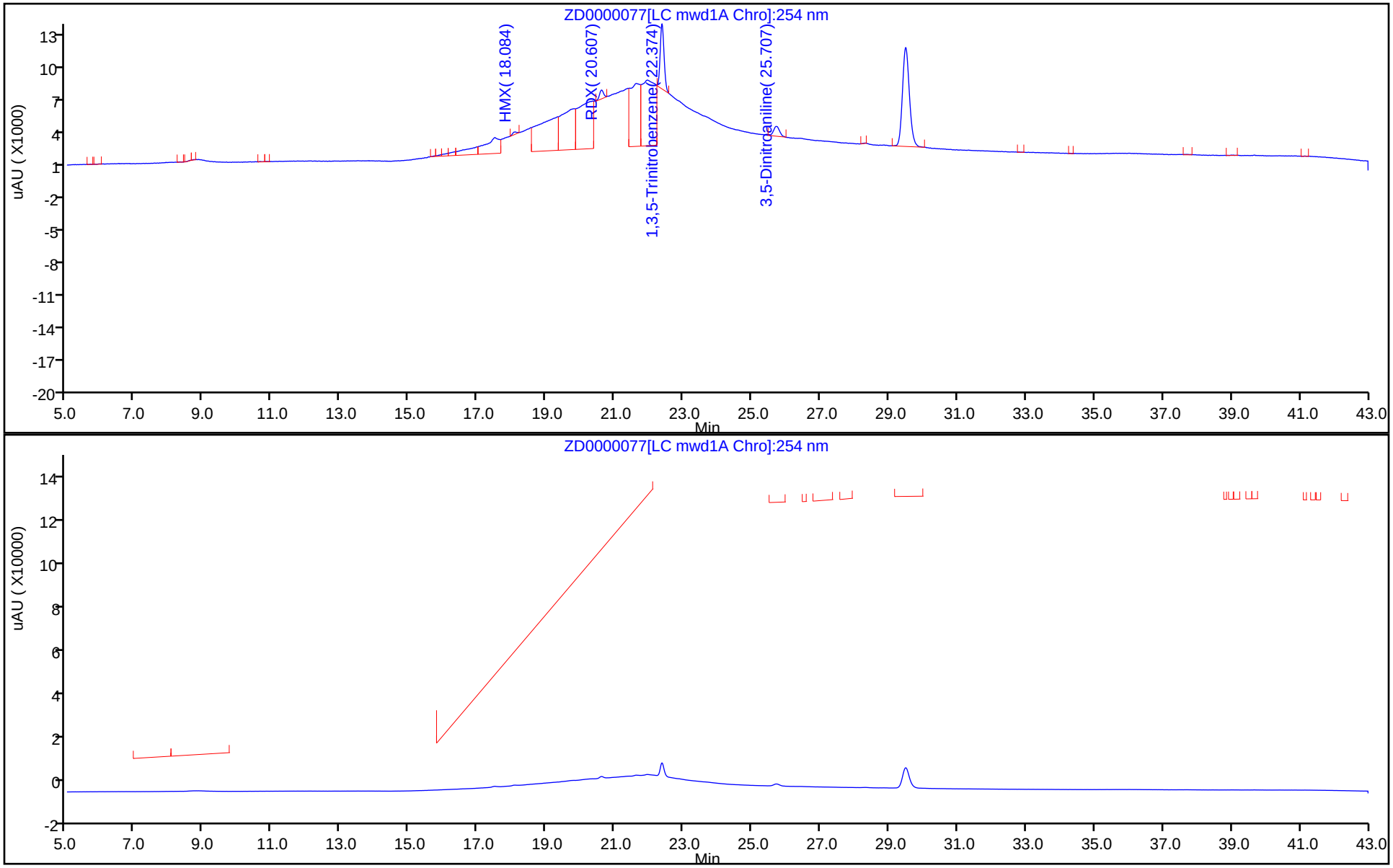
Report Date: 03-May-2019 14:27:32 Chrom Revision: 2.3 01-May-2019 12:41:30

Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000077.D

Injection Date:	03-May-2019 09:21:00	Instrument ID:	LC11	Operator ID:	AO
Lims ID:	280-123009-A-3-A	Lab Sample ID:	320-123009-3	Worklist Smp#:	77
Client ID:	SP-S8				
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	74
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins TestAmerica, Sacramento

Recovery Report

Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000077.D				
Lims ID:	280-123009-A-3-A				
Client ID:	SP-S8				
Sample Type:	Client				
Inject. Date:	03-May-2019 09:21:00	ALS Bottle#:	74	Worklist Smp#:	77
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Sample Info:	320-0075622-077				
Operator ID:	AO	Instrument ID:	LC11		
Method:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\8330 Metab LC11.m				
Limit Group:	LC 8330A ICAL				
Last Update:	03-May-2019 14:27:31	Calib Date:	28-Feb-2019 10:01:13		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D				
Column 1 :	Synergi Hydro-RP C18 (4.60 mm)		Det: LC mwd1A, 250 nm		
Process Host:	CTX0325				
First Level Reviewer: ortizam		Date:	03-May-2019 14:27:31		

Compound	Amount Added	Amount Recovered	% Rec.
$ 16 3,4-Dinitrotoluene	125.0	120.9	96.73

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

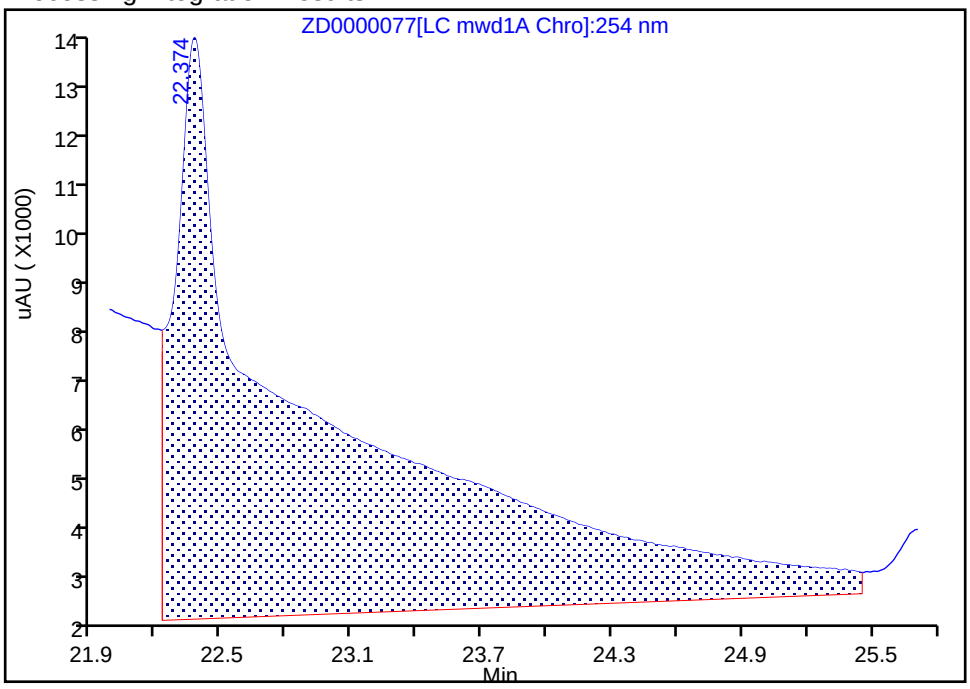
Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000077.D				
Injection Date:	03-May-2019 09:21:00	Instrument ID:	LC11		
Lims ID:	280-123009-A-3-A	Lab Sample ID:	320-123009-3		
Client ID:	SP-S8				
Operator ID:	AO	ALS Bottle#:	74	Worklist Smp#:	77
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

8 1,3,5-Trinitrobenzene, CAS: 99-35-4

Signal: 1

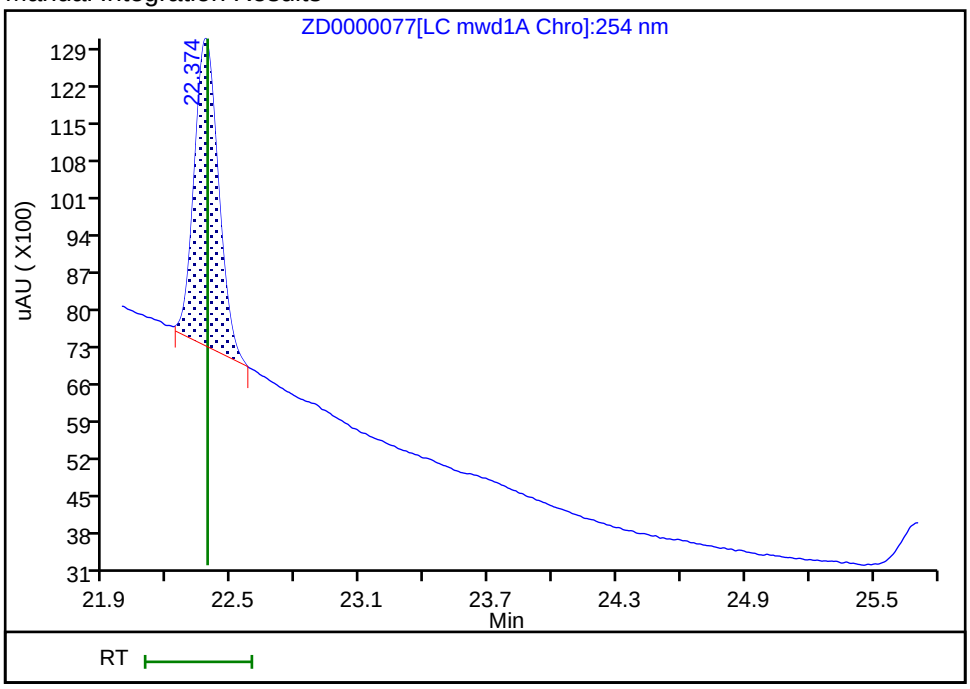
Processing Integration Results

RT: 22.37
Height: 10845
Amount: 46.292824
Amount Units: ng/ml



Manual Integration Results

RT: 22.37
Height: 5822
Amount: 24.851712
Amount Units: ng/ml



Reviewer: ortizam, 03-May-2019 14:27:05

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

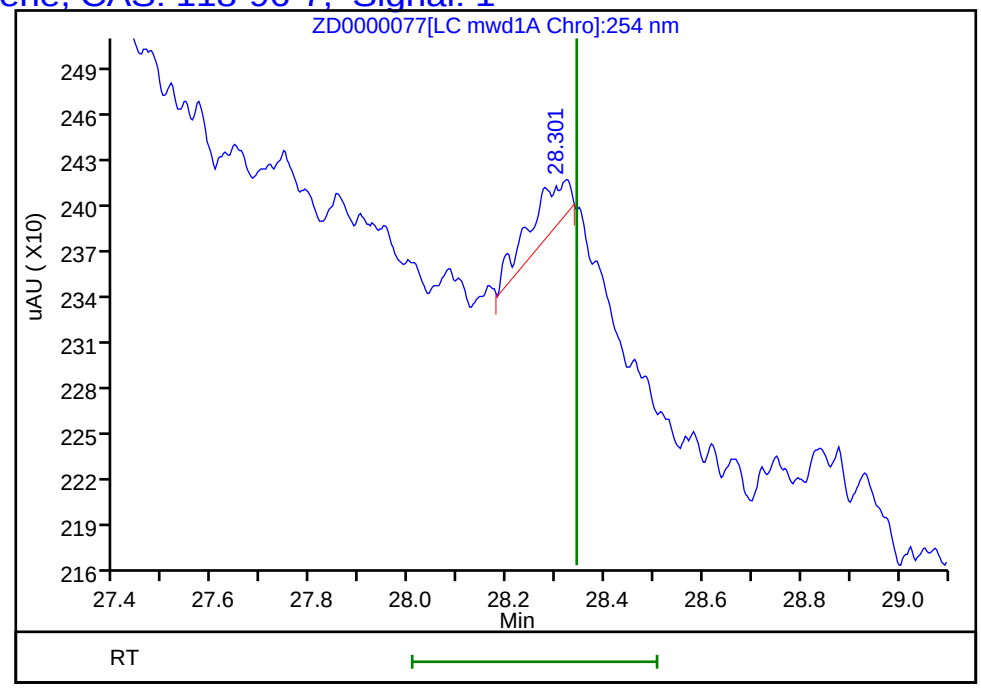
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000077.D				
Injection Date:	03-May-2019 09:21:00	Instrument ID:	LC11		
Lims ID:	280-123009-A-3-A	Lab Sample ID:	320-123009-3		
Client ID:	SP-S8				
Operator ID:	AO	ALS Bottle#:	74	Worklist Smp#:	77
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

14 2,4,6-Trinitrotoluene, CAS: 118-96-7, Signal: 1

RT: 28.30
Response: 26
Amount: 0.225941



Reviewer: ortizam, 03-May-2019 14:27:31
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

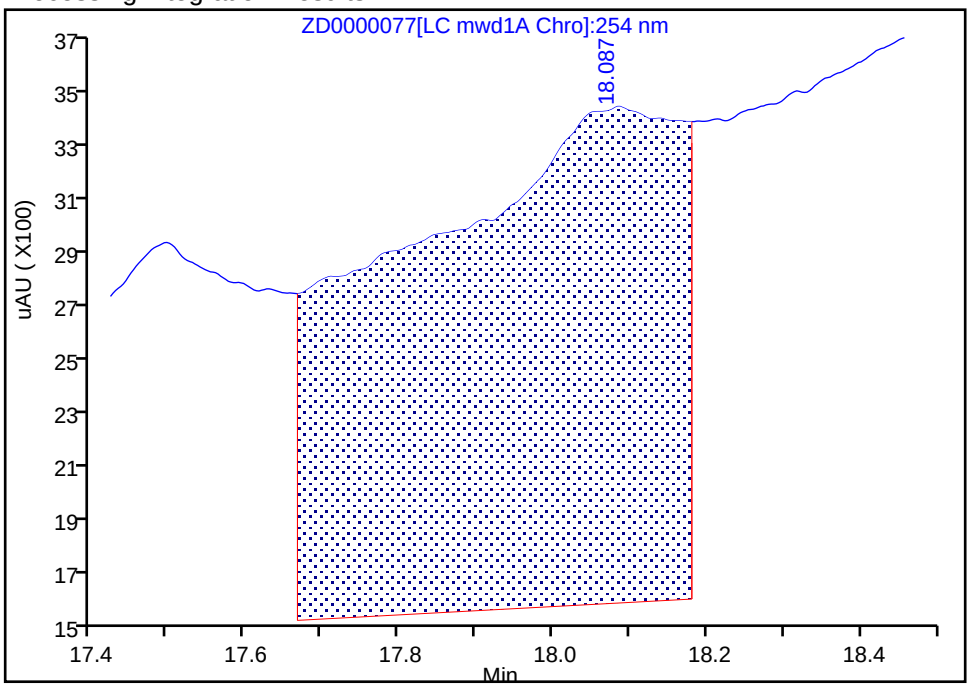
Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000077.D				
Injection Date:	03-May-2019 09:21:00	Instrument ID:	LC11		
Lims ID:	280-123009-A-3-A	Lab Sample ID:	320-123009-3		
Client ID:	SP-S8				
Operator ID:	AO	ALS Bottle#:	74	Worklist Smp#:	77
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

3 HMX, CAS: 2691-41-0

Signal: 1

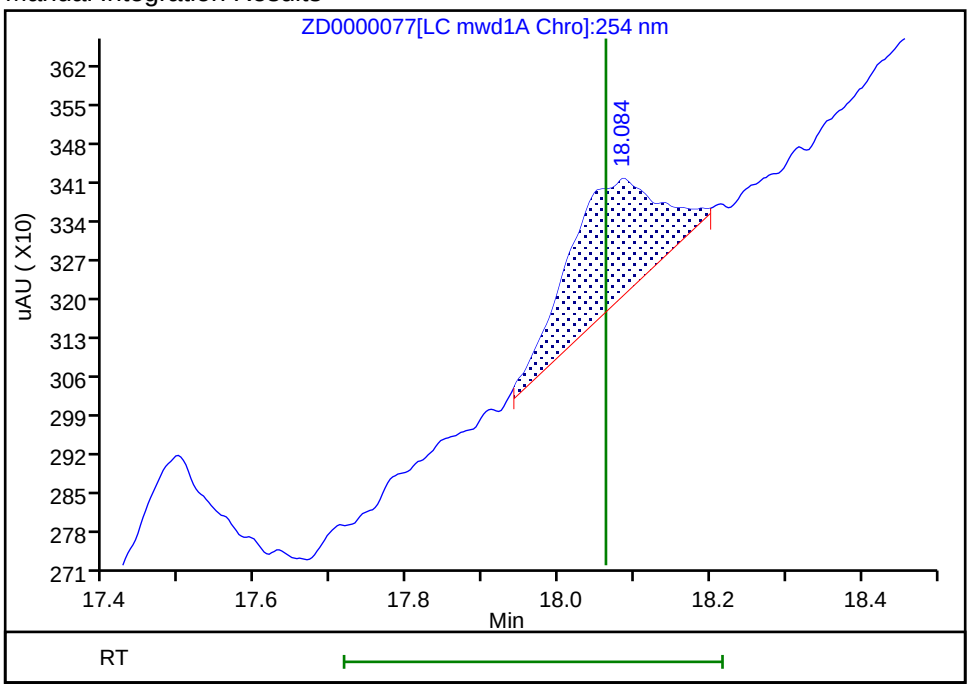
Processing Integration Results

RT: 18.09
Height: 1841
Amount: 22.826747
Amount Units: ng/ml



Manual Integration Results

RT: 18.08
Height: 215
Amount: 2.665807
Amount Units: ng/ml



Reviewer: ortizam, 03-May-2019 14:26:51

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

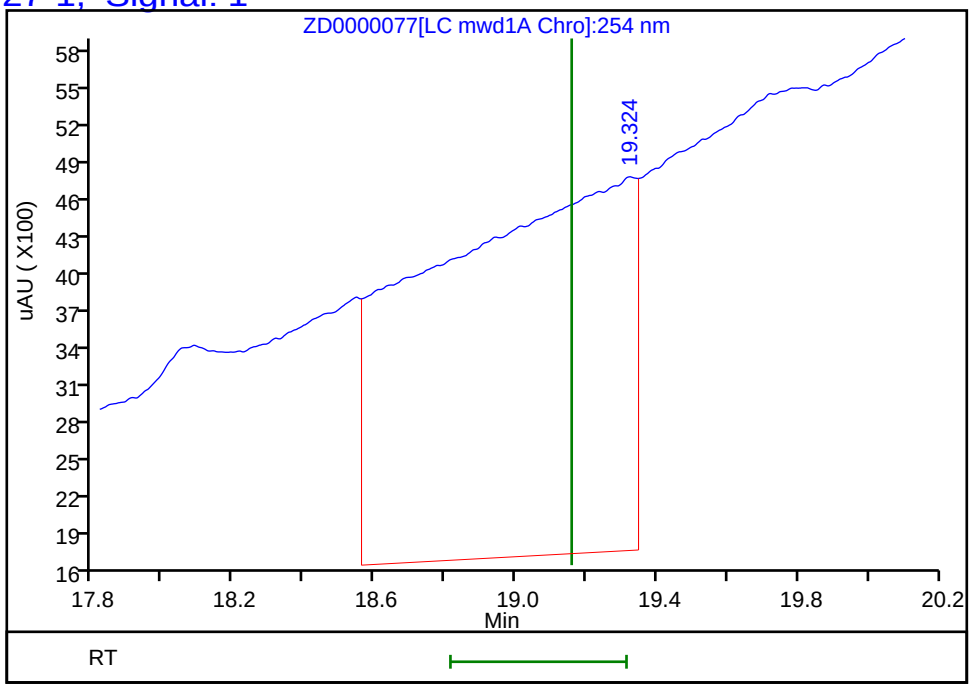
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000077.D				
Injection Date:	03-May-2019 09:21:00	Instrument ID:	LC11		
Lims ID:	280-123009-A-3-A	Lab Sample ID:	320-123009-3		
Client ID:	SP-S8				
Operator ID:	AO	ALS Bottle#:	74	Worklist Smp#:	77
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

4 MNX, CAS: 5755-27-1, Signal: 1

RT: 19.32
Response: 3006
Amount: 30.011947



Reviewer: ortizam, 03-May-2019 14:27:31
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

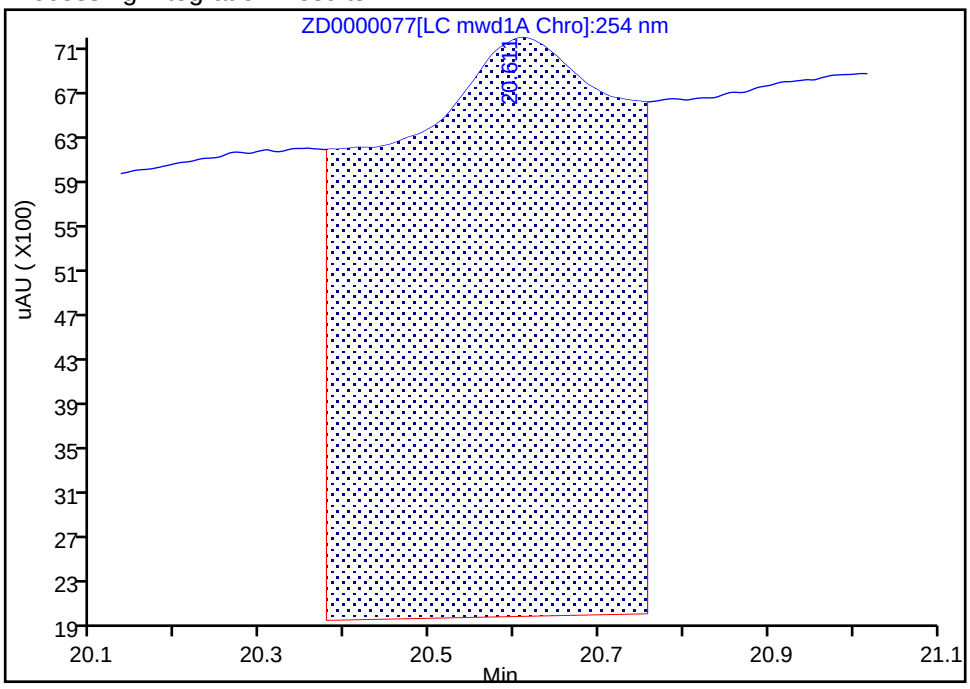
Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000077.D				
Injection Date:	03-May-2019 09:21:00	Instrument ID:	LC11		
Lims ID:	280-123009-A-3-A	Lab Sample ID:	320-123009-3		
Client ID:	SP-S8				
Operator ID:	AO	ALS Bottle#:	74	Worklist Smp#:	77
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

6 RDX, CAS: 121-82-4

Signal: 1

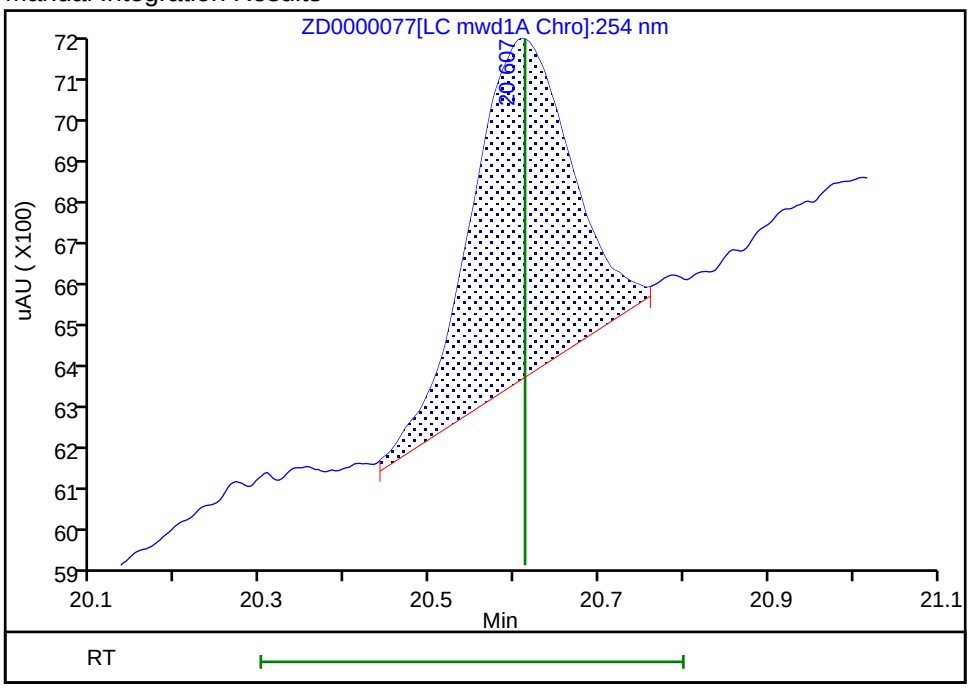
Processing Integration Results

RT: 20.61
Height: 5197
Amount: 52.453244
Amount Units: ng/ml



Manual Integration Results

RT: 20.61
Height: 792
Amount: 7.993644
Amount Units: ng/ml



Reviewer: ortizam, 03-May-2019 14:27:10

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Client Sample ID: SP-S8 Lab Sample ID: 280-123009-3

Matrix: Water Lab File ID: U000069.D

Analysis Method: 8330A Date Collected: 04/24/2019 08:48

Extraction Method: 8330-Prep Date Extracted: 04/29/2019 06:59

Sample wt/vol: 1005.9(mL) Date Analyzed: 05/24/2019 08:19

Con. Extract Vol.: 20(mL) Dilution Factor: 1

Injection Volume: 500(uL) GC Column: Zorbax CN ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 295993 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	89	*M*	79-111

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000069.D
Lims ID: 280-123009-A-3-A
Client ID: SP-S8
Sample Type: Client
Inject. Date: 24-May-2019 08:19:22 ALS Bottle#: 60 Worklist Smp#: 67
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 280-123009-a-3-a
Operator ID: AO Instrument ID: LC12

Method: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 24-May-2019 10:42:36 Calib Date: 15-May-2019 07:09:15
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0337

First Level Reviewer: cartiera Date: 24-May-2019 10:42:36

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
7 1,3,5-Trinitrobenzene						
1	26.673	26.612	0.061	2555H	27.3	
13 RDX						M
1	31.417	31.385	0.032	438H	6.67	M
$ 18 3,4-Dinitrotoluene						M
1	34.813	34.822	-0.009	15577H	111.2	M
19 2,4,6-Trinitrotoluene						M
1	35.393	35.395	-0.002	298H	1.44	M
20 HMX						M
1	36.233	36.235	-0.002	493H	3.14	M
22 Tetryl						
1	37.790	37.865	-0.075	312H	1.33	

QC Flag Legend

Review Flags
M - Manually Integrated

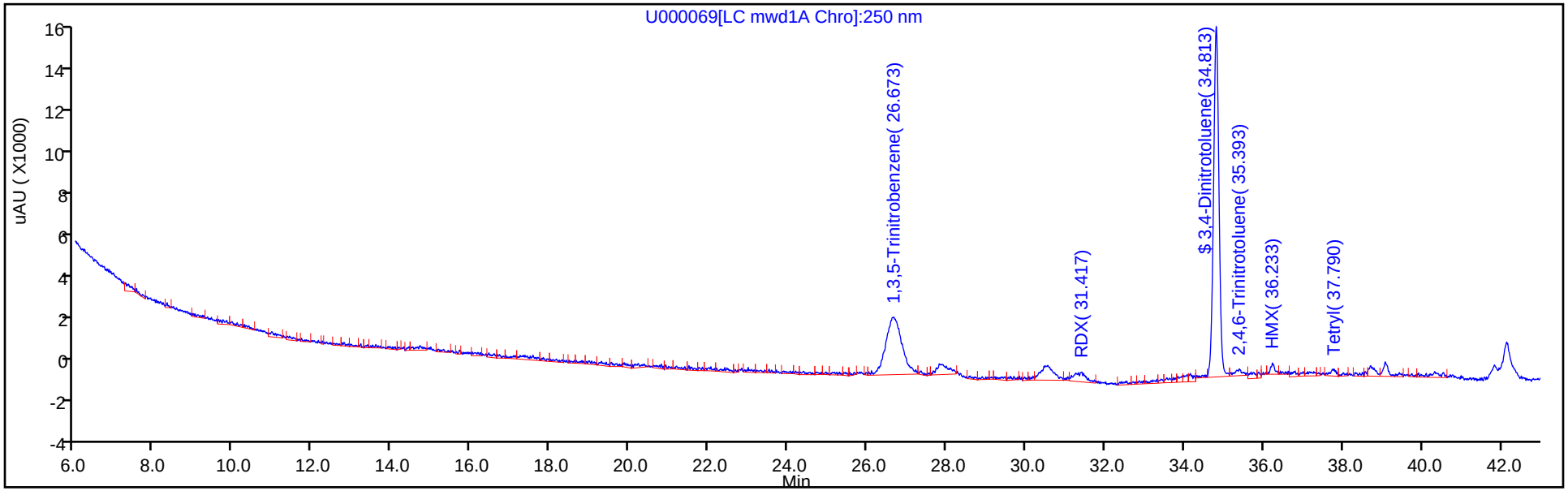
Report Date: 24-May-2019 10:42:36 Chrom Revision: 2.3 12-May-2019 16:28:34

Eurofins TestAmerica, Sacramento

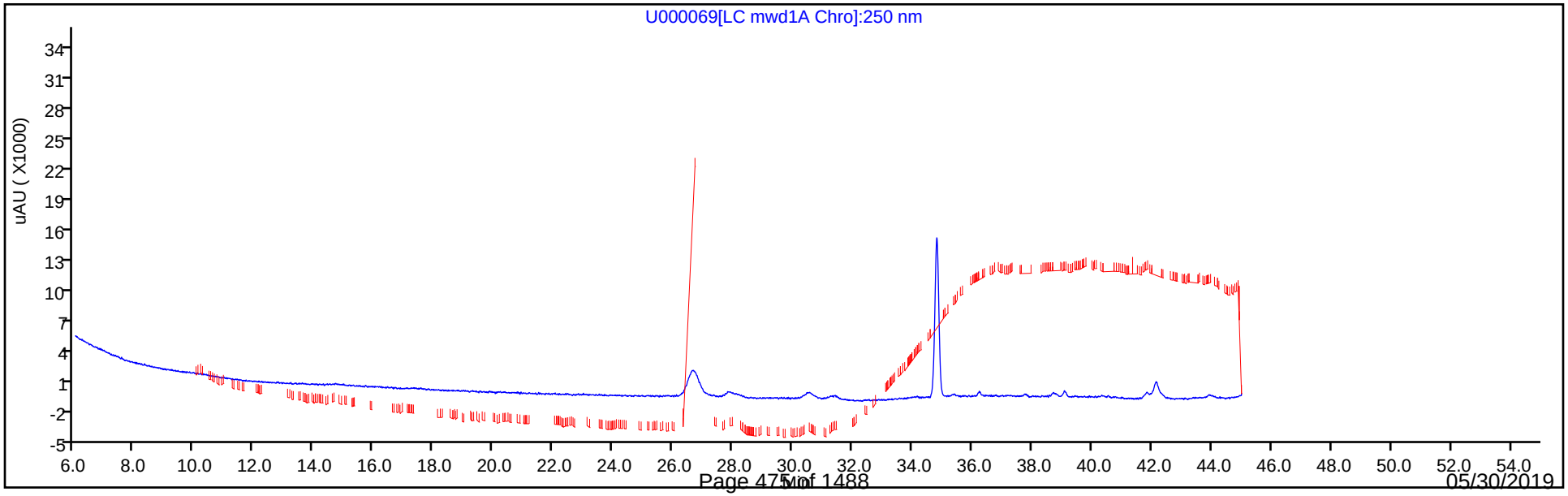
Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000069.D

Injection Date:	24-May-2019 08:19:22	Instrument ID:	LC12	Operator ID:	AO
Lims ID:	280-123009-A-3-A	Lab Sample ID:	320-123009-3	Worklist Smp#:	67
Client ID:	SP-S8				
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	60
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



Eurofins TestAmerica, Sacramento
Recovery Report

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000069.D				
Lims ID:	280-123009-A-3-A				
Client ID:	SP-S8				
Sample Type:	Client				
Inject. Date:	24-May-2019 08:19:22	ALS Bottle#:	60	Worklist Smp#:	67
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-123009-a-3-a				
Operator ID:	AO	Instrument ID:	LC12		
Method:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\LC12_Conf_8330.m				
Limit Group:	LC 8330A ICAL				
Last Update:	24-May-2019 10:42:36	Calib Date:	15-May-2019 07:09:15		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D				
Column 1 :	Zorbax Cyano CN (4.60 mm)		Det: LC mwd1A, 250 nm		
Process Host:	CTX0337				

First Level Reviewer: cartiera Date: 24-May-2019 10:42:36

Compound	Amount Added	Amount Recovered	% Rec.
$ 18 3,4-Dinitrotoluene	125.0	111.2	89.00

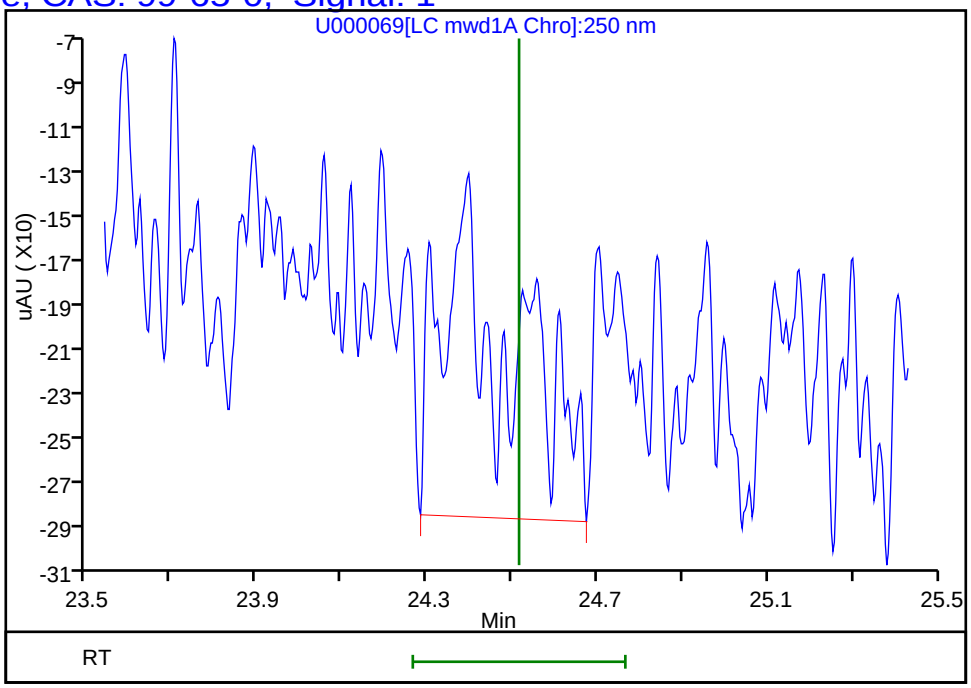
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000069.D				
Injection Date:	24-May-2019 08:19:22	Instrument ID:	LC12		
Lims ID:	280-123009-A-3-A	Lab Sample ID:	320-123009-3		
Client ID:	SP-S8				
Operator ID:	AO	ALS Bottle#:	60	Worklist Smp#:	67
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

6 1,3-Dinitrobenzene, CAS: 99-65-0, Signal: 1

RT: 24.40
Response: 149
Amount: 1.275981



Reviewer: cartiera, 24-May-2019 10:30:42
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

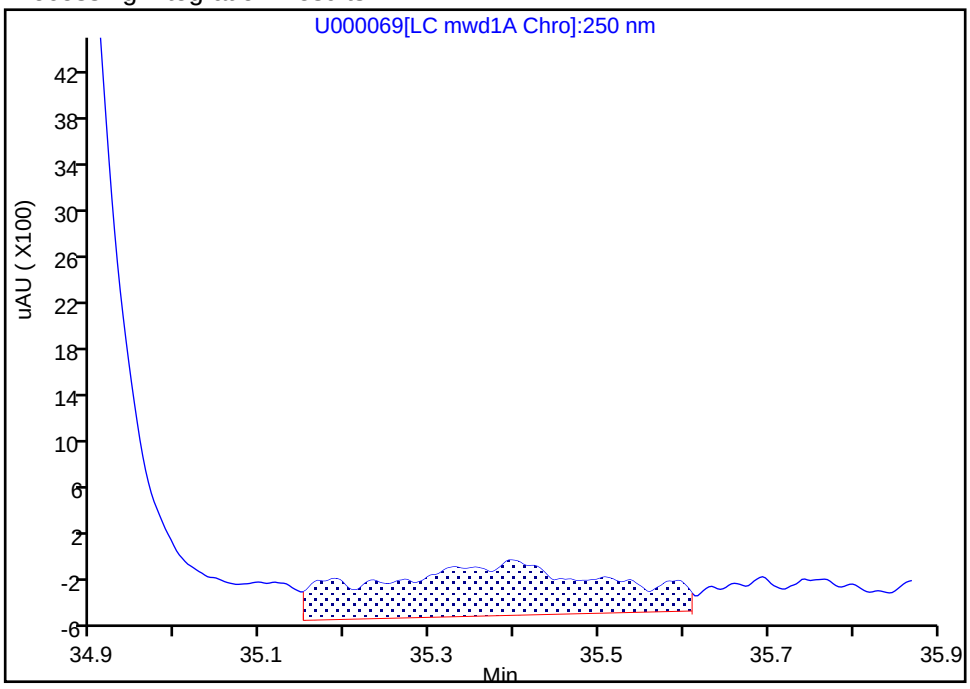
Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000069.D				
Injection Date:	24-May-2019 08:19:22	Instrument ID:	LC12		
Lims ID:	280-123009-A-3-A	Lab Sample ID:	320-123009-3		
Client ID:	SP-S8				
Operator ID:	AO	ALS Bottle#:	60	Worklist Smp#:	67
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

19 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

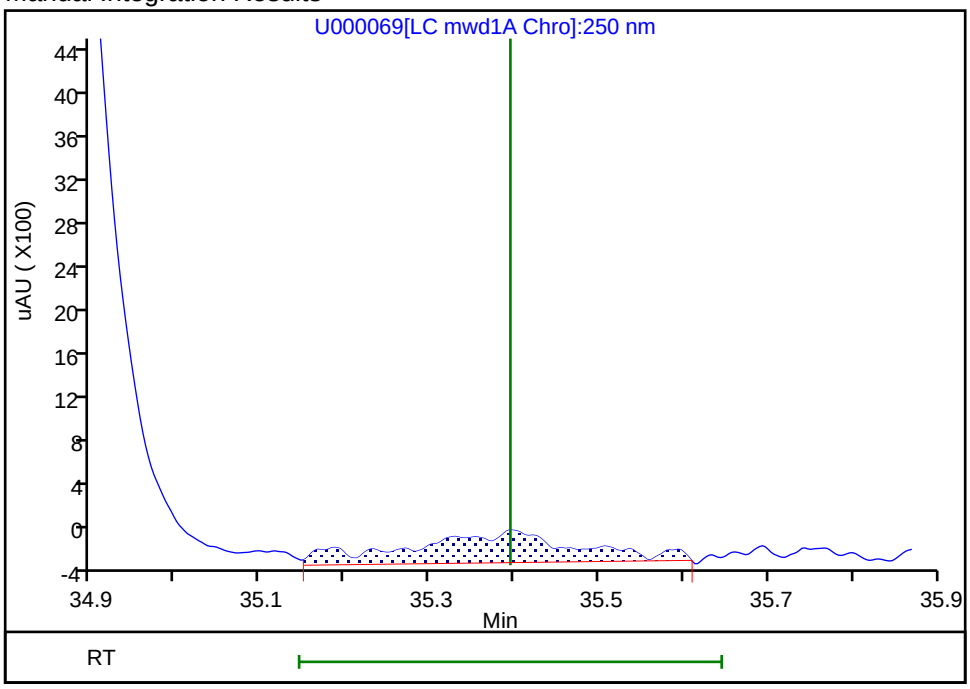
Processing Integration Results

RT: 35.39
Height: 466
Amount: 2.250645
Amount Units: ng/ml



Manual Integration Results

RT: 35.39
Height: 298
Amount: 1.439254
Amount Units: ng/ml



Reviewer: cartiera, 24-May-2019 10:29:41

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

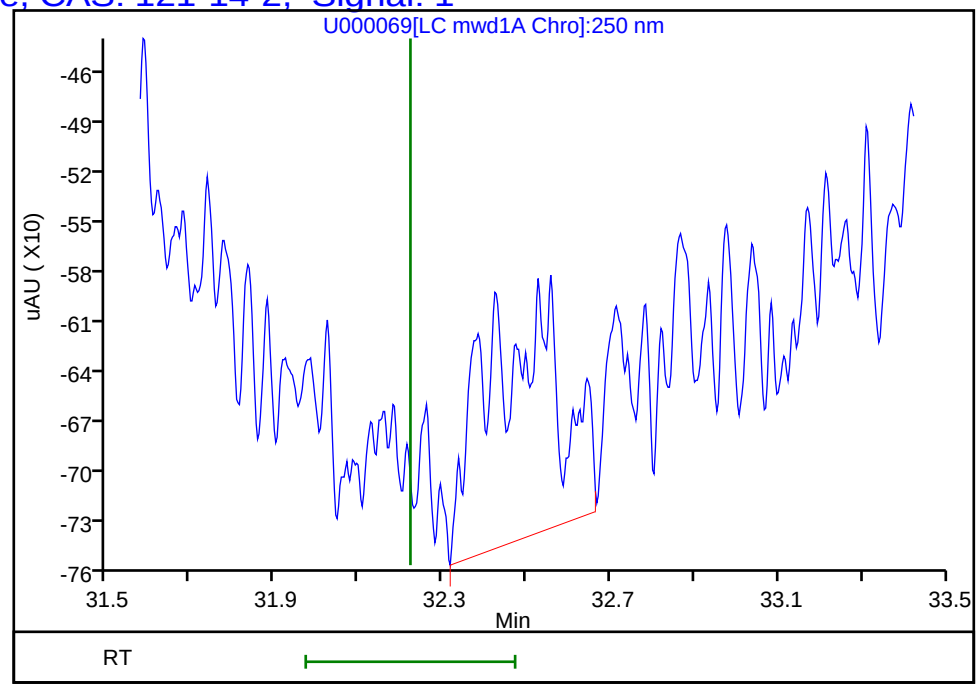
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000069.D				
Injection Date:	24-May-2019 08:19:22	Instrument ID:	LC12		
Lims ID:	280-123009-A-3-A	Lab Sample ID:	320-123009-3		
Client ID:	SP-S8				
Operator ID:	AO	ALS Bottle#:	60	Worklist Smp#:	67
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

14 2,4-Dinitrotoluene, CAS: 121-14-2, Signal: 1

RT: 32.42
Response: 148
Amount: 1.173793



Reviewer: cartiera, 24-May-2019 10:30:42
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

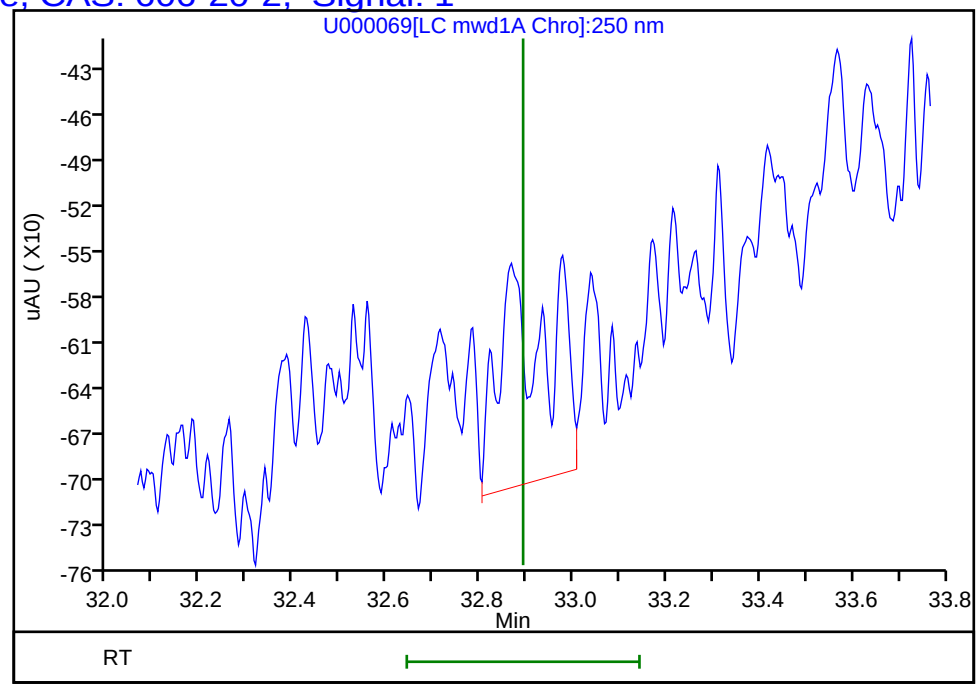
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000069.D				
Injection Date:	24-May-2019 08:19:22	Instrument ID:	LC12		
Lims ID:	280-123009-A-3-A	Lab Sample ID:	320-123009-3		
Client ID:	SP-S8				
Operator ID:	AO	ALS Bottle#:	60	Worklist Smp#:	67
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

15 2,6-Dinitrotoluene, CAS: 606-20-2, Signal: 1

RT: 32.87
Response: 142
Amount: 1.492934



Reviewer: cartiera, 24-May-2019 10:30:42
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

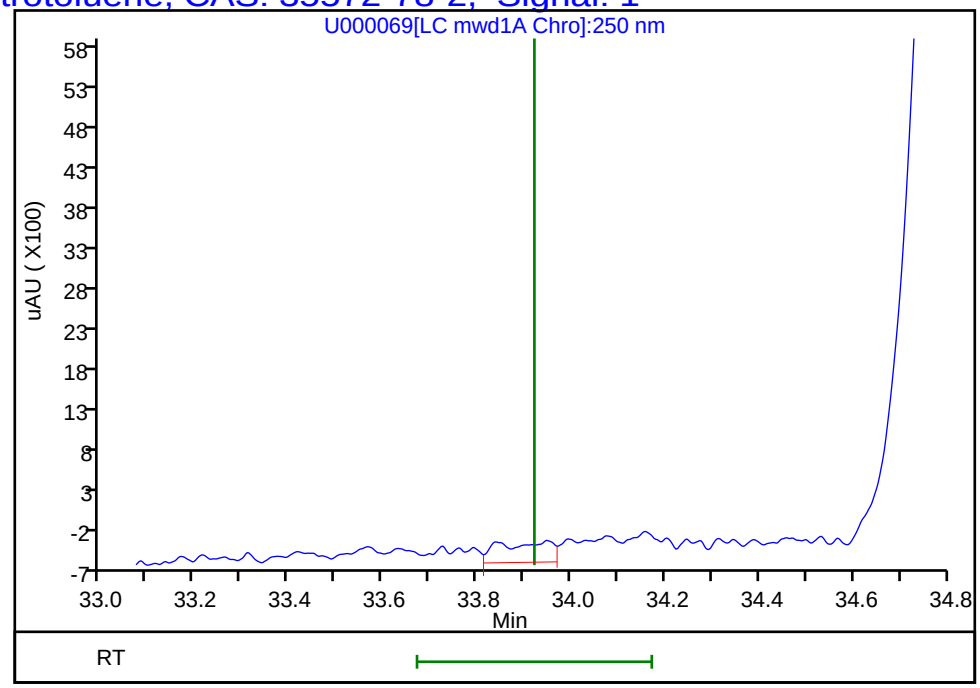
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000069.D				
Injection Date:	24-May-2019 08:19:22	Instrument ID:	LC12		
Lims ID:	280-123009-A-3-A	Lab Sample ID:	320-123009-3		
Client ID:	SP-S8				
Operator ID:	AO	ALS Bottle#:	60	Worklist Smp#:	67
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

16 2-Amino-4,6-dinitrotoluene, CAS: 35572-78-2, Signal: 1

RT: 33.95
Response: 268
Amount: 1.325210



Reviewer: cartiera, 24-May-2019 10:30:42
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

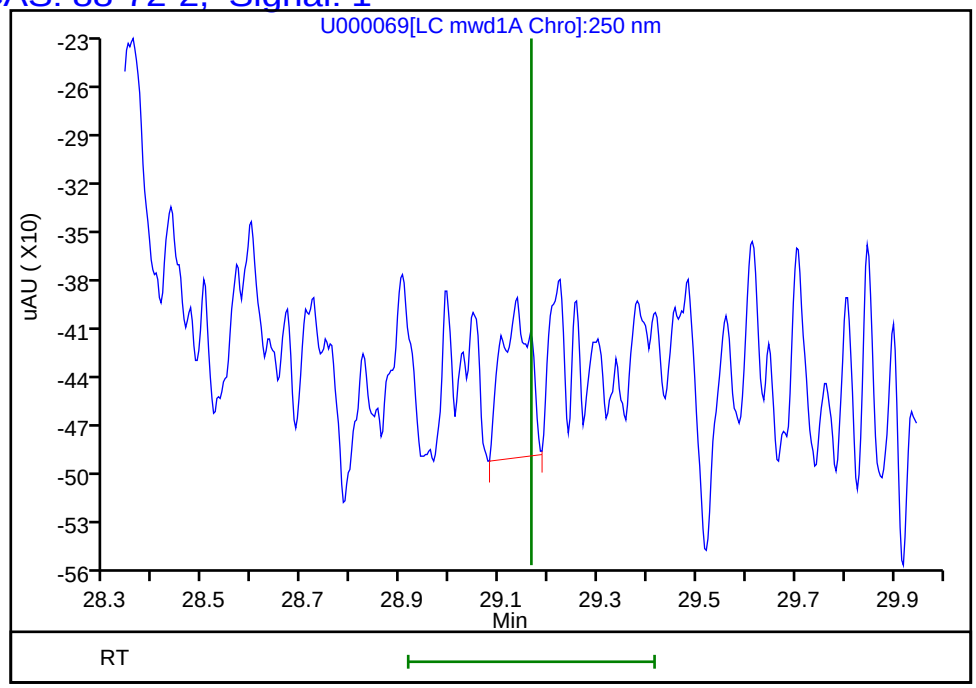
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000069.D				
Injection Date:	24-May-2019 08:19:22	Instrument ID:	LC12		
Lims ID:	280-123009-A-3-A	Lab Sample ID:	320-123009-3		
Client ID:	SP-S8				
Operator ID:	AO	ALS Bottle#:	60	Worklist Smp#:	67
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

10 o-Nitrotoluene, CAS: 88-72-2, Signal: 1

RT: 29.14
Response: 96
Amount: 1.351036



Reviewer: cartiera, 24-May-2019 10:30:42
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

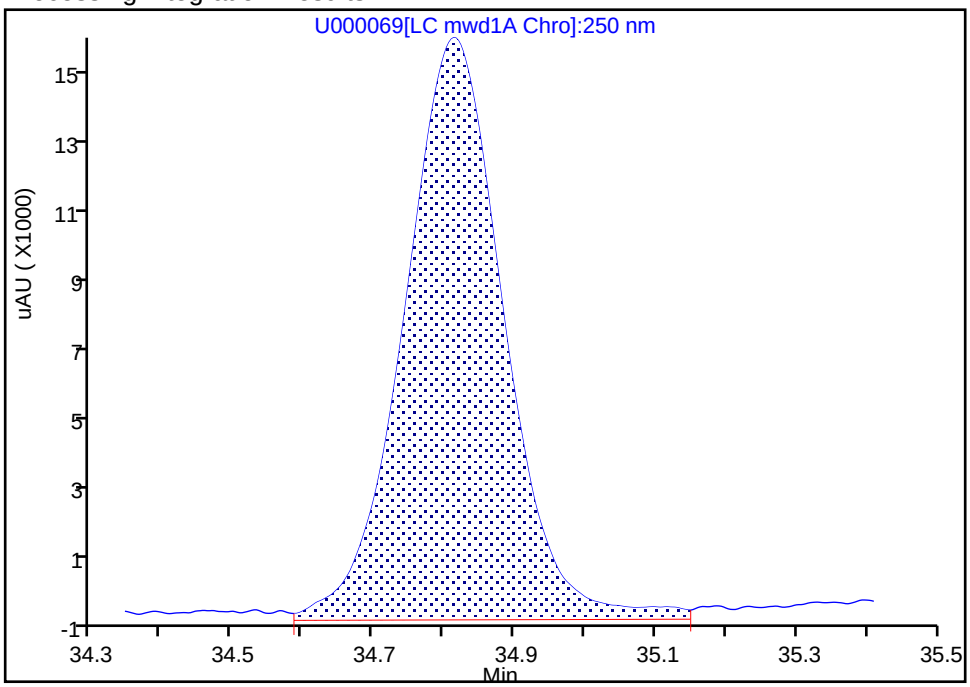
Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000069.D				
Injection Date:	24-May-2019 08:19:22	Instrument ID:	LC12		
Lims ID:	280-123009-A-3-A	Lab Sample ID:	320-123009-3		
Client ID:	SP-S8				
Operator ID:	AO	ALS Bottle#:	60	Worklist Smp#:	67
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

$ 18 3,4-Dinitrotoluene, CAS: 610-39-9

Signal: 1

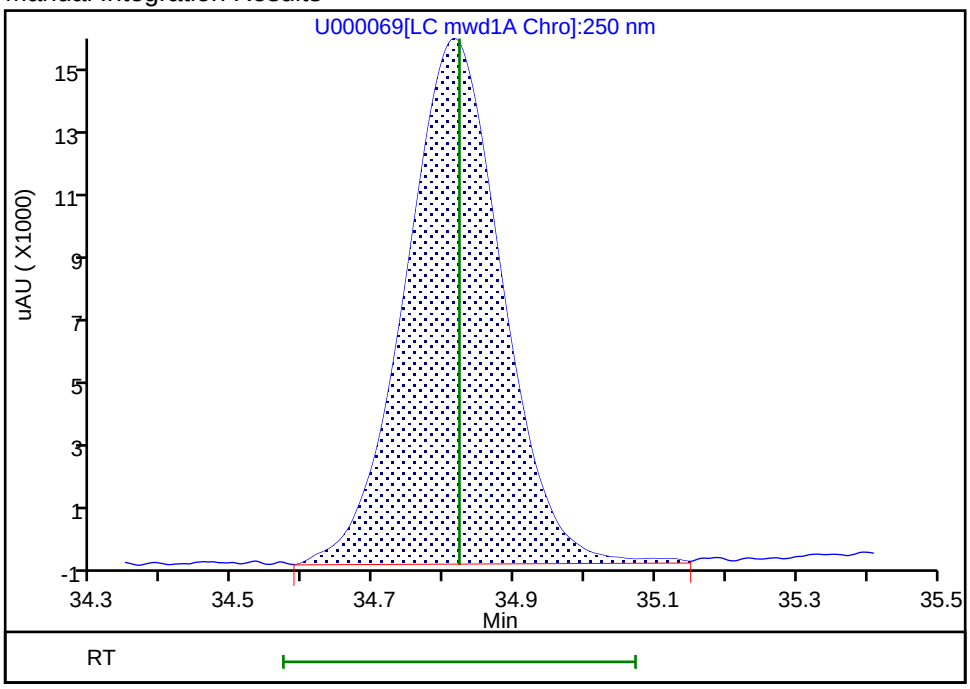
Processing Integration Results

RT: 34.81
Height: 15762
Amount: 112.5684
Amount Units: ng/ml



Manual Integration Results

RT: 34.81
Height: 15577
Amount: 111.2471
Amount Units: ng/ml



Reviewer: cartiera, 24-May-2019 10:29:41

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

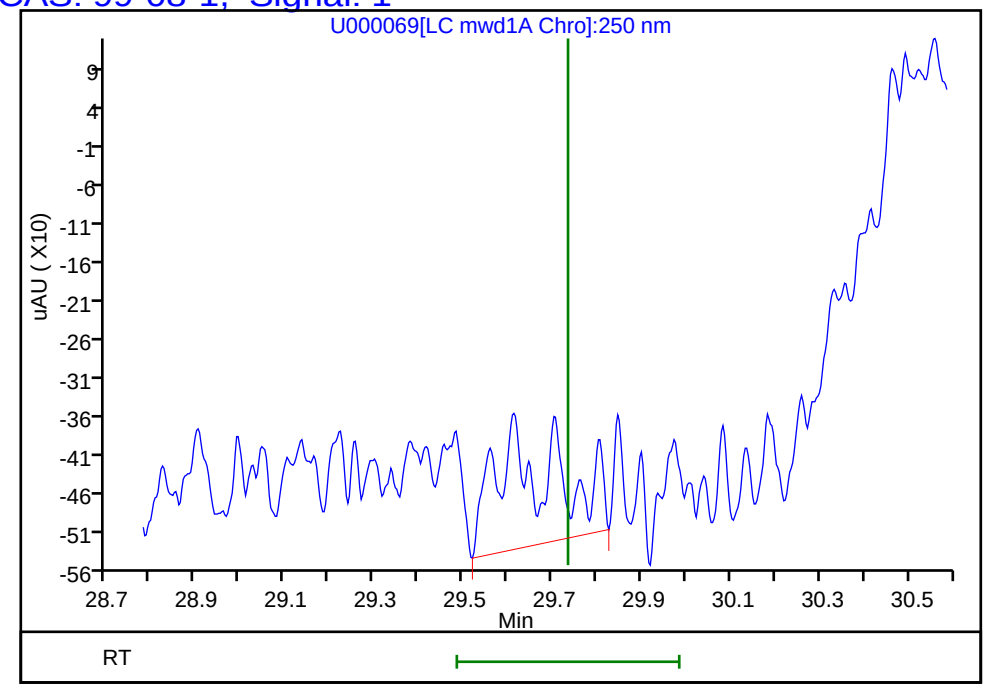
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000069.D				
Injection Date:	24-May-2019 08:19:22	Instrument ID:	LC12		
Lims ID:	280-123009-A-3-A	Lab Sample ID:	320-123009-3		
Client ID:	SP-S8				
Operator ID:	AO	ALS Bottle#:	60	Worklist Smp#:	67
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

11 m-Nitrotoluene, CAS: 99-08-1, Signal: 1

RT: 29.61
Response: 175
Amount: 1.840016



Reviewer: cartiera, 24-May-2019 10:30:42
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

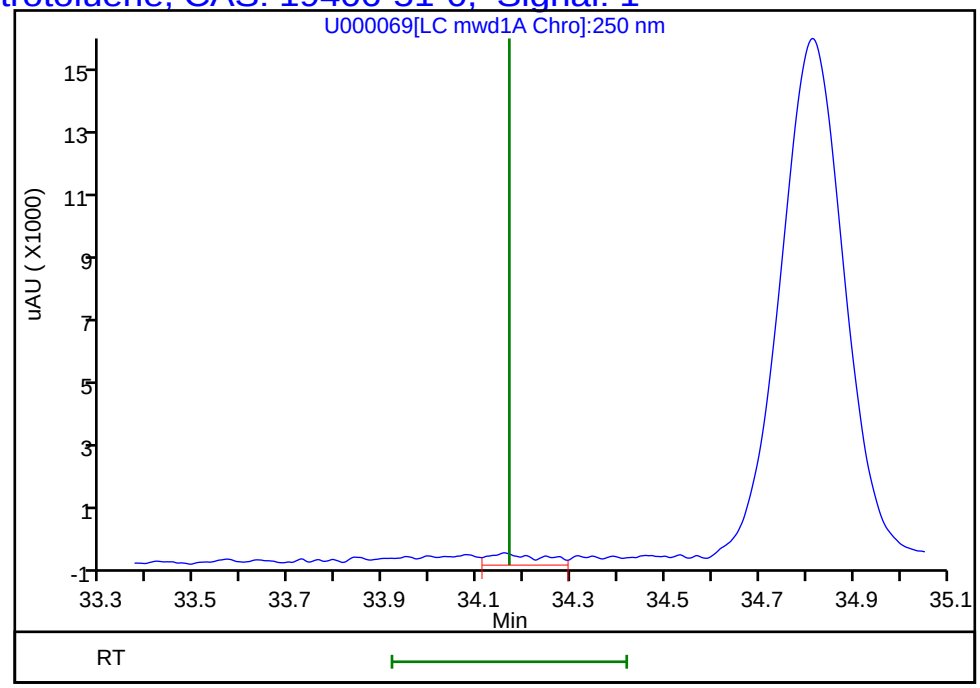
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000069.D				
Injection Date:	24-May-2019 08:19:22	Instrument ID:	LC12		
Lims ID:	280-123009-A-3-A	Lab Sample ID:	320-123009-3		
Client ID:	SP-S8				
Operator ID:	AO	ALS Bottle#:	60	Worklist Smp#:	67
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

17 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0, Signal: 1

RT: 34.16
Response: 2830
Amount: 1.097762



Reviewer: cartiera, 24-May-2019 10:30:42

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

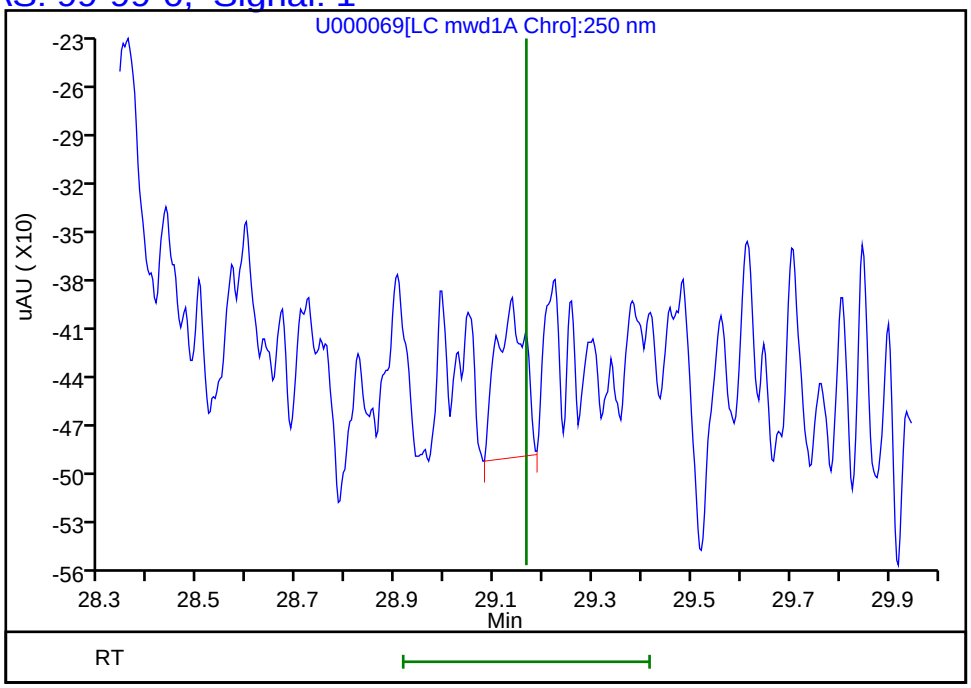
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000069.D				
Injection Date:	24-May-2019 08:19:22	Instrument ID:	LC12		
Lims ID:	280-123009-A-3-A	Lab Sample ID:	320-123009-3		
Client ID:	SP-S8				
Operator ID:	AO	ALS Bottle#:	60	Worklist Smp#:	67
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

9 p-Nitrotoluene, CAS: 99-99-0, Signal: 1

RT: 29.14
Response: 96
Amount: 1.351036



Reviewer: cartiera, 24-May-2019 10:30:42
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

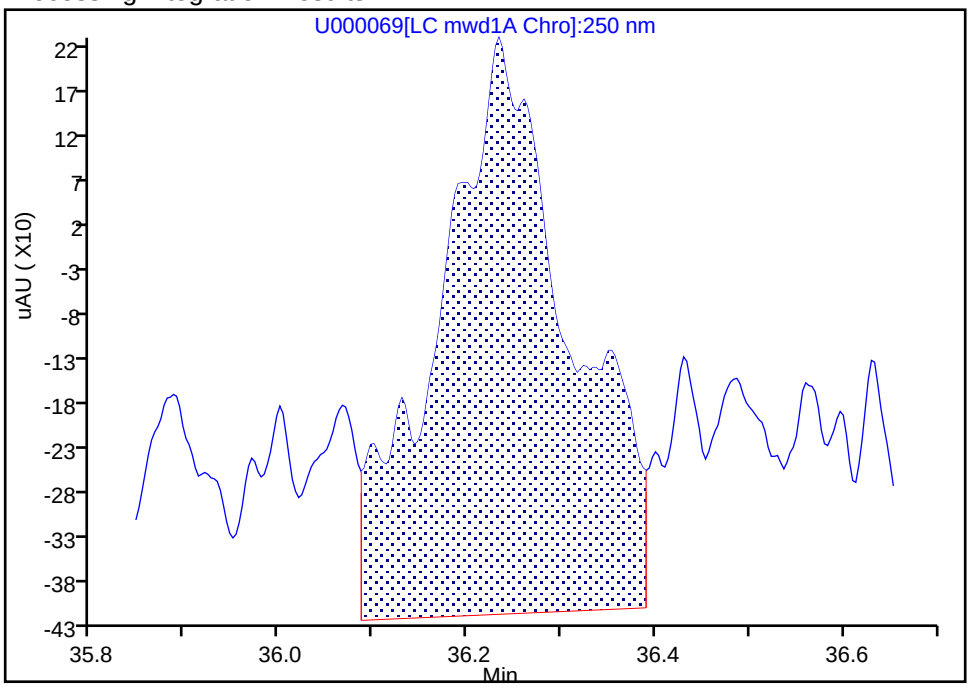
Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000069.D				
Injection Date:	24-May-2019 08:19:22	Instrument ID:	LC12		
Lims ID:	280-123009-A-3-A	Lab Sample ID:	320-123009-3		
Client ID:	SP-S8				
Operator ID:	AO	ALS Bottle#:	60	Worklist Smp#:	67
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

20 HMX, CAS: 2691-41-0

Signal: 1

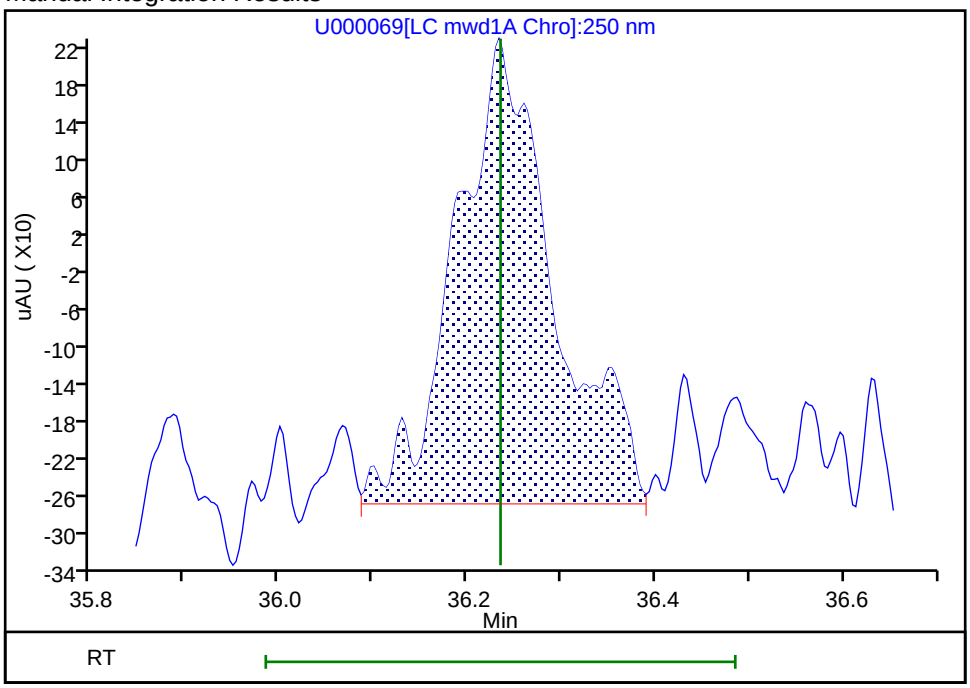
Processing Integration Results

RT: 36.23
Height: 643
Amount: 4.096253
Amount Units: ng/ml



Manual Integration Results

RT: 36.23
Height: 493
Amount: 3.140673
Amount Units: ng/ml



Reviewer: cartiera, 24-May-2019 10:29:51

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

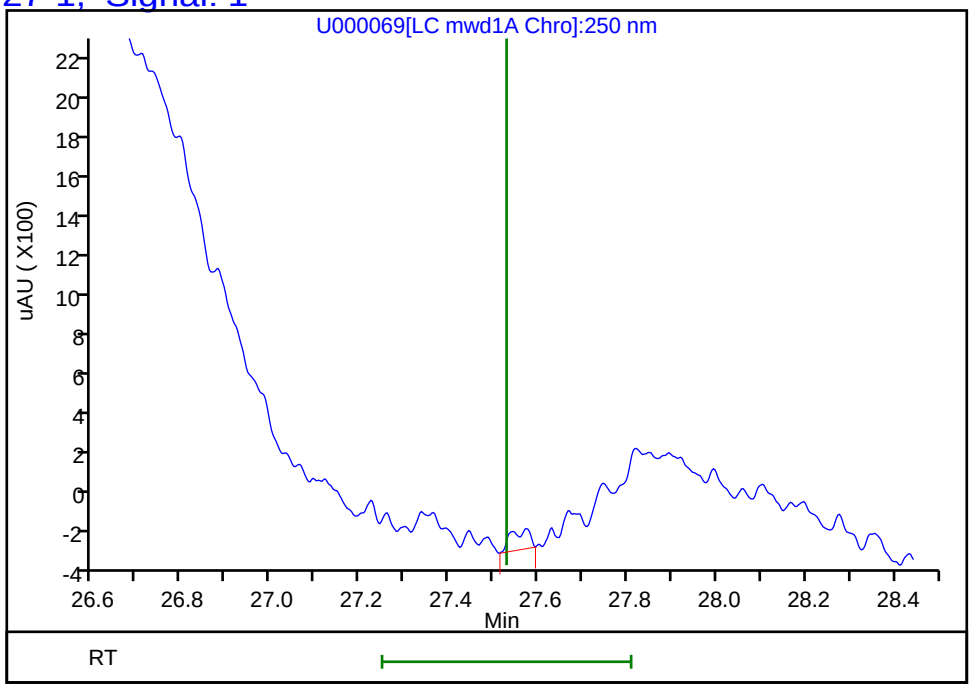
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000069.D				
Injection Date:	24-May-2019 08:19:22	Instrument ID:	LC12		
Lims ID:	280-123009-A-3-A	Lab Sample ID:	320-123009-3		
Client ID:	SP-S8				
Operator ID:	AO	ALS Bottle#:	60	Worklist Smp#:	67
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

8 MNX, CAS: 5755-27-1, Signal: 1

RT: 27.57
Response: 100
Amount: 1.536223



Reviewer: cartiera, 24-May-2019 10:30:42
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

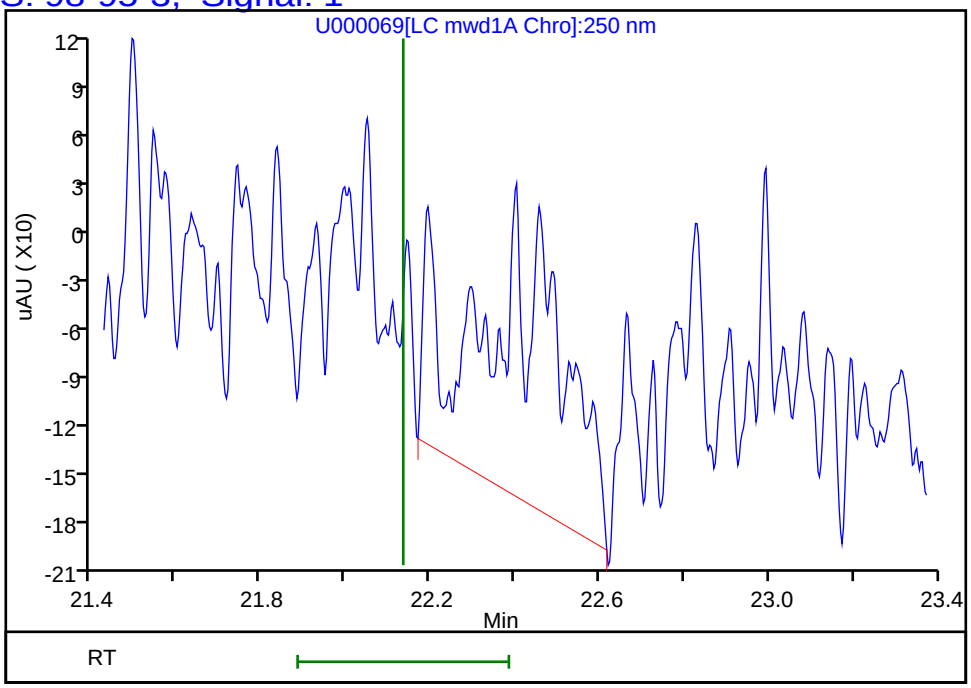
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000069.D				
Injection Date:	24-May-2019 08:19:22	Instrument ID:	LC12		
Lims ID:	280-123009-A-3-A	Lab Sample ID:	320-123009-3		
Client ID:	SP-S8				
Operator ID:	AO	ALS Bottle#:	60	Worklist Smp#:	67
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

3 Nitrobenzene, CAS: 98-95-3, Signal: 1

RT: 22.30
Response: 110
Amount: 1.937443



Reviewer: cartiera, 24-May-2019 10:30:42
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

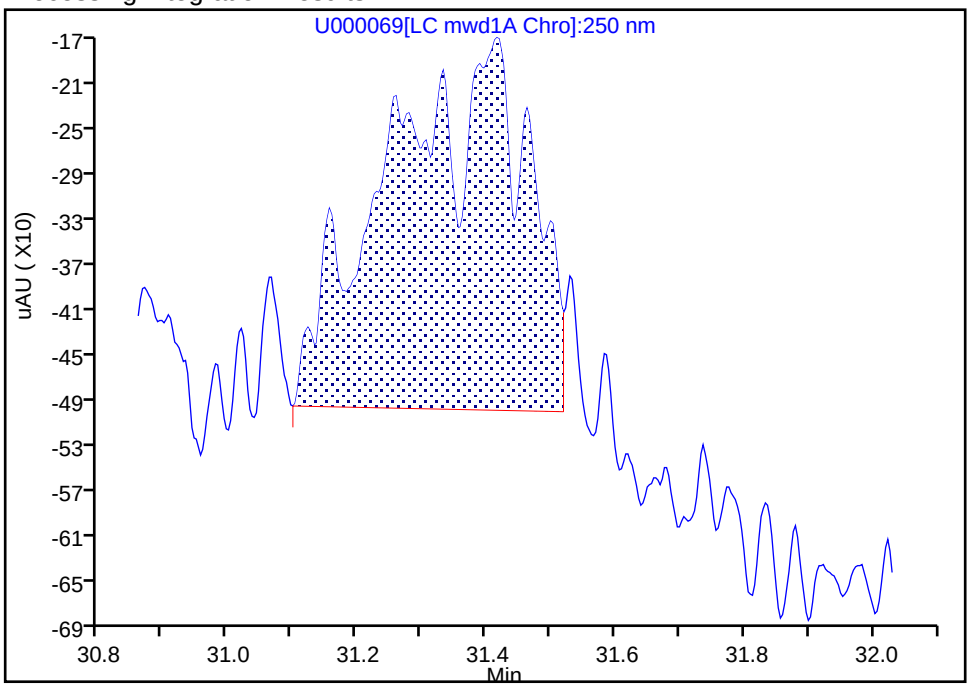
Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000069.D				
Injection Date:	24-May-2019 08:19:22	Instrument ID:	LC12		
Lims ID:	280-123009-A-3-A	Lab Sample ID:	320-123009-3		
Client ID:	SP-S8				
Operator ID:	AO	ALS Bottle#:	60	Worklist Smp#:	67
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

13 RDX, CAS: 121-82-4

Signal: 1

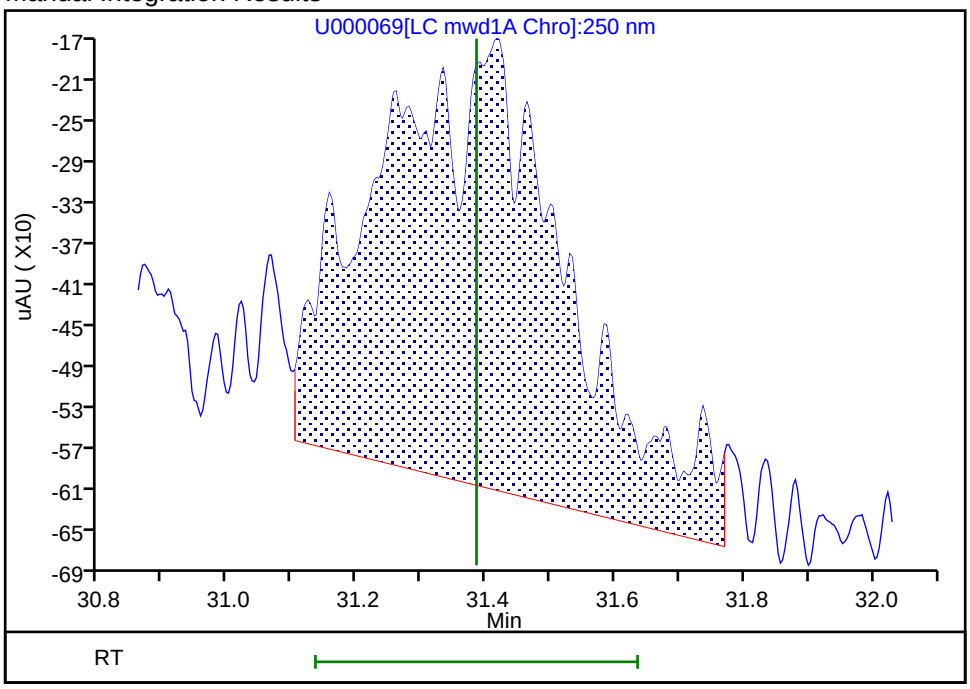
Processing Integration Results

RT: 31.26
Height: 273
Amount: 3.507951
Amount Units: ng/ml



Manual Integration Results

RT: 31.42
Height: 438
Amount: 6.666173
Amount Units: ng/ml



Reviewer: cartiera, 24-May-2019 10:42:31

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Client Sample ID: SP-E1 Lab Sample ID: 280-123009-4

Matrix: Water Lab File ID: ZD0000078.D

Analysis Method: 8330A Date Collected: 04/24/2019 08:51

Extraction Method: 8330-Prep Date Extracted: 04/29/2019 06:59

Sample wt/vol: 1006.7(mL) Date Analyzed: 05/03/2019 10:14

Con. Extract Vol.: 20(mL) Dilution Factor: 1

Injection Volume: 500(uL) GC Column: Synergi C18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 291526 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	0.41	M	0.15	0.099	0.031
99-65-0	1,3-Dinitrobenzene	0.099	U	0.15	0.099	0.050
118-96-7	2,4,6-Trinitrotoluene	0.099	U M	0.15	0.099	0.050
121-14-2	2,4-Dinitrotoluene	0.099	U	0.13	0.099	0.050
606-20-2	2,6-Dinitrotoluene	0.099	U	0.13	0.099	0.050
35572-78-2	2-Amino-4,6-dinitrotoluene	0.099	U	0.15	0.099	0.030
88-72-2	2-Nitrotoluene	0.20	U	0.50	0.20	0.087
99-08-1	3-Nitrotoluene	0.20	U	0.50	0.20	0.057
19406-51-0	4-Amino-2,6-dinitrotoluene	0.099	U	0.15	0.099	0.050
99-99-0	4-Nitrotoluene	0.20	U	0.50	0.20	0.087
2691-41-0	HMX	0.044	J M	0.15	0.099	0.036
5755-27-1	MNX	0.099	U	0.50	0.099	0.028
98-95-3	Nitrobenzene	0.099	U	0.15	0.099	0.050
121-82-4	RDX	0.15	M	0.15	0.099	0.036
479-45-8	Tetryl	0.099	U	0.15	0.099	0.050

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	94		79-111

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000078.D
Lims ID: 280-123009-A-4-A
Client ID: SP-E1
Sample Type: Client
Inject. Date: 03-May-2019 10:14:38 ALS Bottle#: 75 Worklist Smp#: 78
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 320-0075622-078
Operator ID: AO Instrument ID: LC11

Method: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 28-May-2019 15:52:59 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0332

First Level Reviewer: ortizam Date: 28-May-2019 15:52:59

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
3 HMX						M
1	18.053	18.062	-0.009	179H	2.22	M
6 RDX						M
1	20.583	20.612	-0.029	747H	7.54	M
7 2,4,6-Trinitrophenol						a
2	22.009	22.020	-0.011	828H	NC	
1	0.000	22.017	-22.017	0H		
8 1,3,5-Trinitrobenzene						Ma
1	22.359	22.382	-0.023	4836H	20.6	Ma
10 3,5-Dinitroaniline						Ma
1	25.673	25.746	-0.073	1032H	6.51	Ma
$ 16 3,4-Dinitrotoluene						
1	29.453	29.516	-0.063	8636H	118.0	
2	29.453	29.516	-0.063	17617H		

QC Flag Legend

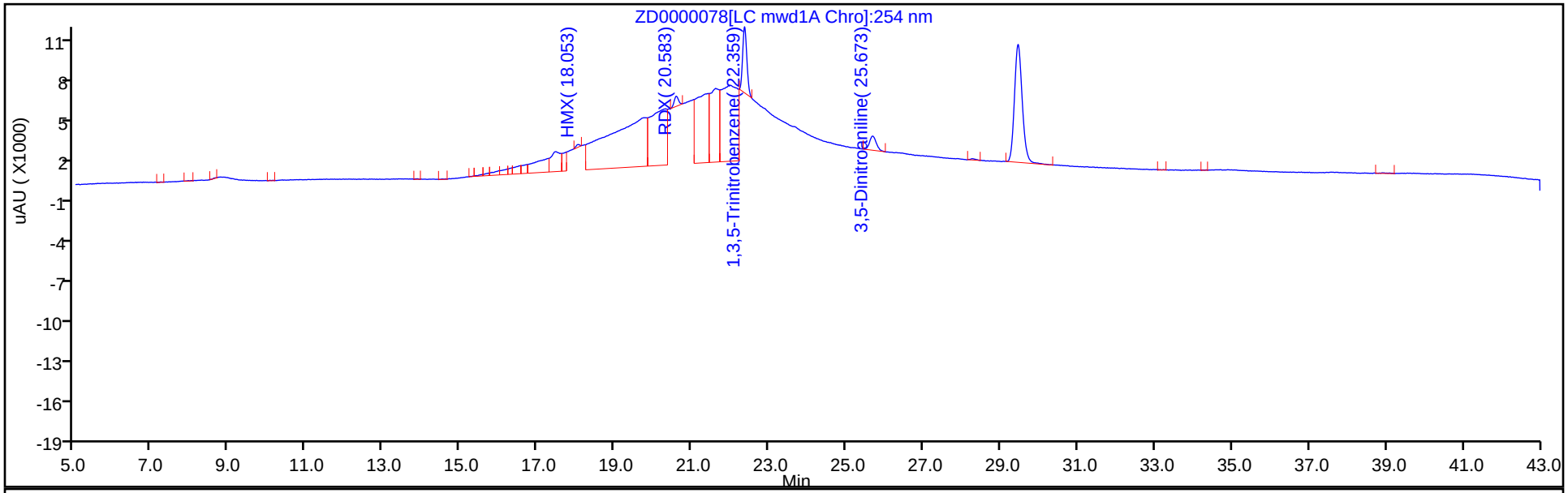
Processing Flags
NC - Not Calibrated
H - Response Measured by Height
Review Flags
M - Manually Integrated
a - User Assigned ID

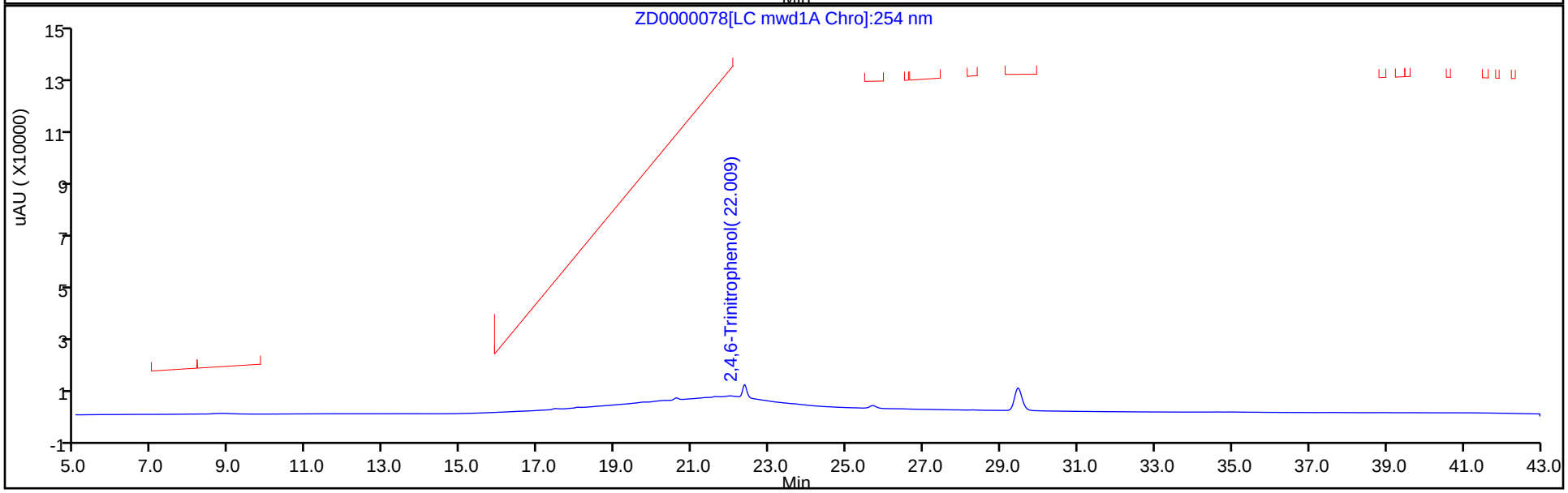
Report Date: 28-May-2019 15:53:00 Chrom Revision: 2.3 12-May-2019 16:28:34

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000078.D				
Injection Date:	03-May-2019 10:14:38	Instrument ID:	LC11	Operator ID:	AO
Lims ID:	280-123009-A-4-A	Lab Sample ID:	320-123009-4	Worklist Smp#:	78
Client ID:	SP-E1				
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	75
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1





Eurofins TestAmerica, Sacramento
Recovery Report

Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000078.D				
Lims ID:	280-123009-A-4-A				
Client ID:	SP-E1				
Sample Type:	Client				
Inject. Date:	03-May-2019 10:14:38	ALS Bottle#:	75	Worklist Smp#:	78
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Sample Info:	320-0075622-078				
Operator ID:	AO	Instrument ID:	LC11		
Method:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\8330 Metab LC11.m				
Limit Group:	LC 8330A ICAL				
Last Update:	28-May-2019 15:52:59	Calib Date:	28-Feb-2019 10:01:13		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D				
Column 1 :	Synergi Hydro-RP C18 (4.60 mm)		Det: LC mwd1A, 250 nm		
Process Host:	CTX0332				
First Level Reviewer: ortizam		Date:	28-May-2019 15:52:59		

Compound	Amount Added	Amount Recovered	% Rec.
$ 16 3,4-Dinitrotoluene	125.0	118.0	94.38

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

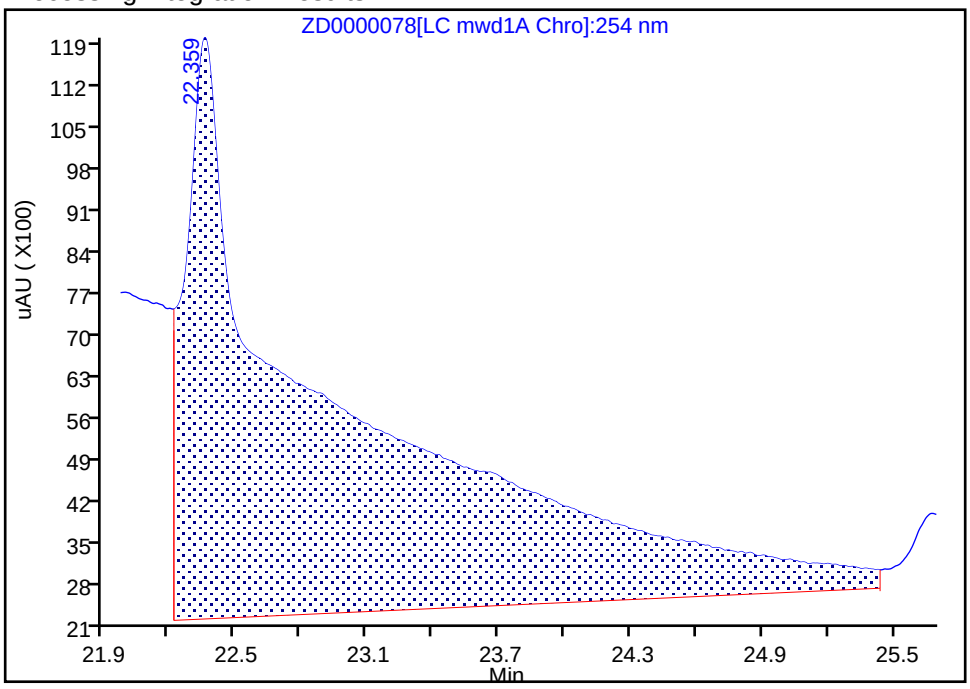
Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000078.D				
Injection Date:	03-May-2019 10:14:38	Instrument ID:	LC11		
Lims ID:	280-123009-A-4-A	Lab Sample ID:	320-123009-4		
Client ID:	SP-E1				
Operator ID:	AO	ALS Bottle#:	75	Worklist Smp#:	78
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

8 1,3,5-Trinitrobenzene, CAS: 99-35-4

Signal: 1

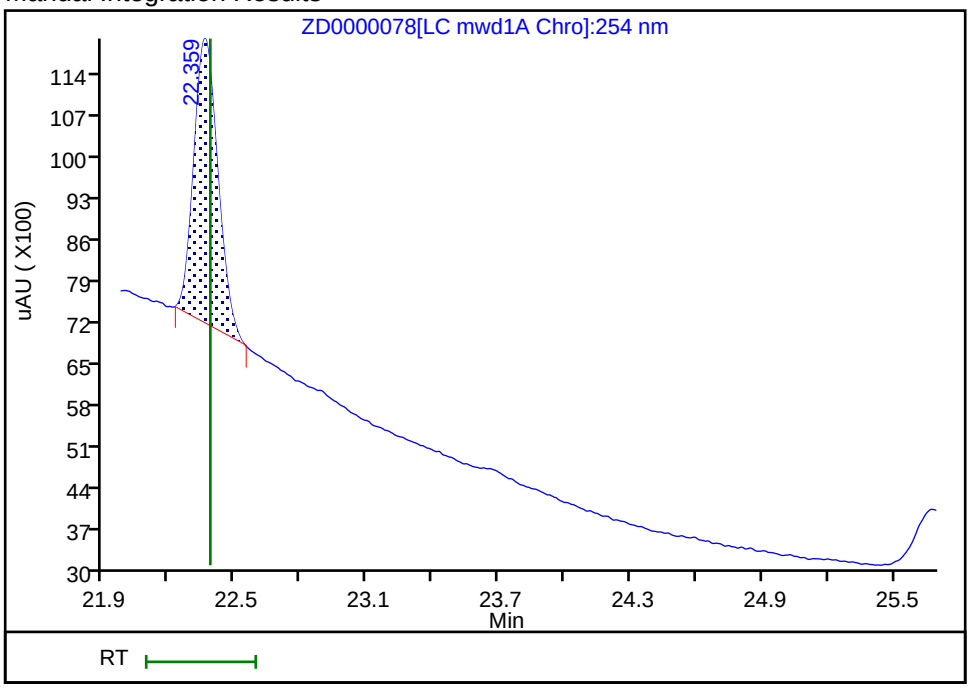
Processing Integration Results

RT: 22.36
Height: 9781
Amount: 41.751047
Amount Units: ng/ml



Manual Integration Results

RT: 22.36
Height: 4836
Amount: 20.642886
Amount Units: ng/ml



Reviewer: ortizam, 28-May-2019 15:52:56

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Peak not integrated

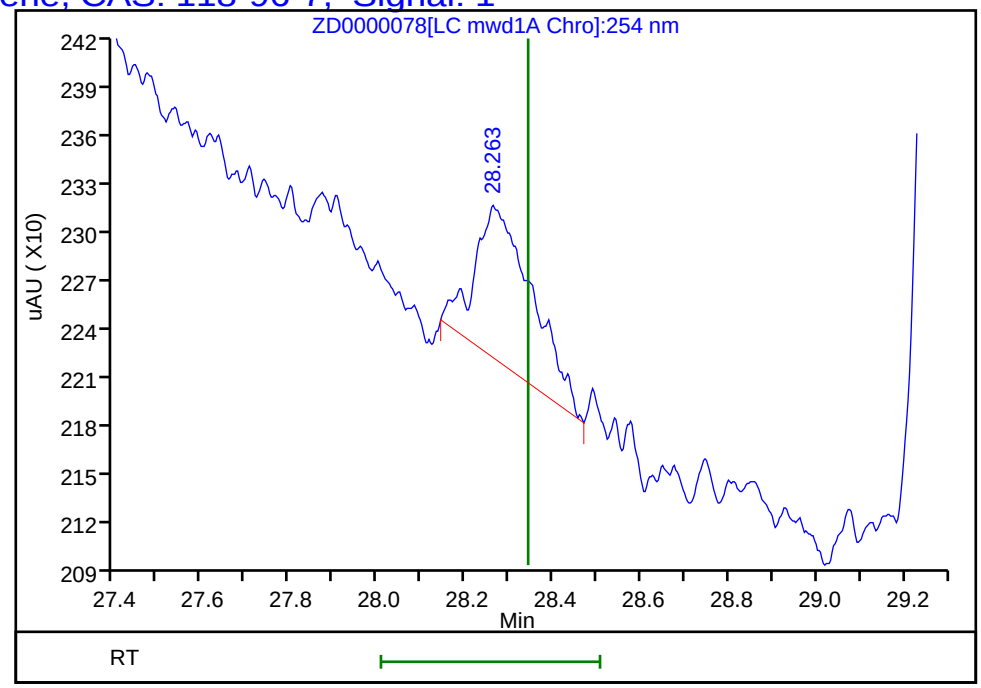
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000078.D				
Injection Date:	03-May-2019 10:14:38	Instrument ID:	LC11		
Lims ID:	280-123009-A-4-A	Lab Sample ID:	320-123009-4		
Client ID:	SP-E1				
Operator ID:	AO	ALS Bottle#:	75	Worklist Smp#:	78
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

14 2,4,6-Trinitrotoluene, CAS: 118-96-7, Signal: 1

RT: 28.26
Response: 94
Amount: 0.816864



Reviewer: ortizam, 03-May-2019 14:28:46
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

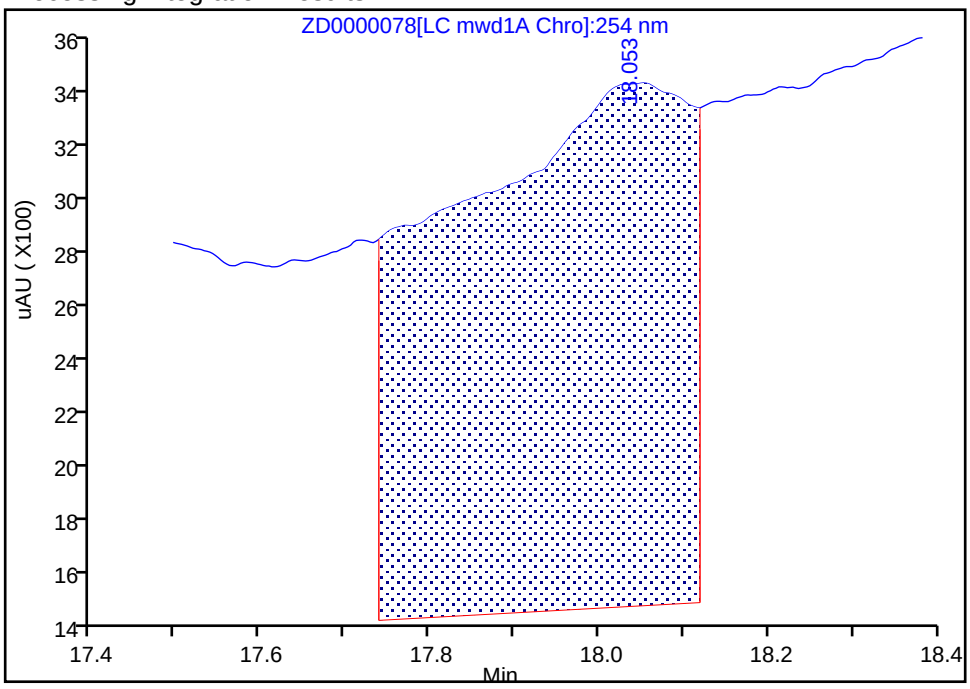
Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000078.D				
Injection Date:	03-May-2019 10:14:38	Instrument ID:	LC11		
Lims ID:	280-123009-A-4-A	Lab Sample ID:	320-123009-4		
Client ID:	SP-E1				
Operator ID:	AO	ALS Bottle#:	75	Worklist Smp#:	78
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

3 HMX, CAS: 2691-41-0

Signal: 1

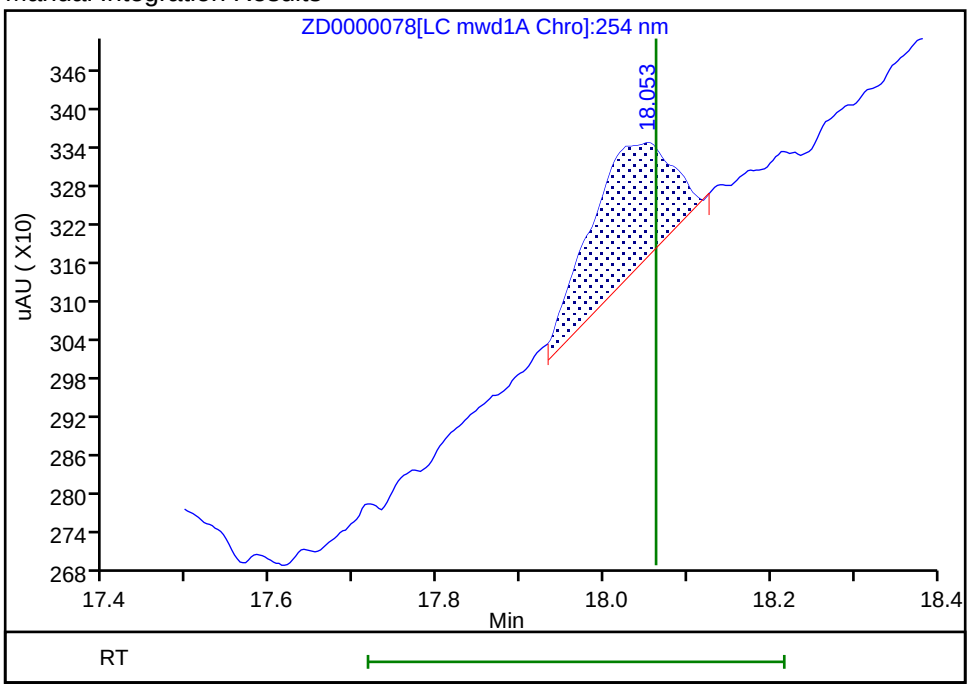
Processing Integration Results

RT: 18.05
Height: 1883
Amount: 23.347510
Amount Units: ng/ml



Manual Integration Results

RT: 18.05
Height: 179
Amount: 2.219439
Amount Units: ng/ml



Reviewer: ortizam, 03-May-2019 14:28:40

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

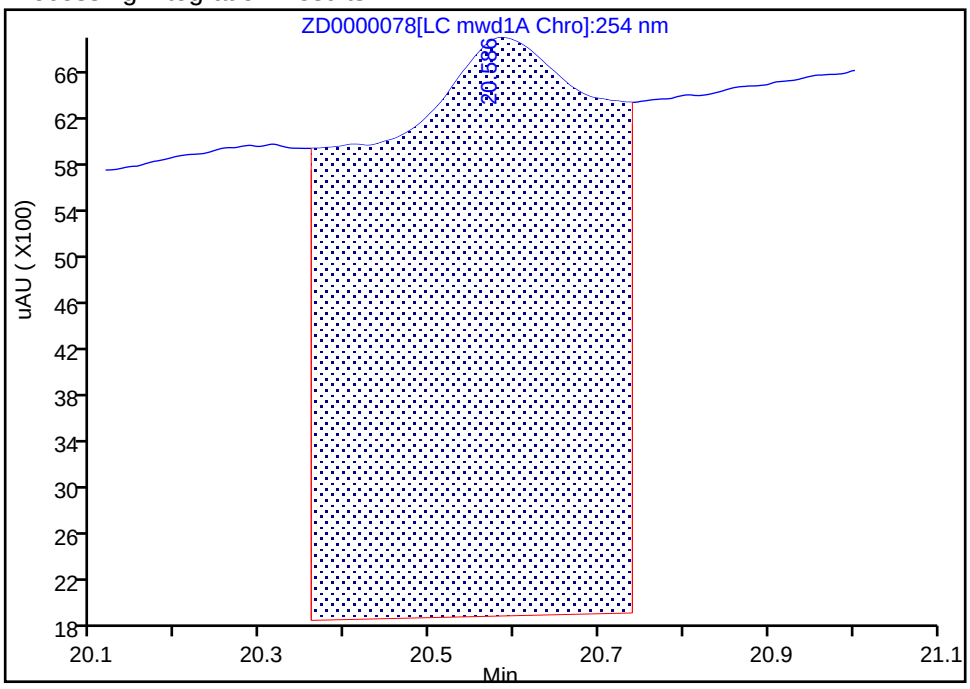
Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000078.D				
Injection Date:	03-May-2019 10:14:38	Instrument ID:	LC11		
Lims ID:	280-123009-A-4-A	Lab Sample ID:	320-123009-4		
Client ID:	SP-E1				
Operator ID:	AO	ALS Bottle#:	75	Worklist Smp#:	78
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

6 RDX, CAS: 121-82-4

Signal: 1

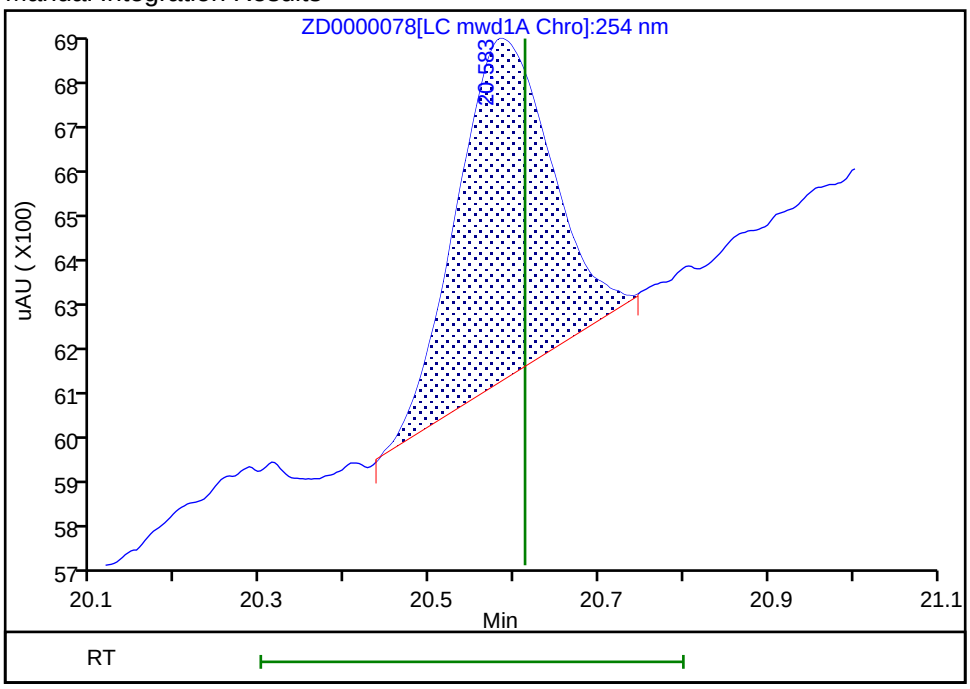
Processing Integration Results

RT: 20.59
Height: 4998
Amount: 50.444740
Amount Units: ng/ml



Manual Integration Results

RT: 20.58
Height: 747
Amount: 7.539460
Amount Units: ng/ml



Reviewer: ortizam, 03-May-2019 14:28:30

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Client Sample ID: SP-E1 Lab Sample ID: 280-123009-4

Matrix: Water Lab File ID: U000070.D

Analysis Method: 8330A Date Collected: 04/24/2019 08:51

Extraction Method: 8330-Prep Date Extracted: 04/29/2019 06:59

Sample wt/vol: 1006.7(mL) Date Analyzed: 05/24/2019 09:16

Con. Extract Vol.: 20(mL) Dilution Factor: 1

Injection Volume: 500(uL) GC Column: Zorbax CN ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 295993 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	86	*M*	79-111

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000070.D				
Lims ID:	280-123009-A-4-A				
Client ID:	SP-E1				
Sample Type:	Client				
Inject. Date:	24-May-2019 09:16:58	ALS Bottle#:	61	Worklist Smp#:	68
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-123009-a-4-a				
Operator ID:	AO	Instrument ID:	LC12		
Method:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\LC12_Conf_8330.m				
Limit Group:	LC 8330A ICAL				
Last Update:	24-May-2019 15:49:27	Calib Date:	15-May-2019 07:09:15		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D				
Column 1 :	Zorbax Cyano CN (4.60 mm)		Det: LC mwd1A, 250 nm		
Process Host:	CTX0332				

First Level Reviewer: cartiera Date: 24-May-2019 10:32:11

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
7 1,3,5-Trinitrobenzene						M
1	26.635	26.612	0.023	2203H	23.5	M
13 RDX						
1	31.285	31.385	-0.100	468H	7.24	
$ 18 3,4-Dinitrotoluene						M
1	34.802	34.822	-0.020	15046H	107.5	M
19 2,4,6-Trinitrotoluene						M
1	35.388	35.395	-0.007	254H	1.23	M
20 HMX						M
1	36.332	36.235	0.097	517H	3.29	M
22 Tetryl						
1	37.748	37.865	-0.117	389H	1.65	

QC Flag Legend

Review Flags

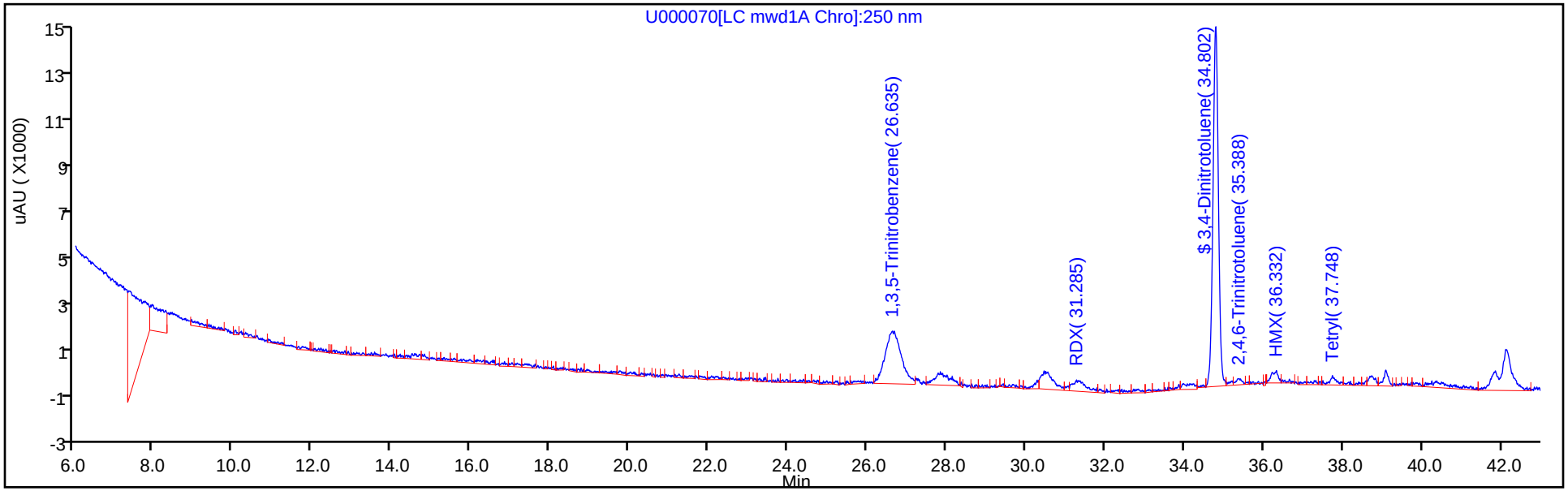
M - Manually Integrated

Report Date: 28-May-2019 15:53:29 Chrom Revision: 2.3 12-May-2019 16:28:34

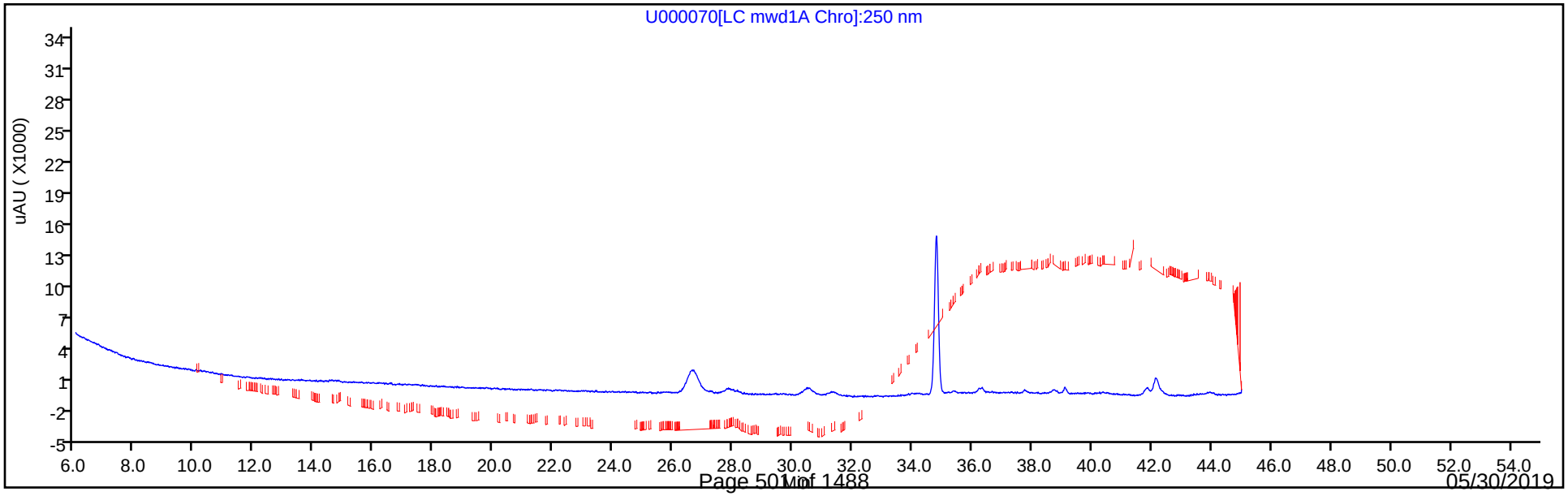
Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000070.D				
Injection Date:	24-May-2019 09:16:58	Instrument ID:	LC12	Operator ID:	AO
Lims ID:	280-123009-A-4-A	Lab Sample ID:	320-123009-4	Worklist Smp#:	68
Client ID:	SP-E1				
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	61
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



Eurofins TestAmerica, Sacramento
Recovery Report

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000070.D				
Lims ID:	280-123009-A-4-A				
Client ID:	SP-E1				
Sample Type:	Client				
Inject. Date:	24-May-2019 09:16:58	ALS Bottle#:	61	Worklist Smp#:	68
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-123009-a-4-a				
Operator ID:	AO	Instrument ID:	LC12		
Method:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\LC12_Conf_8330.m				
Limit Group:	LC 8330A ICAL				
Last Update:	24-May-2019 15:49:27	Calib Date:	15-May-2019 07:09:15		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D				
Column 1 :	Zorbax Cyano CN (4.60 mm)		Det: LC mwd1A, 250 nm		
Process Host:	CTX0332				
First Level Reviewer: cartiera		Date:	24-May-2019 10:32:11		

Compound	Amount Added	Amount Recovered	% Rec.
$ 18 3,4-Dinitrotoluene	125.0	107.5	85.96

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

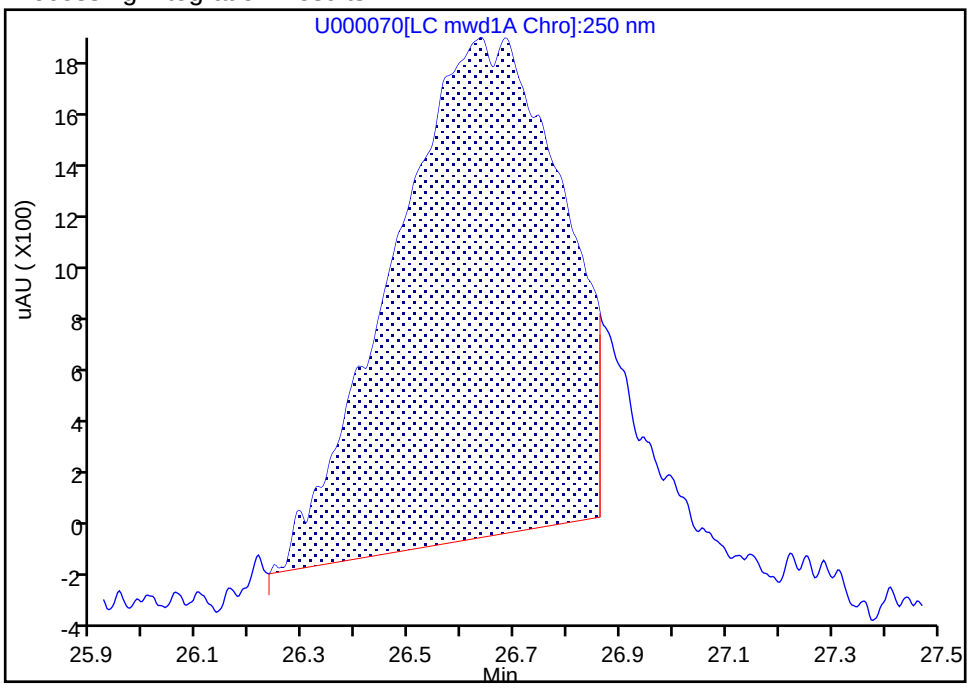
Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000070.D				
Injection Date:	24-May-2019 09:16:58	Instrument ID:	LC12		
Lims ID:	280-123009-A-4-A	Lab Sample ID:	320-123009-4		
Client ID:	SP-E1				
Operator ID:	AO	ALS Bottle#:	61	Worklist Smp#:	68
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

7 1,3,5-Trinitrobenzene, CAS: 99-35-4

Signal: 1

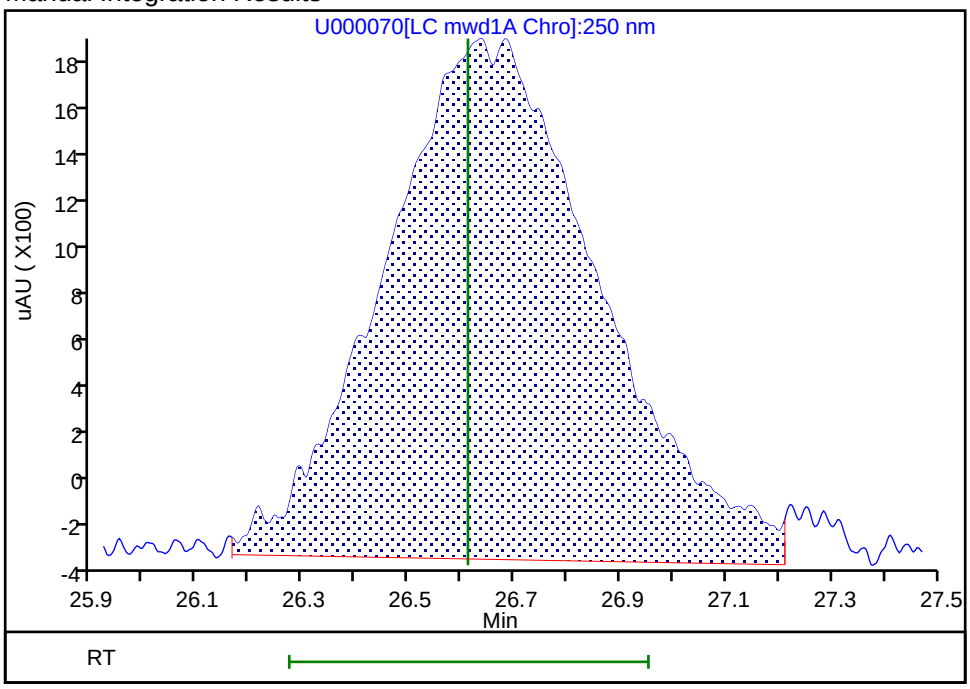
Processing Integration Results

RT: 26.64
Height: 1912
Amount: 20.394542
Amount Units: ng/ml



Manual Integration Results

RT: 26.64
Height: 2203
Amount: 23.498523
Amount Units: ng/ml



Reviewer: cartiera, 24-May-2019 10:31:09

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

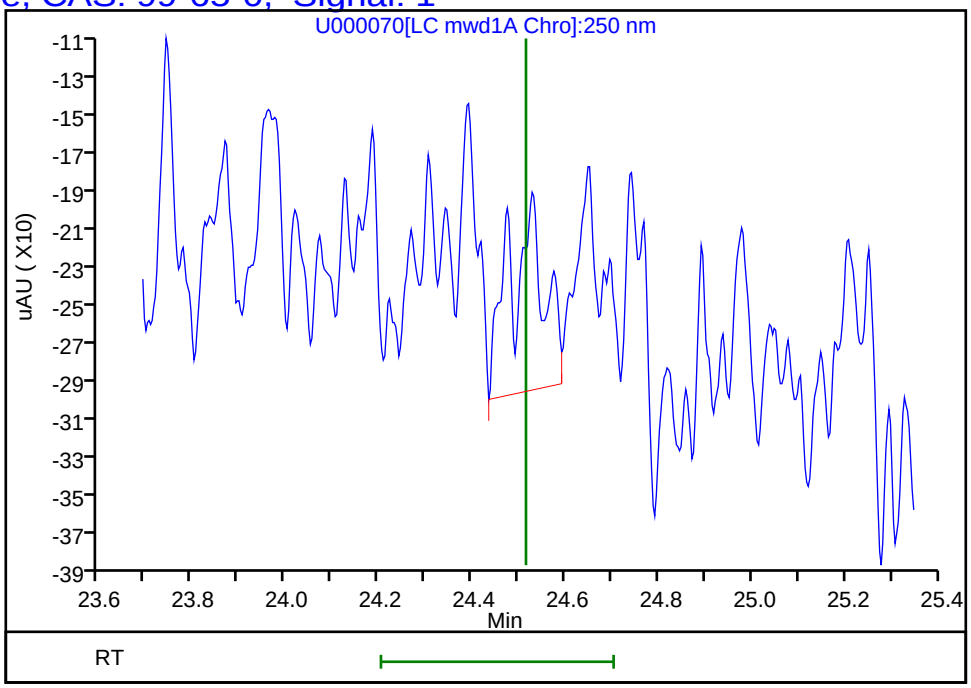
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000070.D				
Injection Date:	24-May-2019 09:16:58	Instrument ID:	LC12		
Lims ID:	280-123009-A-4-A	Lab Sample ID:	320-123009-4		
Client ID:	SP-E1				
Operator ID:	AO	ALS Bottle#:	61	Worklist Smp#:	68
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

6 1,3-Dinitrobenzene, CAS: 99-65-0, Signal: 1

RT: 24.53
Response: 100
Amount: 0.856363



Reviewer: cartiera, 24-May-2019 10:32:11
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

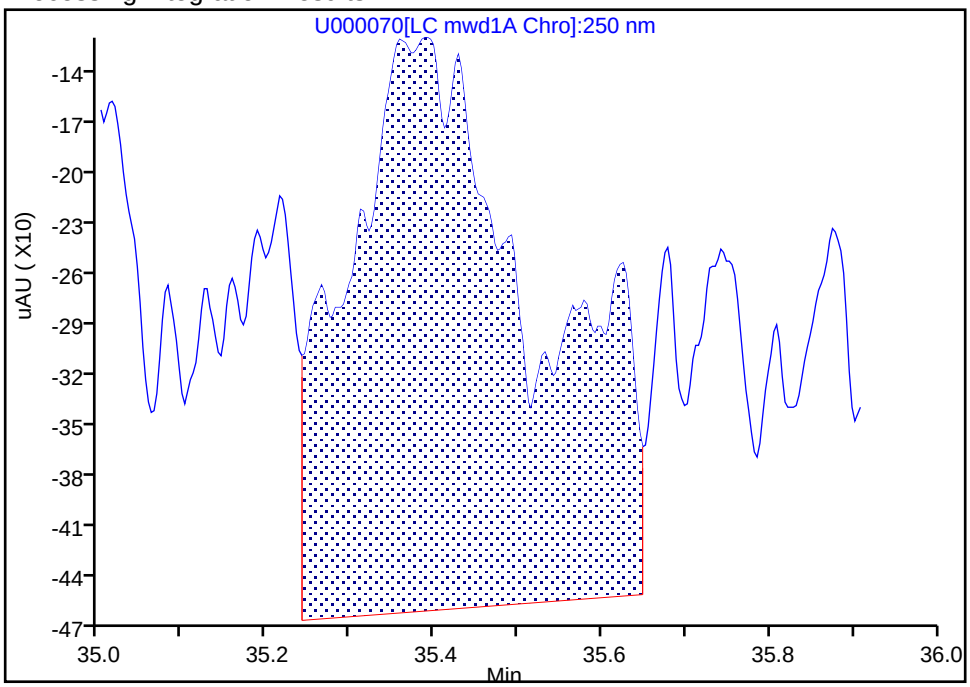
Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000070.D				
Injection Date:	24-May-2019 09:16:58	Instrument ID:	LC12		
Lims ID:	280-123009-A-4-A	Lab Sample ID:	320-123009-4		
Client ID:	SP-E1				
Operator ID:	AO	ALS Bottle#:	61	Worklist Smp#:	68
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

19 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

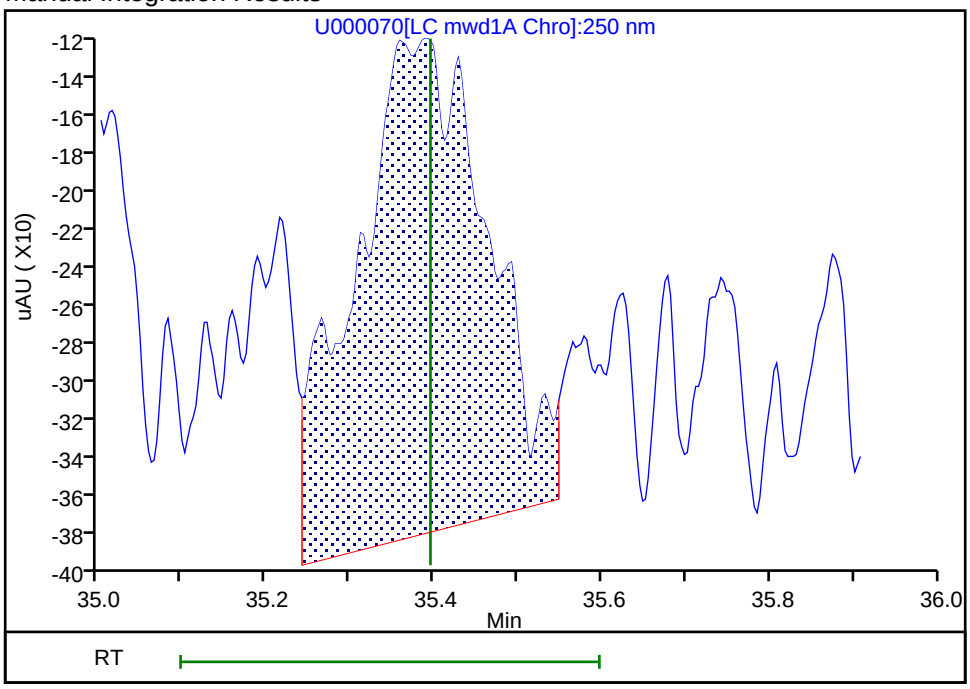
Processing Integration Results

RT: 35.39
Height: 333
Amount: 1.608294
Amount Units: ng/ml



Manual Integration Results

RT: 35.39
Height: 254
Amount: 1.226747
Amount Units: ng/ml



Reviewer: cartiera, 24-May-2019 10:31:52

Audit Action: Split an Integrated Peak Audit Reason: Baseline Smoothing

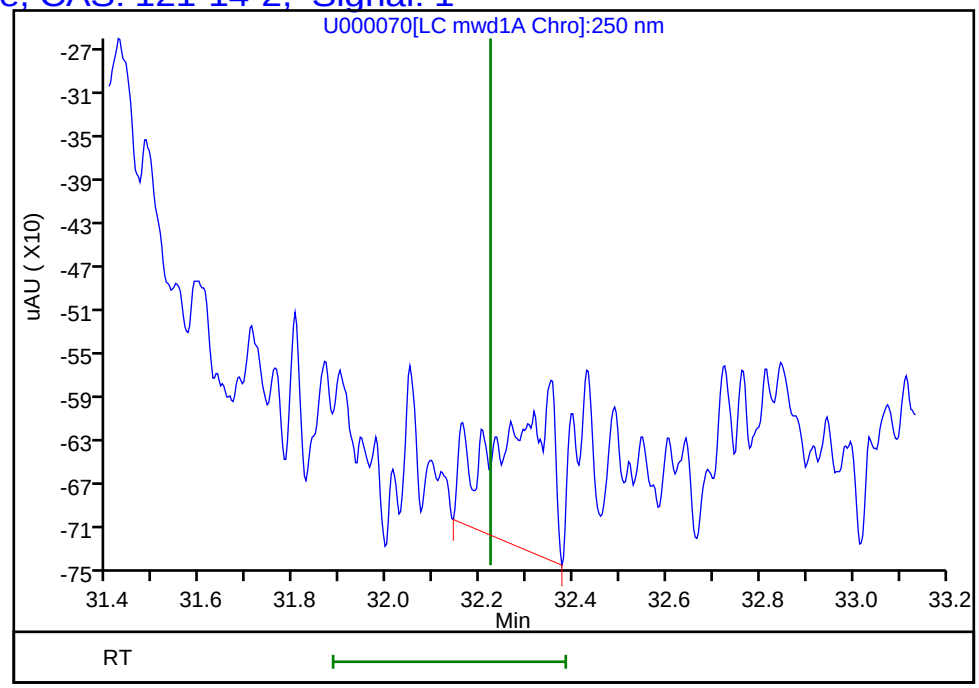
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000070.D				
Injection Date:	24-May-2019 09:16:58	Instrument ID:	LC12		
Lims ID:	280-123009-A-4-A	Lab Sample ID:	320-123009-4		
Client ID:	SP-E1				
Operator ID:	AO	ALS Bottle#:	61	Worklist Smp#:	68
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

14 2,4-Dinitrotoluene, CAS: 121-14-2, Signal: 1

RT: 32.35
Response: 161
Amount: 1.276896



Reviewer: cartiera, 24-May-2019 10:32:11
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

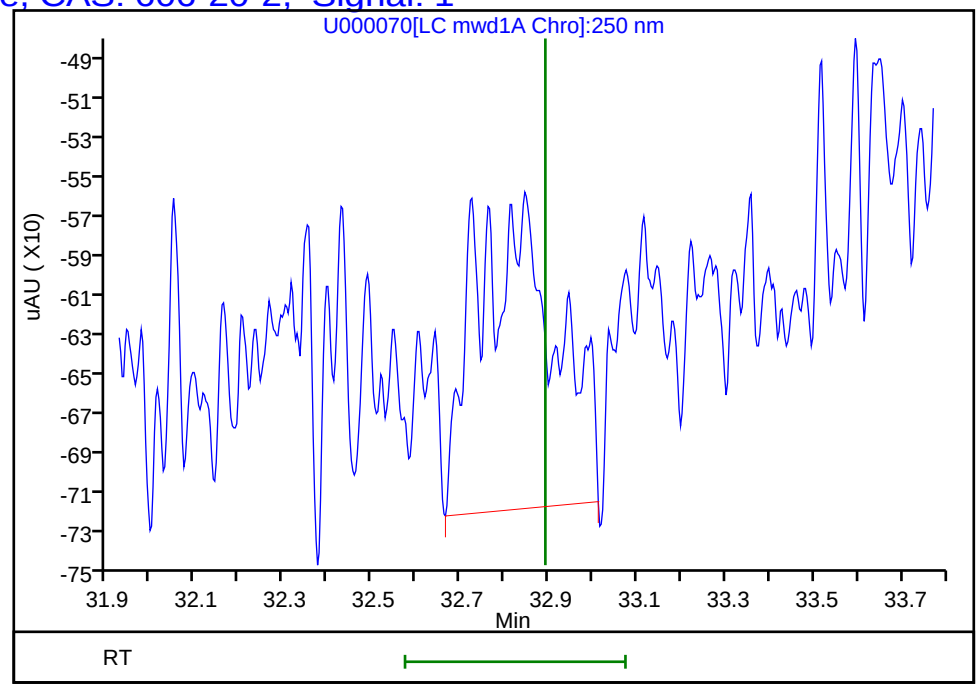
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000070.D				
Injection Date:	24-May-2019 09:16:58	Instrument ID:	LC12		
Lims ID:	280-123009-A-4-A	Lab Sample ID:	320-123009-4		
Client ID:	SP-E1				
Operator ID:	AO	ALS Bottle#:	61	Worklist Smp#:	68
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

15 2,6-Dinitrotoluene, CAS: 606-20-2, Signal: 1

RT: 32.73
Response: 153
Amount: 1.608584



Reviewer: cartiera, 24-May-2019 10:32:11

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

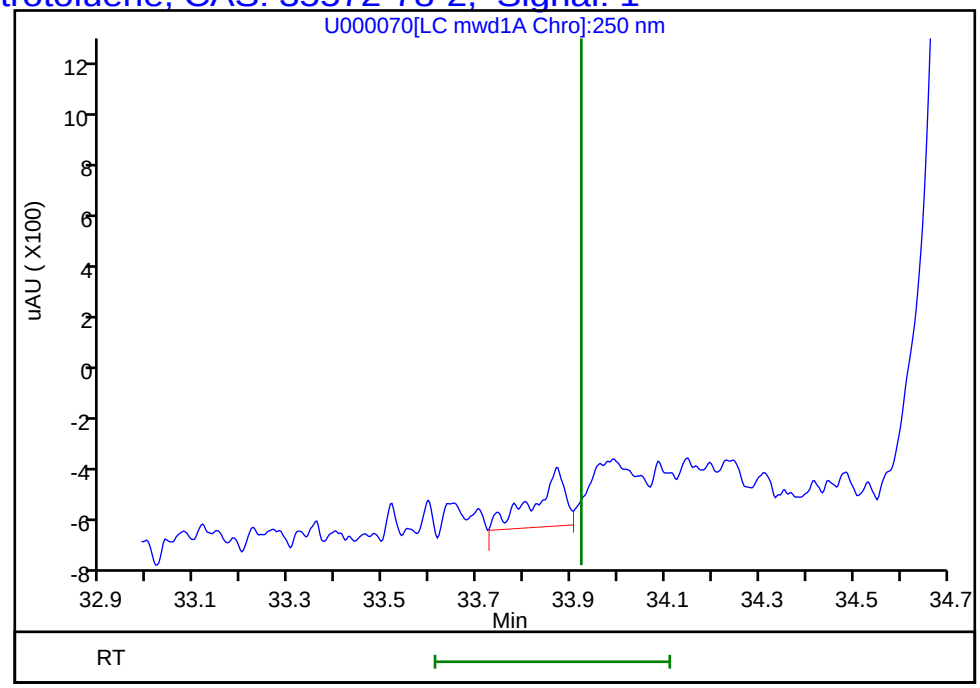
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000070.D				
Injection Date:	24-May-2019 09:16:58	Instrument ID:	LC12		
Lims ID:	280-123009-A-4-A	Lab Sample ID:	320-123009-4		
Client ID:	SP-E1				
Operator ID:	AO	ALS Bottle#:	61	Worklist Smp#:	68
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

16 2-Amino-4,6-dinitrotoluene, CAS: 35572-78-2, Signal: 1

RT: 33.87
Response: 215
Amount: 1.063135



Reviewer: cartiera, 24-May-2019 10:32:11

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

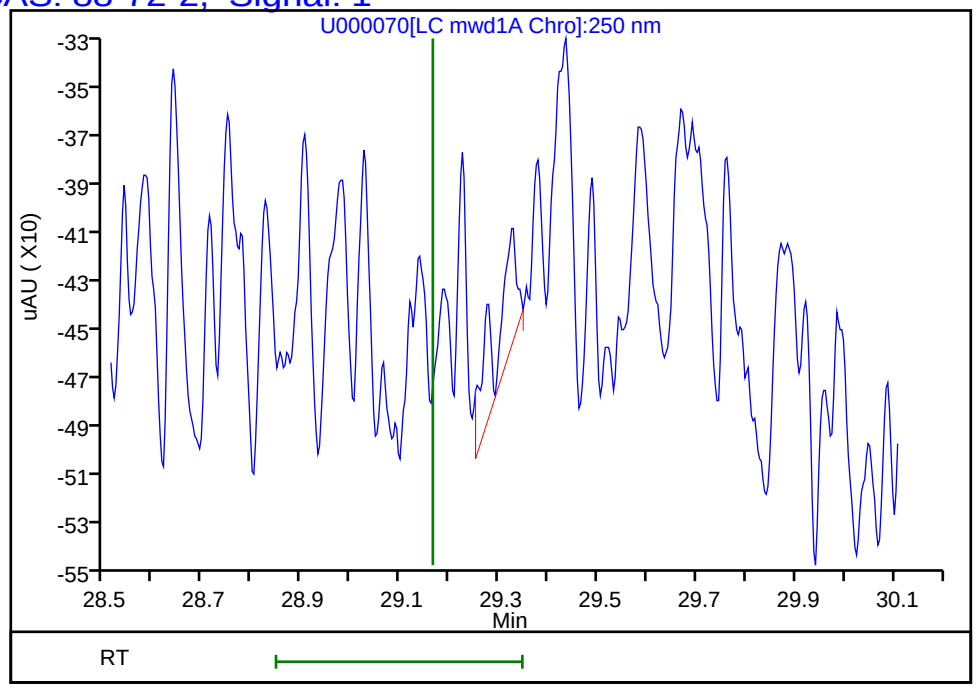
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000070.D				
Injection Date:	24-May-2019 09:16:58	Instrument ID:	LC12		
Lims ID:	280-123009-A-4-A	Lab Sample ID:	320-123009-4		
Client ID:	SP-E1				
Operator ID:	AO	ALS Bottle#:	61	Worklist Smp#:	68
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

10 o-Nitrotoluene, CAS: 88-72-2, Signal: 1

RT: 29.33
Response: 44
Amount: 0.619225



Reviewer: cartiera, 24-May-2019 10:32:11
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

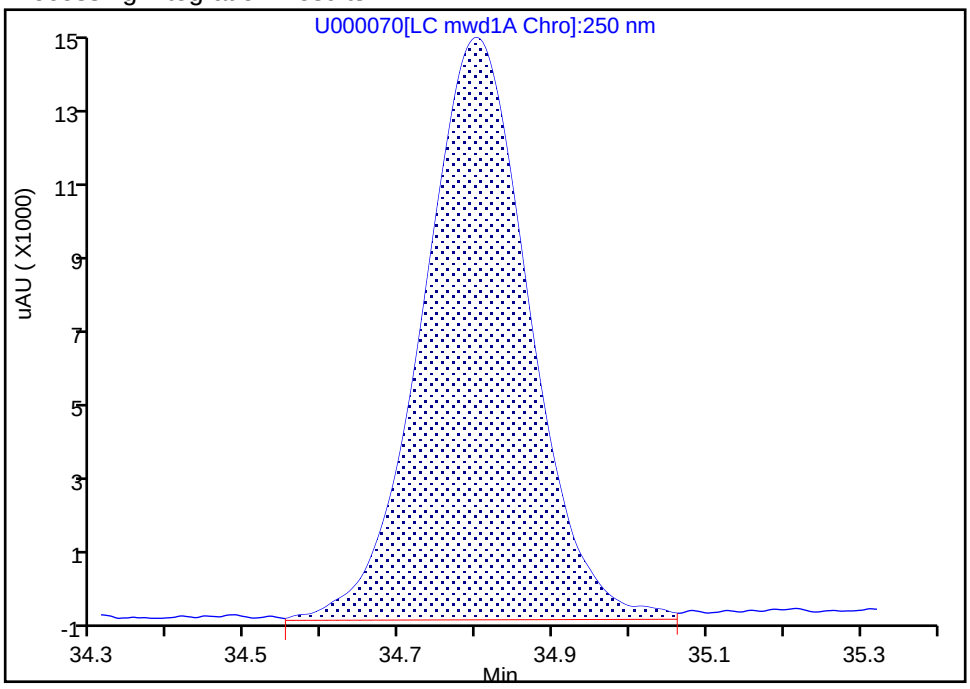
Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000070.D				
Injection Date:	24-May-2019 09:16:58	Instrument ID:	LC12		
Lims ID:	280-123009-A-4-A	Lab Sample ID:	320-123009-4		
Client ID:	SP-E1				
Operator ID:	AO	ALS Bottle#:	61	Worklist Smp#:	68
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

$ 18 3,4-Dinitrotoluene, CAS: 610-39-9

Signal: 1

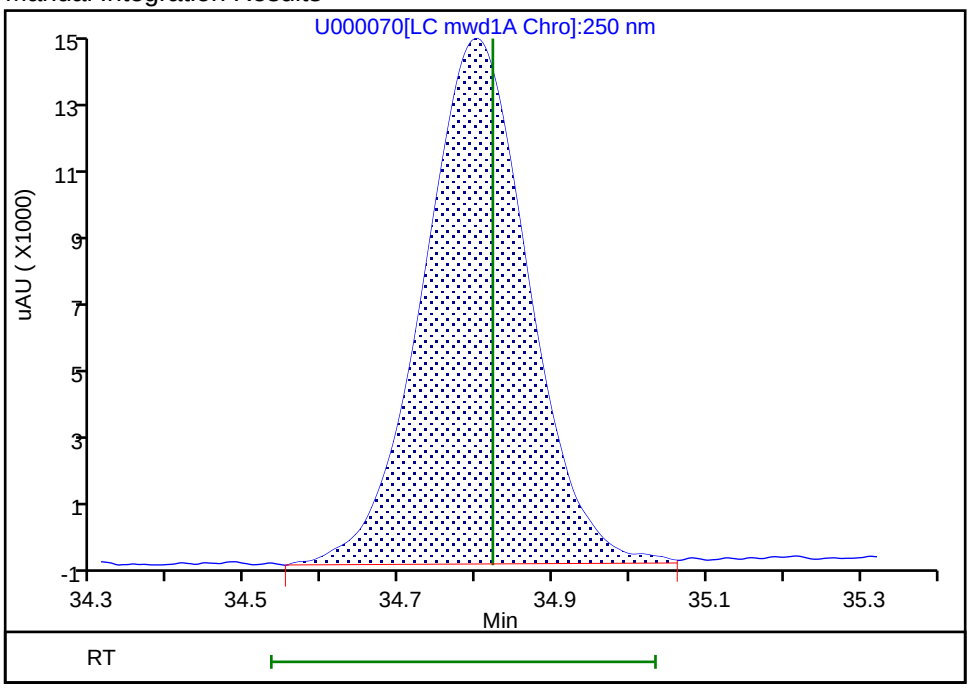
Processing Integration Results

RT: 34.80
Height: 15112
Amount: 107.9262
Amount Units: ng/ml



Manual Integration Results

RT: 34.80
Height: 15046
Amount: 107.4549
Amount Units: ng/ml



Reviewer: cartiera, 24-May-2019 10:31:47

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

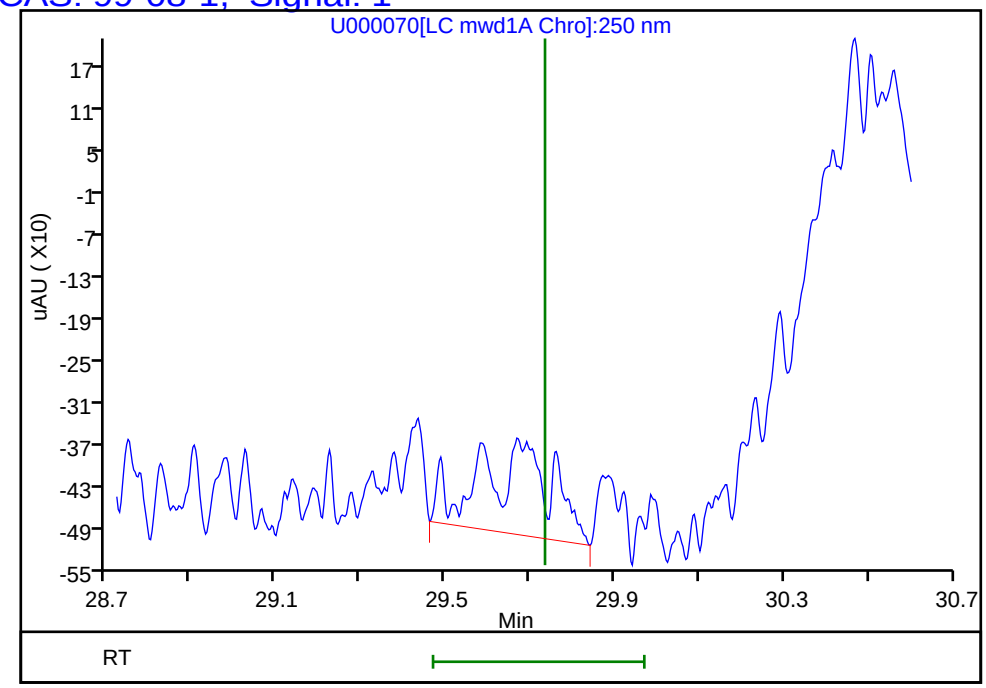
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000070.D				
Injection Date:	24-May-2019 09:16:58	Instrument ID:	LC12		
Lims ID:	280-123009-A-4-A	Lab Sample ID:	320-123009-4		
Client ID:	SP-E1				
Operator ID:	AO	ALS Bottle#:	61	Worklist Smp#:	68
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

11 m-Nitrotoluene, CAS: 99-08-1, Signal: 1

RT: 29.59
Response: 122
Amount: 0.592615



Reviewer: cartiera, 24-May-2019 10:32:11
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

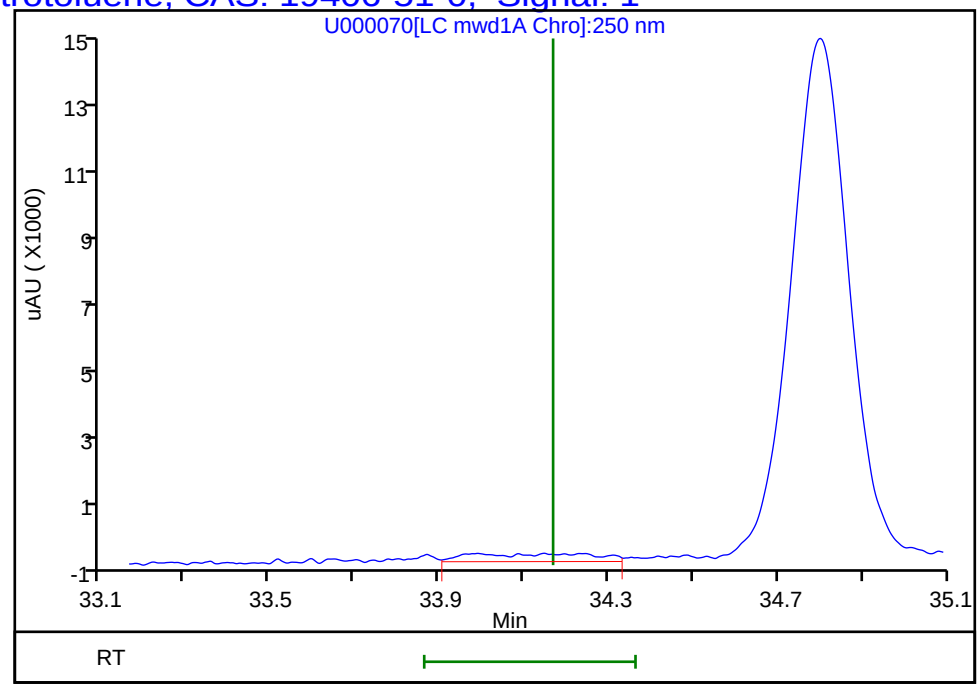
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000070.D				
Injection Date:	24-May-2019 09:16:58	Instrument ID:	LC12		
Lims ID:	280-123009-A-4-A	Lab Sample ID:	320-123009-4		
Client ID:	SP-E1				
Operator ID:	AO	ALS Bottle#:	61	Worklist Smp#:	68
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

17 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0, Signal: 1

RT: 33.99
Response: 4747
Amount: 2.164139



Reviewer: cartiera, 24-May-2019 10:32:11

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

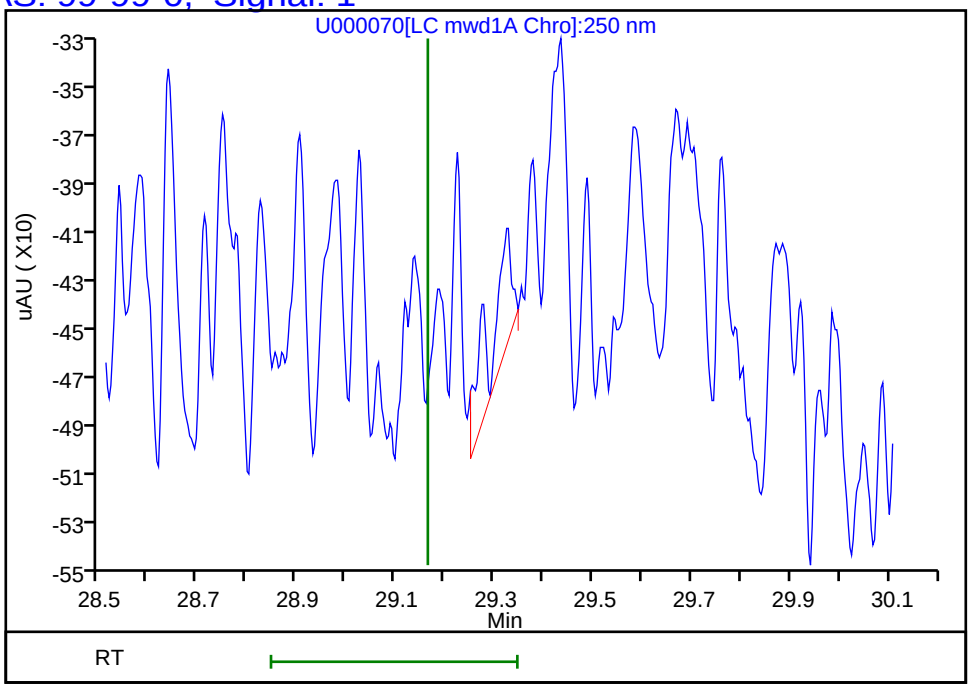
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000070.D				
Injection Date:	24-May-2019 09:16:58	Instrument ID:	LC12		
Lims ID:	280-123009-A-4-A	Lab Sample ID:	320-123009-4		
Client ID:	SP-E1				
Operator ID:	AO	ALS Bottle#:	61	Worklist Smp#:	68
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

9 p-Nitrotoluene, CAS: 99-99-0, Signal: 1

RT: 29.33
Response: 44
Amount: 0.619225



Reviewer: cartiera, 24-May-2019 10:32:11
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

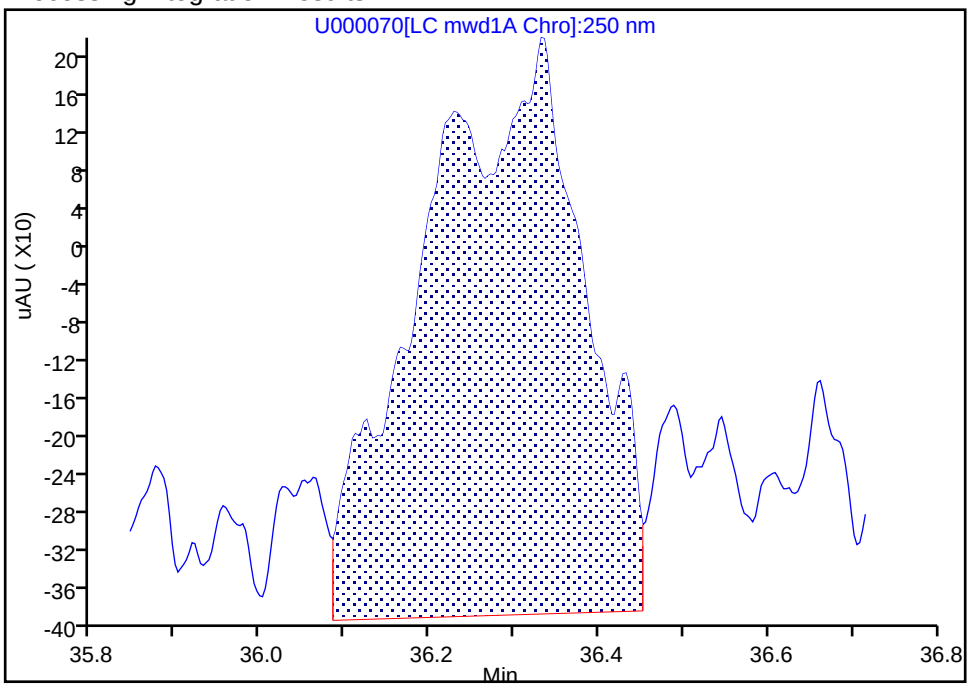
Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000070.D				
Injection Date:	24-May-2019 09:16:58	Instrument ID:	LC12		
Lims ID:	280-123009-A-4-A	Lab Sample ID:	320-123009-4		
Client ID:	SP-E1				
Operator ID:	AO	ALS Bottle#:	61	Worklist Smp#:	68
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

20 HMX, CAS: 2691-41-0

Signal: 1

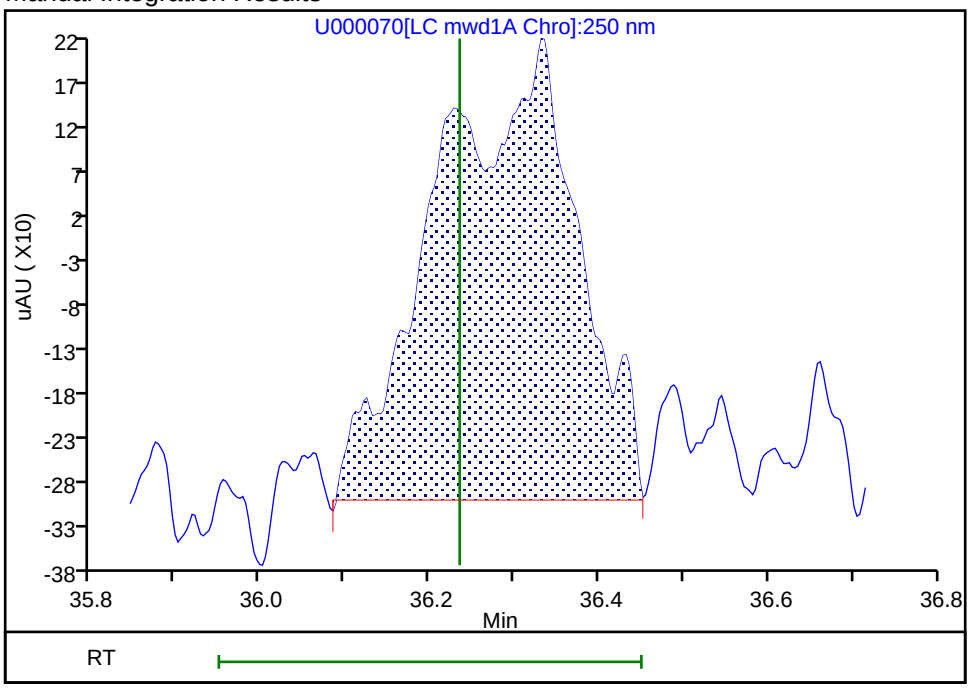
Processing Integration Results

RT: 36.23
Height: 533
Amount: 3.395495
Amount Units: ng/ml



Manual Integration Results

RT: 36.33
Height: 517
Amount: 3.293566
Amount Units: ng/ml



Reviewer: cartiera, 24-May-2019 10:32:07

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

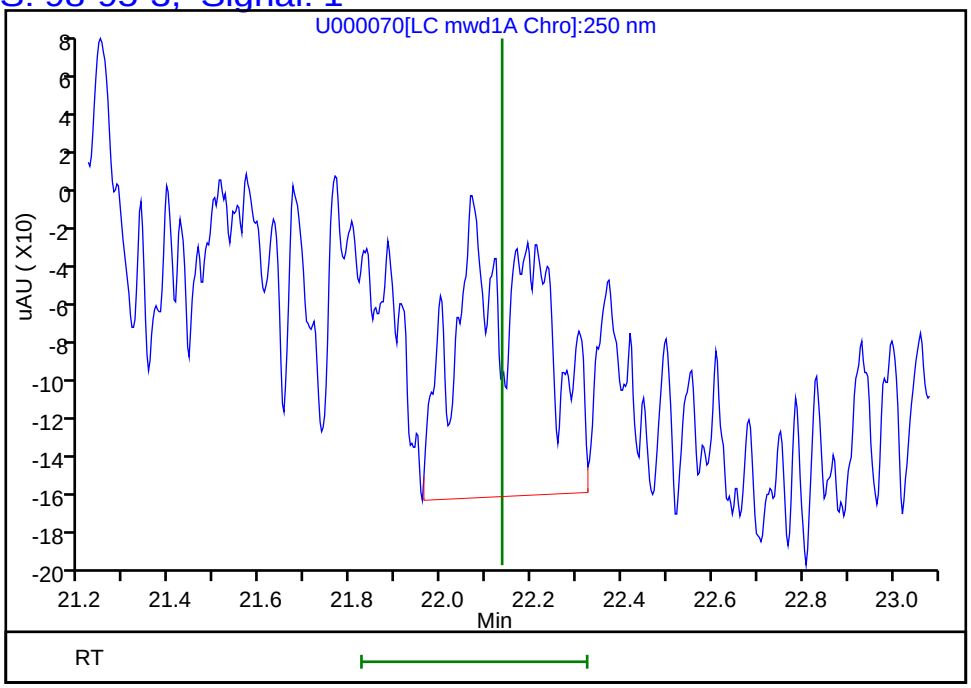
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000070.D				
Injection Date:	24-May-2019 09:16:58	Instrument ID:	LC12		
Lims ID:	280-123009-A-4-A	Lab Sample ID:	320-123009-4		
Client ID:	SP-E1				
Operator ID:	AO	ALS Bottle#:	61	Worklist Smp#:	68
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

3 Nitrobenzene, CAS: 98-95-3, Signal: 1

RT: 22.07
Response: 153
Amount: 2.694807



Reviewer: cartiera, 24-May-2019 10:32:11
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Client Sample ID: SP-S22 Lab Sample ID: 280-123009-5

Matrix: Water Lab File ID: ZD0000079.D

Analysis Method: 8330A Date Collected: 04/24/2019 08:43

Extraction Method: 8330-Prep Date Extracted: 04/29/2019 06:59

Sample wt/vol: 991.9(mL) Date Analyzed: 05/03/2019 11:08

Con. Extract Vol.: 20(mL) Dilution Factor: 1

Injection Volume: 500(uL) GC Column: Synergi C18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 291526 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-65-0	1,3-Dinitrobenzene	0.10	U M	0.15	0.10	0.050
118-96-7	2,4,6-Trinitrotoluene	7.4		0.15	0.10	0.050
121-14-2	2,4-Dinitrotoluene	0.10	U	0.13	0.10	0.050
606-20-2	2,6-Dinitrotoluene	0.10	U M	0.13	0.10	0.050
35572-78-2	2-Amino-4,6-dinitrotoluene	1.8		0.15	0.10	0.030
88-72-2	2-Nitrotoluene	0.20	U	0.50	0.20	0.089
99-08-1	3-Nitrotoluene	0.20	U	0.50	0.20	0.057
19406-51-0	4-Amino-2,6-dinitrotoluene	1.6		0.15	0.10	0.050
99-99-0	4-Nitrotoluene	0.20	U	0.50	0.20	0.089
2691-41-0	HMX	0.49	M	0.15	0.10	0.036
5755-27-1	MNX	0.10	U	0.50	0.10	0.028
98-95-3	Nitrobenzene	0.10	U	0.15	0.10	0.050
121-82-4	RDX	0.61	M	0.15	0.10	0.036
479-45-8	Tetryl	0.10	U	0.15	0.10	0.050

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	99		79-111

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000079.D
Lims ID: 280-123009-B-5-A
Client ID: SP-S22
Sample Type: Client
Inject. Date: 03-May-2019 11:08:20 ALS Bottle#: 76 Worklist Smp#: 79
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 320-0075622-079
Operator ID: AO Instrument ID: LC11

Method: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 03-May-2019 13:04:16 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0325

First Level Reviewer: ortizam Date: 03-May-2019 13:04:15

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
3 HMX						M
1	18.018	18.062	-0.044	1965H	24.4	M
6 RDX						M
1	20.571	20.612	-0.041	2998H	30.3	M
8 1,3,5-Trinitrobenzene						M
1	22.351	22.382	-0.031	232287H	991.5	EM
10 3,5-Dinitroaniline						
1	25.651	25.746	-0.095	107249H	676.1	E
12 Tetryl						
1	27.111	26.956	0.155	505H	4.81	
14 2,4,6-Trinitrotoluene						
1	28.268	28.342	-0.074	41977H	364.8	
15 4-Amino-2,6-dinitrotoluene						
1	29.085	29.202	-0.117	6896H	79.2	
$ 16 3,4-Dinitrotoluene						
1	29.425	29.516	-0.091	9018H	123.2	
2	29.425	29.516	-0.091	18842H		
17 2-Amino-4,6-dinitrotoluene						
1	29.761	29.899	-0.138	10168H	89.6	
19 2,4-Dinitrotoluene						
1	31.601	31.722	-0.121	400H	2.96	

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount
H - Response Measured by Height

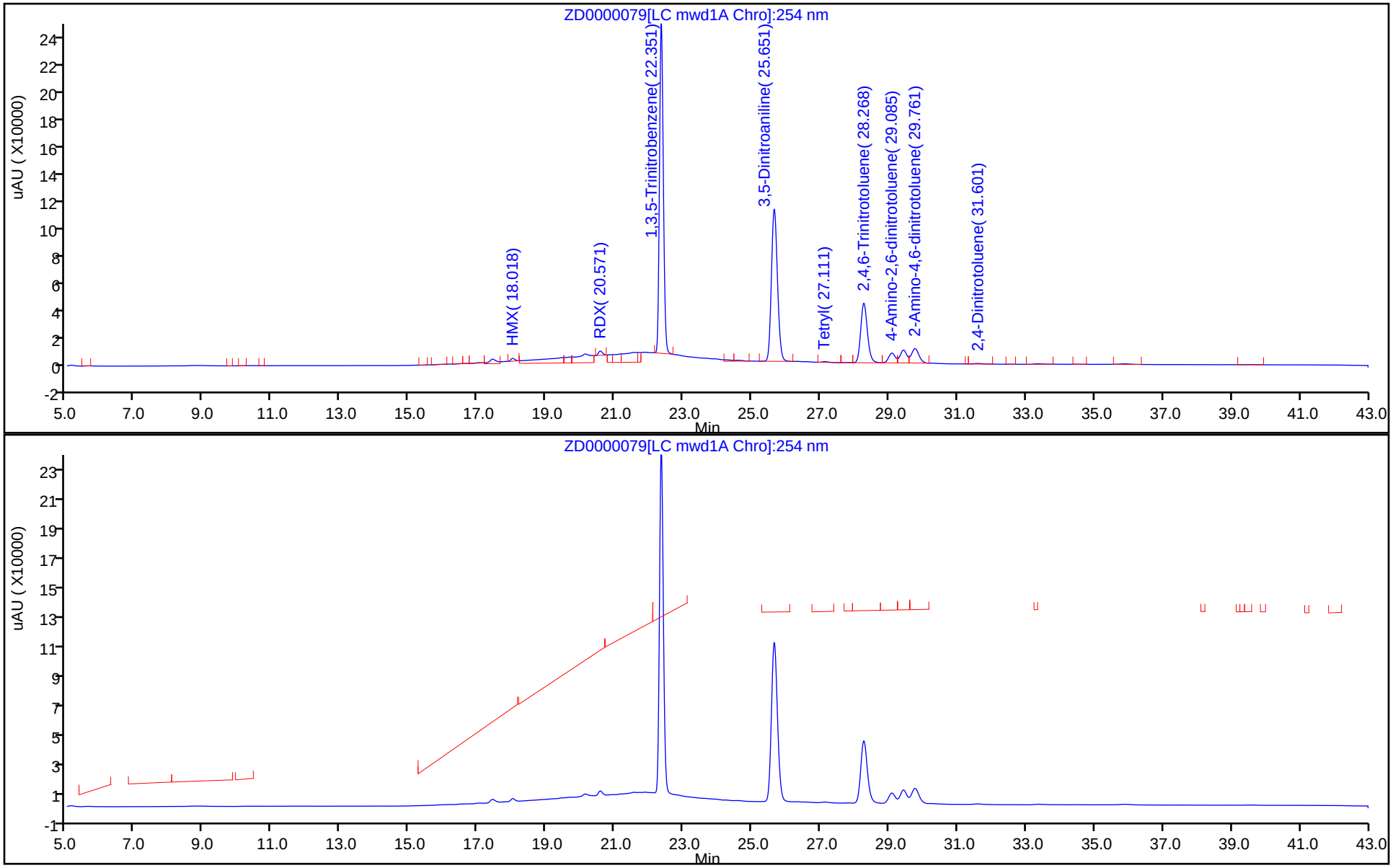
Review Flags
M - Manually Integrated

Report Date: 03-May-2019 13:04:17 Chrom Revision: 2.3 01-May-2019 12:41:30

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000079.D				
Injection Date:	03-May-2019 11:08:20	Instrument ID:	LC11	Operator ID:	AO
Lims ID:	280-123009-B-5-A	Lab Sample ID:	320-123009-5	Worklist Smp#:	79
Client ID:	SP-S22				
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	76
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins TestAmerica, Sacramento
Recovery Report

Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000079.D				
Lims ID:	280-123009-B-5-A				
Client ID:	SP-S22				
Sample Type:	Client				
Inject. Date:	03-May-2019 11:08:20	ALS Bottle#:	76	Worklist Smp#:	79
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Sample Info:	320-0075622-079				
Operator ID:	AO	Instrument ID:	LC11		
Method:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\8330 Metab LC11.m				
Limit Group:	LC 8330A ICAL				
Last Update:	03-May-2019 13:04:16	Calib Date:	28-Feb-2019 10:01:13		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D				
Column 1 :	Synergi Hydro-RP C18 (4.60 mm)		Det: LC mwd1A, 250 nm		
Process Host:	CTX0325				
First Level Reviewer: ortizam		Date:	03-May-2019 13:04:15		

Compound	Amount Added	Amount Recovered	% Rec.
$ 16 3,4-Dinitrotoluene	125.0	123.2	98.56

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

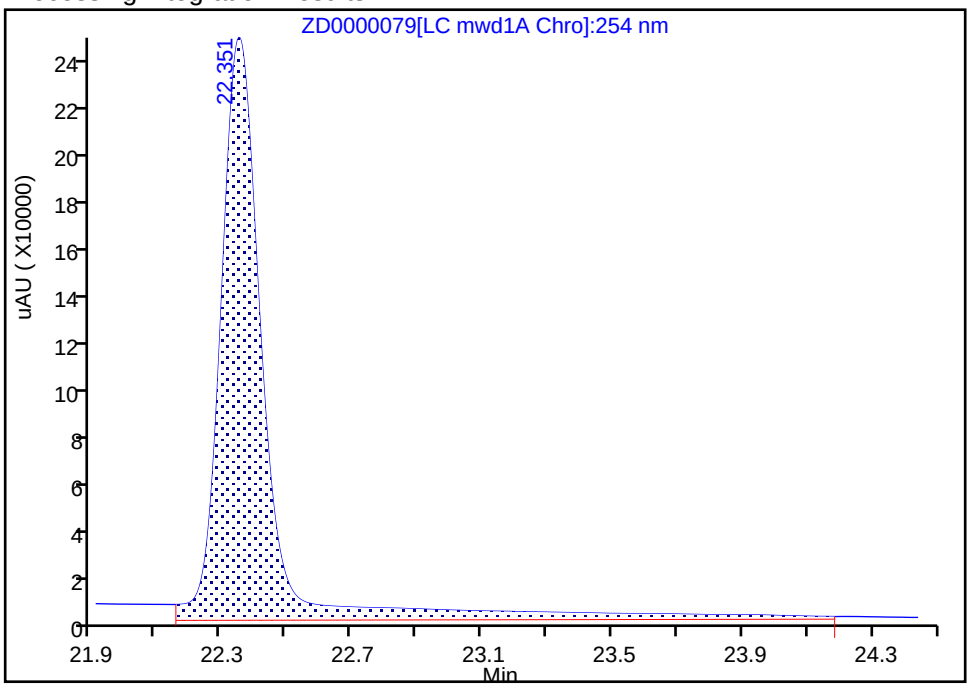
Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000079.D				
Injection Date:	03-May-2019 11:08:20	Instrument ID:	LC11		
Lims ID:	280-123009-B-5-A	Lab Sample ID:	320-123009-5		
Client ID:	SP-S22				
Operator ID:	AO	ALS Bottle#:	76	Worklist Smp#:	79
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

8 1,3,5-Trinitrobenzene, CAS: 99-35-4

Signal: 1

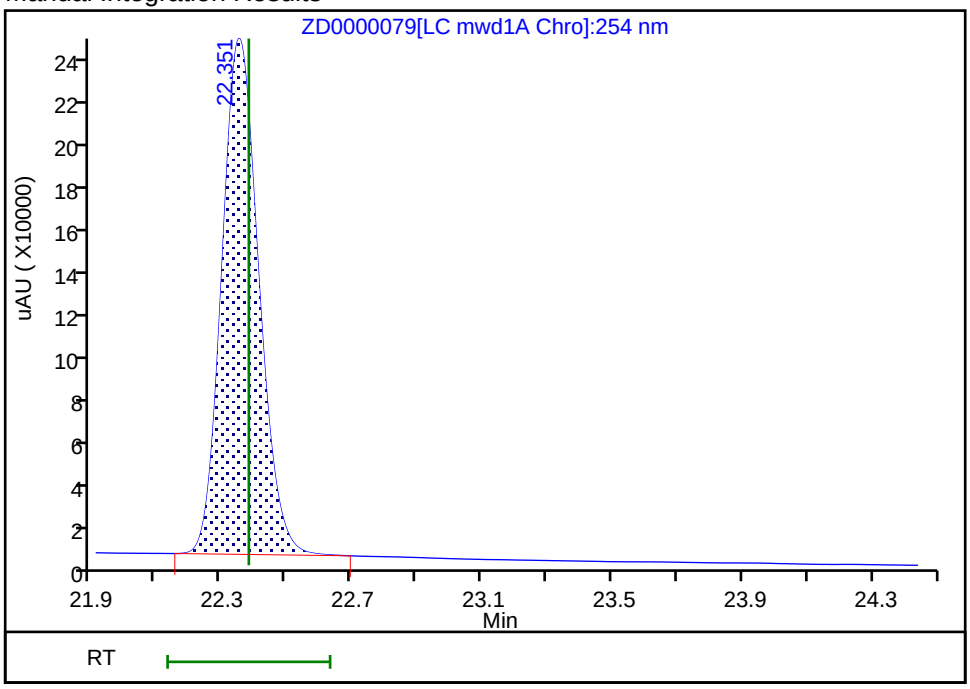
Processing Integration Results

RT: 22.35
Height: 238369
Amount: 1017.4988
Amount Units: ng/ml



Manual Integration Results

RT: 22.35
Height: 232287
Amount: 991.5372
Amount Units: ng/ml



Reviewer: ortizam, 03-May-2019 13:03:09

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

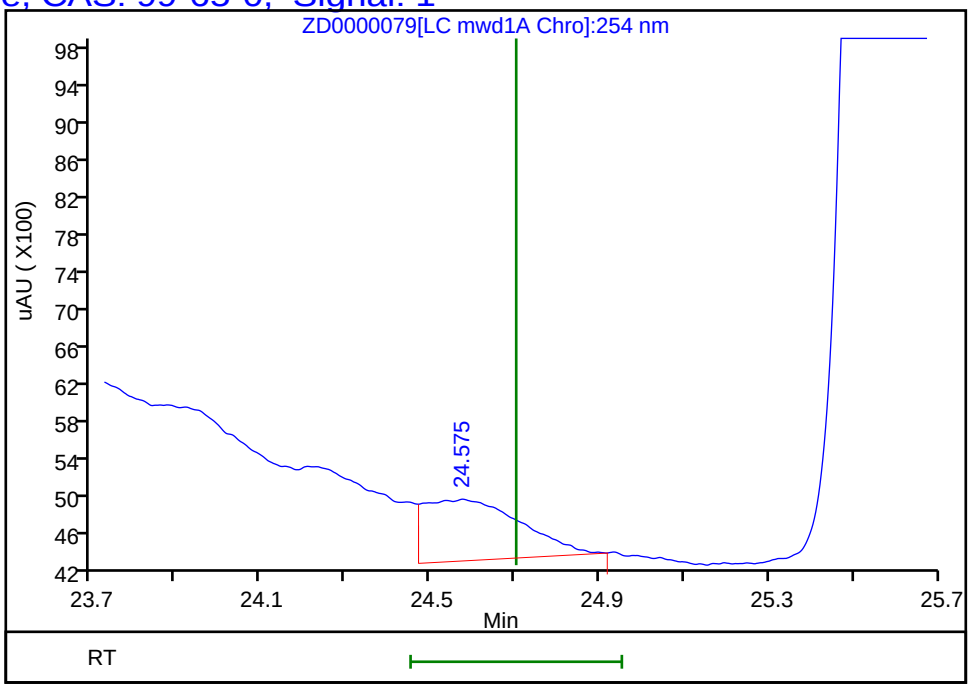
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000079.D				
Injection Date:	03-May-2019 11:08:20	Instrument ID:	LC11		
Lims ID:	280-123009-B-5-A	Lab Sample ID:	320-123009-5		
Client ID:	SP-S22				
Operator ID:	AO	ALS Bottle#:	76	Worklist Smp#:	79
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

9 1,3-Dinitrobenzene, CAS: 99-65-0, Signal: 1

RT: 24.57
Response: 660
Amount: 3.158201



Reviewer: ortizam, 03-May-2019 13:04:15
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

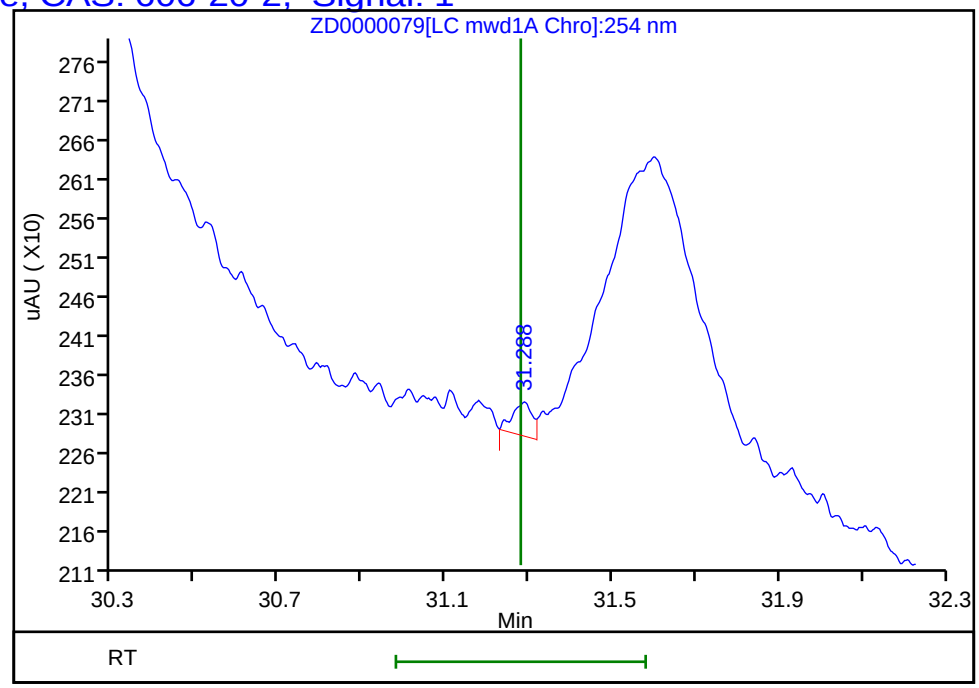
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000079.D				
Injection Date:	03-May-2019 11:08:20	Instrument ID:	LC11		
Lims ID:	280-123009-B-5-A	Lab Sample ID:	320-123009-5		
Client ID:	SP-S22				
Operator ID:	AO	ALS Bottle#:	76	Worklist Smp#:	79
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

18 2,6-Dinitrotoluene, CAS: 606-20-2, Signal: 1

RT: 31.29
Response: 44
Amount: 0.600002



Reviewer: ortizam, 03-May-2019 13:04:15
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

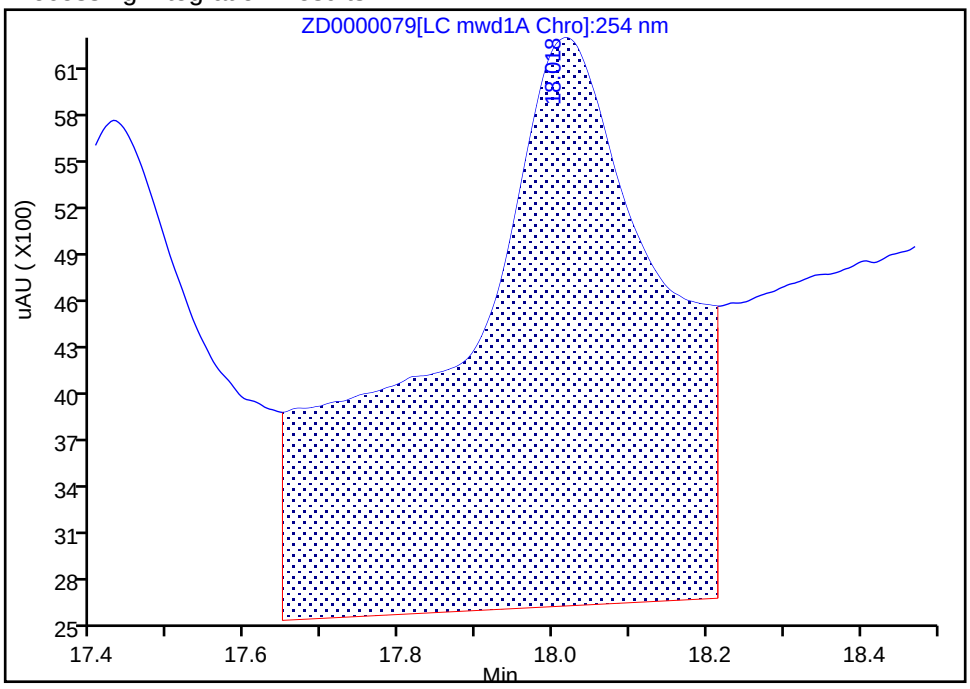
Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000079.D				
Injection Date:	03-May-2019 11:08:20	Instrument ID:	LC11		
Lims ID:	280-123009-B-5-A	Lab Sample ID:	320-123009-5		
Client ID:	SP-S22				
Operator ID:	AO	ALS Bottle#:	76	Worklist Smp#:	79
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

3 HMX, CAS: 2691-41-0

Signal: 1

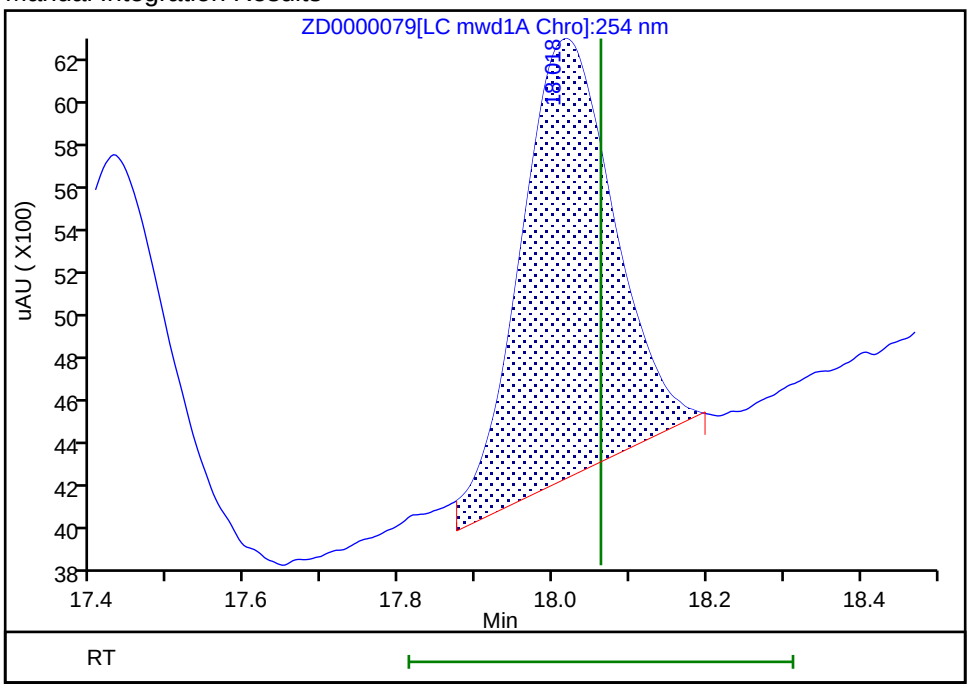
Processing Integration Results

RT: 18.02
Height: 3568
Amount: 44.239997
Amount Units: ng/ml



Manual Integration Results

RT: 18.02
Height: 1965
Amount: 24.364236
Amount Units: ng/ml



Reviewer: ortizam, 03-May-2019 13:02:43

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

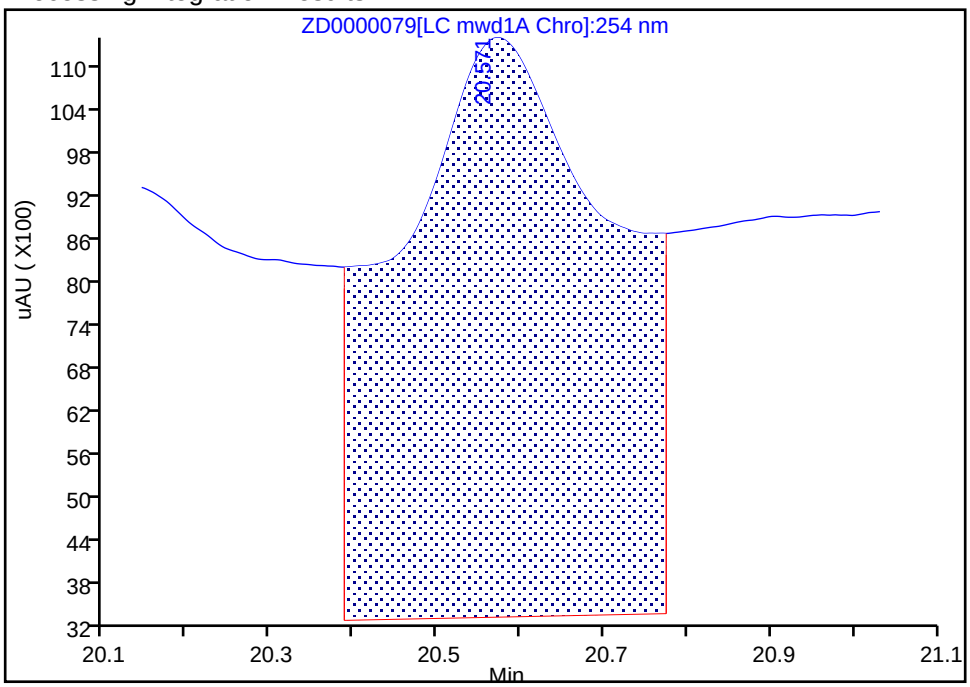
Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000079.D				
Injection Date:	03-May-2019 11:08:20	Instrument ID:	LC11		
Lims ID:	280-123009-B-5-A	Lab Sample ID:	320-123009-5		
Client ID:	SP-S22				
Operator ID:	AO	ALS Bottle#:	76	Worklist Smp#:	79
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

6 RDX, CAS: 121-82-4

Signal: 1

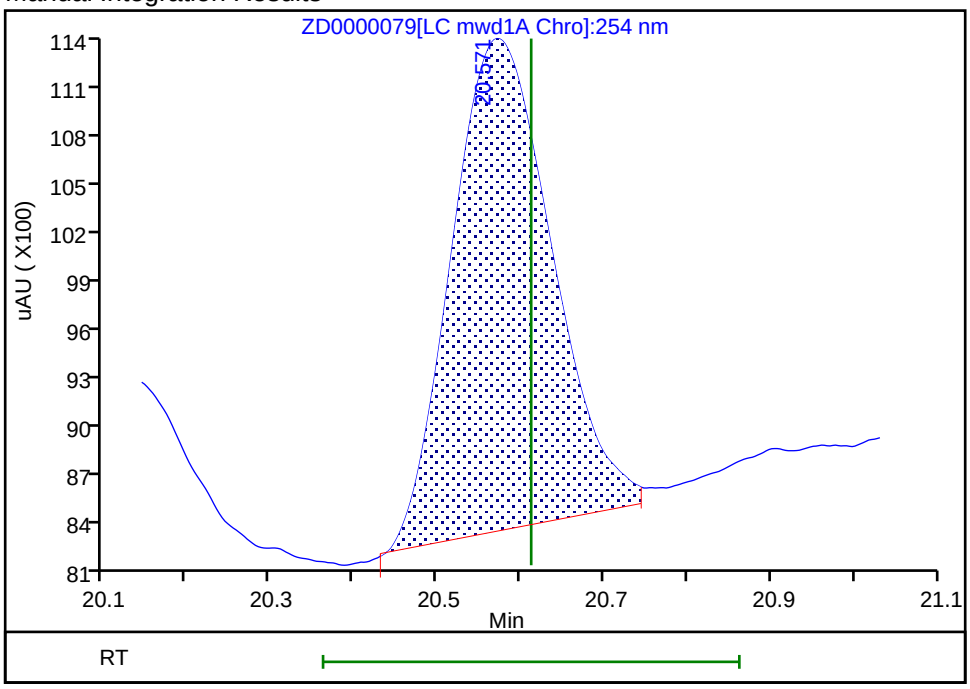
Processing Integration Results

RT: 20.57
Height: 8095
Amount: 81.702715
Amount Units: ng/ml



Manual Integration Results

RT: 20.57
Height: 2998
Amount: 30.258770
Amount Units: ng/ml



Reviewer: ortizam, 03-May-2019 13:02:55

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Client Sample ID: SP-S22 Lab Sample ID: 280-123009-5

Matrix: Water Lab File ID: U000071.D

Analysis Method: 8330A Date Collected: 04/24/2019 08:43

Extraction Method: 8330-Prep Date Extracted: 04/29/2019 06:59

Sample wt/vol: 991.9(mL) Date Analyzed: 05/24/2019 10:14

Con. Extract Vol.: 20(mL) Dilution Factor: 1

Injection Volume: 500(uL) GC Column: Zorbax CN ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 295993 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	86		79-111

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000071.D
Lims ID: 280-123009-B-5-A
Client ID: SP-S22
Sample Type: Client
Inject. Date: 24-May-2019 10:14:31 ALS Bottle#: 62 Worklist Smp#: 69
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 280-123009-b-5-a
Operator ID: AO Instrument ID: LC12

Method: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 24-May-2019 13:14:53 Calib Date: 15-May-2019 07:09:15
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0337

First Level Reviewer: cartiera Date: 24-May-2019 13:14:00

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
6 1,3-Dinitrobenzene						Ma
1	24.405	24.515	-0.110	351H	3.01	Ma
7 1,3,5-Trinitrobenzene						M
1	26.618	26.612	0.006	80423H	857.8	EM
13 RDX						
1	31.338	31.385	-0.047	1161H	20.5	
15 2,6-Dinitrotoluene						M
1	32.872	32.892	-0.020	417H	4.38	M
16 2-Amino-4,6-dinitrotoluene						
1	33.892	33.922	-0.030	15915H	78.7	
17 4-Amino-2,6-dinitrotoluene						
1	34.142	34.168	-0.026	142243	78.6	
$ 18 3,4-Dinitrotoluene						
1	34.802	34.822	-0.020	15088H	107.8	
19 2,4,6-Trinitrotoluene						
1	35.372	35.395	-0.023	63074H	304.6	
20 HMX						
1	36.222	36.235	-0.013	3133H	20.0	

QC Flag Legend

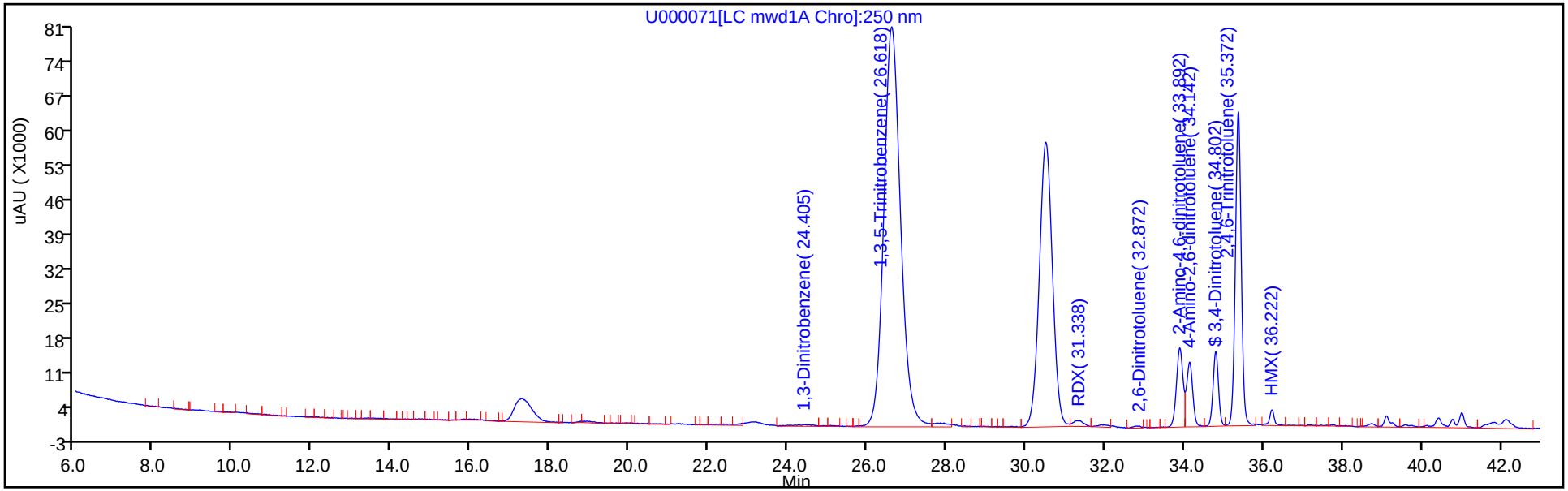
Processing Flags
E - Exceeded Maximum Amount
H - Response Measured by Height
Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 24-May-2019 13:15:03 Chrom Revision: 2.3 12-May-2019 16:28:34

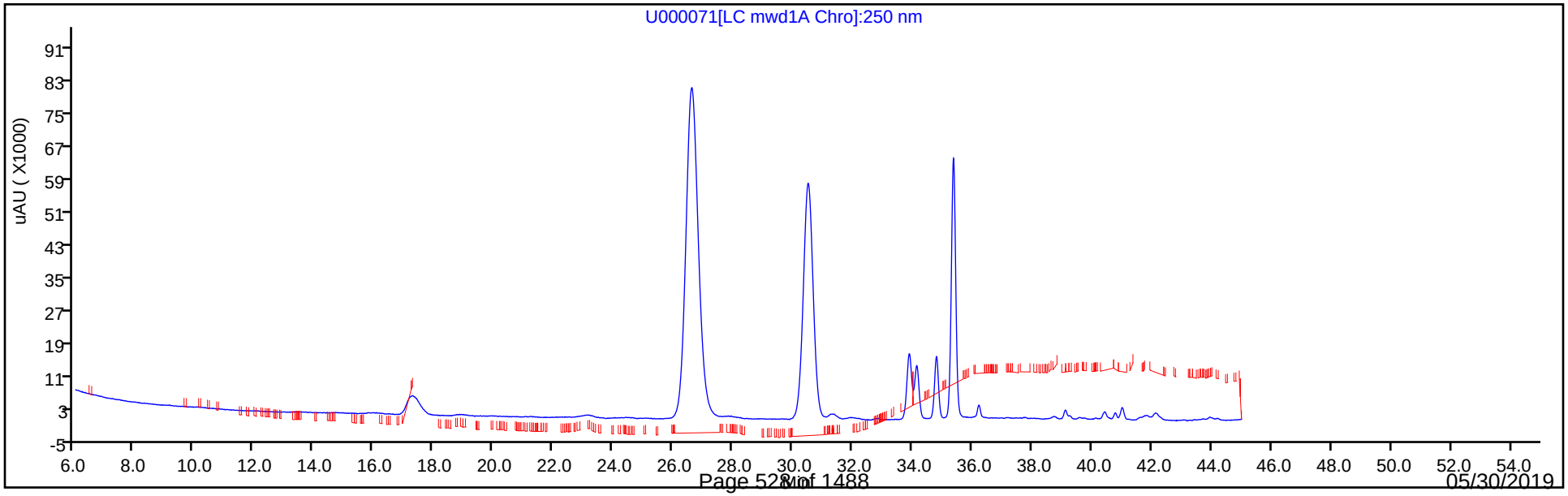
Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000071.D				
Injection Date:	24-May-2019 10:14:31	Instrument ID:	LC12	Operator ID:	AO
Lims ID:	280-123009-B-5-A	Lab Sample ID:	320-123009-5	Worklist Smp#:	69
Client ID:	SP-S22				
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	62
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



Eurofins TestAmerica, Sacramento
Recovery Report

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000071.D				
Lims ID:	280-123009-B-5-A				
Client ID:	SP-S22				
Sample Type:	Client				
Inject. Date:	24-May-2019 10:14:31	ALS Bottle#:	62	Worklist Smp#:	69
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-123009-b-5-a				
Operator ID:	AO	Instrument ID:	LC12		
Method:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\LC12_Conf_8330.m				
Limit Group:	LC 8330A ICAL				
Last Update:	24-May-2019 13:14:53	Calib Date:	15-May-2019 07:09:15		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D				
Column 1 :	Zorbax Cyano CN (4.60 mm)		Det: LC mwd1A, 250 nm		
Process Host:	CTX0337				
First Level Reviewer: cartiera		Date:	24-May-2019 13:14:00		

Compound	Amount Added	Amount Recovered	% Rec.
$ 18 3,4-Dinitrotoluene	125.0	107.8	86.20

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

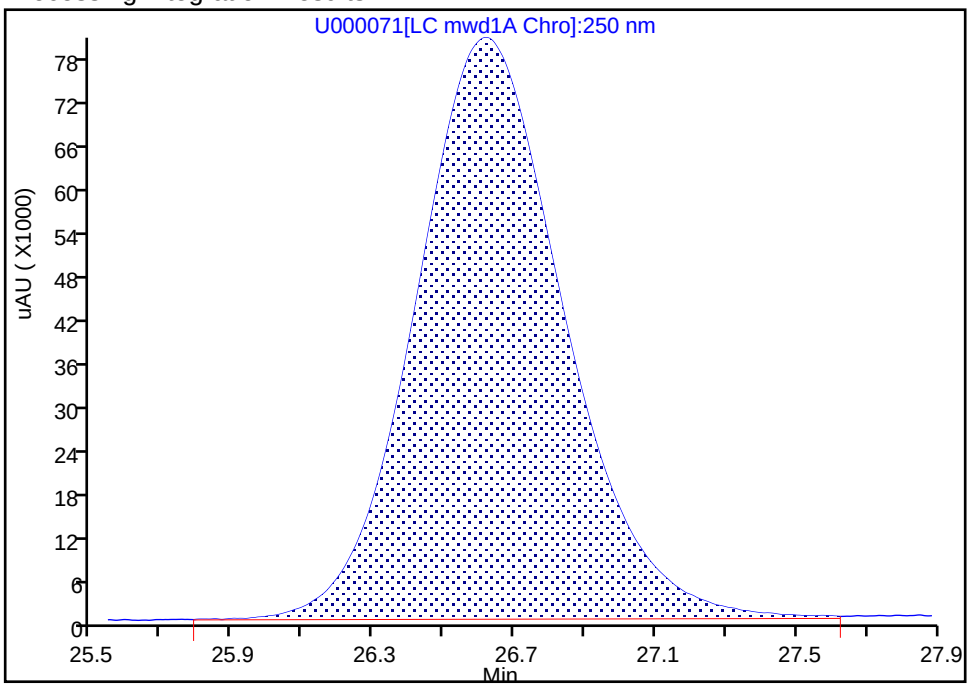
Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000071.D				
Injection Date:	24-May-2019 10:14:31	Instrument ID:	LC12		
Lims ID:	280-123009-B-5-A	Lab Sample ID:	320-123009-5		
Client ID:	SP-S22				
Operator ID:	AO	ALS Bottle#:	62	Worklist Smp#:	69
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

7 1,3,5-Trinitrobenzene, CAS: 99-35-4

Signal: 1

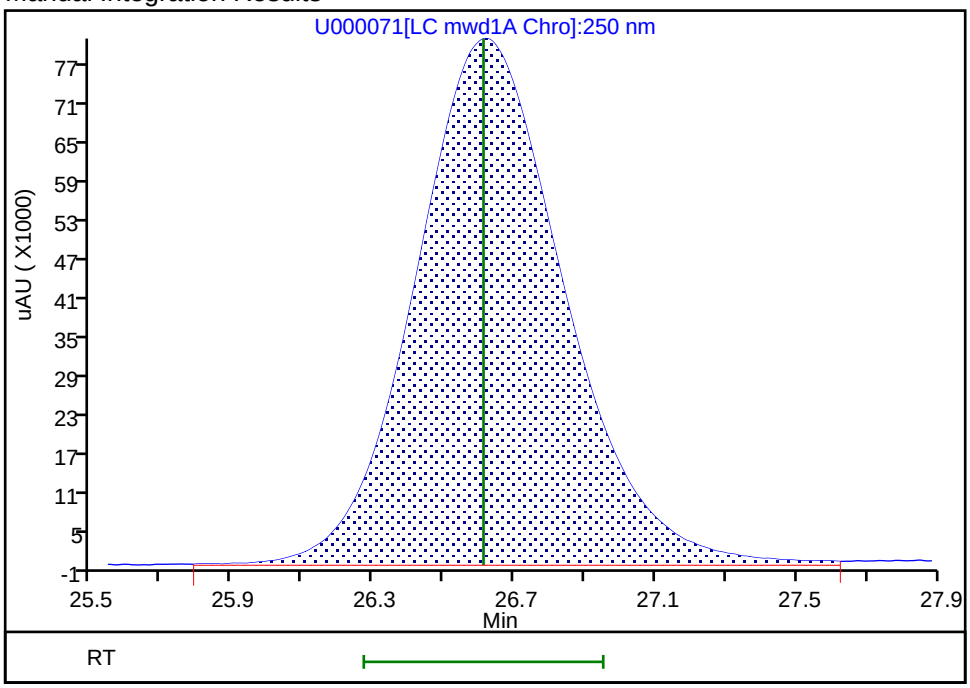
Processing Integration Results

RT: 26.62
Height: 80226
Amount: 855.7388
Amount Units: ng/ml



Manual Integration Results

RT: 26.62
Height: 80423
Amount: 857.8401
Amount Units: ng/ml



Reviewer: cartiera, 24-May-2019 13:12:20

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

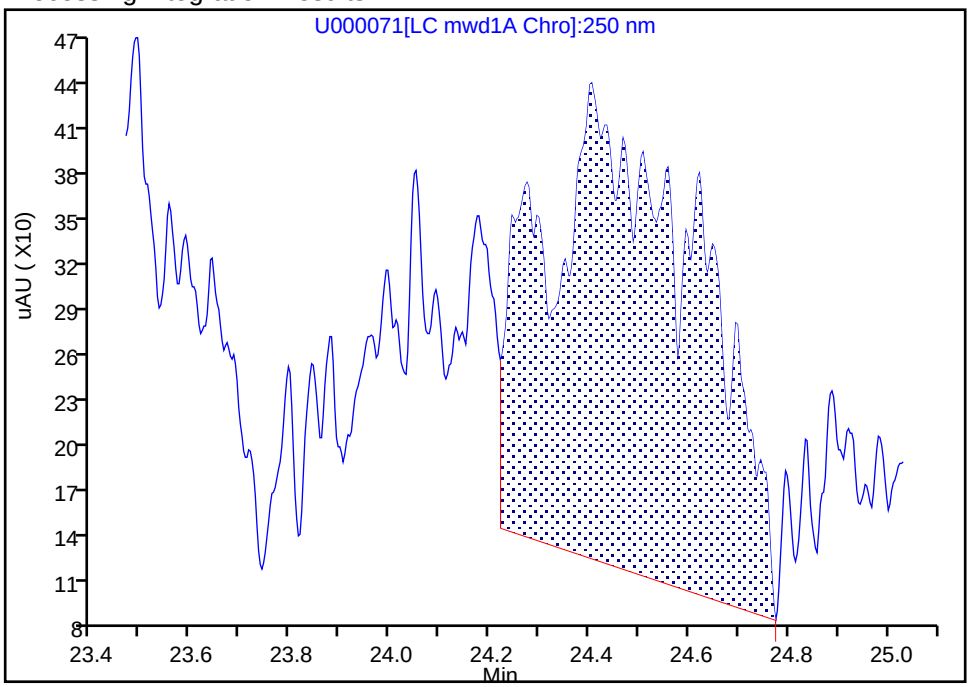
Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000071.D				
Injection Date:	24-May-2019 10:14:31	Instrument ID:	LC12		
Lims ID:	280-123009-B-5-A	Lab Sample ID:	320-123009-5		
Client ID:	SP-S22				
Operator ID:	AO	ALS Bottle#:	62	Worklist Smp#:	69
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

6 1,3-Dinitrobenzene, CAS: 99-65-0

Signal: 1

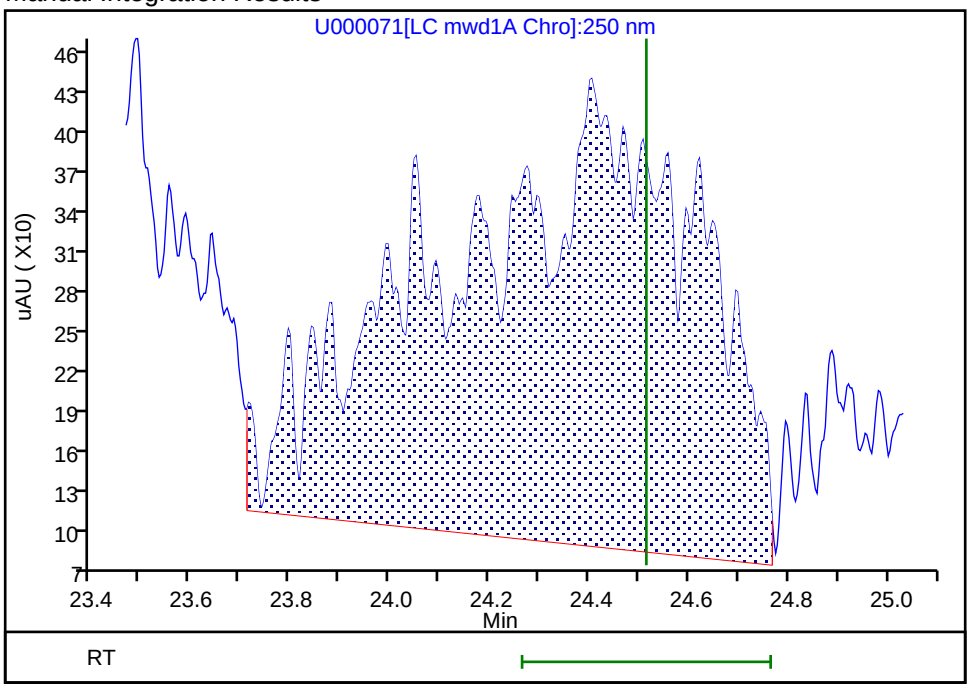
Processing Integration Results

RT: 24.41
Height: 316
Amount: 2.706108
Amount Units: ng/ml



Manual Integration Results

RT: 24.41
Height: 351
Amount: 3.005836
Amount Units: ng/ml



Reviewer: cartiera, 24-May-2019 13:11:59

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

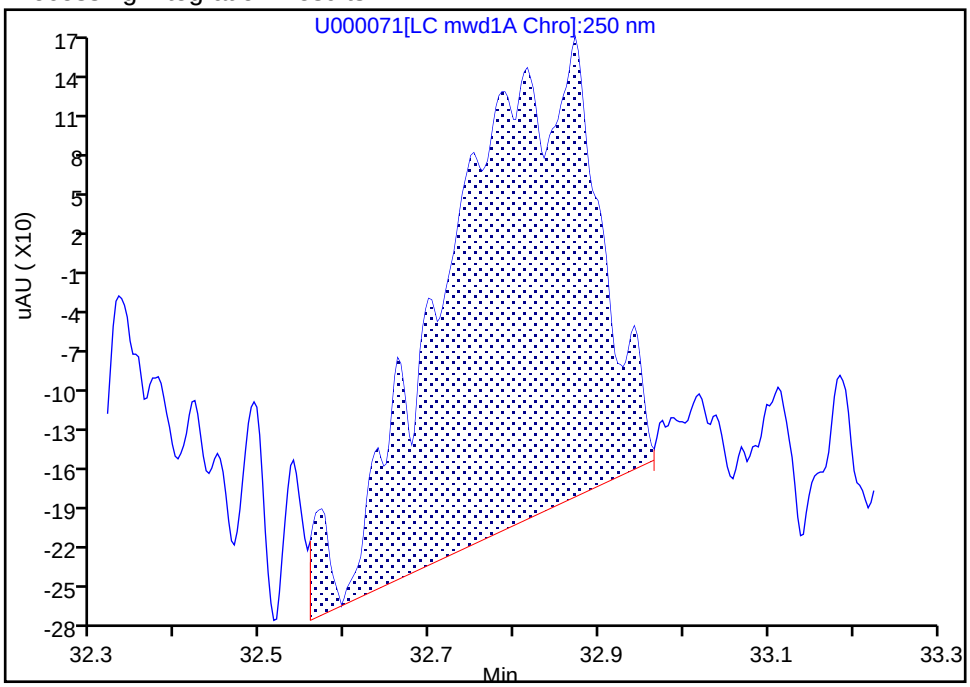
Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000071.D				
Injection Date:	24-May-2019 10:14:31	Instrument ID:	LC12		
Lims ID:	280-123009-B-5-A	Lab Sample ID:	320-123009-5		
Client ID:	SP-S22				
Operator ID:	AO	ALS Bottle#:	62	Worklist Smp#:	69
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

15 2,6-Dinitrotoluene, CAS: 606-20-2

Signal: 1

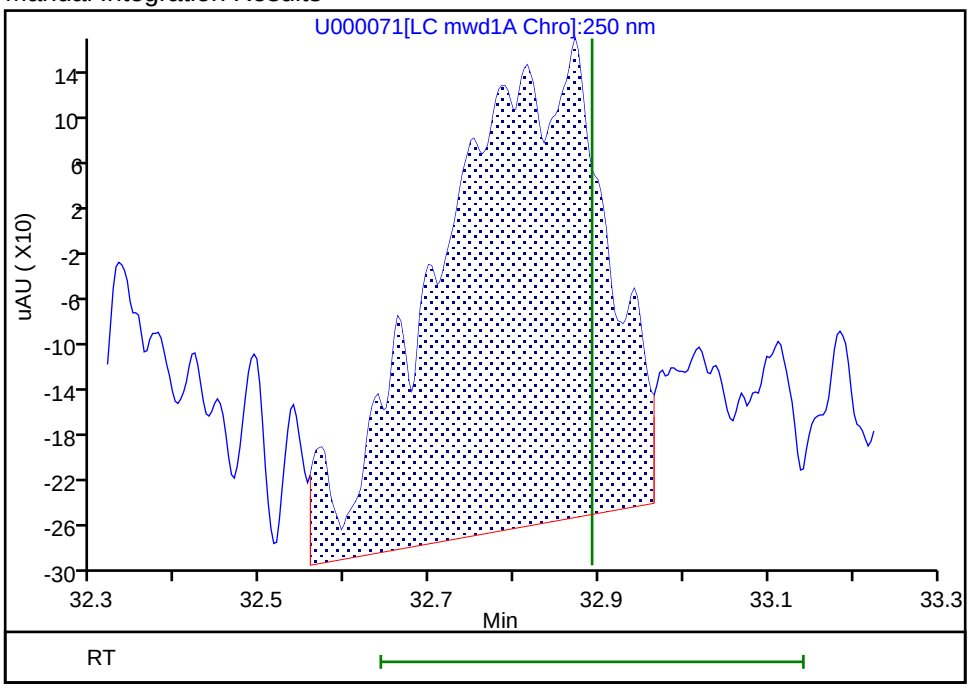
Processing Integration Results

RT: 32.82
Height: 340
Amount: 3.574631
Amount Units: ng/ml



Manual Integration Results

RT: 32.87
Height: 417
Amount: 4.384180
Amount Units: ng/ml



Reviewer: cartiera, 24-May-2019 13:13:36

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

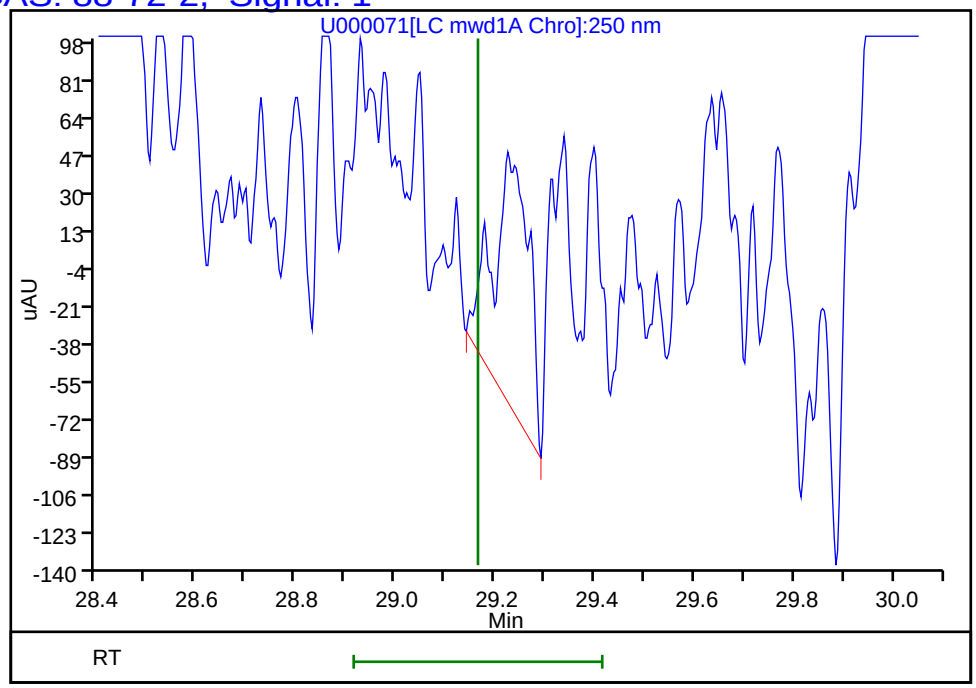
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000071.D				
Injection Date:	24-May-2019 10:14:31	Instrument ID:	LC12		
Lims ID:	280-123009-B-5-A	Lab Sample ID:	320-123009-5		
Client ID:	SP-S22				
Operator ID:	AO	ALS Bottle#:	62	Worklist Smp#:	69
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

10 o-Nitrotoluene, CAS: 88-72-2, Signal: 1

RT: 29.23
Response: 110
Amount: 1.548062



Reviewer: cartiera, 24-May-2019 13:14:00
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

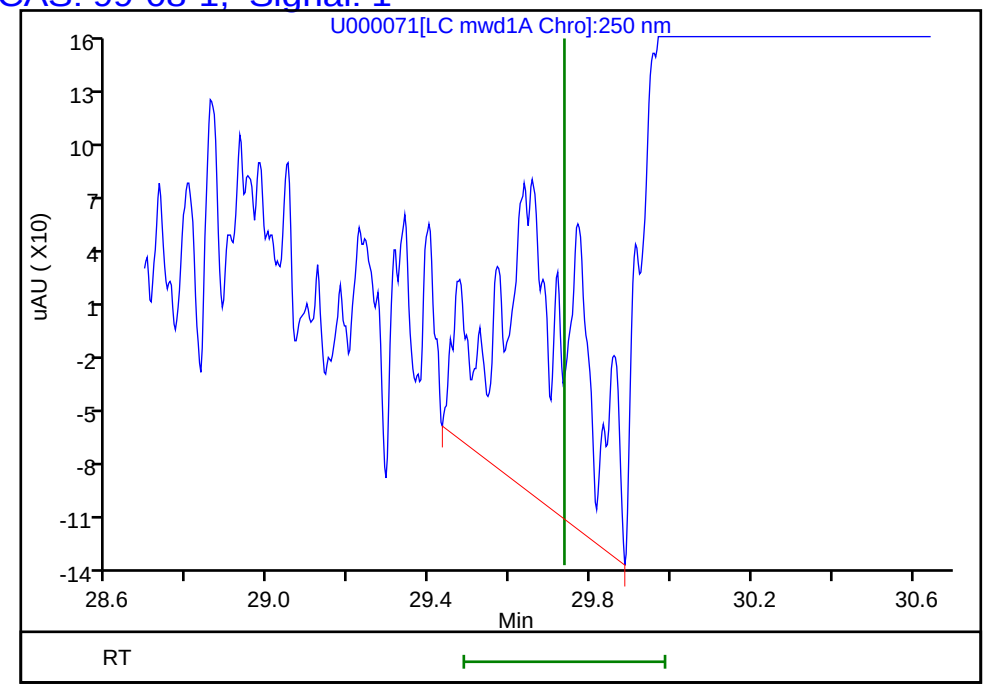
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000071.D				
Injection Date:	24-May-2019 10:14:31	Instrument ID:	LC12		
Lims ID:	280-123009-B-5-A	Lab Sample ID:	320-123009-5		
Client ID:	SP-S22				
Operator ID:	AO	ALS Bottle#:	62	Worklist Smp#:	69
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

11 m-Nitrotoluene, CAS: 99-08-1, Signal: 1

RT: 29.66
Response: 169
Amount: 1.698800



Reviewer: cartiera, 24-May-2019 13:14:00
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

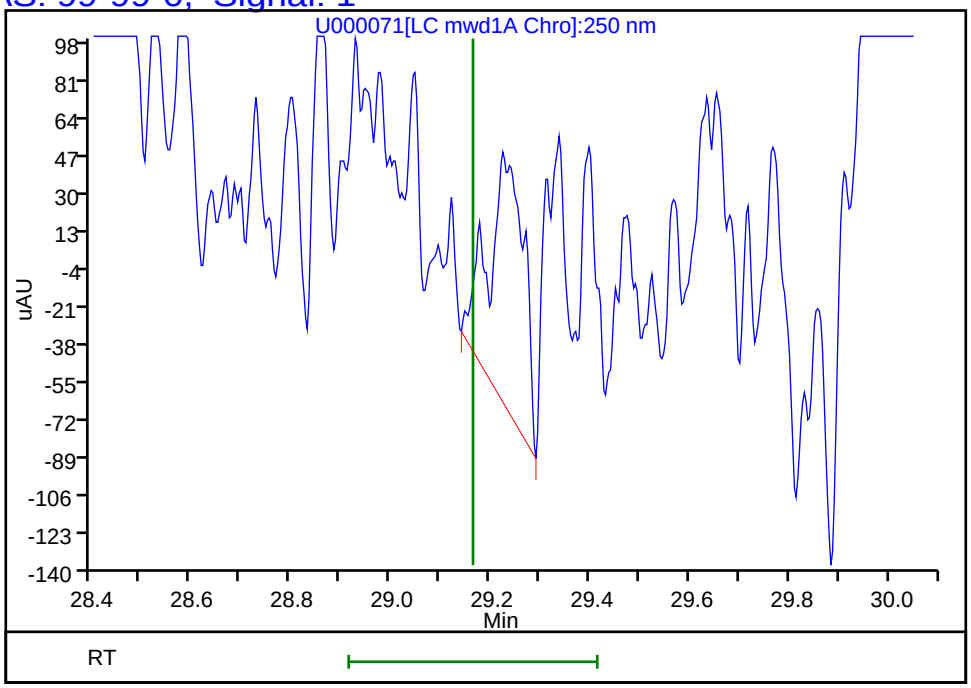
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000071.D				
Injection Date:	24-May-2019 10:14:31	Instrument ID:	LC12		
Lims ID:	280-123009-B-5-A	Lab Sample ID:	320-123009-5		
Client ID:	SP-S22				
Operator ID:	AO	ALS Bottle#:	62	Worklist Smp#:	69
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

9 p-Nitrotoluene, CAS: 99-99-0, Signal: 1

RT: 29.23
Response: 110
Amount: 1.548062



Reviewer: cartiera, 24-May-2019 13:14:00
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

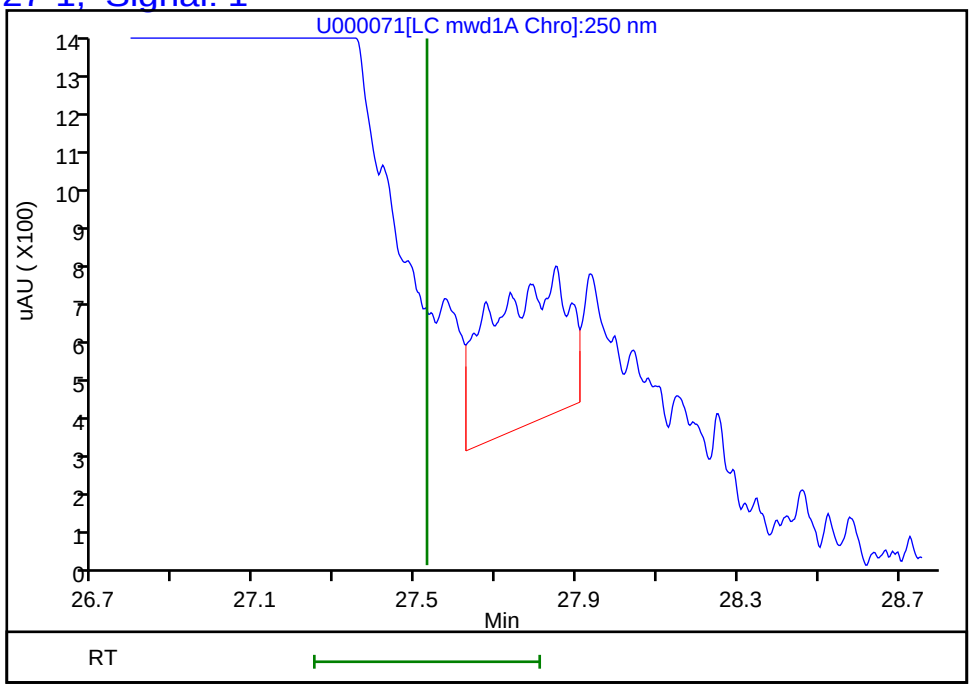
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000071.D				
Injection Date:	24-May-2019 10:14:31	Instrument ID:	LC12		
Lims ID:	280-123009-B-5-A	Lab Sample ID:	320-123009-5		
Client ID:	SP-S22				
Operator ID:	AO	ALS Bottle#:	62	Worklist Smp#:	69
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

8 MNX, CAS: 5755-27-1, Signal: 1

RT: 27.68
Response: 363
Amount: 5.576488



Reviewer: cartiera, 24-May-2019 13:14:00
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

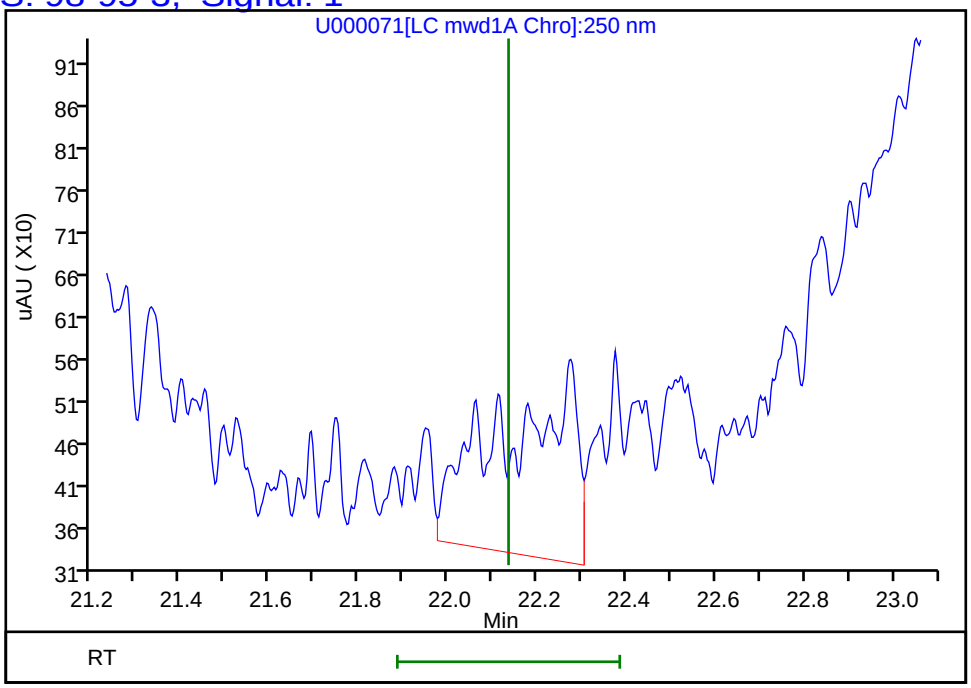
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000071.D				
Injection Date:	24-May-2019 10:14:31	Instrument ID:	LC12		
Lims ID:	280-123009-B-5-A	Lab Sample ID:	320-123009-5		
Client ID:	SP-S22				
Operator ID:	AO	ALS Bottle#:	62	Worklist Smp#:	69
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

3 Nitrobenzene, CAS: 98-95-3, Signal: 1

RT: 22.06
Response: 174
Amount: 3.064683



Reviewer: cartiera, 24-May-2019 13:14:00
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

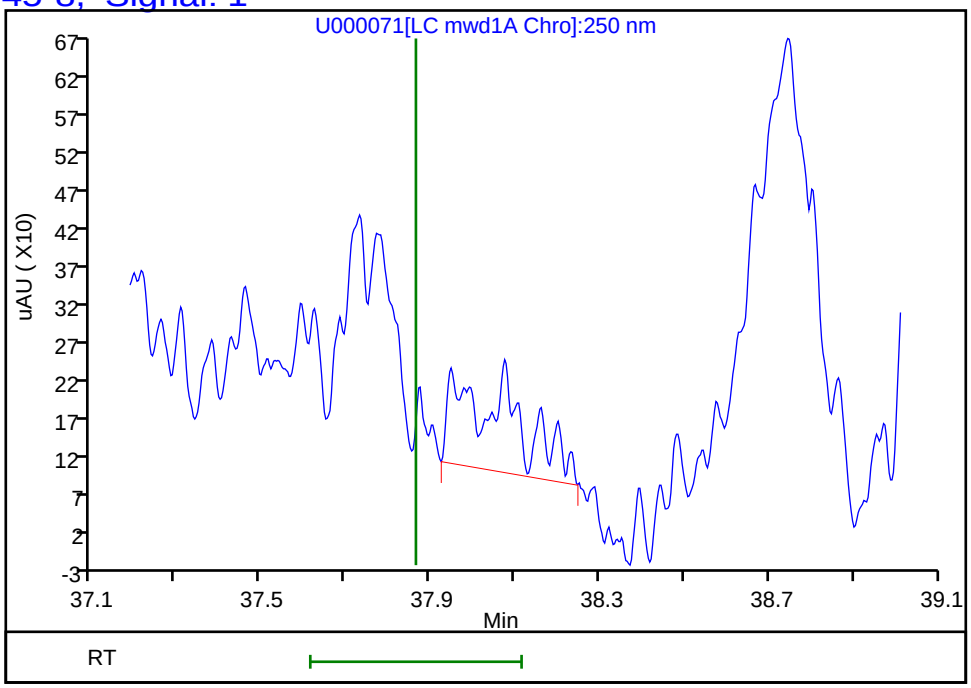
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000071.D				
Injection Date:	24-May-2019 10:14:31	Instrument ID:	LC12		
Lims ID:	280-123009-B-5-A	Lab Sample ID:	320-123009-5		
Client ID:	SP-S22				
Operator ID:	AO	ALS Bottle#:	62	Worklist Smp#:	69
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

22 Tetryl, CAS: 479-45-8, Signal: 1

RT: 37.95
Response: 119
Amount: 0.506004



Reviewer: cartiera, 24-May-2019 13:14:00
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Client Sample ID: SP-S22 DL Lab Sample ID: 280-123009-5 DL

Matrix: Water Lab File ID: U000073.D

Analysis Method: 8330A Date Collected: 04/24/2019 08:43

Extraction Method: 8330-Prep Date Extracted: 04/29/2019 06:59

Sample wt/vol: 991.9(mL) Date Analyzed: 05/24/2019 12:09

Con. Extract Vol.: 20(mL) Dilution Factor: 5

Injection Volume: 500(uL) GC Column: Zorbax CN ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 295993 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	93		79-111

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000073.D
Lims ID: 280-123009-B-5-A
Client ID: SP-S22
Sample Type: Client
Inject. Date: 24-May-2019 12:09:43 ALS Bottle#: 64 Worklist Smp#: 71
Injection Vol: 500.0 ul Dil. Factor: 5.0000
Sample Info: 280-123009-5 5X
Operator ID: AO Instrument ID: LC12

Method: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 24-May-2019 13:14:53 Calib Date: 15-May-2019 07:09:15
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0337

First Level Reviewer: cartiera Date: 24-May-2019 13:14:53

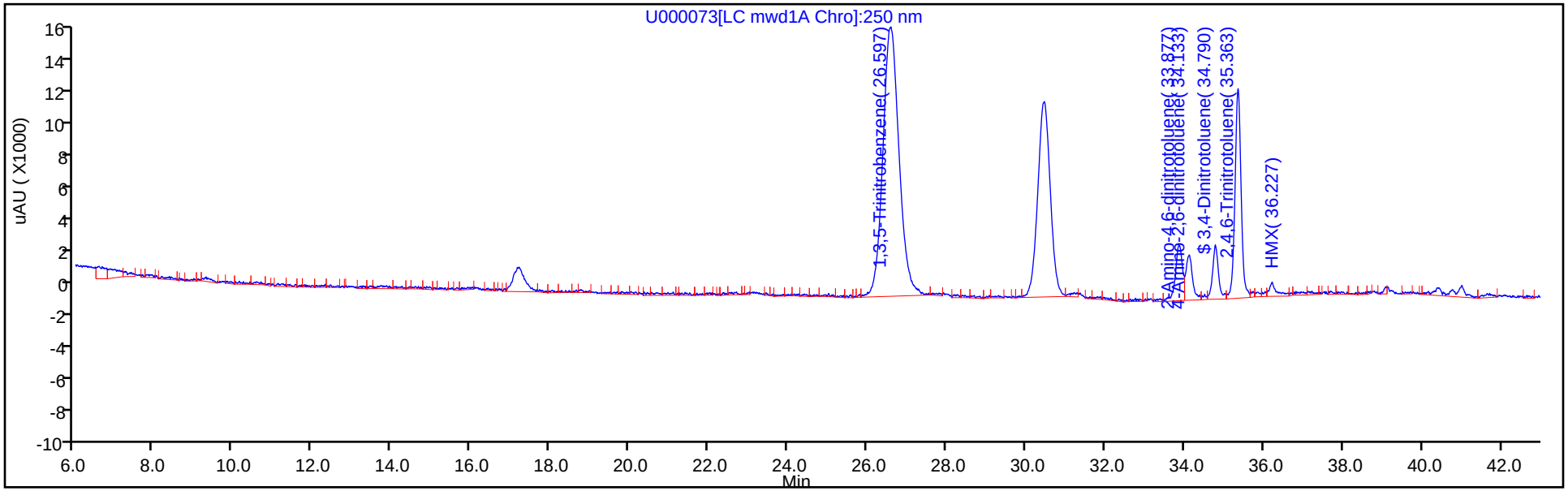
Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
7 1,3,5-Trinitrobenzene						
1	26.597	26.612	-0.015	16257	173.4	H
16 2-Amino-4,6-dinitrotoluene						
1	33.877	33.922	-0.045	3357	16.6	H
17 4-Amino-2,6-dinitrotoluene						
1	34.133	34.168	-0.035	31694	17.2	
$ 18 3,4-Dinitrotoluene						
1	34.790	34.822	-0.032	3269	23.3	H
19 2,4,6-Trinitrotoluene						
1	35.363	35.395	-0.032	12637	61.0	H
20 HMX						
1	36.227	36.235	-0.008	856	5.45	H

Report Date: 24-May-2019 13:15:09 Chrom Revision: 2.3 12-May-2019 16:28:34

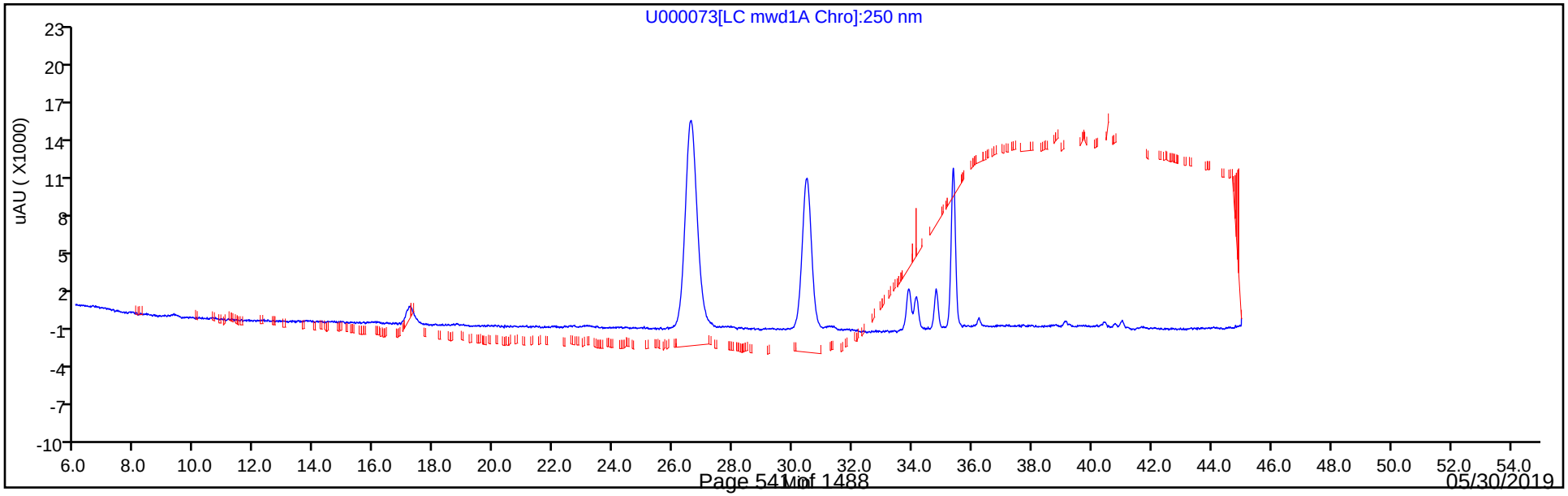
Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000073.D				
Injection Date:	24-May-2019 12:09:43	Instrument ID:	LC12	Operator ID:	AO
Lims ID:	280-123009-B-5-A	Lab Sample ID:	320-123009-5	Worklist Smp#:	71
Client ID:	SP-S22				
Injection Vol:	500.0 ul	Dil. Factor:	5.0000	ALS Bottle#:	64
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



Eurofins TestAmerica, Sacramento
Recovery Report

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000073.D				
Lims ID:	280-123009-B-5-A				
Client ID:	SP-S22				
Sample Type:	Client				
Inject. Date:	24-May-2019 12:09:43	ALS Bottle#:	64	Worklist Smp#:	71
Injection Vol:	500.0 ul	Dil. Factor:	5.0000		
Sample Info:	280-123009-5 5X				
Operator ID:	AO	Instrument ID:	LC12		
Method:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\LC12_Conf_8330.m				
Limit Group:	LC 8330A ICAL				
Last Update:	24-May-2019 13:14:53	Calib Date:	15-May-2019 07:09:15		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D				
Column 1 :	Zorbax Cyano CN (4.60 mm)		Det: LC mwd1A, 250 nm		
Process Host:	CTX0337				

First Level Reviewer: cartiera Date: 24-May-2019 13:14:53

Compound	Amount Added	Amount Recovered	% Rec.
$ 18 3,4-Dinitrotoluene	125.0	23.3	93.39

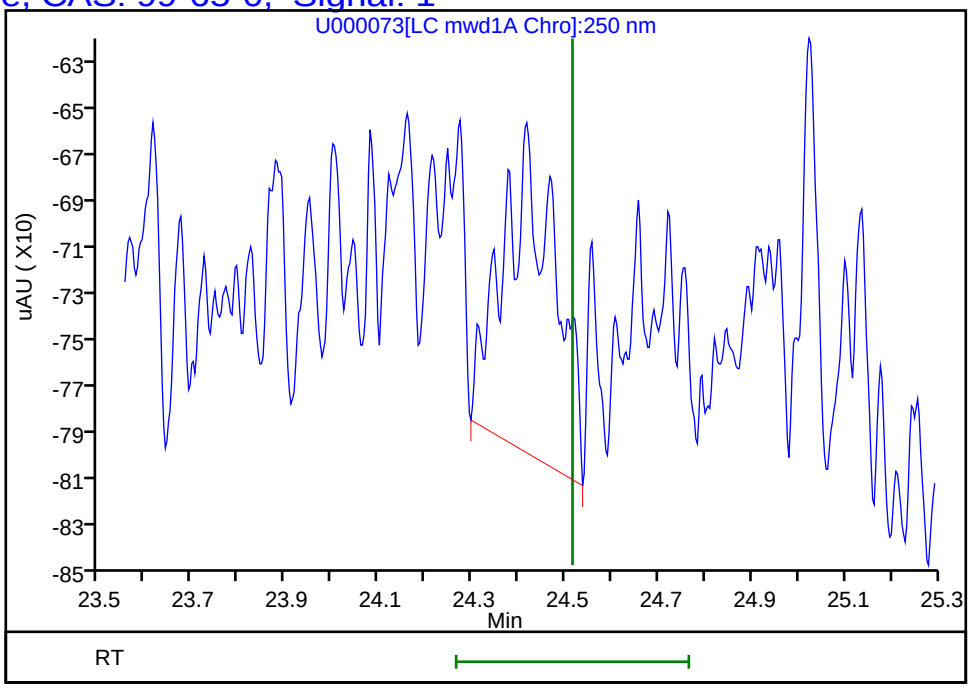
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000073.D				
Injection Date:	24-May-2019 12:09:43	Instrument ID:	LC12		
Lims ID:	280-123009-B-5-A	Lab Sample ID:	320-123009-5		
Client ID:	SP-S22				
Operator ID:	AO	ALS Bottle#:	64	Worklist Smp#:	71
Injection Vol:	500.0 ul	Dil. Factor:	5.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

6 1,3-Dinitrobenzene, CAS: 99-65-0, Signal: 1

RT: 24.42
Response: 141
Amount: 1.207472



Reviewer: cartiera, 24-May-2019 13:14:53
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

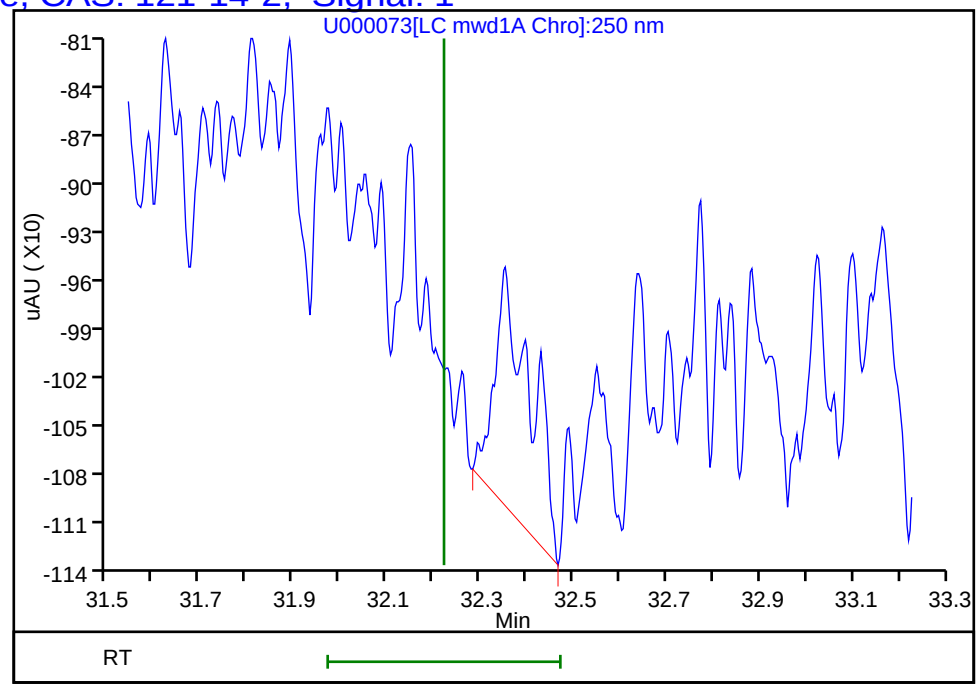
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000073.D				
Injection Date:	24-May-2019 12:09:43	Instrument ID:	LC12		
Lims ID:	280-123009-B-5-A	Lab Sample ID:	320-123009-5		
Client ID:	SP-S22				
Operator ID:	AO	ALS Bottle#:	64	Worklist Smp#:	71
Injection Vol:	500.0 ul	Dil. Factor:	5.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

14 2,4-Dinitrotoluene, CAS: 121-14-2, Signal: 1

RT: 32.35
Response: 144
Amount: 1.142069



Reviewer: cartiera, 24-May-2019 13:14:53
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

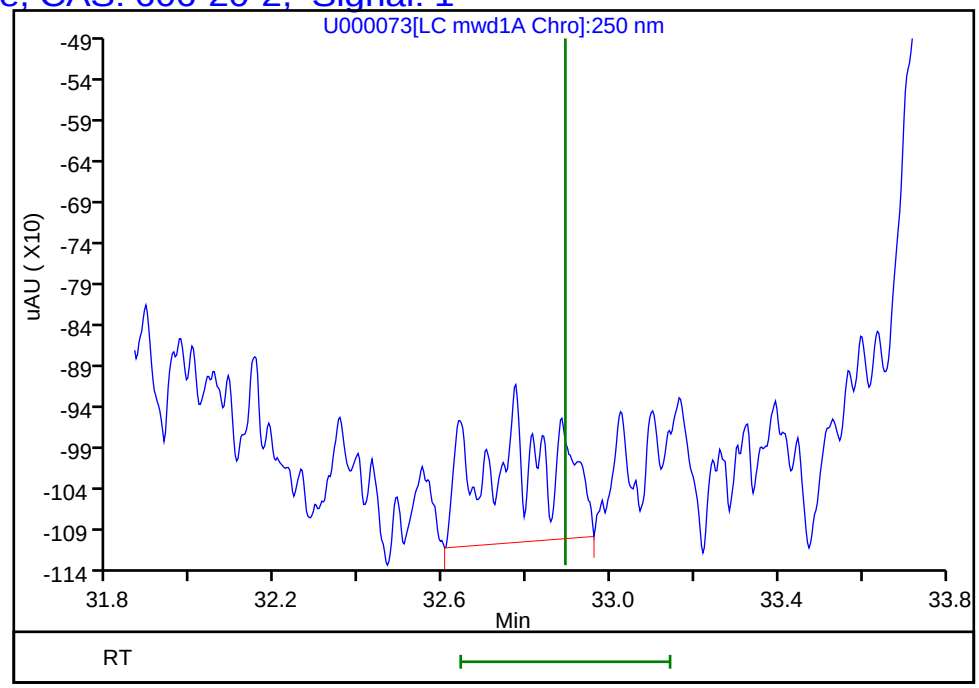
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000073.D				
Injection Date:	24-May-2019 12:09:43	Instrument ID:	LC12		
Lims ID:	280-123009-B-5-A	Lab Sample ID:	320-123009-5		
Client ID:	SP-S22				
Operator ID:	AO	ALS Bottle#:	64	Worklist Smp#:	71
Injection Vol:	500.0 ul	Dil. Factor:	5.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

15 2,6-Dinitrotoluene, CAS: 606-20-2, Signal: 1

RT: 32.77
Response: 192
Amount: 2.018615



Reviewer: cartiera, 24-May-2019 13:14:53
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

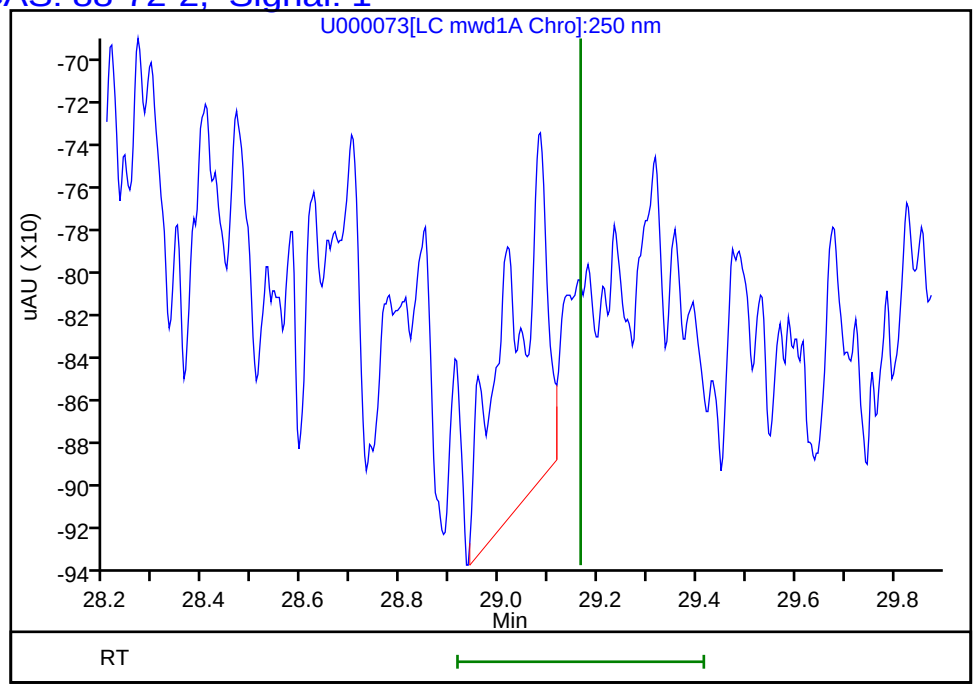
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000073.D				
Injection Date:	24-May-2019 12:09:43	Instrument ID:	LC12		
Lims ID:	280-123009-B-5-A	Lab Sample ID:	320-123009-5		
Client ID:	SP-S22				
Operator ID:	AO	ALS Bottle#:	64	Worklist Smp#:	71
Injection Vol:	500.0 ul	Dil. Factor:	5.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

10 o-Nitrotoluene, CAS: 88-72-2, Signal: 1

RT: 29.02
Response: 124
Amount: 1.745088



Reviewer: cartiera, 24-May-2019 13:14:53
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

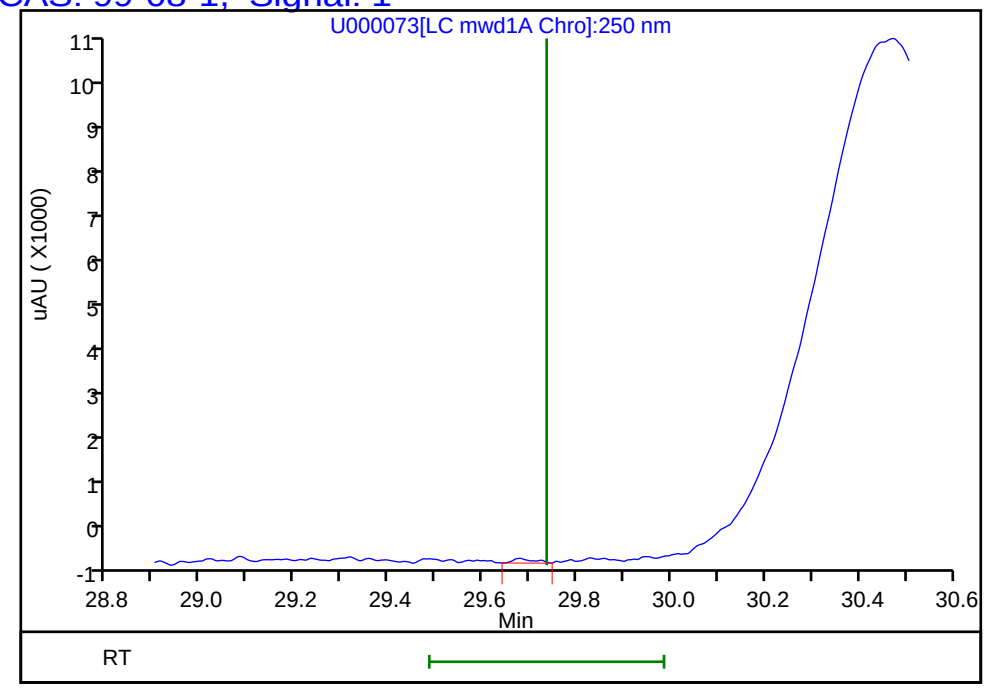
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000073.D				
Injection Date:	24-May-2019 12:09:43	Instrument ID:	LC12		
Lims ID:	280-123009-B-5-A	Lab Sample ID:	320-123009-5		
Client ID:	SP-S22				
Operator ID:	AO	ALS Bottle#:	64	Worklist Smp#:	71
Injection Vol:	500.0 ul	Dil. Factor:	5.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

11 m-Nitrotoluene, CAS: 99-08-1, Signal: 1

RT: 29.68
Response: 106
Amount: 0.216041



Reviewer: cartiera, 24-May-2019 13:14:53

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

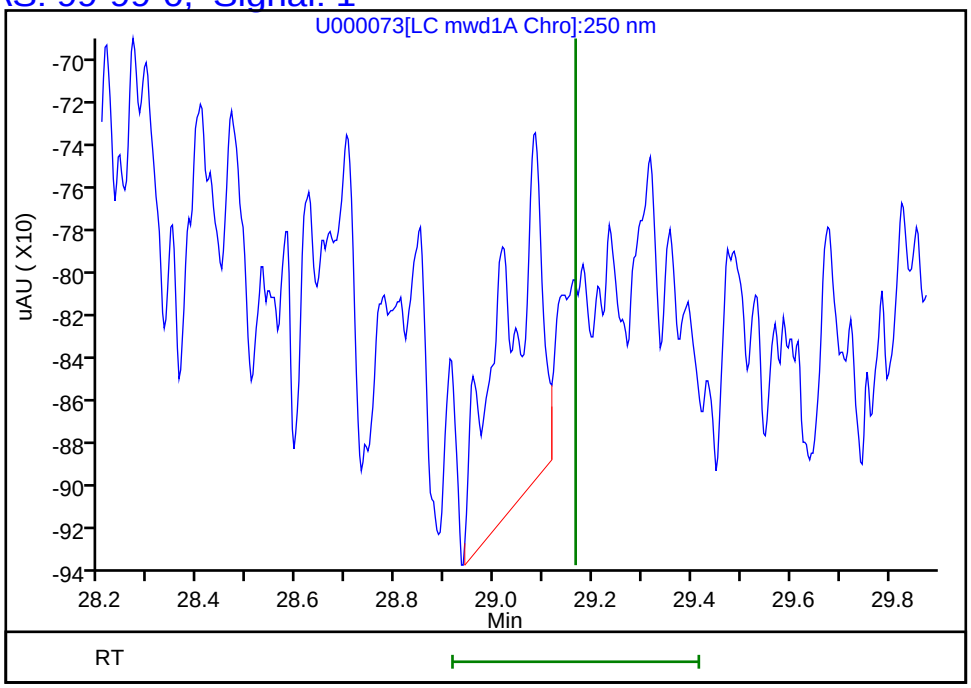
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000073.D				
Injection Date:	24-May-2019 12:09:43	Instrument ID:	LC12		
Lims ID:	280-123009-B-5-A	Lab Sample ID:	320-123009-5		
Client ID:	SP-S22				
Operator ID:	AO	ALS Bottle#:	64	Worklist Smp#:	71
Injection Vol:	500.0 ul	Dil. Factor:	5.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

9 p-Nitrotoluene, CAS: 99-99-0, Signal: 1

RT: 29.02
Response: 124
Amount: 1.745088



Reviewer: cartiera, 24-May-2019 13:14:53
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

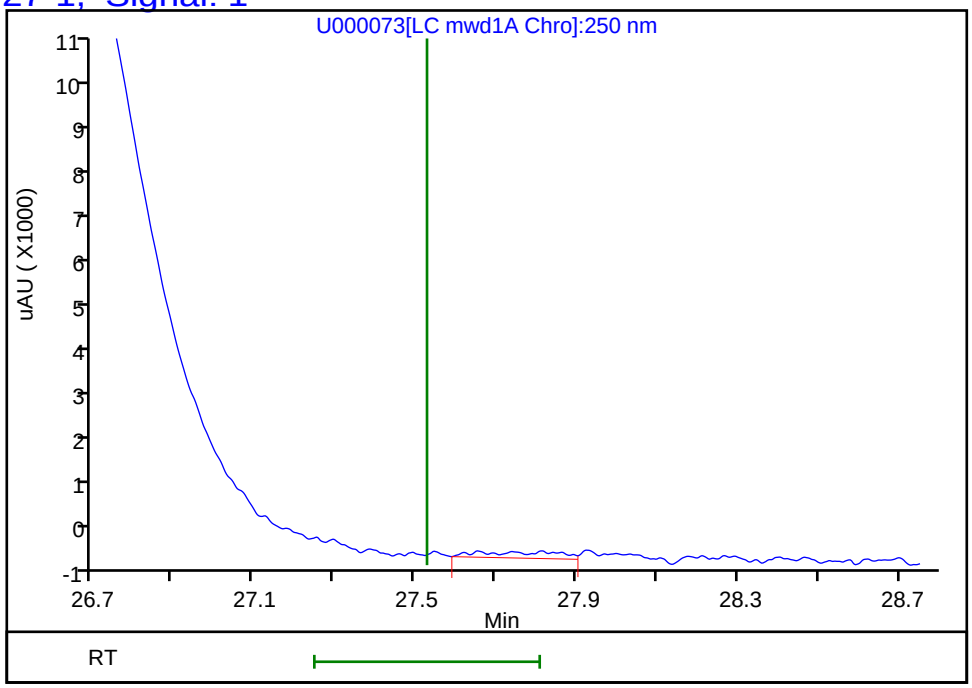
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000073.D				
Injection Date:	24-May-2019 12:09:43	Instrument ID:	LC12		
Lims ID:	280-123009-B-5-A	Lab Sample ID:	320-123009-5		
Client ID:	SP-S22				
Operator ID:	AO	ALS Bottle#:	64	Worklist Smp#:	71
Injection Vol:	500.0 ul	Dil. Factor:	5.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

8 MNX, CAS: 5755-27-1, Signal: 1

RT: 27.65
Response: 131
Amount: 2.012452



Reviewer: cartiera, 24-May-2019 13:14:53
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

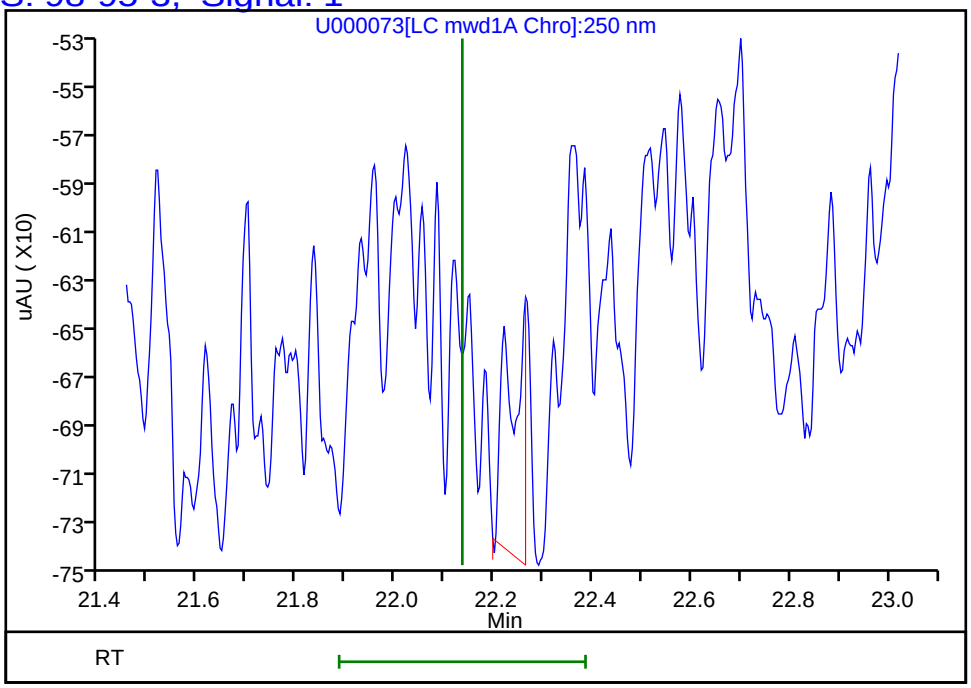
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000073.D				
Injection Date:	24-May-2019 12:09:43	Instrument ID:	LC12		
Lims ID:	280-123009-B-5-A	Lab Sample ID:	320-123009-5		
Client ID:	SP-S22				
Operator ID:	AO	ALS Bottle#:	64	Worklist Smp#:	71
Injection Vol:	500.0 ul	Dil. Factor:	5.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

3 Nitrobenzene, CAS: 98-95-3, Signal: 1

RT: 22.26
Response: 110
Amount: 1.937443



Reviewer: cartiera, 24-May-2019 13:14:53
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

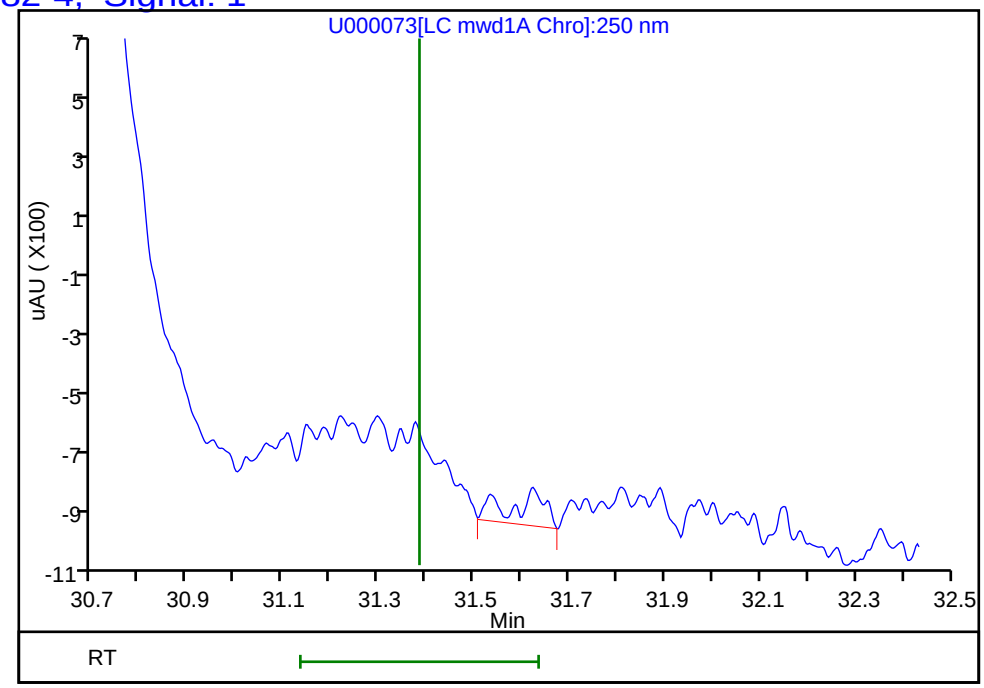
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000073.D				
Injection Date:	24-May-2019 12:09:43	Instrument ID:	LC12		
Lims ID:	280-123009-B-5-A	Lab Sample ID:	320-123009-5		
Client ID:	SP-S22				
Operator ID:	AO	ALS Bottle#:	64	Worklist Smp#:	71
Injection Vol:	500.0 ul	Dil. Factor:	5.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

13 RDX, CAS: 121-82-4, Signal: 1

RT: 31.53
Response: 88
Amount: -0.033087



Reviewer: cartiera, 24-May-2019 13:14:53
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

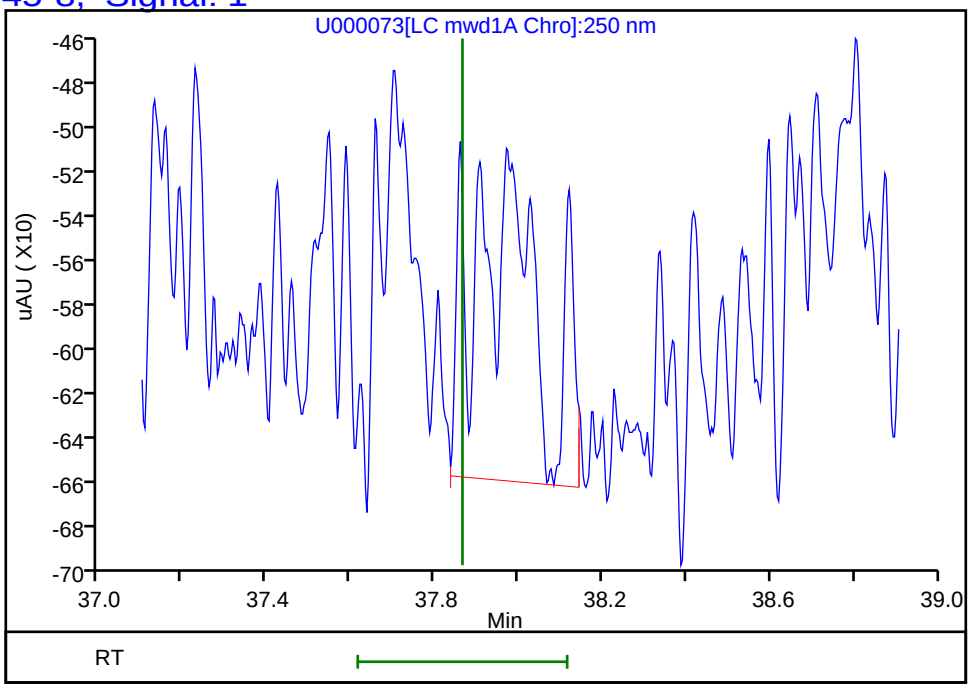
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000073.D				
Injection Date:	24-May-2019 12:09:43	Instrument ID:	LC12		
Lims ID:	280-123009-B-5-A	Lab Sample ID:	320-123009-5		
Client ID:	SP-S22				
Operator ID:	AO	ALS Bottle#:	64	Worklist Smp#:	71
Injection Vol:	500.0 ul	Dil. Factor:	5.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

22 Tetryl, CAS: 479-45-8, Signal: 1

RT: 37.97
Response: 145
Amount: 0.616560



Reviewer: cartiera, 24-May-2019 13:14:53
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Client Sample ID: SP-S22 DL Lab Sample ID: 280-123009-5 DL

Matrix: Water Lab File ID: T0000110.D

Analysis Method: 8330A Date Collected: 04/24/2019 08:43

Extraction Method: 8330-Prep Date Extracted: 04/29/2019 06:59

Sample wt/vol: 991.9(mL) Date Analyzed: 05/24/2019 15:28

Con. Extract Vol.: 20(mL) Dilution Factor: 5

Injection Volume: 500(uL) GC Column: Synergi C18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 296662 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	20	D	0.76	0.50	0.16

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	89	M	79-111

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190523-76793.b\T0000110.D
Lims ID: 280-123009-B-5-A
Client ID: SP-S22
Sample Type: Client
Inject. Date: 24-May-2019 15:28:48 ALS Bottle#: 96 Worklist Smp#: 24
Injection Vol: 500.0 ul Dil. Factor: 5.0000
Sample Info: 320-0076793-024
Operator ID: AO Instrument ID: LC11

Method: \\chromna\Sacramento\ChromData\LC11\20190523-76793.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 24-May-2019 16:22:23 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0313

First Level Reviewer: ortizam Date: 24-May-2019 16:22:56

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
2 DNX						
1	16.593	16.671	-0.078	196H	3.02	
3 HMX						M
1	18.013	18.066	-0.053	398H	4.93	M
6 RDX						
1	20.569	20.590	-0.021	596H	6.02	
8 1,3,5-Trinitrobenzene						
1	22.336	22.343	-0.007	45974H	196.2	
10 3,5-Dinitroaniline						
1	25.619	25.680	-0.061	20635H	130.1	
14 2,4,6-Trinitrotoluene						
1	28.196	28.233	-0.037	7631H	66.3	
15 4-Amino-2,6-dinitrotoluene						a
1	29.029	29.110	-0.081	1263H	14.5	a
$ 16 3,4-Dinitrotoluene						a
1	29.346	29.420	-0.074	1636H	22.3	a
2	29.356	29.420	-0.064	3670H		
17 2-Amino-4,6-dinitrotoluene						
1	29.683	29.793	-0.110	1912H	16.9	

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

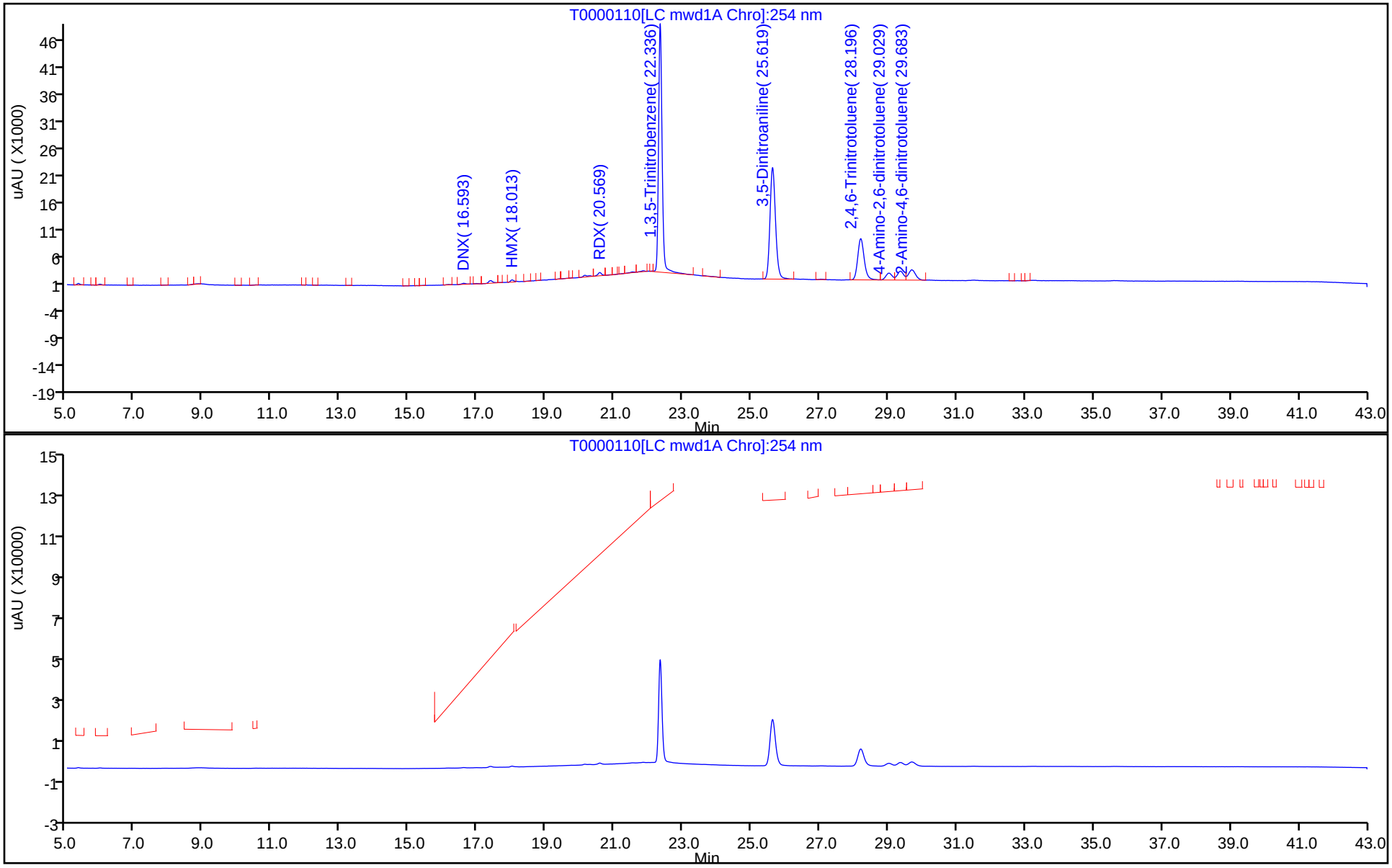
Report Date: 24-May-2019 16:22:56 Chrom Revision: 2.3 12-May-2019 16:28:34

Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190523-76793.b\T0000110.D

Injection Date:	24-May-2019 15:28:48	Instrument ID:	LC11	Operator ID:	AO
Lims ID:	280-123009-B-5-A	Lab Sample ID:	320-123009-5	Worklist Smp#:	24
Client ID:	SP-S22				
Injection Vol:	500.0 ul	Dil. Factor:	5.0000	ALS Bottle#:	96
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins TestAmerica, Sacramento
Recovery Report

Data File:	\\chromna\Sacramento\ChromData\LC11\20190523-76793.b\T0000110.D				
Lims ID:	280-123009-B-5-A				
Client ID:	SP-S22				
Sample Type:	Client				
Inject. Date:	24-May-2019 15:28:48	ALS Bottle#:	96	Worklist Smp#:	24
Injection Vol:	500.0 ul	Dil. Factor:	5.0000		
Sample Info:	320-0076793-024				
Operator ID:	AO	Instrument ID:	LC11		
Method:	\\chromna\Sacramento\ChromData\LC11\20190523-76793.b\8330 Metab LC11.m				
Limit Group:	LC 8330A ICAL				
Last Update:	24-May-2019 16:22:23	Calib Date:	28-Feb-2019 10:01:13		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D				
Column 1 :	Synergi Hydro-RP C18 (4.60 mm)		Det: LC mwd1A, 250 nm		
Process Host:	CTX0313				
First Level Reviewer: ortizam		Date:	24-May-2019 16:22:56		

Compound	Amount Added	Amount Recovered	% Rec.
$ 16 3,4-Dinitrotoluene	125.0	22.3	89.40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

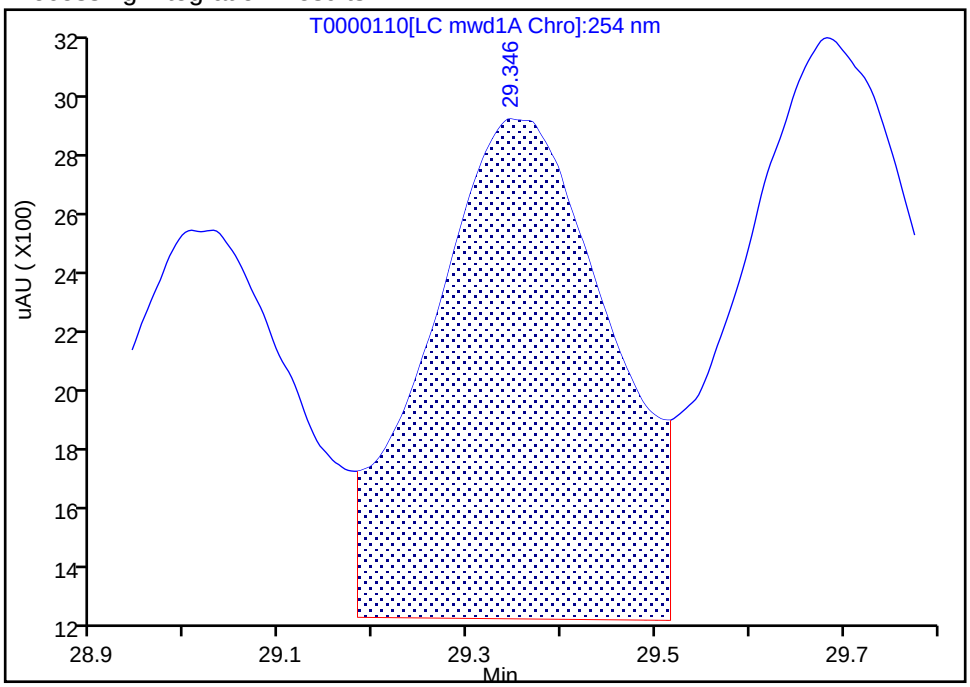
Data File:	\\chromna\Sacramento\ChromData\LC11\20190523-76793.b\T0000110.D				
Injection Date:	24-May-2019 15:28:48	Instrument ID:	LC11		
Lims ID:	280-123009-B-5-A	Lab Sample ID:	320-123009-5		
Client ID:	SP-S22				
Operator ID:	AO	ALS Bottle#:	96	Worklist Smp#:	24
Injection Vol:	500.0 ul	Dil. Factor:	5.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

$ 16 3,4-Dinitrotoluene, CAS: 610-39-9

Signal: 1

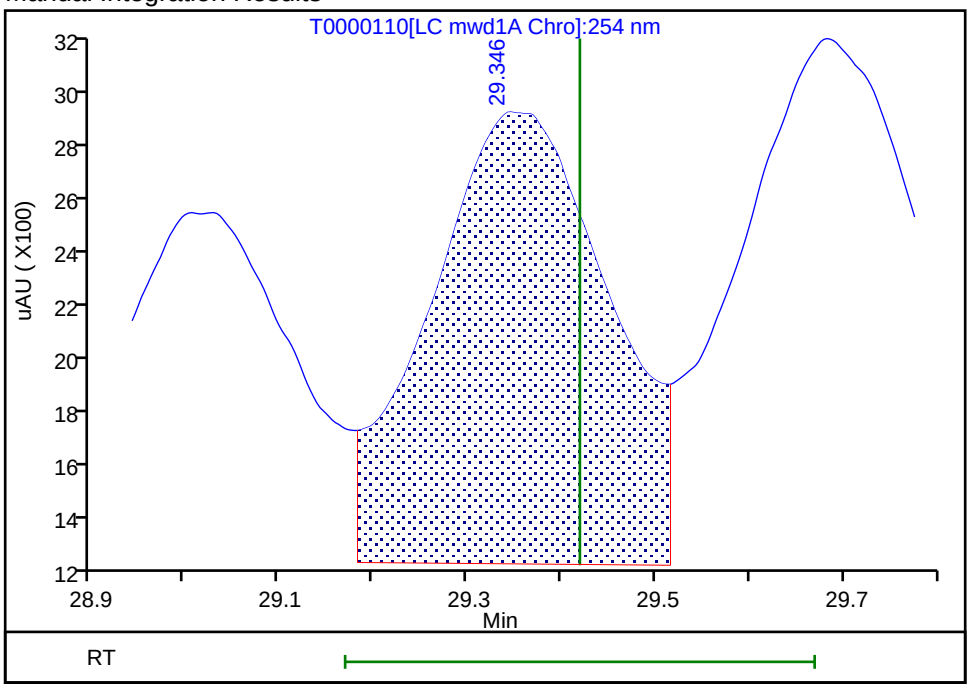
Processing Integration Results

RT: 29.35
Height: 1636
Amount: 22.349945
Amount Units: ng/ml



Manual Integration Results

RT: 29.35
Height: 1636
Amount: 22.349945
Amount Units: ng/ml



Reviewer: ortizam, 24-May-2019 16:22:01

Audit Action: Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

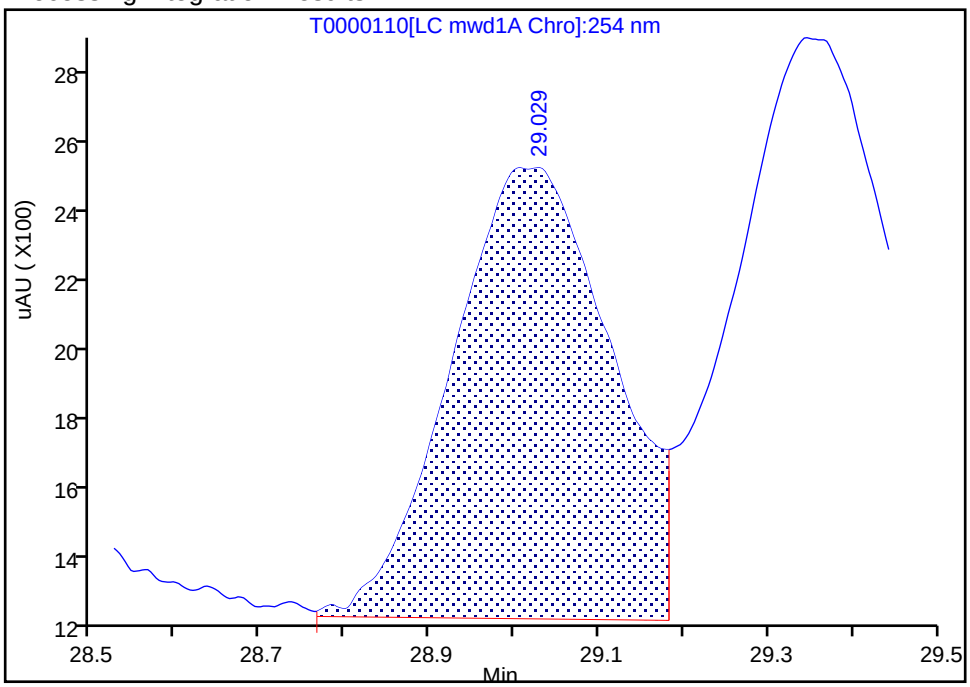
Data File:	\\chromna\Sacramento\ChromData\LC11\20190523-76793.b\T0000110.D				
Injection Date:	24-May-2019 15:28:48	Instrument ID:	LC11		
Lims ID:	280-123009-B-5-A	Lab Sample ID:	320-123009-5		
Client ID:	SP-S22				
Operator ID:	AO	ALS Bottle#:	96	Worklist Smp#:	24
Injection Vol:	500.0 ul	Dil. Factor:	5.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

15 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

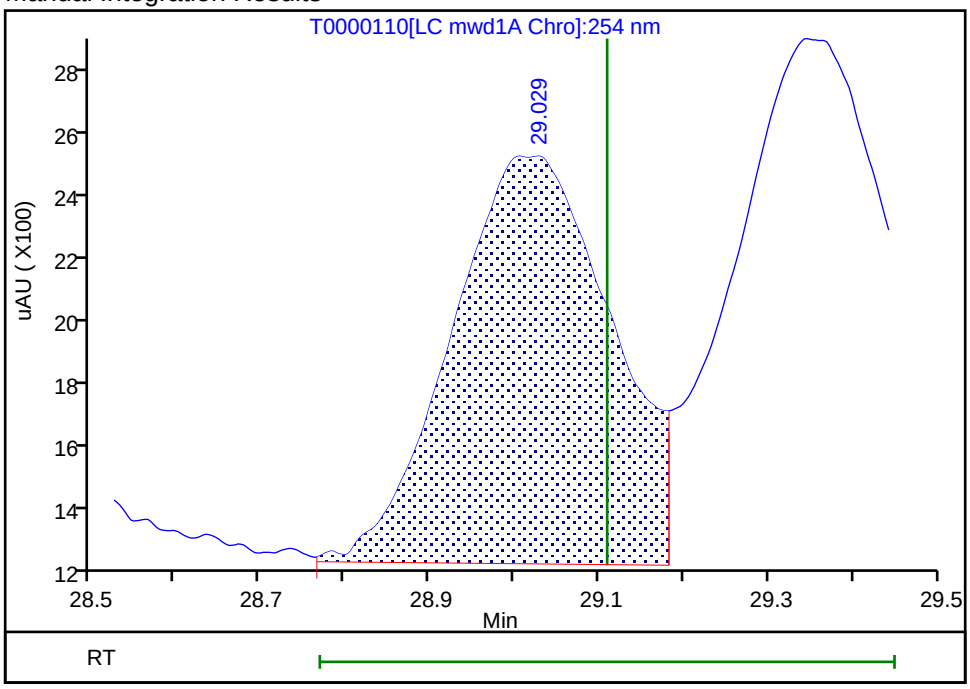
Processing Integration Results

RT: 29.03
Height: 1263
Amount: 14.514694
Amount Units: ng/ml



Manual Integration Results

RT: 29.03
Height: 1263
Amount: 14.514694
Amount Units: ng/ml



Reviewer: ortizam, 24-May-2019 16:22:04

Audit Action: Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

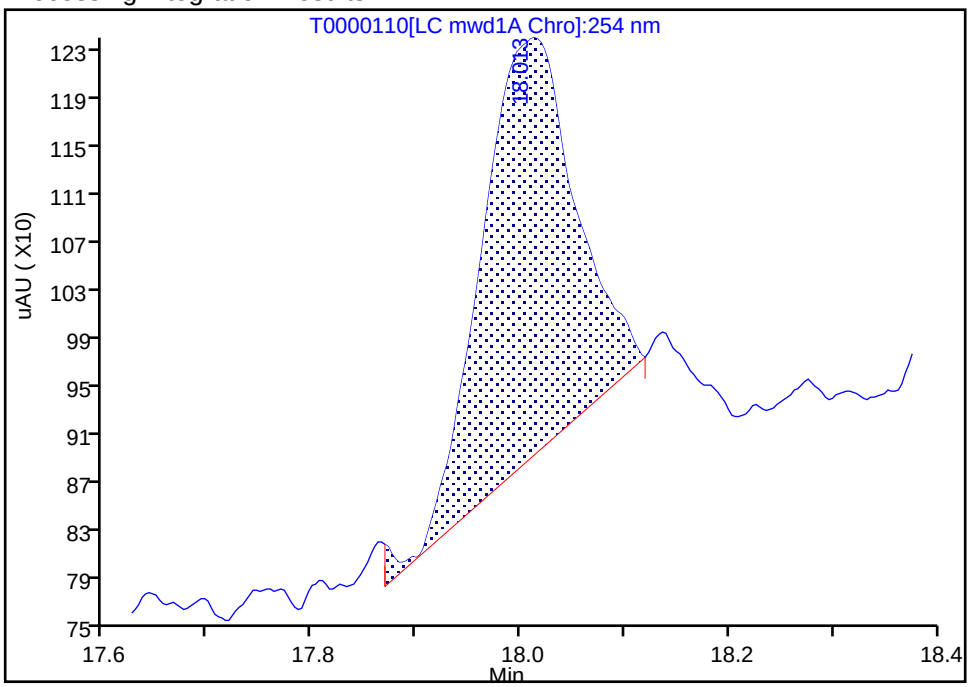
Data File:	\\chromna\Sacramento\ChromData\LC11\20190523-76793.b\T0000110.D				
Injection Date:	24-May-2019 15:28:48	Instrument ID:	LC11		
Lims ID:	280-123009-B-5-A	Lab Sample ID:	320-123009-5		
Client ID:	SP-S22				
Operator ID:	AO	ALS Bottle#:	96	Worklist Smp#:	24
Injection Vol:	500.0 ul	Dil. Factor:	5.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

3 HMX, CAS: 2691-41-0

Signal: 1

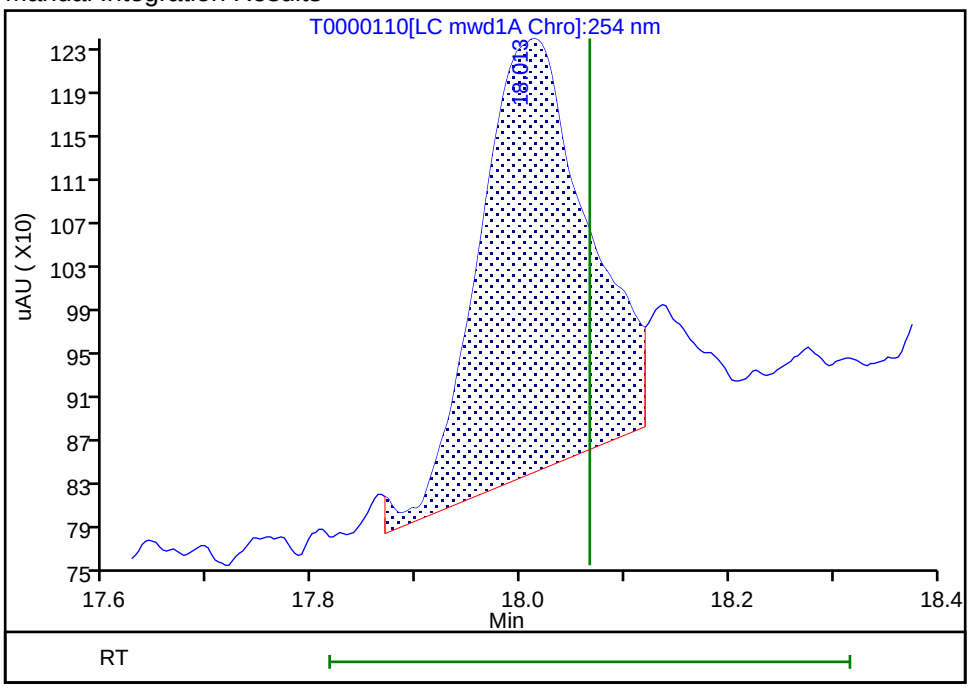
Processing Integration Results

RT: 18.01
Height: 347
Amount: 4.302488
Amount Units: ng/ml



Manual Integration Results

RT: 18.01
Height: 398
Amount: 4.934843
Amount Units: ng/ml



Reviewer: ortizam, 24-May-2019 16:21:51

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

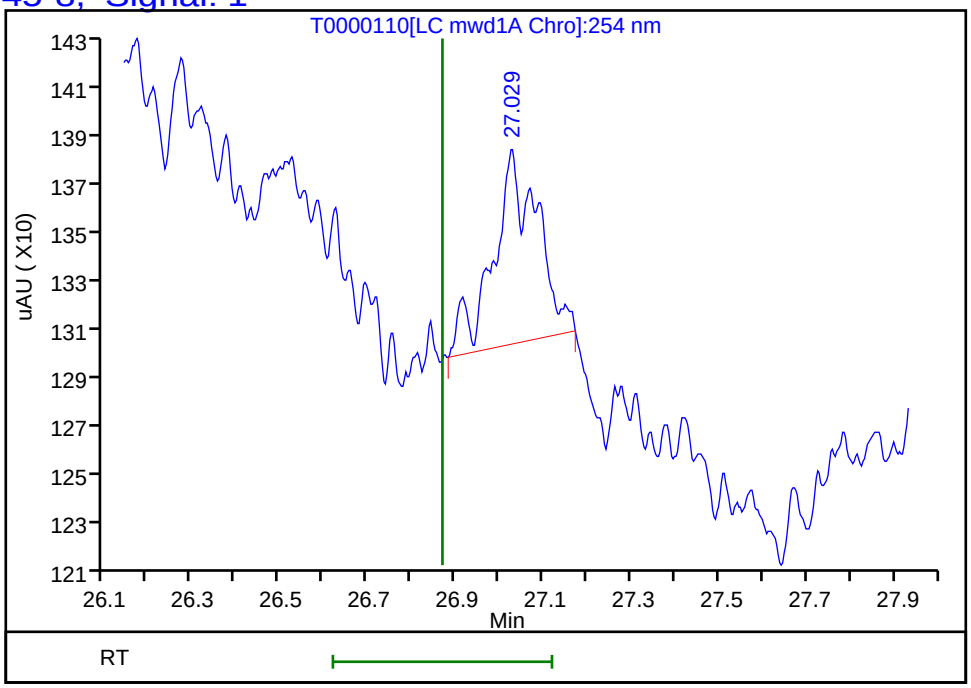
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC11\20190523-76793.b\T0000110.D				
Injection Date:	24-May-2019 15:28:48	Instrument ID:	LC11		
Lims ID:	280-123009-B-5-A	Lab Sample ID:	320-123009-5		
Client ID:	SP-S22				
Operator ID:	AO	ALS Bottle#:	96	Worklist Smp#:	24
Injection Vol:	500.0 ul	Dil. Factor:	5.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

12 Tetryl, CAS: 479-45-8, Signal: 1

RT: 27.03
Response: 81
Amount: 0.771845



Reviewer: ortizam, 24-May-2019 16:22:56
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1 Analy Batch No.: 278694

SDG No.:

Instrument ID: LC11 GC Column: Synergi C18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/27/2019 19:43 Calibration End Date: 02/28/2019 10:01 Calibration ID: 43973

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 320-278694/3	ZAB0000003.D
Level 2	STD2 320-278694/4	ZAB0000004.D
Level 3	STD 320-278694/14	ZAB0000014.D
Level 4	STD3 320-278694/5	ZAB0000005.D
Level 5	STD 320-278694/15	ZAB0000015.D
Level 6	STD4 320-278694/6	ZAB0000006.D
Level 7	STD 320-278694/16	ZAB0000016.D
Level 8	STD5 320-278694/7	ZAB0000007.D
Level 9	STD 320-278694/17	ZAB0000017.D
Level 10	STD6 320-278694/8	ZAB0000008.D
Level 11	STD 320-278694/18	ZAB0000018.D
Level 12	STD7 320-278694/9	ZAB0000009.D
Level 13	STD 320-278694/19	ZAB0000019.D

ANALYTE	LVL 1 LVL 11	LVL 2 LVL 12	LVL 3 LVL 13	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	RT WINDOW	AVG RT
TNX	12.725		12.734 12.719		12.709		12.726		12.719		12.469 - 12.969	12.722
DNX	16.652		16.654 16.649		16.652		16.649		16.646		16.396 - 16.896	16.650
HMX	18.040	18.026 18.005		18.014		18.009		18.002		18.006	17.759 - 18.259	18.015
MNX	19.122		19.127 19.119		19.122		19.123		19.119		18.869 - 19.369	19.122
RDX	20.610	20.600 20.591		20.594		20.595		20.592		20.596	20.345 - 20.845	20.597
1,3,5-Trinitrobenzene	22.426	22.423 22.418		22.418		22.419		22.422		22.419	22.169 - 22.669	22.421
1,3-Dinitrobenzene	24.750	24.746 24.741		24.744		24.742		24.752		24.746	24.492 - 24.992	24.746
3,5-Dinitroaniline	25.763	25.766 25.755		25.761		25.762		25.768		25.759	25.512 - 26.012	25.762
Nitrobenzene	26.390	26.386 26.378		26.388		26.389		26.392		26.379	26.139 - 26.639	26.386
Tetryl	27.070	27.063 27.038		27.061		27.052		27.058		27.043	26.802 - 27.302	27.055
Nitroglycerin	27.883	27.860 27.821		27.858		27.845		27.848		27.826	27.595 - 28.095	27.849
2,4,6-Trinitrotoluene	28.500	28.486 28.461		28.491		28.482		28.485		28.466	28.232 - 28.732	28.482
4-Amino-2,6-dinitrotoluene	29.263	29.266 29.251		29.274		29.272		29.278		29.253	28.932 - 29.612	29.265

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1 Analy Batch No.: 278694

SDG No.:

Instrument ID: LC11 GC Column: Synergi C18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/27/2019 19:43 Calibration End Date: 02/28/2019 10:01 Calibration ID: 43973

ANALYTE	LVL 1 LVL 11	LVL 2 LVL 12	LVL 3 LVL 13	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	RT WINDOW	AVG RT
2-Amino-4,6-dinitrotoluene	29.946	29.943 29.931		29.964		29.952		29.962		29.933	29.572 - 30.332	29.947
2,6-Dinitrotoluene	31.416	31.410 31.395		31.418		31.415		31.425		31.396	31.115 - 31.715	31.411
2,4-Dinitrotoluene	31.846	31.846 31.828		31.854		31.845		31.858		31.829	31.535 - 32.155	31.844
2-Nitrotoluene	35.053	35.043 35.045		35.061		35.042		35.068		35.039	34.712 - 35.372	35.050
4-Nitrotoluene	36.596	36.583 36.581		36.578		36.569		36.605		36.576	36.209 - 36.929	36.584
3-Nitrotoluene	38.243	38.263 38.265		38.264		38.235		38.291		38.262	37.835 - 38.635	38.260
PETN	40.213	40.260 40.218		40.228		40.199		40.248		40.226	39.789 - 40.609	40.227
3,4-Dinitrotoluene	29.600	29.600 29.568		29.594		29.592		29.595		29.569	29.342 - 29.842	29.588

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1 Analy Batch No.: 278694

SDG No.:

Instrument ID: LC11 GC Column: Synergi C18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/27/2019 19:43 Calibration End Date: 02/28/2019 10:01 Calibration ID: 43973

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 320-278694/3	ZAB0000003.D
Level 2	STD2 320-278694/4	ZAB0000004.D
Level 3	STD 320-278694/14	ZAB0000014.D
Level 4	STD3 320-278694/5	ZAB0000005.D
Level 5	STD 320-278694/15	ZAB0000015.D
Level 6	STD4 320-278694/6	ZAB0000006.D
Level 7	STD 320-278694/16	ZAB0000016.D
Level 8	STD5 320-278694/7	ZAB0000007.D
Level 9	STD 320-278694/17	ZAB0000017.D
Level 10	STD6 320-278694/8	ZAB0000008.D
Level 11	STD 320-278694/18	ZAB0000018.D
Level 12	STD7 320-278694/9	ZAB0000009.D
Level 13	STD 320-278694/19	ZAB0000019.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5 LVL 9 LVL 13	LVL 2 LVL 6 LVL 10	LVL 3 LVL 7 LVL 11	LVL 4 LVL 8 LVL 12		B	M1	M2								
TNX	 51.399 52.547 50.072		53.846 50.769 53.392		Ave		52.0041625				2.9		20.0			
DNX	 65.637 65.070 61.910		67.131 63.606 66.140		Ave		64.9158367				2.9		20.0			
HMX	86.200	80.300 80.640 77.585		81.700 79.020 79.112	Ave		80.6510000				3.4		20.0			
MNX	 101.20 101.42 97.089		100.26 98.137 102.86		Ave		100.160114				2.2		20.0			
RDX	103.80	99.600 98.960 95.605		100.50 97.430 97.656	Ave		99.0787143				2.7		20.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1 Analy Batch No.: 278694

SDG No.:

Instrument ID: LC11 GC Column: Synergi C18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/27/2019 19:43 Calibration End Date: 02/28/2019 10:01 Calibration ID: 43973

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5 LVL 9 LVL 13	LVL 2 LVL 6 LVL 10	LVL 3 LVL 7 LVL 11	LVL 4 LVL 8 LVL 12		B	M1	M2								
1,3,5-Trinitrobenzene	239.20	233.20 234.18 230.84		235.60 232.86 234.01	Ave		234.269571				1.1		20.0			
1,3-Dinitrobenzene	212.60	206.60 208.72 206.68		210.75 207.38 210.13	Ave		208.979714				1.1		20.0			
3,5-Dinitroaniline	162.60	157.40 157.56 156.68		158.95 157.55 159.68	Ave		158.631000				1.3		20.0			
Nitrobenzene	116.60	117.50 117.38 116.53		117.50 116.86 116.73	Ave		117.013714				0.4		20.0			
Tetryl	107.60	102.70 104.28 104.92		104.30 104.72 106.09	Ave		104.943286				1.5		20.0			
Nitroglycerin	91.000	117.30 98.500 97.680		100.40 98.680 100.91	Ave		100.639143				8.0		20.0			
2,4,6-Trinitrotoluene	116.00	114.70 115.04 114.57		114.70 114.65 115.86	Ave		115.074286				0.5		20.0			
4-Amino-2,6-dinitrotoluene	86.600	87.300 87.420 86.305		87.650 86.560 87.352	Lin2	-0.8411807	87.0732196							1.0000		0.9900
2-Amino-4,6-dinitrotoluene	111.80	112.70 114.30 112.52		113.50 112.88 114.08	Lin2	-8.3170967	113.569959							1.0000		0.9900

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1 Analy Batch No.: 278694

SDG No.:

Instrument ID: LC11 GC Column: Synergi C18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/27/2019 19:43 Calibration End Date: 02/28/2019 10:01 Calibration ID: 43973

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5 LVL 9 LVL 13	LVL 2 LVL 6 LVL 10	LVL 3 LVL 7 LVL 11	LVL 4 LVL 8 LVL 12		B	M1	M2								
2,6-Dinitrotoluene	78.600	72.800 72.600 71.870		72.450 72.200 72.812	Ave		73.3331429				3.2		20.0			
2,4-Dinitrotoluene	139.00	133.80 135.18 133.96		134.40 134.53 135.86	Ave		135.246143				1.3		20.0			
2-Nitrotoluene	59.800	54.600 57.760 57.510		59.800 57.700 57.054	Ave		57.7462857				3.1		20.0			
4-Nitrotoluene	75.800	73.000 71.360 70.070		72.700 70.090 70.170	Ave		71.8842857				2.9		20.0			
3-Nitrotoluene	74.000	69.800 70.260 69.225		71.450 69.310 69.246	Lin2	20.9737529	69.3105939							1.0000		0.9900
PETN	71.600	63.200 54.560 54.480		59.250 54.210 54.922	Lin2	89.4008779	53.9462657							1.0000		0.9900
3,4-Dinitrotoluene	70.600	72.900 74.080 73.425		73.750 73.470 74.170	Ave		73.1992857				1.7		20.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1 Analy Batch No.: 278694

SDG No.:

Instrument ID: LC11 GC Column: Synergi C18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/27/2019 19:43 Calibration End Date: 02/28/2019 10:01 Calibration ID: 43973

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 320-278694/3	ZAB0000003.D
Level 2	STD2 320-278694/4	ZAB0000004.D
Level 3	STD 320-278694/14	ZAB0000014.D
Level 4	STD3 320-278694/5	ZAB0000005.D
Level 5	STD 320-278694/15	ZAB0000015.D
Level 6	STD4 320-278694/6	ZAB0000006.D
Level 7	STD 320-278694/16	ZAB0000016.D
Level 8	STD5 320-278694/7	ZAB0000007.D
Level 9	STD 320-278694/17	ZAB0000017.D
Level 10	STD6 320-278694/8	ZAB0000008.D
Level 11	STD 320-278694/18	ZAB0000018.D
Level 12	STD7 320-278694/9	ZAB0000009.D
Level 13	STD 320-278694/19	ZAB0000019.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
		LVL 1 LVL 6 LVL 11	LVL 2 LVL 7 LVL 12	LVL 3 LVL 8 LVL 13	LVL 4 LVL 9	LVL 5 LVL 10	LVL 6 LVL 11	LVL 2 LVL 7 LVL 12	LVL 3 LVL 8 LVL 13	LVL 4 LVL 9	LVL 5 LVL 10
TNX	Ave	10689	2541	539 25061	5260	1029	200	50.1	10.0 501	100	20.0
DNX	Ave	13281	3193	674 31079	6533	1318	201	50.2	10.0 502	100	20.1
HMX	Ave	431 4032	803 39556	7902	1634	15517	5.00 50.0	10.0 500	100	20.0	200
MNX	Ave	24070	5741	1173 56797	11866	2368	234	58.5	11.7 585	117	23.4
RDX	Ave	519 4948	996 48828	9743	2010	19121	5.00 50.0	10.0 500	100	20.0	200
1,3,5-Trinitrobenzene	Ave	1196 11709	2332 117006	23286	4712	46167	5.00 50.0	10.0 500	100	20.0	200
1,3-Dinitrobenzene	Ave	1063 10436	2066 105064	20738	4215	41336	5.00 50.0	10.0 500	100	20.0	200
3,5-Dinitroaniline	Ave	813 7878	1574 79841	15755	3179	31335	5.00 50.0	10.0 500	100	20.0	200

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1 Analy Batch No.: 278694

SDG No.:

Instrument ID: LC11 GC Column: Synergi C18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/27/2019 19:43 Calibration End Date: 02/28/2019 10:01 Calibration ID: 43973

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
		LVL 1 LVL 6 LVL 11	LVL 2 LVL 7 LVL 12	LVL 3 LVL 8 LVL 13	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7 LVL 12	LVL 3 LVL 8 LVL 13	LVL 4 LVL 9	LVL 5 LVL 10
Nitrobenzene	Ave	583 5869	1175 58363	11686	2350	23306	5.00 50.0	10.0 500	100	20.0	200
Tetryl	Ave	538 5214	1027 53044	10472	2086	20983	5.00 50.0	10.0 500	100	20.0	200
Nitroglycerin	Ave	455 4925	1173 50457	9868	2008	19536	5.00 50.0	10.0 500	100	20.0	200
2,4,6-Trinitrotoluene	Ave	580 5752	1147 57930	11465	2294	22914	5.00 50.0	10.0 500	100	20.0	200
4-Amino-2,6-dinitrotoluene	Lin2	433 4371	873 43676	8656	1753	17261	5.00 50.0	10.0 500	100	20.0	200
2-Amino-4,6-dinitrotoluene	Lin2	559 5715	1127 57038	11288	2270	22503	5.00 50.0	10.0 500	100	20.0	200
2,6-Dinitrotoluene	Ave	393 3630	728 36406	7220	1449	14374	5.00 50.0	10.0 500	100	20.0	200
2,4-Dinitrotoluene	Ave	695 6759	1338 67929	13453	2688	26791	5.00 50.0	10.0 500	100	20.0	200
2-Nitrotoluene	Ave	299 2888	546 28527	5770	1196	11502	5.00 50.0	10.0 500	100	20.0	200
4-Nitrotoluene	Ave	379 3568	730 35085	7009	1454	14014	5.00 50.0	10.0 500	100	20.0	200
3-Nitrotoluene	Lin2	370 3513	698 34623	6931	1429	13845	5.00 50.0	10.0 500	100	20.0	200
PETN	Lin2	358 2728	632 27461	5421	1185	10896	5.00 50.0	10.0 500	100	20.0	200
3,4-Dinitrotoluene	Ave	353 3704	729 37085	7347	1475	14685	5.00 50.0	10.0 500	100	20.0	200

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1 Analy Batch No.: 278694

SDG No.:

Instrument ID: LC11 GC Column: Synergi C18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/27/2019 19:43 Calibration End Date: 02/28/2019 10:01 Calibration ID: 43973

Curve Type Legend:

Ave = Average by Height
Lin2 = Linear 1/conc^2 by height

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000003.D
Lims ID: std1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 27-Feb-2019 19:43:28 ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 320-0072509-003
Operator ID: AJC Instrument ID: LC11
Sublist: chrom-8330 Metab LC11*sub10

Method: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 04-Mar-2019 13:29:32 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0304

First Level Reviewer: ortizam Date: 28-Feb-2019 12:10:07

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
3 HMX							
1	18.040	18.009	0.031	431H	5.00	5.34	
6 RDX							
1	20.610	20.595	0.015	519H	5.00	5.24	
8 1,3,5-Trinitrobenzene							
1	22.426	22.419	0.007	1196H	5.00	5.11	
9 1,3-Dinitrobenzene							
1	24.750	24.742	0.008	1063H	5.00	5.09	
10 3,5-Dinitroaniline							
1	25.763	25.762	0.001	813H	5.00	5.13	
11 Nitrobenzene							
1	26.390	26.389	0.001	583H	5.00	4.98	
12 Tetryl							
1	27.070	27.052	0.018	538H	5.00	5.13	
13 Nitroglycerin							M
2	27.883	27.845	0.038	455H	5.00	4.52	M
14 2,4,6-Trinitrotoluene							
1	28.500	28.482	0.018	580H	5.00	5.04	
15 4-Amino-2,6-dinitrotoluene							
1	29.263	29.272	-0.009	433H	5.00	4.98	
$ 16 3,4-Dinitrotoluene							
1	29.600	29.592	0.008	353H	5.00	4.82	
2	29.593	29.592	0.001	779H			
17 2-Amino-4,6-dinitrotoluene							
1	29.946	29.952	-0.006	559H	5.00	5.00	
18 2,6-Dinitrotoluene							
1	31.416	31.415	0.001	393H	5.00	5.36	
19 2,4-Dinitrotoluene							
1	31.846	31.845	0.001	695H	5.00	5.14	

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
20 o-Nitrotoluene							
1	35.053	35.042	0.011	299H	5.00	5.18	
21 p-Nitrotoluene							
1	36.596	36.569	0.027	379H	5.00	5.27	
22 m-Nitrotoluene							
1	38.243	38.235	0.008	370H	5.00	5.04	
23 PETN							M
2	40.213	40.199	0.014	358H	5.00	4.98	M

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

HP8330L1_00041 Amount Added: 1.00 Units: ml

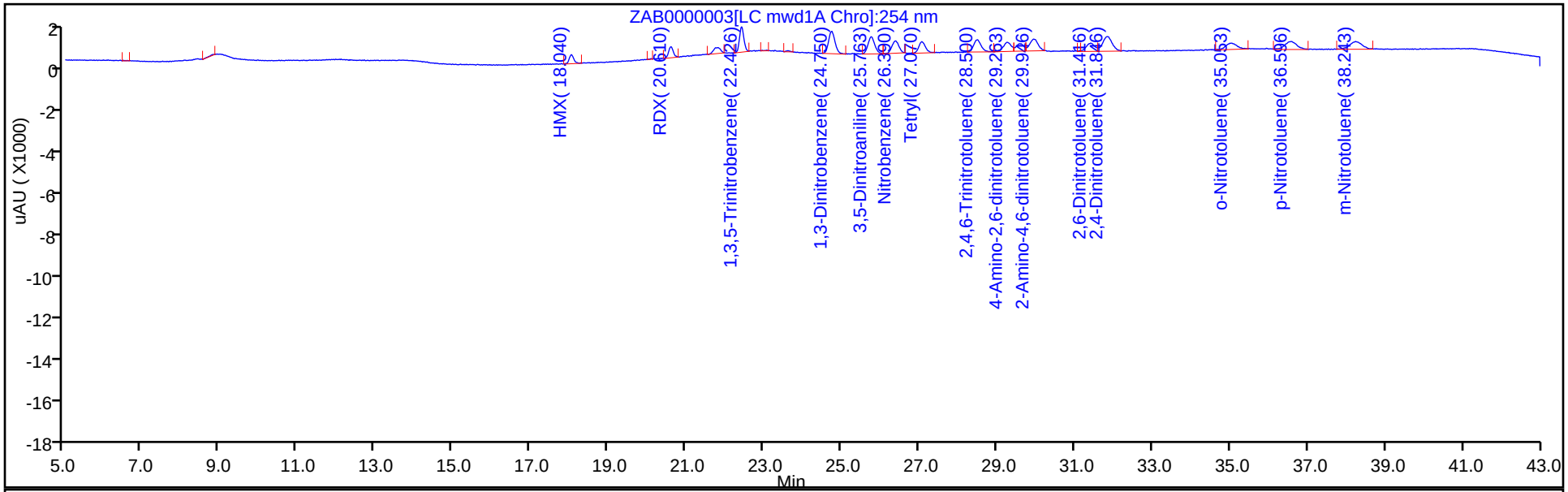
Report Date: 04-Mar-2019 13:29:33 Chrom Revision: 2.3 11-Feb-2019 16:31:10

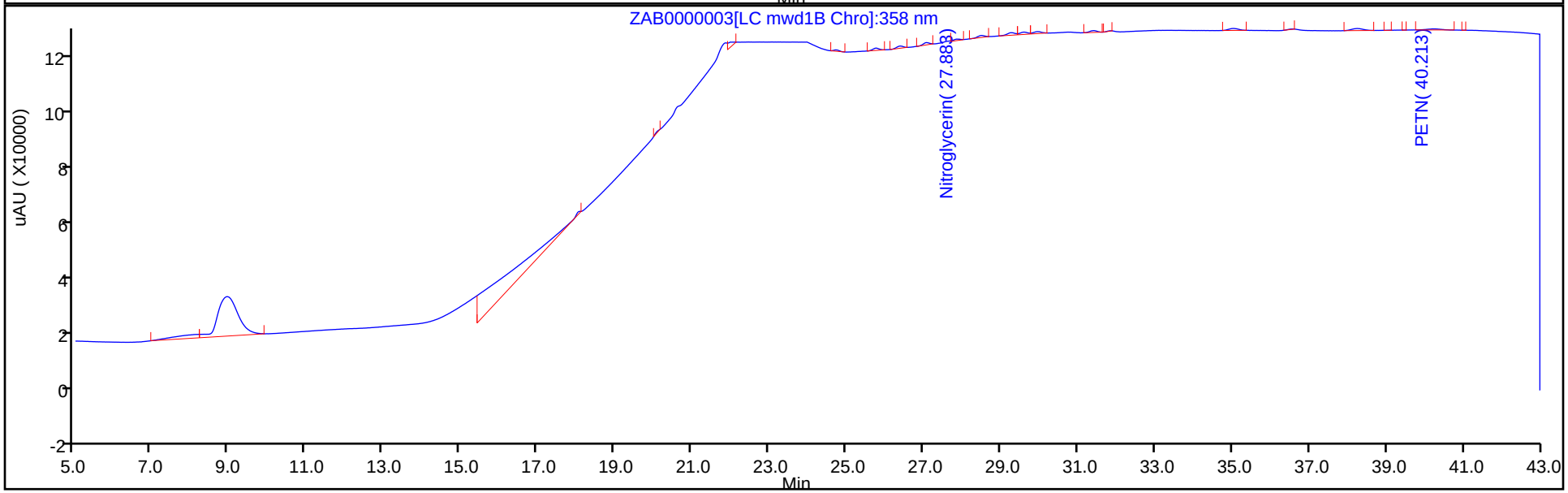
TestAmerica Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000003.D

Injection Date:	27-Feb-2019 19:43:28	Instrument ID:	LC11	Operator ID:	AJC
Lims ID:	std1			Worklist Smp#:	3
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1





Manual Integration/User Assign Peak Report

TestAmerica Sacramento

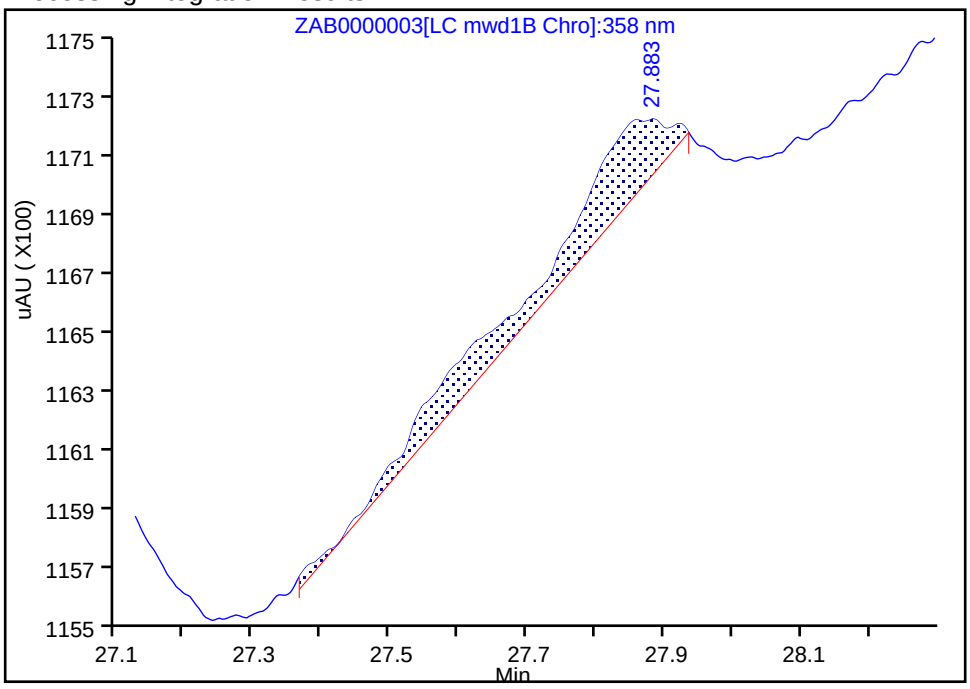
Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000003.D
Injection Date: 27-Feb-2019 19:43:28 Instrument ID: LC11
Lims ID: std1
Client ID:
Operator ID: AJC ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: 8330 Metab LC11 Limit Group: LC 8330A ICAL
Column: Detector LC mwd1B, 358 nm

13 Nitroglycerin, CAS: 55-63-0

Signal: 1

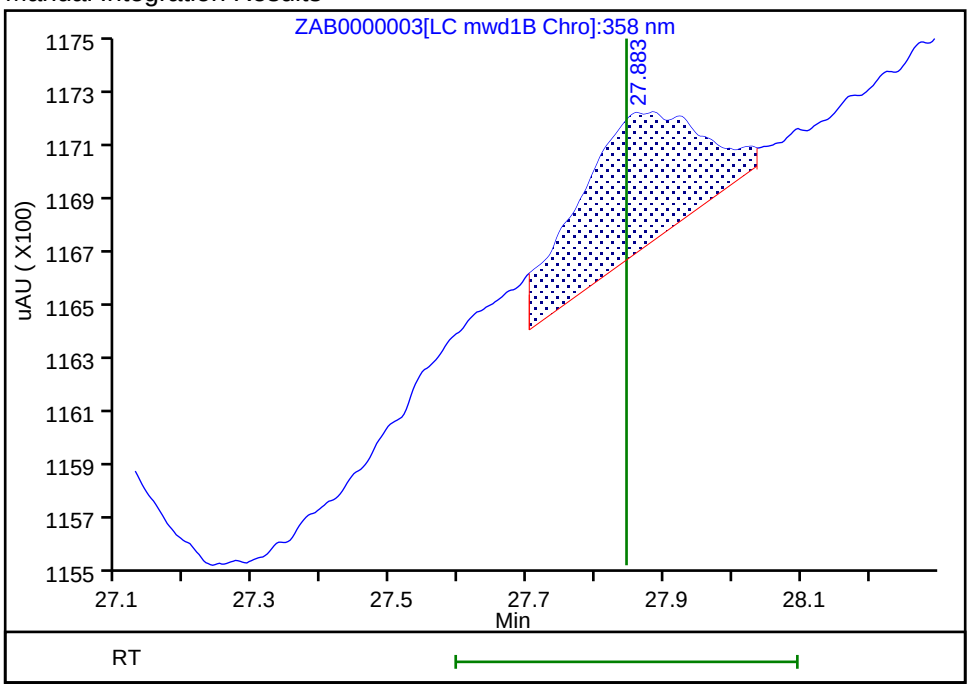
Processing Integration Results

RT: 27.88
Height: 179
Amount: 4.094906
Amount Units: ng/ml



Manual Integration Results

RT: 27.88
Height: 455
Amount: 4.521104
Amount Units: ng/ml



Reviewer: ortizam, 28-Feb-2019 12:09:48
Audit Action: Assigned New Baseline Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

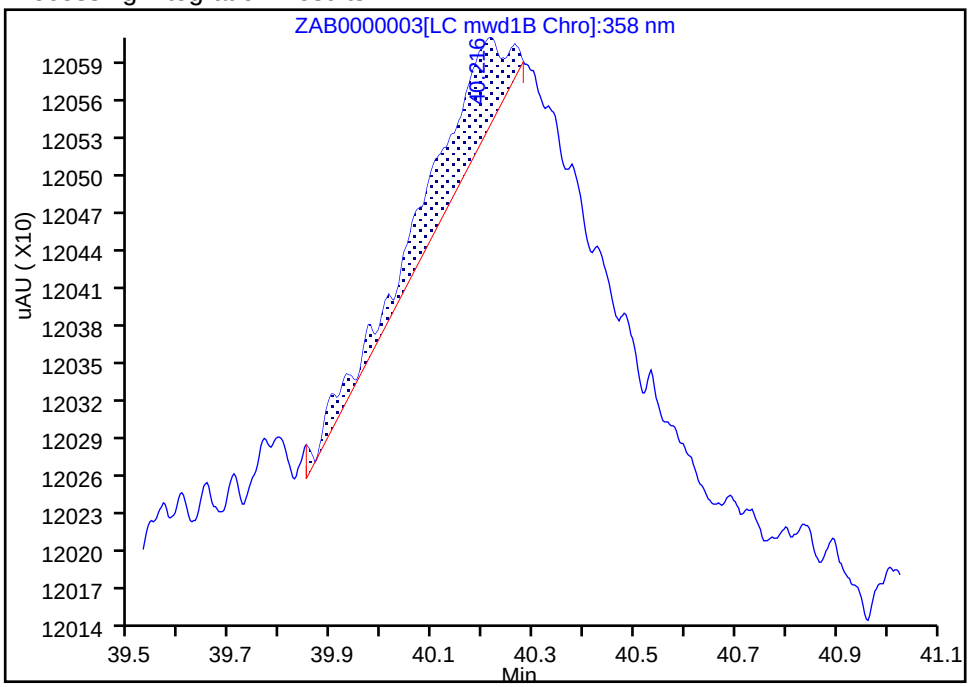
Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000003.D
Injection Date: 27-Feb-2019 19:43:28 Instrument ID: LC11
Lims ID: std1
Client ID:
Operator ID: AJC ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: 8330 Metab LC11 Limit Group: LC 8330A ICAL
Column: Detector LC mwd1B, 358 nm

23 PETN, CAS: 78-11-5

Signal: 1

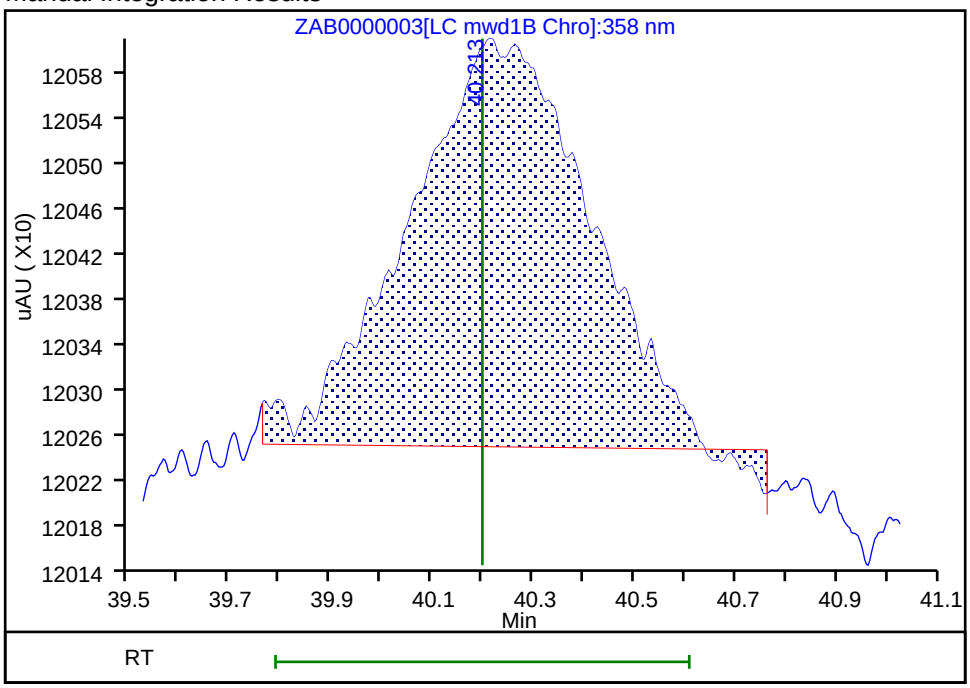
Processing Integration Results

RT: 40.22
Height: 68
Amount: 4.043334
Amount Units: ng/ml



Manual Integration Results

RT: 40.21
Height: 358
Amount: 4.979012
Amount Units: ng/ml



Reviewer: ortizam, 28-Feb-2019 12:09:58
Audit Action: Manually Integrated Audit Reason: Peak not integrated

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000004.D
Lims ID: std2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 27-Feb-2019 20:37:02 ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 320-0072509-004
Operator ID: AJC Instrument ID: LC11
Sublist: chrom-8330 Metab LC11*sub10

Method: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 04-Mar-2019 13:29:34 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0304

First Level Reviewer: cartiera Date: 01-Mar-2019 12:25:53

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
3 HMX							
1	18.026	18.009	0.017	803H	10.0	9.96	
5 Ethylene glycol dinitrate							Ma
2	20.206	20.082	0.124	12469	10.0	9.76	Ma
6 RDX							
1	20.600	20.595	0.005	996H	10.0	10.1	
8 1,3,5-Trinitrobenzene							
1	22.423	22.419	0.004	2332H	10.0	9.95	
9 1,3-Dinitrobenzene							
1	24.746	24.742	0.004	2066H	10.0	9.89	
10 3,5-Dinitroaniline							
1	25.766	25.762	0.004	1574H	10.0	9.92	
11 Nitrobenzene							
1	26.386	26.389	-0.003	1175H	10.0	10.0	
12 Tetryl							
1	27.063	27.052	0.011	1027H	10.0	9.79	
13 Nitroglycerin							
2	27.860	27.845	0.015	1173H	10.0	11.7	
14 2,4,6-Trinitrotoluene							
1	28.486	28.482	0.004	1147H	10.0	9.97	
15 4-Amino-2,6-dinitrotoluene							a
1	29.266	29.272	-0.006	873H	10.0	10.0	a
$ 16 3,4-Dinitrotoluene							a
1	29.600	29.592	0.008	729H	10.0	9.96	a
2	29.600	29.592	0.008	1525H			
17 2-Amino-4,6-dinitrotoluene							
1	29.943	29.952	-0.009	1127H	10.0	10.0	
18 2,6-Dinitrotoluene							
1	31.410	31.415	-0.005	728H	10.0	9.93	

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
19 2,4-Dinitrotoluene							
1	31.846	31.845	0.001	1338H	10.0	9.89	
20 o-Nitrotoluene							
1	35.043	35.042	0.001	546H	10.0	9.46	
21 p-Nitrotoluene							
1	36.583	36.569	0.014	730H	10.0	10.2	
22 m-Nitrotoluene							
1	38.263	38.235	0.028	698H	10.0	9.77	
23 PETN							
2	40.260	40.199	0.061	632H	10.0	10.1	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

HP8330L2_00033 Amount Added: 1.00 Units: ml

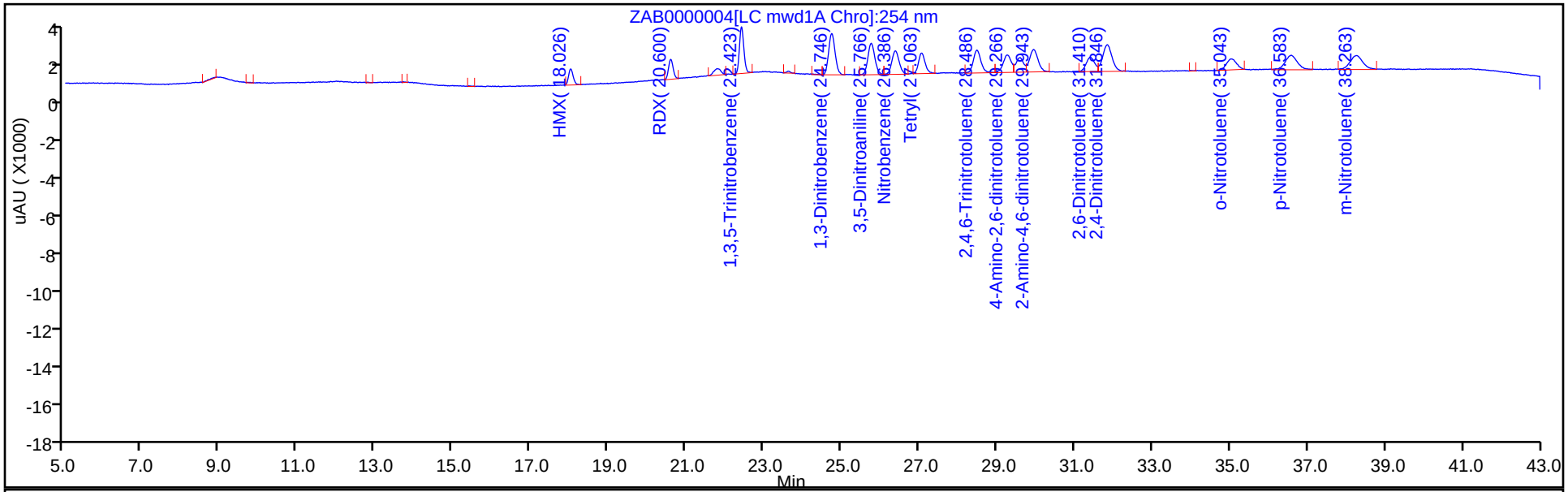
Report Date: 04-Mar-2019 13:29:35 Chrom Revision: 2.3 11-Feb-2019 16:31:10

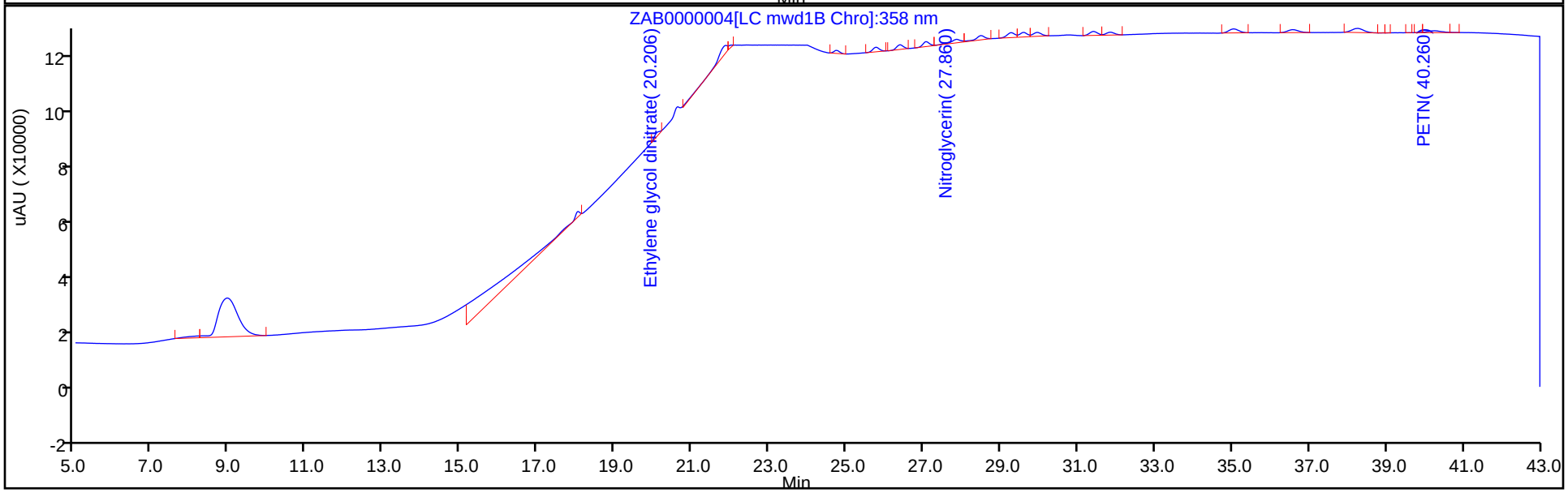
TestAmerica Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000004.D

Injection Date:	27-Feb-2019 20:37:02	Instrument ID:	LC11	Operator ID:	AJC
Lims ID:	std2			Worklist Smp#:	4
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1





Manual Integration/User Assign Peak Report

TestAmerica Sacramento

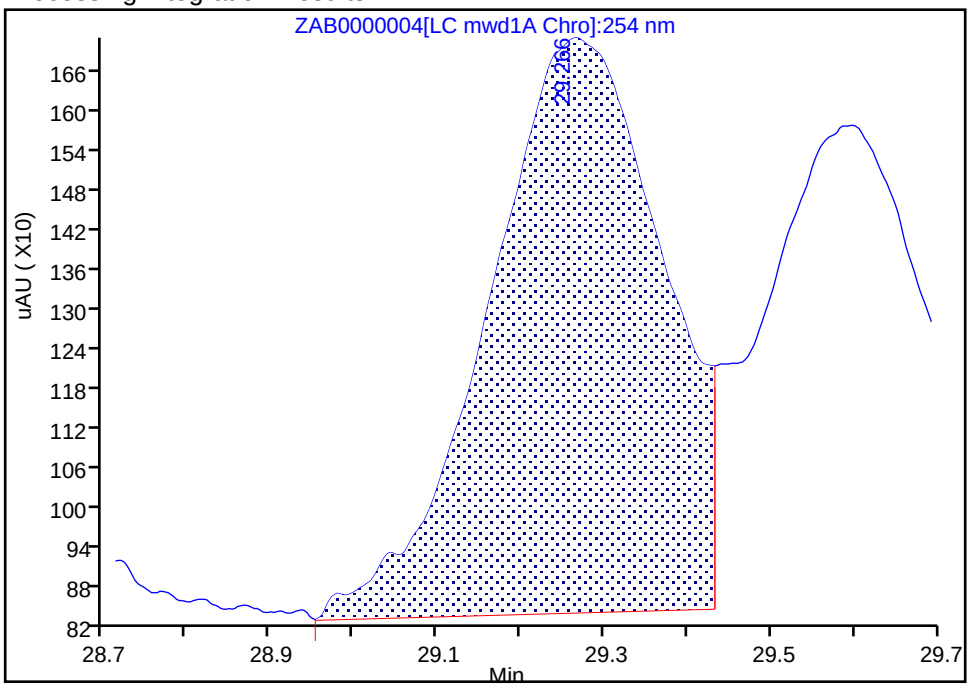
Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000004.D
Injection Date: 27-Feb-2019 20:37:02 Instrument ID: LC11
Lims ID: std2
Client ID:
Operator ID: AJC ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: 8330 Metab LC11 Limit Group: LC 8330A ICAL
Column: Synergi Hydro-RP C18 (4.60 mm) Detector LC mwd1A, 250 nm

15 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

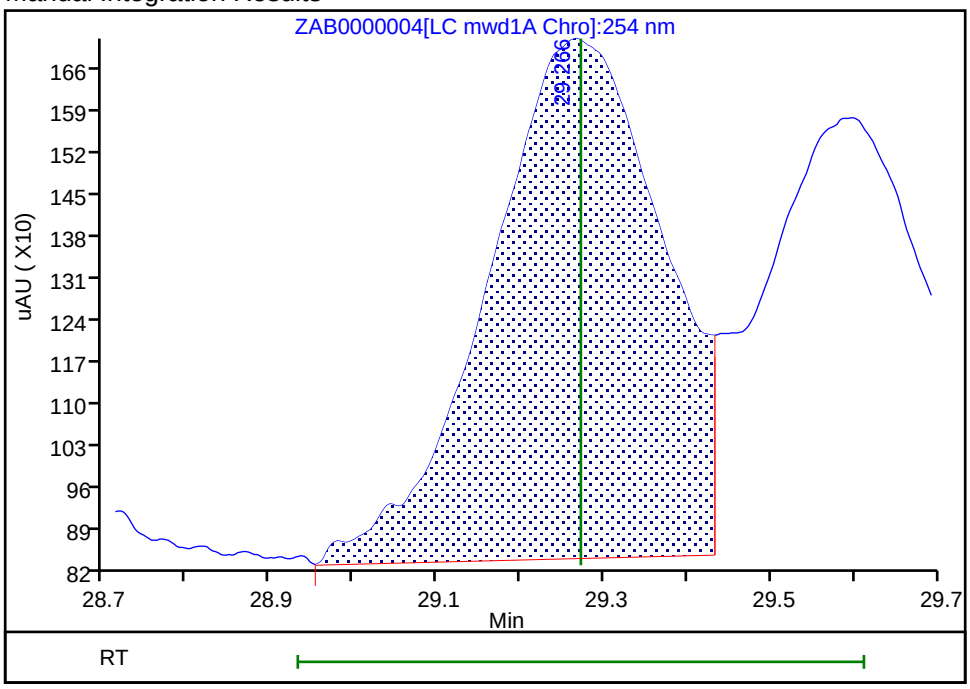
Processing Integration Results

RT: 29.27
Height: 873
Amount: 10.035705
Amount Units: ng/ml



Manual Integration Results

RT: 29.27
Height: 873
Amount: 10.035705
Amount Units: ng/ml



Reviewer: ortizam, 28-Feb-2019 12:14:23
Audit Action: Assigned Compound ID Audit Reason:

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

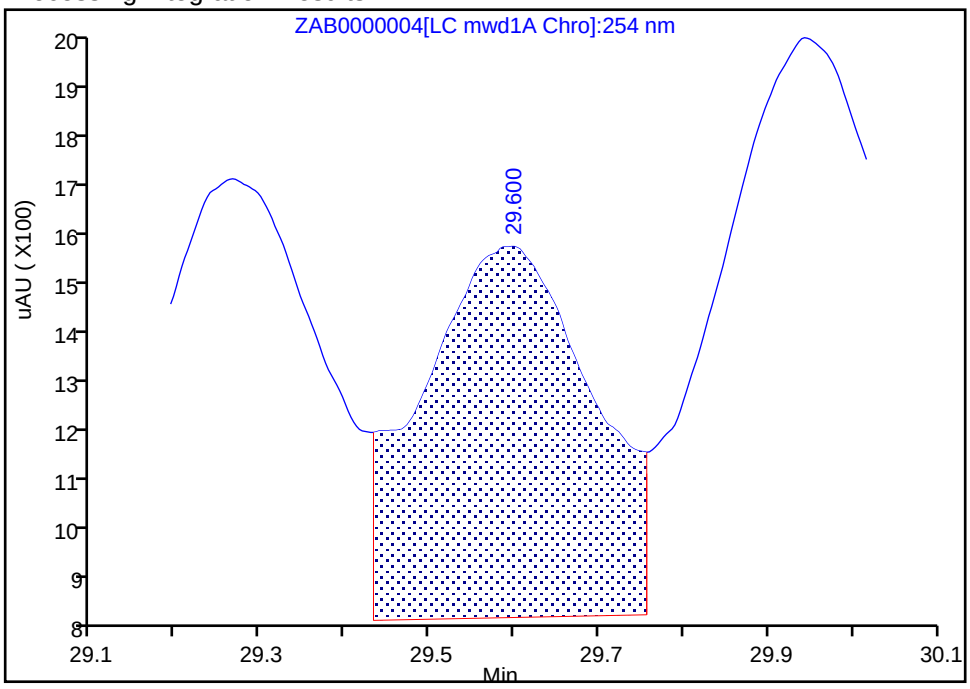
Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000004.D
Injection Date: 27-Feb-2019 20:37:02 Instrument ID: LC11
Lims ID: std2
Client ID:
Operator ID: AJC ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: 8330 Metab LC11 Limit Group: LC 8330A ICAL
Column: Synergi Hydro-RP C18 (4.60 mm) Detector LC mwd1A, 250 nm

$ 16 3,4-Dinitrotoluene, CAS: 610-39-9

Signal: 1

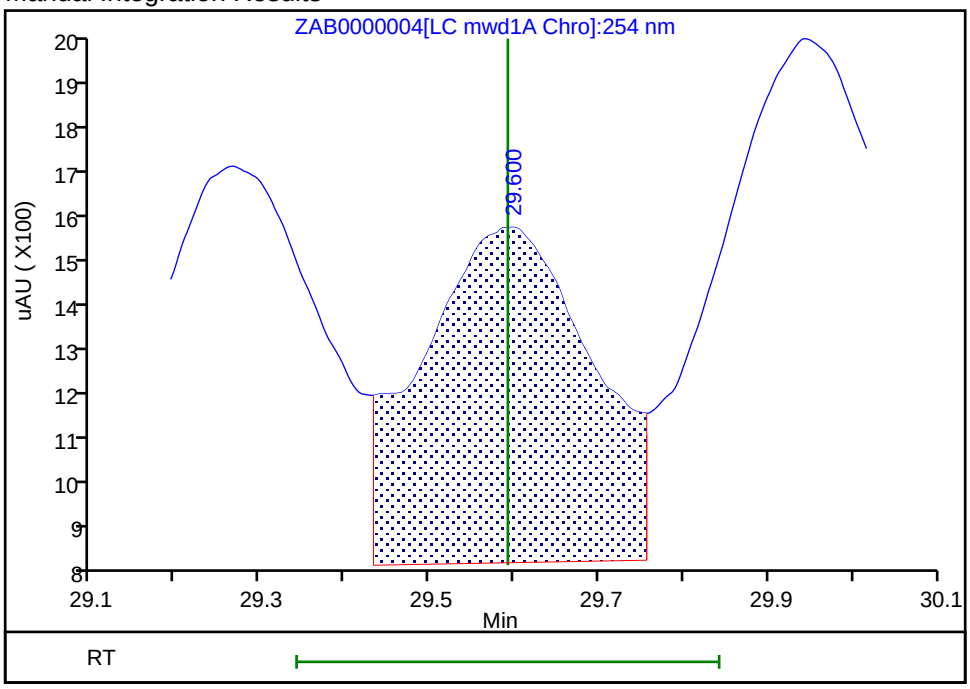
Processing Integration Results

RT: 29.60
Height: 729
Amount: 9.959114
Amount Units: ng/ml



Manual Integration Results

RT: 29.60
Height: 729
Amount: 9.959114
Amount Units: ng/ml



Reviewer: ortizam, 28-Feb-2019 12:14:20
Audit Action: Assigned Compound ID Audit Reason:

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000005.D
Lims ID: std3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 27-Feb-2019 21:30:43 ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 320-0072509-005
Operator ID: AJC Instrument ID: LC11
Sublist: chrom-8330 Metab LC11*sub10

Method: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 04-Mar-2019 13:29:36 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0304

First Level Reviewer: ortizam Date: 28-Feb-2019 12:15:52

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
3 HMX							
1	18.014	18.009	0.005	1634H	20.0	20.3	
5 Ethylene glycol dinitrate							M
2	20.098	20.082	0.016	25262	20.0	19.8	M
6 RDX							
1	20.594	20.595	-0.001	2010H	20.0	20.3	
8 1,3,5-Trinitrobenzene							
1	22.418	22.419	-0.001	4712H	20.0	20.1	
9 1,3-Dinitrobenzene							
1	24.744	24.742	0.002	4215H	20.0	20.2	
10 3,5-Dinitroaniline							
1	25.761	25.762	-0.001	3179H	20.0	20.0	
11 Nitrobenzene							
1	26.388	26.389	-0.001	2350H	20.0	20.1	
12 Tetryl							
1	27.061	27.052	0.009	2086H	20.0	19.9	
13 Nitroglycerin							M
2	27.858	27.845	0.013	2008H	20.0	20.0	M
14 2,4,6-Trinitrotoluene							
1	28.491	28.482	0.009	2294H	20.0	19.9	
15 4-Amino-2,6-dinitrotoluene							a
1	29.274	29.272	0.002	1753H	20.0	20.1	a
$ 16 3,4-Dinitrotoluene							Ma
1	29.594	29.592	0.002	1475H	20.0	20.2	a
2	29.601	29.592	0.009	3025H			M
17 2-Amino-4,6-dinitrotoluene							
1	29.964	29.952	0.012	2270H	20.0	20.1	
18 2,6-Dinitrotoluene							
1	31.418	31.415	0.003	1449H	20.0	19.8	

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
19 2,4-Dinitrotoluene							
1	31.854	31.845	0.009	2688H	20.0	19.9	
20 o-Nitrotoluene							
1	35.061	35.042	0.019	1196H	20.0	20.7	
21 p-Nitrotoluene							
1	36.578	36.569	0.009	1454H	20.0	20.2	
22 m-Nitrotoluene							
1	38.264	38.235	0.029	1429H	20.0	20.3	
23 PETN							
2	40.228	40.199	0.029	1185H	20.0	20.3	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

HP8330L3_00036 Amount Added: 1.00 Units: ml

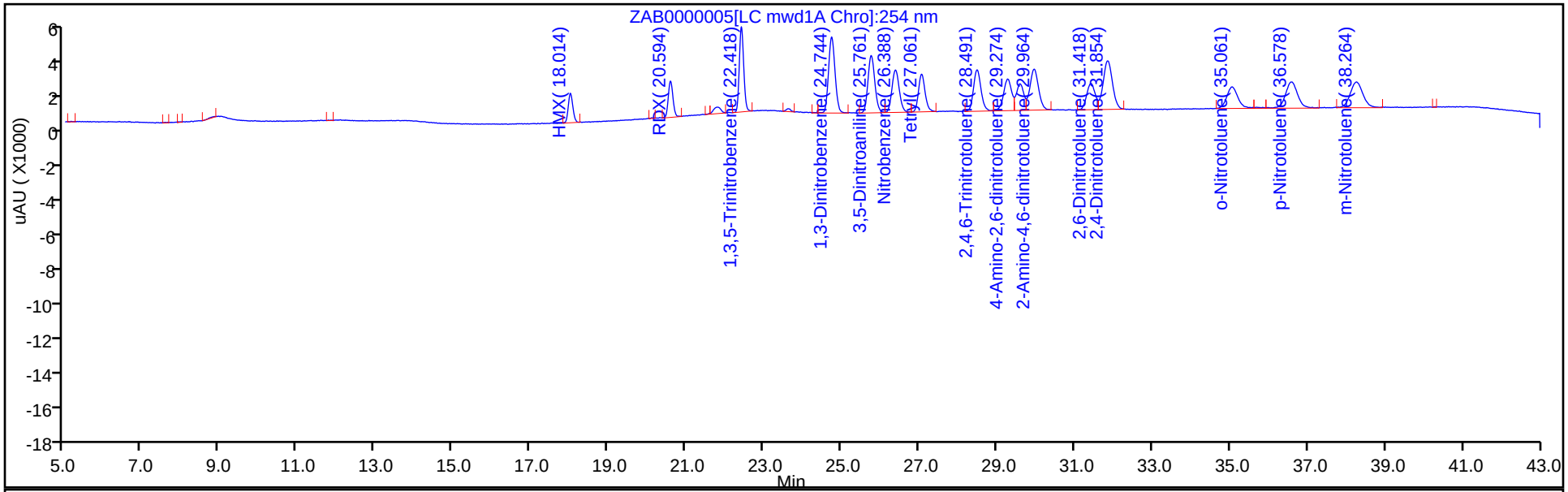
Report Date: 04-Mar-2019 13:29:37 Chrom Revision: 2.3 11-Feb-2019 16:31:10

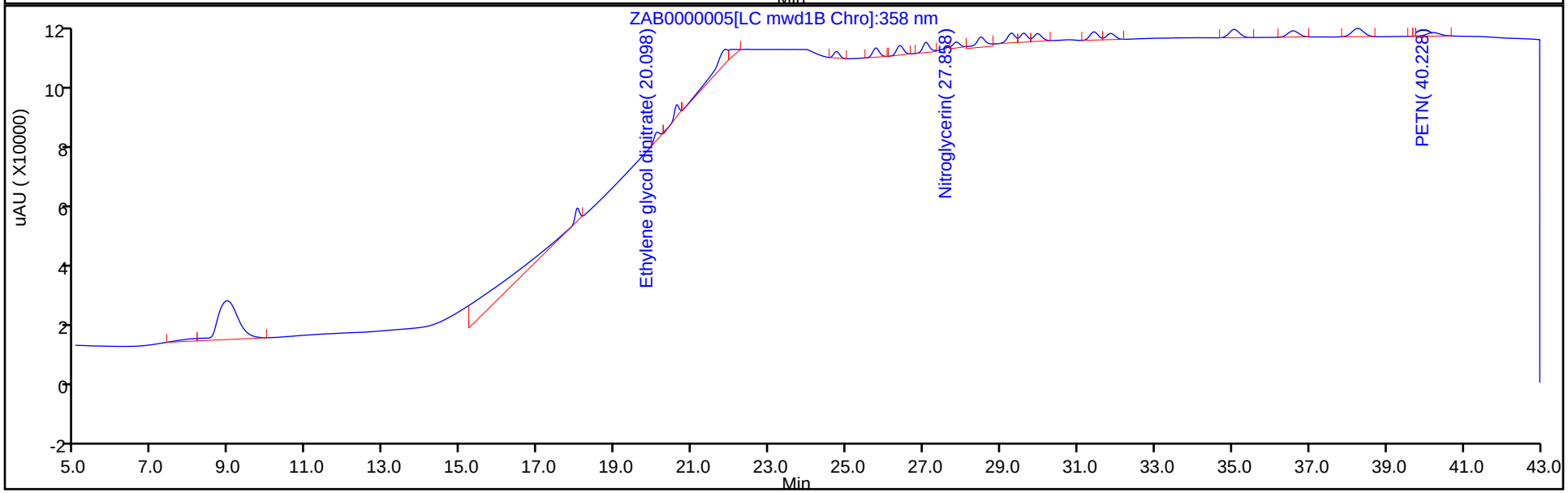
TestAmerica Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000005.D

Injection Date:	27-Feb-2019 21:30:43	Instrument ID:	LC11	Operator ID:	AJC
Lims ID:	std3			Worklist Smp#:	5
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1





Manual Integration/User Assign Peak Report

TestAmerica Sacramento

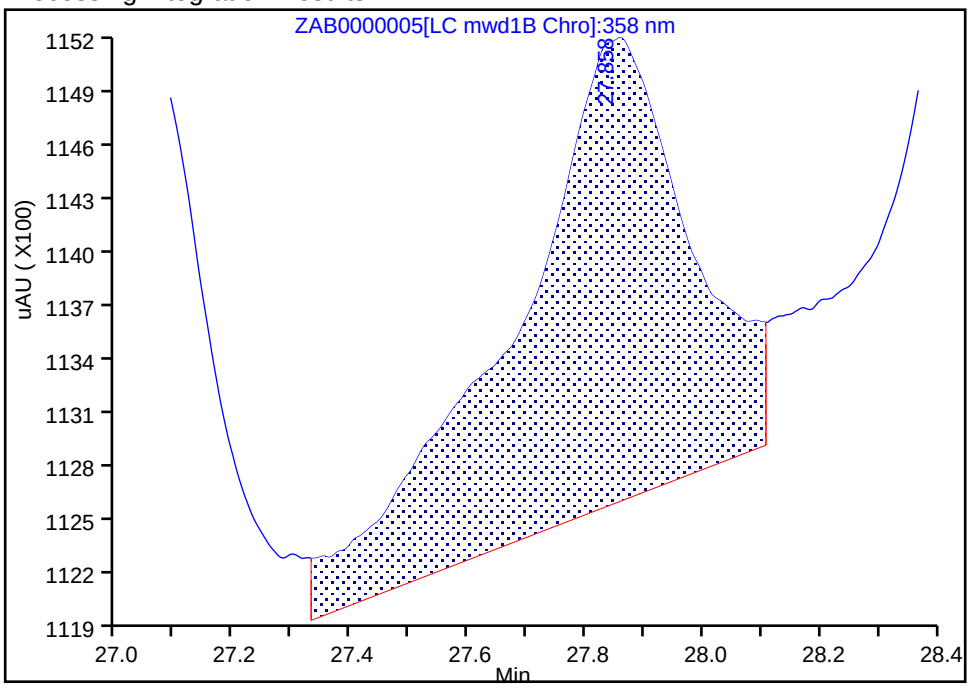
Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000005.D
Injection Date: 27-Feb-2019 21:30:43 Instrument ID: LC11
Lims ID: std3
Client ID:
Operator ID: AJC ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: 8330 Metab LC11 Limit Group: LC 8330A ICAL
Column: Detector LC mwd1B, 358 nm

13 Nitroglycerin, CAS: 55-63-0

Signal: 1

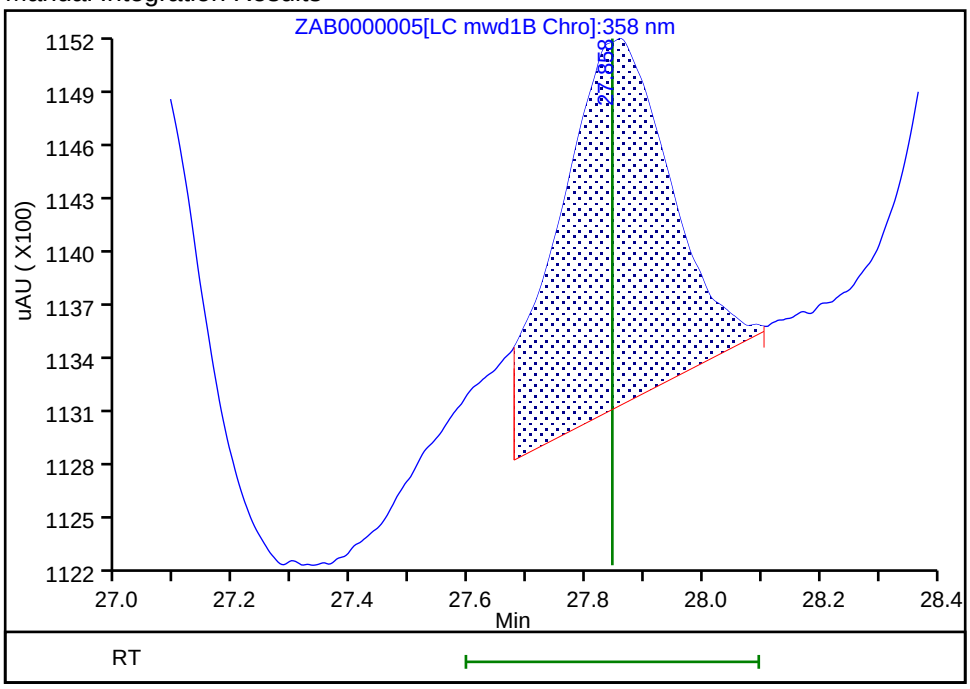
Processing Integration Results

RT: 27.86
Height: 2565
Amount: 23.994633
Amount Units: ng/ml



Manual Integration Results

RT: 27.86
Height: 2008
Amount: 19.952475
Amount Units: ng/ml



Reviewer: ortizam, 28-Feb-2019 12:15:29
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

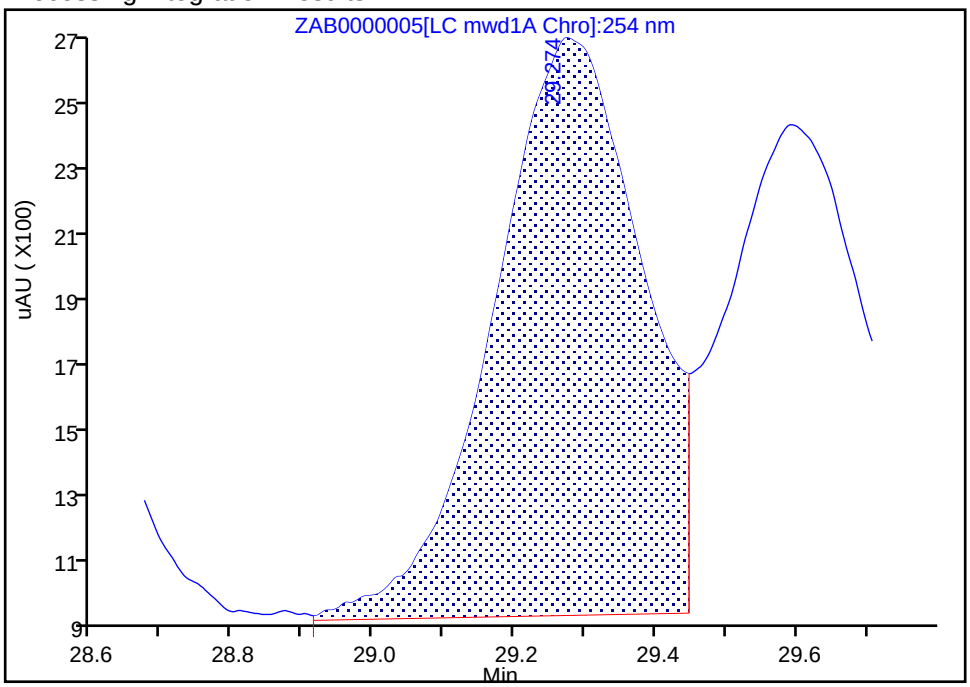
Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000005.D
Injection Date: 27-Feb-2019 21:30:43 Instrument ID: LC11
Lims ID: std3
Client ID:
Operator ID: AJC ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: 8330 Metab LC11 Limit Group: LC 8330A ICAL
Column: Synergi Hydro-RP C18 (4.60 mm) Detector LC mwd1A, 250 nm

15 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

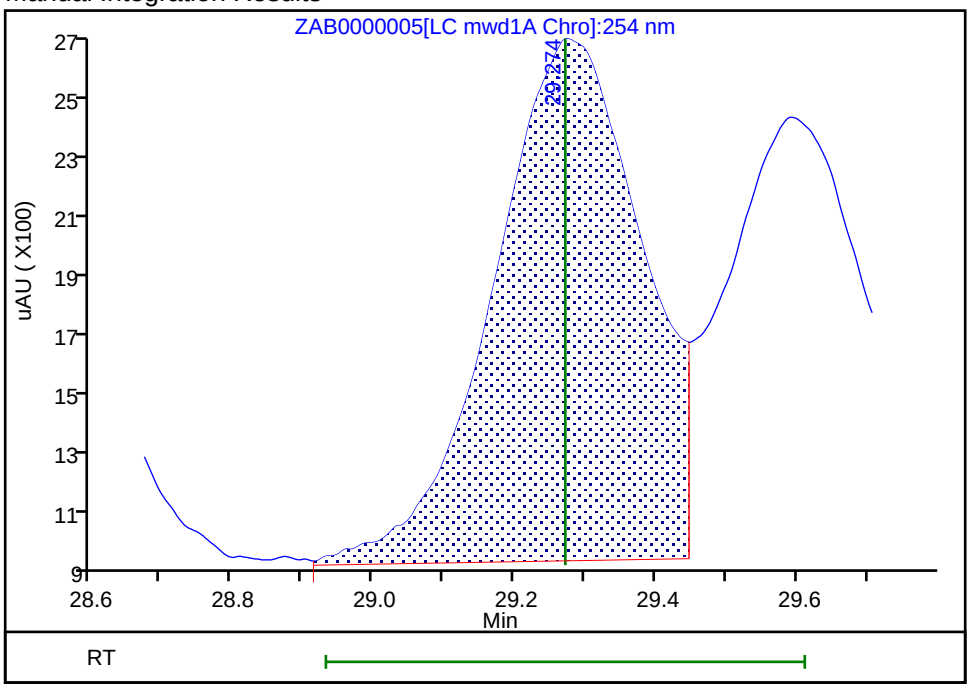
Processing Integration Results

RT: 29.27
Height: 1753
Amount: 20.142142
Amount Units: ng/ml



Manual Integration Results

RT: 29.27
Height: 1753
Amount: 20.142142
Amount Units: ng/ml



Reviewer: ortizam, 28-Feb-2019 12:15:02
Audit Action: Assigned Compound ID Audit Reason:

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

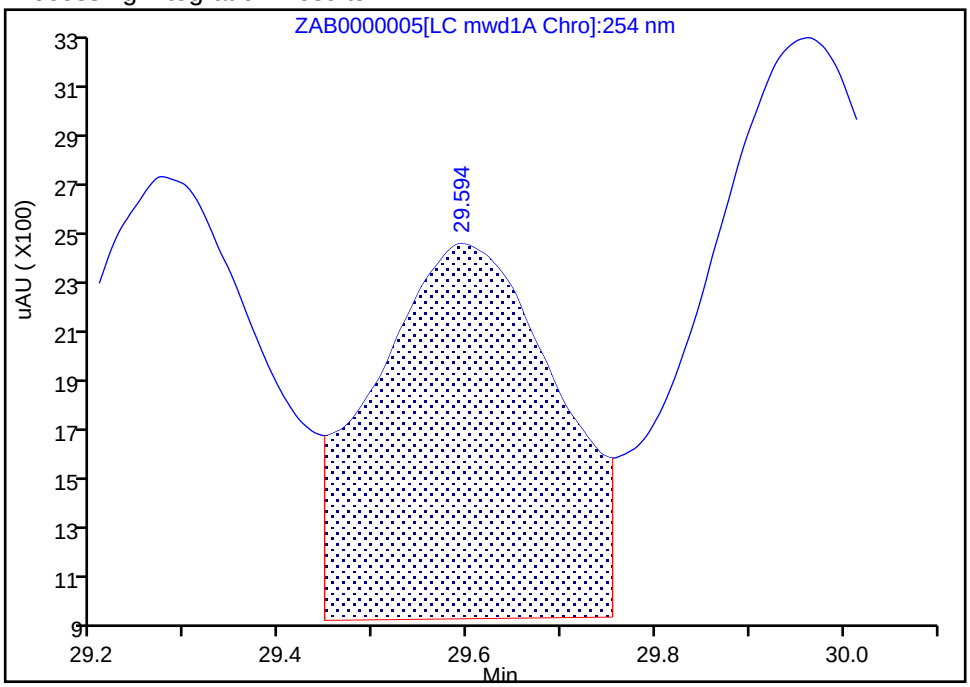
Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000005.D
Injection Date: 27-Feb-2019 21:30:43 Instrument ID: LC11
Lims ID: std3
Client ID:
Operator ID: AJC ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: 8330 Metab LC11 Limit Group: LC 8330A ICAL
Column: Synergi Hydro-RP C18 (4.60 mm) Detector LC mwd1A, 250 nm

$ 16 3,4-Dinitrotoluene, CAS: 610-39-9

Signal: 1

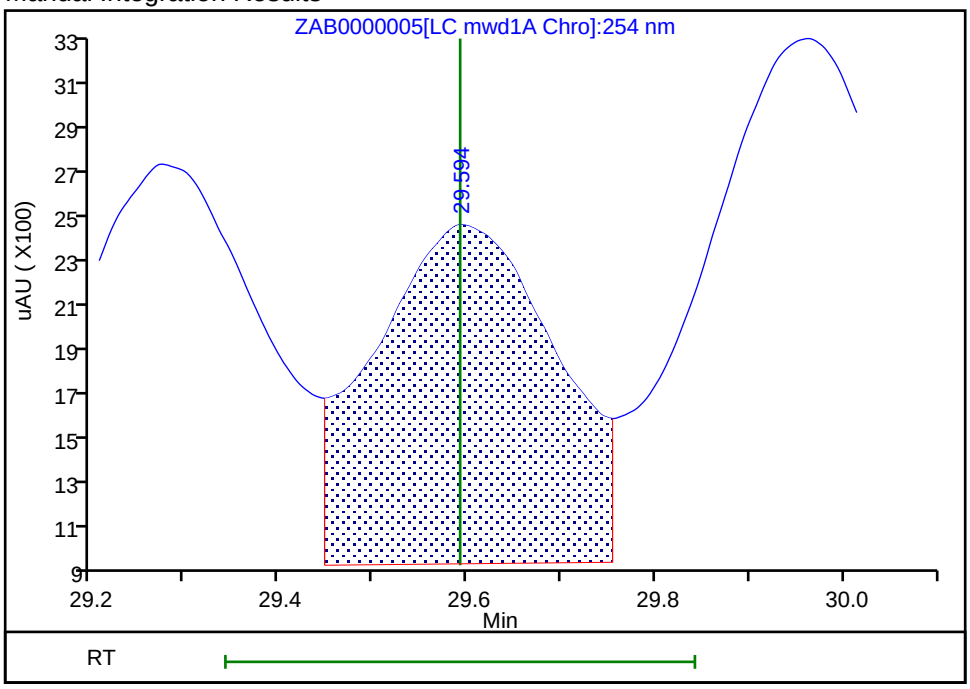
Processing Integration Results

RT: 29.59
Height: 1475
Amount: 20.150470
Amount Units: ng/ml



Manual Integration Results

RT: 29.59
Height: 1475
Amount: 20.150470
Amount Units: ng/ml



Reviewer: ortizam, 28-Feb-2019 12:15:00
Audit Action: Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

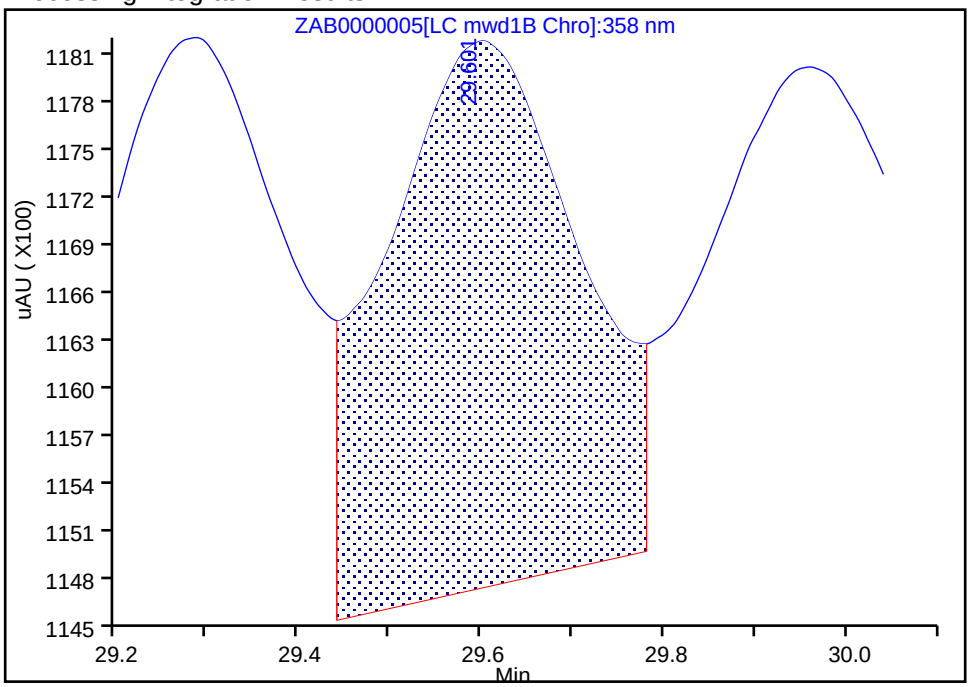
Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000005.D
Injection Date: 27-Feb-2019 21:30:43 Instrument ID: LC11
Lims ID: std3
Client ID:
Operator ID: AJC ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: 8330 Metab LC11 Limit Group: LC 8330A ICAL
Column: Detector LC mwd1B, 358 nm

$ 16 3,4-Dinitrotoluene, CAS: 610-39-9

Signal: 2

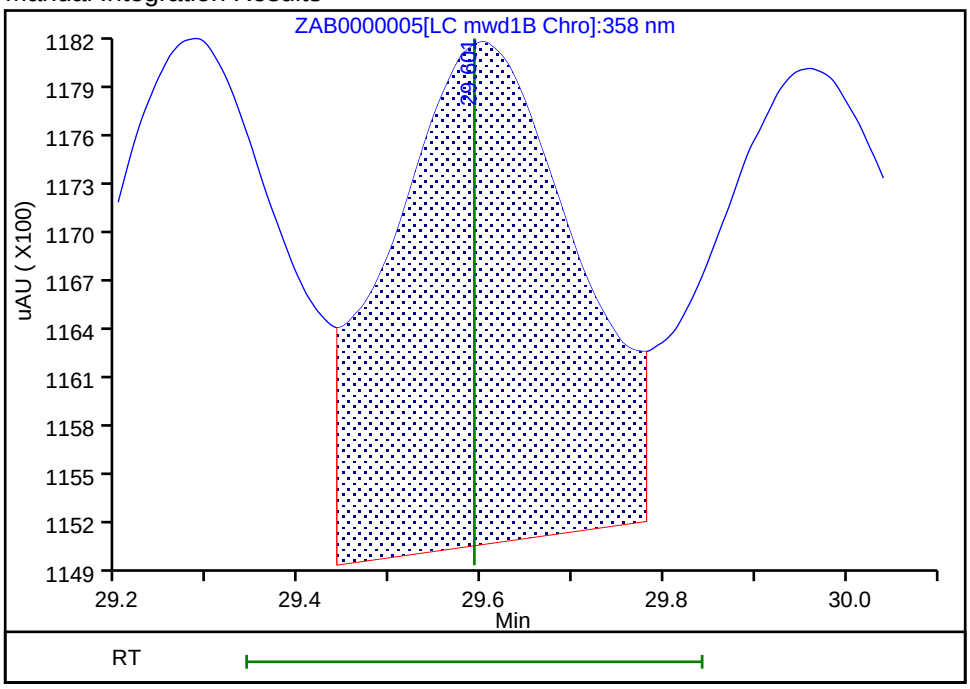
Processing Integration Results

RT: 29.60
Height: 3362
Amount: 20.150470
Amount Units: ng/ml



Manual Integration Results

RT: 29.60
Height: 3025
Amount: 20.150470
Amount Units: ng/ml



Reviewer: ortizam, 28-Feb-2019 12:15:38
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000006.D
Lims ID: std4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 27-Feb-2019 22:24:18 ALS Bottle#: 5 Worklist Smp#: 6
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 320-0072509-006
Operator ID: AJC Instrument ID: LC11
Sublist: chrom-8330 Metab LC11*sub10

Method: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 04-Mar-2019 13:29:39 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0304

First Level Reviewer: ortizam Date: 28-Feb-2019 12:17:13

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
3 HMX							
1	18.009	18.009	0.000	4032H	50.0	50.0	
5 Ethylene glycol dinitrate							M
2	20.082	20.082	0.000	62271	50.0	48.7	M
6 RDX							
1	20.595	20.595	0.000	4948H	50.0	49.9	
8 1,3,5-Trinitrobenzene							
1	22.419	22.419	0.000	11709H	50.0	50.0	
9 1,3-Dinitrobenzene							
1	24.742	24.742	0.000	10436H	50.0	49.9	
10 3,5-Dinitroaniline							
1	25.762	25.762	0.000	7878H	50.0	49.7	
11 Nitrobenzene							
1	26.389	26.389	0.000	5869H	50.0	50.2	
12 Tetryl							
1	27.052	27.052	0.000	5214H	50.0	49.7	
13 Nitroglycerin							M
2	27.845	27.845	0.000	4925H	50.0	48.9	M
14 2,4,6-Trinitrotoluene							
1	28.482	28.482	0.000	5752H	50.0	50.0	
15 4-Amino-2,6-dinitrotoluene							a
1	29.272	29.272	0.000	4371H	50.0	50.2	a
$ 16 3,4-Dinitrotoluene							Ma
1	29.592	29.592	0.000	3704H	50.0	50.6	a
2	29.592	29.592	0.000	7540H			M
17 2-Amino-4,6-dinitrotoluene							
1	29.952	29.952	0.000	5715H	50.0	50.4	
18 2,6-Dinitrotoluene							
1	31.415	31.415	0.000	3630H	50.0	49.5	

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
19 2,4-Dinitrotoluene							
1	31.845	31.845	0.000	6759H	50.0	50.0	
20 o-Nitrotoluene							
1	35.042	35.042	0.000	2888H	50.0	50.0	
21 p-Nitrotoluene							
1	36.569	36.569	0.000	3568H	50.0	49.6	
22 m-Nitrotoluene							
1	38.235	38.235	0.000	3513H	50.0	50.4	
23 PETN							
2	40.199	40.199	0.000	2728H	50.0	48.9	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

HP8330L4_00061 Amount Added: 1.00 Units: ml

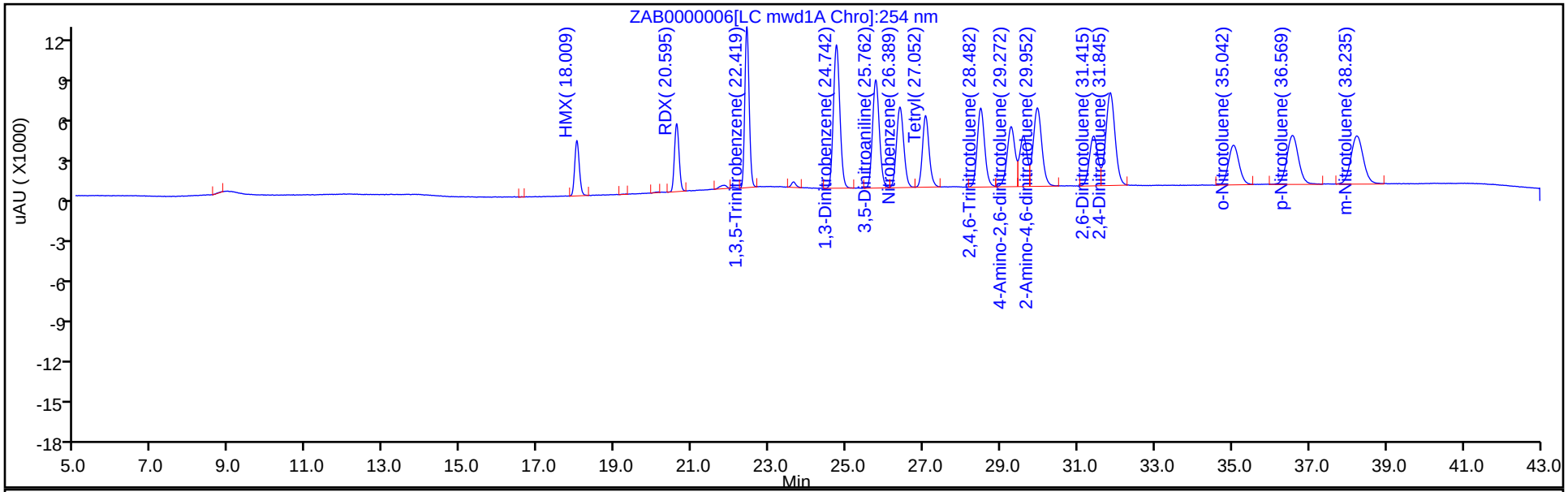
Report Date: 04-Mar-2019 13:29:39 Chrom Revision: 2.3 11-Feb-2019 16:31:10

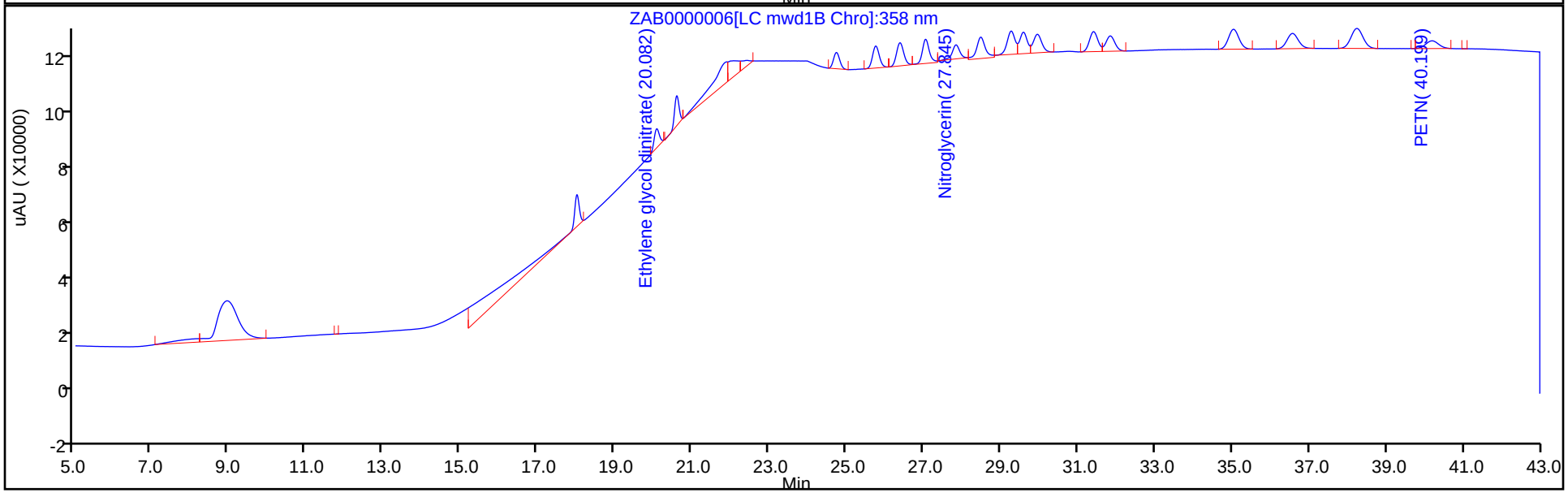
TestAmerica Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000006.D

Injection Date:	27-Feb-2019 22:24:18	Instrument ID:	LC11	Operator ID:	AJC
Lims ID:	std4			Worklist Smp#:	6
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1





Manual Integration/User Assign Peak Report

TestAmerica Sacramento

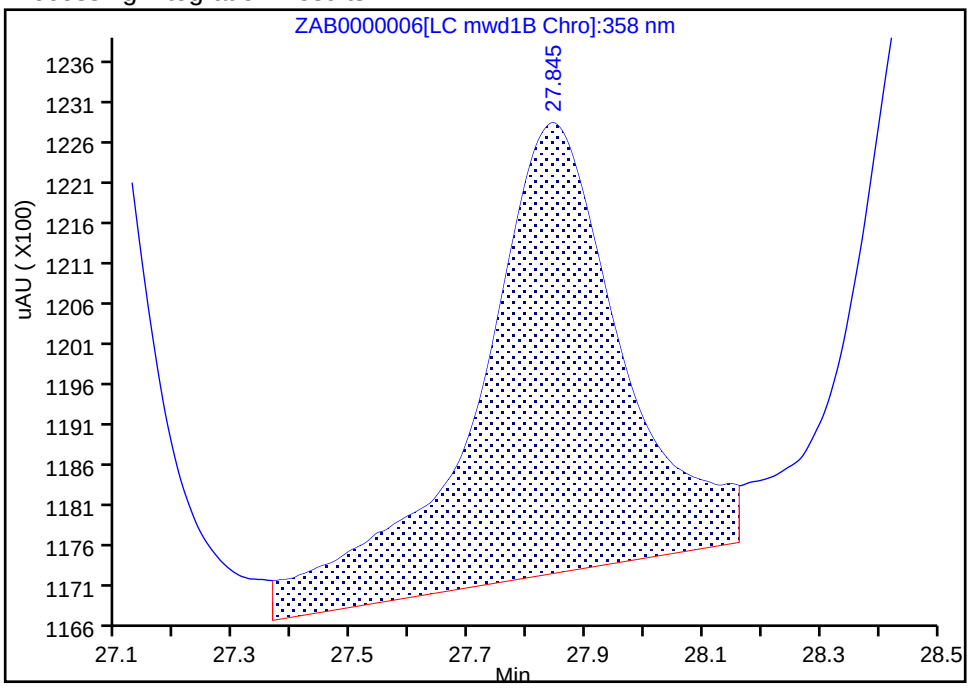
Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000006.D
Injection Date: 27-Feb-2019 22:24:18 Instrument ID: LC11
Lims ID: std4
Client ID:
Operator ID: AJC ALS Bottle#: 5 Worklist Smp#: 6
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: 8330 Metab LC11 Limit Group: LC 8330A ICAL
Column: Detector LC mwd1B, 358 nm

13 Nitroglycerin, CAS: 55-63-0

Signal: 1

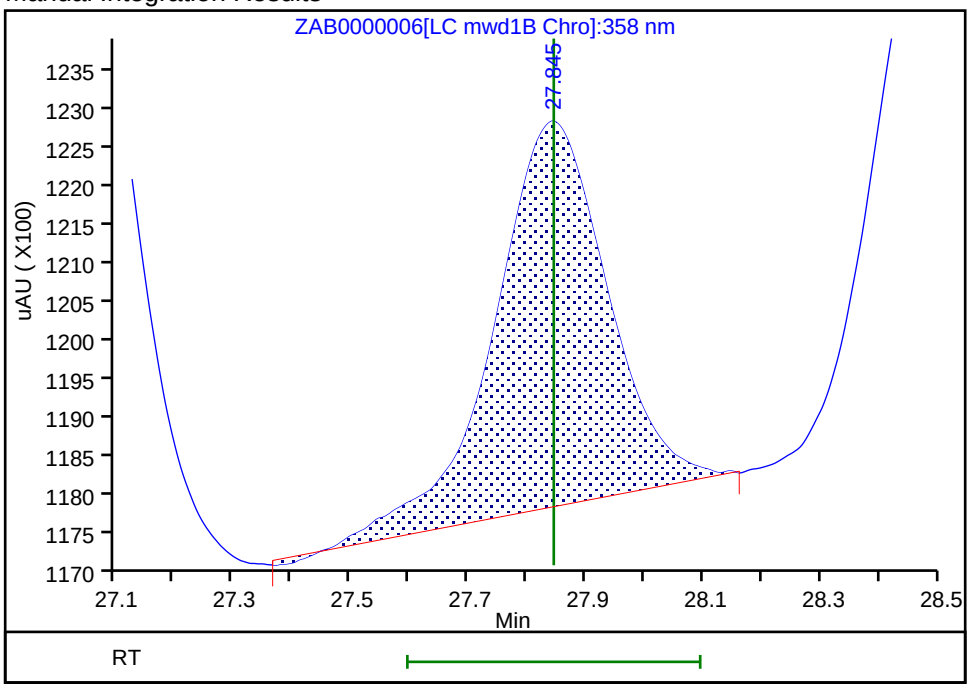
Processing Integration Results

RT: 27.85
Height: 5579
Amount: 53.929068
Amount Units: ng/ml



Manual Integration Results

RT: 27.85
Height: 4925
Amount: 48.937221
Amount Units: ng/ml



Reviewer: ortizam, 28-Feb-2019 12:16:30
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

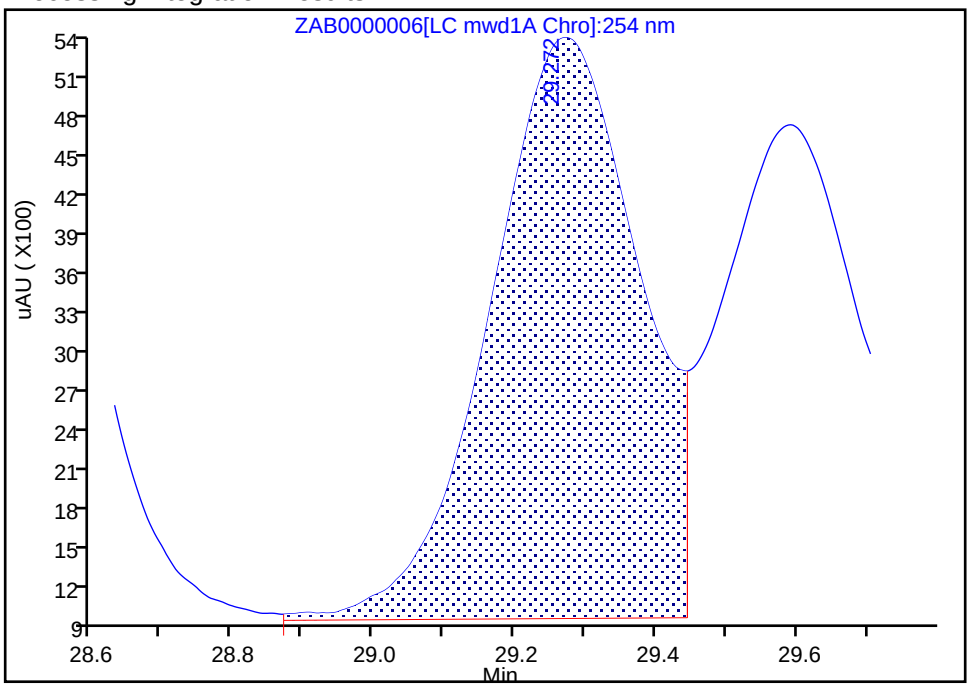
Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000006.D
Injection Date: 27-Feb-2019 22:24:18 Instrument ID: LC11
Lims ID: std4
Client ID:
Operator ID: AJC ALS Bottle#: 5 Worklist Smp#: 6
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: 8330 Metab LC11 Limit Group: LC 8330A ICAL
Column: Synergi Hydro-RP C18 (4.60 mm) Detector LC mwd1A, 250 nm

15 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

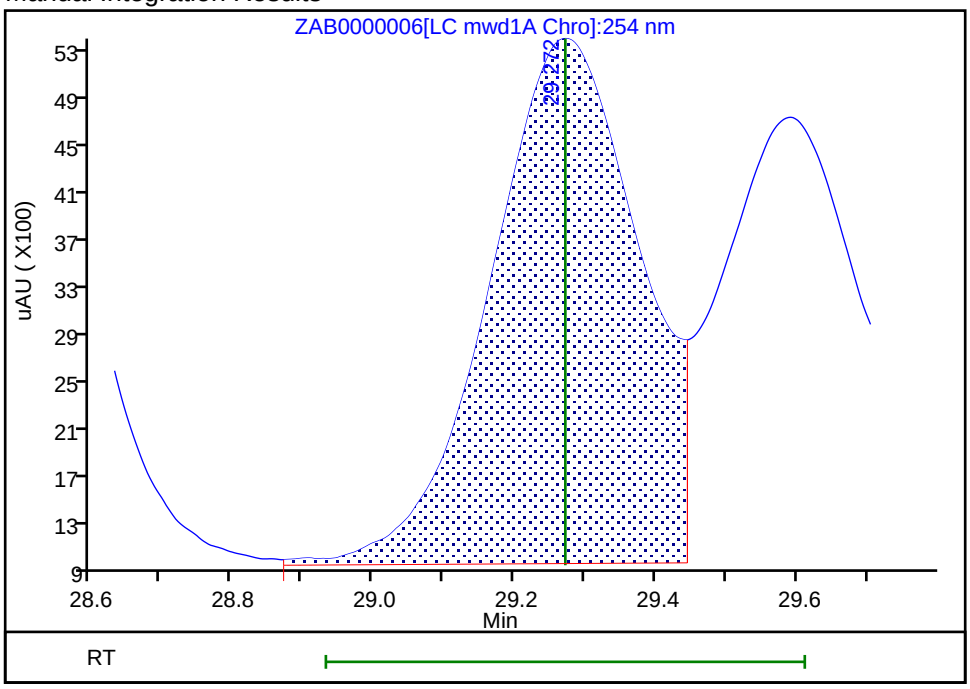
Processing Integration Results

RT: 29.27
Height: 4371
Amount: 50.208792
Amount Units: ng/ml



Manual Integration Results

RT: 29.27
Height: 4371
Amount: 50.208792
Amount Units: ng/ml



Reviewer: ortizam, 28-Feb-2019 12:16:08
Audit Action: Assigned Compound ID Audit Reason:

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

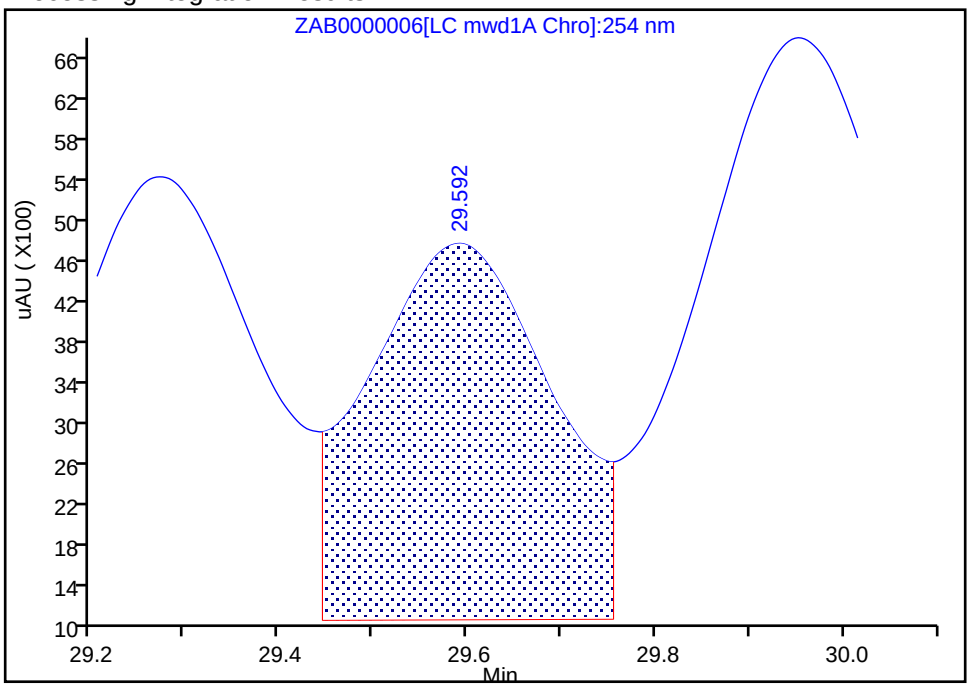
Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000006.D
Injection Date: 27-Feb-2019 22:24:18 Instrument ID: LC11
Lims ID: std4
Client ID:
Operator ID: AJC ALS Bottle#: 5 Worklist Smp#: 6
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: 8330 Metab LC11 Limit Group: LC 8330A ICAL
Column: Synergi Hydro-RP C18 (4.60 mm) Detector LC mwd1A, 250 nm

$ 16 3,4-Dinitrotoluene, CAS: 610-39-9

Signal: 1

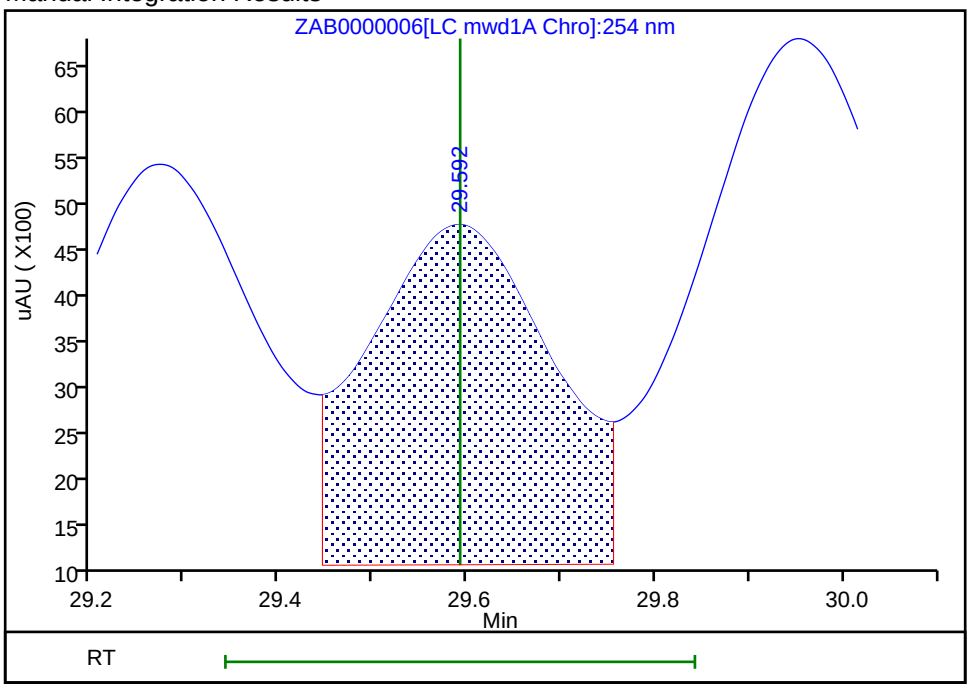
Processing Integration Results

RT: 29.59
Height: 3704
Amount: 50.601587
Amount Units: ng/ml



Manual Integration Results

RT: 29.59
Height: 3704
Amount: 50.601587
Amount Units: ng/ml



Reviewer: ortizam, 28-Feb-2019 12:16:05
Audit Action: Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

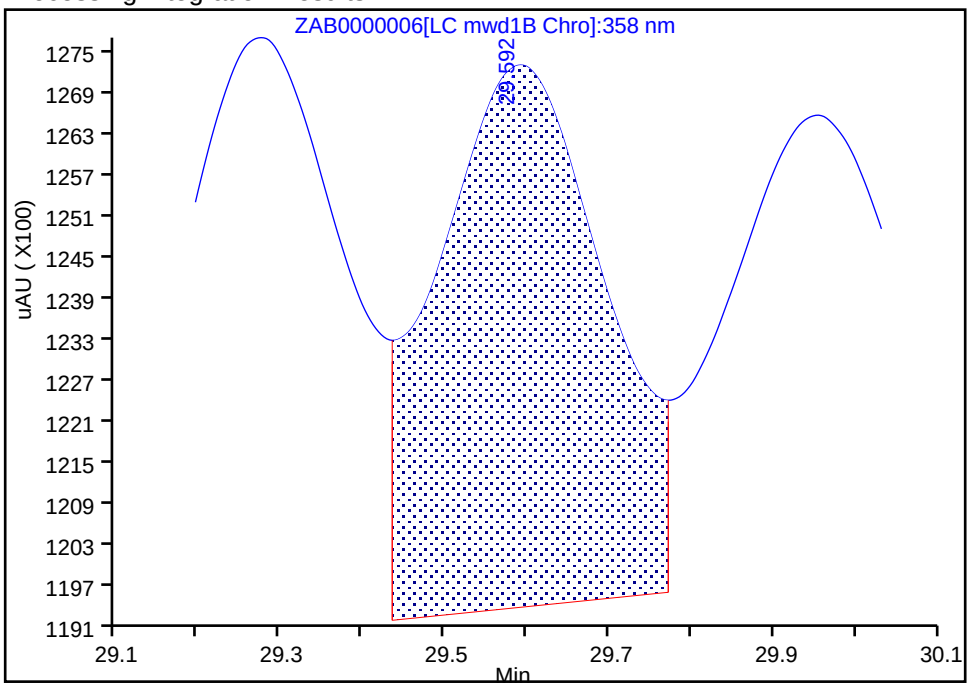
Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000006.D
Injection Date: 27-Feb-2019 22:24:18 Instrument ID: LC11
Lims ID: std4
Client ID:
Operator ID: AJC ALS Bottle#: 5 Worklist Smp#: 6
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: 8330 Metab LC11 Limit Group: LC 8330A ICAL
Column: Detector LC mwd1B, 358 nm

$ 16 3,4-Dinitrotoluene, CAS: 610-39-9

Signal: 2

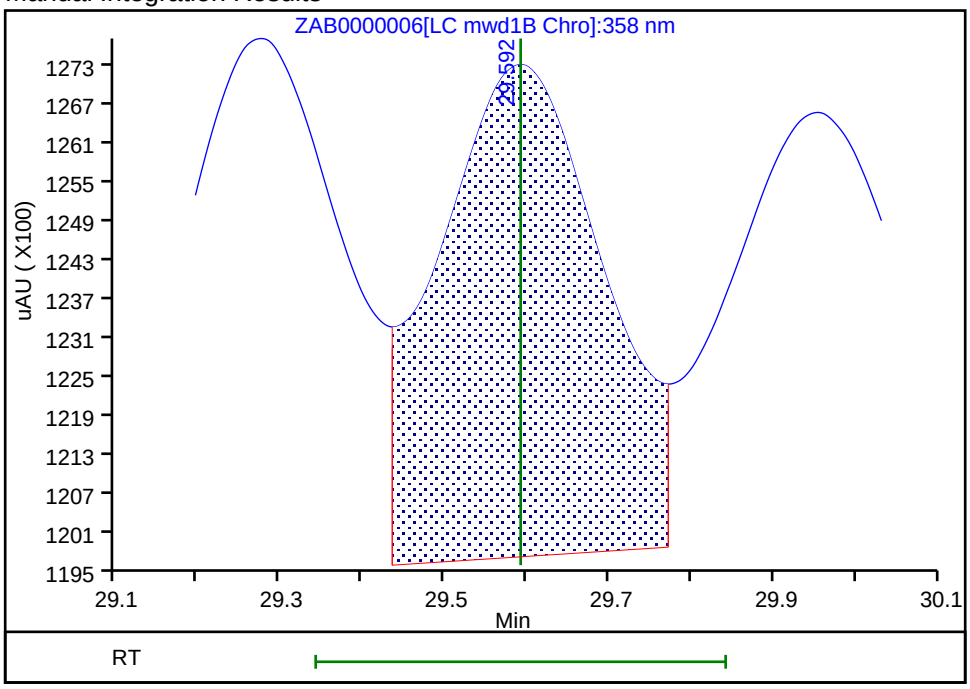
Processing Integration Results

RT: 29.59
Height: 7916
Amount: 50.601587
Amount Units: ng/ml



Manual Integration Results

RT: 29.59
Height: 7540
Amount: 50.601587
Amount Units: ng/ml



Reviewer: ortizam, 28-Feb-2019 12:16:33
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000007.D
Lims ID: std5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 27-Feb-2019 23:17:54 ALS Bottle#: 6 Worklist Smp#: 7
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 320-0072509-007
Operator ID: AJC Instrument ID: LC11
Sublist: chrom-8330 Metab LC11*sub10

Method: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 04-Mar-2019 13:29:41 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0304

First Level Reviewer: ortizam Date: 28-Feb-2019 12:11:37

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
3 HMX							
1	18.002	18.009	-0.007	7902H	100.0	98.0	
5 Ethylene glycol dinitrate							M
2	20.068	20.082	-0.014	128908	100.0	100.9	M
6 RDX							
1	20.592	20.595	-0.003	9743H	100.0	98.3	
8 1,3,5-Trinitrobenzene							
1	22.422	22.419	0.003	23286H	100.0	99.4	
9 1,3-Dinitrobenzene							
1	24.752	24.742	0.010	20738H	100.0	99.2	
10 3,5-Dinitroaniline							
1	25.768	25.762	0.006	15755H	100.0	99.3	
11 Nitrobenzene							
1	26.392	26.389	0.003	11686H	100.0	99.9	
12 Tetryl							
1	27.058	27.052	0.006	10472H	100.0	99.8	
13 Nitroglycerin							M
2	27.848	27.845	0.003	9868H	100.0	98.1	M
14 2,4,6-Trinitrotoluene							
1	28.485	28.482	0.003	11465H	100.0	99.6	
15 4-Amino-2,6-dinitrotoluene							a
1	29.278	29.272	0.006	8656H	100.0	99.4	a
$ 16 3,4-Dinitrotoluene							Ma
1	29.595	29.592	0.003	7347H	100.0	100.4	a
2	29.595	29.592	0.003	15039H			M
17 2-Amino-4,6-dinitrotoluene							
1	29.962	29.952	0.010	11288H	100.0	99.5	
18 2,6-Dinitrotoluene							
1	31.425	31.415	0.010	7220H	100.0	98.5	

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
19 2,4-Dinitrotoluene							
1	31.858	31.845	0.013	13453H	100.0	99.5	
20 o-Nitrotoluene							
1	35.068	35.042	0.026	5770H	100.0	99.9	
21 p-Nitrotoluene							
1	36.605	36.569	0.036	7009H	100.0	97.5	
22 m-Nitrotoluene							
1	38.291	38.235	0.056	6931H	100.0	99.7	
23 PETN							
2	40.248	40.199	0.049	5421H	100.0	98.8	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

HP8330L5_00069 Amount Added: 1.00 Units: ml

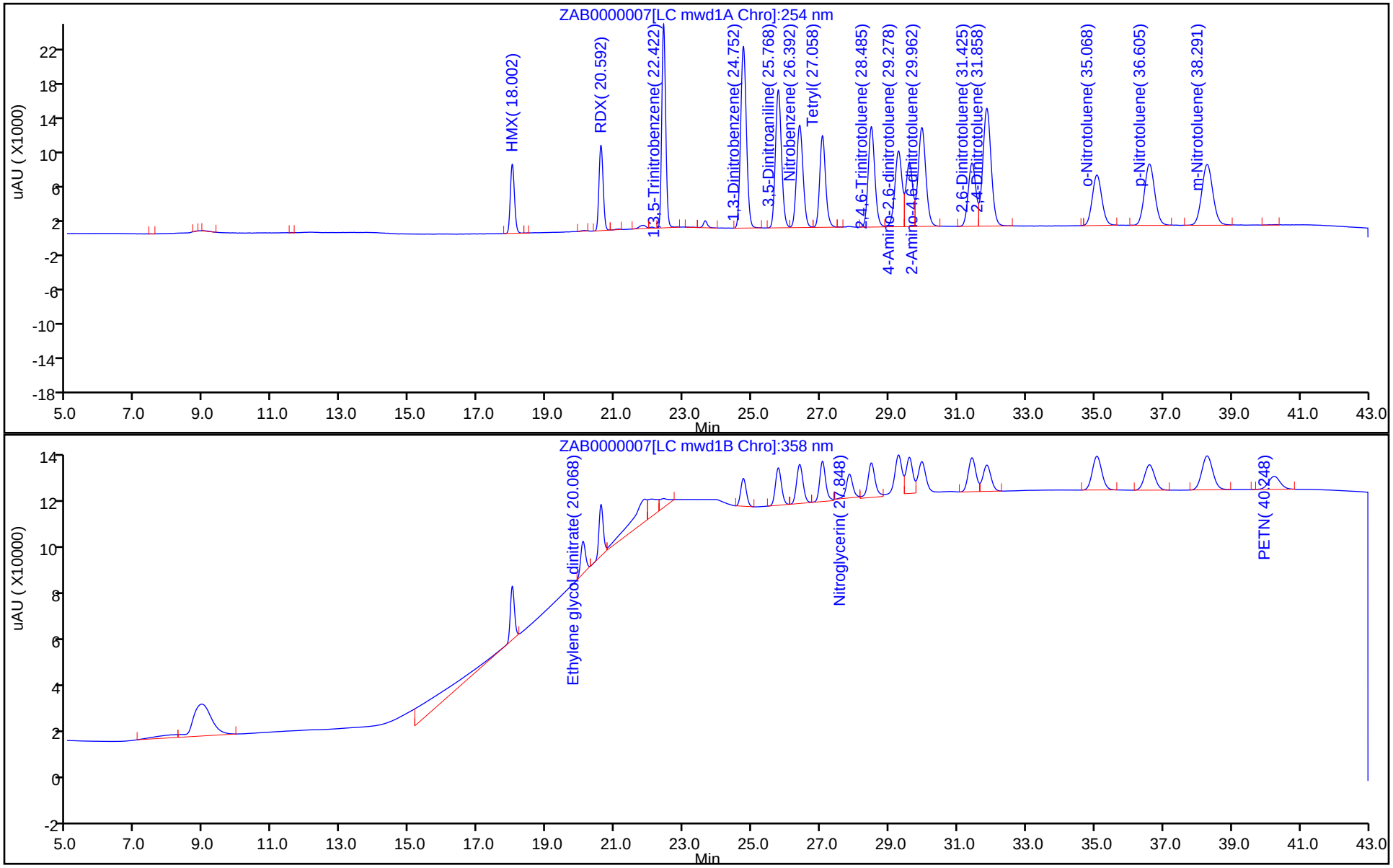
Report Date: 04-Mar-2019 13:29:42 Chrom Revision: 2.3 11-Feb-2019 16:31:10

TestAmerica Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000007.D

Injection Date:	27-Feb-2019 23:17:54	Instrument ID:	LC11	Operator ID:	AJC
Lims ID:	std5			Worklist Smp#:	7
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

TestAmerica Sacramento

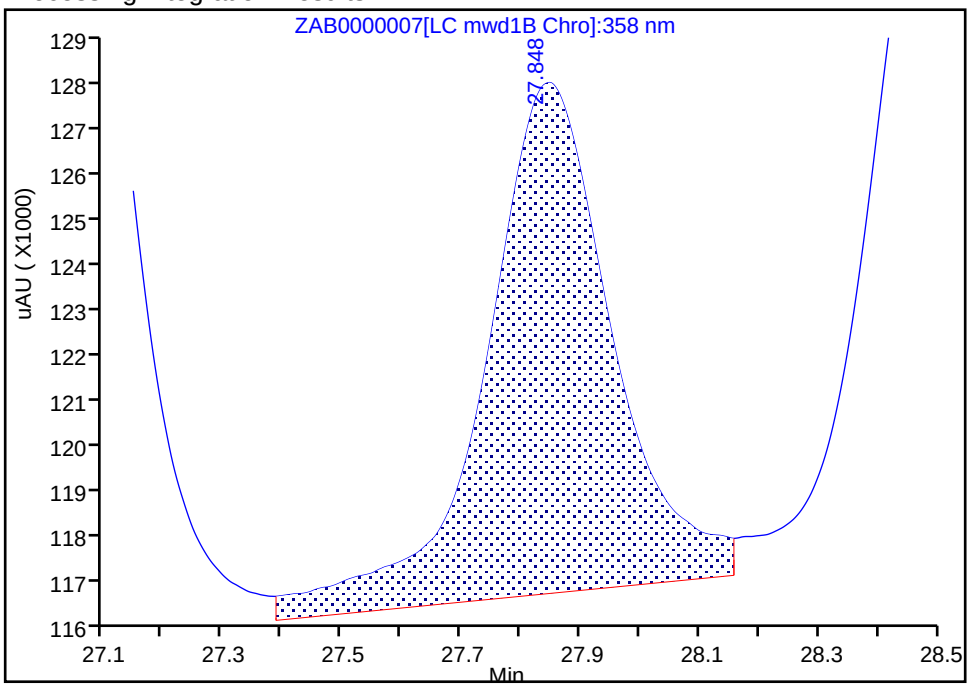
Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000007.D
Injection Date: 27-Feb-2019 23:17:54 Instrument ID: LC11
Lims ID: std5
Client ID:
Operator ID: AJC ALS Bottle#: 6 Worklist Smp#: 7
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: 8330 Metab LC11 Limit Group: LC 8330A ICAL
Column: Detector LC mwd1B, 358 nm

13 Nitroglycerin, CAS: 55-63-0

Signal: 1

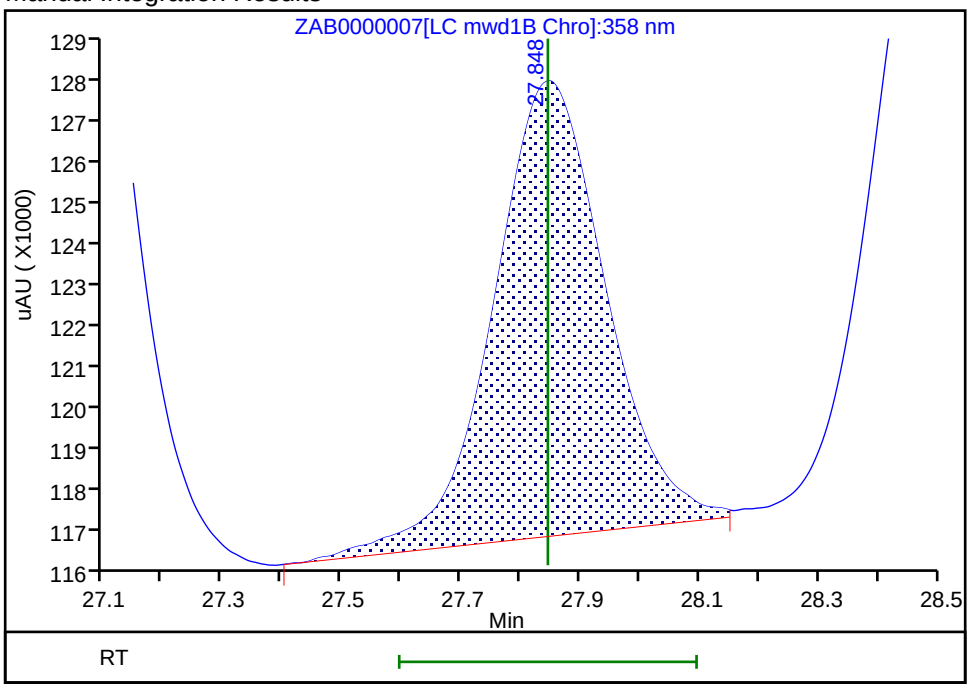
Processing Integration Results

RT: 27.85
Height: 10436
Amount: 94.866004
Amount Units: ng/ml



Manual Integration Results

RT: 27.85
Height: 9868
Amount: 98.053299
Amount Units: ng/ml



Reviewer: ortizam, 28-Feb-2019 12:10:52
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

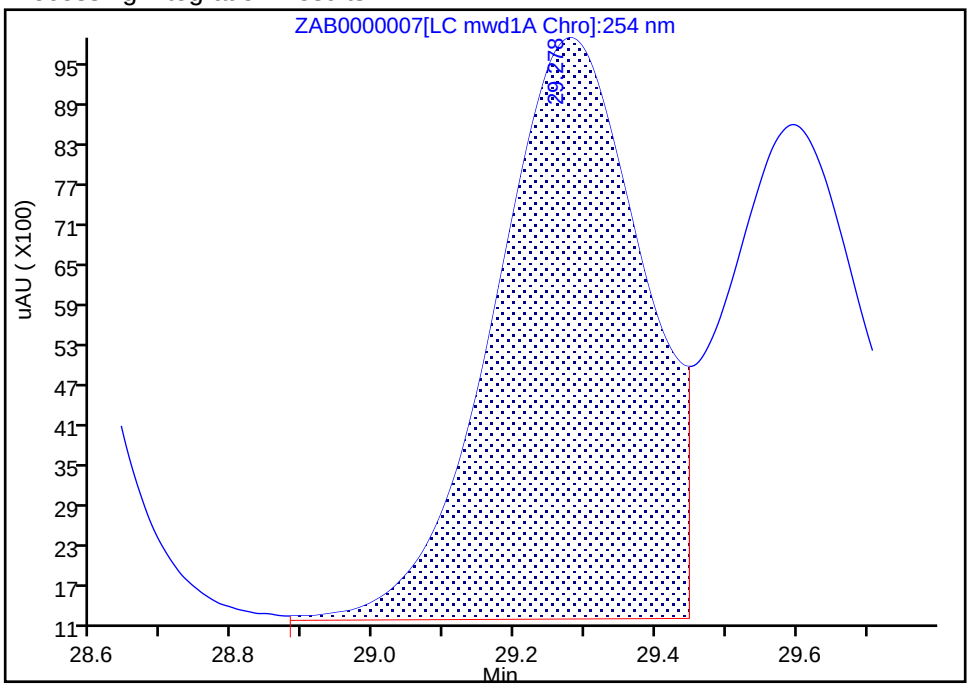
Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000007.D
Injection Date: 27-Feb-2019 23:17:54 Instrument ID: LC11
Lims ID: std5
Client ID:
Operator ID: AJC ALS Bottle#: 6 Worklist Smp#: 7
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: 8330 Metab LC11 Limit Group: LC 8330A ICAL
Column: Synergi Hydro-RP C18 (4.60 mm) Detector LC mwd1A, 250 nm

15 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

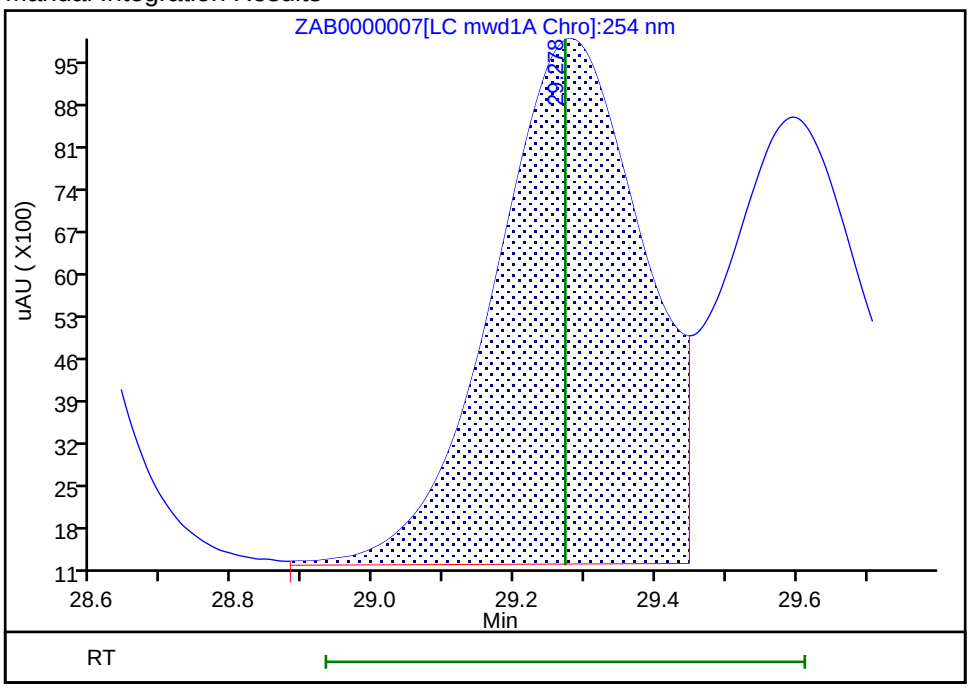
Processing Integration Results

RT: 29.28
Height: 8656
Amount: 99.420249
Amount Units: ng/ml



Manual Integration Results

RT: 29.28
Height: 8656
Amount: 99.420249
Amount Units: ng/ml



Reviewer: ortizam, 28-Feb-2019 12:10:28
Audit Action: Assigned Compound ID Audit Reason:

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

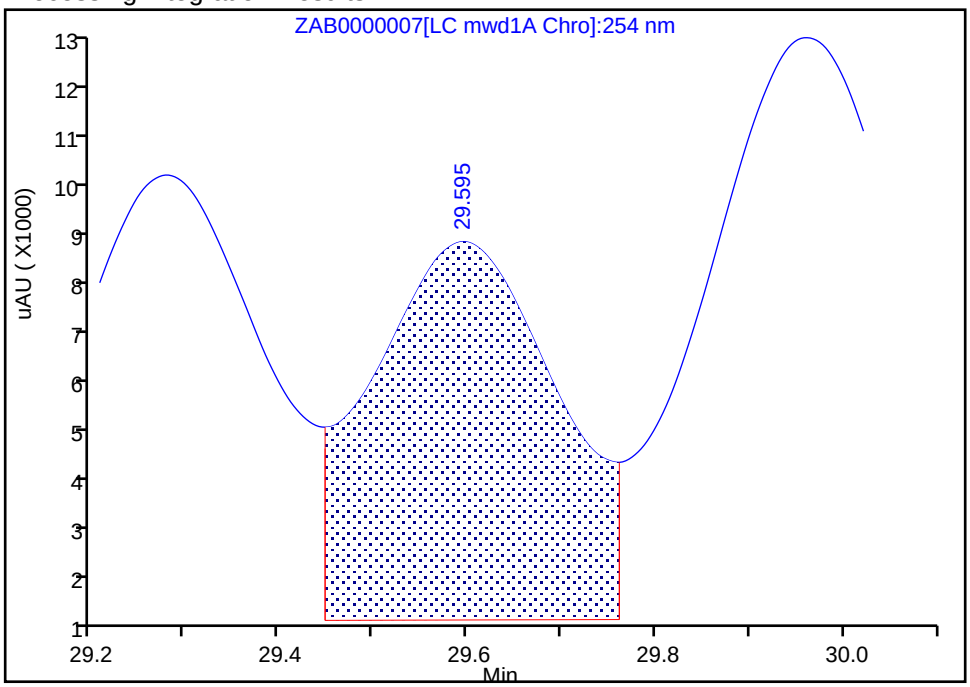
Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000007.D
Injection Date: 27-Feb-2019 23:17:54 Instrument ID: LC11
Lims ID: std5
Client ID:
Operator ID: AJC ALS Bottle#: 6 Worklist Smp#: 7
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: 8330 Metab LC11 Limit Group: LC 8330A ICAL
Column: Synergi Hydro-RP C18 (4.60 mm) Detector LC mwd1A, 250 nm

$ 16 3,4-Dinitrotoluene, CAS: 610-39-9

Signal: 1

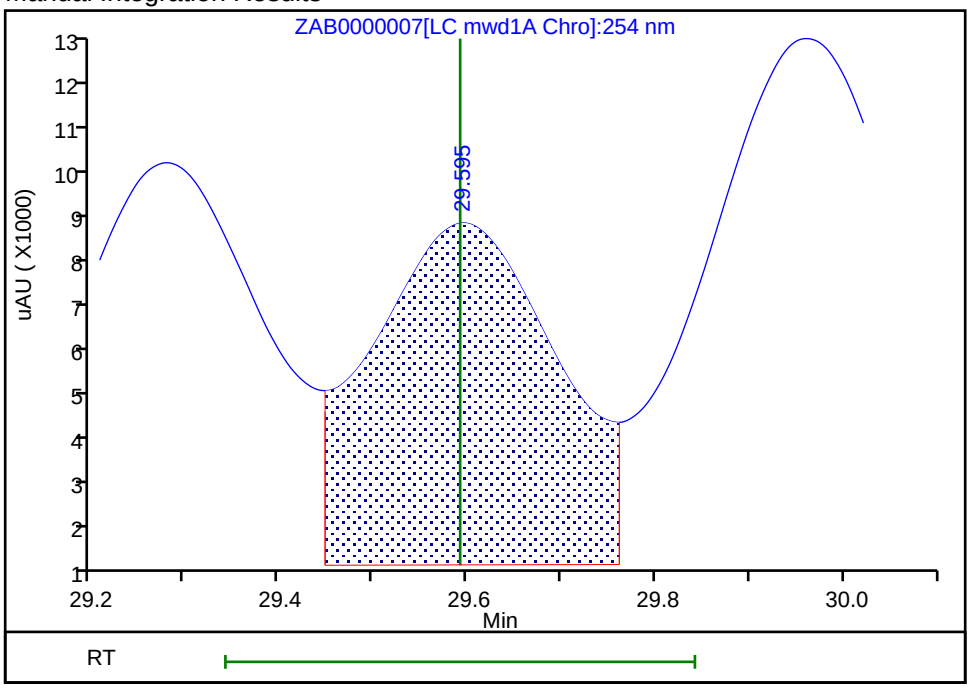
Processing Integration Results

RT: 29.59
Height: 7347
Amount: 100.3698
Amount Units: ng/ml



Manual Integration Results

RT: 29.59
Height: 7347
Amount: 100.3698
Amount Units: ng/ml



Reviewer: ortizam, 28-Feb-2019 12:10:24
Audit Action: Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

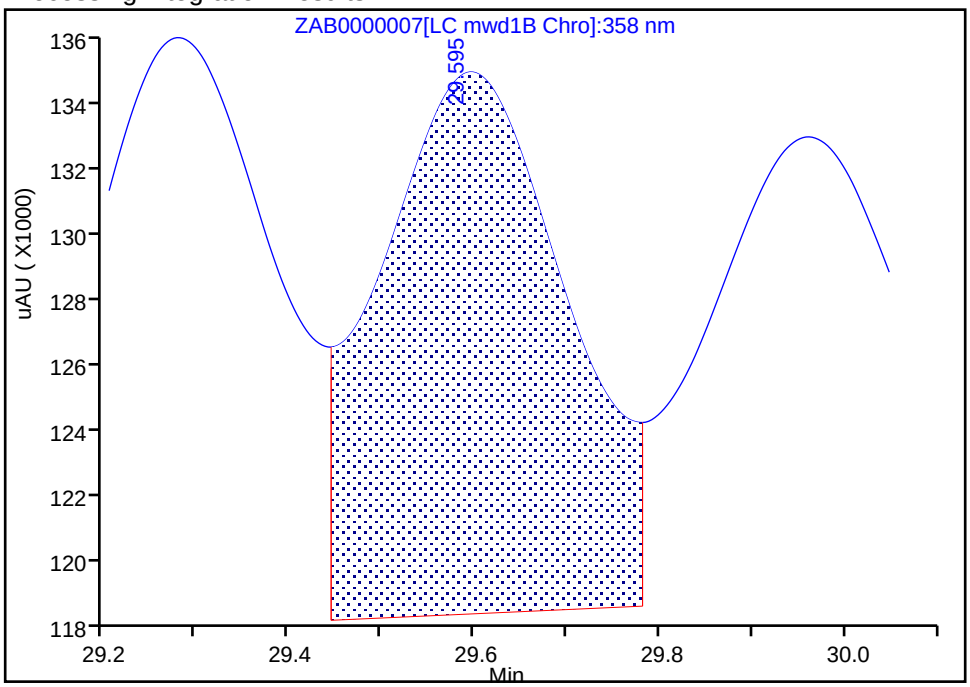
Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000007.D
Injection Date: 27-Feb-2019 23:17:54 Instrument ID: LC11
Lims ID: std5
Client ID:
Operator ID: AJC ALS Bottle#: 6 Worklist Smp#: 7
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: 8330 Metab LC11 Limit Group: LC 8330A ICAL
Column: Detector LC mwd1B, 358 nm

$ 16 3,4-Dinitrotoluene, CAS: 610-39-9

Signal: 2

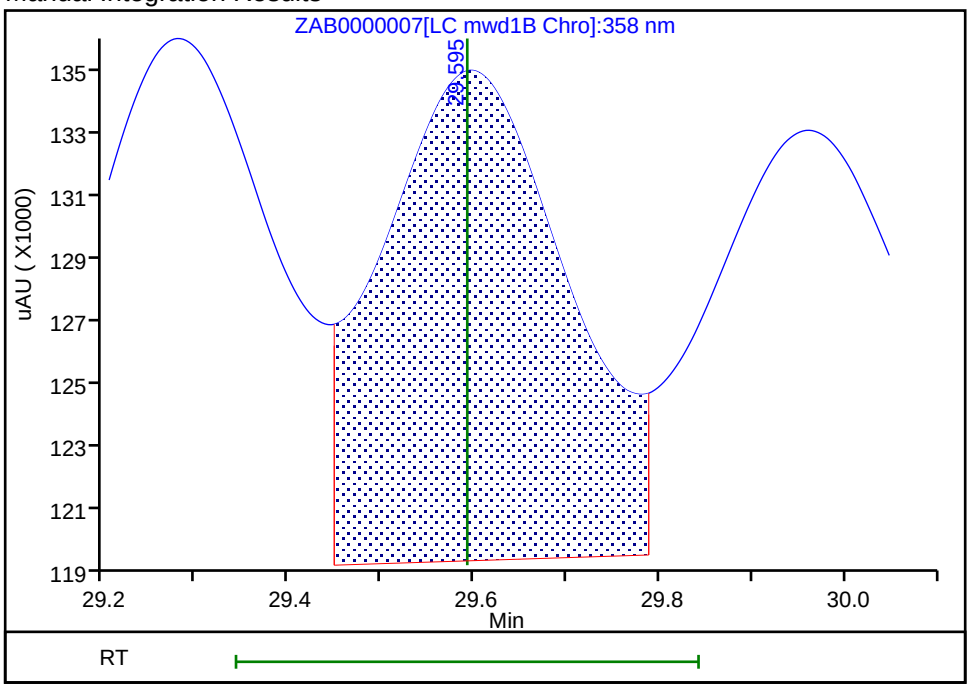
Processing Integration Results

RT: 29.59
Height: 15368
Amount: 100.3698
Amount Units: ng/ml



Manual Integration Results

RT: 29.59
Height: 15039
Amount: 100.3698
Amount Units: ng/ml



Reviewer: ortizam, 28-Feb-2019 12:11:15
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000008.D
Lims ID: std6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 28-Feb-2019 00:11:36 ALS Bottle#: 7 Worklist Smp#: 8
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 320-0072509-008
Operator ID: AJC Instrument ID: LC11
Sublist: chrom-8330 Metab LC11*sub10

Method: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 04-Mar-2019 13:29:44 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0304

First Level Reviewer: ortizam Date: 28-Feb-2019 12:12:38

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
3 HMX							
1	18.006	18.009	-0.003	15517H	200.0	192.4	
5 Ethylene glycol dinitrate							M
2	20.073	20.082	-0.009	259127	200.0	202.8	M
6 RDX							
1	20.596	20.595	0.001	19121H	200.0	193.0	
8 1,3,5-Trinitrobenzene							
1	22.419	22.419	0.000	46167H	200.0	197.1	
9 1,3-Dinitrobenzene							
1	24.746	24.742	0.004	41336H	200.0	197.8	
10 3,5-Dinitroaniline							
1	25.759	25.762	-0.003	31335H	200.0	197.5	
11 Nitrobenzene							
1	26.379	26.389	-0.010	23306H	200.0	199.2	
12 Tetryl							
1	27.043	27.052	-0.009	20983H	200.0	199.9	
13 Nitroglycerin							M
2	27.826	27.845	-0.019	19536H	200.0	194.1	M
14 2,4,6-Trinitrotoluene							
1	28.466	28.482	-0.016	22914H	200.0	199.1	
15 4-Amino-2,6-dinitrotoluene							a
1	29.253	29.272	-0.019	17261H	200.0	198.2	a
$ 16 3,4-Dinitrotoluene							Ma
1	29.569	29.592	-0.023	14685H	200.0	200.6	a
2	29.569	29.592	-0.023	29892H			M
17 2-Amino-4,6-dinitrotoluene							
1	29.933	29.952	-0.019	22503H	200.0	198.2	
18 2,6-Dinitrotoluene							
1	31.396	31.415	-0.019	14374H	200.0	196.0	

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
19 2,4-Dinitrotoluene							
1	31.829	31.845	-0.016	26791H	200.0	198.1	
20 o-Nitrotoluene							
1	35.039	35.042	-0.003	11502H	200.0	199.2	
21 p-Nitrotoluene							
1	36.576	36.569	0.007	14014H	200.0	195.0	
22 m-Nitrotoluene							
1	38.262	38.235	0.027	13845H	200.0	199.5	
23 PETN							
2	40.226	40.199	0.027	10896H	200.0	200.3	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

HP8330L6_00050 Amount Added: 1.00 Units: ml

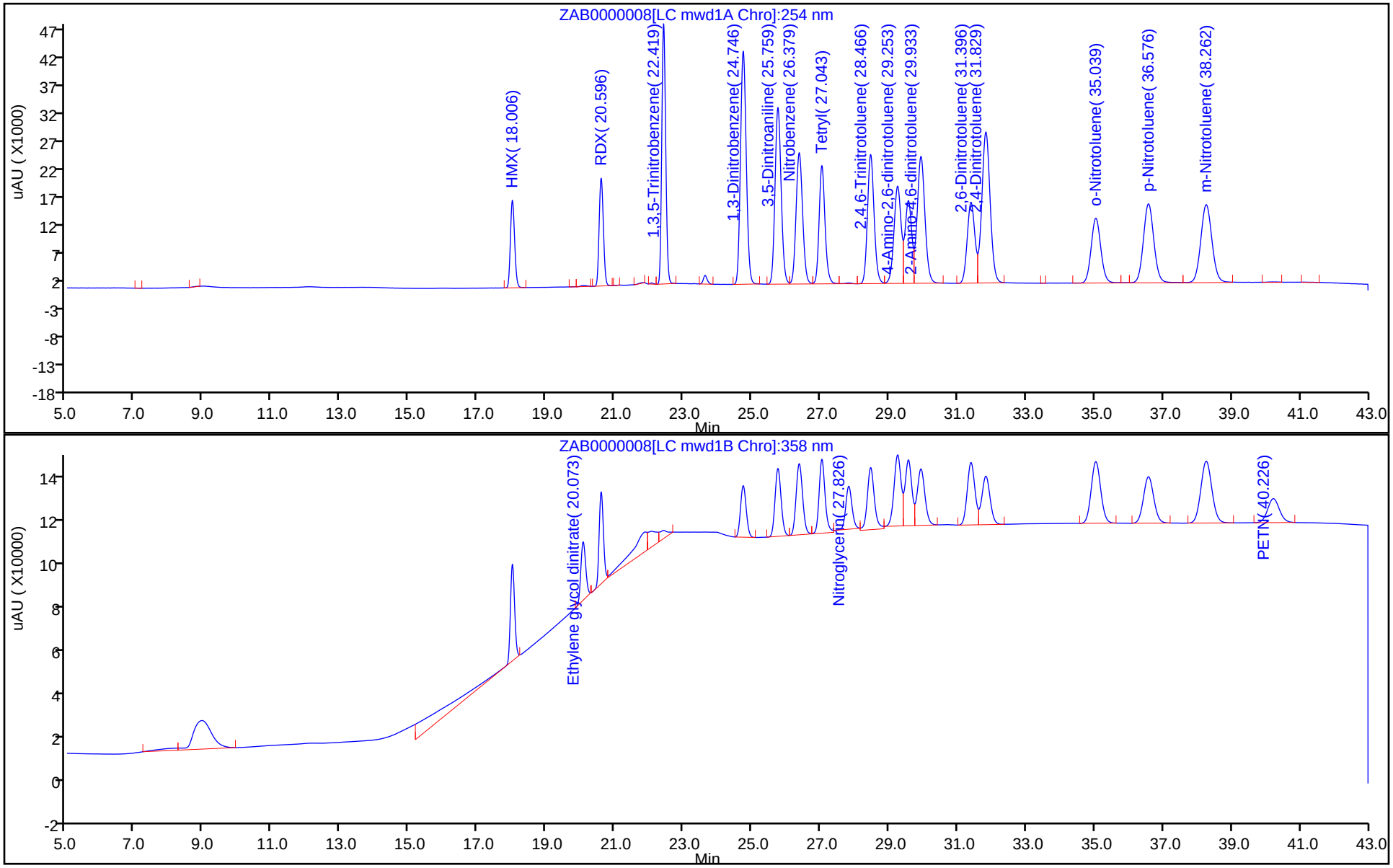
Report Date: 04-Mar-2019 13:29:44 Chrom Revision: 2.3 11-Feb-2019 16:31:10

TestAmerica Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000008.D

Injection Date:	28-Feb-2019 00:11:36	Instrument ID:	LC11	Operator ID:	AJC
Lims ID:	std6			Worklist Smp#:	8
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

TestAmerica Sacramento

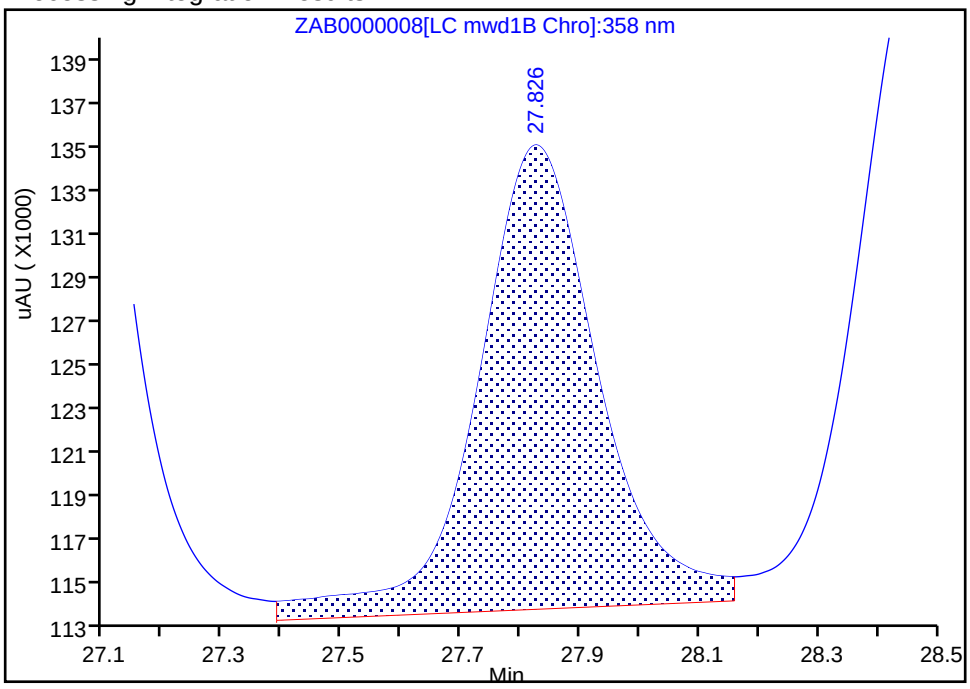
Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000008.D
Injection Date: 28-Feb-2019 00:11:36 Instrument ID: LC11
Lims ID: std6
Client ID:
Operator ID: AJC ALS Bottle#: 7 Worklist Smp#: 8
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: 8330 Metab LC11 Limit Group: LC 8330A ICAL
Column: Detector LC mwd1B, 358 nm

13 Nitroglycerin, CAS: 55-63-0

Signal: 1

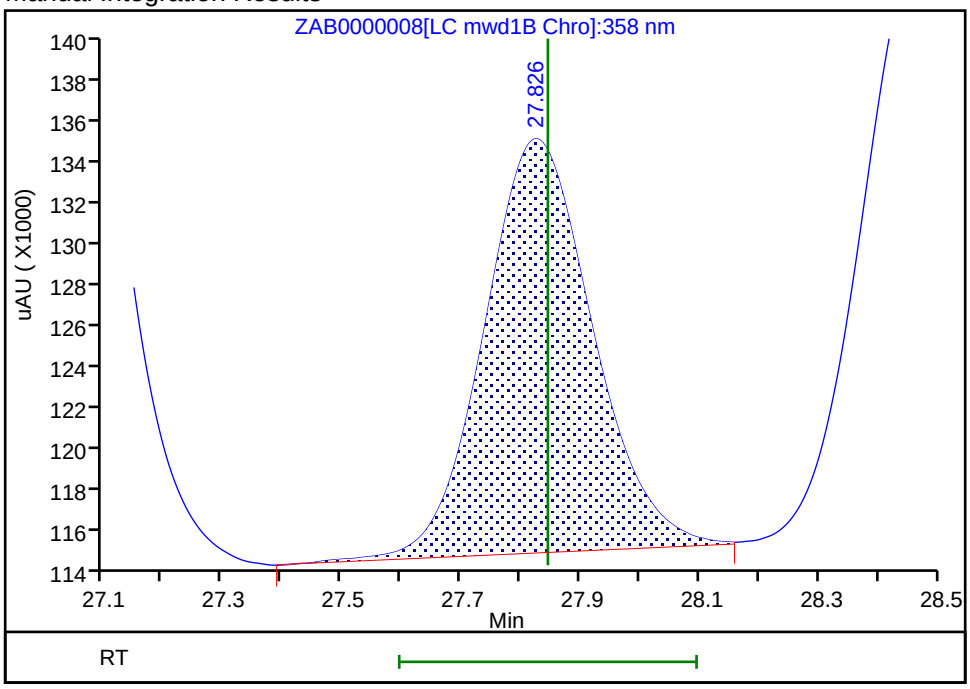
Processing Integration Results

RT: 27.83
Height: 20461
Amount: 187.6659
Amount Units: ng/ml



Manual Integration Results

RT: 27.83
Height: 19536
Amount: 194.1193
Amount Units: ng/ml



Reviewer: ortizam, 28-Feb-2019 12:11:56
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

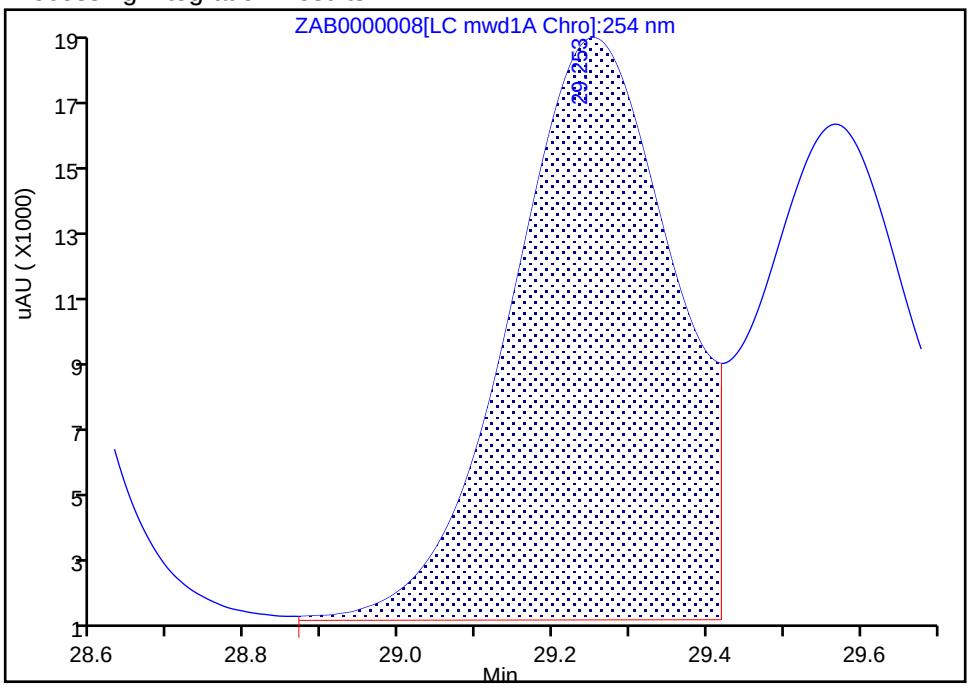
Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000008.D
Injection Date: 28-Feb-2019 00:11:36 Instrument ID: LC11
Lims ID: std6
Client ID:
Operator ID: AJC ALS Bottle#: 7 Worklist Smp#: 8
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: 8330 Metab LC11 Limit Group: LC 8330A ICAL
Column: Synergi Hydro-RP C18 (4.60 mm) Detector LC mwd1A, 250 nm

15 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

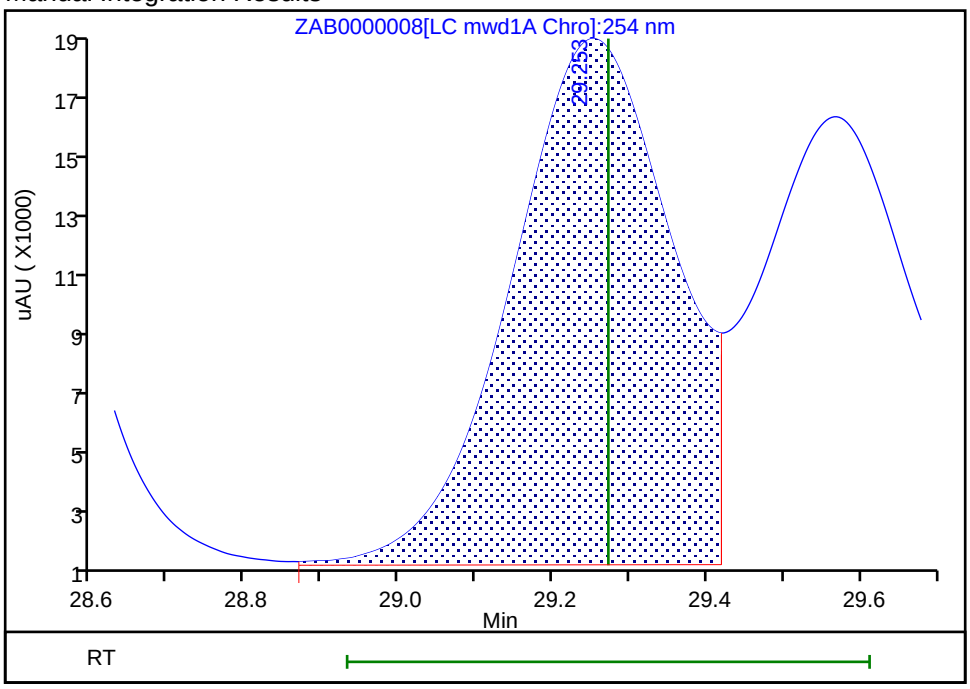
Processing Integration Results

RT: 29.25
Height: 17261
Amount: 198.2451
Amount Units: ng/ml



Manual Integration Results

RT: 29.25
Height: 17261
Amount: 198.2451
Amount Units: ng/ml



Reviewer: ortizam, 28-Feb-2019 12:12:11
Audit Action: Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

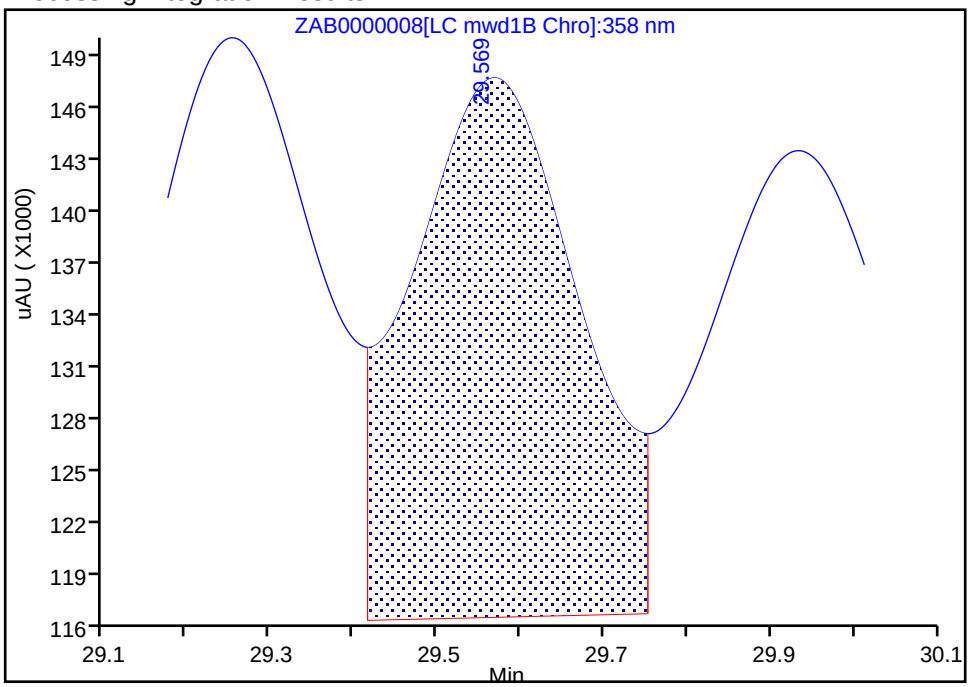
Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000008.D
Injection Date: 28-Feb-2019 00:11:36 Instrument ID: LC11
Lims ID: std6
Client ID:
Operator ID: AJC ALS Bottle#: 7 Worklist Smp#: 8
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: 8330 Metab LC11 Limit Group: LC 8330A ICAL
Column: Detector LC mwd1B, 358 nm

$ 16 3,4-Dinitrotoluene, CAS: 610-39-9

Signal: 2

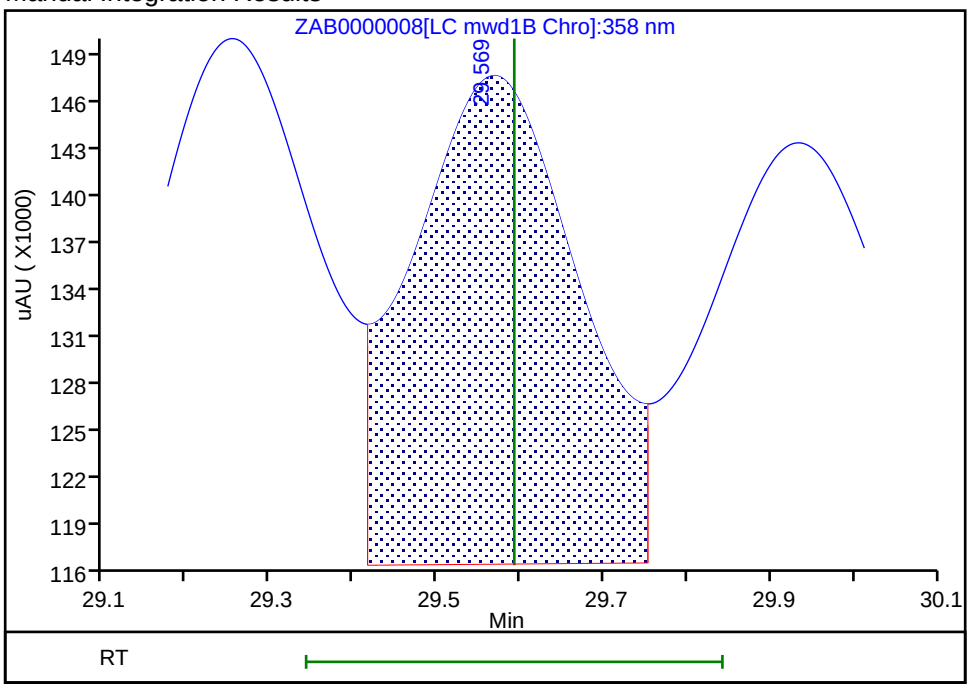
Processing Integration Results

RT: 29.57
Height: 30456
Amount: 200.6167
Amount Units: ng/ml



Manual Integration Results

RT: 29.57
Height: 29892
Amount: 200.6167
Amount Units: ng/ml



Reviewer: ortizam, 28-Feb-2019 12:11:58
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

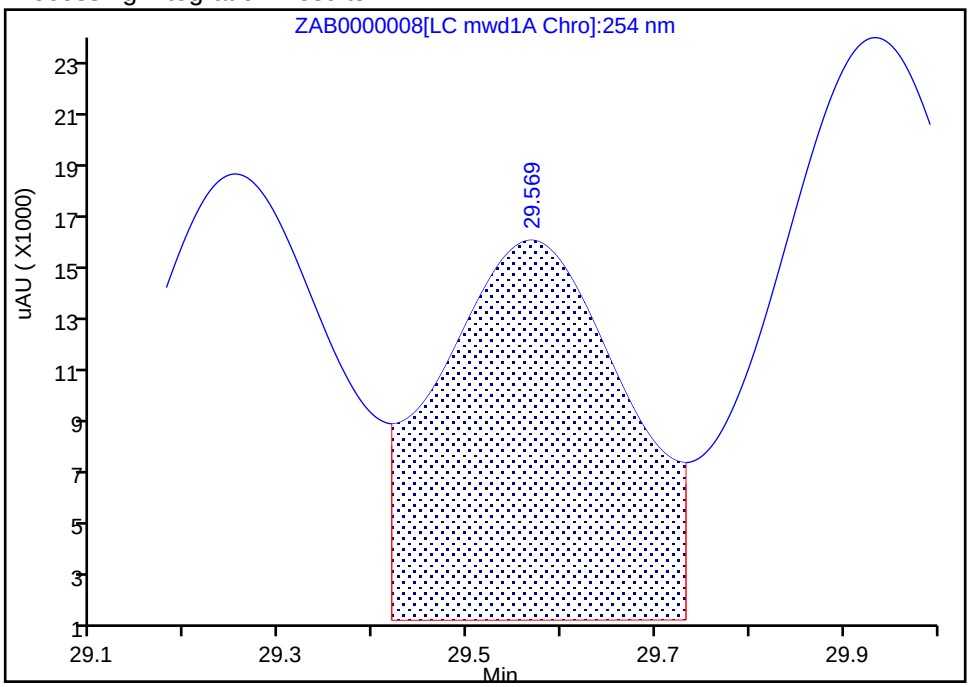
Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000008.D
Injection Date: 28-Feb-2019 00:11:36 Instrument ID: LC11
Lims ID: std6
Client ID:
Operator ID: AJC ALS Bottle#: 7 Worklist Smp#: 8
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: 8330 Metab LC11 Limit Group: LC 8330A ICAL
Column: Synergi Hydro-RP C18 (4.60 mm) Detector LC mwd1A, 250 nm

$ 16 3,4-Dinitrotoluene, CAS: 610-39-9

Signal: 1

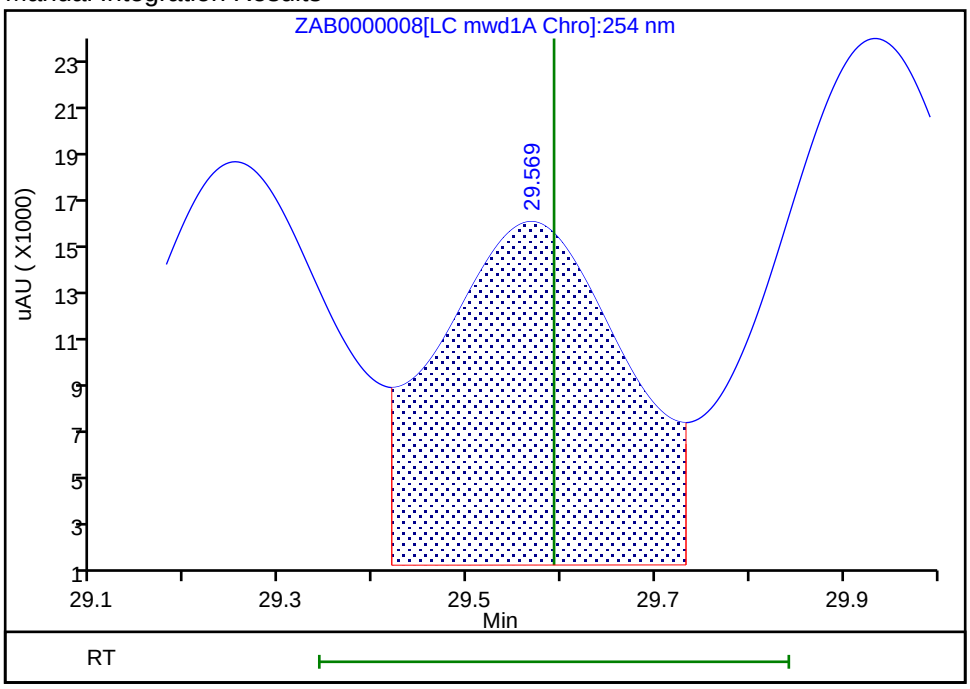
Processing Integration Results

RT: 29.57
Height: 14685
Amount: 200.6167
Amount Units: ng/ml



Manual Integration Results

RT: 29.57
Height: 14685
Amount: 200.6167
Amount Units: ng/ml



Reviewer: ortizam, 28-Feb-2019 12:12:08
Audit Action: Assigned Compound ID Audit Reason: Baseline Smoothing

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000009.D
Lims ID: std7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 28-Feb-2019 01:05:14 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 320-0072509-009
Operator ID: AJC Instrument ID: LC11
Sublist: chrom-8330 Metab LC11*sub10

Method: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 04-Mar-2019 13:29:46 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0304

First Level Reviewer: ortizam Date: 28-Feb-2019 12:13:30

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
3 HMX							
1	18.005	18.009	-0.004	39556H	500.0	490.5	
5 Ethylene glycol dinitrate							M
2	20.068	20.082	-0.014	663583	500.0	519.3	M
6 RDX							
1	20.591	20.595	-0.004	48828H	500.0	492.8	
8 1,3,5-Trinitrobenzene							
1	22.418	22.419	-0.001	117006H	500.0	499.5	
9 1,3-Dinitrobenzene							
1	24.741	24.742	-0.001	105064H	500.0	502.7	
10 3,5-Dinitroaniline							
1	25.755	25.762	-0.007	79841H	500.0	503.3	
11 Nitrobenzene							
1	26.378	26.389	-0.011	58363H	500.0	498.8	
12 Tetryl							
1	27.038	27.052	-0.014	53044H	500.0	505.5	
13 Nitroglycerin							
2	27.821	27.845	-0.024	50457H	500.0	501.4	
14 2,4,6-Trinitrotoluene							
1	28.461	28.482	-0.021	57930H	500.0	503.4	
15 4-Amino-2,6-dinitrotoluene							a
1	29.251	29.272	-0.021	43676H	500.0	501.6	a
$ 16 3,4-Dinitrotoluene							a
1	29.568	29.592	-0.024	37085H	500.0	506.6	a
2	29.568	29.592	-0.024	76161H			
17 2-Amino-4,6-dinitrotoluene							
1	29.931	29.952	-0.021	57038H	500.0	502.3	
18 2,6-Dinitrotoluene							
1	31.395	31.415	-0.020	36406H	500.0	496.4	

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
19 2,4-Dinitrotoluene							
1	31.828	31.845	-0.017	67929H	500.0	502.3	
20 o-Nitrotoluene							
1	35.045	35.042	0.003	28527H	500.0	494.0	
21 p-Nitrotoluene							
1	36.581	36.569	0.012	35085H	500.0	488.1	
22 m-Nitrotoluene							
1	38.265	38.235	0.030	34623H	500.0	499.2	
23 PETN							
2	40.218	40.199	0.019	27461H	500.0	507.4	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

HP8330L7_00036 Amount Added: 1.00 Units: mL

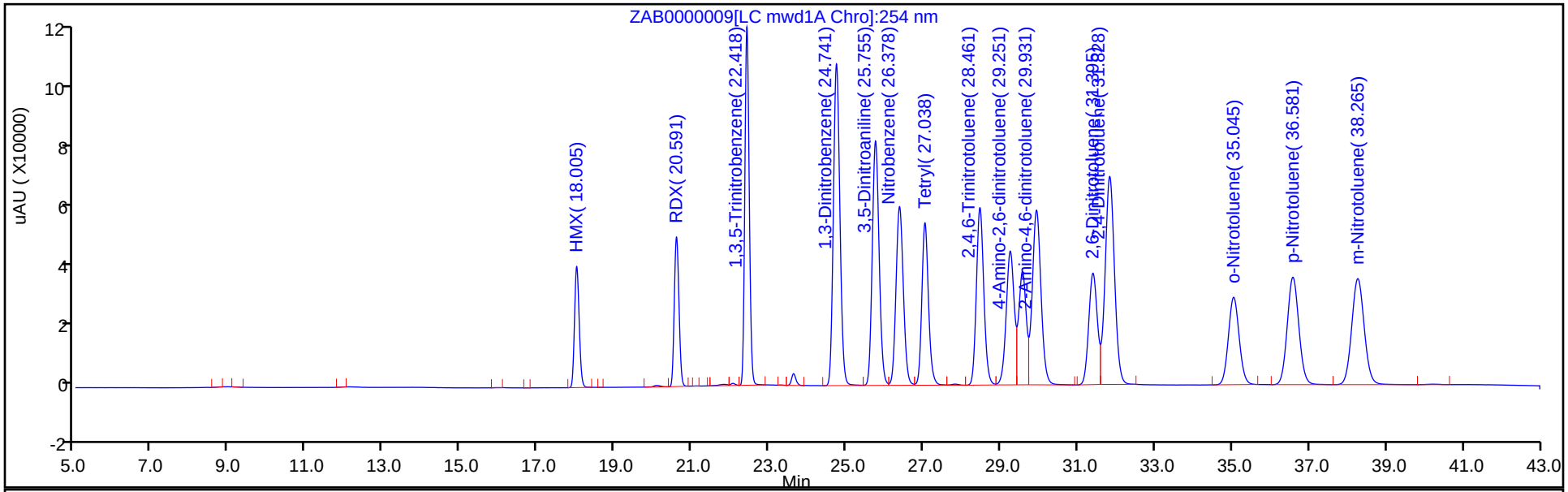
Report Date: 04-Mar-2019 13:29:47 Chrom Revision: 2.3 11-Feb-2019 16:31:10

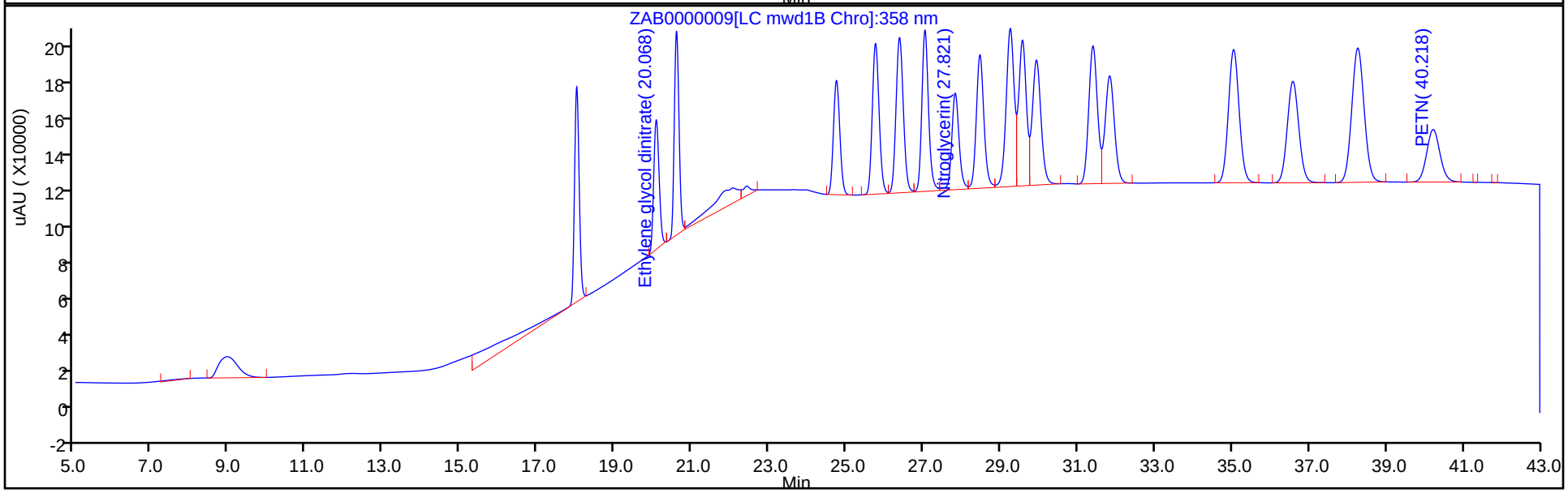
TestAmerica Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000009.D

Injection Date:	28-Feb-2019 01:05:14	Instrument ID:	LC11	Operator ID:	AJC
Lims ID:	std7			Worklist Smp#:	9
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1





Manual Integration/User Assign Peak Report

TestAmerica Sacramento

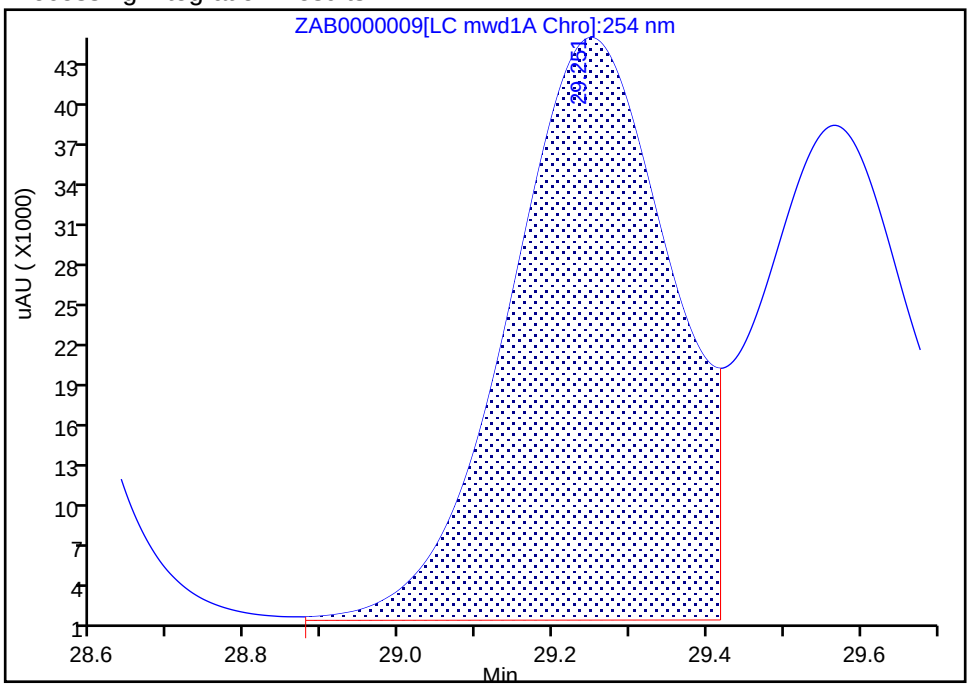
Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000009.D
Injection Date: 28-Feb-2019 01:05:14 Instrument ID: LC11
Lims ID: std7
Client ID:
Operator ID: AJC ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: 8330 Metab LC11 Limit Group: LC 8330A ICAL
Column: Synergi Hydro-RP C18 (4.60 mm) Detector LC mwd1A, 250 nm

15 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

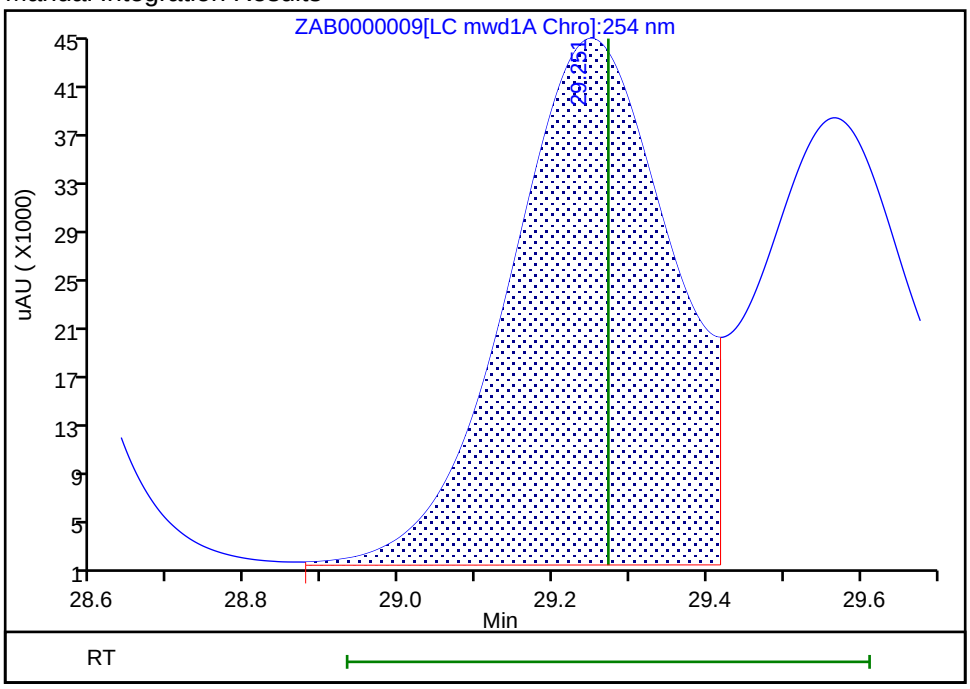
Processing Integration Results

RT: 29.25
Height: 43676
Amount: 501.6105
Amount Units: ng/ml



Manual Integration Results

RT: 29.25
Height: 43676
Amount: 501.6105
Amount Units: ng/ml



Reviewer: ortizam, 28-Feb-2019 12:12:55
Audit Action: Assigned Compound ID Audit Reason:

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

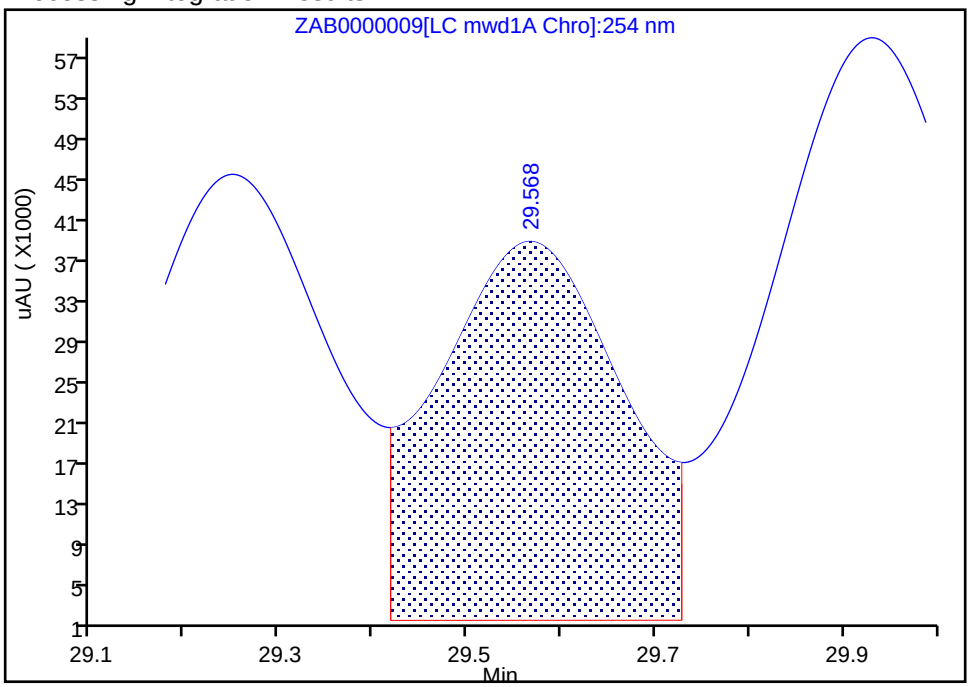
Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000009.D
Injection Date: 28-Feb-2019 01:05:14 Instrument ID: LC11
Lims ID: std7
Client ID:
Operator ID: AJC ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: 8330 Metab LC11 Limit Group: LC 8330A ICAL
Column: Synergi Hydro-RP C18 (4.60 mm) Detector LC mwd1A, 250 nm

$ 16 3,4-Dinitrotoluene, CAS: 610-39-9

Signal: 1

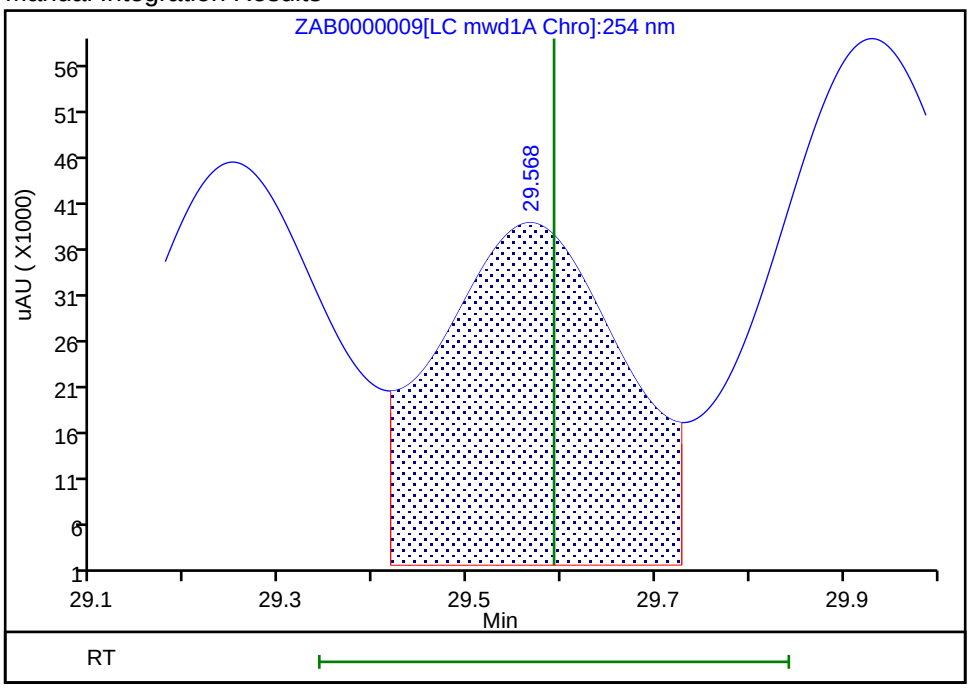
Processing Integration Results

RT: 29.57
Height: 37085
Amount: 506.6306
Amount Units: ng/ml



Manual Integration Results

RT: 29.57
Height: 37085
Amount: 506.6306
Amount Units: ng/ml



Reviewer: ortizam, 28-Feb-2019 12:12:51
Audit Action: Assigned Compound ID Audit Reason:

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000014.D
Lims ID: std met2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 28-Feb-2019 05:33:11 ALS Bottle#: 13 Worklist Smp#: 14
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 320-0072509-014
Operator ID: AJC Instrument ID: LC11
Sublist: chrom-8330 Metab LC11*sub10

Method: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 04-Mar-2019 13:29:49 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0304

First Level Reviewer: ortizam Date: 28-Feb-2019 12:27:19

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
1 TNX							
1	12.734	12.719	0.015	539H	10.0	10.4	
2 DNX							
1	16.654	16.646	0.008	674H	10.0	10.4	
4 MNX							
1	19.127	19.119	0.008	1173H	11.7	11.7	

Reagents:

HPMETABL2_00008 Amount Added: 1.00 Units: mL

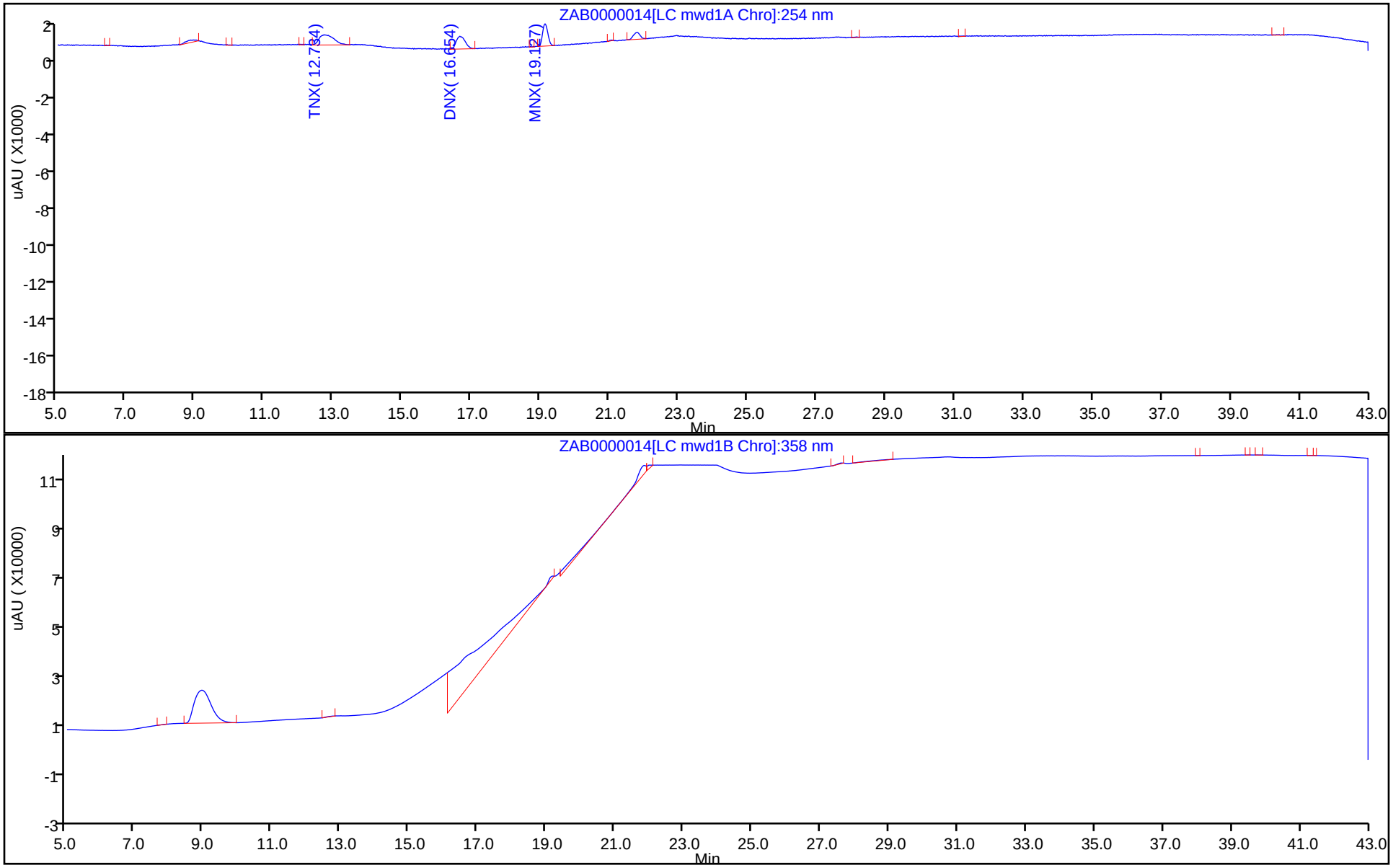
Report Date: 04-Mar-2019 13:29:49 Chrom Revision: 2.3 11-Feb-2019 16:31:10

TestAmerica Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000014.D

Injection Date:	28-Feb-2019 05:33:11	Instrument ID:	LC11	Operator ID:	AJC
Lims ID:	std met2			Worklist Smp#:	14
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Sacramento
Target Compound Quantitation Report

Data File:	\\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000015.D				
Lims ID:	std met3				
Client ID:					
Sample Type:	IC	Calib Level:	3		
Inject. Date:	28-Feb-2019 06:26:45	ALS Bottle#:	14	Worklist Smp#:	15
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Sample Info:	320-0072509-015				
Operator ID:	AJC	Instrument ID:	LC11		
Sublist:	chrom-8330 Metab LC11*sub10				
Method:	\\chromna\Sacramento\ChromData\LC11\20190227-72509.b\8330 Metab LC11.m				
Limit Group:	LC 8330A ICAL				
Last Update:	04-Mar-2019 13:29:50	Calib Date:	28-Feb-2019 10:01:13		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D				
Column 1 :	Synergi Hydro-RP C18 (4.60 mm)		Det: LC mwd1A, 250 nm		
Process Host:	CTX0304				
First Level Reviewer: ortizam		Date:	28-Feb-2019 12:27:27		

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
1 TNX							
1	12.709	12.719	-0.010	1029H	20.0	19.8	
2 DNX							
1	16.652	16.646	0.006	1318H	20.1	20.3	
4 MNX							
1	19.122	19.119	0.003	2368H	23.4	23.6	

Reagents:

HPMETABL3_00020 Amount Added: 1.00 Units: mL

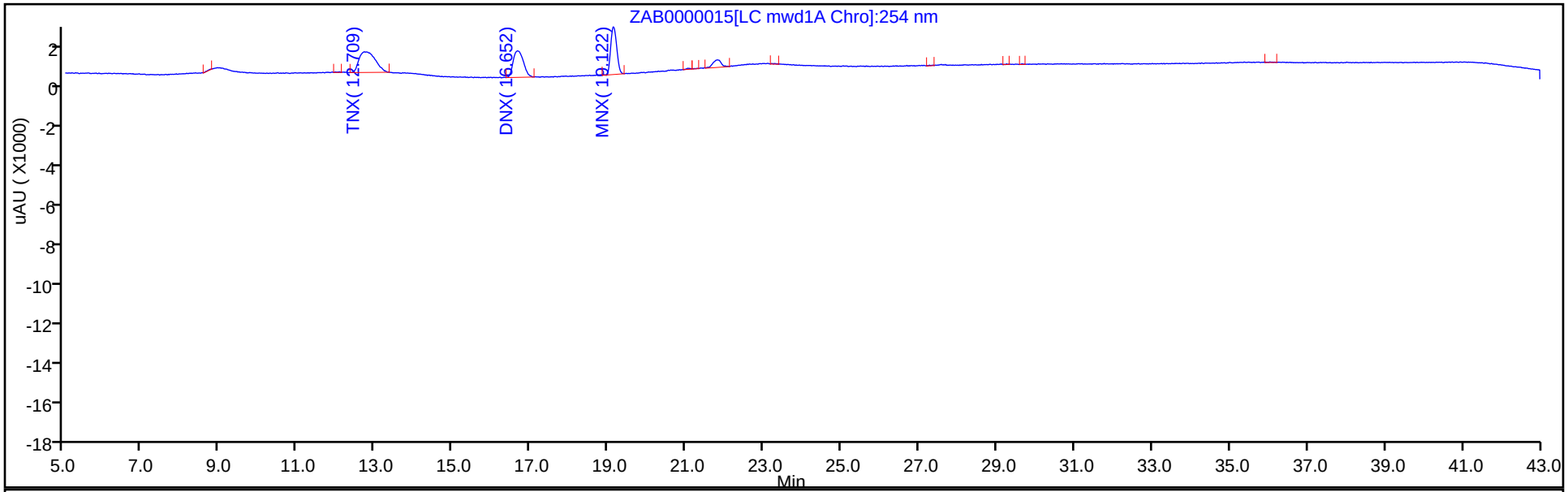
Report Date: 04-Mar-2019 13:29:51 Chrom Revision: 2.3 11-Feb-2019 16:31:10

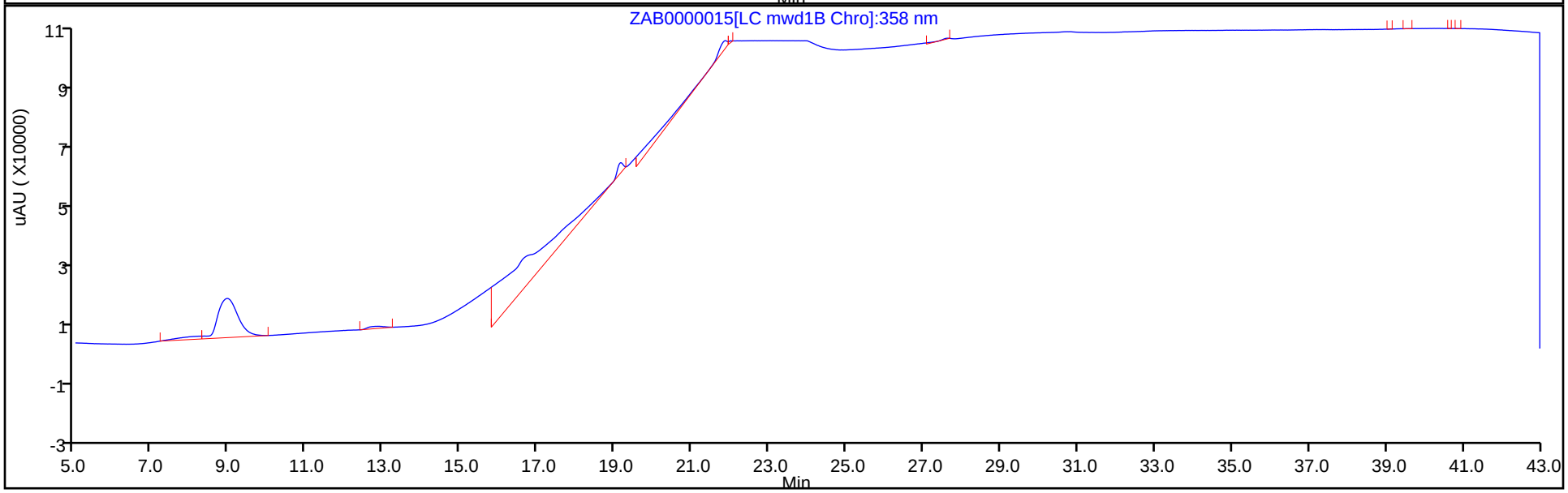
TestAmerica Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000015.D

Injection Date:	28-Feb-2019 06:26:45	Instrument ID:	LC11	Operator ID:	AJC
Lims ID:	std met3			Worklist Smp#:	15
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1





TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000016.D
Lims ID: std met4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 28-Feb-2019 07:20:21 ALS Bottle#: 15 Worklist Smp#: 16
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 320-0072509-016
Operator ID: AJC Instrument ID: LC11
Sublist: chrom-8330 Metab LC11*sub10

Method: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 04-Mar-2019 13:29:52 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0304

First Level Reviewer: ortizam Date: 28-Feb-2019 12:27:35

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
1 TNX							
1	12.726	12.719	0.007	2541H	50.1	48.9	
2 DNX							
1	16.649	16.646	0.003	3193H	50.2	49.2	
4 MNX							
1	19.123	19.119	0.004	5741H	58.5	57.3	

Reagents:

HPMETABL4_00038 Amount Added: 1.00 Units: mL

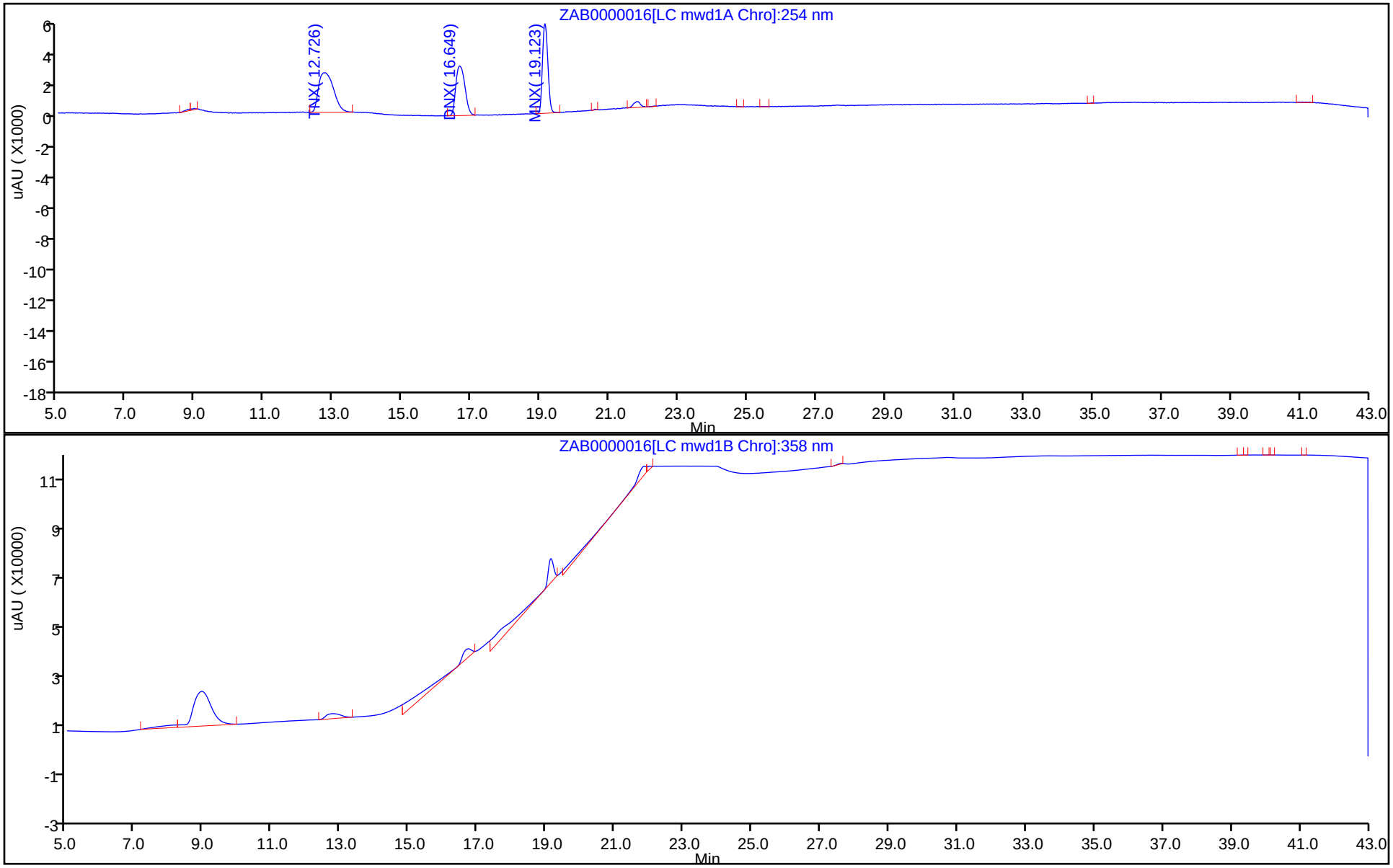
Report Date: 04-Mar-2019 13:29:52 Chrom Revision: 2.3 11-Feb-2019 16:31:10

TestAmerica Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000016.D

Injection Date:	28-Feb-2019 07:20:21	Instrument ID:	LC11	Operator ID:	AJC
Lims ID:	std met4			Worklist Smp#:	16
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000017.D
Lims ID: std met5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 28-Feb-2019 08:13:57 ALS Bottle#: 16 Worklist Smp#: 17
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 320-0072509-017
Operator ID: AJC Instrument ID: LC11
Sublist: chrom-8330 Metab LC11*sub10

Method: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 04-Mar-2019 13:29:54 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0304

First Level Reviewer: ortizam Date: 28-Feb-2019 12:27:43

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
1 TNX							
1	12.719	12.719	0.000	5260H	100.1	101.1	
2 DNX							
1	16.646	16.646	0.000	6533H	100.4	100.6	
4 MNX							
1	19.119	19.119	0.000	11866H	117.0	118.5	

Reagents:

HPMETABL5_00040 Amount Added: 1.00 Units: mL

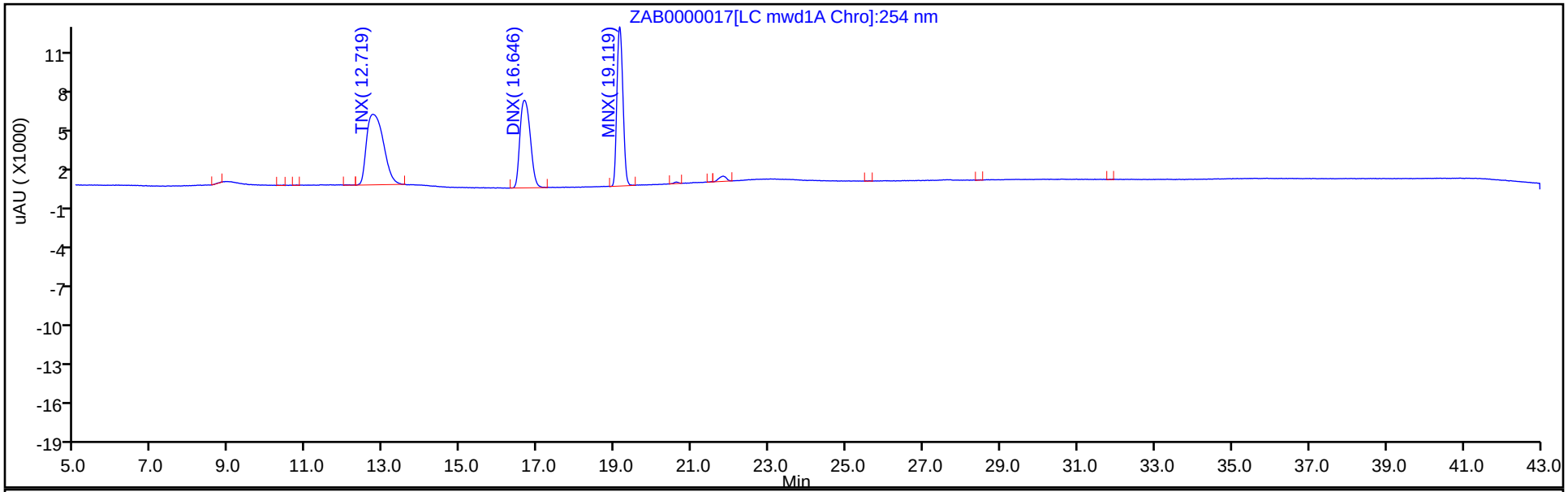
Report Date: 04-Mar-2019 13:29:54 Chrom Revision: 2.3 11-Feb-2019 16:31:10

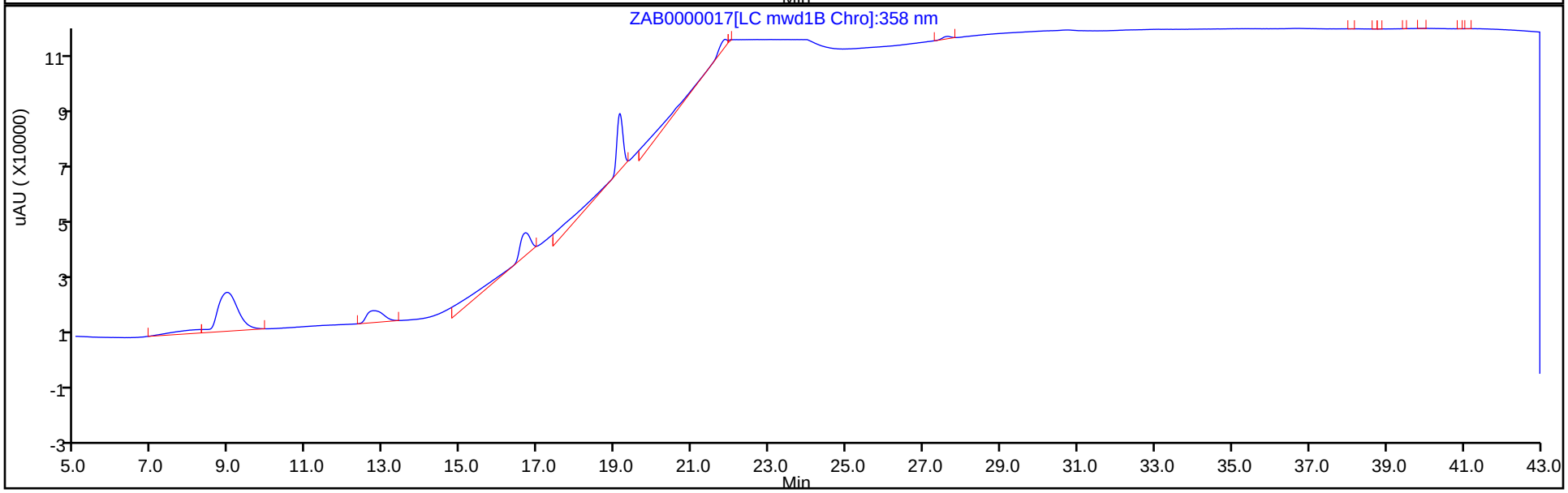
TestAmerica Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000017.D

Injection Date:	28-Feb-2019 08:13:57	Instrument ID:	LC11	Operator ID:	AJC
Lims ID:	std met5			Worklist Smp#:	17
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1





TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000018.D
Lims ID: std met6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 28-Feb-2019 09:07:35 ALS Bottle#: 17 Worklist Smp#: 18
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 320-0072509-018
Operator ID: AJC Instrument ID: LC11
Sublist: chrom-8330 Metab LC11*sub10

Method: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 04-Mar-2019 13:29:56 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0304

First Level Reviewer: ortizam Date: 28-Feb-2019 12:27:59

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
1 TNX							
1	12.725	12.719	0.006	10689H	200.2	205.5	
2 DNX							
1	16.652	16.646	0.006	13281H	200.8	204.6	
4 MNX							
1	19.122	19.119	0.003	24070H	234.0	240.3	

Reagents:

HPMETABL6_00023 Amount Added: 1.00 Units: mL

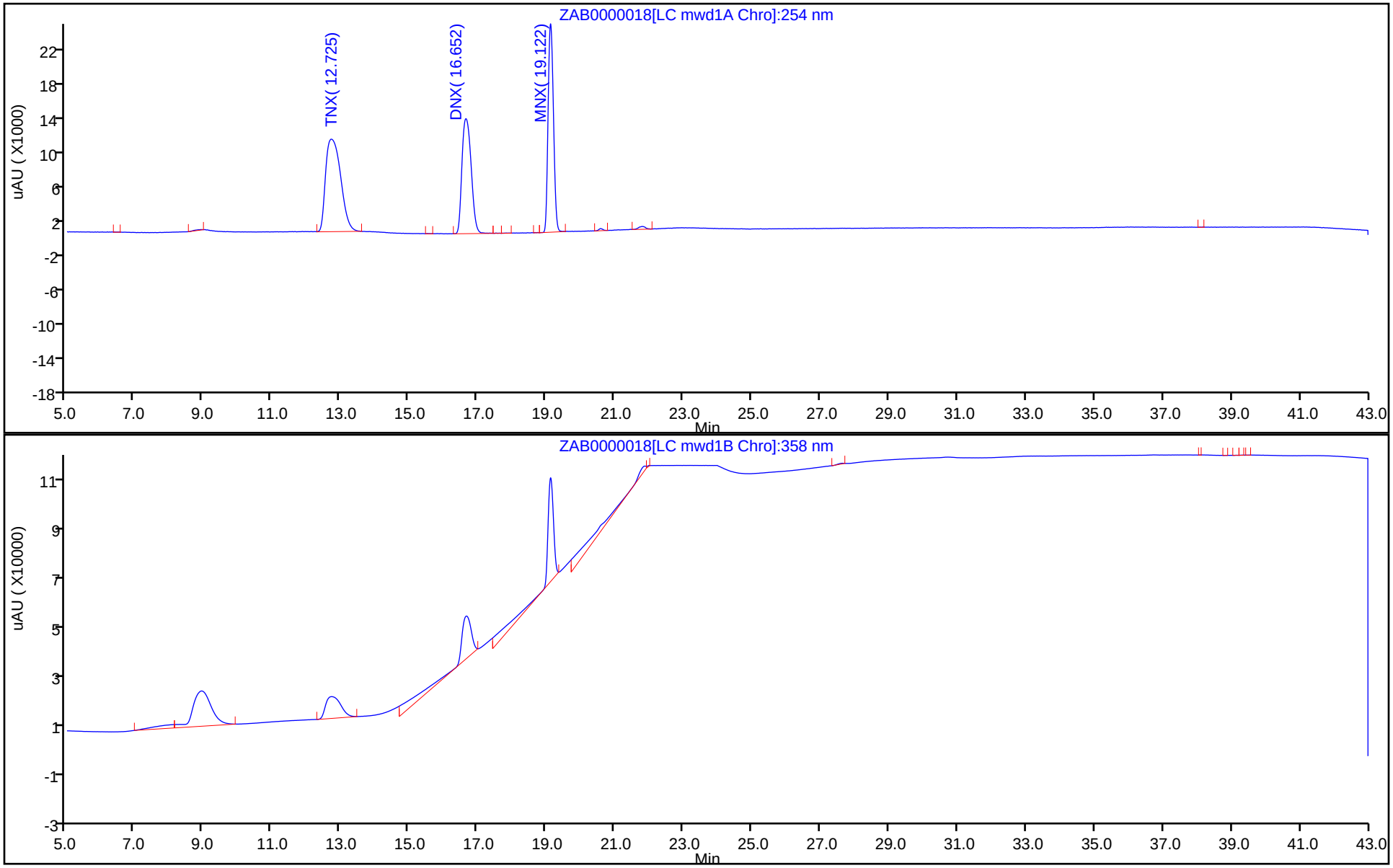
Report Date: 04-Mar-2019 13:29:56 Chrom Revision: 2.3 11-Feb-2019 16:31:10

TestAmerica Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000018.D

Injection Date:	28-Feb-2019 09:07:35	Instrument ID:	LC11	Operator ID:	AJC
Lims ID:	std met6			Worklist Smp#:	18
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D
Lims ID: std met7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 28-Feb-2019 10:01:13 ALS Bottle#: 18 Worklist Smp#: 19
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 320-0072509-019
Operator ID: AJC Instrument ID: LC11
Sublist: chrom-8330 Metab LC11*sub10

Method: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 04-Mar-2019 13:29:57 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0304

First Level Reviewer: ortizam Date: 28-Feb-2019 12:30:29

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
1 TNX							
1	12.719	12.719	0.000	25061H	500.5	481.9	
2 DNX							
1	16.649	16.646	0.003	31079H	502.0	478.8	
4 MNX							
1	19.119	19.119	0.000	56797H	585.0	567.1	

Reagents:

HPMETABL7_00022 Amount Added: 1.00 Units: mL

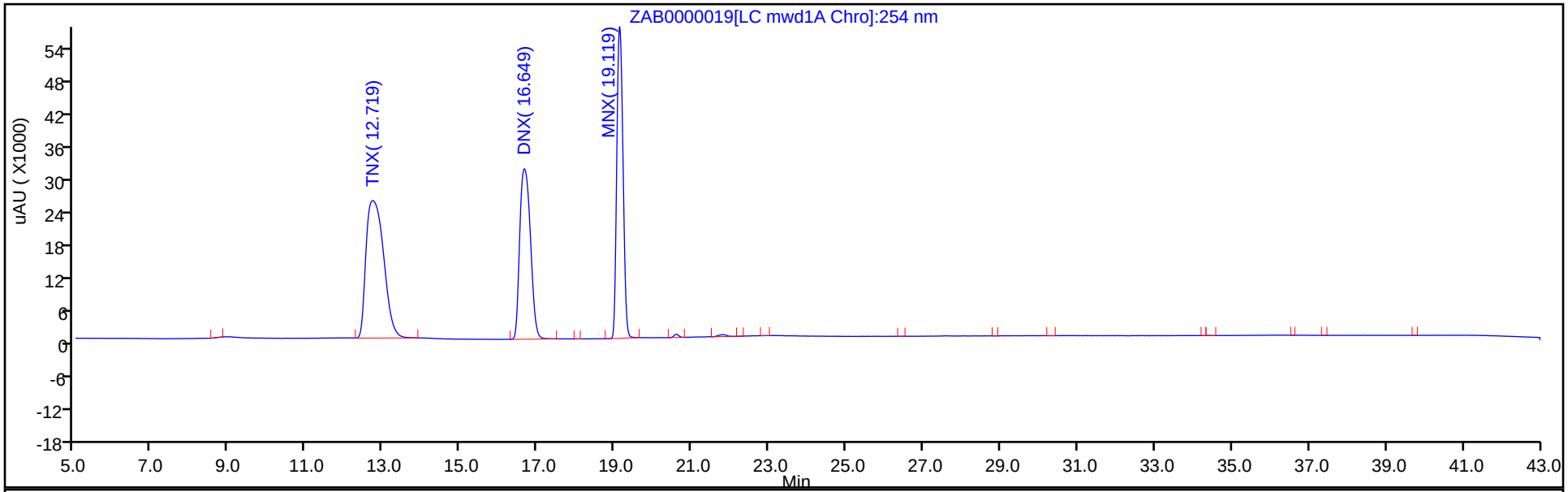
Report Date: 04-Mar-2019 13:29:57 Chrom Revision: 2.3 11-Feb-2019 16:31:10

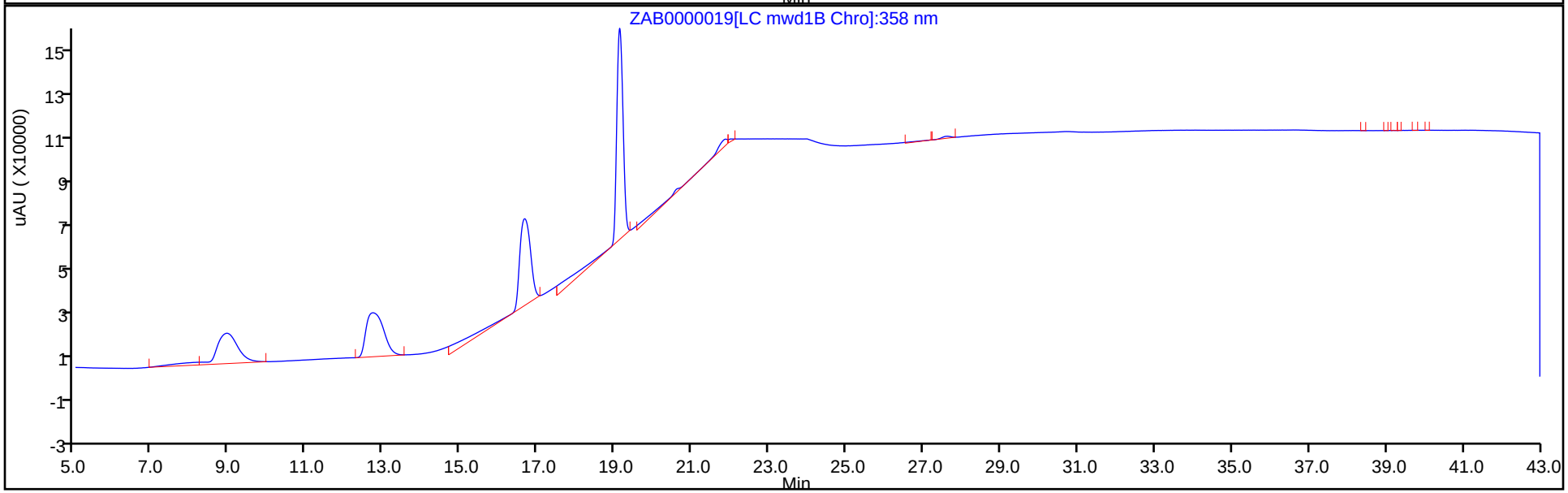
TestAmerica Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Injection Date:	28-Feb-2019 10:01:13	Instrument ID:	LC11	Operator ID:	AJC
Lims ID:	std met7			Worklist Smp#:	19
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1





FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1 Analy Batch No.: 287393

SDG No.:

Instrument ID: LC12 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/09/2019 22:07 Calibration End Date: 04/10/2019 14:25 Calibration ID: 44676

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 320-287393/3	H000032.D
Level 2	STD2 320-287393/4	H000033.D
Level 3	STD2 320-287393/14	H000044.D
Level 4	STD3 320-287393/5	H000034.D
Level 5	STD3 320-287393/15	H000045.D
Level 6	STD4 320-287393/6	H000035.D
Level 7	STD4 320-287393/16	H000046.D
Level 8	STD5 320-287393/7	H000036.D
Level 9	STD5 320-287393/17	H000047.D
Level 10	STD6 320-287393/8	H000037.D
Level 11	STD6 320-287393/18	H000048.D
Level 12	STD7 320-287393/9	H000038.D
Level 13	STD7 320-287393/19	H000049.D

ANALYTE	LVL 1 LVL 11	LVL 2 LVL 12	LVL 3 LVL 13	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	RT WINDOW	AVG RT
TNX	16.785		16.775 16.772		16.802		16.780		16.784		16.534 - 17.034	16.783
Nitrobenzene	20.882	20.839 20.760		20.815		20.849		20.827		20.800	20.577 - 21.077	20.825
DNX	21.899		22.005 21.889		21.972		21.890		21.920		21.650 - 22.190	21.929
1,3-Dinitrobenzene	23.112	23.109 23.014		23.062		23.119		23.044		23.054	22.794 - 23.294	23.073
1,3,5-Trinitrobenzene	24.712	24.699 24.617		24.689		24.722		24.657		24.657	24.317 - 24.997	24.679
MNX	25.989		26.049 25.995		26.009		25.990		26.017		25.737 - 26.297	26.008
2-Nitrotoluene	27.712	27.662 27.550		27.612		27.652		27.577		27.584	27.327 - 27.827	27.621
4-Nitrotoluene	27.712	27.662 27.550		27.612		27.652		27.577		27.584	27.327 - 27.827	27.621
3-Nitrotoluene	28.099	28.085 28.027		28.139		28.195		28.090		28.090	27.840 - 28.340	28.104
3,5-Dinitroaniline	29.179	29.049 29.014		29.075		29.122		29.030		29.037	28.770 - 29.290	29.072
RDX	29.952	29.929 29.884		29.982		29.995		29.914		29.917	29.664 - 30.164	29.939
2,4-Dinitrotoluene	30.752	30.615 30.577		30.662		30.679		30.620		30.604	30.370 - 30.870	30.644
2,6-Dinitrotoluene	31.479	31.472 31.420		31.485		31.522		31.457		31.450	31.207 - 31.707	31.469

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1 Analy Batch No.: 287393

SDG No.:

Instrument ID: LC12 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/09/2019 22:07 Calibration End Date: 04/10/2019 14:25 Calibration ID: 44676

ANALYTE	LVL 1 LVL 11	LVL 2 LVL 12	LVL 3 LVL 13	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	RT WINDOW	AVG RT
2-Amino-4,6-dinitrotoluene	33.142	33.089 33.074		33.129		33.149		33.084		33.087	32.834 - 33.334	33.108
4-Amino-2,6-dinitrotoluene	33.392	33.375 33.327		33.375		33.399		33.340		33.340	33.090 - 33.590	33.364
2,4,6-Trinitrotoluene	34.629	34.582 34.577		34.602		34.625		34.584		34.584	34.334 - 34.834	34.598
HMX	35.865	35.852 35.834		35.862		35.869		35.830		35.837	35.580 - 36.080	35.850
Nitroglycerin	36.499	36.485 36.470		36.499		36.495		36.464		36.467	36.214 - 36.714	36.483
Tetryl	37.442	37.445 37.444		37.462		37.472		37.440		37.444	37.190 - 37.690	37.450
PETN	40.899	40.902 40.900		40.915		40.912		40.897		40.897	40.647 - 41.147	40.903
3,4-Dinitrotoluene	34.272	34.229 34.207		34.249		34.262		34.210		34.214	33.960 - 34.460	34.235

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1 Analy Batch No.: 287393

SDG No.:

Instrument ID: LC12 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/09/2019 22:07 Calibration End Date: 04/10/2019 14:25 Calibration ID: 44676

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 320-287393/3	H000032.D
Level 2	STD2 320-287393/4	H000033.D
Level 3	STD2 320-287393/14	H000044.D
Level 4	STD3 320-287393/5	H000034.D
Level 5	STD3 320-287393/15	H000045.D
Level 6	STD4 320-287393/6	H000035.D
Level 7	STD4 320-287393/16	H000046.D
Level 8	STD5 320-287393/7	H000036.D
Level 9	STD5 320-287393/17	H000047.D
Level 10	STD6 320-287393/8	H000037.D
Level 11	STD6 320-287393/18	H000048.D
Level 12	STD7 320-287393/9	H000038.D
Level 13	STD7 320-287393/19	H000049.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5 LVL 9 LVL 13	LVL 2 LVL 6 LVL 10	LVL 3 LVL 7 LVL 11	LVL 4 LVL 8 LVL 12		B	M1	M2								
TNX	65.534 63.906 62.170		66.933 67.253 65.035		Ave		65.1385281				2.9		20.0			
Nitrobenzene	59.400	46.600 48.480 47.095		49.900 48.310 44.170	Ave		49.1364286				9.9		20.0			
DNX	53.685 52.062 50.261		55.179 54.781 52.849		Ave		53.1361222				3.4		20.0			
1,3-Dinitrobenzene	108.20	100.80 99.500 96.060		99.050 97.580 91.072	Ave		98.8945714				5.2		20.0			
1,3,5-Trinitrobenzene	86.800	78.800 78.220 76.195		78.300 76.930 73.450	Ave		78.3850000				5.3		20.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1 Analy Batch No.: 287393

SDG No.:

Instrument ID: LC12 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/09/2019 22:07 Calibration End Date: 04/10/2019 14:25 Calibration ID: 44676

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5 LVL 9 LVL 13	LVL 2 LVL 6 LVL 10	LVL 3 LVL 7 LVL 11	LVL 4 LVL 8 LVL 12		B	M1	M2								
MNX	53.034 53.162 51.562		54.701 55.197 53.932		Ave		53.5980057				2.4		20.0			
2-Nitrotoluene	66.800	63.100 57.880 56.610		59.700 57.260 53.824	Ave		59.3105714				7.4		20.0			
4-Nitrotoluene	66.800	63.100 57.880 56.610		59.700 57.260 53.824	Ave		59.3105714				7.4		20.0			
3-Nitrotoluene	50.200	47.500 40.580 40.080		41.250 39.980 38.422	Ave		42.5731429				10.4		20.0			
3,5-Dinitroaniline	89.400	81.600 76.460 75.255		75.850 75.760 71.930	Ave		78.0364286				7.4		20.0			
RDX	51.400	50.500 43.460 43.520		43.950 43.950 41.348	Ave		45.4468571				8.5		20.0			
2,4-Dinitrotoluene	98.000	94.900 89.420 88.995		89.200 89.420 85.794	Ave		90.8184286				4.6		20.0			
2,6-Dinitrotoluene	59.200	58.900 55.860 55.805		54.650 56.420 53.718	Ave		56.3647143				3.6		20.0			
2-Amino-4,6-dinitrotoluene	128.40	119.20 123.20 116.34		119.95 117.00 112.72	Ave		119.544286				4.3		20.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1 Analy Batch No.: 287393

SDG No.:

Instrument ID: LC12 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/09/2019 22:07 Calibration End Date: 04/10/2019 14:25 Calibration ID: 44676

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5 LVL 9 LVL 13	LVL 2 LVL 6 LVL 10	LVL 3 LVL 7 LVL 11	LVL 4 LVL 8 LVL 12		B	M1	M2								
4-Amino-2,6-dinitrotoluene	132.80	122.60 125.90 121.50		124.35 121.00 117.75	Ave		123.699000				3.9		20.0			
2,4,6-Trinitrotoluene	135.20	133.40 129.42 125.80		129.25 125.85 123.07	Ave		128.856286				3.4		20.0			
HMX	102.00	107.50 101.28 97.635		102.60 98.900 95.292	Ave		100.743857				3.9		20.0			
Nitroglycerin	146.00	127.70 128.28 127.61		137.10 127.31 123.74	Ave		131.104714				5.9		20.0			
Tetryl	164.60	159.80 156.56 151.80		159.25 154.68 149.89	Ave		156.653714				3.2		20.0			
PETN	151.80	148.50 148.76 145.11		149.15 147.26 143.84	Ave		147.773286				1.8		20.0			
3,4-Dinitrotoluene	92.600	89.100 86.720 83.485		84.800 83.790 80.536	Ave		85.8615714				4.7		20.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1 Analy Batch No.: 287393

SDG No.:

Instrument ID: LC12 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/09/2019 22:07 Calibration End Date: 04/10/2019 14:25 Calibration ID: 44676

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 320-287393/3	H000032.D
Level 2	STD2 320-287393/4	H000033.D
Level 3	STD2 320-287393/14	H000044.D
Level 4	STD3 320-287393/5	H000034.D
Level 5	STD3 320-287393/15	H000045.D
Level 6	STD4 320-287393/6	H000035.D
Level 7	STD4 320-287393/16	H000046.D
Level 8	STD5 320-287393/7	H000036.D
Level 9	STD5 320-287393/17	H000047.D
Level 10	STD6 320-287393/8	H000037.D
Level 11	STD6 320-287393/18	H000048.D
Level 12	STD7 320-287393/9	H000038.D
Level 13	STD7 320-287393/19	H000049.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
		LVL 1 LVL 6 LVL 11	LVL 2 LVL 7 LVL 12	LVL 3 LVL 8 LVL 13	LVL 4 LVL 9	LVL 5 LVL 10	LVL 6 LVL 11	LVL 2 LVL 7 LVL 12	LVL 3 LVL 8 LVL 13	LVL 4 LVL 9	LVL 5 LVL 10
TNX	Ave	13020	3366	670 31116	6397	1312	200	50.1	10.0 501	100	20.0
Nitrobenzene	Ave	297 2424	466 22085	4831	998	9419	5.00 50.0	10.0 500	100	20.0	200
DNX	Ave	10612	2750	554 25231	5227	1078	201	50.2	10.0 502	100	20.1
1,3-Dinitrobenzene	Ave	541 4975	1008 45536	9758	1981	19212	5.00 50.0	10.0 500	100	20.0	200
1,3,5-Trinitrobenzene	Ave	434 3911	788 36725	7693	1566	15239	5.00 50.0	10.0 500	100	20.0	200
MNX	Ave	12620	3229	640 30164	6220	1241	234	58.5	11.7 585	117	23.4
2-Nitrotoluene	Ave	334 2894	631 26912	5726	1194	11322	5.00 50.0	10.0 500	100	20.0	200
4-Nitrotoluene	Ave	334 2894	631 26912	5726	1194	11322	5.00 50.0	10.0 500	100	20.0	200

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1 Analy Batch No.: 287393

SDG No.:

Instrument ID: LC12 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/09/2019 22:07 Calibration End Date: 04/10/2019 14:25 Calibration ID: 44676

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
		LVL 1 LVL 6 LVL 11	LVL 2 LVL 7 LVL 12	LVL 3 LVL 8 LVL 13	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6 LVL 11	LVL 2 LVL 7 LVL 12	LVL 3 LVL 8 LVL 13	LVL 4 LVL 9	LVL 5 LVL 10
3-Nitrotoluene	Ave	251 2029	475 19211	3998	825	8016	5.00 50.0	10.0 500	100	20.0	200
3,5-Dinitroaniline	Ave	447 3823	816 35965	7576	1517	15051	5.00 50.0	10.0 500	100	20.0	200
RDX	Ave	257 2173	505 20674	4395	879	8704	5.00 50.0	10.0 500	100	20.0	200
2,4-Dinitrotoluene	Ave	490 4471	949 42897	8942	1784	17799	5.00 50.0	10.0 500	100	20.0	200
2,6-Dinitrotoluene	Ave	296 2793	589 26859	5642	1093	11161	5.00 50.0	10.0 500	100	20.0	200
2-Amino-4,6-dinitrotoluene	Ave	642 6160	1192 56360	11700	2399	23268	5.00 50.0	10.0 500	100	20.0	200
4-Amino-2,6-dinitrotoluene	Ave	664 6295	1226 58874	12100	2487	24299	5.00 50.0	10.0 500	100	20.0	200
2,4,6-Trinitrotoluene	Ave	676 6471	1334 61537	12585	2585	25160	5.00 50.0	10.0 500	100	20.0	200
HMX	Ave	510 5064	1075 47646	9890	2052	19527	5.00 50.0	10.0 500	100	20.0	200
Nitroglycerin	Ave	730 6414	1277 61869	12731	2742	25521	5.00 50.0	10.0 500	100	20.0	200
Tetryl	Ave	823 7828	1598 74943	15468	3185	30360	5.00 50.0	10.0 500	100	20.0	200
PETN	Ave	759 7438	1485 71919	14726	2983	29021	5.00 50.0	10.0 500	100	20.0	200
3,4-Dinitrotoluene	Ave	463 4336	891 40268	8379	1696	16697	5.00 50.0	10.0 500	100	20.0	200

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1 Analy Batch No.: 287393

SDG No.:

Instrument ID: LC12 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/09/2019 22:07 Calibration End Date: 04/10/2019 14:25 Calibration ID: 44676

Curve Type Legend:
Ave = Average by Height

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000032.D
Lims ID: std1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 09-Apr-2019 22:07:22 ALS Bottle#: 62 Worklist Smp#: 3
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: L1
Operator ID: AJC Instrument ID: LC12
Sublist: chrom-LC12_Conf_8330*sub11

Method: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 12-Apr-2019 12:28:01 Calib Date: 10-Apr-2019 14:25:56
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000049.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0331

First Level Reviewer: ortizam Date: 10-Apr-2019 12:42:33

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
4 Ethylene glycol dinitrate							Ma
2	20.792	20.747	0.045	514H	5.00	5.02	Ma
3 Nitrobenzene							M
1	20.882	20.827	0.055	297H	5.00	6.04	M
6 1,3-Dinitrobenzene							M
1	23.112	23.044	0.068	541H	5.00	5.47	M
7 1,3,5-Trinitrobenzene							M
1	24.712	24.657	0.055	434H	5.00	5.54	M
9 p-Nitrotoluene							M
1	27.712	27.577	0.135	334H	5.00	5.63	M
10 o-Nitrotoluene							M
1	27.712	27.577	0.135	334H	5.00	5.63	M
11 m-Nitrotoluene							Ma
1	28.099	28.090	0.009	251H	5.00	5.90	M
12 3,5-Dinitroaniline							M
1	29.179	29.030	0.149	447H	5.00	5.73	M
13 RDX							M
1	29.952	29.914	0.038	257H	5.00	5.65	M
14 2,4-Dinitrotoluene							M
1	30.752	30.620	0.132	490H	5.00	5.40	M
15 2,6-Dinitrotoluene							M
1	31.479	31.457	0.022	296H	5.00	5.25	M
16 2-Amino-4,6-dinitrotoluene							M
1	33.142	33.084	0.058	642H	5.00	5.37	M
17 4-Amino-2,6-dinitrotoluene							M
1	33.392	33.340	0.052	664H	5.00	5.37	M
$ 18 3,4-Dinitrotoluene							M
1	34.272	34.210	0.062	463H	5.00	5.39	M

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
19 2,4,6-Trinitrotoluene							M
1	34.629	34.584	0.045	676H	5.00	5.25	M
20 HMX							M
1	35.865	35.830	0.035	510H	5.00	5.06	M
21 Nitroglycerin							M
2	36.499	36.464	0.035	730H	5.00	5.57	M
22 Tetryl							
1	37.442	37.440	0.002	823H	5.00	5.25	
23 PETN							
2	40.899	40.897	0.002	759H	5.00	5.14	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

HP8330L1_00041 Amount Added: 1.00 Units: mL

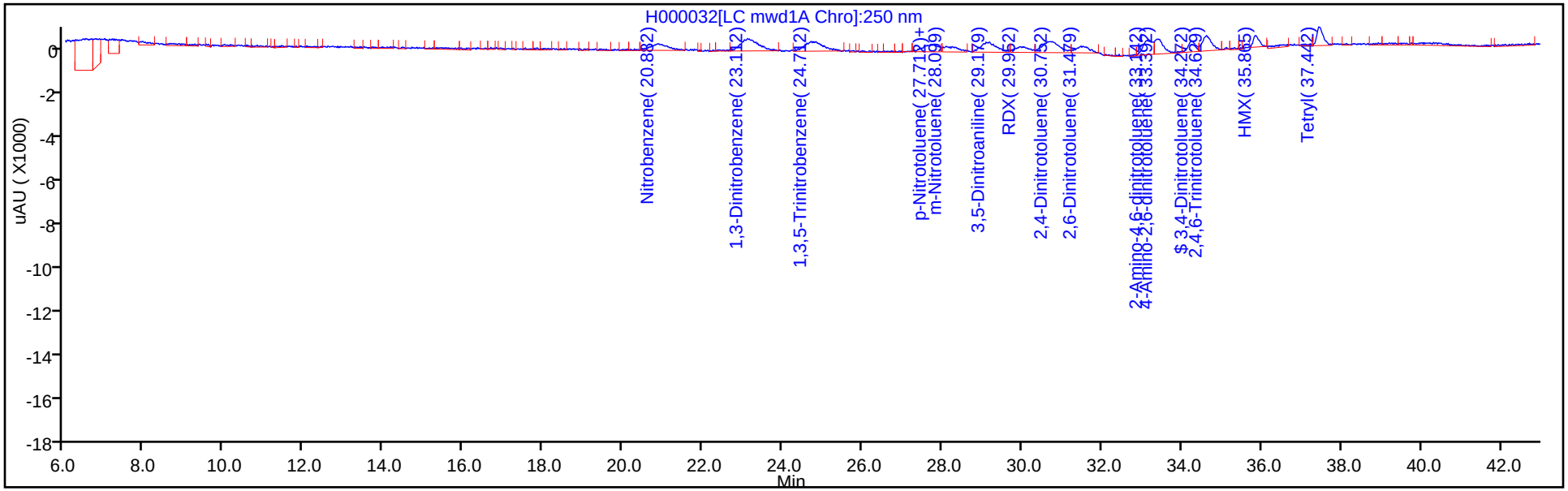
Report Date: 12-Apr-2019 12:28:02 Chrom Revision: 2.3 24-Mar-2019 20:11:04

Eurofins TestAmerica, Sacramento

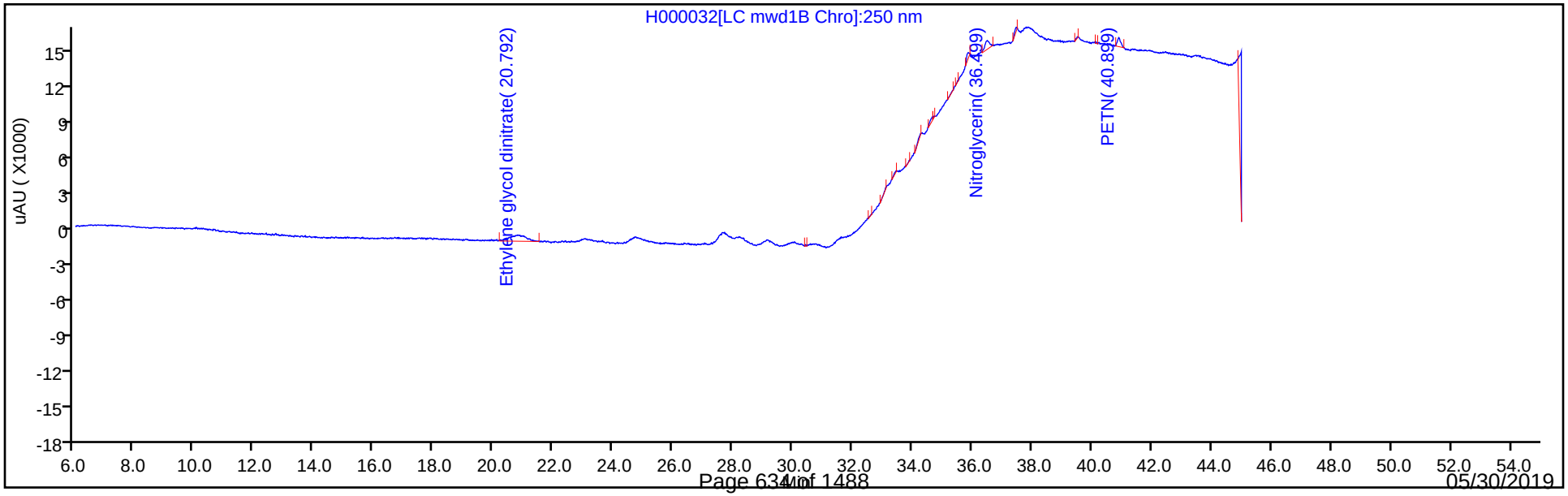
Data File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000032.D

Injection Date:	09-Apr-2019 22:07:22	Instrument ID:	LC12	Operator ID:	AJC
Lims ID:	std1			Worklist Smp#:	3
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	62
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

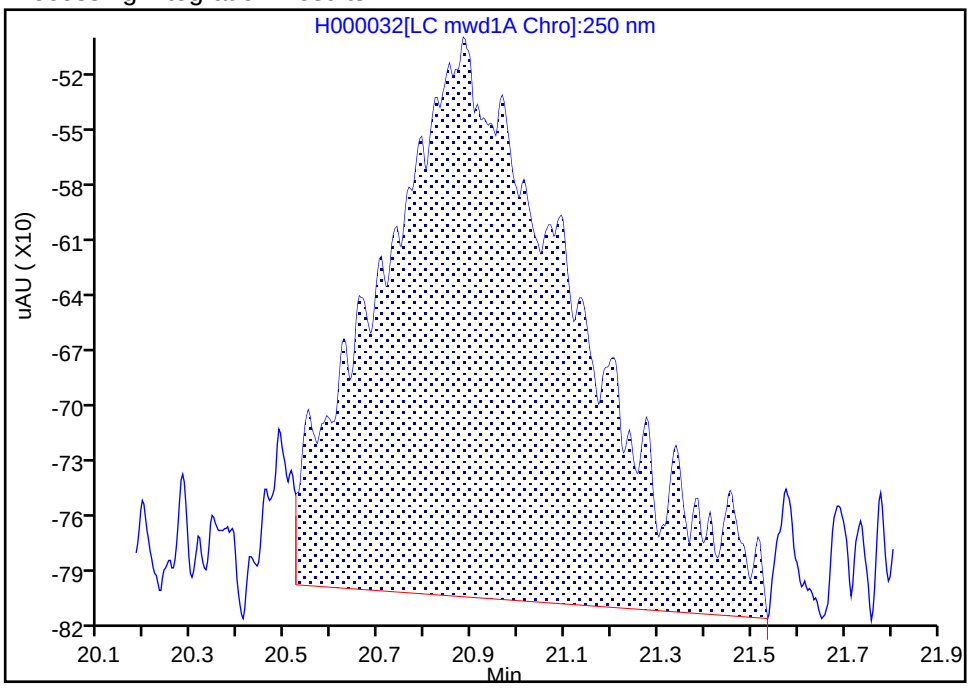
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000032.D				
Injection Date:	09-Apr-2019 22:07:22	Instrument ID:	LC12		
Lims ID:	std1				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	62	Worklist Smp#:	3
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

3 Nitrobenzene, CAS: 98-95-3

Signal: 1

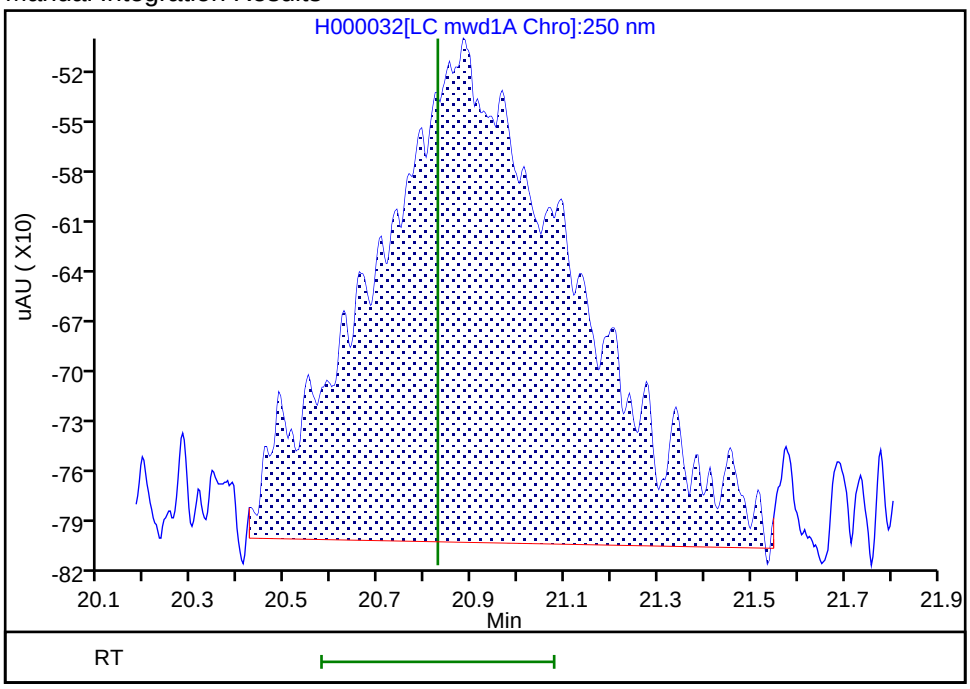
Processing Integration Results

RT: 20.88
Height: 298
Amount: 5.617557
Amount Units: ng/ml



Manual Integration Results

RT: 20.88
Height: 297
Amount: 6.044395
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 12:41:18

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

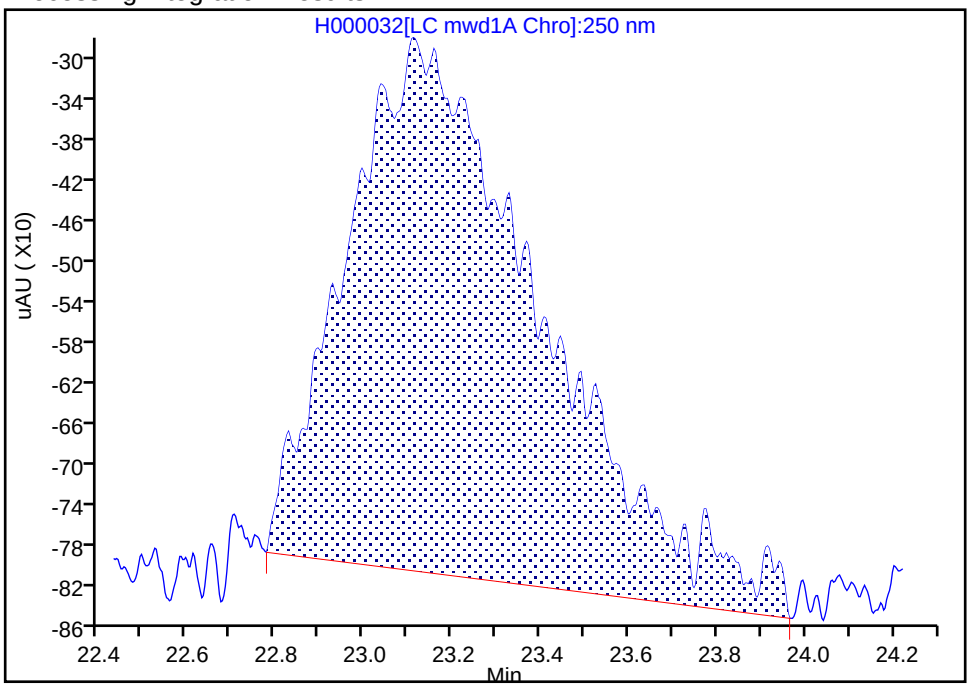
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000032.D				
Injection Date:	09-Apr-2019 22:07:22	Instrument ID:	LC12		
Lims ID:	std1				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	62	Worklist Smp#:	3
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

6 1,3-Dinitrobenzene, CAS: 99-65-0

Signal: 1

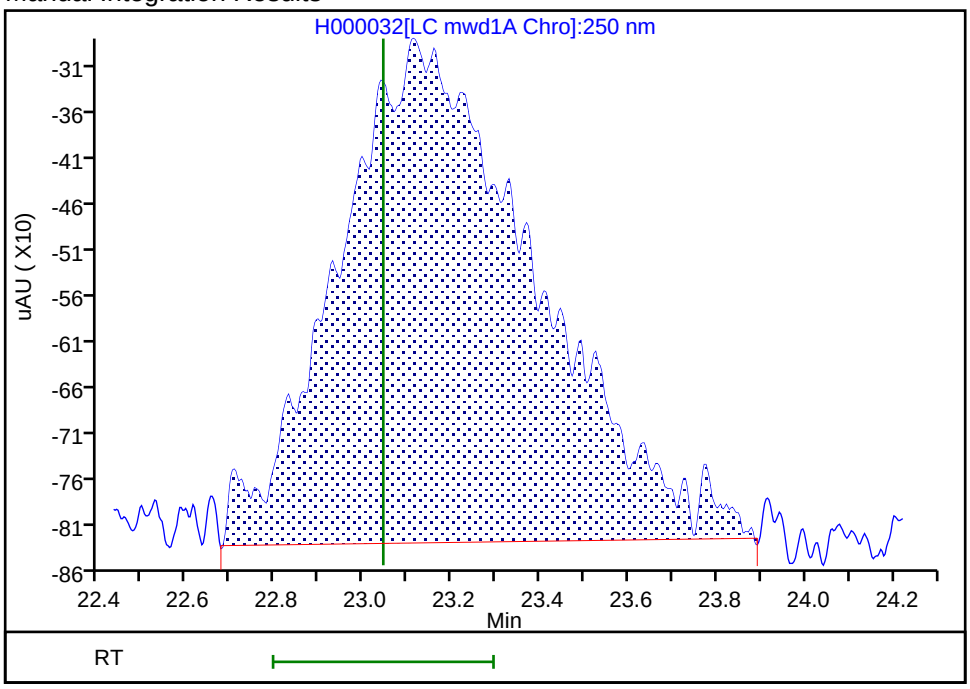
Processing Integration Results

RT: 23.11
Height: 516
Amount: 5.255638
Amount Units: ng/ml



Manual Integration Results

RT: 23.11
Height: 541
Amount: 5.470472
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 12:41:15

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

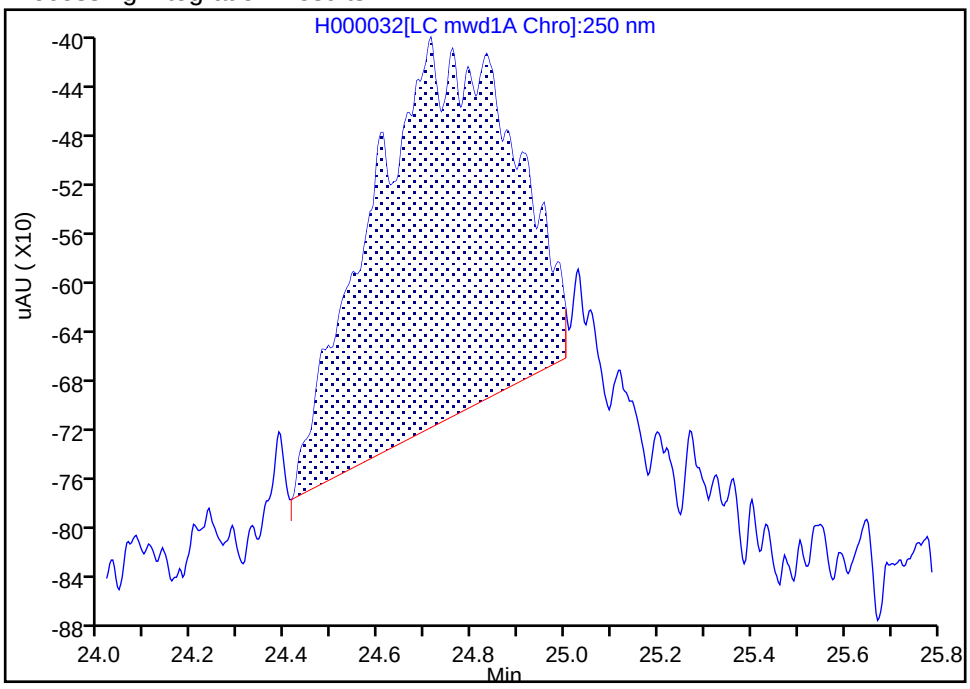
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000032.D				
Injection Date:	09-Apr-2019 22:07:22	Instrument ID:	LC12		
Lims ID:	std1				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	62	Worklist Smp#:	3
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

7 1,3,5-Trinitrobenzene, CAS: 99-35-4

Signal: 1

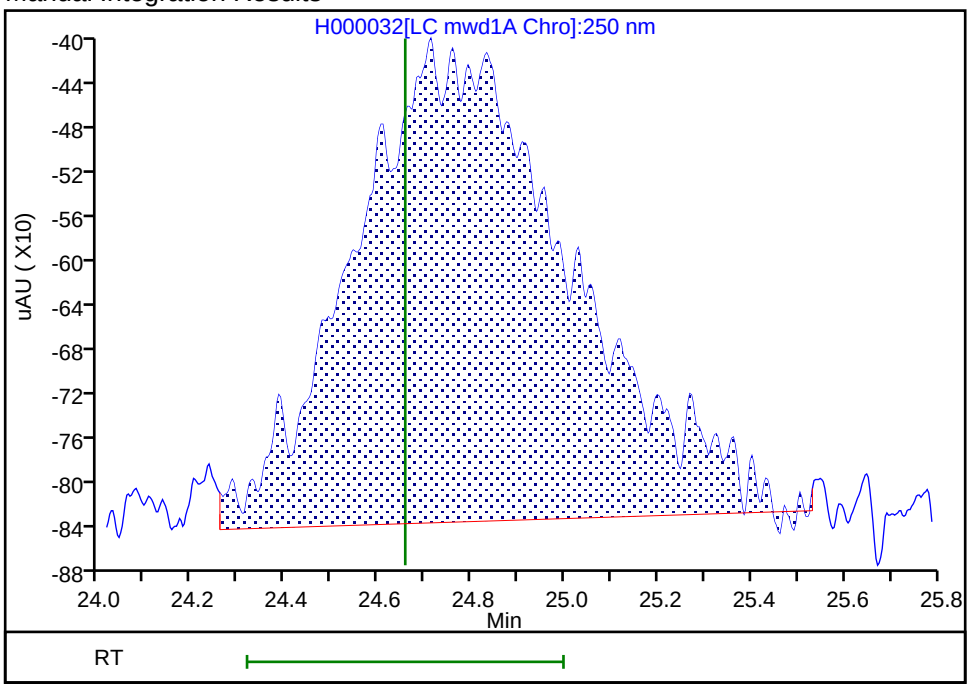
Processing Integration Results

RT: 24.71
Height: 316
Amount: 4.212571
Amount Units: ng/ml



Manual Integration Results

RT: 24.71
Height: 434
Amount: 5.536774
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 12:41:12

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

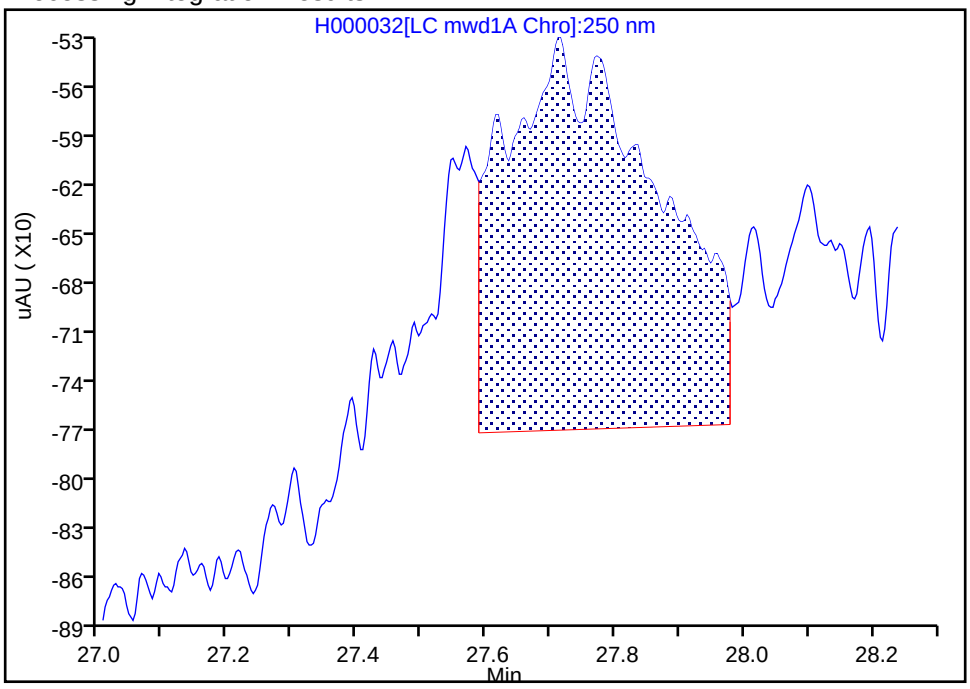
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000032.D				
Injection Date:	09-Apr-2019 22:07:22	Instrument ID:	LC12		
Lims ID:	std1				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	62	Worklist Smp#:	3
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

10 o-Nitrotoluene, CAS: 88-72-2

Signal: 1

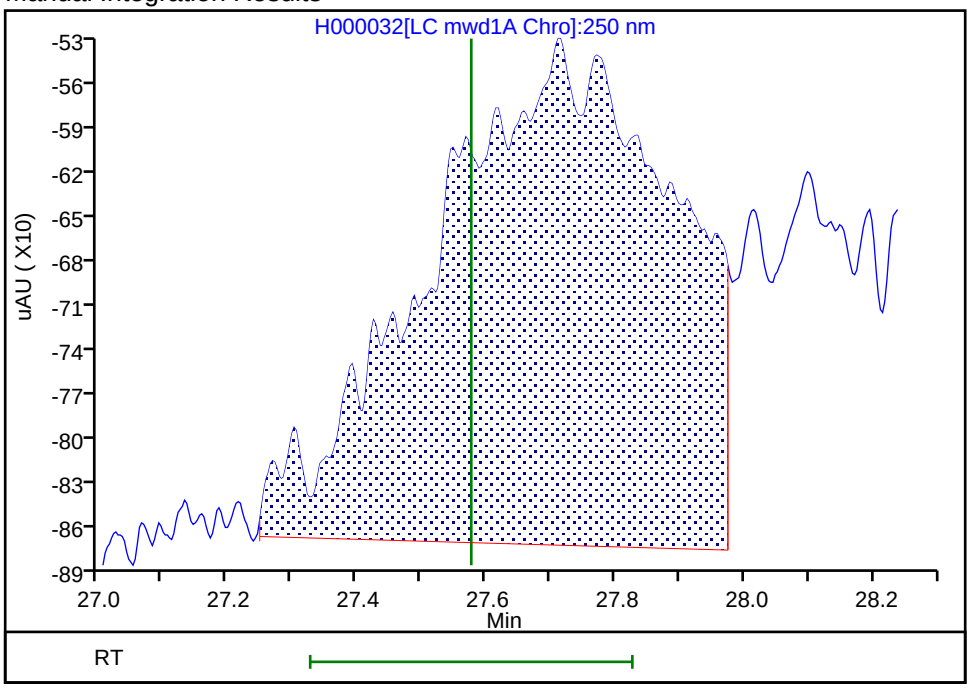
Processing Integration Results

RT: 27.72
Height: 234
Amount: 5.833235
Amount Units: ng/ml



Manual Integration Results

RT: 27.71
Height: 334
Amount: 5.631374
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 12:42:15

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

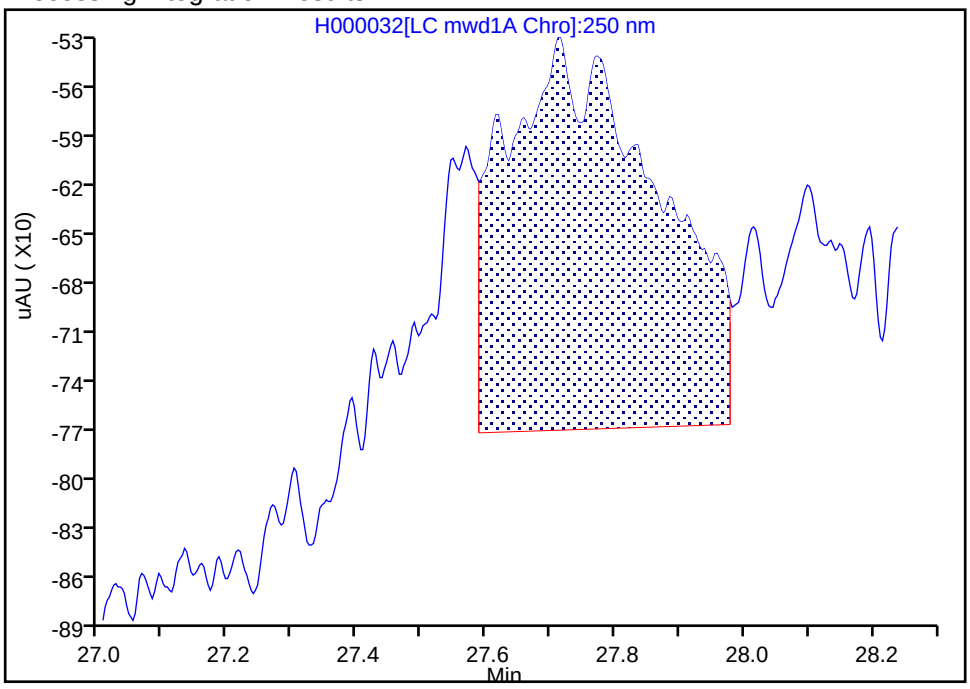
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000032.D				
Injection Date:	09-Apr-2019 22:07:22	Instrument ID:	LC12		
Lims ID:	std1				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	62	Worklist Smp#:	3
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

9 p-Nitrotoluene, CAS: 99-99-0

Signal: 1

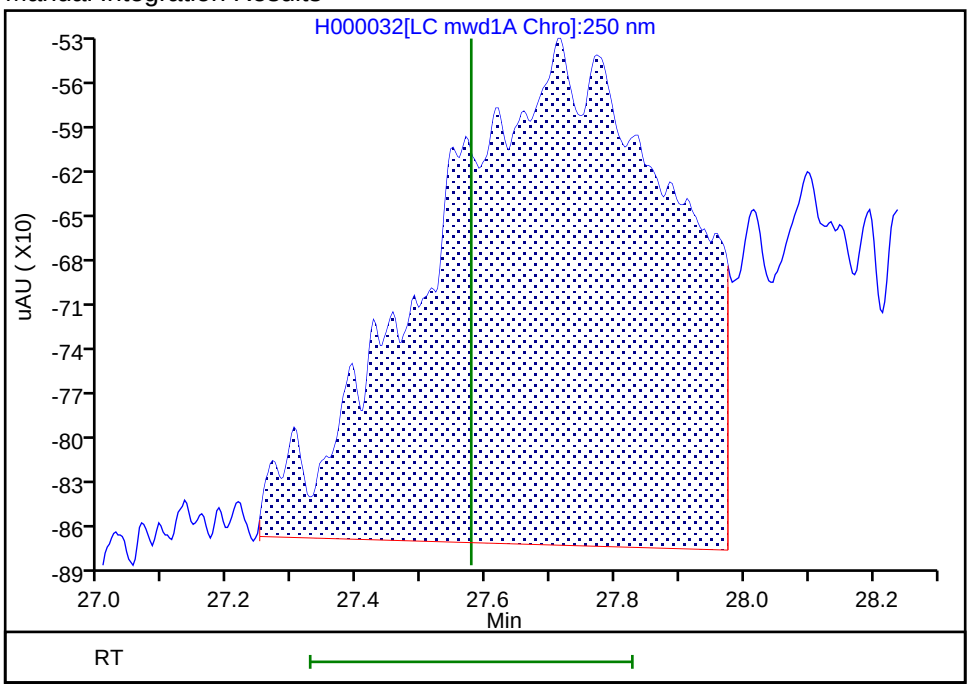
Processing Integration Results

RT: 27.72
Height: 234
Amount: 5.833235
Amount Units: ng/ml



Manual Integration Results

RT: 27.71
Height: 334
Amount: 5.631374
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 12:42:15

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

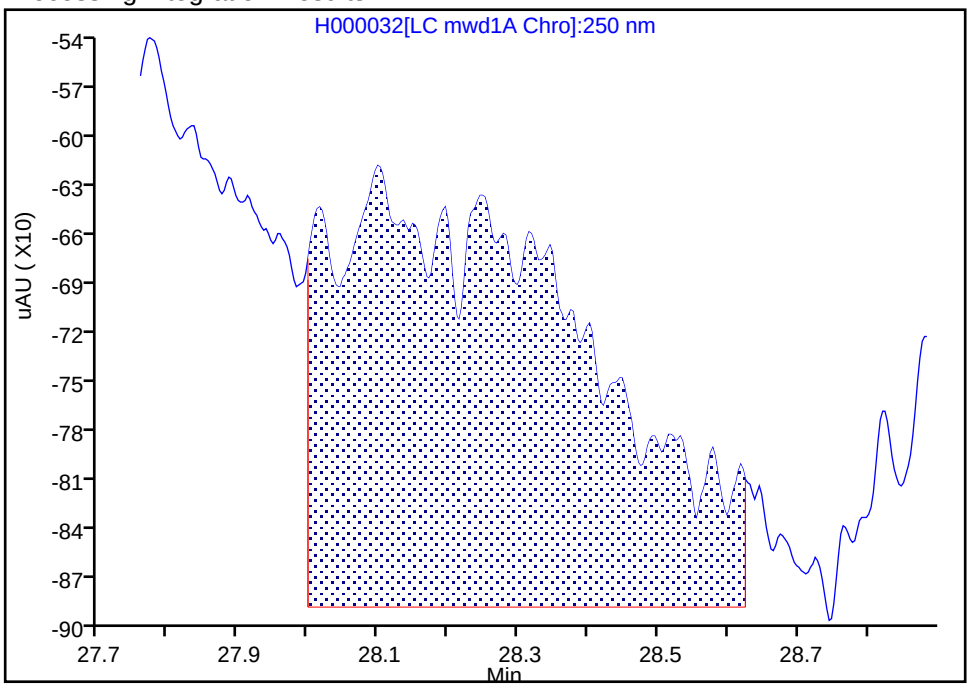
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000032.D				
Injection Date:	09-Apr-2019 22:07:22	Instrument ID:	LC12		
Lims ID:	std1				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	62	Worklist Smp#:	3
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

11 m-Nitrotoluene, CAS: 99-08-1

Signal: 1

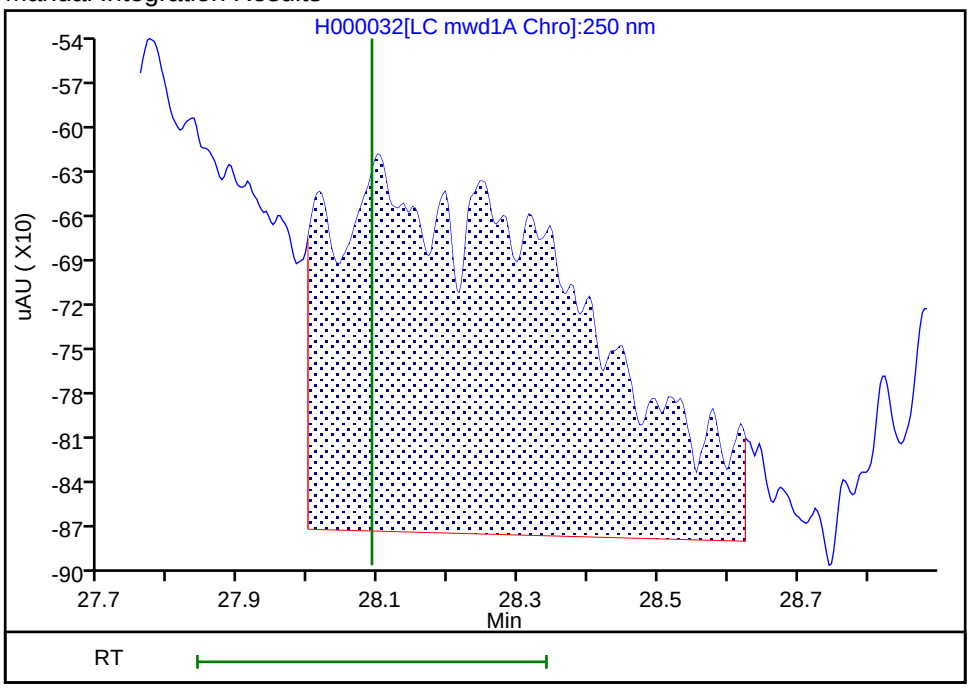
Processing Integration Results

RT: 28.10
Height: 266
Amount: 5.028917
Amount Units: ng/ml



Manual Integration Results

RT: 28.10
Height: 251
Amount: 5.895736
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 12:42:15

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

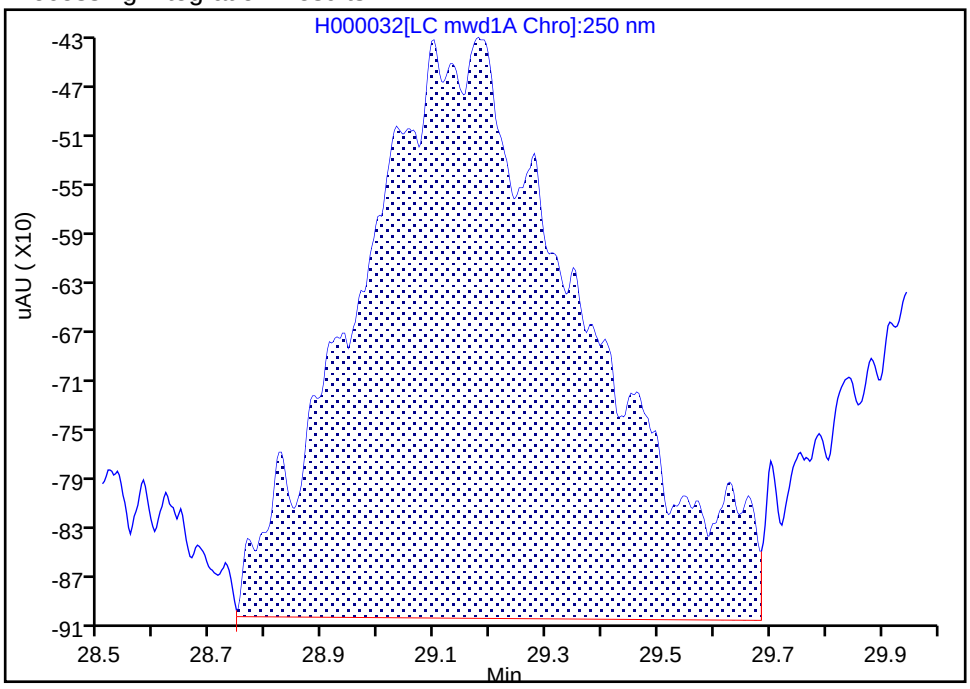
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000032.D				
Injection Date:	09-Apr-2019 22:07:22	Instrument ID:	LC12		
Lims ID:	std1				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	62	Worklist Smp#:	3
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

12 3,5-Dinitroaniline, CAS: 618-87-1

Signal: 1

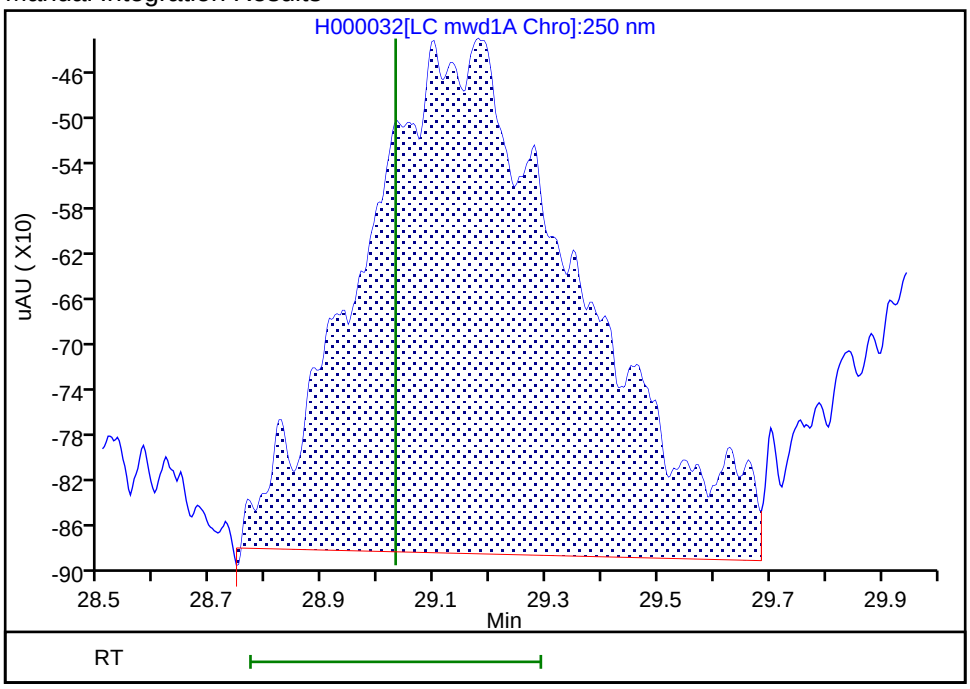
Processing Integration Results

RT: 29.10
Height: 461
Amount: 5.952172
Amount Units: ng/ml



Manual Integration Results

RT: 29.18
Height: 447
Amount: 5.728094
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 12:42:15

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

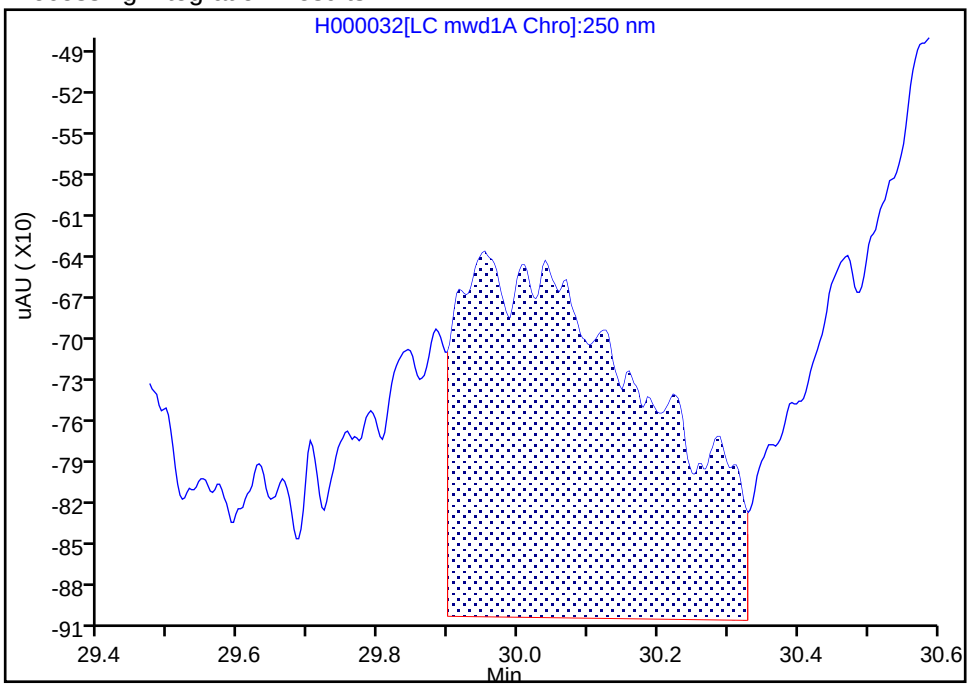
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000032.D				
Injection Date:	09-Apr-2019 22:07:22	Instrument ID:	LC12		
Lims ID:	std1				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	62	Worklist Smp#:	3
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

13 RDX, CAS: 121-82-4

Signal: 1

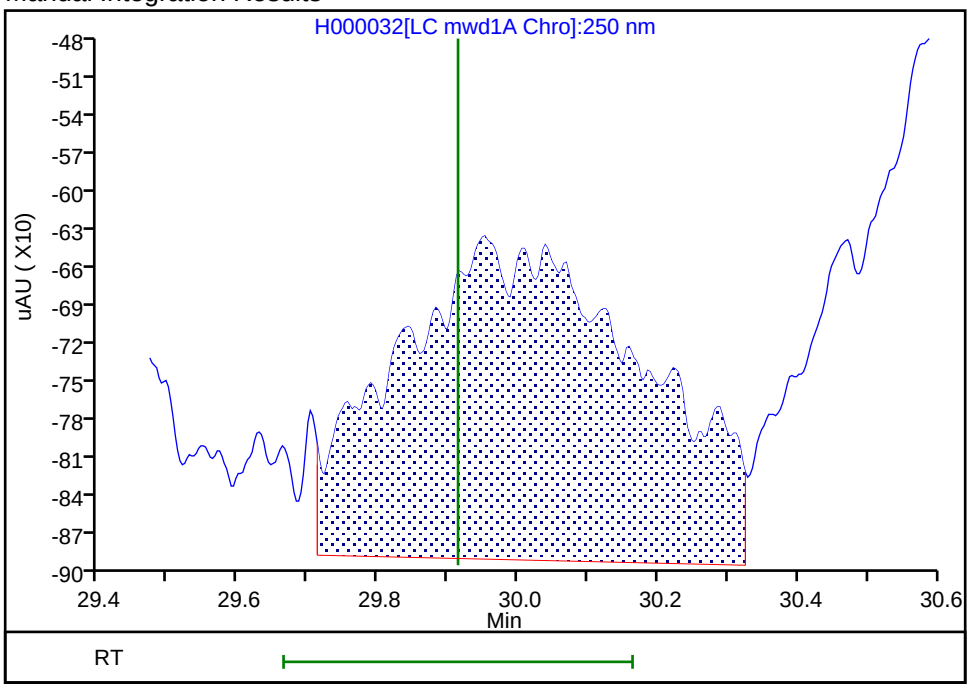
Processing Integration Results

RT: 29.95
Height: 268
Amount: 5.915592
Amount Units: ng/ml



Manual Integration Results

RT: 29.95
Height: 257
Amount: 5.654956
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 12:42:15

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

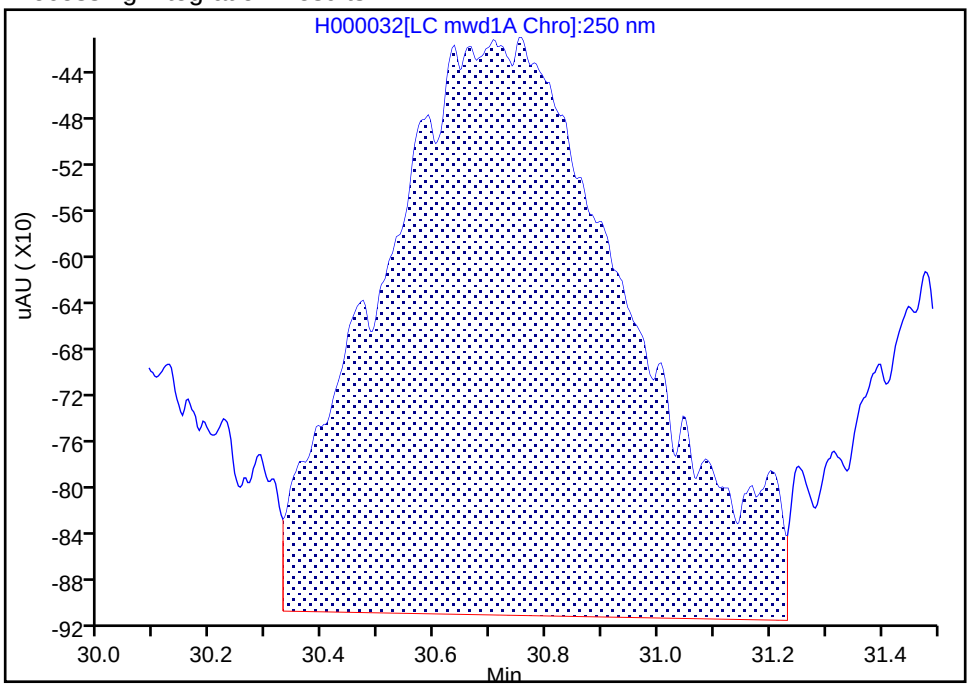
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000032.D				
Injection Date:	09-Apr-2019 22:07:22	Instrument ID:	LC12		
Lims ID:	std1				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	62	Worklist Smp#:	3
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

14 2,4-Dinitrotoluene, CAS: 121-14-2

Signal: 1

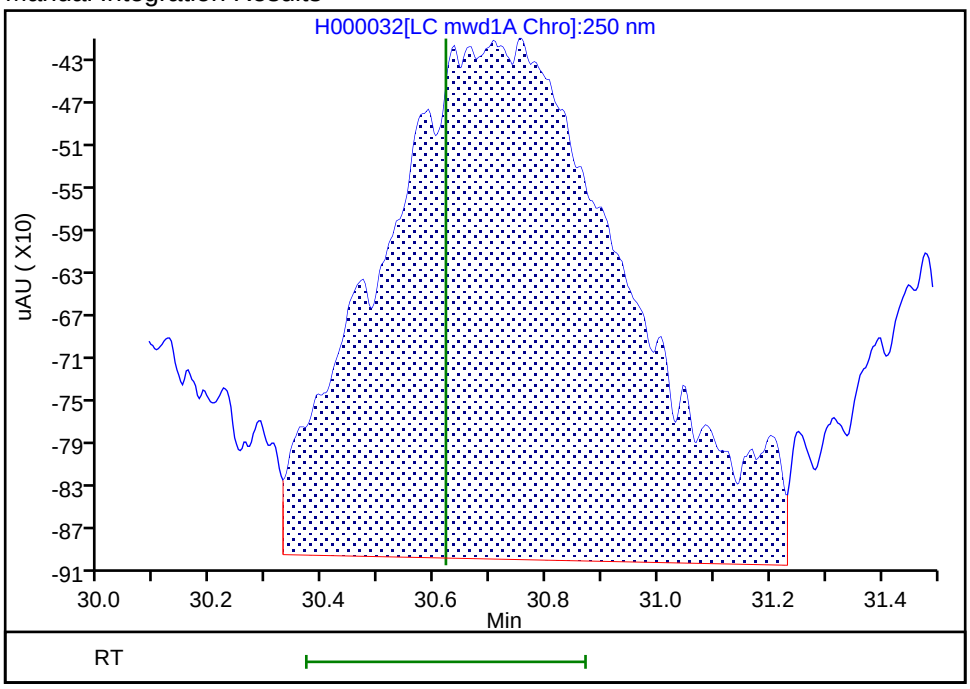
Processing Integration Results

RT: 30.71
Height: 496
Amount: 5.454583
Amount Units: ng/ml



Manual Integration Results

RT: 30.75
Height: 490
Amount: 5.395381
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 12:42:15

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

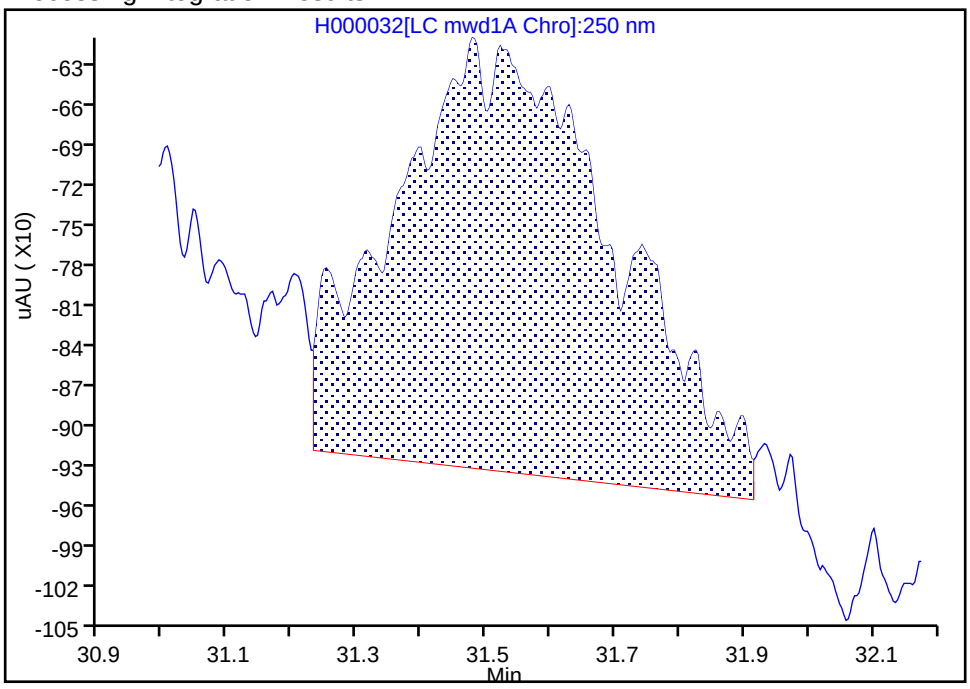
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000032.D				
Injection Date:	09-Apr-2019 22:07:22	Instrument ID:	LC12		
Lims ID:	std1				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	62	Worklist Smp#:	3
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

15 2,6-Dinitrotoluene, CAS: 606-20-2

Signal: 1

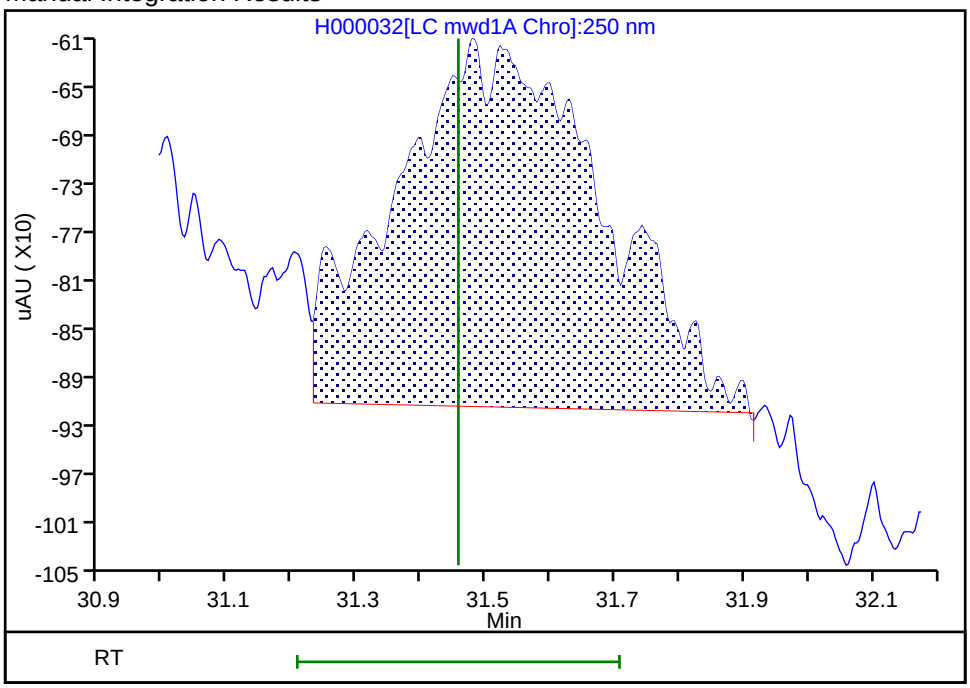
Processing Integration Results

RT: 31.48
Height: 313
Amount: 5.461756
Amount Units: ng/ml



Manual Integration Results

RT: 31.48
Height: 296
Amount: 5.251512
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 12:42:15

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

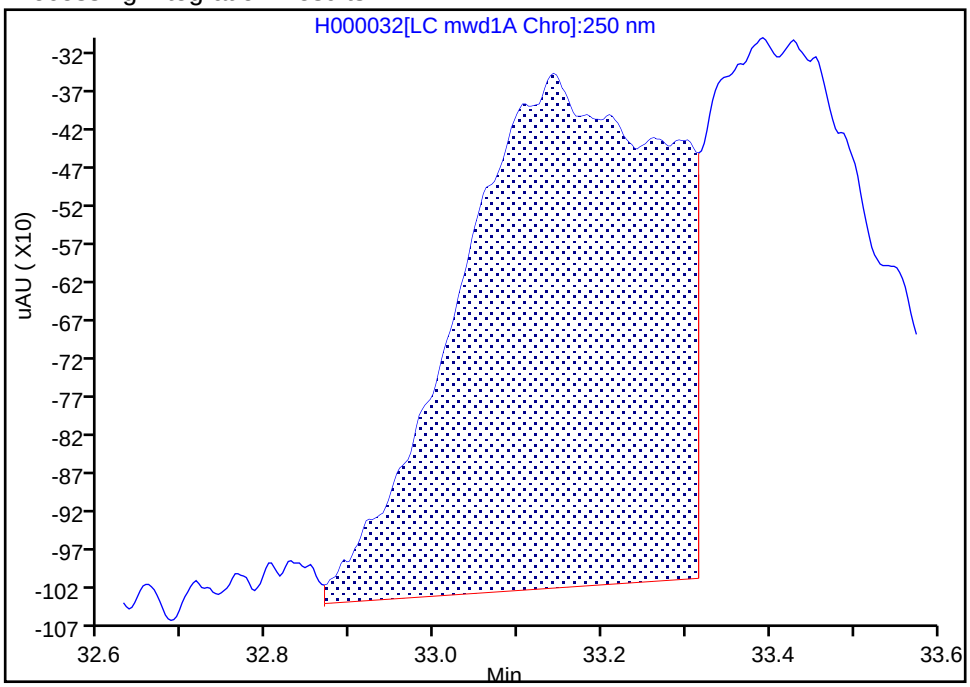
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000032.D				
Injection Date:	09-Apr-2019 22:07:22	Instrument ID:	LC12		
Lims ID:	std1				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	62	Worklist Smp#:	3
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

16 2-Amino-4,6-dinitrotoluene, CAS: 35572-78-2

Signal: 1

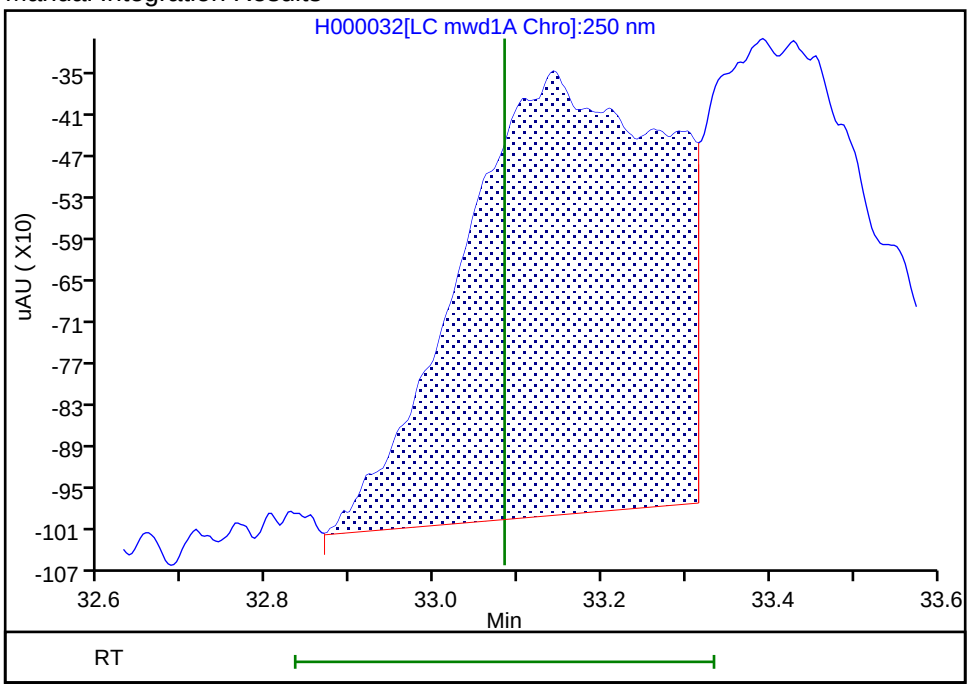
Processing Integration Results

RT: 33.14
Height: 672
Amount: 4.566226
Amount Units: ng/ml



Manual Integration Results

RT: 33.14
Height: 642
Amount: 5.370395
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 12:41:37

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

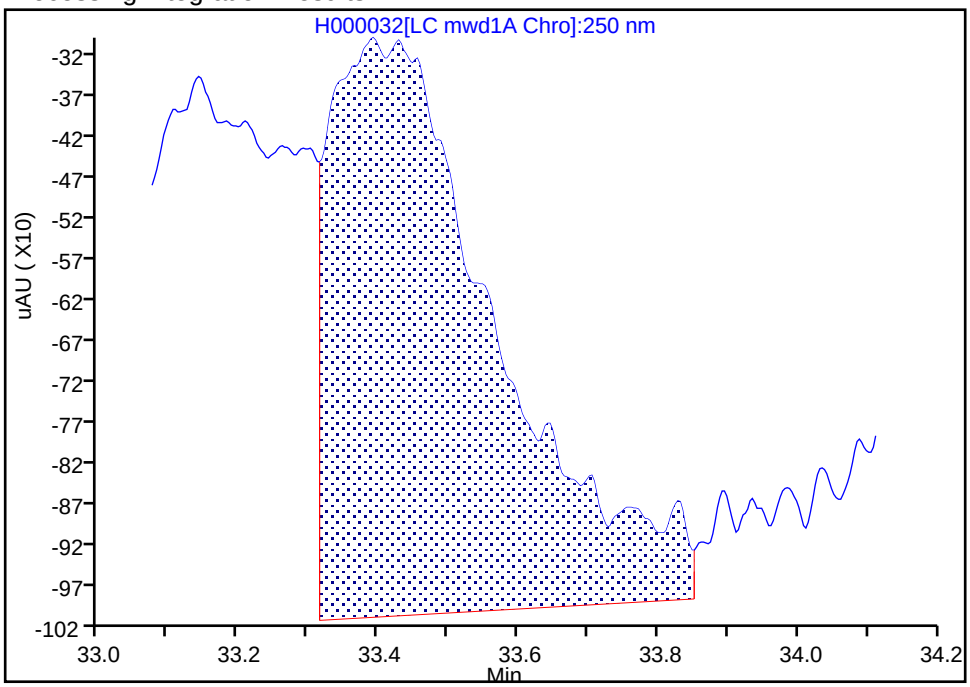
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000032.D				
Injection Date:	09-Apr-2019 22:07:22	Instrument ID:	LC12		
Lims ID:	std1				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	62	Worklist Smp#:	3
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

17 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

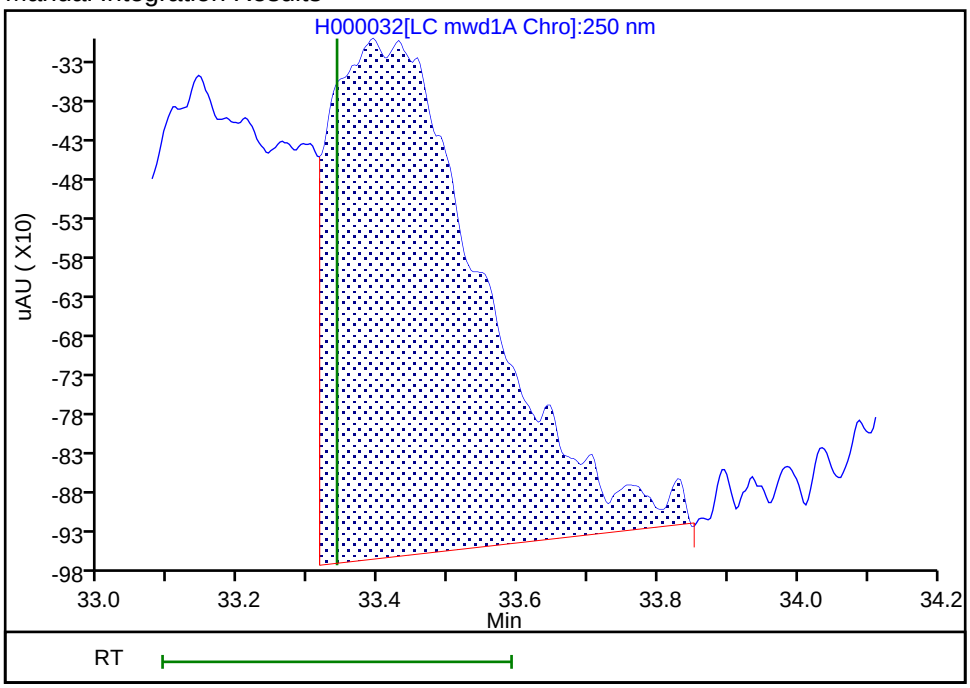
Processing Integration Results

RT: 33.39
Height: 703
Amount: 5.118655
Amount Units: ng/ml



Manual Integration Results

RT: 33.39
Height: 664
Amount: 5.367869
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 12:41:37

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

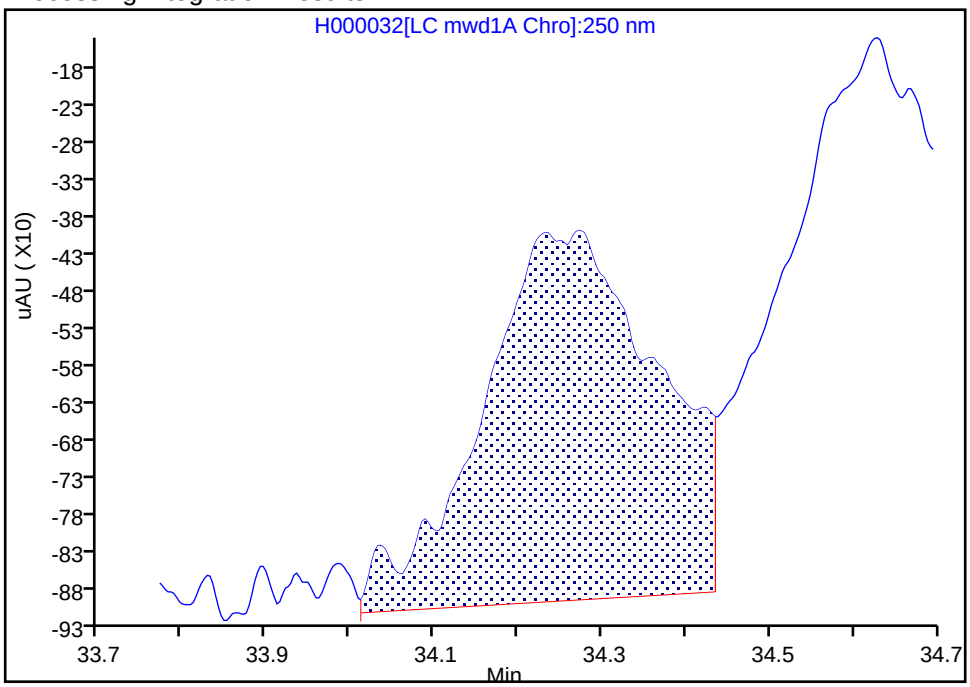
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000032.D				
Injection Date:	09-Apr-2019 22:07:22	Instrument ID:	LC12		
Lims ID:	std1				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	62	Worklist Smp#:	3
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

$ 18 3,4-Dinitrotoluene, CAS: 610-39-9

Signal: 1

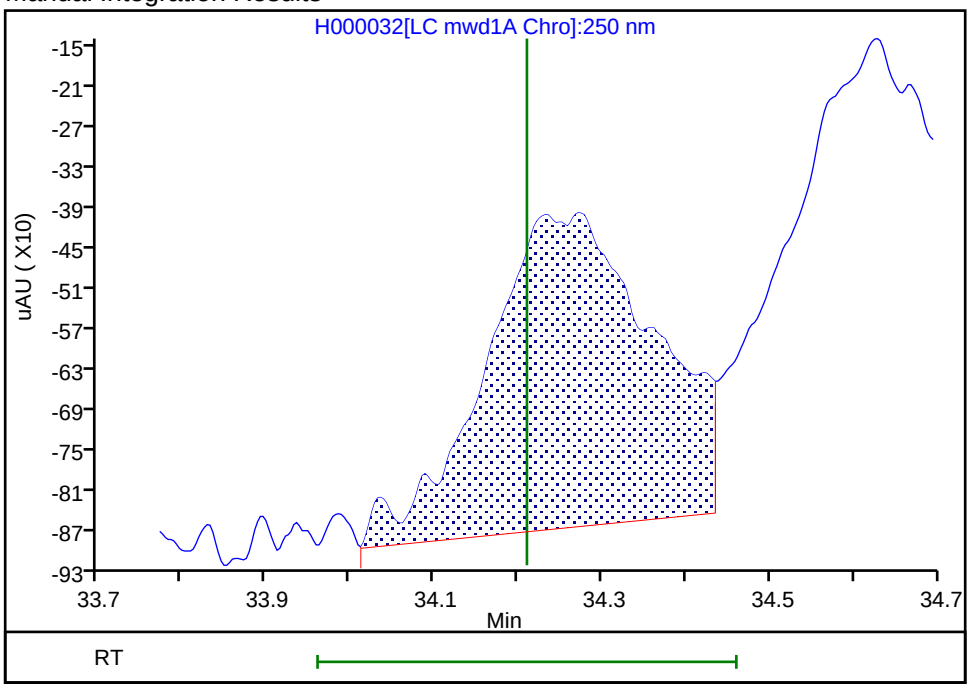
Processing Integration Results

RT: 34.27
Height: 492
Amount: 5.721206
Amount Units: ng/ml



Manual Integration Results

RT: 34.27
Height: 463
Amount: 5.392401
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 12:41:02

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

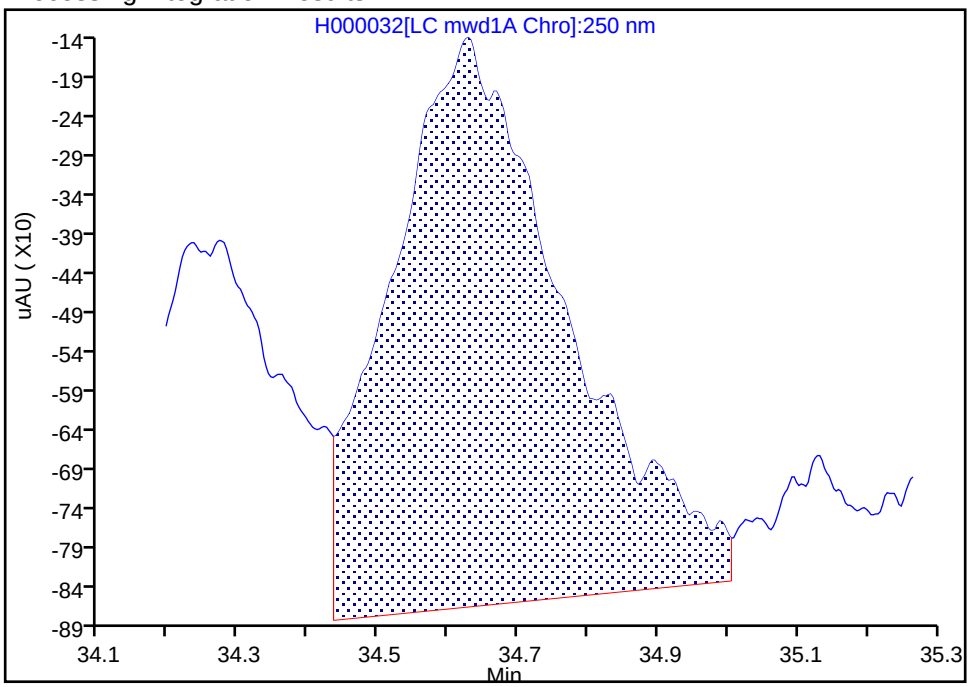
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000032.D				
Injection Date:	09-Apr-2019 22:07:22	Instrument ID:	LC12		
Lims ID:	std1				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	62	Worklist Smp#:	3
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

19 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

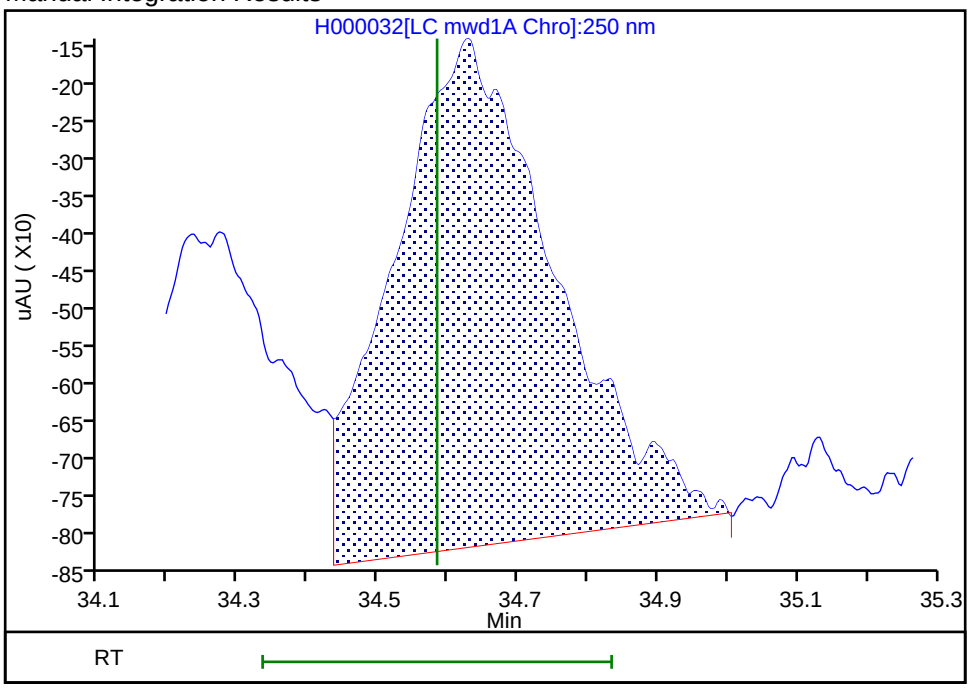
Processing Integration Results

RT: 34.63
Height: 722
Amount: 5.586481
Amount Units: ng/ml



Manual Integration Results

RT: 34.63
Height: 676
Amount: 5.246155
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 12:41:02

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

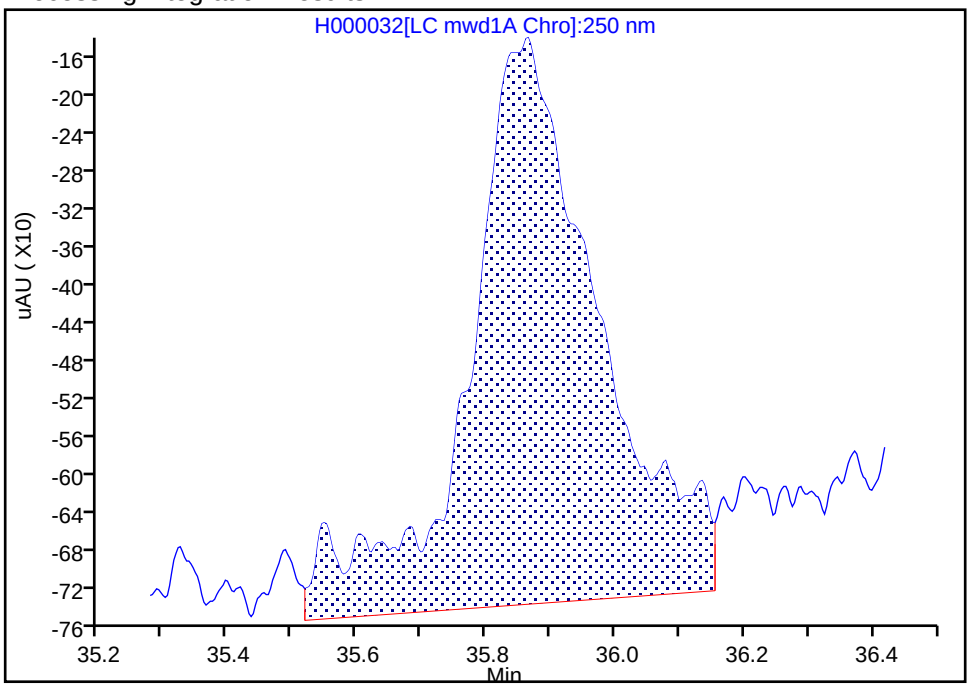
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000032.D				
Injection Date:	09-Apr-2019 22:07:22	Instrument ID:	LC12		
Lims ID:	std1				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	62	Worklist Smp#:	3
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

20 HMX, CAS: 2691-41-0

Signal: 1

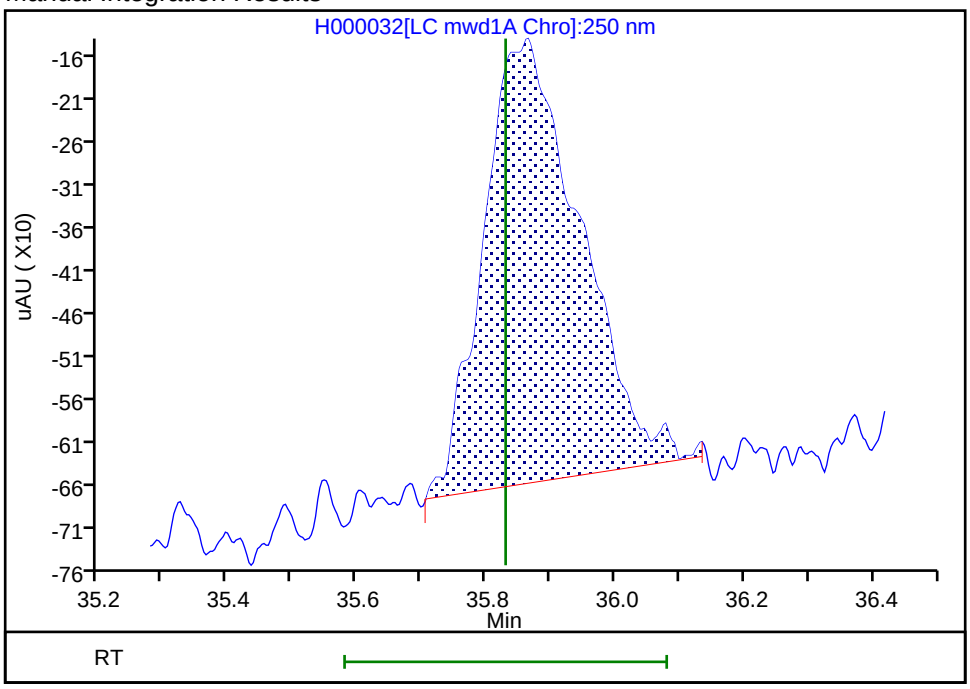
Processing Integration Results

RT: 35.87
Height: 592
Amount: 5.742738
Amount Units: ng/ml



Manual Integration Results

RT: 35.87
Height: 510
Amount: 5.062343
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 12:40:57

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

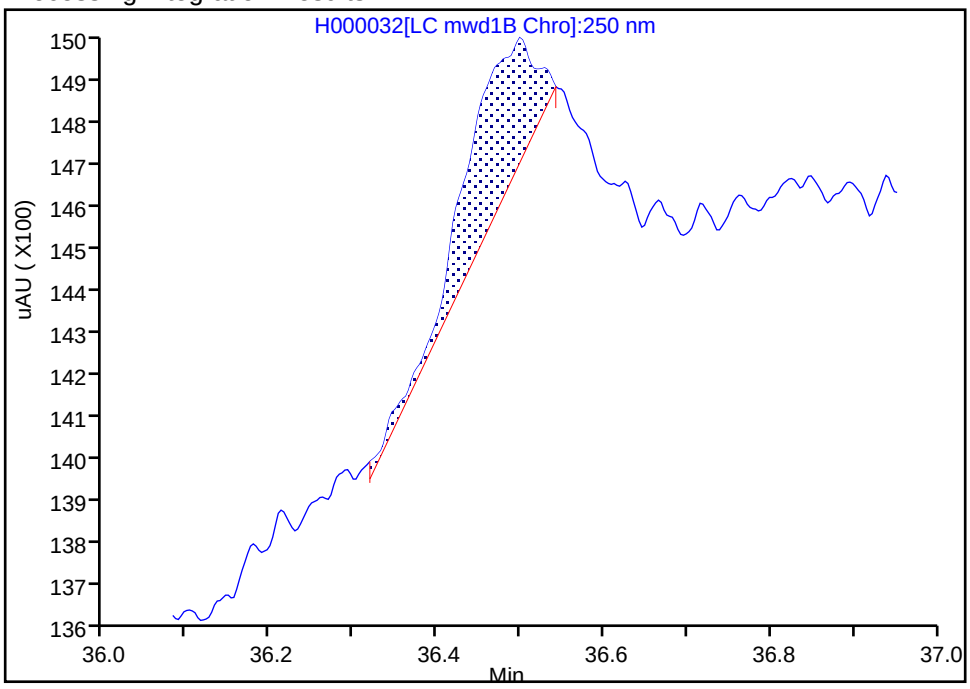
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000032.D				
Injection Date:	09-Apr-2019 22:07:22	Instrument ID:	LC12		
Lims ID:	std1				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	62	Worklist Smp#:	3
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1B, 358 nm		

21 Nitroglycerin, CAS: 55-63-0

Signal: 1

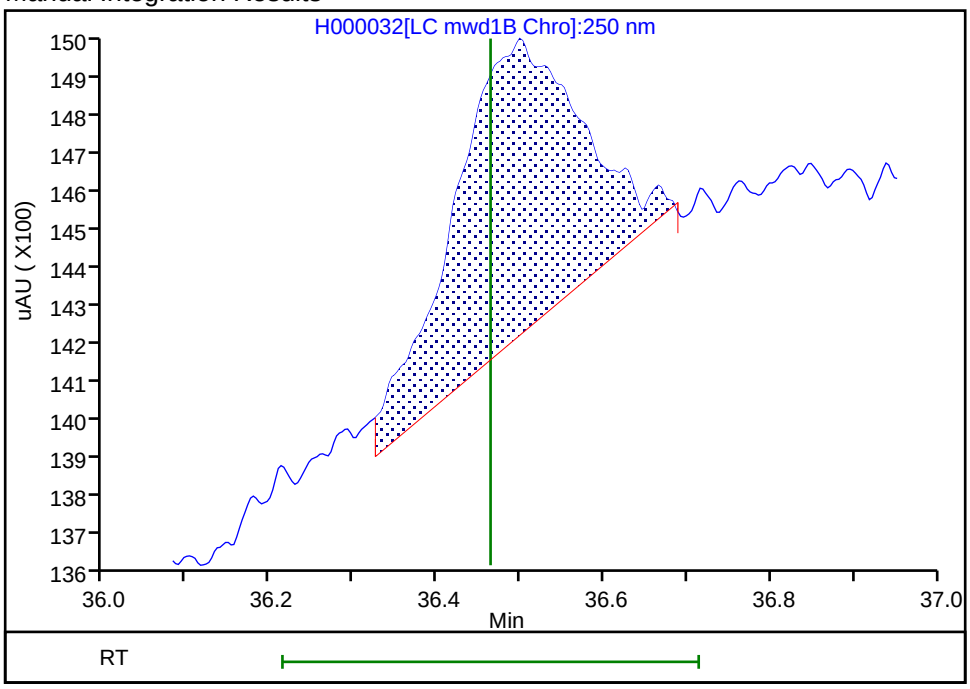
Processing Integration Results

RT: 36.50
Height: 279
Amount: 2.288136
Amount Units: ng/ml



Manual Integration Results

RT: 36.50
Height: 730
Amount: 5.568068
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 12:42:29

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000033.D
Lims ID: std2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 09-Apr-2019 23:04:58 ALS Bottle#: 63 Worklist Smp#: 4
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: L2
Operator ID: AJC Instrument ID: LC12
Sublist: chrom-LC12_Conf_8330*sub11

Method: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 12-Apr-2019 12:28:06 Calib Date: 10-Apr-2019 14:25:56
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000049.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0331

First Level Reviewer: ortizam Date: 10-Apr-2019 12:45:50

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
4 Ethylene glycol dinitrate							M
2	20.715	20.747	-0.032	1087H	10.0	10.6	M
3 Nitrobenzene							M
1	20.839	20.827	0.012	466H	10.0	9.48	M
6 1,3-Dinitrobenzene							
1	23.109	23.044	0.065	1008H	10.0	10.2	
7 1,3,5-Trinitrobenzene							
1	24.699	24.657	0.042	788H	10.0	10.1	
9 p-Nitrotoluene							Ma
1	27.662	27.577	0.085	631H	10.0	10.6	Ma
10 o-Nitrotoluene							Ma
1	27.662	27.577	0.085	631H	10.0	10.6	Ma
11 m-Nitrotoluene							Ma
1	28.085	28.090	-0.005	475H	10.0	11.2	Ma
12 3,5-Dinitroaniline							M
1	29.049	29.030	0.019	816H	10.0	10.5	M
13 RDX							M
1	29.929	29.914	0.015	505H	10.0	11.1	M
14 2,4-Dinitrotoluene							M
1	30.615	30.620	-0.005	949H	10.0	10.4	M
15 2,6-Dinitrotoluene							M
1	31.472	31.457	0.015	589H	10.0	10.4	M
16 2-Amino-4,6-dinitrotoluene							M
1	33.089	33.084	0.005	1192H	10.0	9.97	M
17 4-Amino-2,6-dinitrotoluene							Ma
1	33.375	33.340	0.035	1226H	10.0	9.91	Ma
$ 18 3,4-Dinitrotoluene							
1	34.229	34.210	0.019	891H	10.0	10.4	

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
19 2,4,6-Trinitrotoluene							
1	34.582	34.584	-0.002	1334H	10.0	10.4	
20 HMX							
1	35.852	35.830	0.022	1075H	10.0	10.7	
21 Nitroglycerin							
2	36.485	36.464	0.021	1277H	10.0	9.74	
22 Tetryl							
1	37.445	37.440	0.005	1598H	10.0	10.2	
23 PETN							M
2	40.902	40.897	0.005	1485H	10.0	10.0	M

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

HP8330L2_00033 Amount Added: 1.00 Units: mL

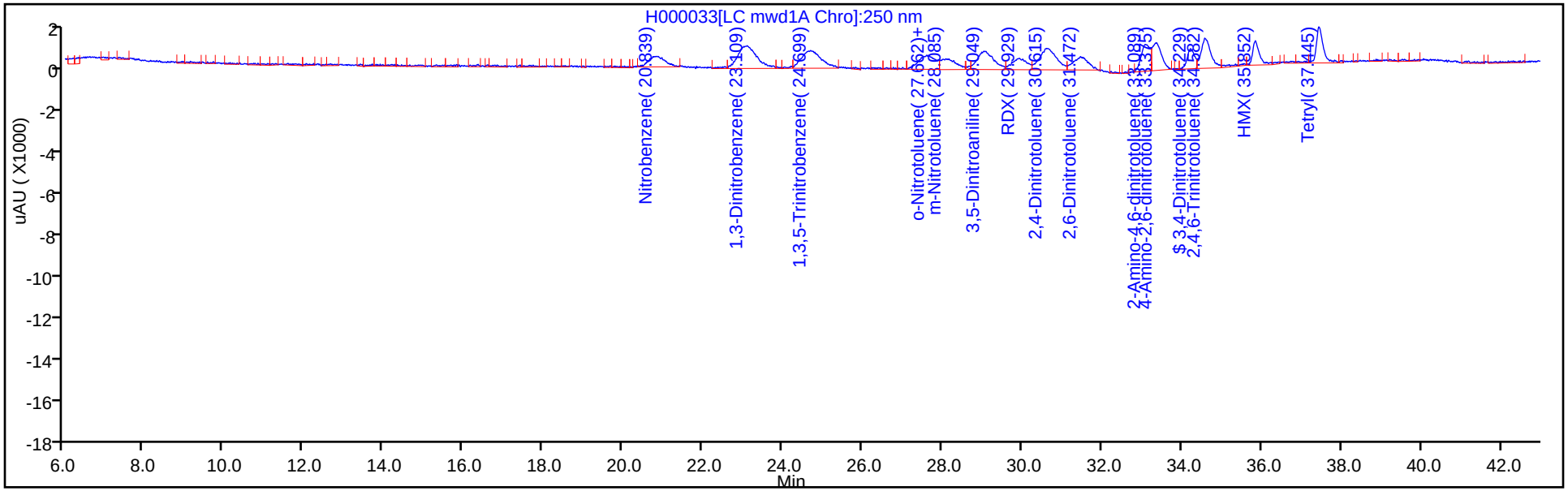
Report Date: 12-Apr-2019 12:28:08 Chrom Revision: 2.3 24-Mar-2019 20:11:04

Eurofins TestAmerica, Sacramento

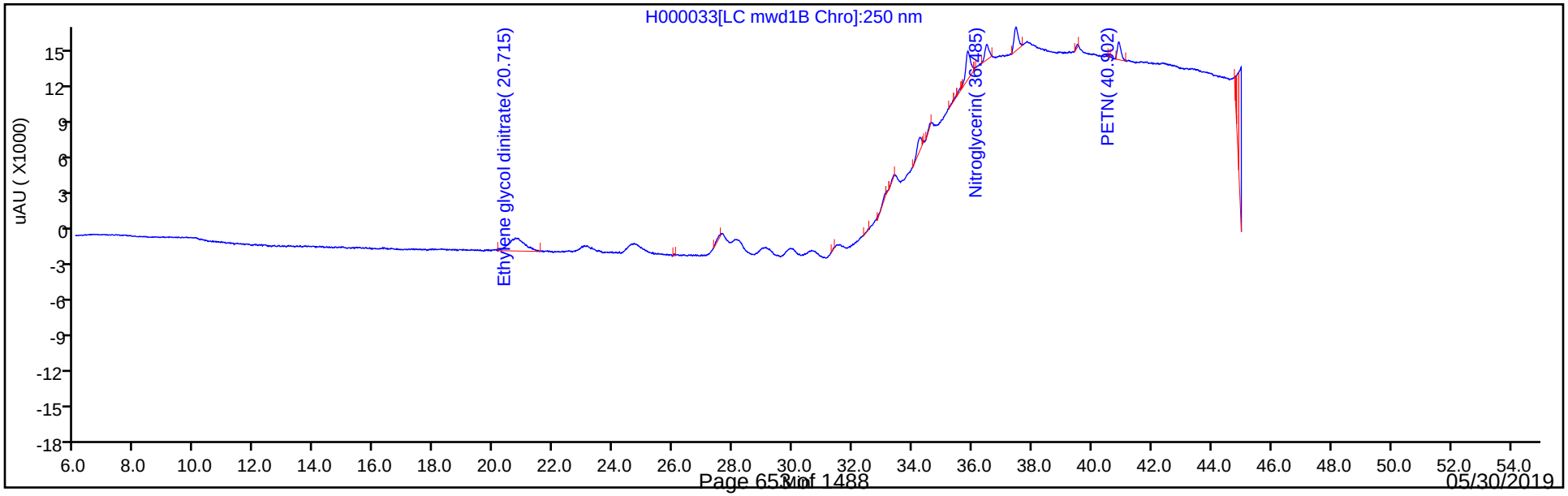
Data File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000033.D

Injection Date:	09-Apr-2019 23:04:58	Instrument ID:	LC12	Operator ID:	AJC
Lims ID:	std2			Worklist Smp#:	4
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	63
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

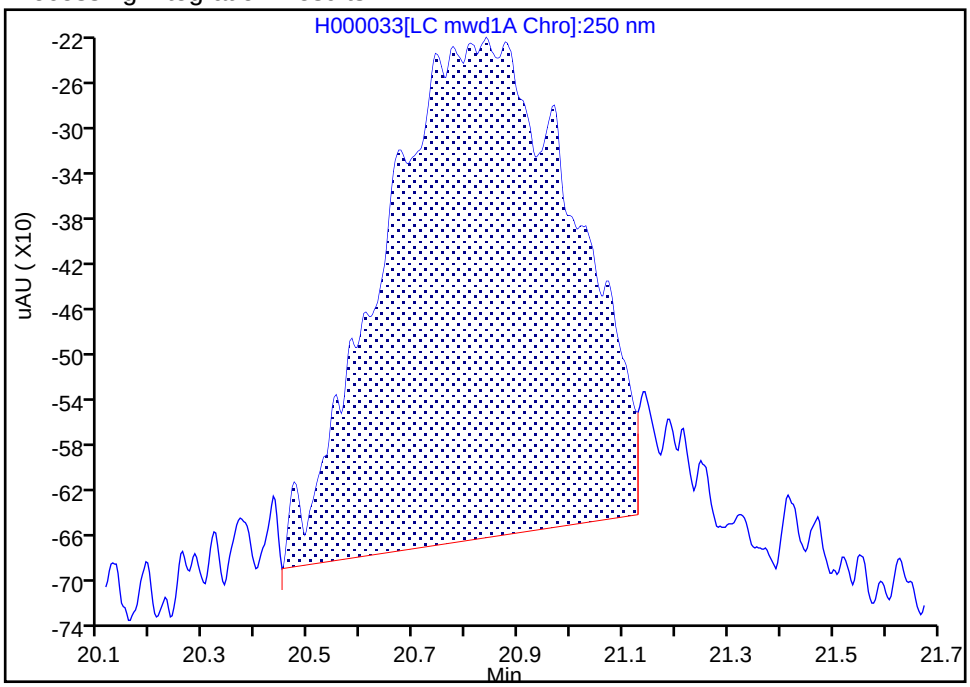
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000033.D				
Injection Date:	09-Apr-2019 23:04:58	Instrument ID:	LC12		
Lims ID:	std2				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	63	Worklist Smp#:	4
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

3 Nitrobenzene, CAS: 98-95-3

Signal: 1

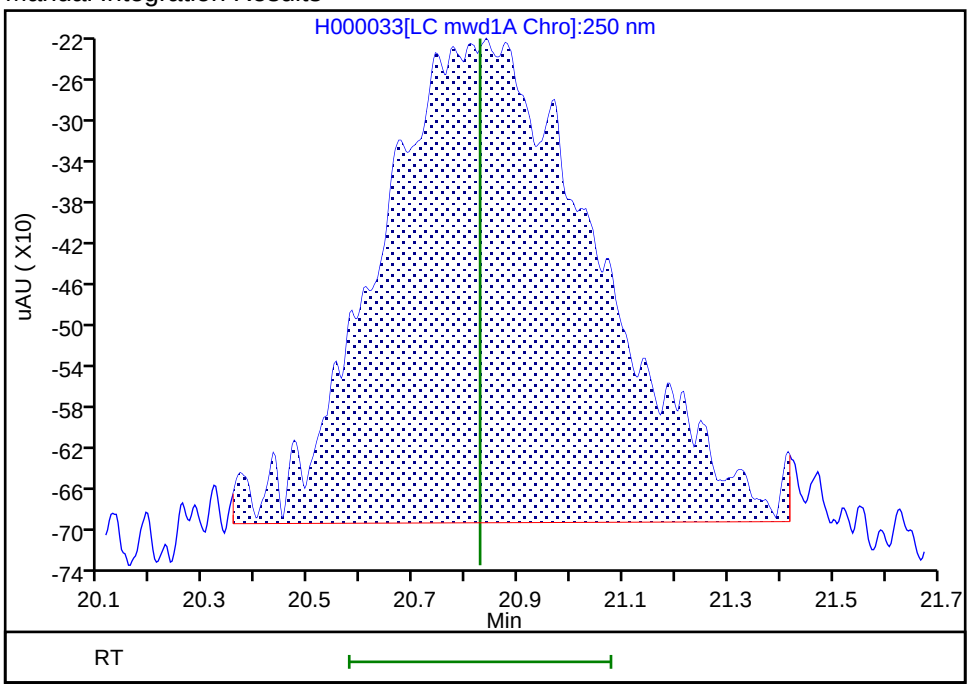
Processing Integration Results

RT: 20.84
Height: 435
Amount: 7.007837
Amount Units: ng/ml



Manual Integration Results

RT: 20.84
Height: 466
Amount: 9.483799
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 12:45:39

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

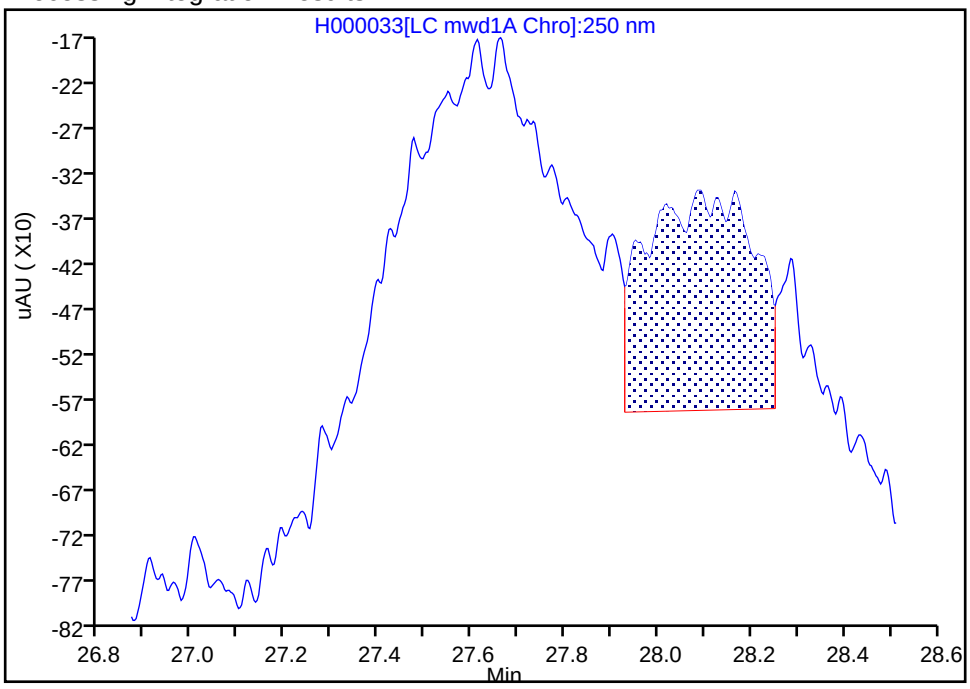
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000033.D				
Injection Date:	09-Apr-2019 23:04:58	Instrument ID:	LC12		
Lims ID:	std2				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	63	Worklist Smp#:	4
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

10 o-Nitrotoluene, CAS: 88-72-2

Signal: 1

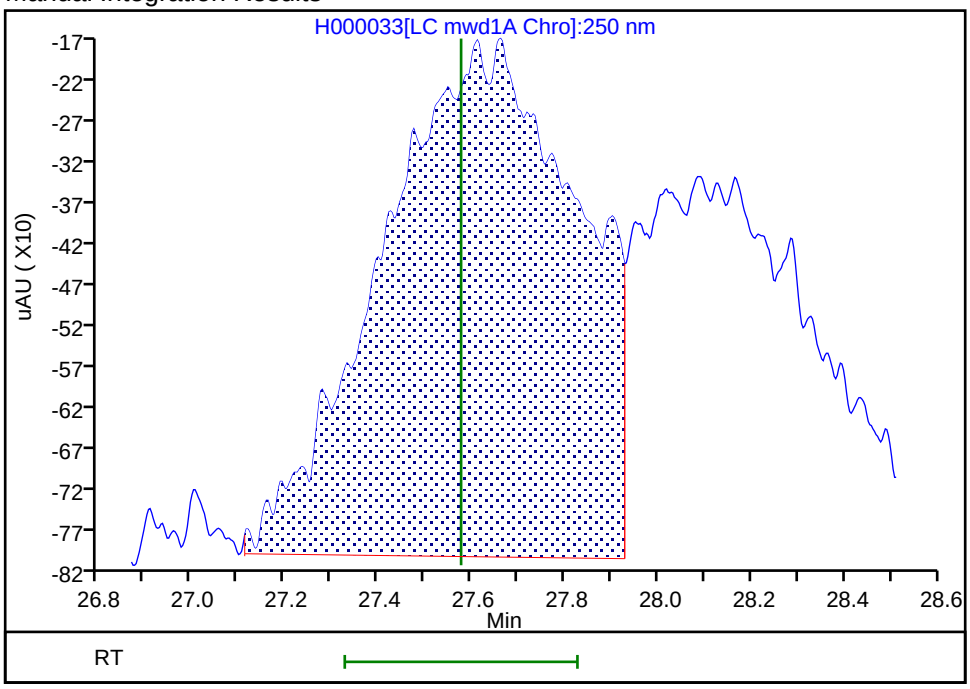
Processing Integration Results

RT: 28.02
Height: 227
Amount: 4.232539
Amount Units: ng/ml



Manual Integration Results

RT: 27.66
Height: 631
Amount: 10.638913
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 12:44:45

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Peak not integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

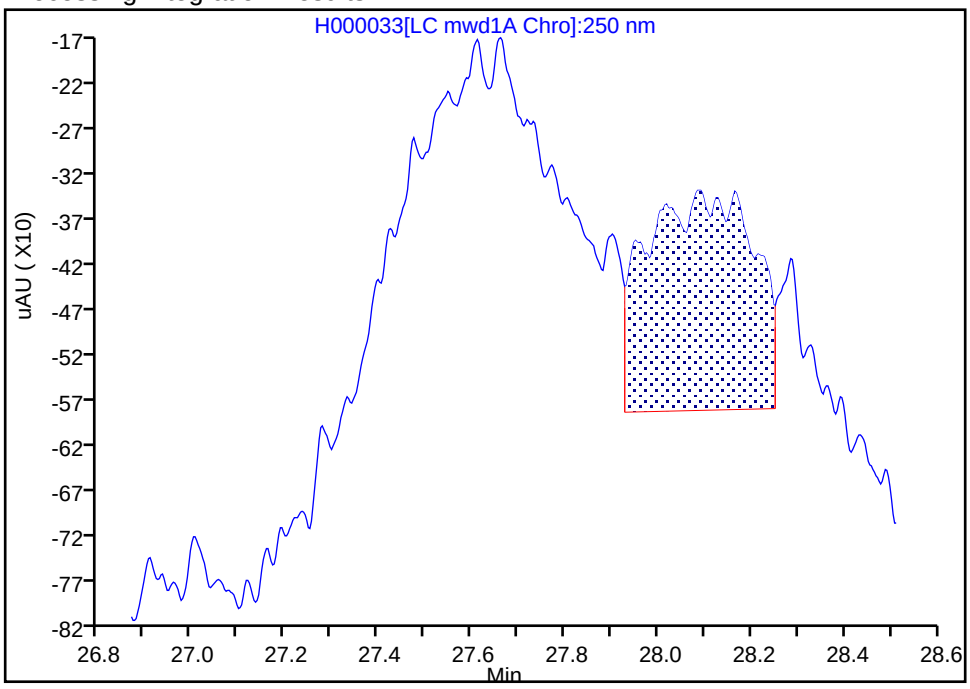
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000033.D				
Injection Date:	09-Apr-2019 23:04:58	Instrument ID:	LC12		
Lims ID:	std2				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	63	Worklist Smp#:	4
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

9 p-Nitrotoluene, CAS: 99-99-0

Signal: 1

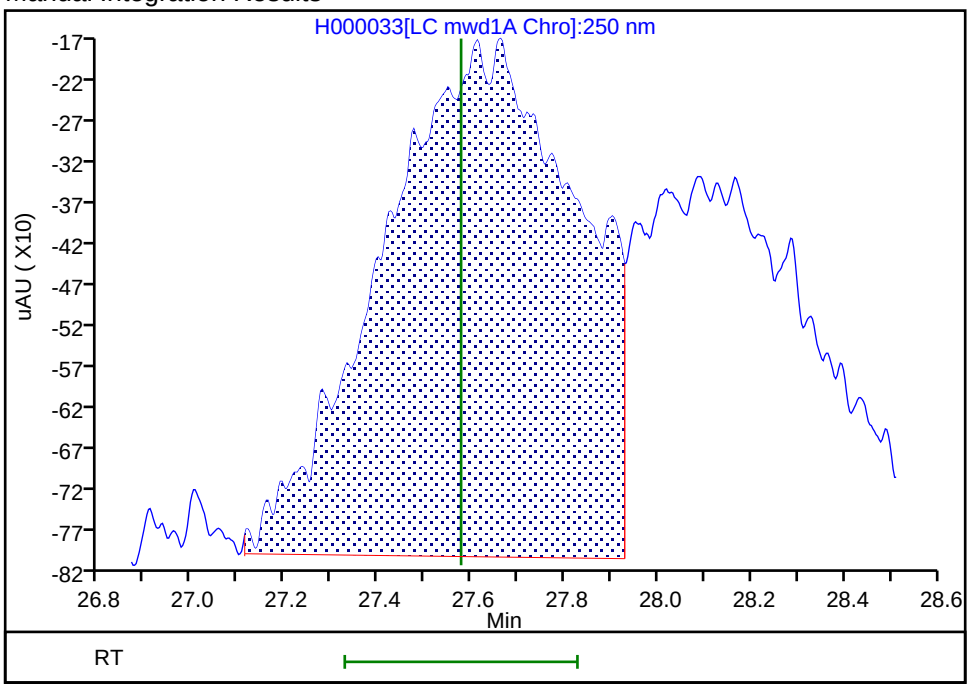
Processing Integration Results

RT: 28.02
Height: 227
Amount: 4.232539
Amount Units: ng/ml



Manual Integration Results

RT: 27.66
Height: 631
Amount: 10.638913
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 12:44:45
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason:

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

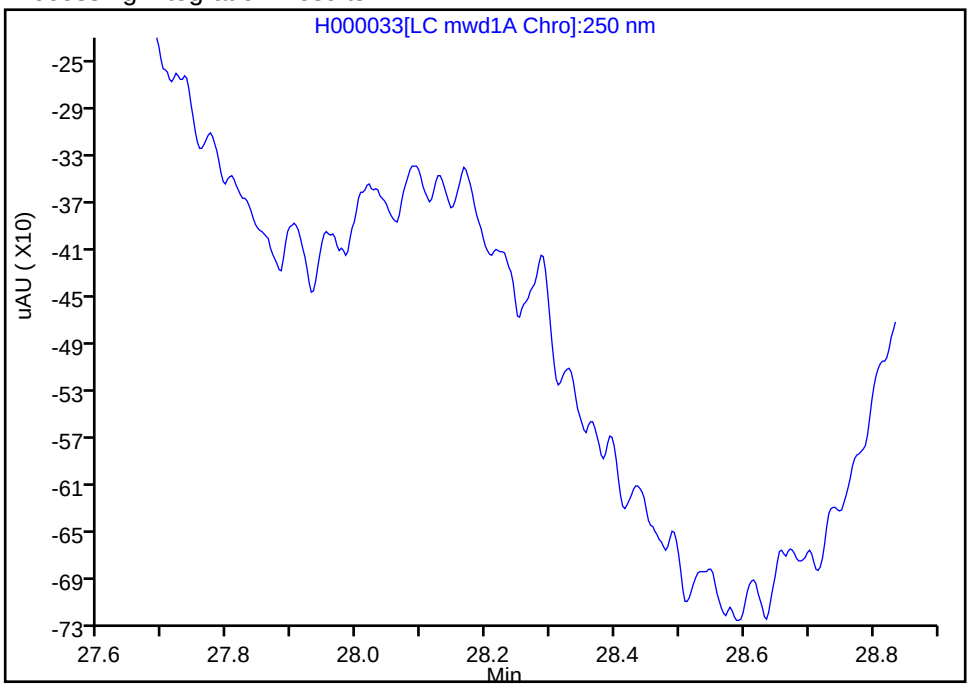
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000033.D				
Injection Date:	09-Apr-2019 23:04:58	Instrument ID:	LC12		
Lims ID:	std2				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	63	Worklist Smp#:	4
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

11 m-Nitrotoluene, CAS: 99-08-1

Signal: 1

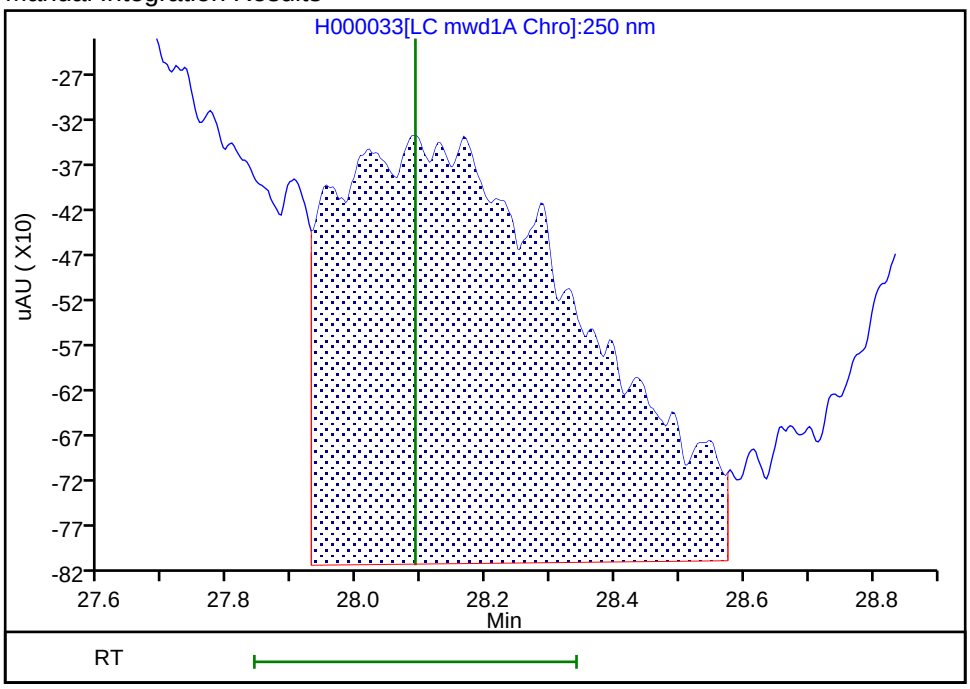
Not Detected
Expected RT: 28.09

Processing Integration Results



Manual Integration Results

RT: 28.09
Height: 475
Amount: 11.157269
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 12:44:52
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Peak not integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

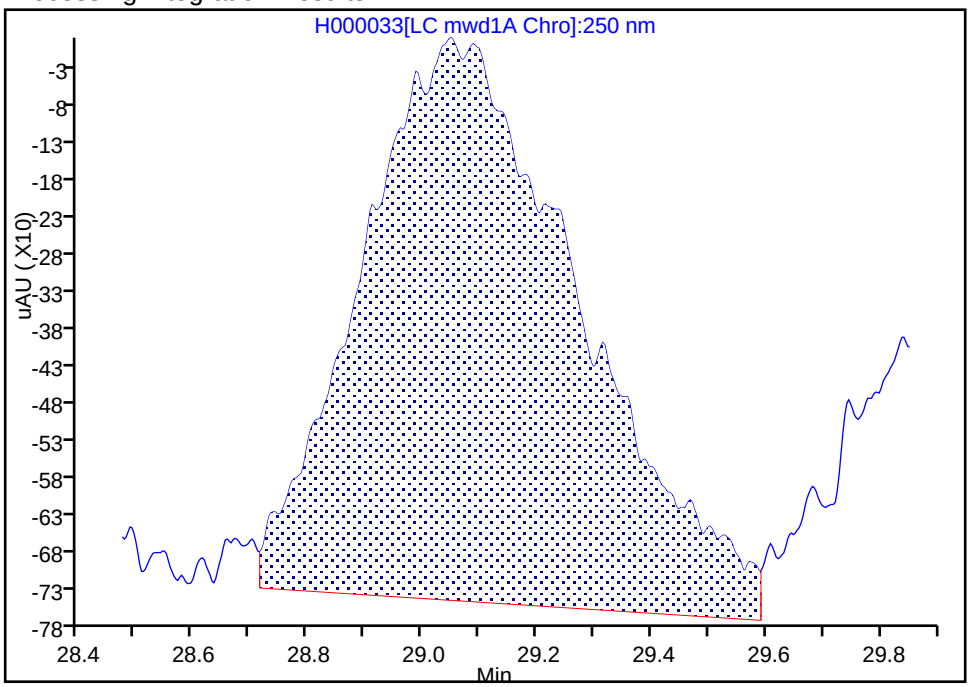
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000033.D				
Injection Date:	09-Apr-2019 23:04:58	Instrument ID:	LC12		
Lims ID:	std2				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	63	Worklist Smp#:	4
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

12 3,5-Dinitroaniline, CAS: 618-87-1

Signal: 1

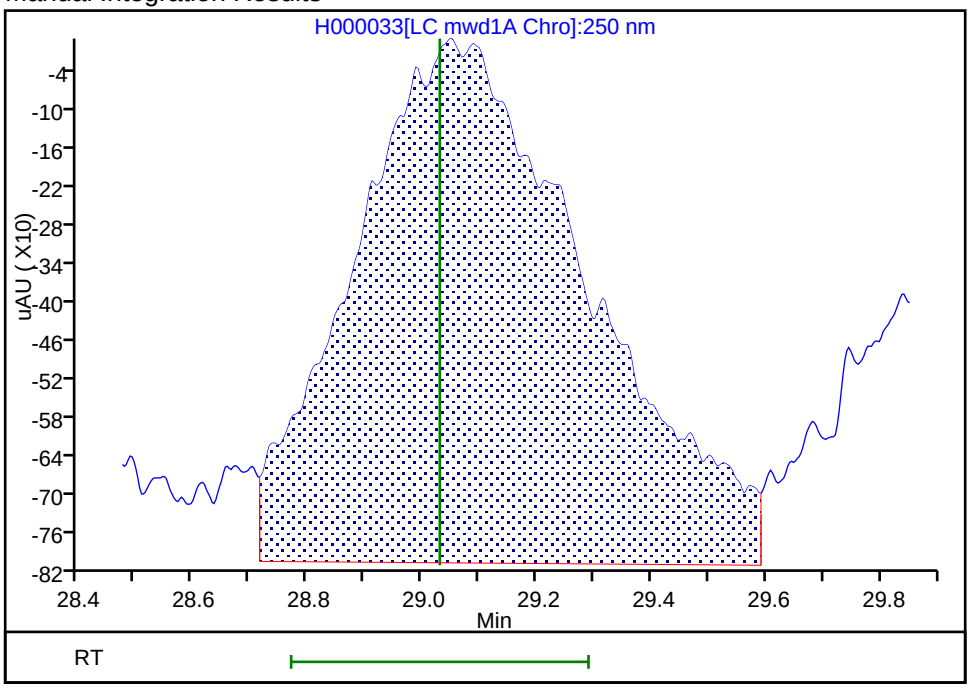
Processing Integration Results

RT: 29.05
Height: 747
Amount: 9.694913
Amount Units: ng/ml



Manual Integration Results

RT: 29.05
Height: 816
Amount: 10.456655
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 12:44:11

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

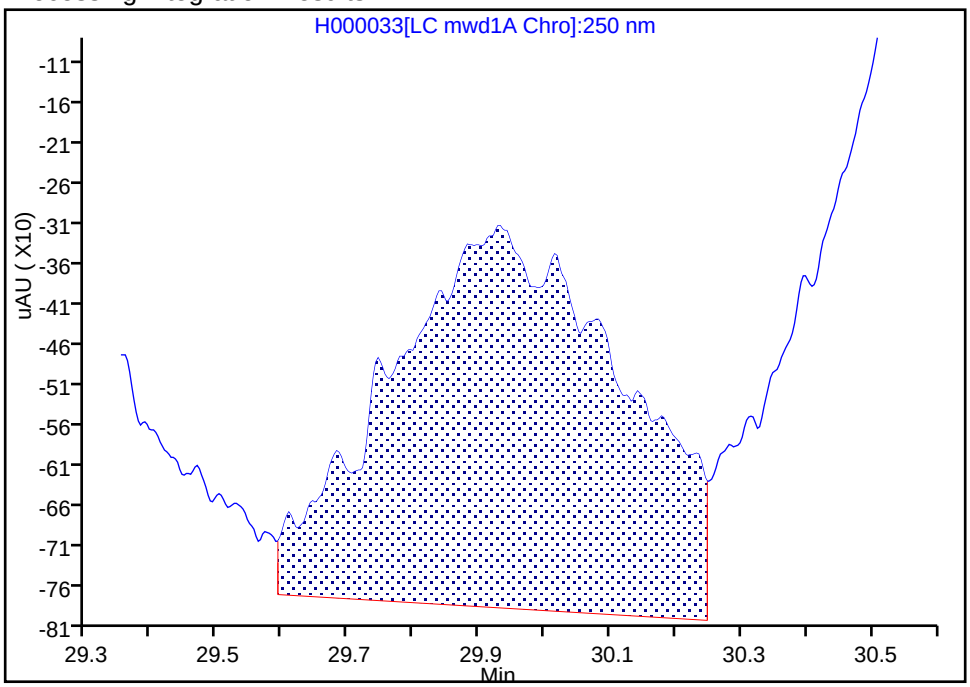
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000033.D				
Injection Date:	09-Apr-2019 23:04:58	Instrument ID:	LC12		
Lims ID:	std2				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	63	Worklist Smp#:	4
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

13 RDX, CAS: 121-82-4

Signal: 1

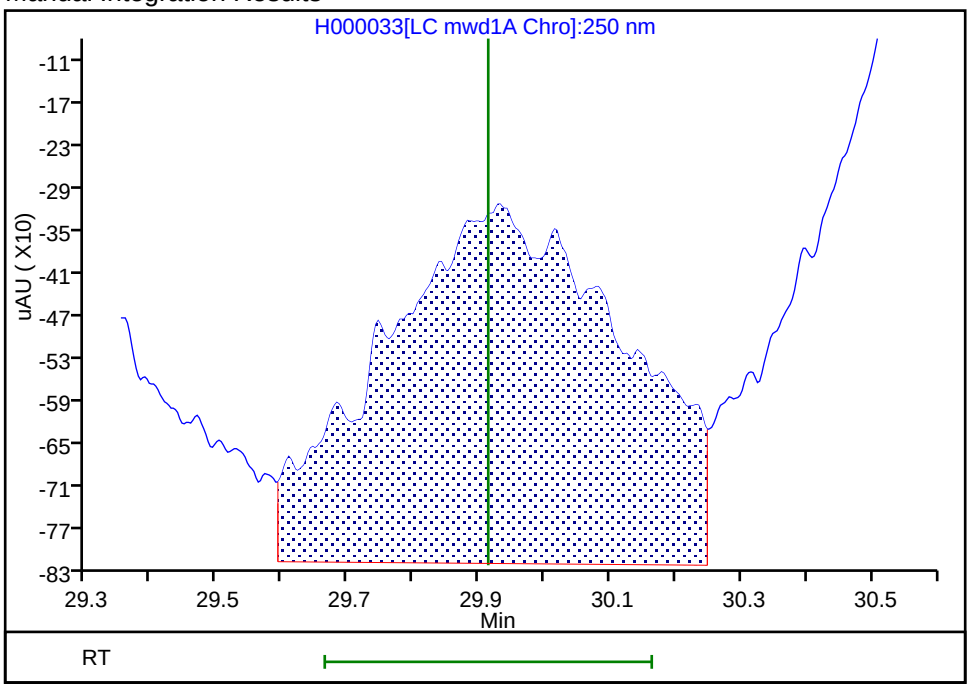
Processing Integration Results

RT: 29.93
Height: 473
Amount: 10.513514
Amount Units: ng/ml



Manual Integration Results

RT: 29.93
Height: 505
Amount: 11.111879
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 12:44:11
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

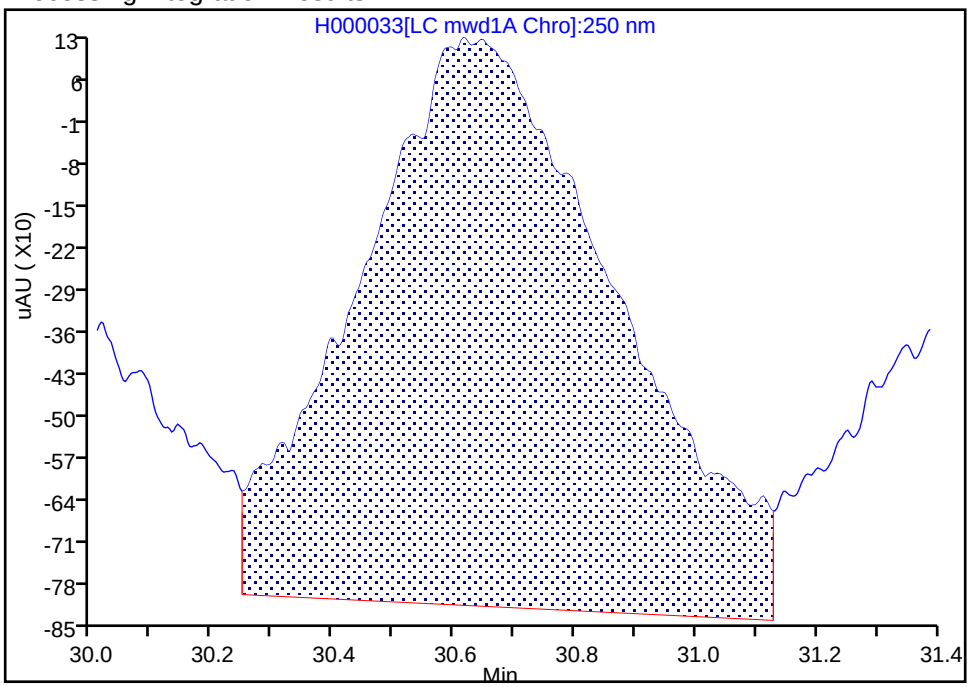
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000033.D				
Injection Date:	09-Apr-2019 23:04:58	Instrument ID:	LC12		
Lims ID:	std2				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	63	Worklist Smp#:	4
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

14 2,4-Dinitrotoluene, CAS: 121-14-2

Signal: 1

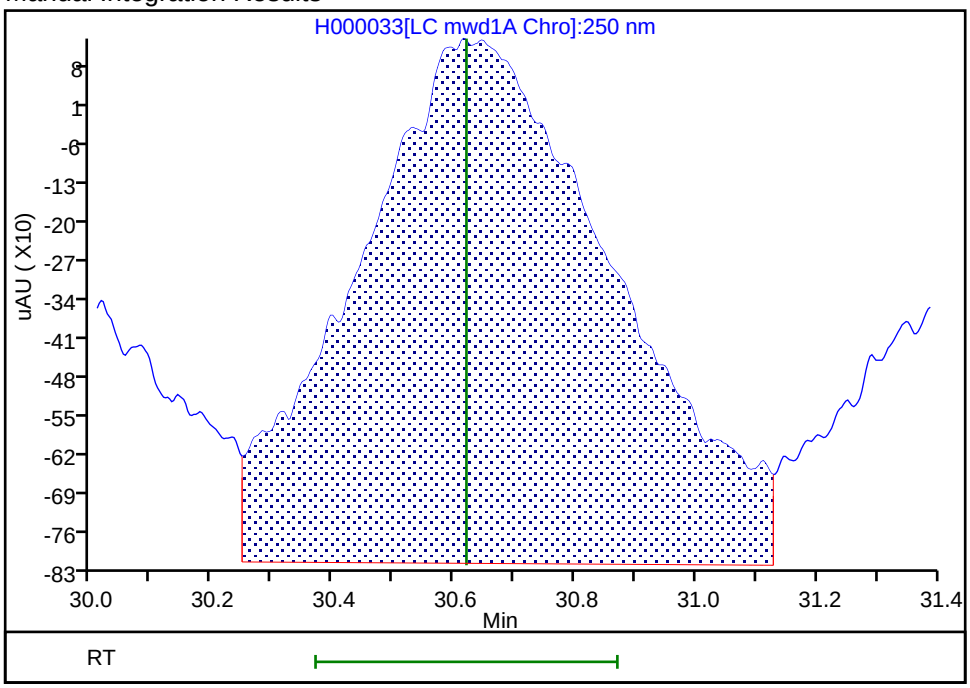
Processing Integration Results

RT: 30.62
Height: 945
Amount: 10.411928
Amount Units: ng/ml



Manual Integration Results

RT: 30.62
Height: 949
Amount: 10.449421
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 12:44:11

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

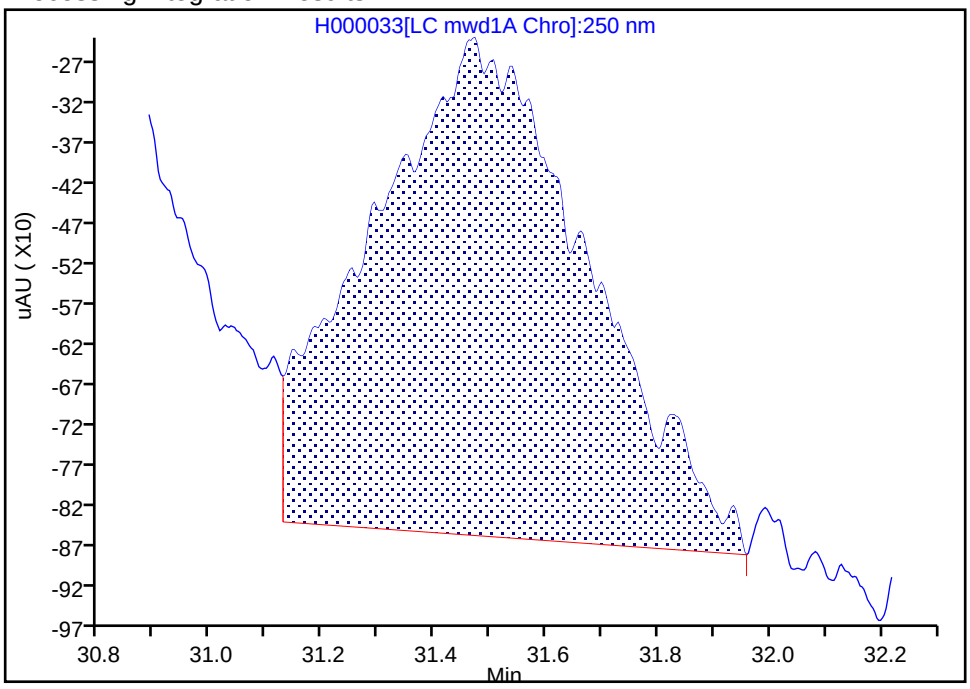
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000033.D				
Injection Date:	09-Apr-2019 23:04:58	Instrument ID:	LC12		
Lims ID:	std2				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	63	Worklist Smp#:	4
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

15 2,6-Dinitrotoluene, CAS: 606-20-2

Signal: 1

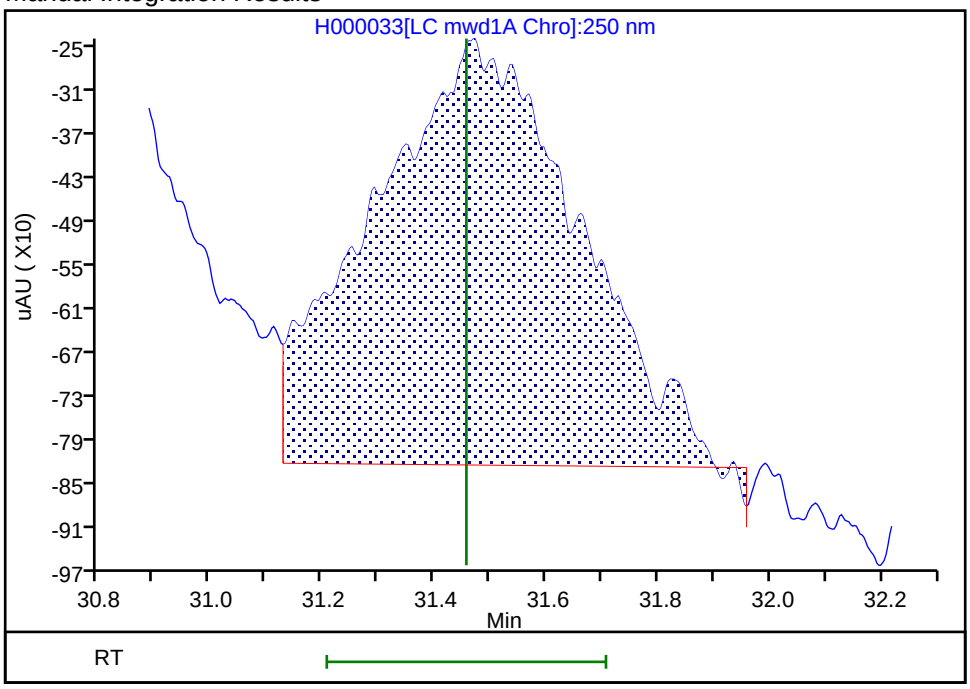
Processing Integration Results

RT: 31.47
Height: 621
Amount: 10.928893
Amount Units: ng/ml



Manual Integration Results

RT: 31.47
Height: 589
Amount: 10.449800
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 12:44:11

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

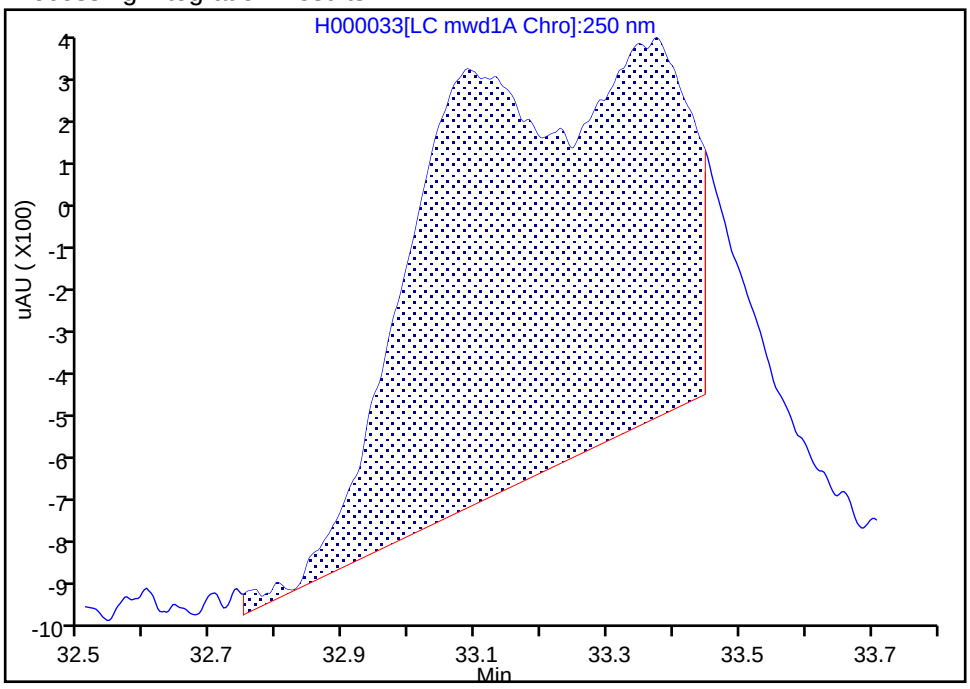
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000033.D				
Injection Date:	09-Apr-2019 23:04:58	Instrument ID:	LC12		
Lims ID:	std2				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	63	Worklist Smp#:	4
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

16 2-Amino-4,6-dinitrotoluene, CAS: 35572-78-2

Signal: 1

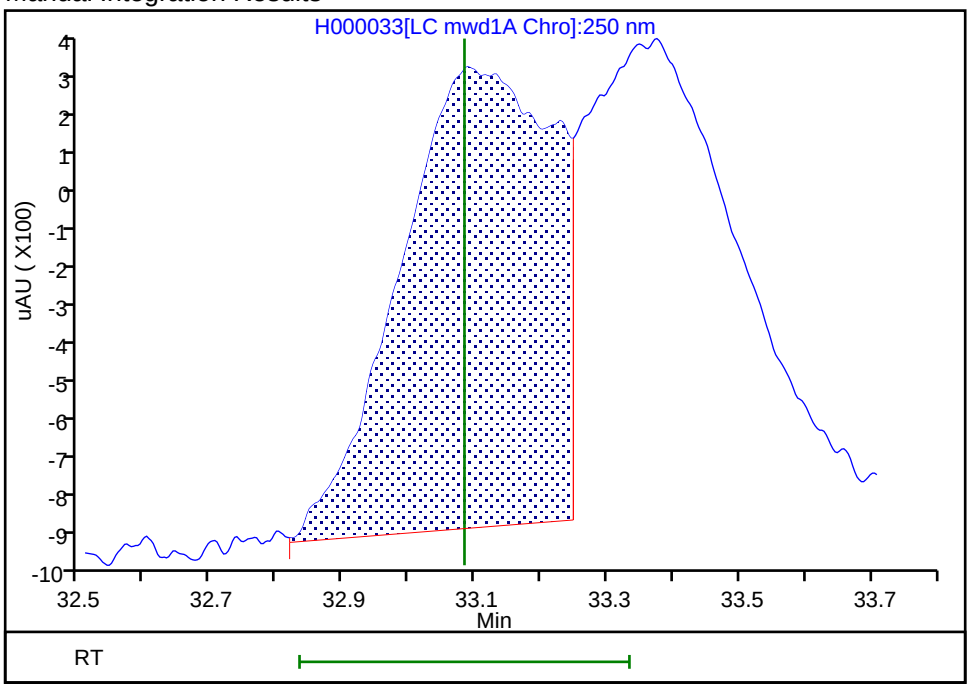
Processing Integration Results

RT: 33.09
Height: 1024
Amount: 12.560036
Amount Units: ng/ml



Manual Integration Results

RT: 33.09
Height: 1192
Amount: 9.971200
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 12:45:10

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

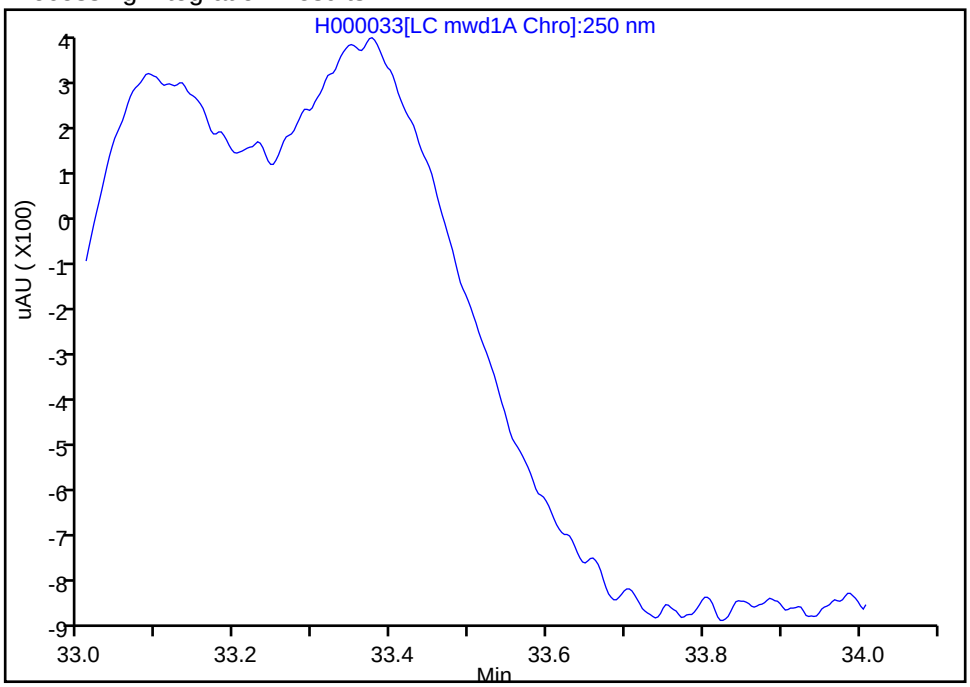
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000033.D				
Injection Date:	09-Apr-2019 23:04:58	Instrument ID:	LC12		
Lims ID:	std2				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	63	Worklist Smp#:	4
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

17 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

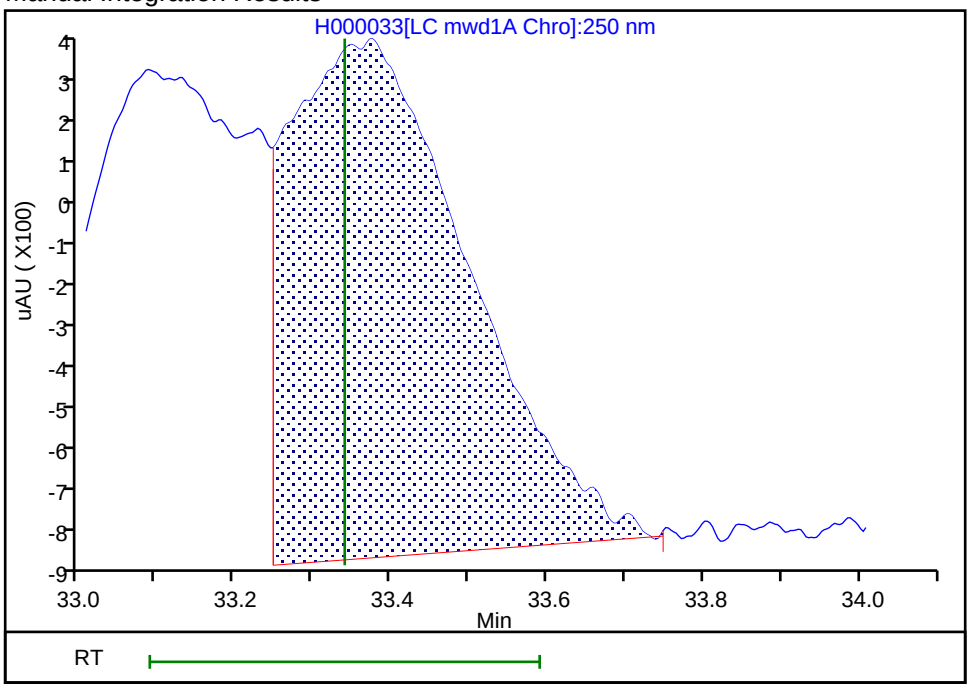
Not Detected
Expected RT: 33.34

Processing Integration Results



Manual Integration Results

RT: 33.38
Height: 1226
Amount: 9.911155
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 12:45:14
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

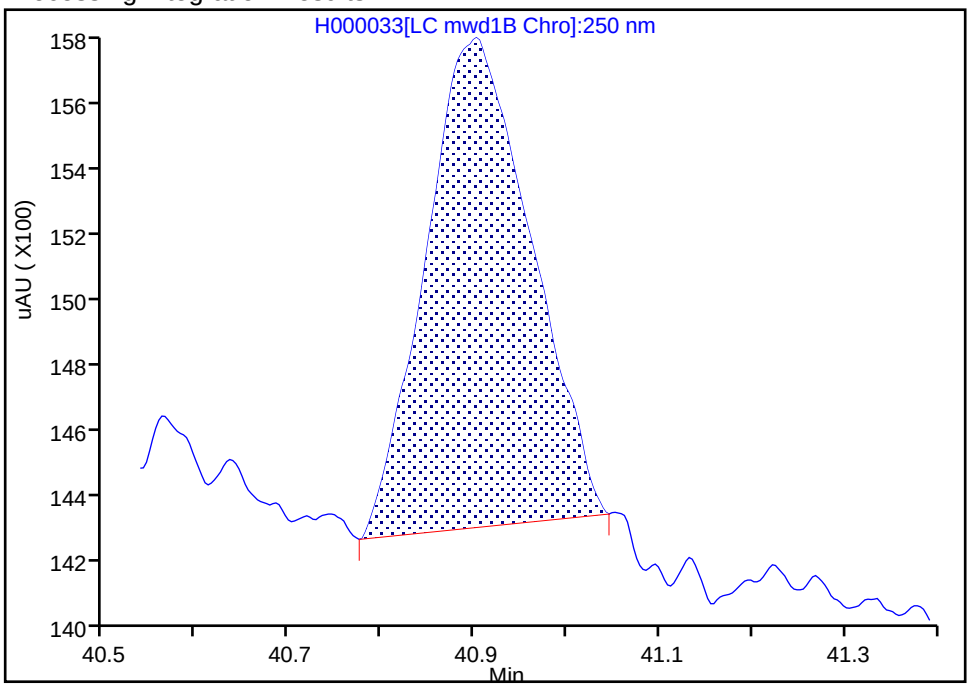
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000033.D				
Injection Date:	09-Apr-2019 23:04:58	Instrument ID:	LC12		
Lims ID:	std2				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	63	Worklist Smp#:	4
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1B, 358 nm		

23 PETN, CAS: 78-11-5

Signal: 1

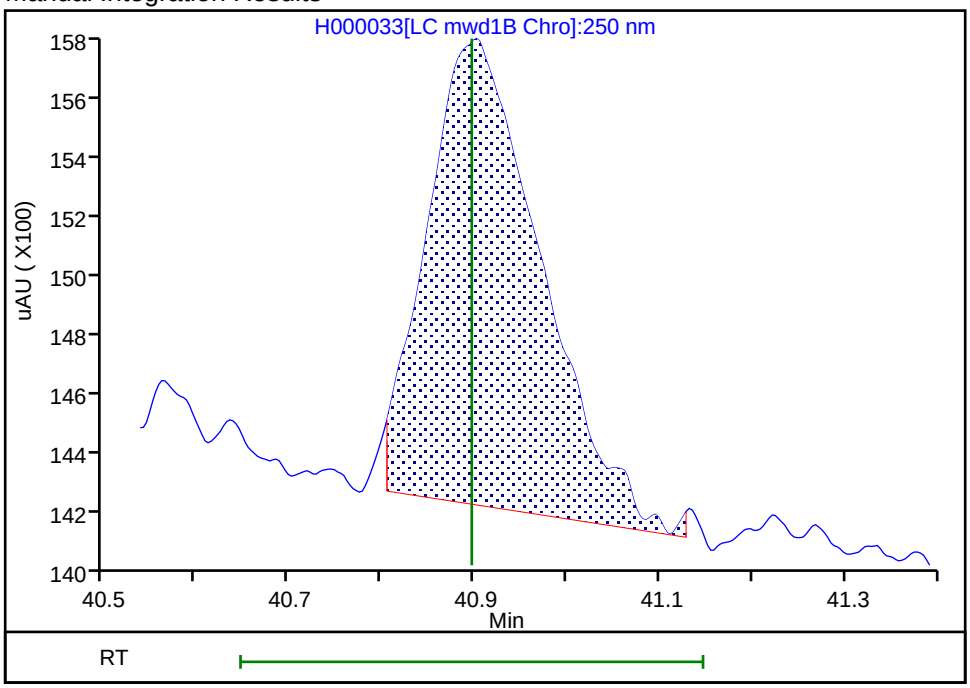
Processing Integration Results

RT: 40.90
Height: 1410
Amount: 9.679194
Amount Units: ng/ml



Manual Integration Results

RT: 40.90
Height: 1485
Amount: 10.049178
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 12:45:32

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000034.D
Lims ID: std3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 10-Apr-2019 00:02:29 ALS Bottle#: 64 Worklist Smp#: 5
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: L3
Operator ID: AJC Instrument ID: LC12
Sublist: chrom-LC12_Conf_8330*sub11

Method: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 12-Apr-2019 12:28:11 Calib Date: 10-Apr-2019 14:25:56
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000049.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0331

First Level Reviewer: ortizam Date: 10-Apr-2019 12:47:06

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
4 Ethylene glycol dinitrate							M
2	20.782	20.747	0.035	2066H	20.0	20.2	M
3 Nitrobenzene							
1	20.815	20.827	-0.012	998H	20.0	20.3	
6 1,3-Dinitrobenzene							
1	23.062	23.044	0.018	1981H	20.0	20.0	
7 1,3,5-Trinitrobenzene							
1	24.689	24.657	0.032	1566H	20.0	20.0	
9 p-Nitrotoluene							
1	27.612	27.577	0.035	1194H	20.0	20.1	
10 o-Nitrotoluene							
1	27.612	27.577	0.035	1194H	20.0	20.1	
11 m-Nitrotoluene							
1	28.139	28.090	0.049	825H	20.0	19.4	
12 3,5-Dinitroaniline							
1	29.075	29.030	0.045	1517H	20.0	19.4	
13 RDX							
1	29.982	29.914	0.068	879H	20.0	19.3	
14 2,4-Dinitrotoluene							
1	30.662	30.620	0.042	1784H	20.0	19.6	
15 2,6-Dinitrotoluene							
1	31.485	31.457	0.028	1093H	20.0	19.4	
16 2-Amino-4,6-dinitrotoluene							M
1	33.129	33.084	0.045	2399H	20.0	20.1	M
17 4-Amino-2,6-dinitrotoluene							M
1	33.375	33.340	0.035	2487H	20.0	20.1	M
$ 18 3,4-Dinitrotoluene							M
1	34.249	34.210	0.039	1696H	20.0	19.8	M

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
19 2,4,6-Trinitrotoluene							M
1	34.602	34.584	0.018	2585H	20.0	20.1	M
20 HMX							
1	35.862	35.830	0.032	2052H	20.0	20.4	
21 Nitroglycerin							M
2	36.499	36.464	0.035	2742H	20.0	20.9	M
22 Tetryl							
1	37.462	37.440	0.022	3185H	20.0	20.3	
23 PETN							M
2	40.915	40.897	0.018	2983H	20.0	20.2	M

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

HP8330L3_00036 Amount Added: 1.00 Units: mL

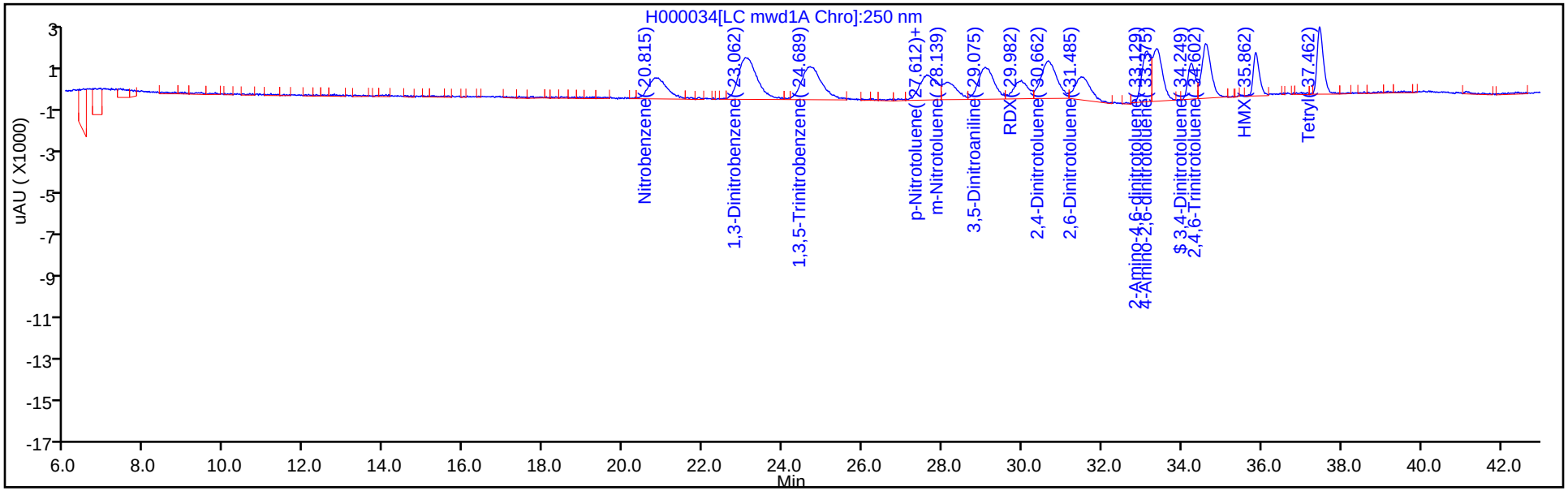
Report Date: 12-Apr-2019 12:28:12 Chrom Revision: 2.3 24-Mar-2019 20:11:04

Eurofins TestAmerica, Sacramento

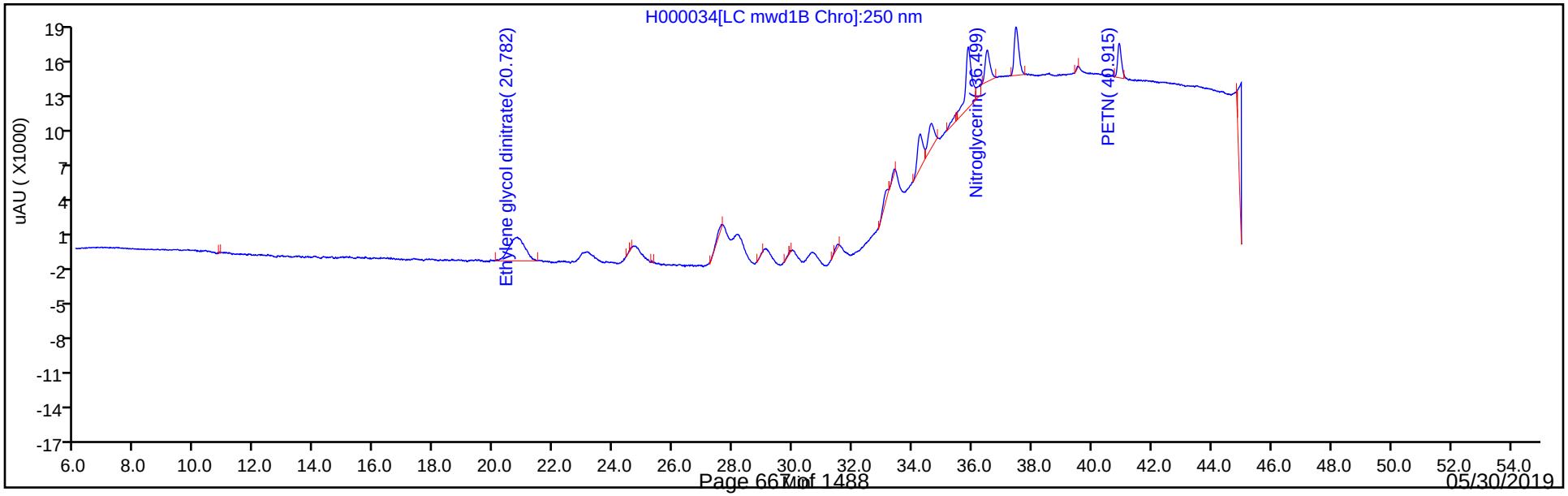
Data File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000034.D

Injection Date:	10-Apr-2019 00:02:29	Instrument ID:	LC12	Operator ID:	AJC
Lims ID:	std3			Worklist Smp#:	5
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	64
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

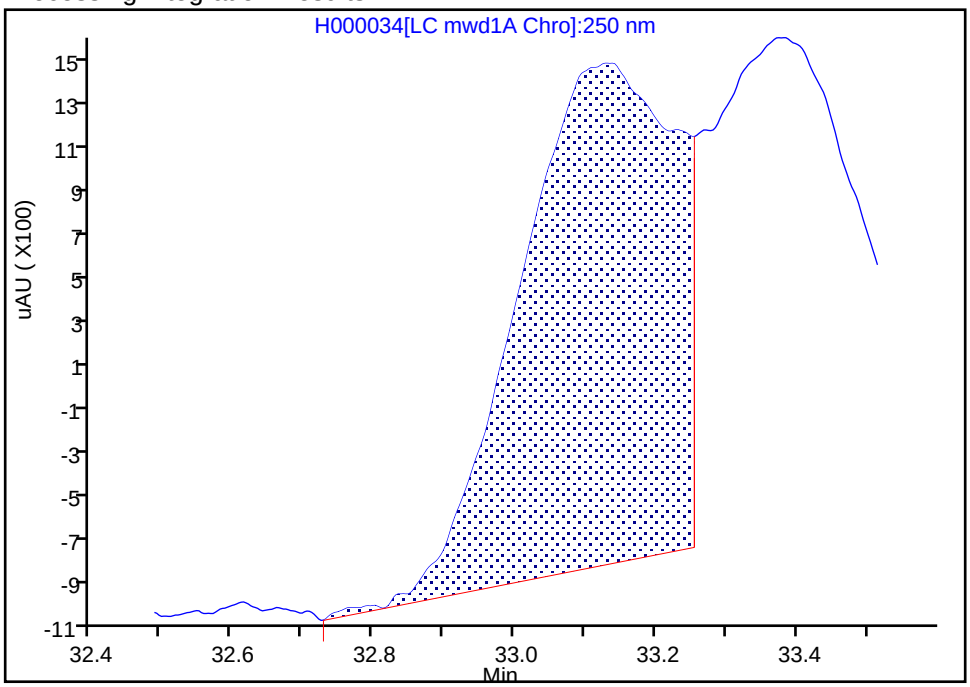
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000034.D				
Injection Date:	10-Apr-2019 00:02:29	Instrument ID:	LC12		
Lims ID:	std3				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	64	Worklist Smp#:	5
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

16 2-Amino-4,6-dinitrotoluene, CAS: 35572-78-2

Signal: 1

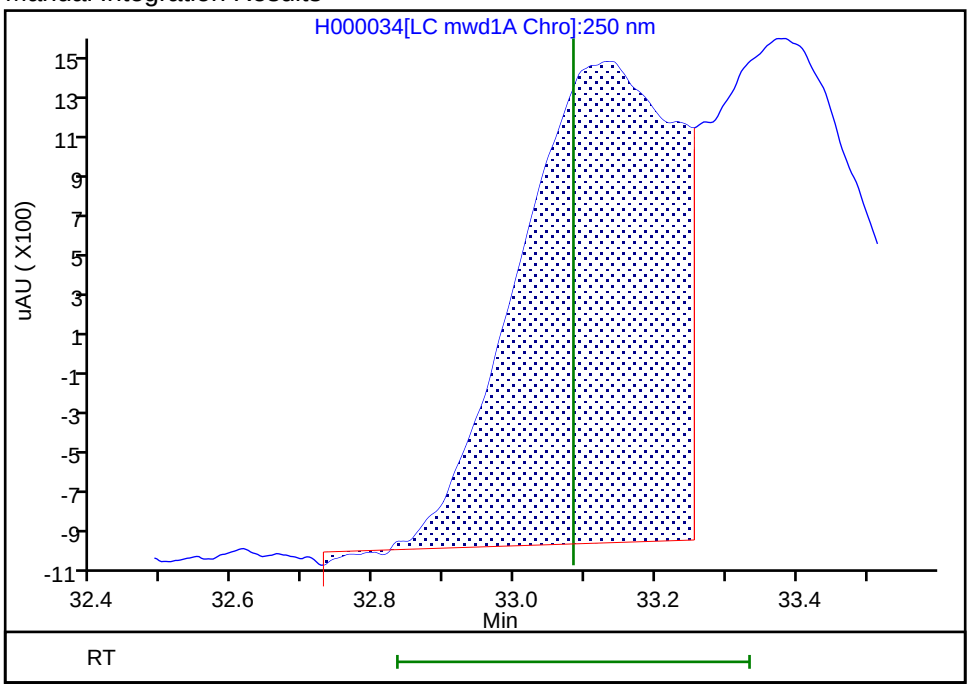
Processing Integration Results

RT: 33.14
Height: 2254
Amount: 18.702974
Amount Units: ng/ml



Manual Integration Results

RT: 33.13
Height: 2399
Amount: 20.067877
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 12:46:22

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

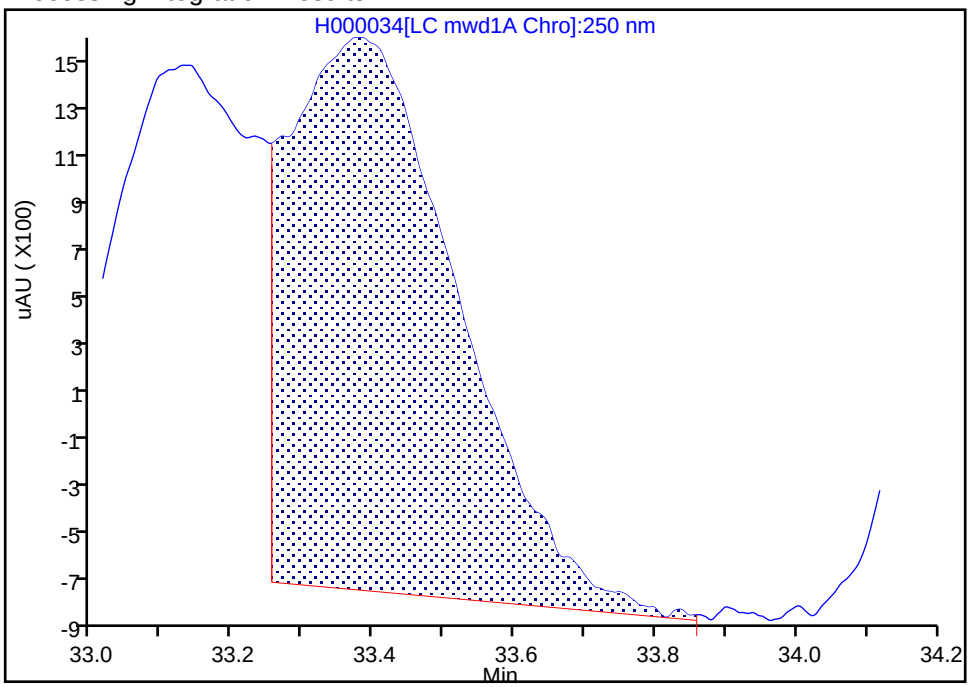
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000034.D				
Injection Date:	10-Apr-2019 00:02:29	Instrument ID:	LC12		
Lims ID:	std3				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	64	Worklist Smp#:	5
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

17 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

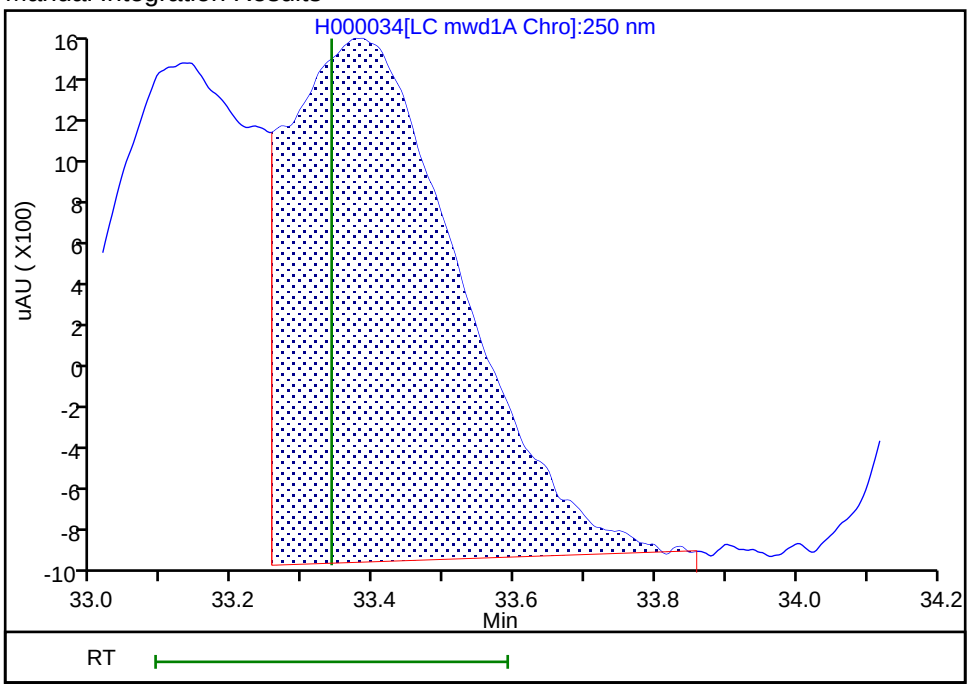
Processing Integration Results

RT: 33.39
Height: 2332
Amount: 18.648866
Amount Units: ng/ml



Manual Integration Results

RT: 33.38
Height: 2487
Amount: 20.105255
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 12:46:22

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

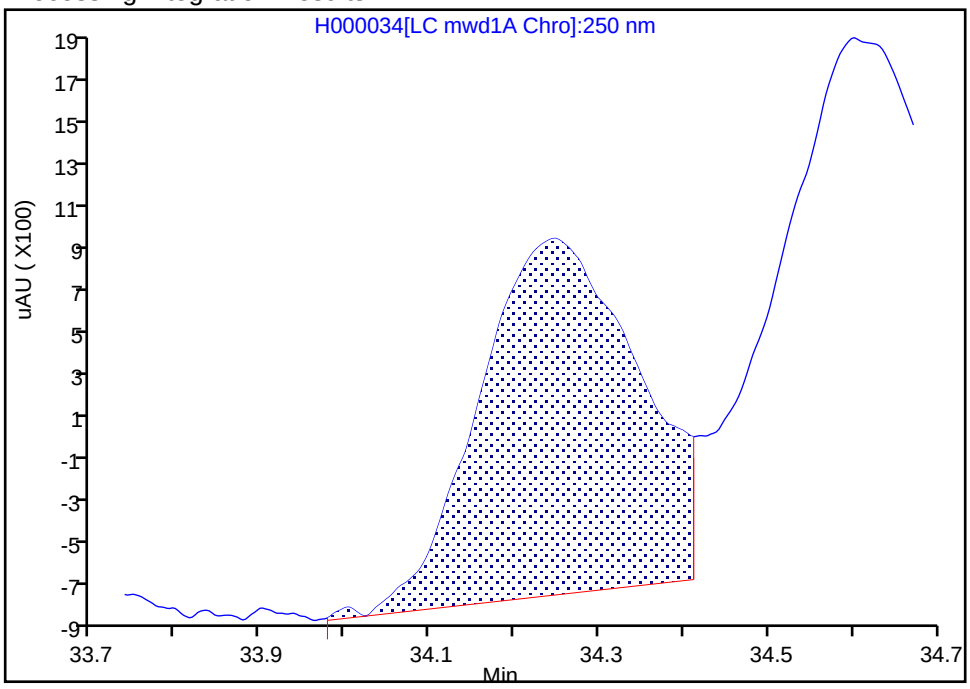
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000034.D				
Injection Date:	10-Apr-2019 00:02:29	Instrument ID:	LC12		
Lims ID:	std3				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	64	Worklist Smp#:	5
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

$ 18 3,4-Dinitrotoluene, CAS: 610-39-9

Signal: 1

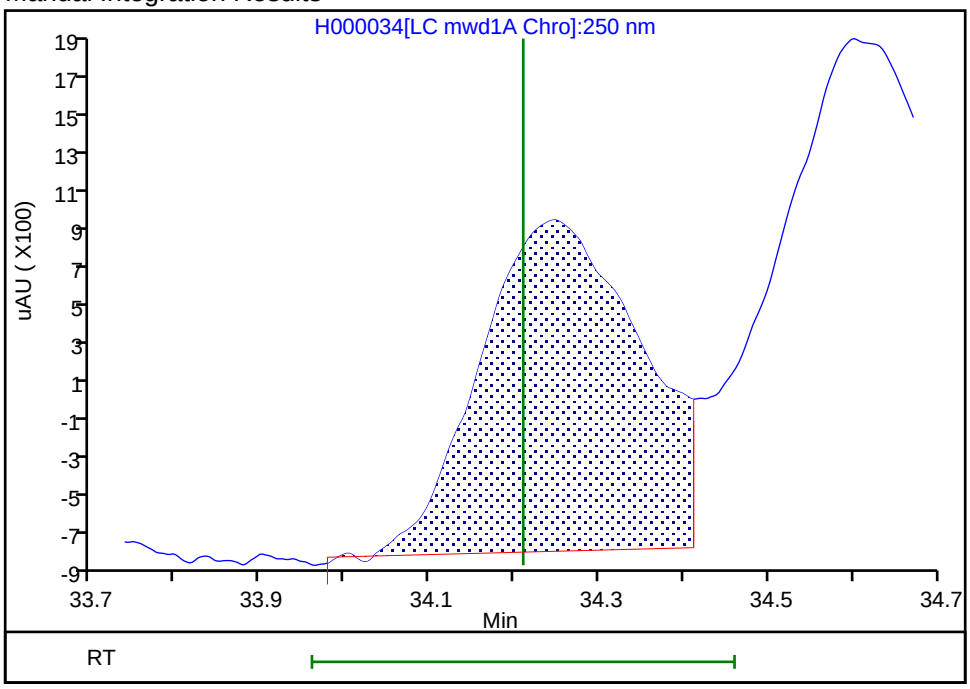
Processing Integration Results

RT: 34.25
Height: 1650
Amount: 19.290800
Amount Units: ng/ml



Manual Integration Results

RT: 34.25
Height: 1696
Amount: 19.752725
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 12:46:22

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

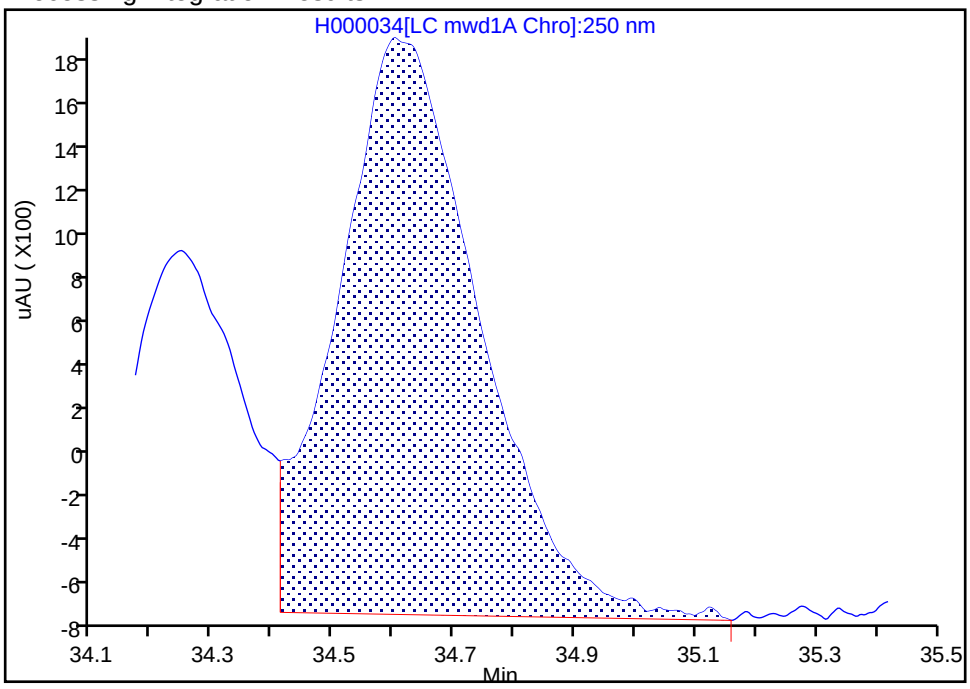
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000034.D				
Injection Date:	10-Apr-2019 00:02:29	Instrument ID:	LC12		
Lims ID:	std3				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	64	Worklist Smp#:	5
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

19 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

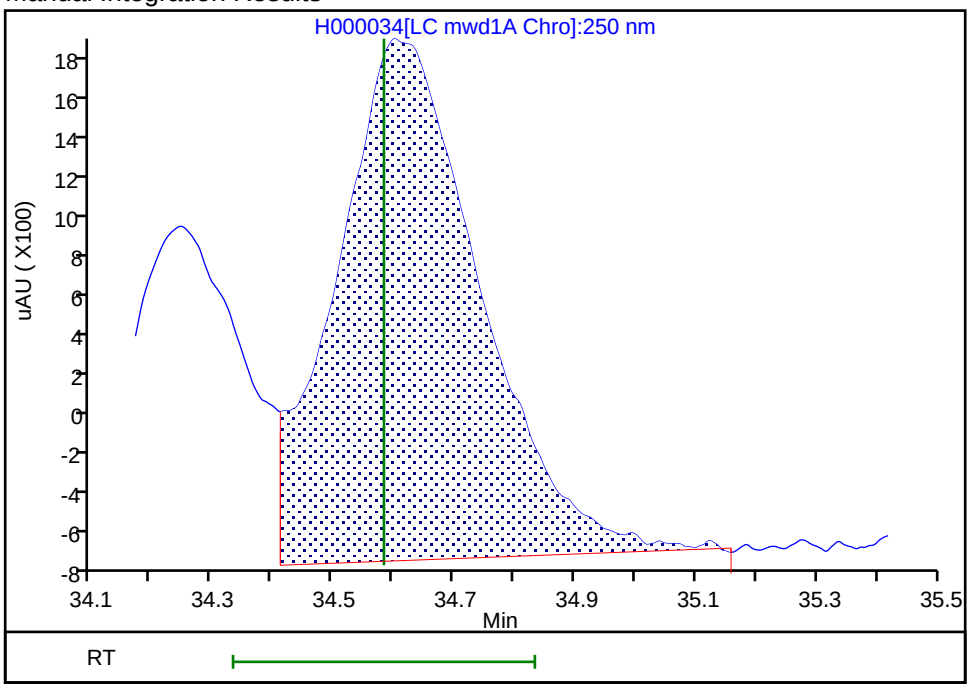
Processing Integration Results

RT: 34.60
Height: 2516
Amount: 19.600598
Amount Units: ng/ml



Manual Integration Results

RT: 34.60
Height: 2585
Amount: 20.061109
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 12:46:22

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

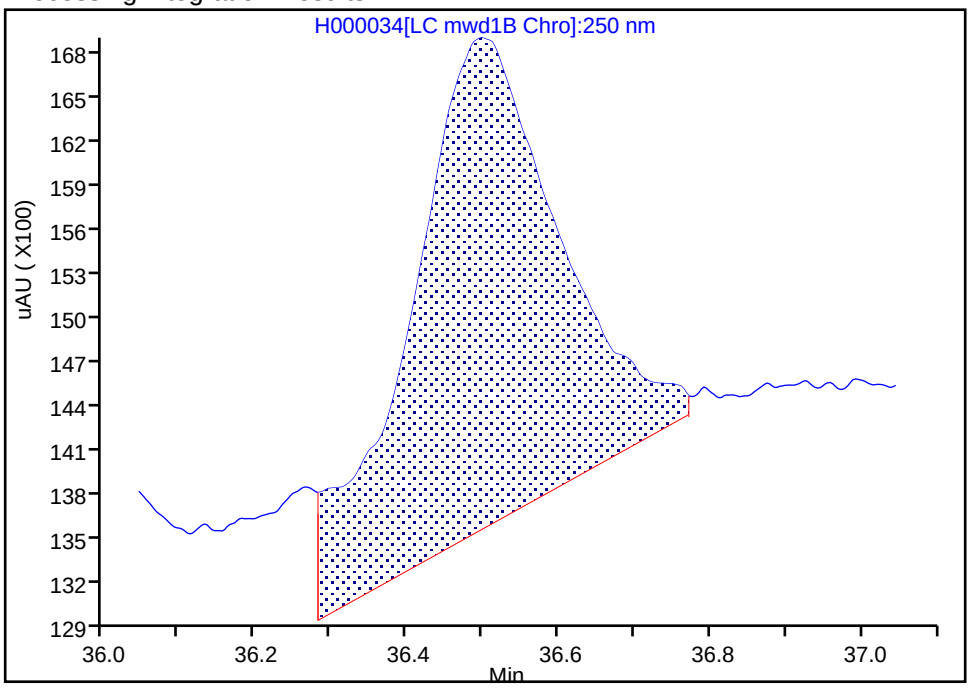
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000034.D				
Injection Date:	10-Apr-2019 00:02:29	Instrument ID:	LC12		
Lims ID:	std3				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	64	Worklist Smp#:	5
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1B, 358 nm		

21 Nitroglycerin, CAS: 55-63-0

Signal: 1

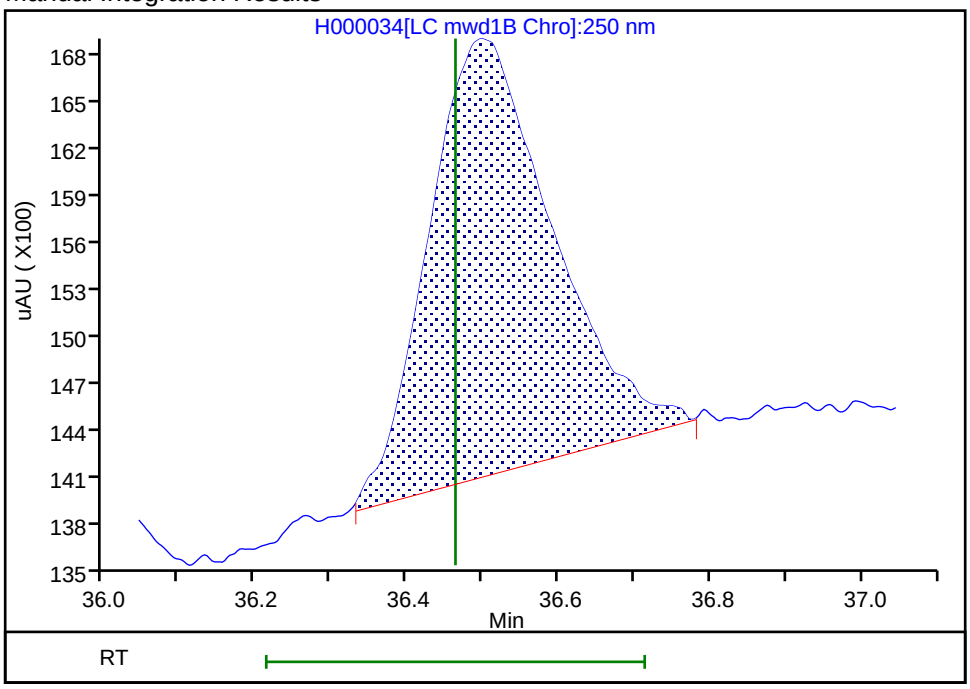
Processing Integration Results

RT: 36.50
Height: 3262
Amount: 24.195403
Amount Units: ng/ml



Manual Integration Results

RT: 36.50
Height: 2742
Amount: 20.914580
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 12:46:08

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

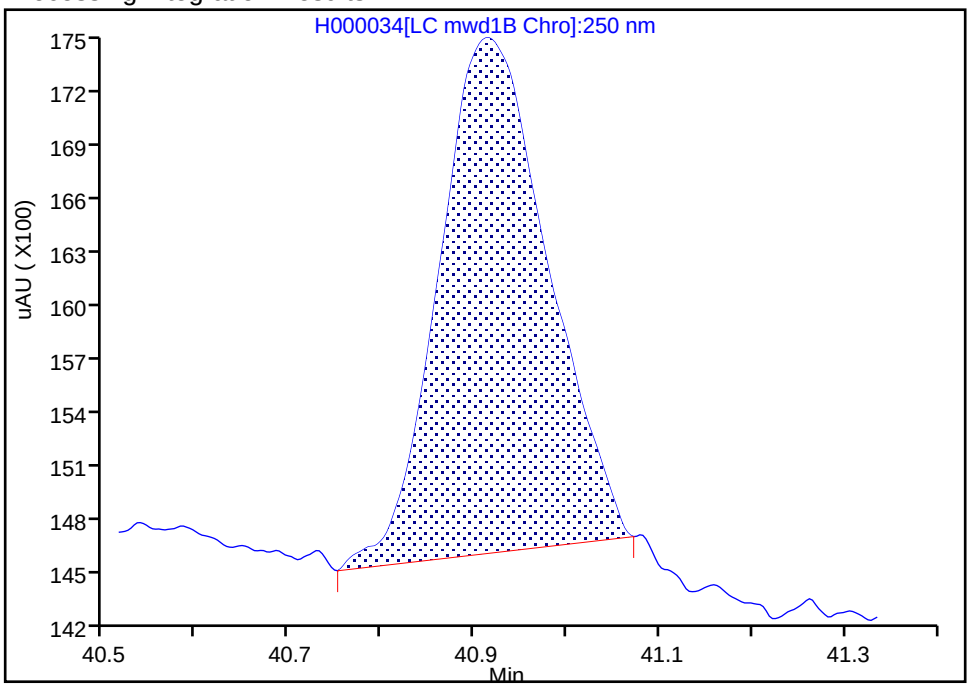
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000034.D				
Injection Date:	10-Apr-2019 00:02:29	Instrument ID:	LC12		
Lims ID:	std3				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	64	Worklist Smp#:	5
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1B, 358 nm		

23 PETN, CAS: 78-11-5

Signal: 1

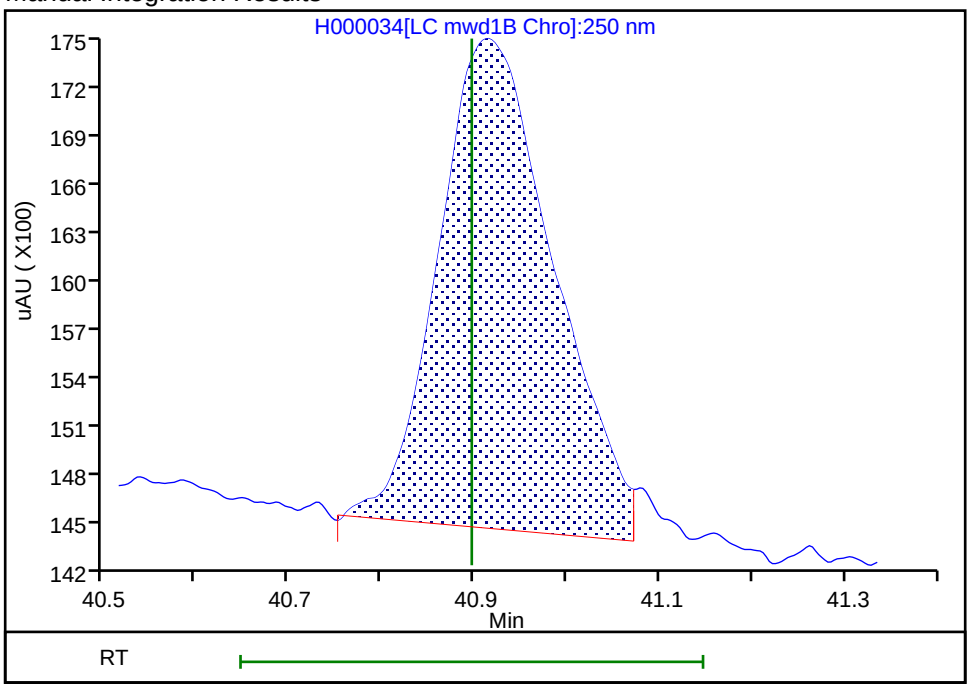
Processing Integration Results

RT: 40.92
Height: 2839
Amount: 19.346523
Amount Units: ng/ml



Manual Integration Results

RT: 40.92
Height: 2983
Amount: 20.186328
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 12:46:41

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000035.D
Lims ID: std4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 10-Apr-2019 01:00:02 ALS Bottle#: 65 Worklist Smp#: 6
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: L4
Operator ID: AJC Instrument ID: LC12
Sublist: chrom-LC12_Conf_8330*sub11

Method: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 12-Apr-2019 12:28:15 Calib Date: 10-Apr-2019 14:25:56
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000049.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0331

First Level Reviewer: ortizam Date: 10-Apr-2019 12:43:00

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
4 Ethylene glycol dinitrate							M
2	20.785	20.747	0.038	5009H	50.0	48.9	M
3 Nitrobenzene							
1	20.849	20.827	0.022	2424H	50.0	49.3	
6 1,3-Dinitrobenzene							
1	23.119	23.044	0.075	4975H	50.0	50.3	
7 1,3,5-Trinitrobenzene							
1	24.722	24.657	0.065	3911H	50.0	49.9	
9 p-Nitrotoluene							
1	27.652	27.577	0.075	2894H	50.0	48.8	
10 o-Nitrotoluene							
1	27.652	27.577	0.075	2894H	50.0	48.8	
11 m-Nitrotoluene							
1	28.195	28.090	0.105	2029H	50.0	47.7	
12 3,5-Dinitroaniline							
1	29.122	29.030	0.092	3823H	50.0	49.0	
13 RDX							
1	29.995	29.914	0.081	2173H	50.0	47.8	
14 2,4-Dinitrotoluene							
1	30.679	30.620	0.059	4471H	50.0	49.2	
15 2,6-Dinitrotoluene							
1	31.522	31.457	0.065	2793H	50.0	49.6	
16 2-Amino-4,6-dinitrotoluene							M
1	33.149	33.084	0.065	6160H	50.0	51.5	M
17 4-Amino-2,6-dinitrotoluene							M
1	33.399	33.340	0.059	6295H	50.0	50.9	M
$ 18 3,4-Dinitrotoluene							M
1	34.262	34.210	0.052	4336H	50.0	50.5	M

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
19 2,4,6-Trinitrotoluene							M
1	34.625	34.584	0.041	6471H	50.0	50.2	M
20 HMX							
1	35.869	35.830	0.039	5064H	50.0	50.3	
21 Nitroglycerin							
2	36.495	36.464	0.031	6414H	50.0	48.9	
22 Tetryl							
1	37.472	37.440	0.032	7828H	50.0	50.0	
23 PETN							
2	40.912	40.897	0.015	7438H	50.0	50.3	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

HP8330L4_00061 Amount Added: 1.00 Units: mL

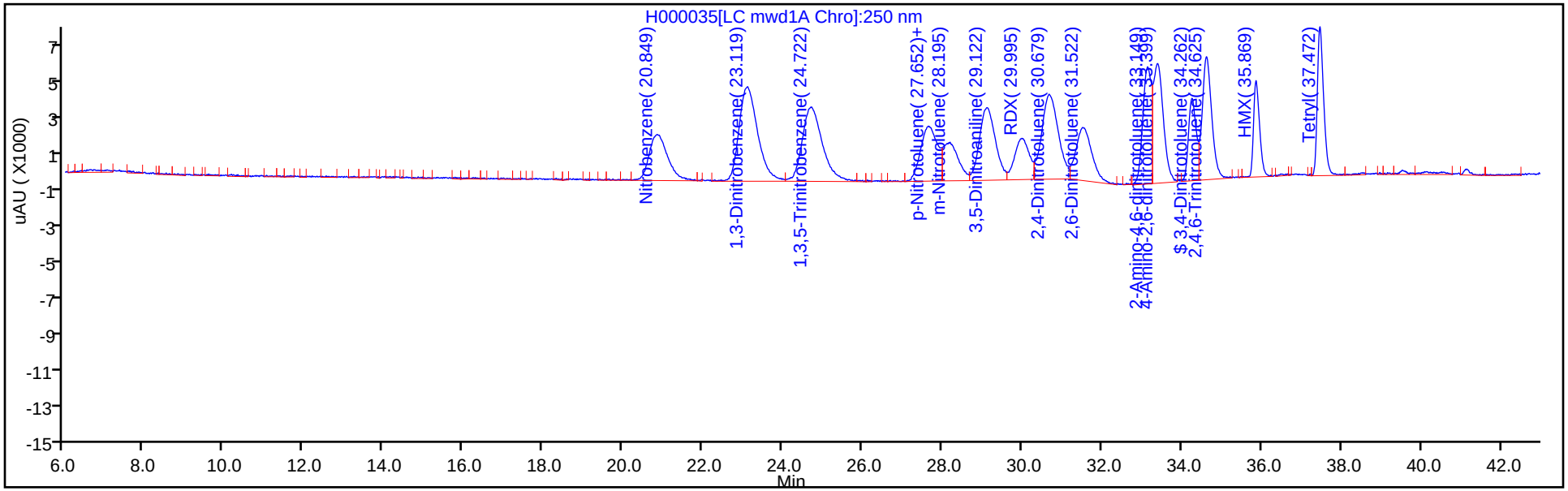
Report Date: 12-Apr-2019 12:28:16 Chrom Revision: 2.3 24-Mar-2019 20:11:04

Eurofins TestAmerica, Sacramento

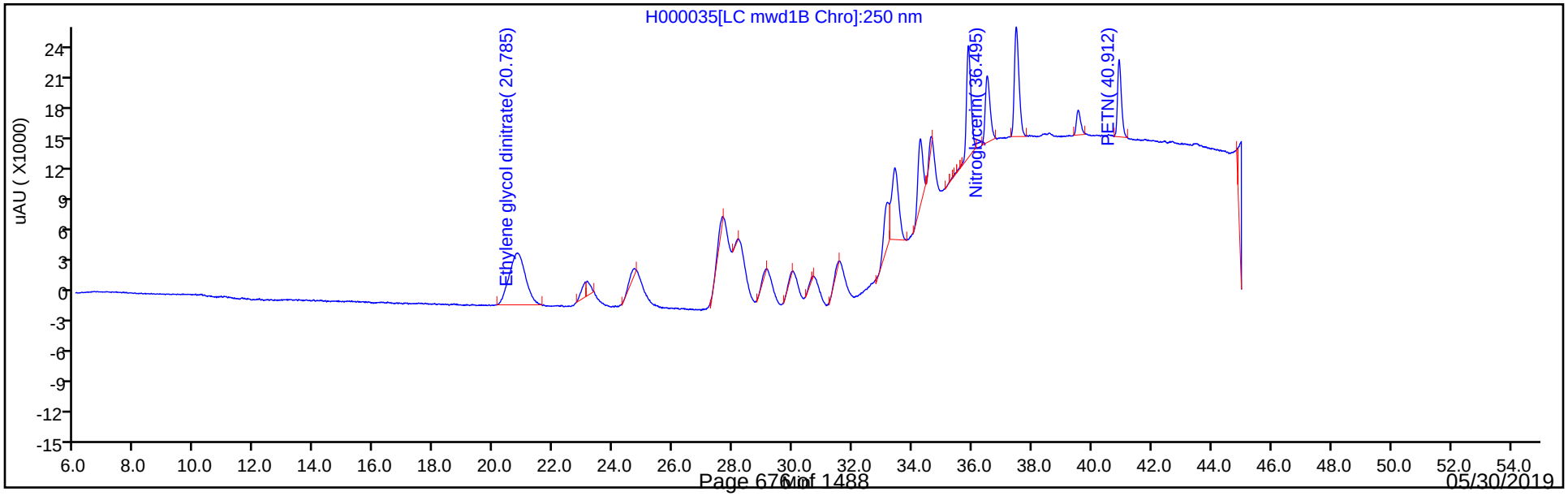
Data File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000035.D

Injection Date:	10-Apr-2019 01:00:02	Instrument ID:	LC12	Operator ID:	AJC
Lims ID:	std4			Worklist Smp#:	6
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	65
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

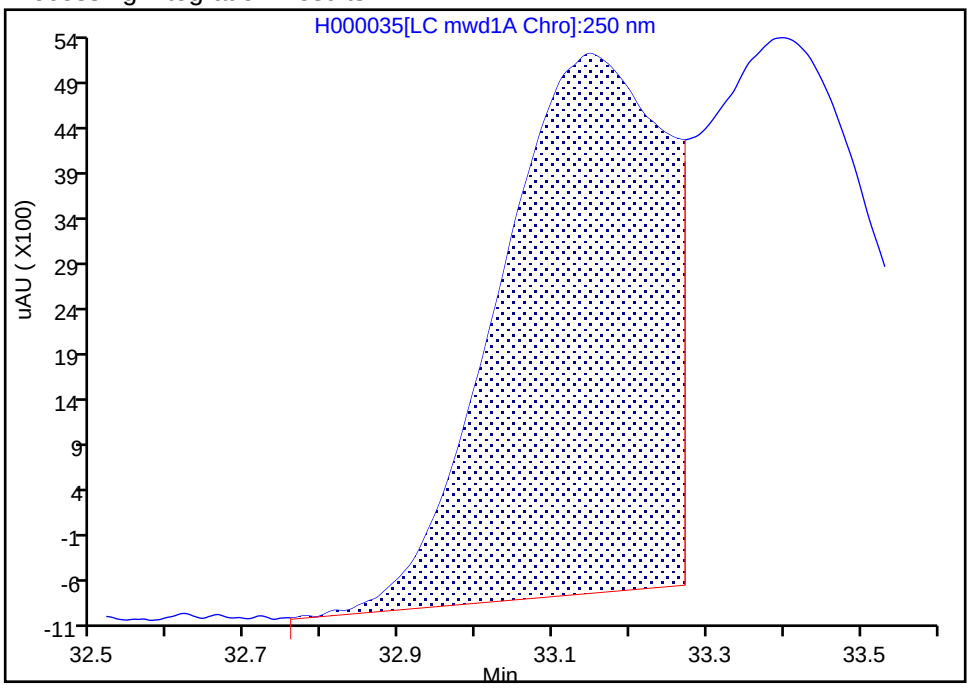
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000035.D				
Injection Date:	10-Apr-2019 01:00:02	Instrument ID:	LC12		
Lims ID:	std4				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	65	Worklist Smp#:	6
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

16 2-Amino-4,6-dinitrotoluene, CAS: 35572-78-2

Signal: 1

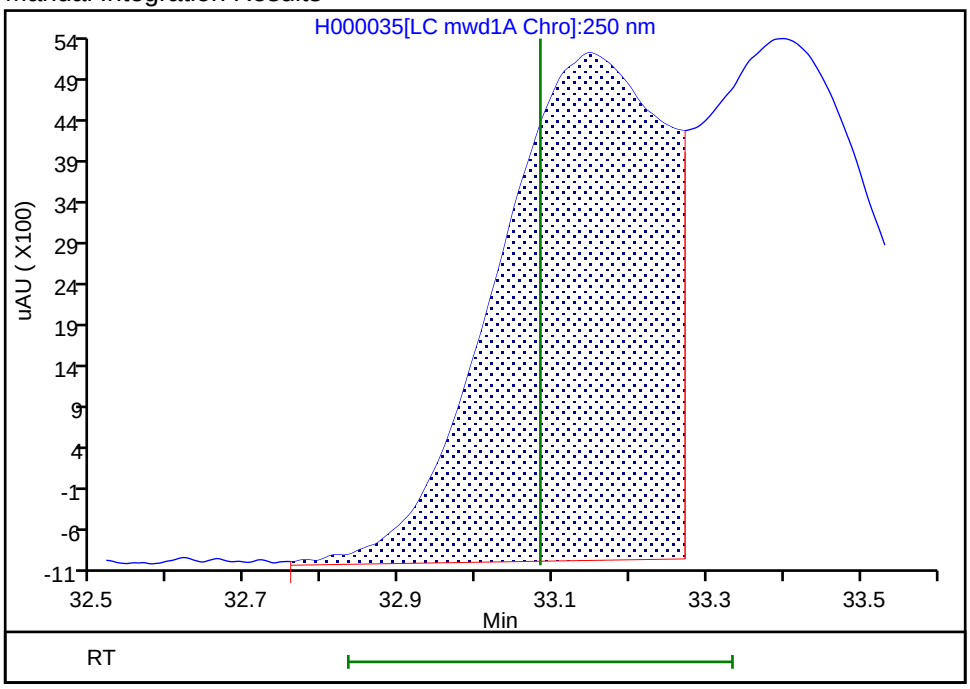
Processing Integration Results

RT: 33.15
Height: 5906
Amount: 48.193112
Amount Units: ng/ml



Manual Integration Results

RT: 33.15
Height: 6160
Amount: 51.529021
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 12:42:52

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

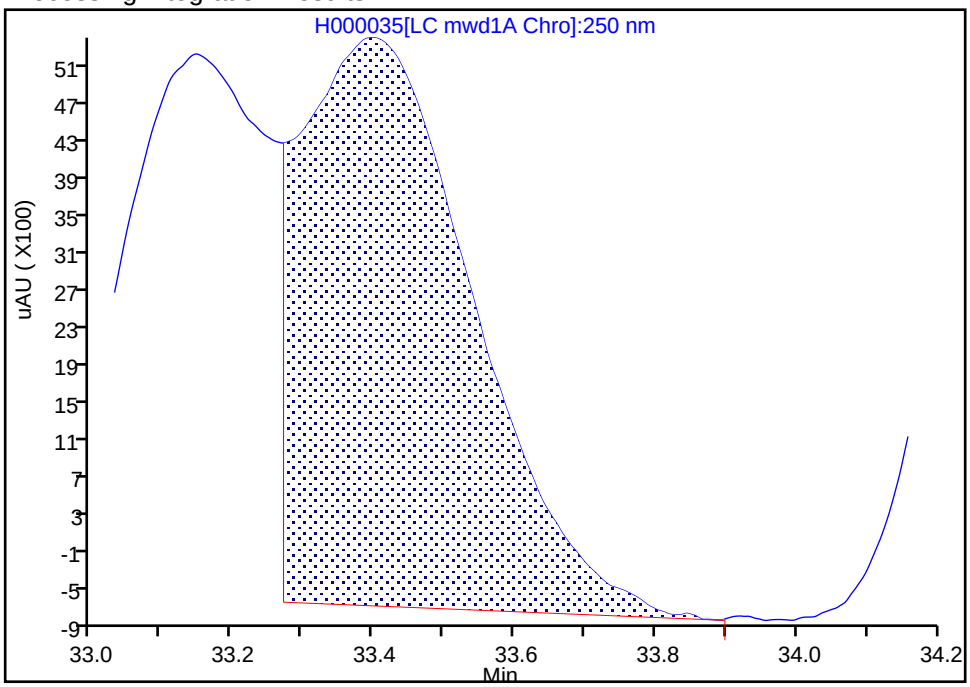
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000035.D				
Injection Date:	10-Apr-2019 01:00:02	Instrument ID:	LC12		
Lims ID:	std4				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	65	Worklist Smp#:	6
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

17 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

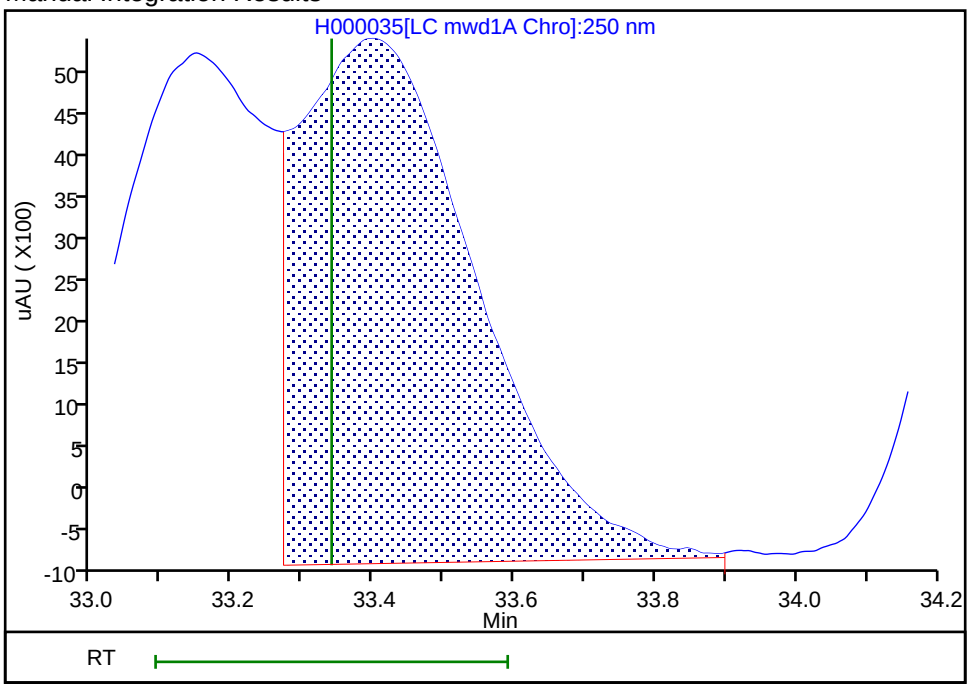
Processing Integration Results

RT: 33.40
Height: 6028
Amount: 48.794552
Amount Units: ng/ml



Manual Integration Results

RT: 33.40
Height: 6295
Amount: 50.889660
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 12:42:52

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

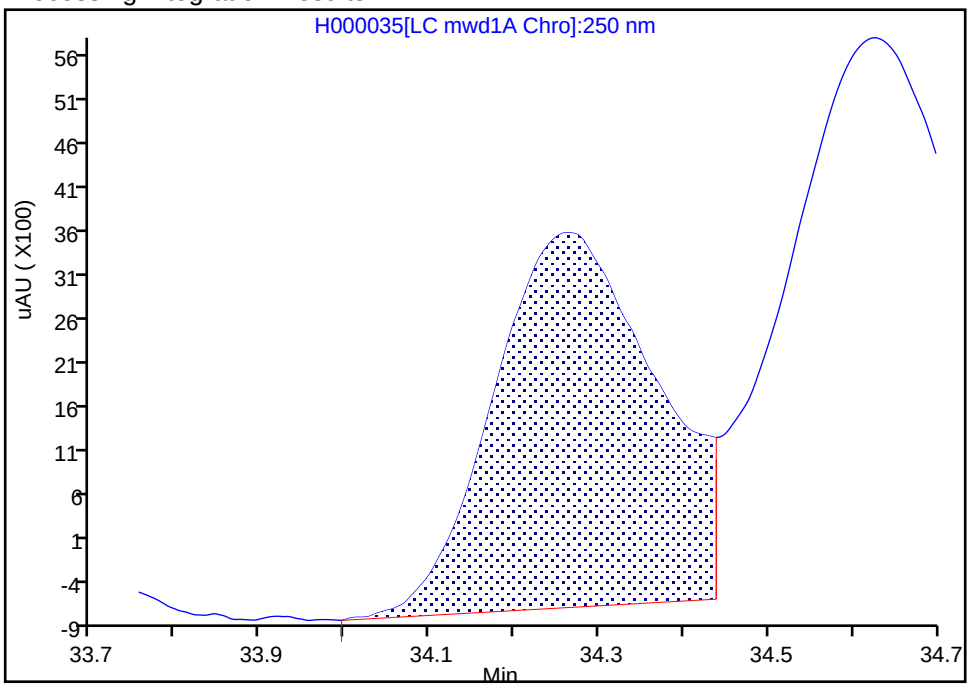
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000035.D				
Injection Date:	10-Apr-2019 01:00:02	Instrument ID:	LC12		
Lims ID:	std4				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	65	Worklist Smp#:	6
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

$ 18 3,4-Dinitrotoluene, CAS: 610-39-9

Signal: 1

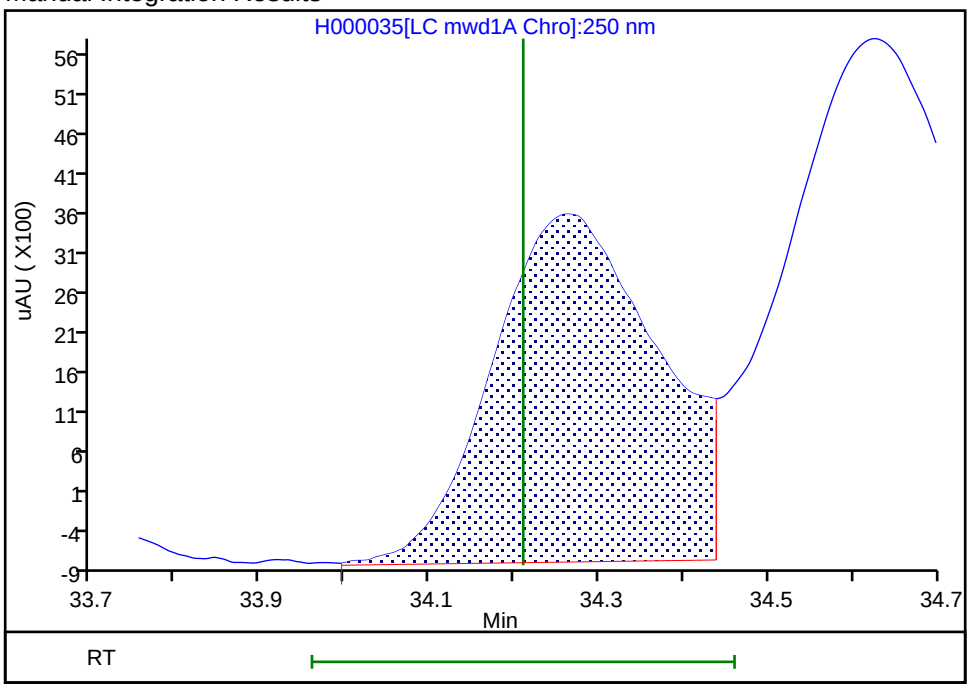
Processing Integration Results

RT: 34.26
Height: 4208
Amount: 49.408643
Amount Units: ng/ml



Manual Integration Results

RT: 34.26
Height: 4336
Amount: 50.499891
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 12:42:52

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

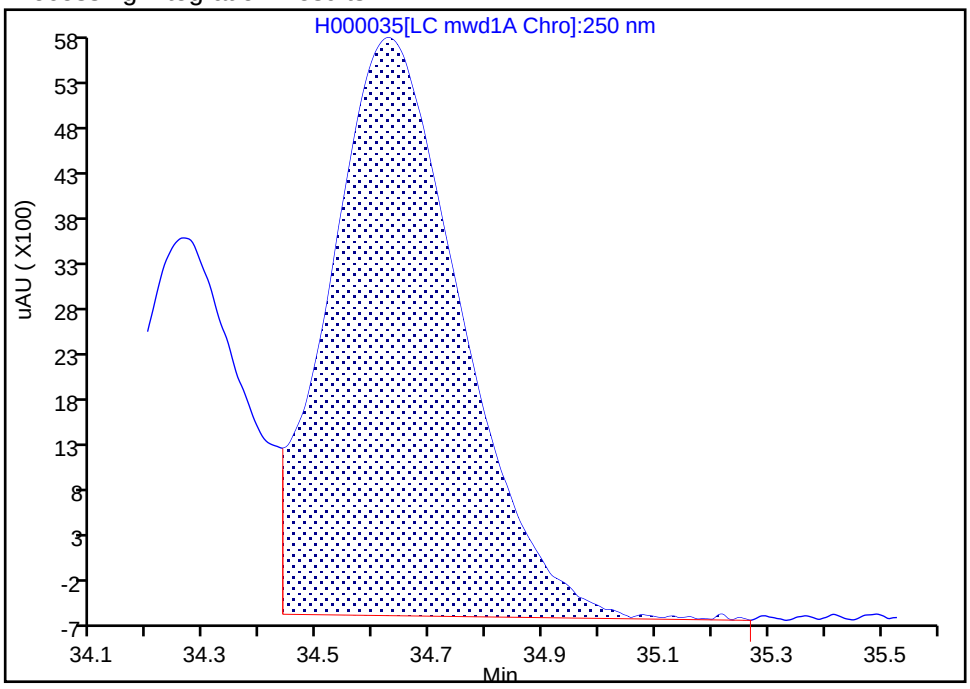
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000035.D				
Injection Date:	10-Apr-2019 01:00:02	Instrument ID:	LC12		
Lims ID:	std4				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	65	Worklist Smp#:	6
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

19 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

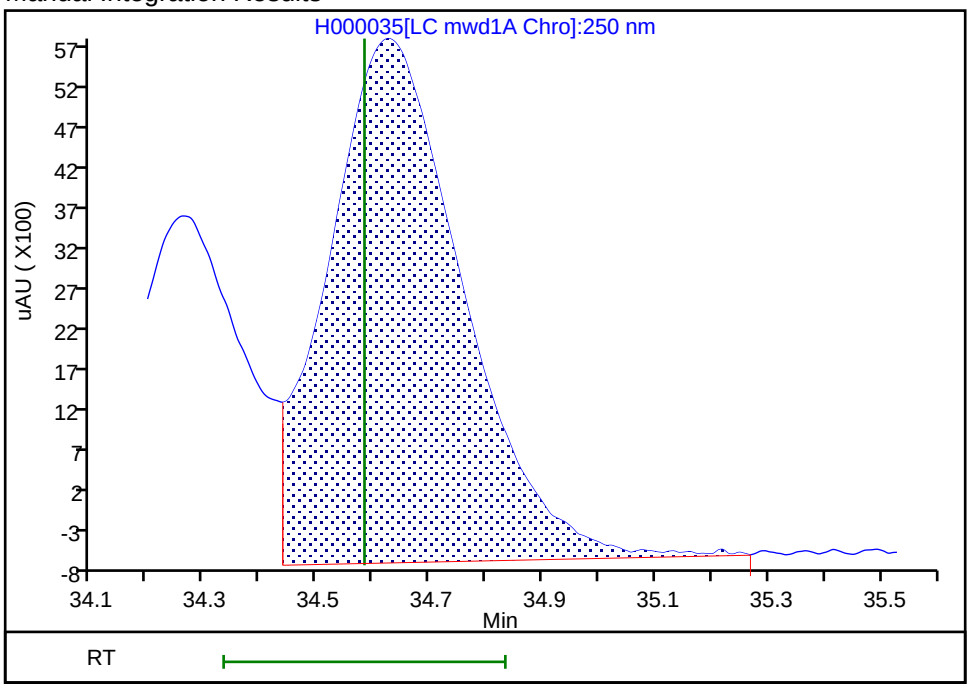
Processing Integration Results

RT: 34.63
Height: 6318
Amount: 49.387817
Amount Units: ng/ml



Manual Integration Results

RT: 34.63
Height: 6471
Amount: 50.218738
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 12:42:52

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000036.D
Lims ID: std5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 10-Apr-2019 01:57:36 ALS Bottle#: 66 Worklist Smp#: 7
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: L5
Operator ID: AJC Instrument ID: LC12
Sublist: chrom-LC12_Conf_8330*sub11

Method: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 12-Apr-2019 12:27:46 Calib Date: 10-Apr-2019 14:25:56
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000049.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0331

First Level Reviewer: cartiera Date: 12-Apr-2019 12:27:46

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
4 Ethylene glycol dinitrate							M
2	20.747	20.747	0.000	10229H	100.0	99.9	M
3 Nitrobenzene							
1	20.827	20.827	0.000	4831H	100.0	98.3	
6 1,3-Dinitrobenzene							
1	23.044	23.044	0.000	9758H	100.0	98.7	
7 1,3,5-Trinitrobenzene							
1	24.657	24.657	0.000	7693H	100.0	98.1	
9 p-Nitrotoluene							
1	27.577	27.577	0.000	5726H	100.0	96.5	
10 o-Nitrotoluene							
1	27.577	27.577	0.000	5726H	100.0	96.5	
11 m-Nitrotoluene							
1	28.090	28.090	0.000	3998H	100.0	93.9	
12 3,5-Dinitroaniline							
1	29.030	29.030	0.000	7576H	100.0	97.1	
13 RDX							
1	29.914	29.914	0.000	4395H	100.0	96.7	
14 2,4-Dinitrotoluene							
1	30.620	30.620	0.000	8942H	100.0	98.5	
15 2,6-Dinitrotoluene							
1	31.457	31.457	0.000	5642H	100.0	100.1	
16 2-Amino-4,6-dinitrotoluene							
1	33.084	33.084	0.000	11700H	100.0	97.9	
17 4-Amino-2,6-dinitrotoluene							
1	33.340	33.340	0.000	12100H	100.0	97.8	
$ 18 3,4-Dinitrotoluene							a
1	34.210	34.210	0.000	8379H	100.0	97.6	a

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
19 2,4,6-Trinitrotoluene							
1	34.584	34.584	0.000	12585H	100.0	97.7	
20 HMX							
1	35.830	35.830	0.000	9890H	100.0	98.2	
21 Nitroglycerin							
2	36.464	36.464	0.000	12731H	100.0	97.1	
22 Tetryl							
1	37.440	37.440	0.000	15468H	100.0	98.7	
23 PETN							
2	40.897	40.897	0.000	14726H	100.0	99.7	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

HP8330L5_00069 Amount Added: 1.00 Units: mL

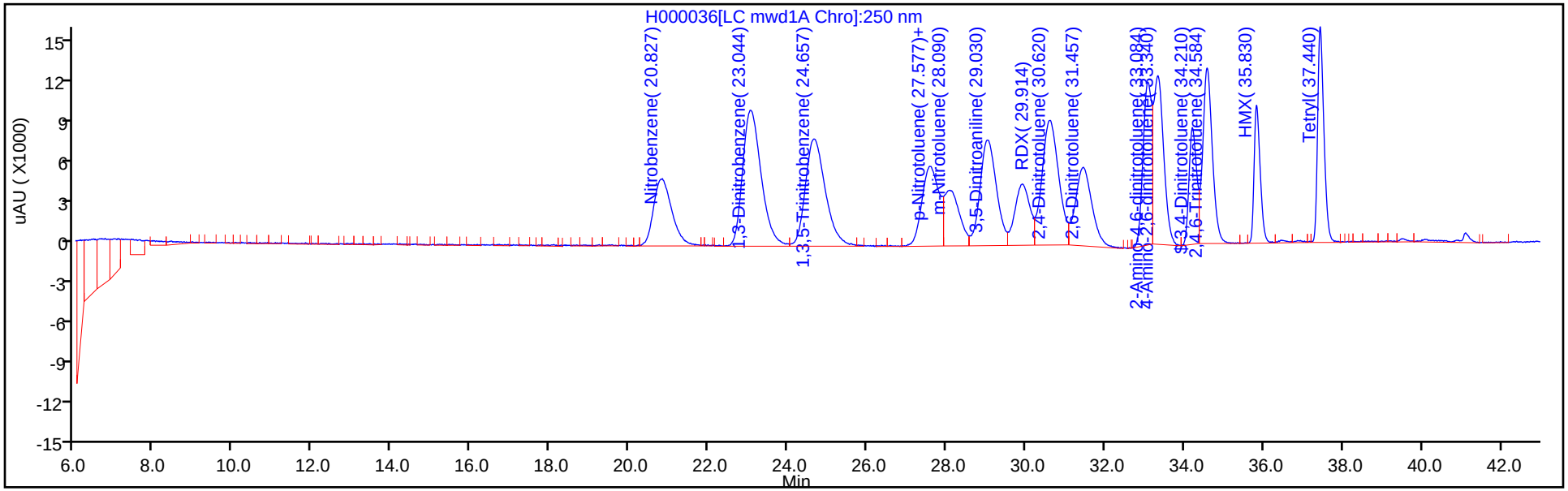
Report Date: 12-Apr-2019 12:27:47 Chrom Revision: 2.3 24-Mar-2019 20:11:04

Eurofins TestAmerica, Sacramento

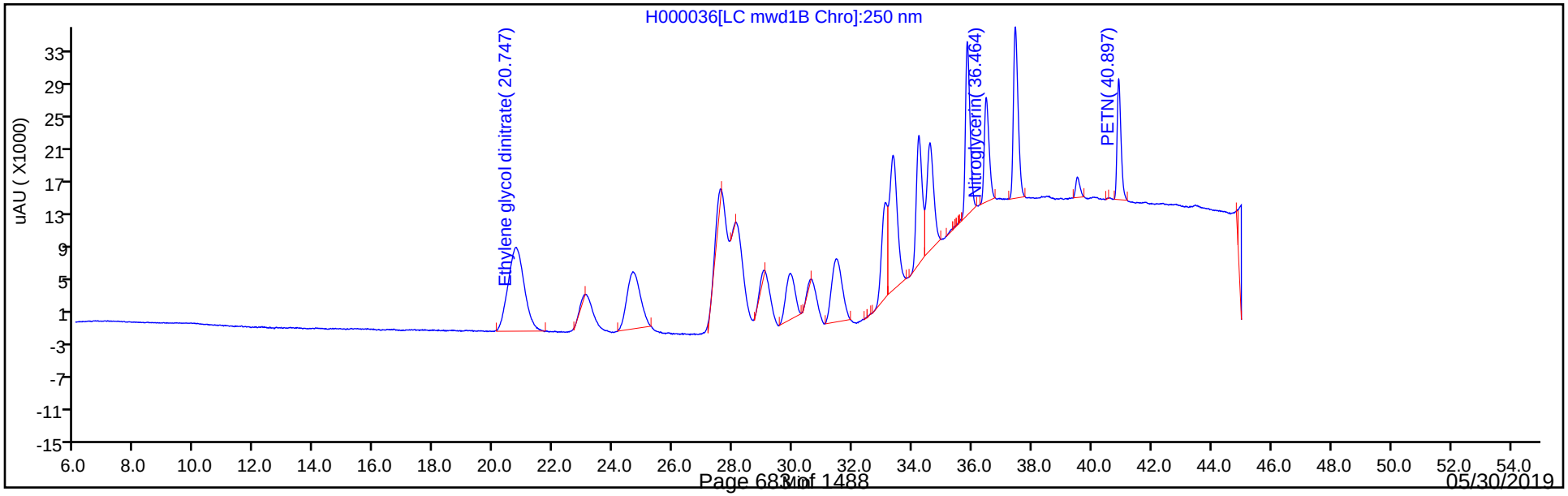
Data File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000036.D

Injection Date:	10-Apr-2019 01:57:36	Instrument ID:	LC12	Operator ID:	AJC
Lims ID:	std5			Worklist Smp#:	7
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	66
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

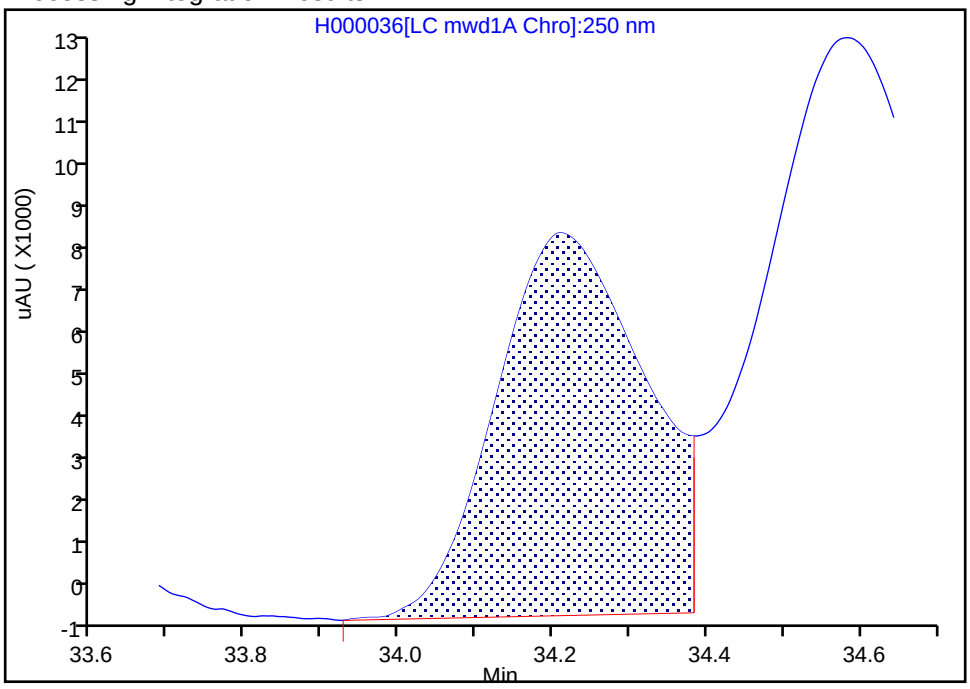
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000036.D				
Injection Date:	10-Apr-2019 01:57:36	Instrument ID:	LC12		
Lims ID:	std5				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	66	Worklist Smp#:	7
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

$ 18 3,4-Dinitrotoluene, CAS: 610-39-9

Signal: 1

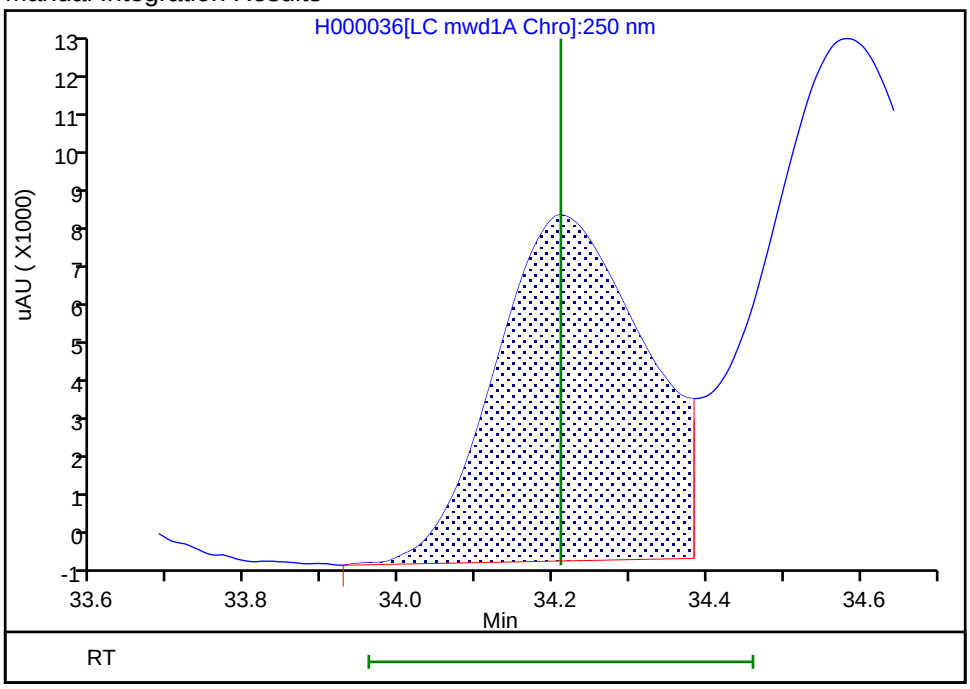
Processing Integration Results

RT: 34.21
Height: 8379
Amount: 97.587312
Amount Units: ng/ml



Manual Integration Results

RT: 34.21
Height: 8379
Amount: 97.587312
Amount Units: ng/ml



Reviewer: cartiera, 12-Apr-2019 12:27:40
Audit Action: Assigned Compound ID Audit Reason:

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000037.D
Lims ID: std6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 10-Apr-2019 02:55:14 ALS Bottle#: 67 Worklist Smp#: 8
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: L6
Operator ID: AJC Instrument ID: LC12
Sublist: chrom-LC12_Conf_8330*sub11

Method: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 12-Apr-2019 12:28:19 Calib Date: 10-Apr-2019 14:25:56
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000049.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0331

First Level Reviewer: ortizam Date: 10-Apr-2019 12:51:23

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
4 Ethylene glycol dinitrate							M
2	20.740	20.747	-0.007	20265H	200.0	198.0	M
3 Nitrobenzene							
1	20.800	20.827	-0.027	9419H	200.0	191.7	
6 1,3-Dinitrobenzene							
1	23.054	23.044	0.010	19212H	200.0	194.3	
7 1,3,5-Trinitrobenzene							
1	24.657	24.657	0.000	15239H	200.0	194.4	
9 p-Nitrotoluene							
1	27.584	27.577	0.007	11322H	200.0	190.9	
10 o-Nitrotoluene							
1	27.584	27.577	0.007	11322H	200.0	190.9	
11 m-Nitrotoluene							
1	28.090	28.090	0.000	8016H	200.0	188.3	
12 3,5-Dinitroaniline							
1	29.037	29.030	0.007	15051H	200.0	192.9	
13 RDX							
1	29.917	29.914	0.003	8704H	200.0	191.5	
14 2,4-Dinitrotoluene							
1	30.604	30.620	-0.016	17799H	200.0	196.0	
15 2,6-Dinitrotoluene							
1	31.450	31.457	-0.007	11161H	200.0	198.0	
16 2-Amino-4,6-dinitrotoluene							
1	33.087	33.084	0.003	23268H	200.0	194.6	
17 4-Amino-2,6-dinitrotoluene							
1	33.340	33.340	0.000	24299H	200.0	196.4	
$ 18 3,4-Dinitrotoluene							
1	34.214	34.210	0.004	16697H	200.0	194.5	

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
19 2,4,6-Trinitrotoluene							
1	34.584	34.584	0.000	25160H	200.0	195.3	
20 HMX							
1	35.837	35.830	0.007	19527H	200.0	193.8	
21 Nitroglycerin							
2	36.467	36.464	0.003	25521H	200.0	194.7	
22 Tetryl							
1	37.444	37.440	0.004	30360H	200.0	193.8	
23 PETN							
2	40.897	40.897	0.000	29021H	200.0	196.4	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

HP8330L6_00050 Amount Added: 1.00 Units: mL

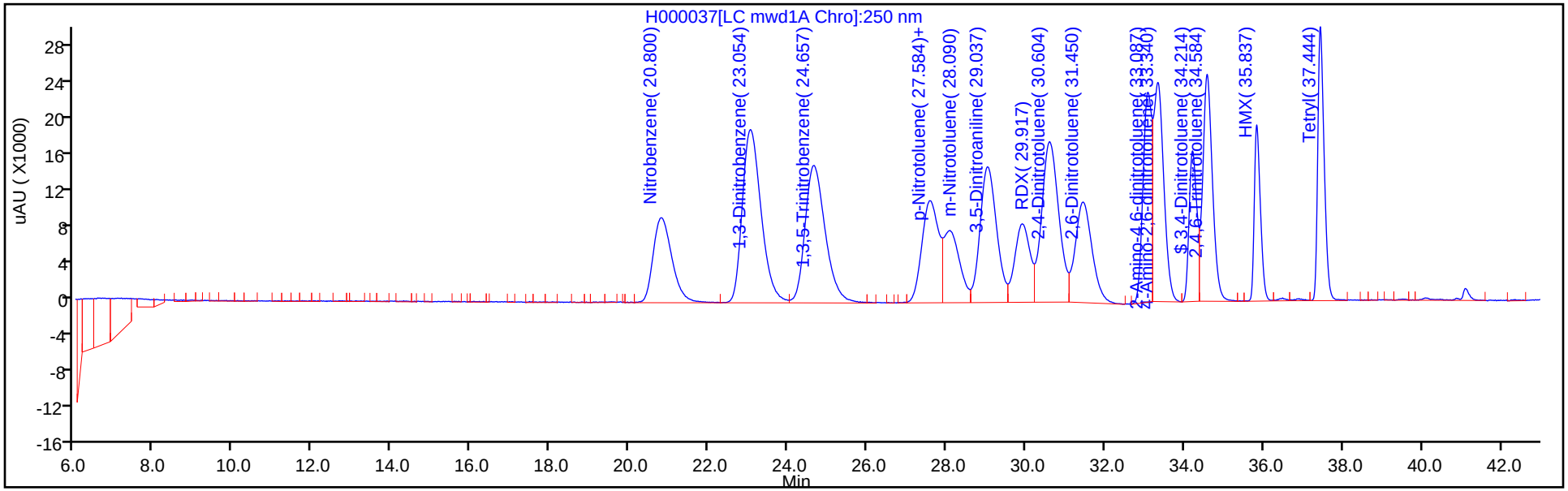
Report Date: 12-Apr-2019 12:28:19 Chrom Revision: 2.3 24-Mar-2019 20:11:04

Eurofins TestAmerica, Sacramento

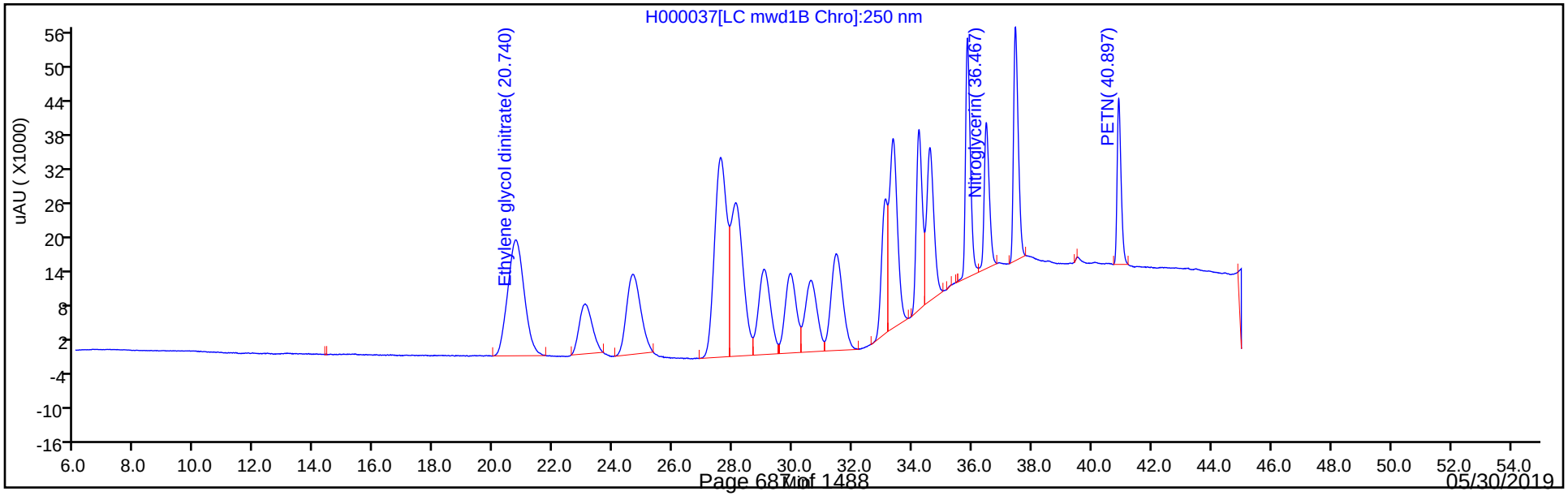
Data File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000037.D

Injection Date:	10-Apr-2019 02:55:14	Instrument ID:	LC12	Operator ID:	AJC
Lims ID:	std6			Worklist Smp#:	8
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	67
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000038.D
Lims ID: std7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 10-Apr-2019 03:52:46 ALS Bottle#: 68 Worklist Smp#: 9
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: L7
Operator ID: AJC Instrument ID: LC12
Sublist: chrom-LC12_Conf_8330*sub11

Method: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 12-Apr-2019 12:28:22 Calib Date: 10-Apr-2019 14:25:56
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000049.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0331

First Level Reviewer: ortizam Date: 10-Apr-2019 12:54:34

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
4 Ethylene glycol dinitrate							
2	20.684	20.747	-0.063	48990H	500.0	478.6	
3 Nitrobenzene							
1	20.760	20.827	-0.067	22085H	500.0	449.5	
6 1,3-Dinitrobenzene							
1	23.014	23.044	-0.030	45536H	500.0	460.4	
7 1,3,5-Trinitrobenzene							
1	24.617	24.657	-0.040	36725H	500.0	468.5	
9 p-Nitrotoluene							
1	27.550	27.577	-0.027	26912H	500.0	453.7	
10 o-Nitrotoluene							
1	27.550	27.577	-0.027	26912H	500.0	453.7	
11 m-Nitrotoluene							
1	28.027	28.090	-0.063	19211H	500.0	451.2	
12 3,5-Dinitroaniline							
1	29.014	29.030	-0.016	35965H	500.0	460.9	
13 RDX							
1	29.884	29.914	-0.030	20674H	500.0	454.9	
14 2,4-Dinitrotoluene							
1	30.577	30.620	-0.043	42897H	500.0	472.3	
15 2,6-Dinitrotoluene							
1	31.420	31.457	-0.037	26859H	500.0	476.5	
16 2-Amino-4,6-dinitrotoluene							
1	33.074	33.084	-0.010	56360H	500.0	471.5	
17 4-Amino-2,6-dinitrotoluene							
1	33.327	33.340	-0.013	58874H	500.0	475.9	
$ 18 3,4-Dinitrotoluene							
1	34.207	34.210	-0.003	40268H	500.0	469.0	

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
19 2,4,6-Trinitrotoluene							
1	34.577	34.584	-0.007	61537H	500.0	477.6	
20 HMX							
1	35.834	35.830	0.004	47646H	500.0	472.9	
21 Nitroglycerin							
2	36.470	36.464	0.006	61869H	500.0	471.9	
22 Tetryl							
1	37.444	37.440	0.004	74943H	500.0	478.4	
23 PETN							
2	40.900	40.897	0.003	71919H	500.0	486.7	

Reagents:

HP8330L7_00036 Amount Added: 1.00 Units: mL

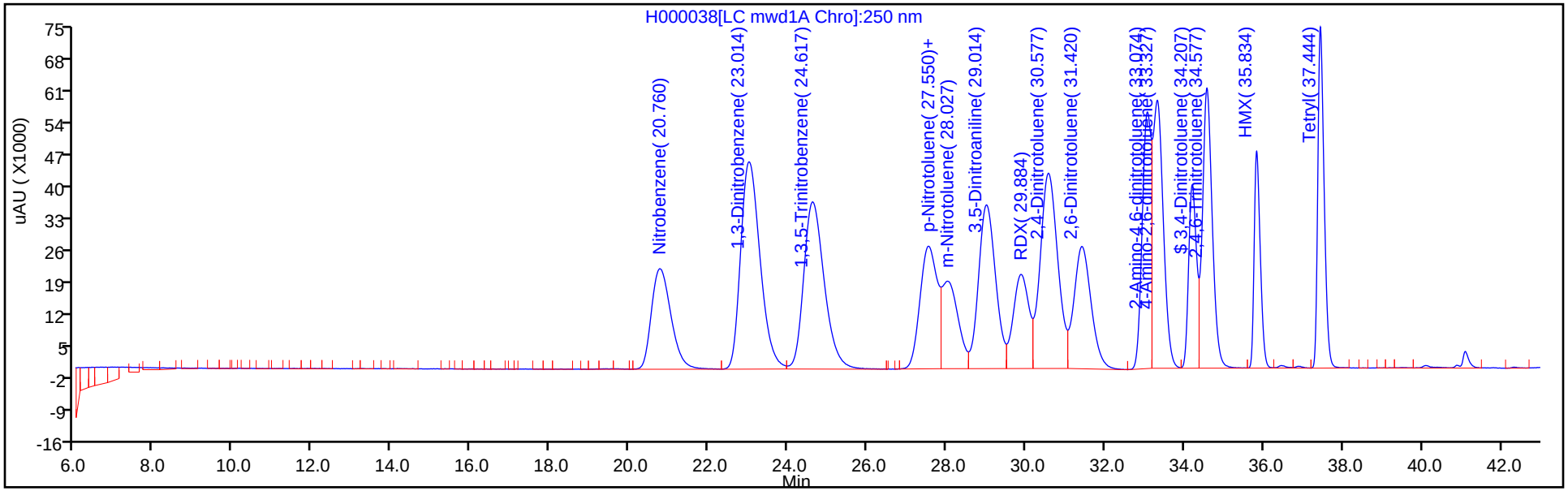
Report Date: 12-Apr-2019 12:28:23 Chrom Revision: 2.3 24-Mar-2019 20:11:04

Eurofins TestAmerica, Sacramento

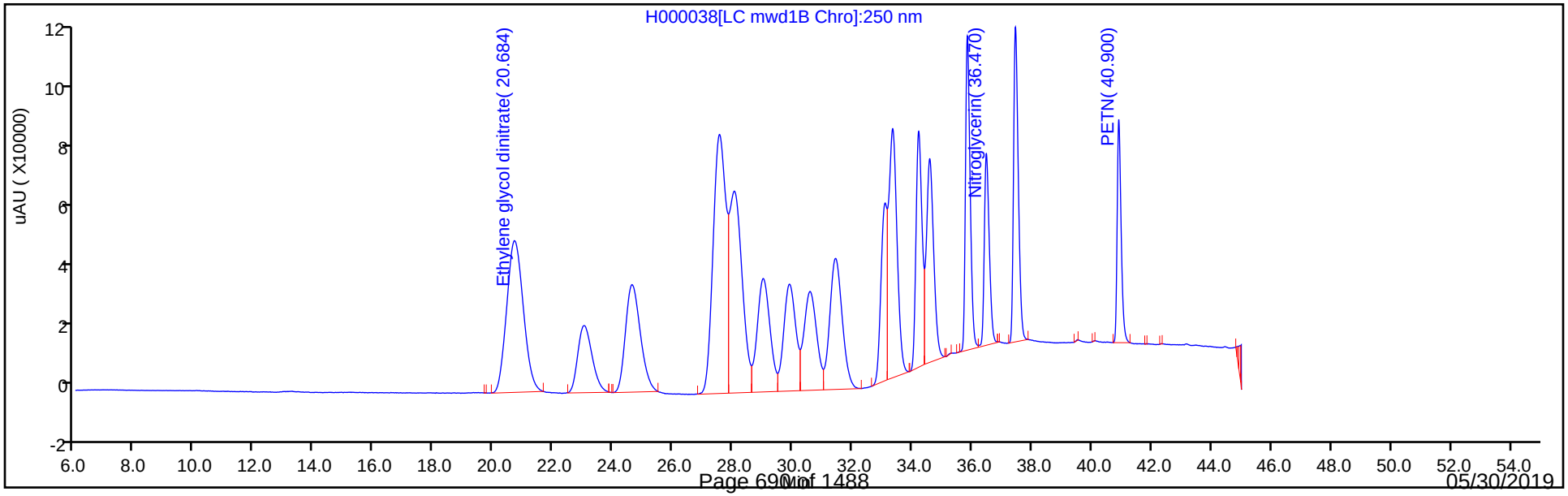
Data File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000038.D

Injection Date:	10-Apr-2019 03:52:46	Instrument ID:	LC12	Operator ID:	AJC
Lims ID:	std7			Worklist Smp#:	9
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	68
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000044.D
Lims ID: std2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 10-Apr-2019 09:38:09 ALS Bottle#: 72 Worklist Smp#: 14
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: M2
Operator ID: AJC Instrument ID: LC12
Sublist: chrom-LC12_Conf_8330*sub11

Method: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 12-Apr-2019 12:28:25 Calib Date: 10-Apr-2019 14:25:56
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000049.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0331

First Level Reviewer: ortizam Date: 10-Apr-2019 13:05:57

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
2 TNX							
1	16.775	16.784	-0.009	670H	10.0	10.3	
5 DNX							
1	22.005	21.920	0.085	554H	10.0	10.4	
8 MNX							Ma
1	26.049	26.017	0.032	640H	11.7	11.9	Ma

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

HPMETABL2_00008 Amount Added: 1.00 Units: mL

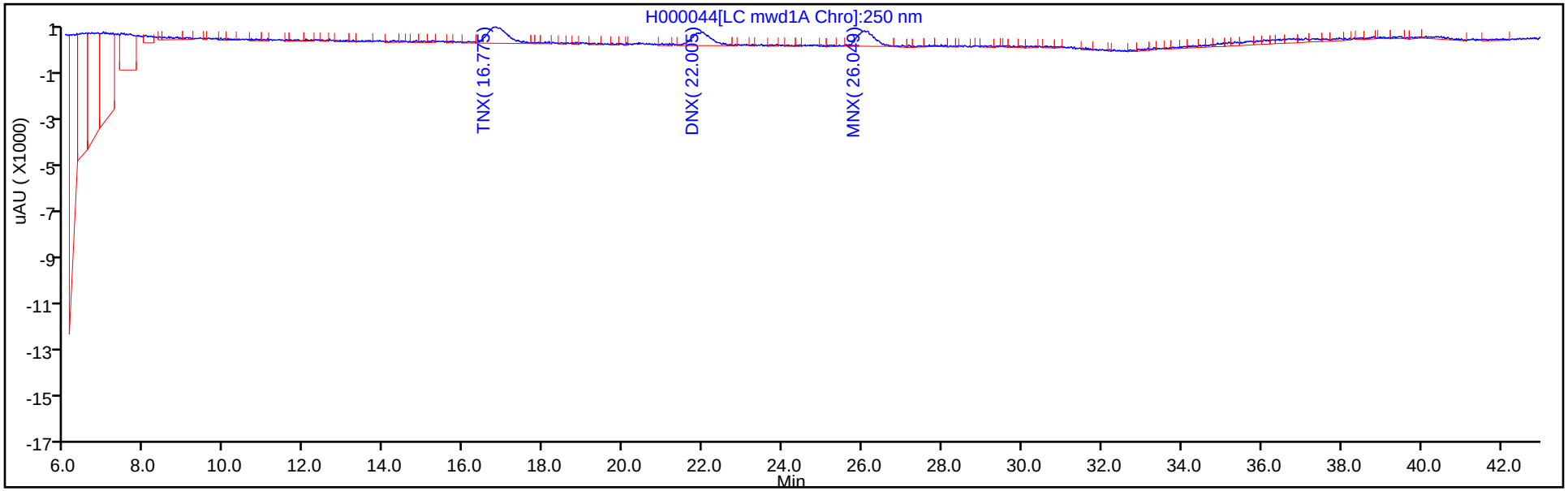
Report Date: 12-Apr-2019 12:28:26 Chrom Revision: 2.3 24-Mar-2019 20:11:04

Eurofins TestAmerica, Sacramento

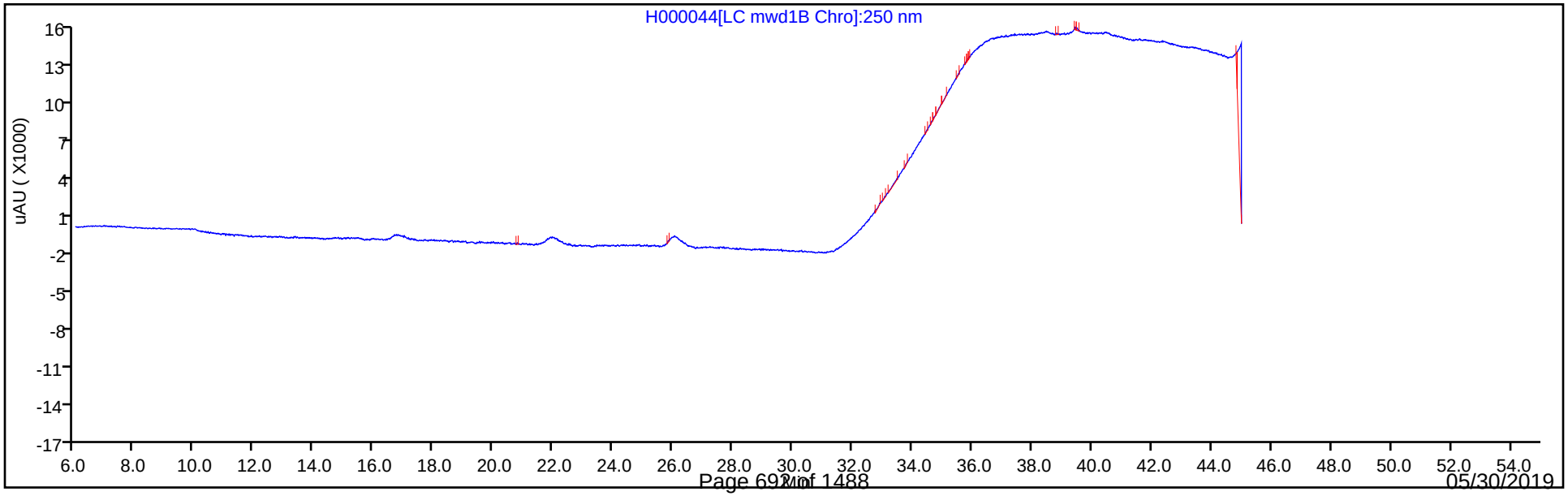
Data File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000044.D

Injection Date:	10-Apr-2019 09:38:09	Instrument ID:	LC12	Operator ID:	AJC
Lims ID:	std2			Worklist Smp#:	14
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	72
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

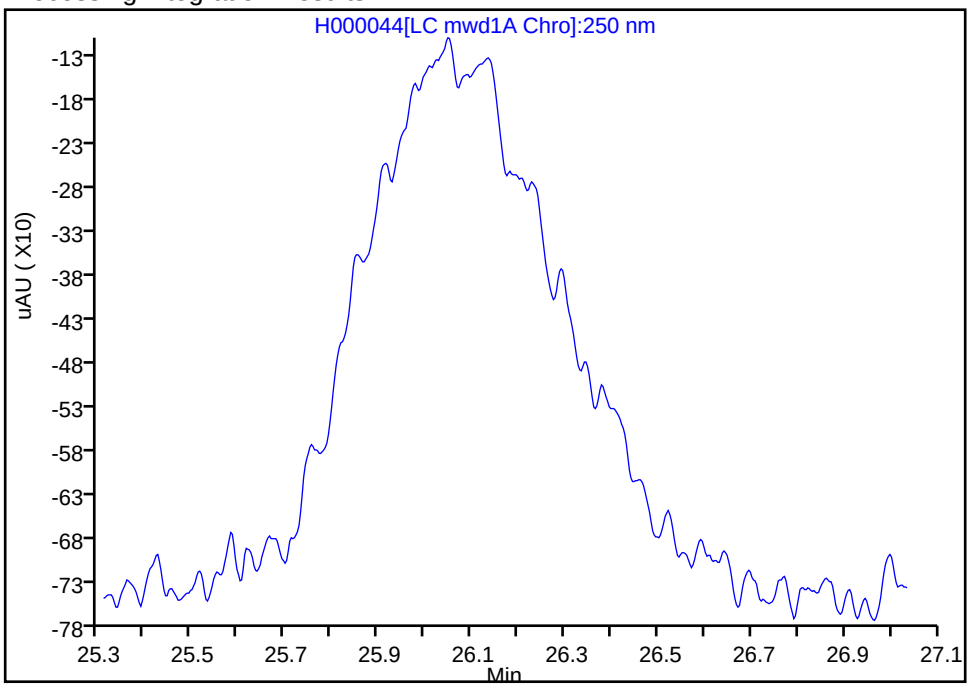
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000044.D				
Injection Date:	10-Apr-2019 09:38:09	Instrument ID:	LC12		
Lims ID:	std2				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	72	Worklist Smp#:	14
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

8 MNX, CAS: 5755-27-1

Signal: 1

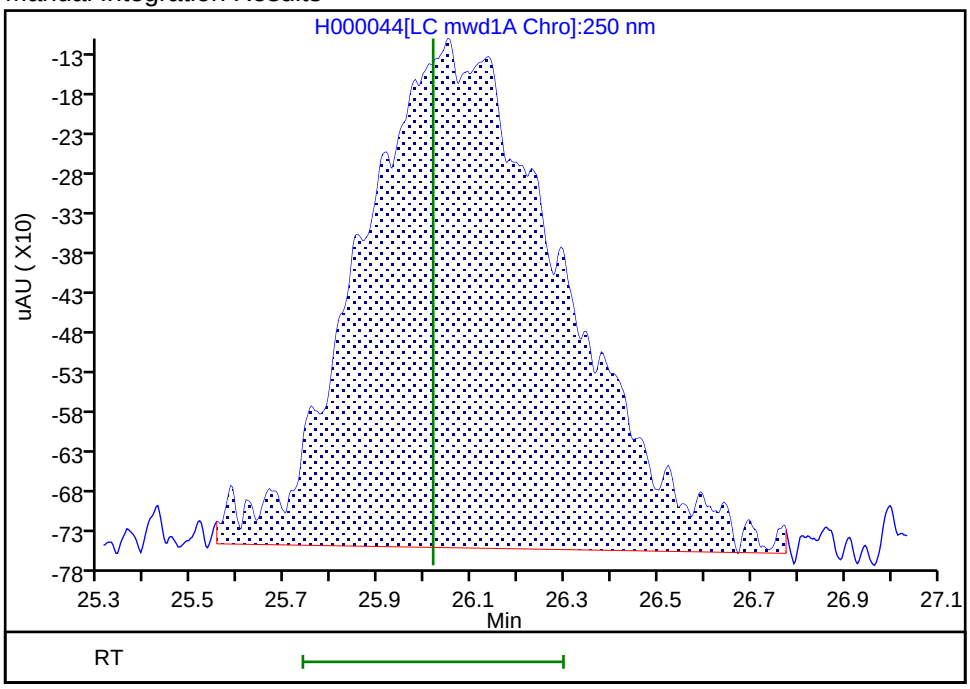
Not Detected
Expected RT: 26.02

Processing Integration Results



Manual Integration Results

RT: 26.05
Height: 640
Amount: 11.940743
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 13:05:48
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Peak not integrated

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000045.D
Lims ID: std3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 10-Apr-2019 10:35:40 ALS Bottle#: 73 Worklist Smp#: 15
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: M3
Operator ID: AJC Instrument ID: LC12
Sublist: chrom-LC12_Conf_8330*sub11

Method: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 12-Apr-2019 12:28:28 Calib Date: 10-Apr-2019 14:25:56
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000049.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0331

First Level Reviewer: ortizam Date: 10-Apr-2019 13:06:35

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
2 TNX							
1	16.802	16.784	0.018	1312H	20.0	20.1	
5 DNX							M
1	21.972	21.920	0.052	1078H	20.1	20.3	M
8 MNX							Ma
1	26.009	26.017	-0.008	1241H	23.4	23.2	Ma

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

HPMETABL3_00020 Amount Added: 1.00 Units: mL

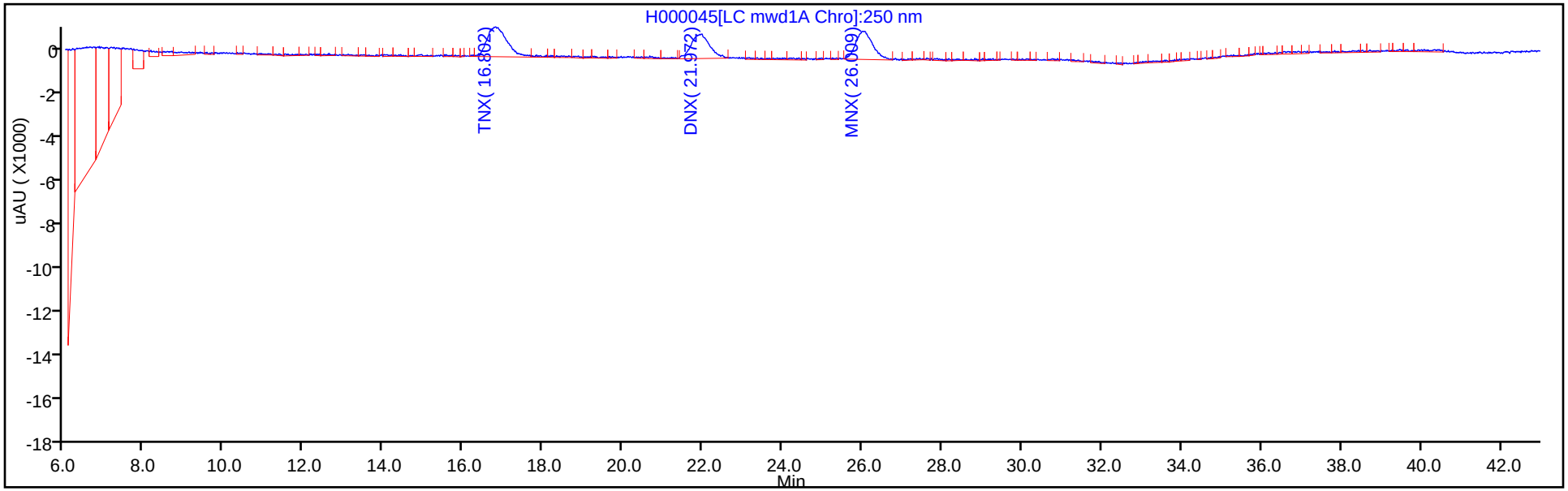
Report Date: 12-Apr-2019 12:28:28 Chrom Revision: 2.3 24-Mar-2019 20:11:04

Eurofins TestAmerica, Sacramento

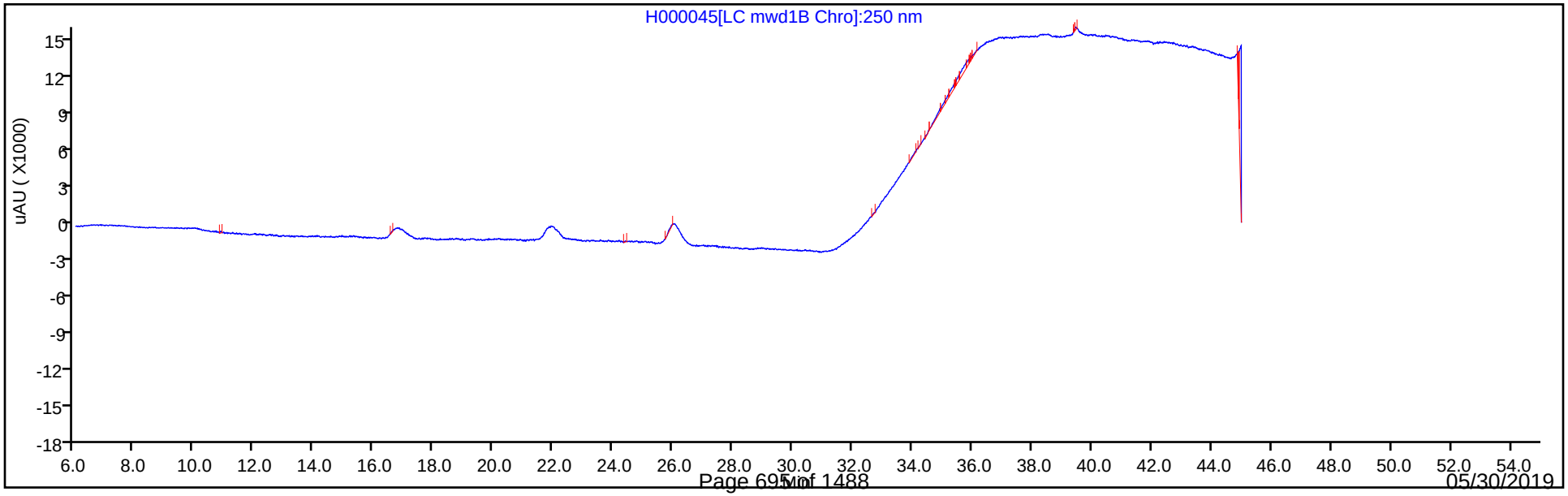
Data File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000045.D

Injection Date:	10-Apr-2019 10:35:40	Instrument ID:	LC12	Operator ID:	AJC
Lims ID:	std3			Worklist Smp#:	15
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	73
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

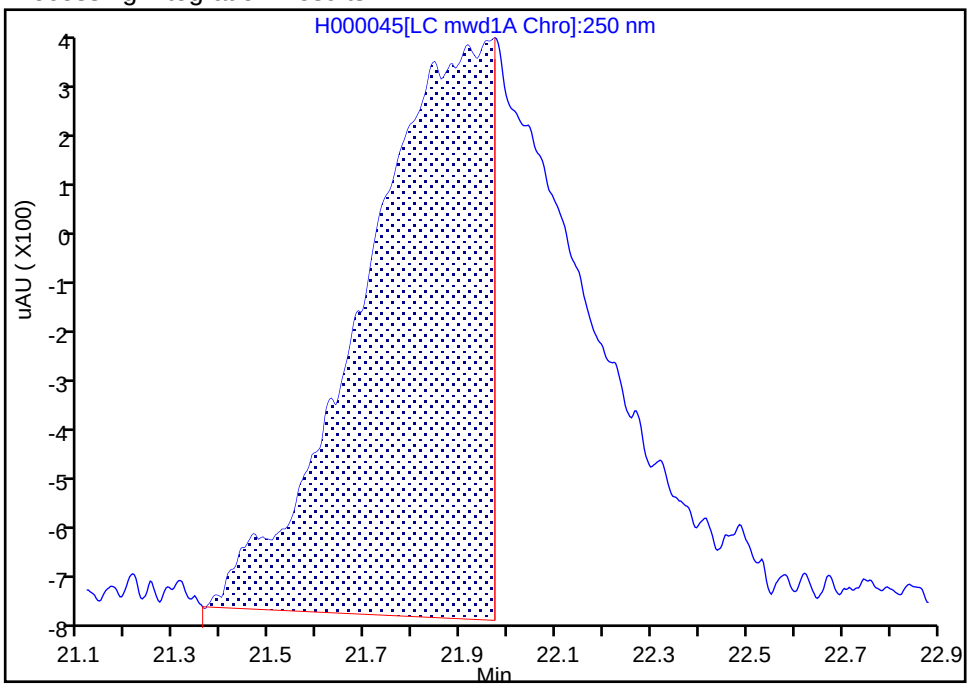
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000045.D				
Injection Date:	10-Apr-2019 10:35:40	Instrument ID:	LC12		
Lims ID:	std3				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	73	Worklist Smp#:	15
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

5 DNX, CAS: 80251-29-2

Signal: 1

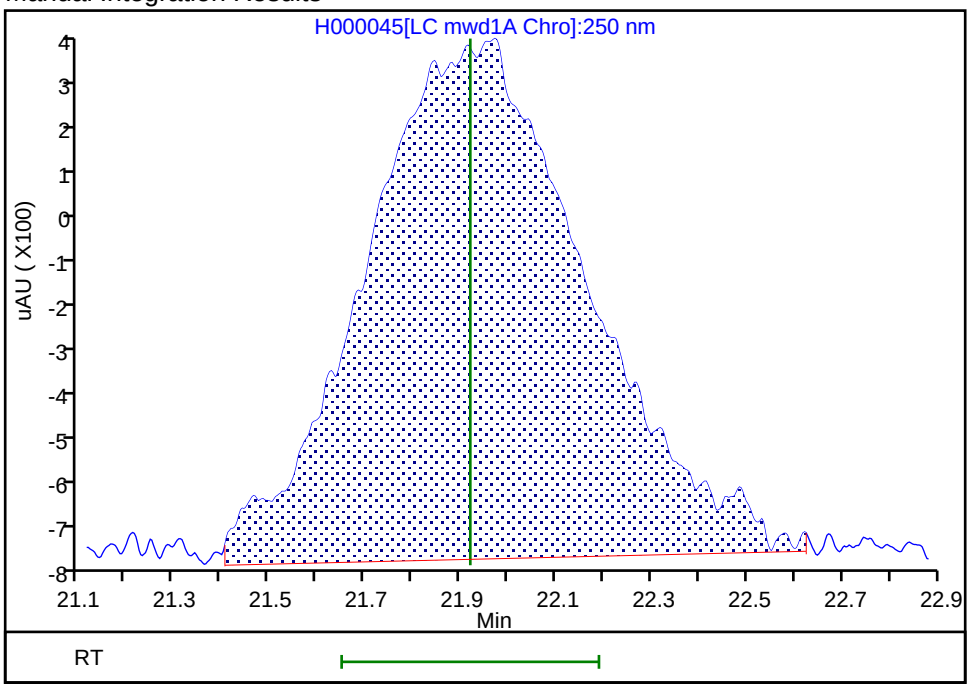
Processing Integration Results

RT: 21.97
Height: 1113
Amount: 20.883375
Amount Units: ng/ml



Manual Integration Results

RT: 21.97
Height: 1078
Amount: 20.287517
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 13:06:24

Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

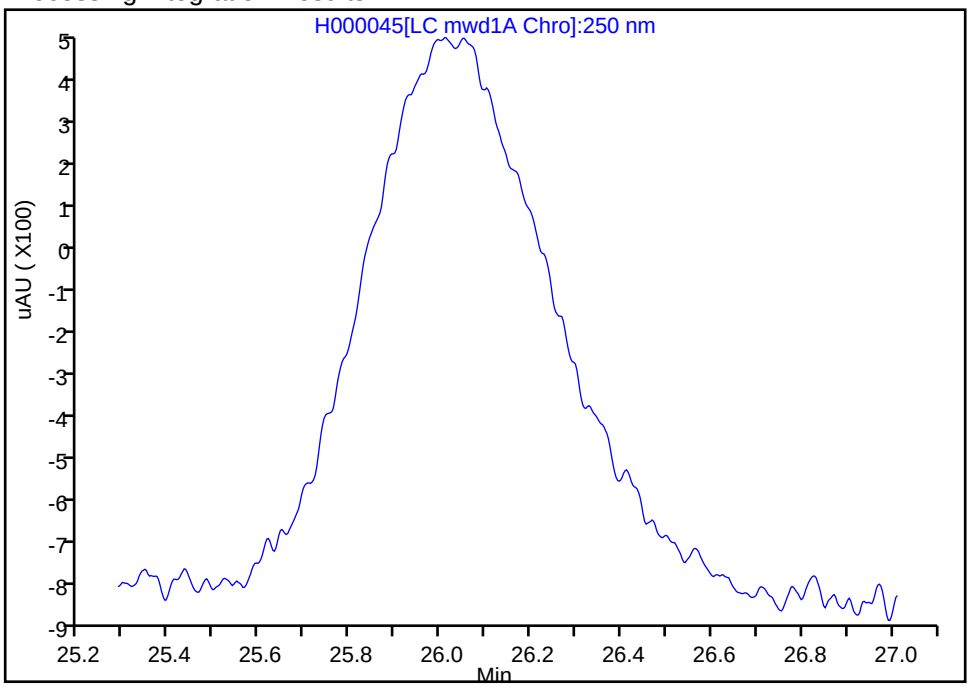
Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000045.D				
Injection Date:	10-Apr-2019 10:35:40	Instrument ID:	LC12		
Lims ID:	std3				
Client ID:					
Operator ID:	AJC	ALS Bottle#:	73	Worklist Smp#:	15
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

8 MNX, CAS: 5755-27-1

Signal: 1

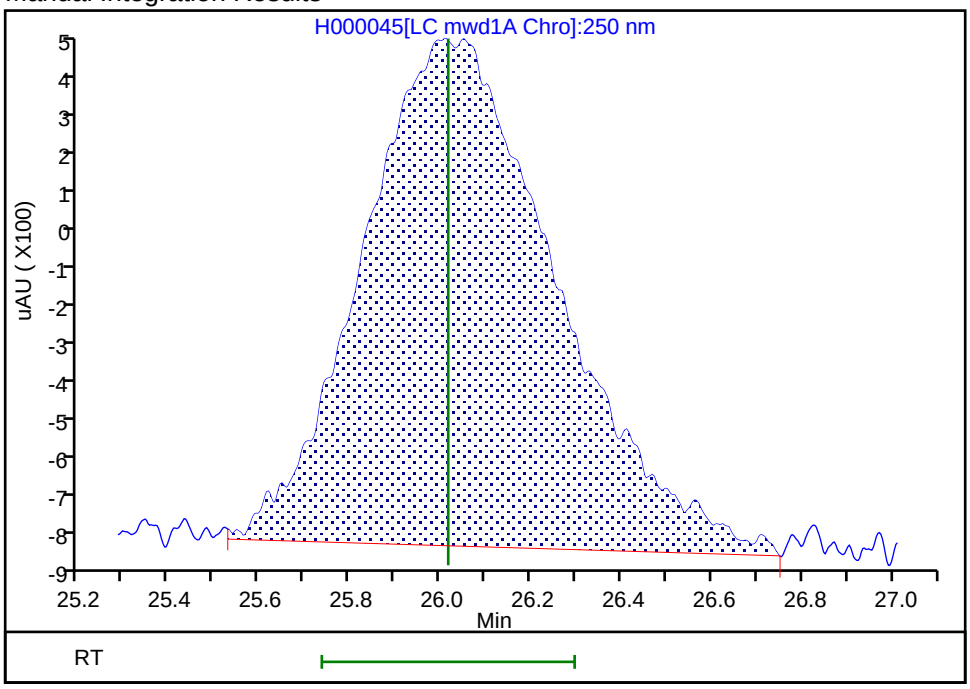
Not Detected
Expected RT: 26.02

Processing Integration Results



Manual Integration Results

RT: 26.01
Height: 1241
Amount: 23.153847
Amount Units: ng/ml



Reviewer: ortizam, 10-Apr-2019 13:06:12
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline Smoothing

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000046.D
Lims ID: std4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 10-Apr-2019 11:33:08 ALS Bottle#: 74 Worklist Smp#: 16
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: M4
Operator ID: AJC Instrument ID: LC12
Sublist: chrom-LC12_Conf_8330*sub11

Method: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 12-Apr-2019 12:28:31 Calib Date: 10-Apr-2019 14:25:56
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000049.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0331

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
2 TNX							
1	16.780	16.784	-0.004	3366H	50.1	51.7	
5 DNX							
1	21.890	21.920	-0.030	2750H	50.2	51.8	
8 MNX							
1	25.990	26.017	-0.027	3229H	58.5	60.2	

Reagents:

HPMETABL4_00038 Amount Added: 1.00 Units: mL

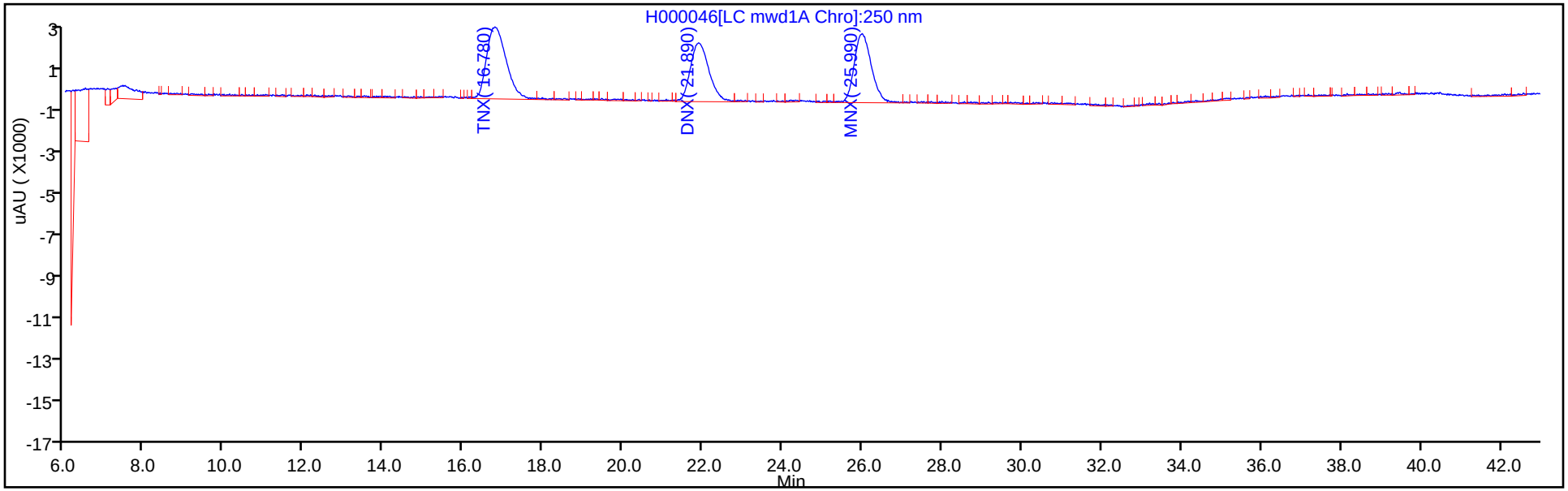
Report Date: 12-Apr-2019 12:28:31 Chrom Revision: 2.3 24-Mar-2019 20:11:04

Eurofins TestAmerica, Sacramento

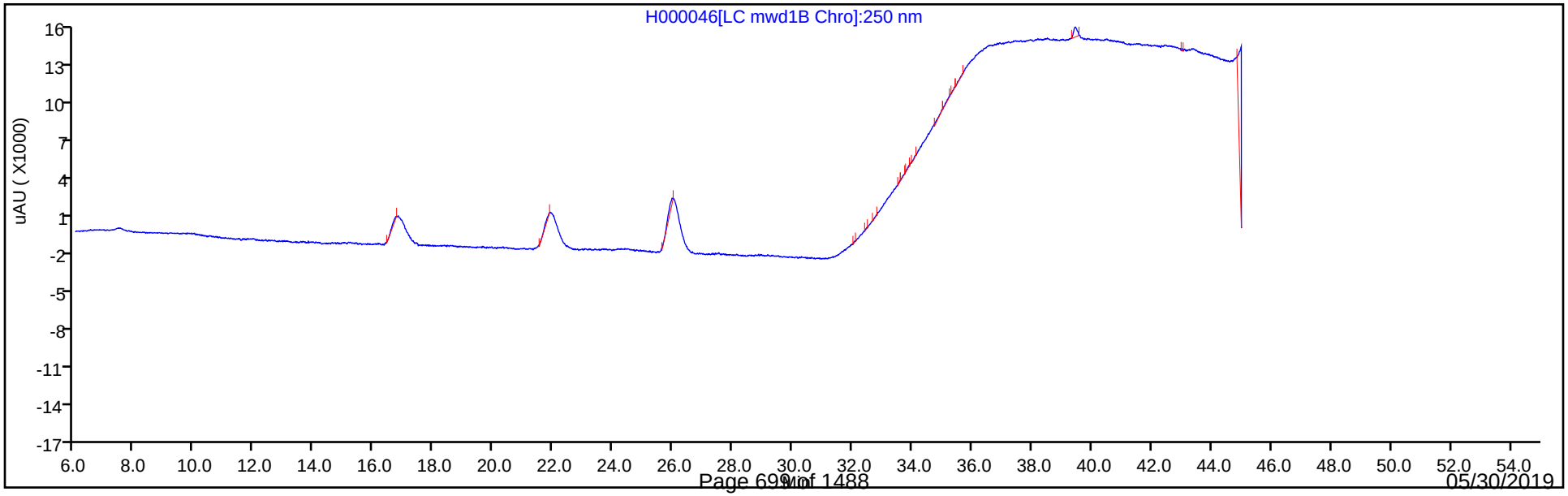
Data File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000046.D

Injection Date:	10-Apr-2019 11:33:08	Instrument ID:	LC12	Operator ID:	AJC
Lims ID:	std4			Worklist Smp#:	16
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	74
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000047.D
Lims ID: std5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 10-Apr-2019 12:30:46 ALS Bottle#: 75 Worklist Smp#: 17
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: M5
Operator ID: AJC Instrument ID: LC12
Sublist: chrom-LC12_Conf_8330*sub11

Method: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 12-Apr-2019 12:28:34 Calib Date: 10-Apr-2019 14:25:56
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000049.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0331

First Level Reviewer: ortizam Date: 10-Apr-2019 13:34:31

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
2 TNX							
1	16.784	16.784	0.000	6397H	100.1	98.2	
5 DNX							
1	21.920	21.920	0.000	5227H	100.4	98.4	
8 MNX							
1	26.017	26.017	0.000	6220H	117.0	116.0	

Reagents:

HPMETABL5_00040 Amount Added: 1.00 Units: mL

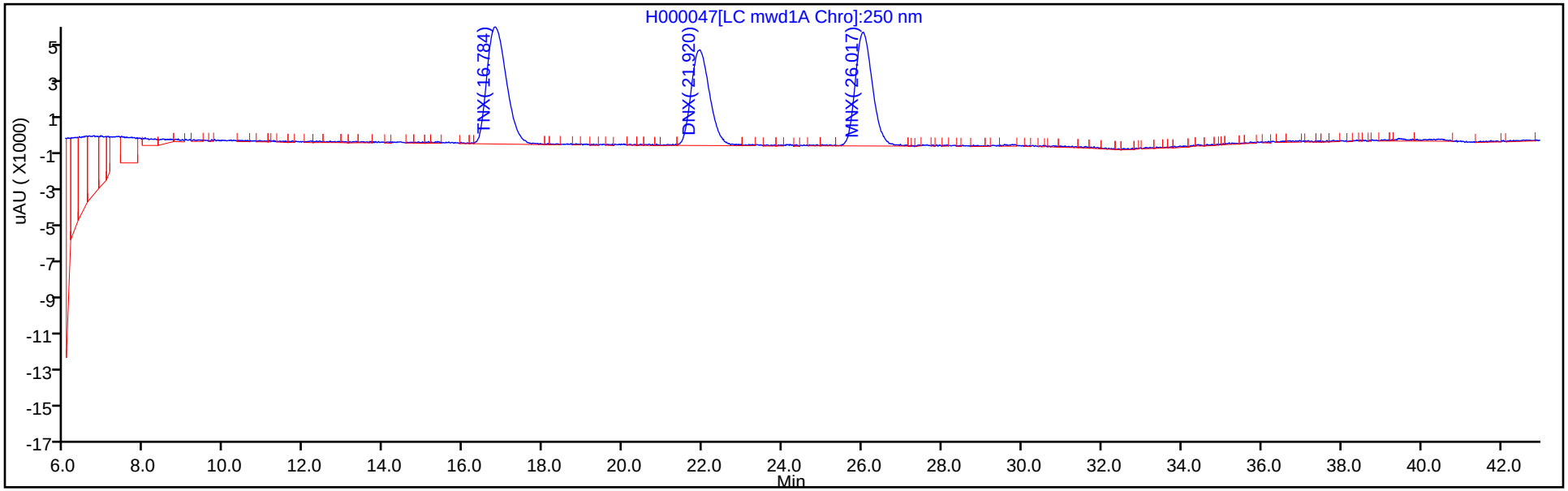
Report Date: 12-Apr-2019 12:28:34 Chrom Revision: 2.3 24-Mar-2019 20:11:04

Eurofins TestAmerica, Sacramento

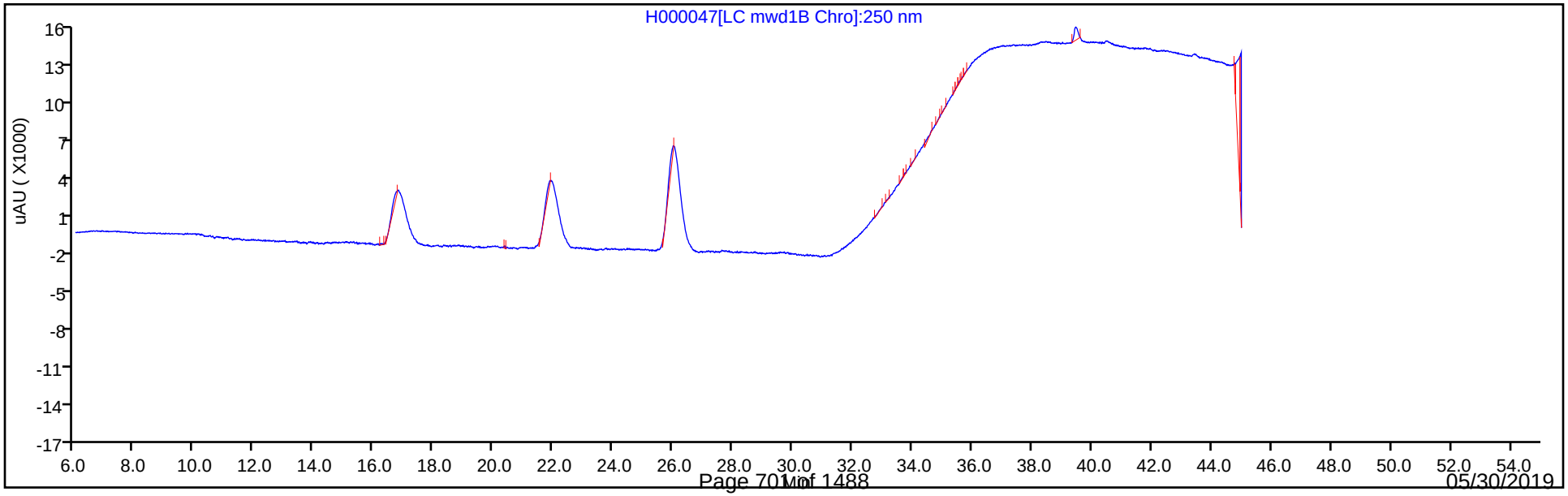
Data File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000047.D

Injection Date:	10-Apr-2019 12:30:46	Instrument ID:	LC12	Operator ID:	AJC
Lims ID:	std5			Worklist Smp#:	17
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	75
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000048.D
Lims ID: std6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 10-Apr-2019 13:28:20 ALS Bottle#: 76 Worklist Smp#: 18
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: M6
Operator ID: AJC Instrument ID: LC12
Sublist: chrom-LC12_Conf_8330*sub11

Method: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 12-Apr-2019 12:28:37 Calib Date: 10-Apr-2019 14:25:56
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000049.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0331

First Level Reviewer: ortizam Date: 10-Apr-2019 14:58:17

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
2 TNX							
1	16.785	16.784	0.001	13020H	200.2	199.9	
5 DNX							
1	21.899	21.920	-0.021	10612H	200.8	199.7	
8 MNX							
1	25.989	26.017	-0.028	12620H	234.0	235.5	

Reagents:

HPMETABL6_00023 Amount Added: 1.00 Units: mL

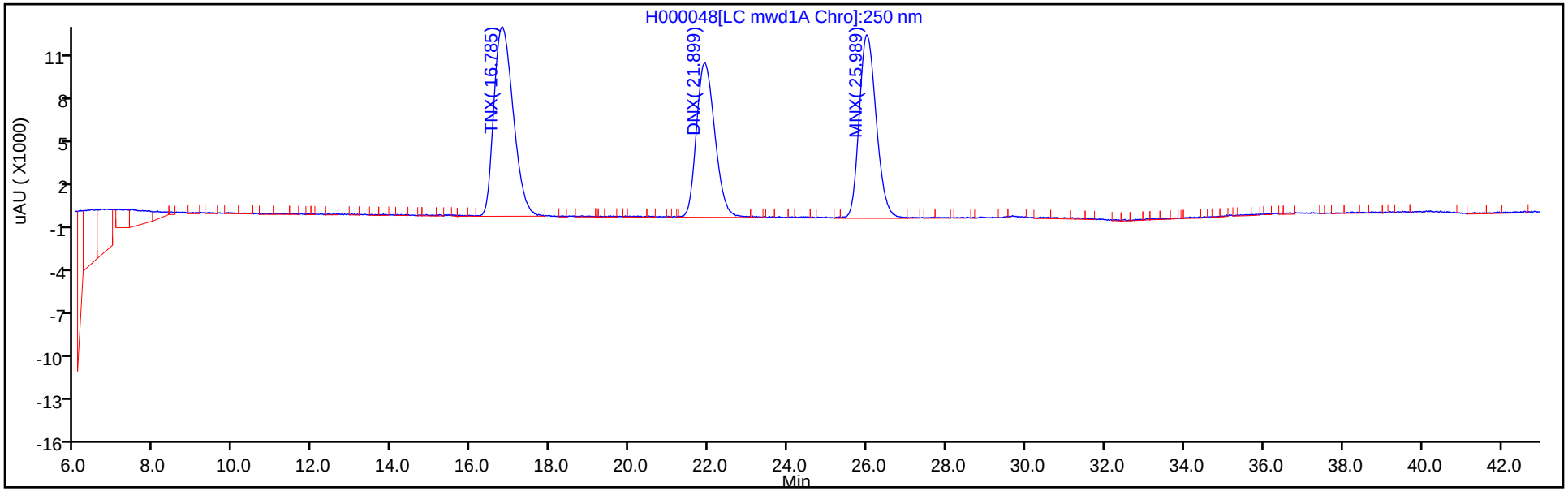
Report Date: 12-Apr-2019 12:28:37 Chrom Revision: 2.3 24-Mar-2019 20:11:04

Eurofins TestAmerica, Sacramento

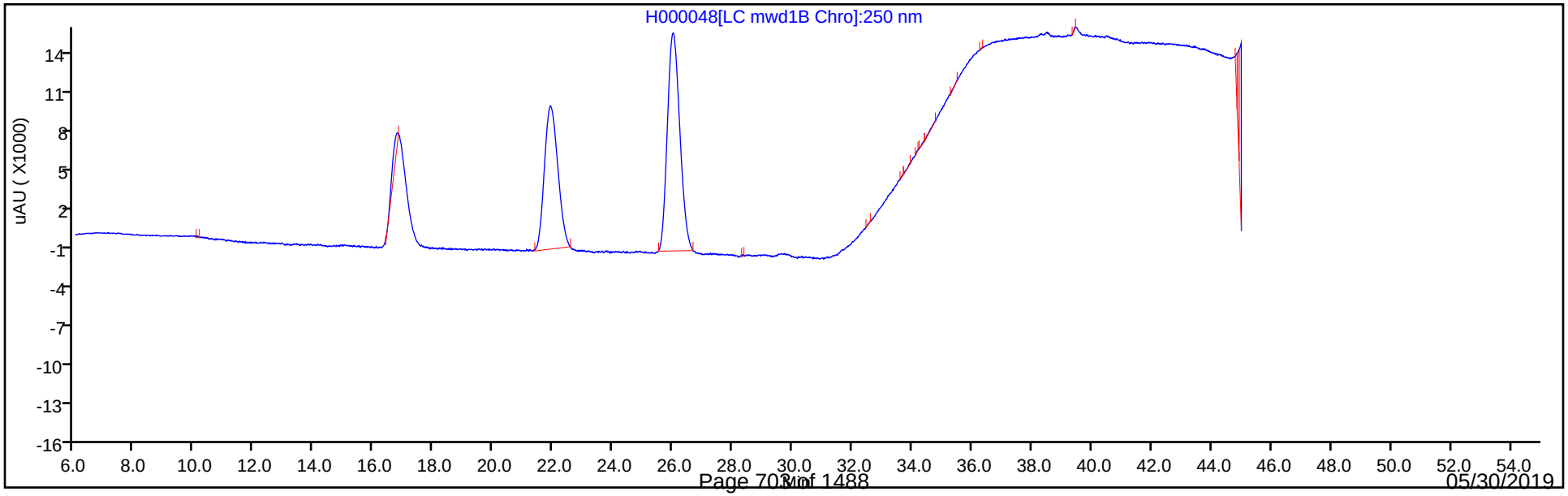
Data File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000048.D

Injection Date:	10-Apr-2019 13:28:20	Instrument ID:	LC12	Operator ID:	AJC
Lims ID:	std6			Worklist Smp#:	18
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	76
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000049.D				
Lims ID:	std7				
Client ID:					
Sample Type:	IC	Calib Level:	7		
Inject. Date:	10-Apr-2019 14:25:56	ALS Bottle#:	77	Worklist Smp#:	19
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Sample Info:	M7				
Operator ID:	AJC	Instrument ID:	LC12		
Sublist:	chrom-LC12_Conf_8330*sub11				
Method:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\LC12_Conf_8330.m				
Limit Group:	LC 8330A ICAL				
Last Update:	12-Apr-2019 12:28:39	Calib Date:	10-Apr-2019 14:25:56		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000049.D				
Column 1 :	Zorbax Cyano CN (4.60 mm)		Det: LC mwd1A, 250 nm		
Process Host:	CTX0331				
First Level Reviewer: ortizam		Date:	10-Apr-2019 15:50:33		

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
2 TNX							
1	16.772	16.784	-0.012	31116H	500.5	477.7	
5 DNX							
1	21.889	21.920	-0.031	25231H	502.0	474.8	
8 MNX							
1	25.995	26.017	-0.022	30164H	585.0	562.8	

Reagents:

HPMETABL7_00022 Amount Added: 1.00 Units: mL

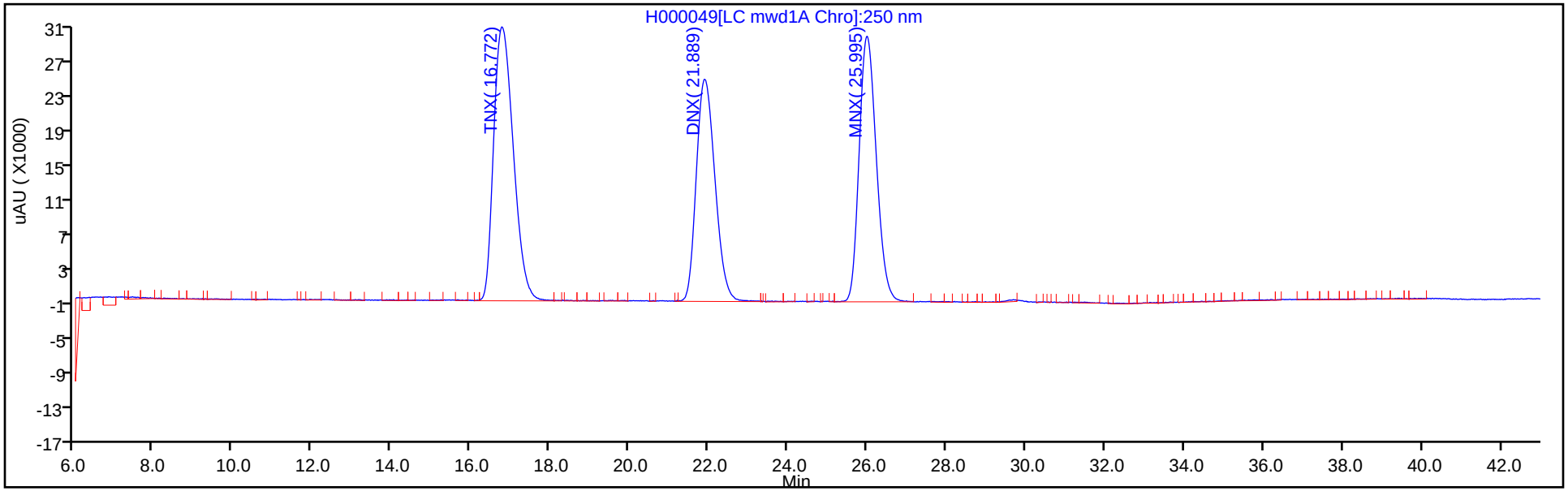
Report Date: 12-Apr-2019 12:28:40 Chrom Revision: 2.3 24-Mar-2019 20:11:04

Eurofins TestAmerica, Sacramento

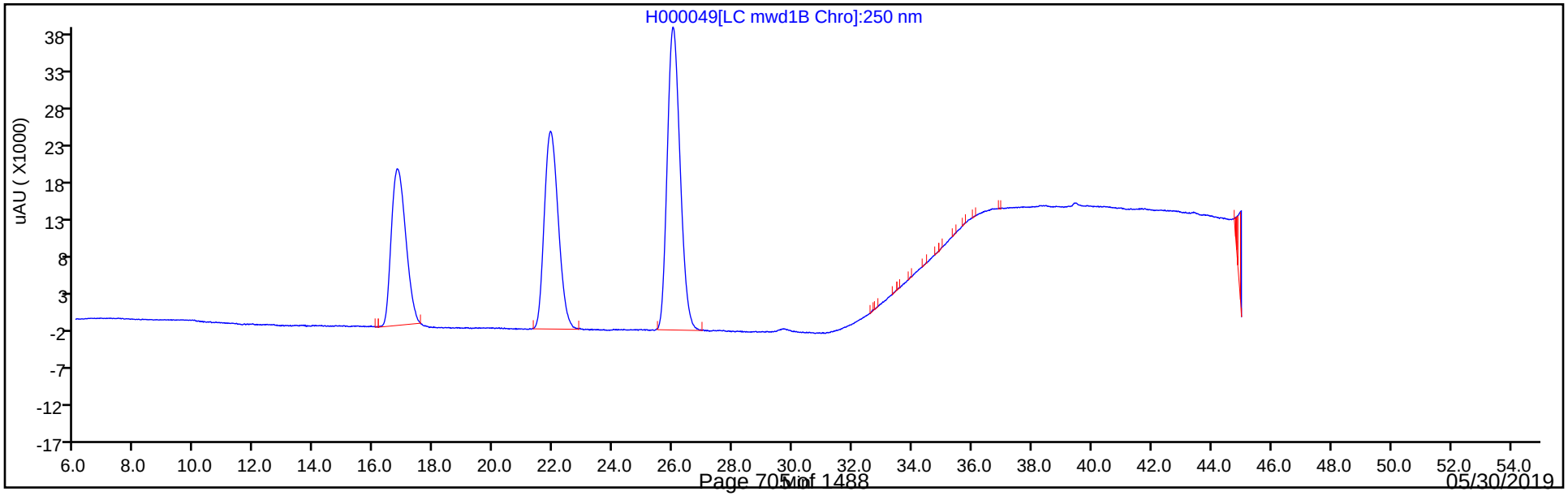
Data File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000049.D

Injection Date:	10-Apr-2019 14:25:56	Instrument ID:	LC12	Operator ID:	AJC
Lims ID:	std7			Worklist Smp#:	19
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	77
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1 Analy Batch No.: 294594

SDG No.:

Instrument ID: LC12 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/14/2019 16:46 Calibration End Date: 05/14/2019 22:31 Calibration ID: 45338

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 320-294594/4	N000002.D
Level 2	STD2 320-294594/5	N000003.D
Level 3	STD3 320-294594/6	N000004.D
Level 4	STD4 320-294594/7	N000005.D
Level 5	STD5 320-294594/8	N000006.D
Level 6	STD6 320-294594/9	N000007.D
Level 7	STD7 320-294594/10	N000008.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7				RT WINDOW	AVG RT
Nitrobenzene	22.173	22.167	22.233	22.152	22.108	22.122	22.108				21.902 - 22.402	22.152
1,3-Dinitrobenzene	24.603	24.557	24.573	24.525	24.482	24.492	24.475				24.275 - 24.775	24.530
1,3,5-Trinitrobenzene	26.707	26.667	26.693	26.645	26.628	26.635	26.602				26.305 - 26.985	26.654
2-Nitrotoluene	29.237	29.243	29.223	29.195	29.138	29.168	29.148				28.945 - 29.445	29.193
4-Nitrotoluene	29.237	29.243	29.223	29.195	29.138	29.168	29.148				28.945 - 29.445	29.193
3-Nitrotoluene	29.753	29.820	29.807	29.782	29.718	29.738	29.722				29.532 - 30.032	29.763
3,5-Dinitroaniline	30.610	30.527	30.527	30.498	30.462	30.482	30.455				30.238 - 30.758	30.509
RDX	31.373	31.363	31.363	31.322	31.305	31.322	31.292				31.072 - 31.572	31.334
2,4-Dinitrotoluene	32.237	32.273	32.210	32.208	32.168	32.188	32.158				31.958 - 32.458	32.206
2,6-Dinitrotoluene	32.950	32.950	32.900	32.902	32.855	32.882	32.858				32.652 - 33.152	32.900
2-Amino-4,6-dinitrotoluene	33.957	33.940	33.937	33.915	33.892	33.912	33.895				33.665 - 34.165	33.921
4-Amino-2,6-dinitrotoluene	34.207	34.190	34.183	34.162	34.138	34.158	34.142				33.912 - 34.412	34.169
2,4,6-Trinitrotoluene	35.437	35.437	35.417	35.405	35.378	35.398	35.385				35.155 - 35.655	35.408
HMX	36.270	36.257	36.250	36.242	36.218	36.238	36.228				35.992 - 36.492	36.243
Nitroglycerin	37.003	36.990	36.987	36.985	36.962	36.982	36.972				36.735 - 37.235	36.983
Tetryl	37.893	37.897	37.890	37.882	37.858	37.882	37.868				37.632 - 38.132	37.881
PETN	41.150	41.150	41.150	41.138	41.122	41.145	41.132				40.888 - 41.388	41.141
3,4-Dinitrotoluene	34.893	34.853	34.847	34.838	34.812	34.832	34.822				34.588 - 35.088	34.842

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1 Analy Batch No.: 294594

SDG No.:

Instrument ID: LC12 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/14/2019 16:46 Calibration End Date: 05/14/2019 22:31 Calibration ID: 45338

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 320-294594/4	N000002.D
Level 2	STD2 320-294594/5	N000003.D
Level 3	STD3 320-294594/6	N000004.D
Level 4	STD4 320-294594/7	N000005.D
Level 5	STD5 320-294594/8	N000006.D
Level 6	STD6 320-294594/9	N000007.D
Level 7	STD7 320-294594/10	N000008.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4		B	M1	M2								
Nitrobenzene	65.800 53.340	62.300 52.175	57.800 51.336	54.680	Ave		56.7758571				9.6		20.0			
1,3-Dinitrobenzene	133.40 112.88	118.40 111.43	116.05 111.83	113.42	Ave		116.772857				6.6		20.0			
1,3,5-Trinitrobenzene	96.000 91.390	100.80 90.040	96.200 90.784	91.040	Ave		93.7505714				4.3		20.0			
2-Nitrotoluene	80.200 67.850	74.300 66.470	74.650 65.026	68.900	Ave		71.0565714				7.7		20.0			
4-Nitrotoluene	80.200 67.850	74.300 66.470	74.650 65.026	68.900	Ave		71.0565714				7.7		20.0			
3-Nitrotoluene	62.000 43.630	50.500 42.600	50.150 41.648	44.360	Lin2	96.8207954	42.4883360							0.9980		0.9900
3,5-Dinitroaniline	118.60 94.610	100.70 93.915	102.45 94.988	95.100	Ave		100.051857				8.8		20.0			
RDX	73.800 53.130	52.500 53.585	59.900 54.322	53.200	Lin2	89.7286054	52.2445757							0.9910		0.9900
2,4-Dinitrotoluene	129.00 124.65	126.50 125.46	128.60 125.30	123.10	Ave		126.087000				1.7		20.0			
2,6-Dinitrotoluene	97.600 93.710	97.900 93.935	95.800 93.498	93.360	Ave		95.1147143				2.1		20.0			
2-Amino-4,6-dinitrotoluene	206.40 198.67	206.10 198.20	208.30 199.30	198.66	Ave		202.232143				2.2		20.0			
4-Amino-2,6-dinitrotoluene	1978.6 1792.6	1840.6 1795.0	1895.3 1810.1	1803.0	Lin2	856.579062	1797.67613							1.0000		0.9900
2,4,6-Trinitrotoluene	208.40 207.15	201.50 205.82	213.20 205.63	207.66	Ave		207.051714				1.7		20.0			
HMX	171.20 153.27	156.30 151.74	160.45 152.31	153.54	Ave		156.972714				4.4		20.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1 Analy Batch No.: 294594

SDG No.:

Instrument ID: LC12 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/14/2019 16:46 Calibration End Date: 05/14/2019 22:31 Calibration ID: 45338

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4		B	M1	M2								
Nitroglycerin	204.40 191.84	189.80 190.08	194.15 189.21	195.40	Ave		193.553571				2.7		20.0			
Tetryl	245.00 232.22	236.30 230.50	236.40 231.62	234.20	Ave		235.175857				2.1		20.0			
PETN	234.00 217.15	203.20 214.30	213.50 214.48	218.58	Ave		216.458571				4.2		20.0			
3,4-Dinitrotoluene	147.40 136.20	142.30 136.41	145.15 135.60	137.10	Ave		140.021571				3.5		20.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1 Analy Batch No.: 294594

SDG No.:

Instrument ID: LC12 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/14/2019 16:46 Calibration End Date: 05/14/2019 22:31 Calibration ID: 45338

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 320-294594/4	N000002.D
Level 2	STD2 320-294594/5	N000003.D
Level 3	STD3 320-294594/6	N000004.D
Level 4	STD4 320-294594/7	N000005.D
Level 5	STD5 320-294594/8	N000006.D
Level 6	STD6 320-294594/9	N000007.D
Level 7	STD7 320-294594/10	N000008.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Nitrobenzene	Ave	329 10435	623 25668	1156	2734	5334	5.00 200	10.0 500	20.0	50.0	100
1,3-Dinitrobenzene	Ave	667 22286	1184 55915	2321	5671	11288	5.00 200	10.0 500	20.0	50.0	100
1,3,5-Trinitrobenzene	Ave	480 18008	1008 45392	1924	4552	9139	5.00 200	10.0 500	20.0	50.0	100
2-Nitrotoluene	Ave	401 13294	743 32513	1493	3445	6785	5.00 200	10.0 500	20.0	50.0	100
4-Nitrotoluene	Ave	401 13294	743 32513	1493	3445	6785	5.00 200	10.0 500	20.0	50.0	100
3-Nitrotoluene	Lin2	310 8520	505 20824	1003	2218	4363	5.00 200	10.0 500	20.0	50.0	100
3,5-Dinitroaniline	Ave	593 18783	1007 47494	2049	4755	9461	5.00 200	10.0 500	20.0	50.0	100
RDX	Lin2	369 10717	525 27161	1198	2660	5313	5.00 200	10.0 500	20.0	50.0	100
2,4-Dinitrotoluene	Ave	645 25091	1265 62652	2572	6155	12465	5.00 200	10.0 500	20.0	50.0	100
2,6-Dinitrotoluene	Ave	488 18787	979 46749	1916	4668	9371	5.00 200	10.0 500	20.0	50.0	100
2-Amino-4,6-dinitrotoluene	Ave	1032 39639	2061 99650	4166	9933	19867	5.00 200	10.0 500	20.0	50.0	100
4-Amino-2,6-dinitrotoluene	Lin2	9893 359001	18406 905067	37905	90150	179264	5.00 200	10.0 500	20.0	50.0	100
2,4,6-Trinitrotoluene	Ave	1042 41164	2015 102816	4264	10383	20715	5.00 200	10.0 500	20.0	50.0	100
HMX	Ave	856 30347	1563 76157	3209	7677	15327	5.00 200	10.0 500	20.0	50.0	100
Nitroglycerin	Ave	1022 38015	1898 94605	3883	9770	19184	5.00 200	10.0 500	20.0	50.0	100

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1 Analy Batch No.: 294594

SDG No.:

Instrument ID: LC12 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/14/2019 16:46 Calibration End Date: 05/14/2019 22:31 Calibration ID: 45338

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Tetryl	Ave	1225 46099	2363 115808	4728	11710	23222	5.00 200	10.0 500	20.0	50.0	100
PETN	Ave	1170 42860	2032 107240	4270	10929	21715	5.00 200	10.0 500	20.0	50.0	100
3,4-Dinitrotoluene	Ave	737 27281	1423 67798	2903	6855	13620	5.00 200	10.0 500	20.0	50.0	100

Curve Type Legend:

Ave = Average by Height
Lin2 = Linear 1/conc^2

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000002.D
Lims ID: STD1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 14-May-2019 16:46:16 ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: std1
Operator ID: AO Instrument ID: LC12
Sublist: chrom-LC12_Conf_8330*sub10

Method: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 15-May-2019 09:39:28 Calib Date: 15-May-2019 07:09:15
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0306

First Level Reviewer: ortizam Date: 15-May-2019 08:41:59

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
3 Nitrobenzene							
1	22.173	22.152	0.021	329H	5.00	5.79	
6 1,3-Dinitrobenzene							
1	24.603	24.525	0.078	667H	5.00	5.71	
7 1,3,5-Trinitrobenzene							M
1	26.707	26.645	0.062	480H	5.00	5.12	M
9 p-Nitrotoluene							M
1	29.237	29.195	0.042	401H	5.00	5.64	M
10 o-Nitrotoluene							M
1	29.237	29.195	0.042	401H	5.00	5.64	M
11 m-Nitrotoluene							M
1	29.753	29.782	-0.029	310H	5.00	5.02	M
12 3,5-Dinitroaniline							M
1	30.610	30.498	0.112	593H	5.00	5.93	M
13 RDX							M
1	31.373	31.322	0.051	369H	5.00	5.35	M
14 2,4-Dinitrotoluene							
1	32.237	32.208	0.029	645H	5.00	5.12	
15 2,6-Dinitrotoluene							
1	32.950	32.902	0.048	488H	5.00	5.13	
16 2-Amino-4,6-dinitrotoluene							M
1	33.957	33.915	0.042	1032H	5.00	5.10	M
17 4-Amino-2,6-dinitrotoluene							M
1	34.207	34.162	0.045	9893	5.00	5.03	M
$ 18 3,4-Dinitrotoluene							
1	34.893	34.838	0.055	737H	5.00	5.26	
19 2,4,6-Trinitrotoluene							M
1	35.437	35.405	0.032	1042H	5.00	5.03	M

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
20 HMX							M
1	36.270	36.242	0.028	856H	5.00	5.45	M
21 Nitroglycerin							
2	37.003	36.985	0.018	1022H	5.00	5.28	
22 Tetryl							M
1	37.893	37.882	0.011	1225H	5.00	5.21	M
23 PETN							
2	41.150	41.138	0.012	1170H	5.00	5.41	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

HP8330L1_00042 Amount Added: 1.00 Units: mL

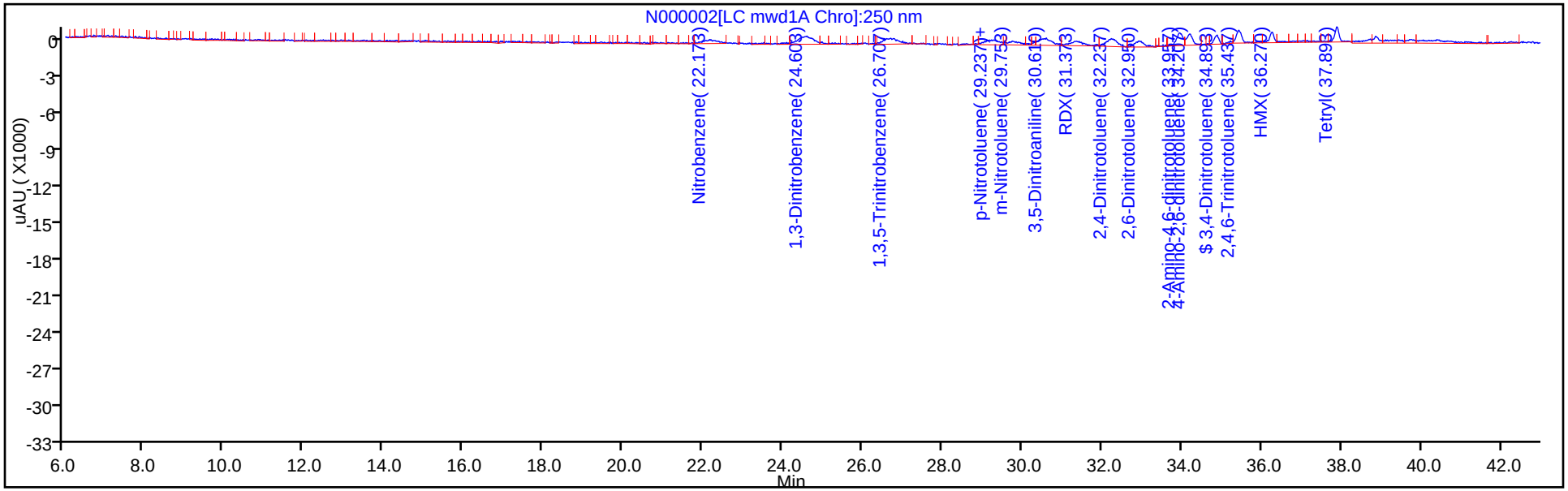
Report Date: 15-May-2019 09:39:29 Chrom Revision: 2.3 12-May-2019 16:28:34

Eurofins TestAmerica, Sacramento

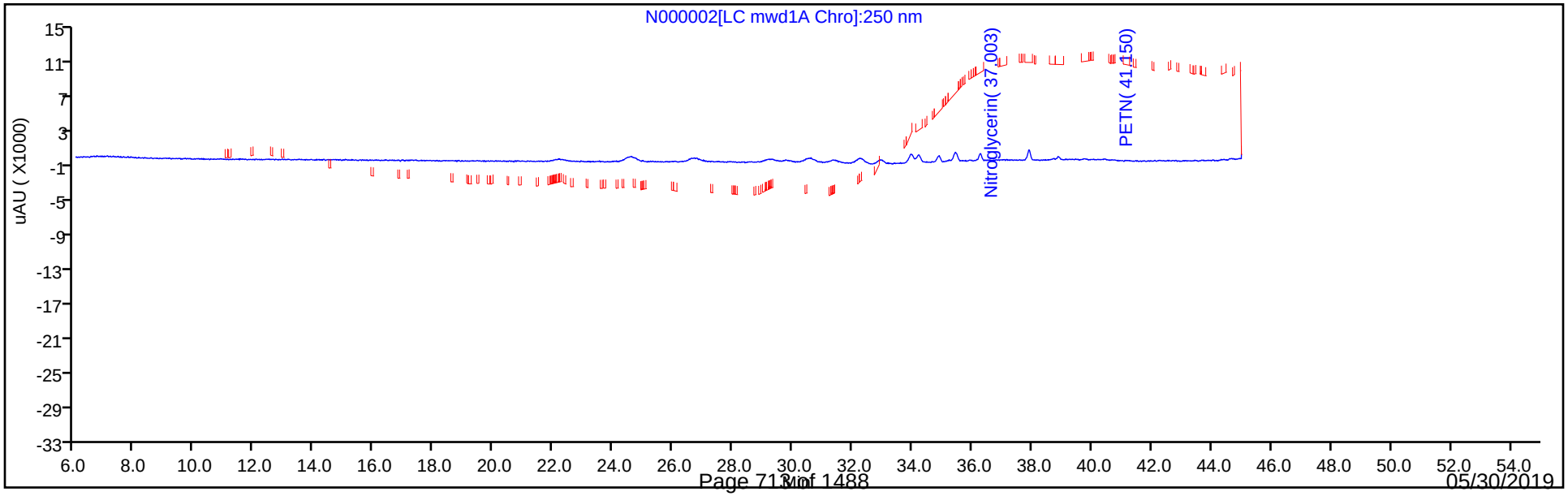
Data File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000002.D

Injection Date:	14-May-2019 16:46:16	Instrument ID:	LC12	Operator ID:	AO
Lims ID:	STD1			Worklist Smp#:	4
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

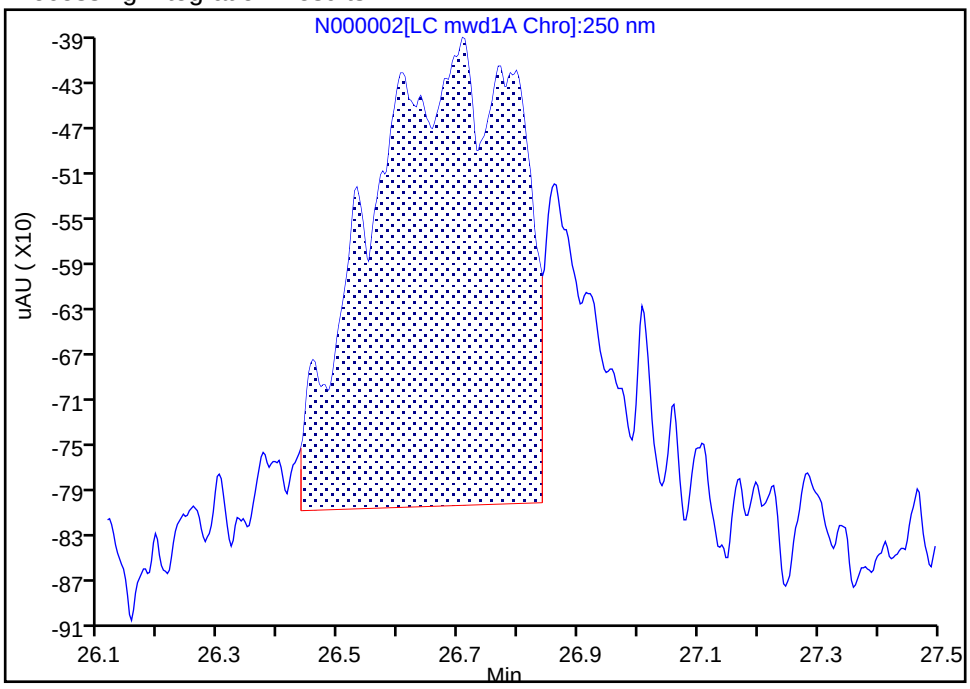
Data File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000002.D				
Injection Date:	14-May-2019 16:46:16	Instrument ID:	LC12		
Lims ID:	STD1				
Client ID:					
Operator ID:	AO	ALS Bottle#:	3	Worklist Smp#:	4
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

7 1,3,5-Trinitrobenzene, CAS: 99-35-4

Signal: 1

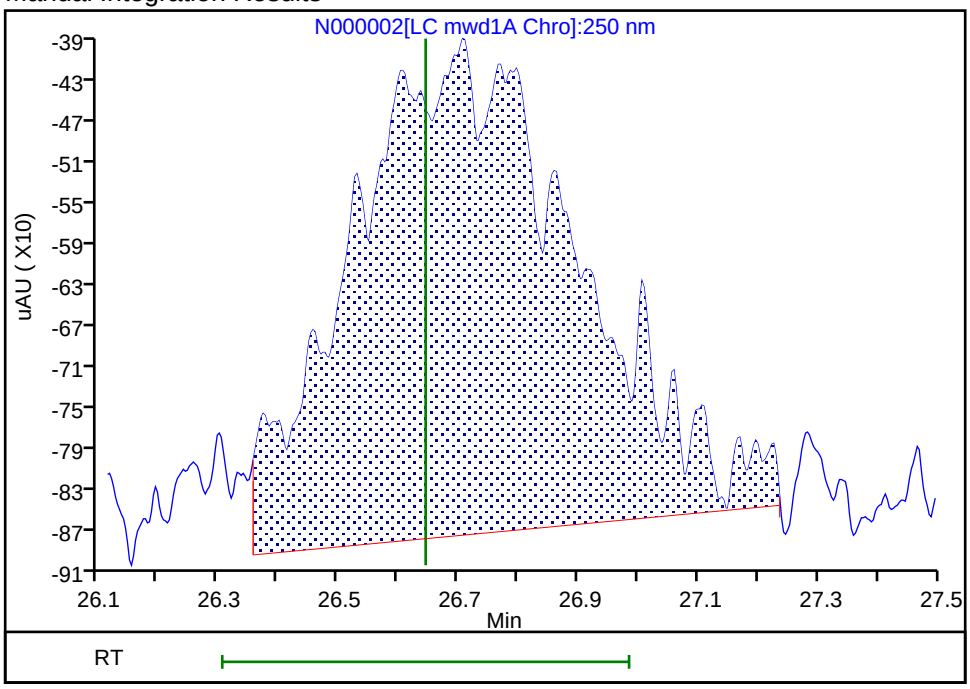
Processing Integration Results

RT: 26.61
Height: 380
Amount: 4.180720
Amount Units: ng/ml



Manual Integration Results

RT: 26.71
Height: 480
Amount: 5.119969
Amount Units: ng/ml



Reviewer: ortizam, 15-May-2019 08:45:29

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

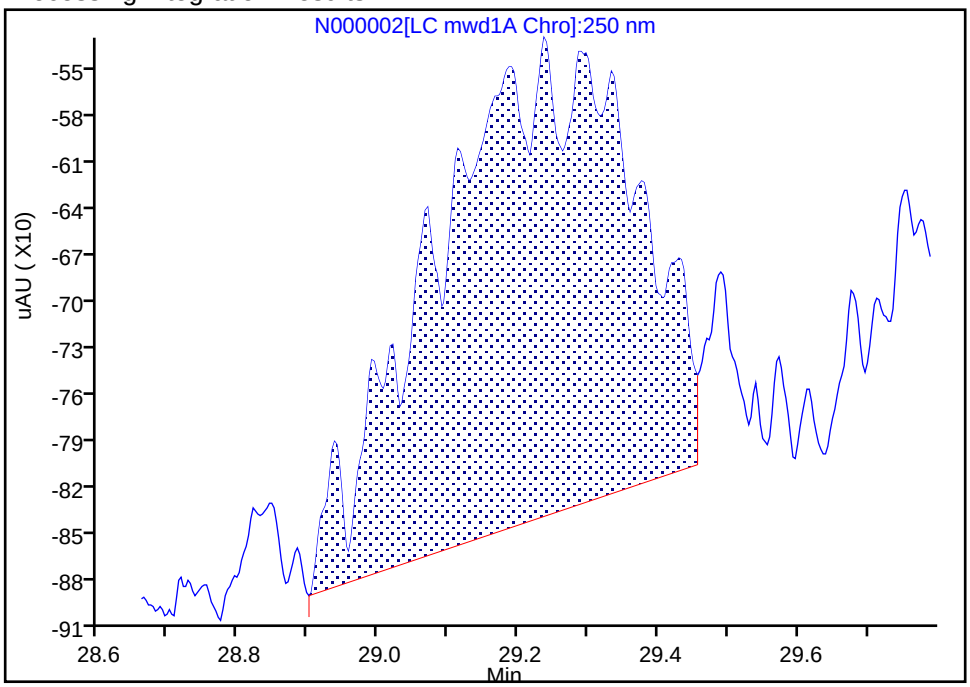
Data File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000002.D				
Injection Date:	14-May-2019 16:46:16	Instrument ID:	LC12		
Lims ID:	STD1				
Client ID:					
Operator ID:	AO	ALS Bottle#:	3	Worklist Smp#:	4
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

10 o-Nitrotoluene, CAS: 88-72-2

Signal: 1

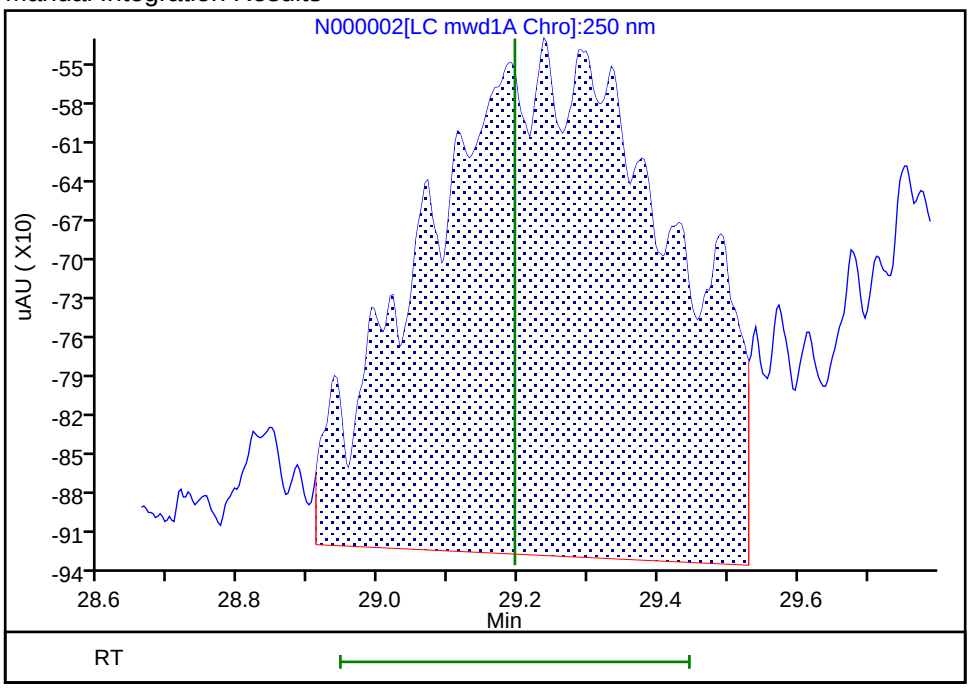
Processing Integration Results

RT: 29.24
Height: 310
Amount: 4.669317
Amount Units: ng/ml



Manual Integration Results

RT: 29.24
Height: 401
Amount: 5.643391
Amount Units: ng/ml



Reviewer: ortizam, 15-May-2019 08:46:11

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

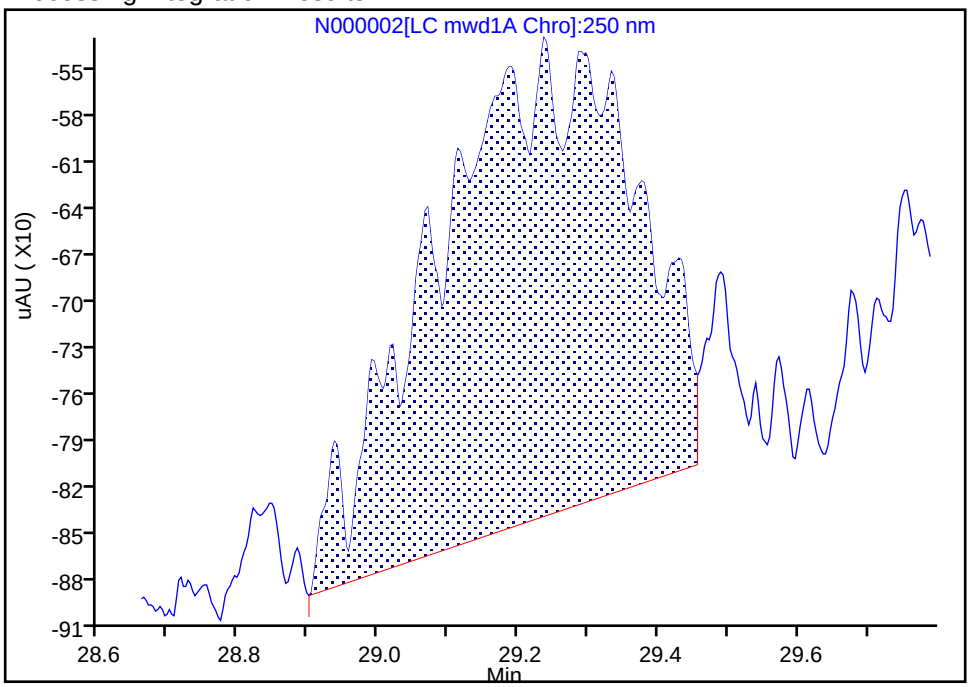
Data File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000002.D				
Injection Date:	14-May-2019 16:46:16	Instrument ID:	LC12		
Lims ID:	STD1				
Client ID:					
Operator ID:	AO	ALS Bottle#:	3	Worklist Smp#:	4
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

9 p-Nitrotoluene, CAS: 99-99-0

Signal: 1

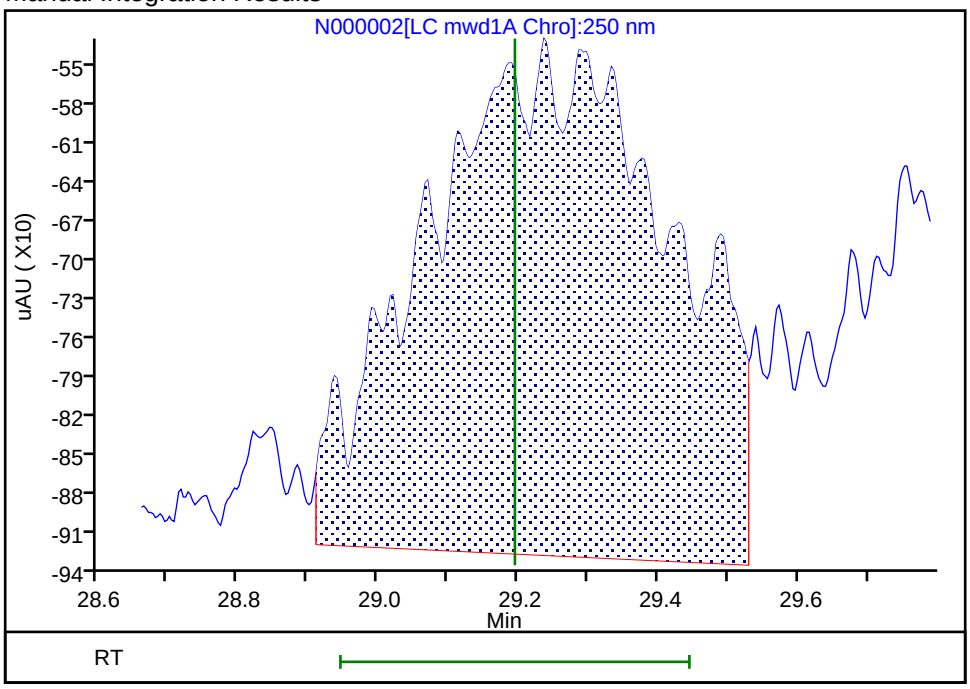
Processing Integration Results

RT: 29.24
Height: 310
Amount: 4.669317
Amount Units: ng/ml



Manual Integration Results

RT: 29.24
Height: 401
Amount: 5.643391
Amount Units: ng/ml



Reviewer: ortizam, 15-May-2019 08:46:11

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

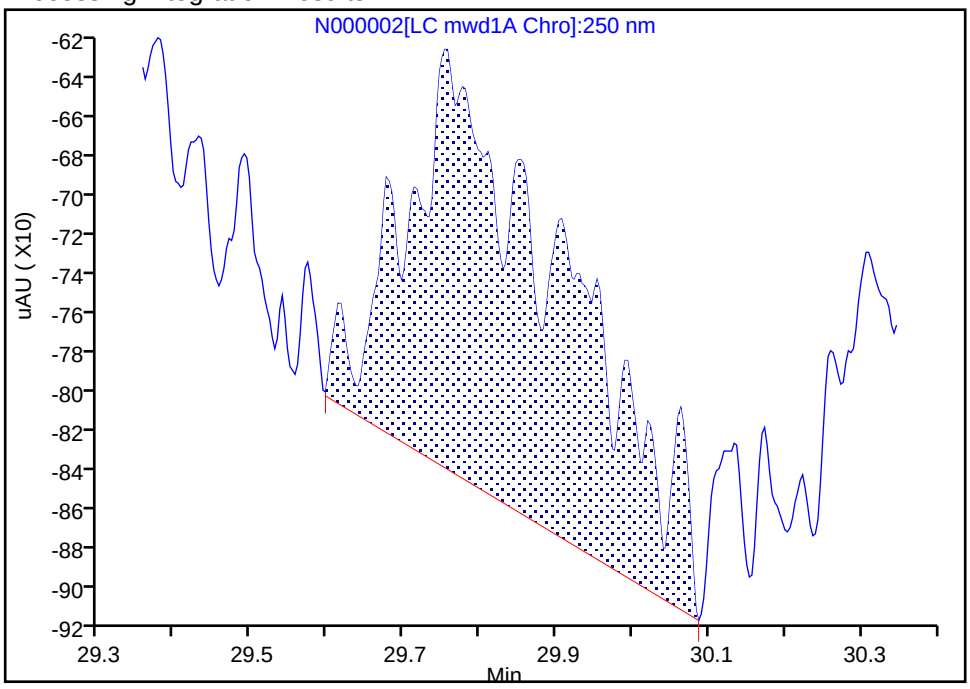
Data File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000002.D				
Injection Date:	14-May-2019 16:46:16	Instrument ID:	LC12		
Lims ID:	STD1				
Client ID:					
Operator ID:	AO	ALS Bottle#:	3	Worklist Smp#:	4
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

11 m-Nitrotoluene, CAS: 99-08-1

Signal: 1

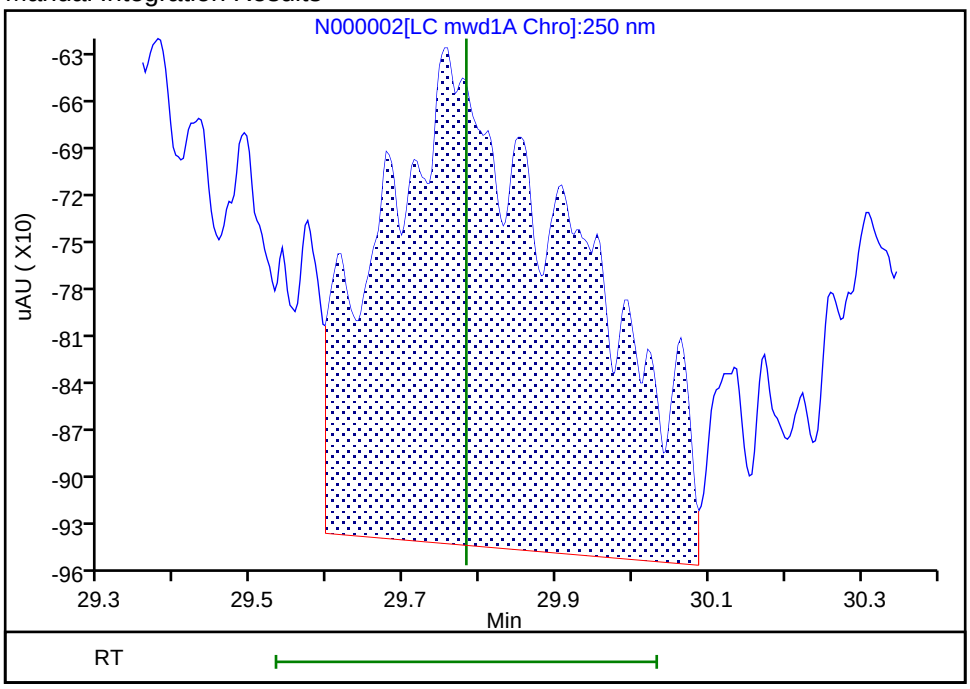
Processing Integration Results

RT: 29.76
Height: 213
Amount: 4.726012
Amount Units: ng/ml



Manual Integration Results

RT: 29.75
Height: 310
Amount: 5.017358
Amount Units: ng/ml



Reviewer: ortizam, 15-May-2019 08:45:08
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

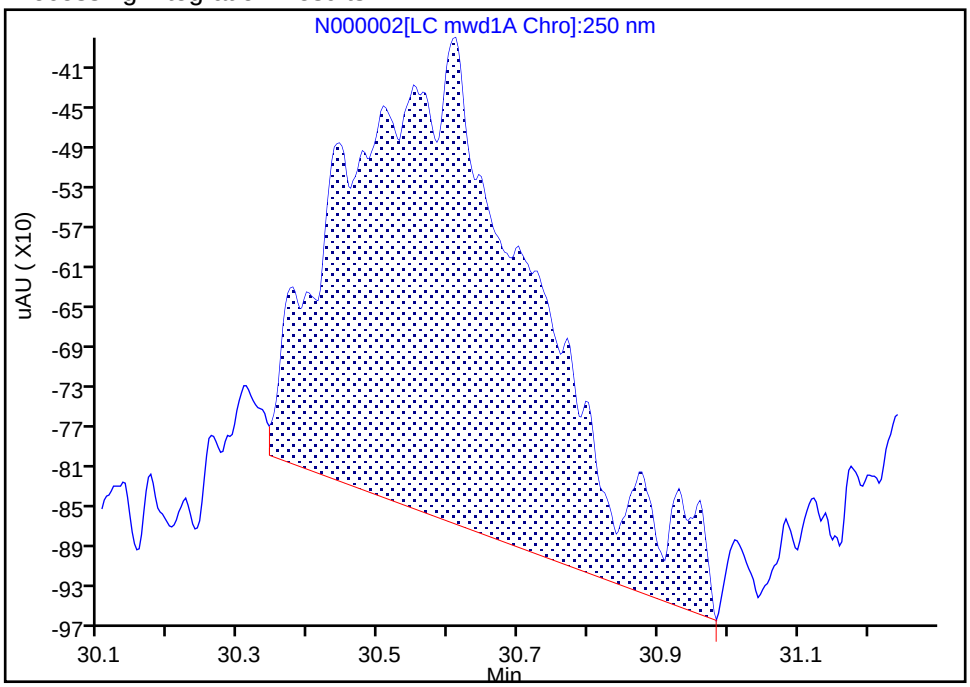
Data File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000002.D				
Injection Date:	14-May-2019 16:46:16	Instrument ID:	LC12		
Lims ID:	STD1				
Client ID:					
Operator ID:	AO	ALS Bottle#:	3	Worklist Smp#:	4
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

12 3,5-Dinitroaniline, CAS: 618-87-1

Signal: 1

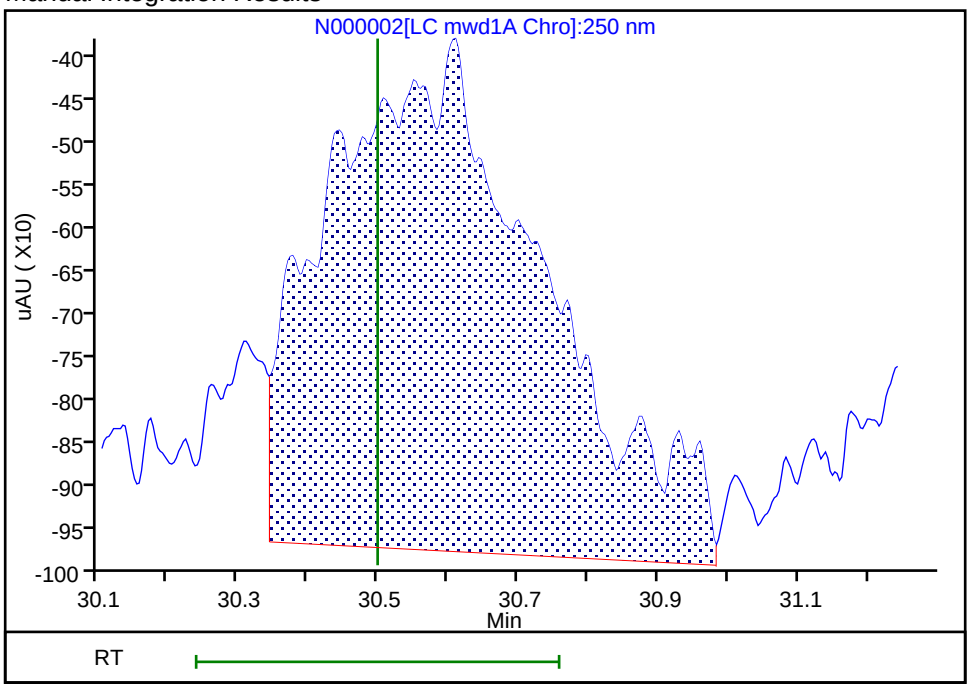
Processing Integration Results

RT: 30.61
Height: 489
Amount: 5.037061
Amount Units: ng/ml



Manual Integration Results

RT: 30.61
Height: 593
Amount: 5.926926
Amount Units: ng/ml



Reviewer: ortizam, 15-May-2019 08:45:08

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

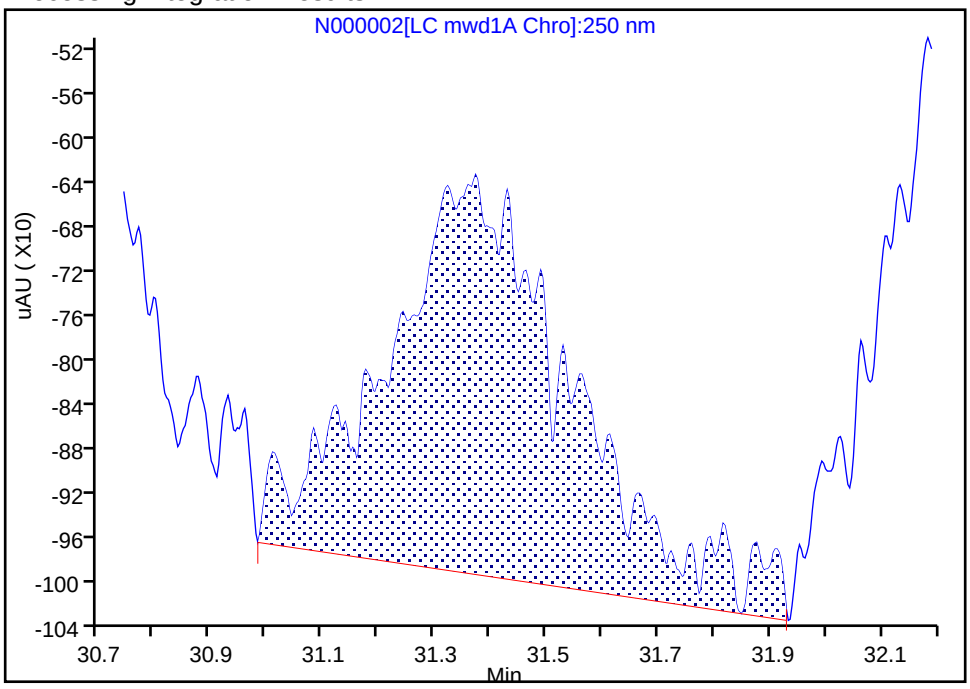
Data File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000002.D				
Injection Date:	14-May-2019 16:46:16	Instrument ID:	LC12		
Lims ID:	STD1				
Client ID:					
Operator ID:	AO	ALS Bottle#:	3	Worklist Smp#:	4
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

13 RDX, CAS: 121-82-4

Signal: 1

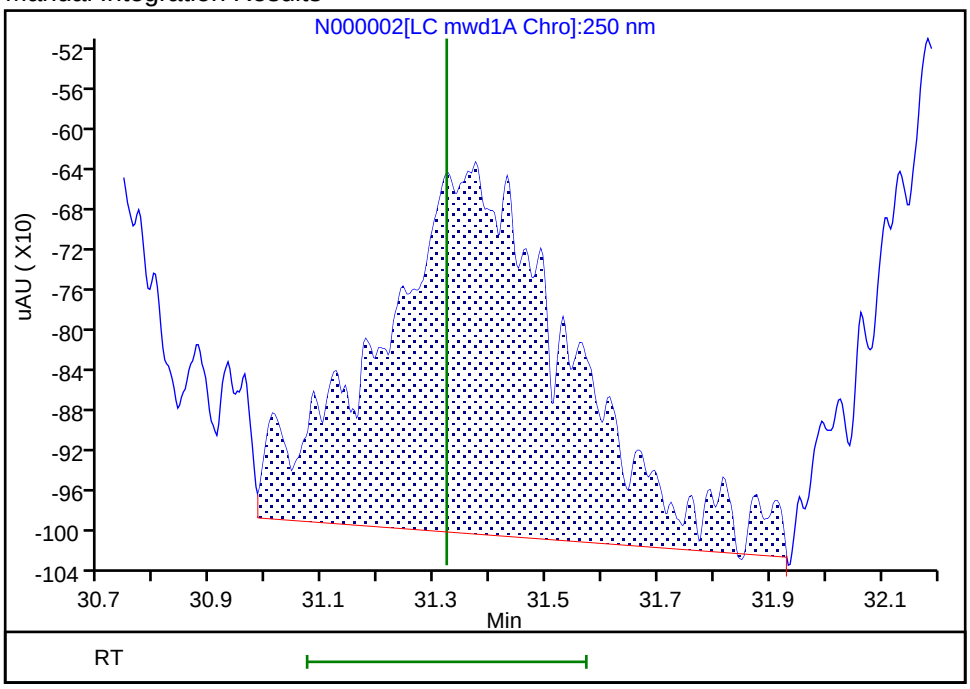
Processing Integration Results

RT: 31.37
Height: 358
Amount: 6.292735
Amount Units: ng/ml



Manual Integration Results

RT: 31.37
Height: 369
Amount: 5.345462
Amount Units: ng/ml



Reviewer: ortizam, 15-May-2019 08:45:08
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

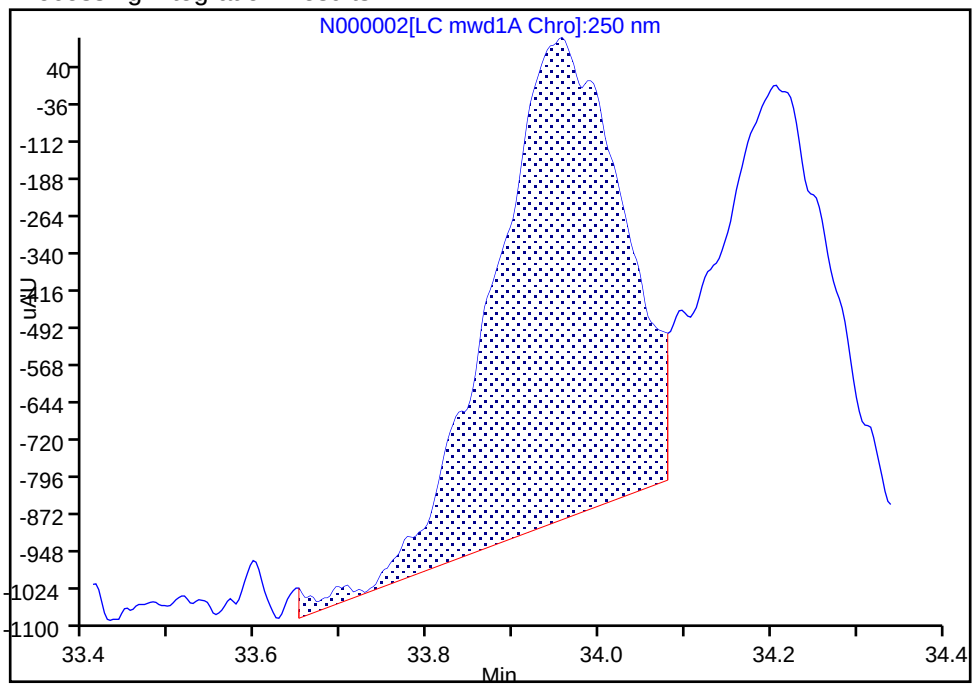
Data File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000002.D				
Injection Date:	14-May-2019 16:46:16	Instrument ID:	LC12		
Lims ID:	STD1				
Client ID:					
Operator ID:	AO	ALS Bottle#:	3	Worklist Smp#:	4
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

16 2-Amino-4,6-dinitrotoluene, CAS: 35572-78-2

Signal: 1

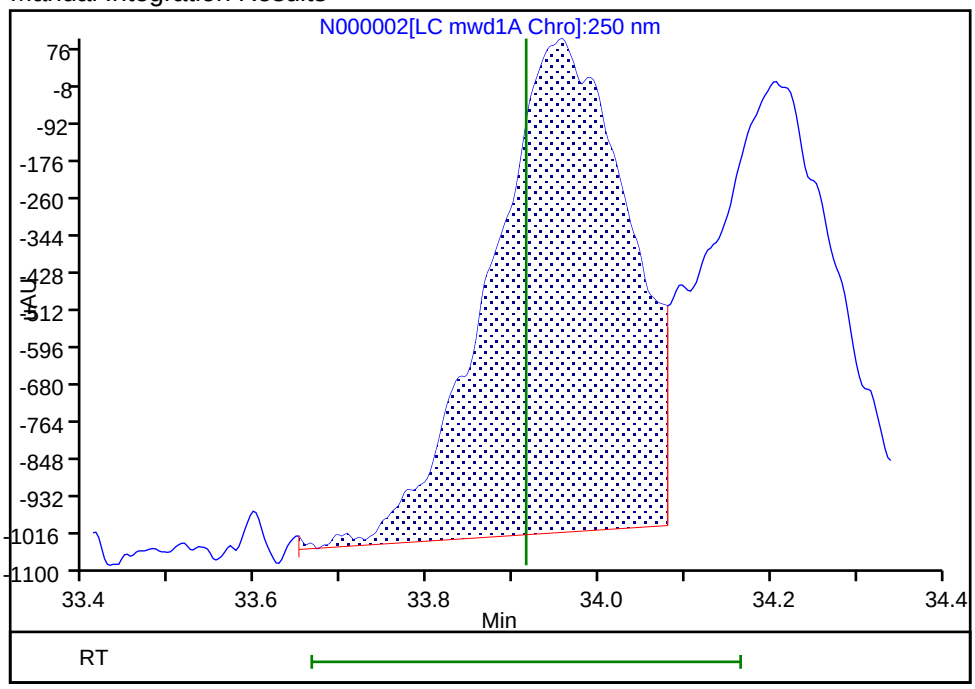
Processing Integration Results

RT: 33.96
Height: 910
Amount: 4.633654
Amount Units: ng/ml



Manual Integration Results

RT: 33.96
Height: 1032
Amount: 5.103046
Amount Units: ng/ml



Reviewer: ortizam, 15-May-2019 08:45:12

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

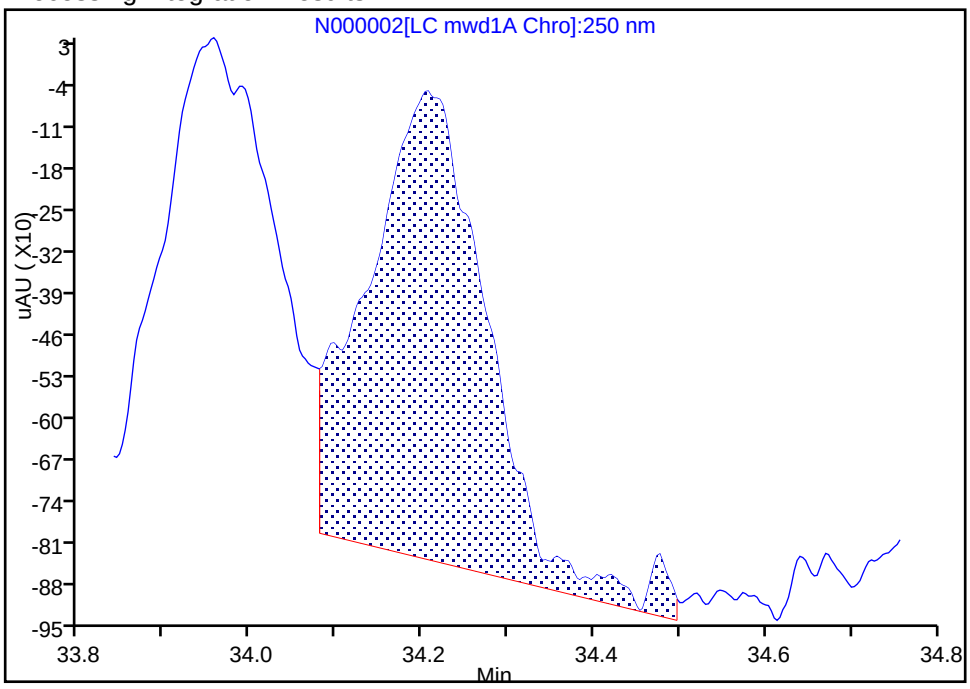
Data File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000002.D				
Injection Date:	14-May-2019 16:46:16	Instrument ID:	LC12		
Lims ID:	STD1				
Client ID:					
Operator ID:	AO	ALS Bottle#:	3	Worklist Smp#:	4
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

17 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

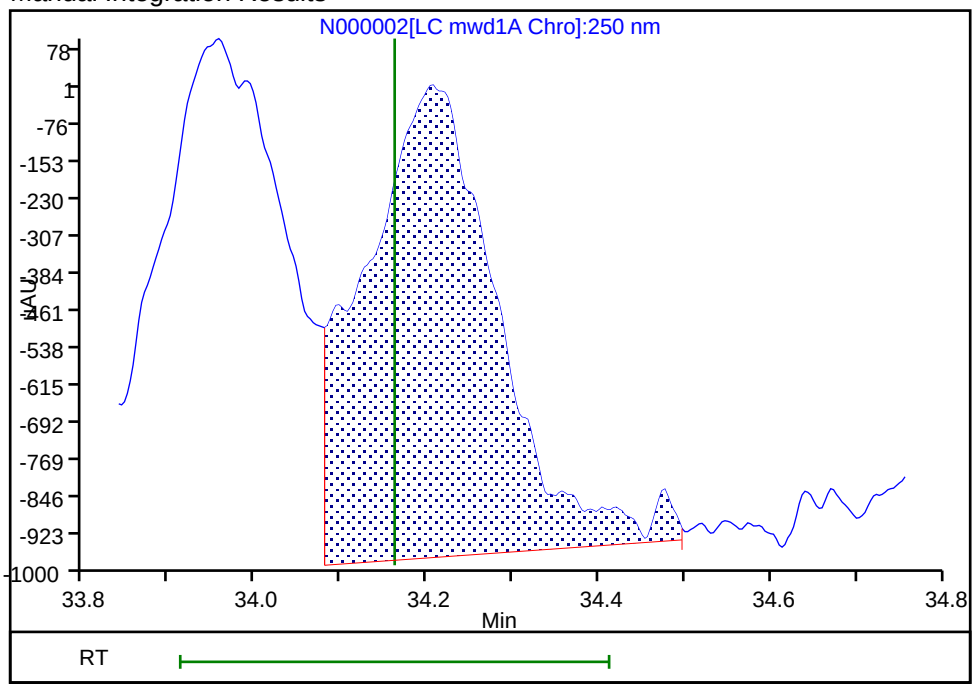
Processing Integration Results

RT: 34.21
Area: 7793
Amount: 4.527769
Amount Units: ng/ml



Manual Integration Results

RT: 34.21
Area: 9893
Amount: 5.026724
Amount Units: ng/ml



Reviewer: ortizam, 15-May-2019 08:45:12

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

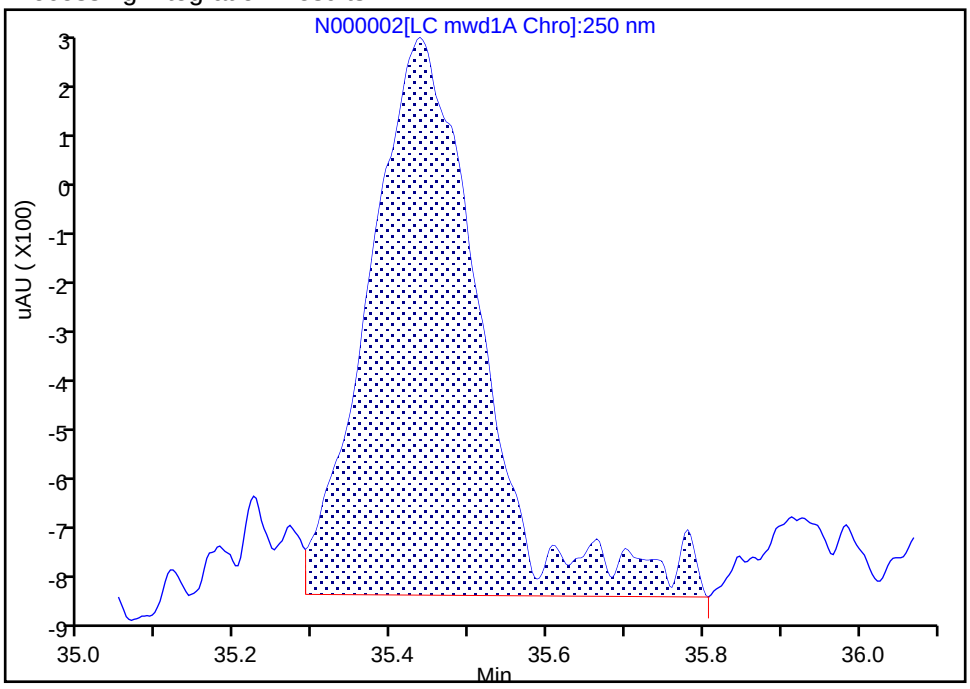
Data File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000002.D				
Injection Date:	14-May-2019 16:46:16	Instrument ID:	LC12		
Lims ID:	STD1				
Client ID:					
Operator ID:	AO	ALS Bottle#:	3	Worklist Smp#:	4
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

19 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

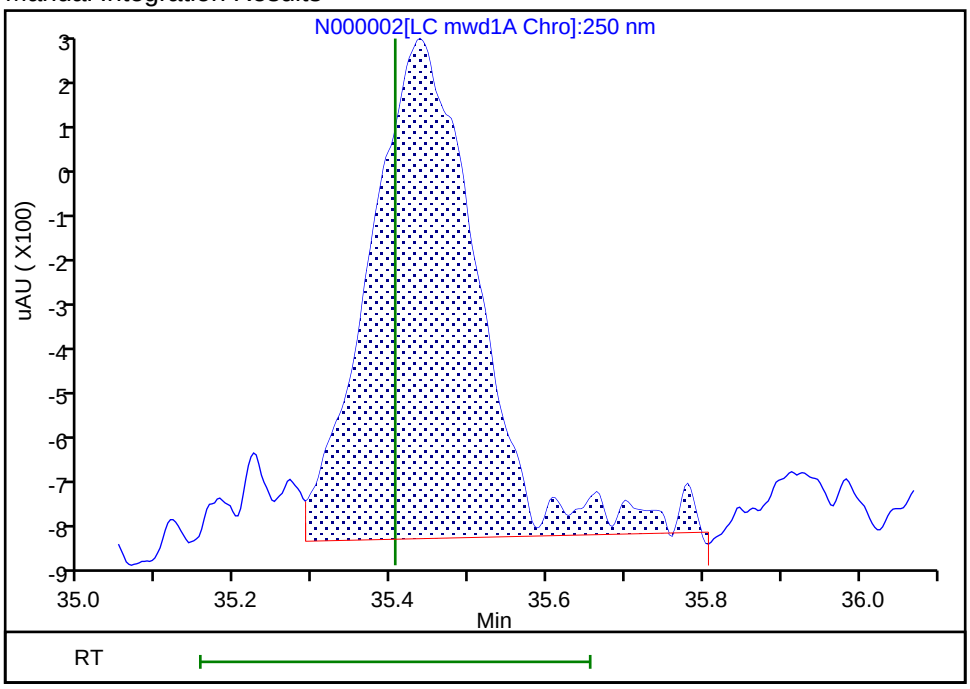
Processing Integration Results

RT: 35.44
Height: 1050
Amount: 5.065804
Amount Units: ng/ml



Manual Integration Results

RT: 35.44
Height: 1042
Amount: 5.032559
Amount Units: ng/ml



Reviewer: ortizam, 15-May-2019 08:45:40

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

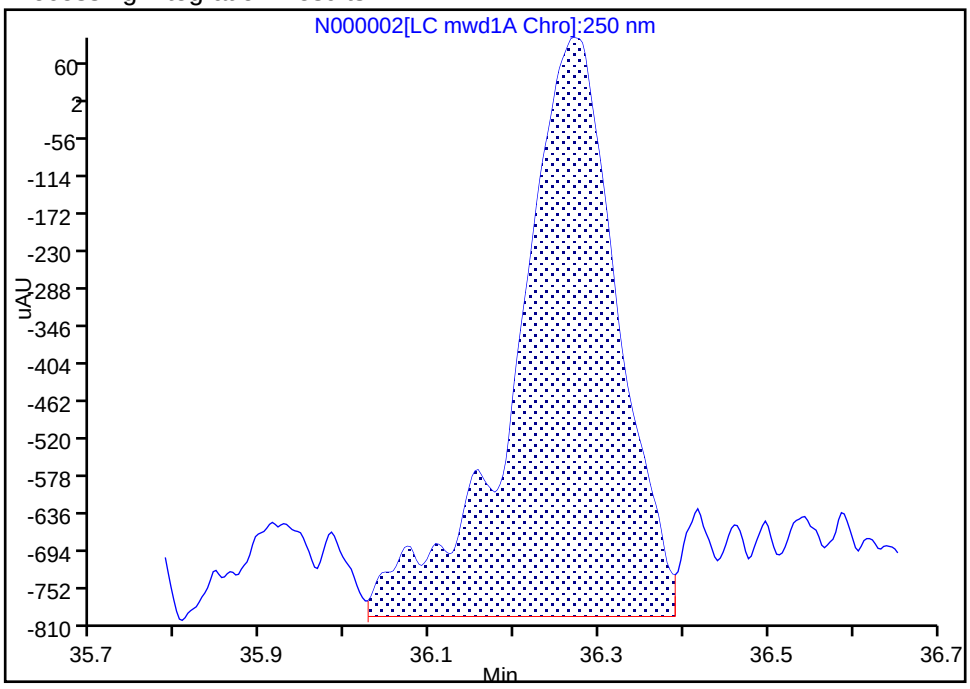
Data File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000002.D				
Injection Date:	14-May-2019 16:46:16	Instrument ID:	LC12		
Lims ID:	STD1				
Client ID:					
Operator ID:	AO	ALS Bottle#:	3	Worklist Smp#:	4
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

20 HMX, CAS: 2691-41-0

Signal: 1

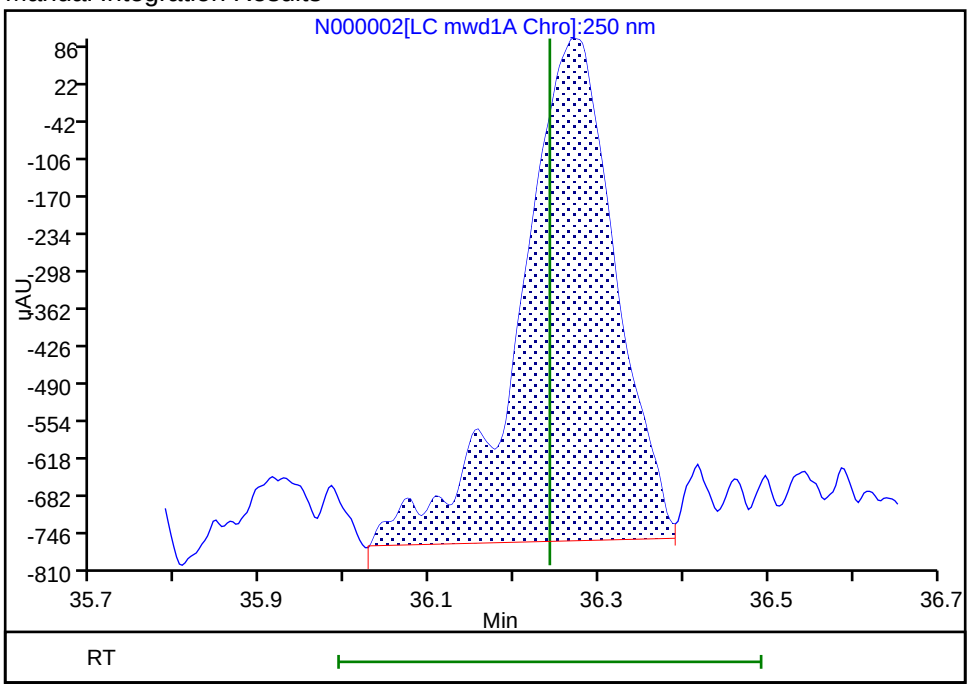
Processing Integration Results

RT: 36.27
Height: 892
Amount: 5.645524
Amount Units: ng/ml



Manual Integration Results

RT: 36.27
Height: 856
Amount: 5.453177
Amount Units: ng/ml



Reviewer: ortizam, 15-May-2019 08:45:40

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

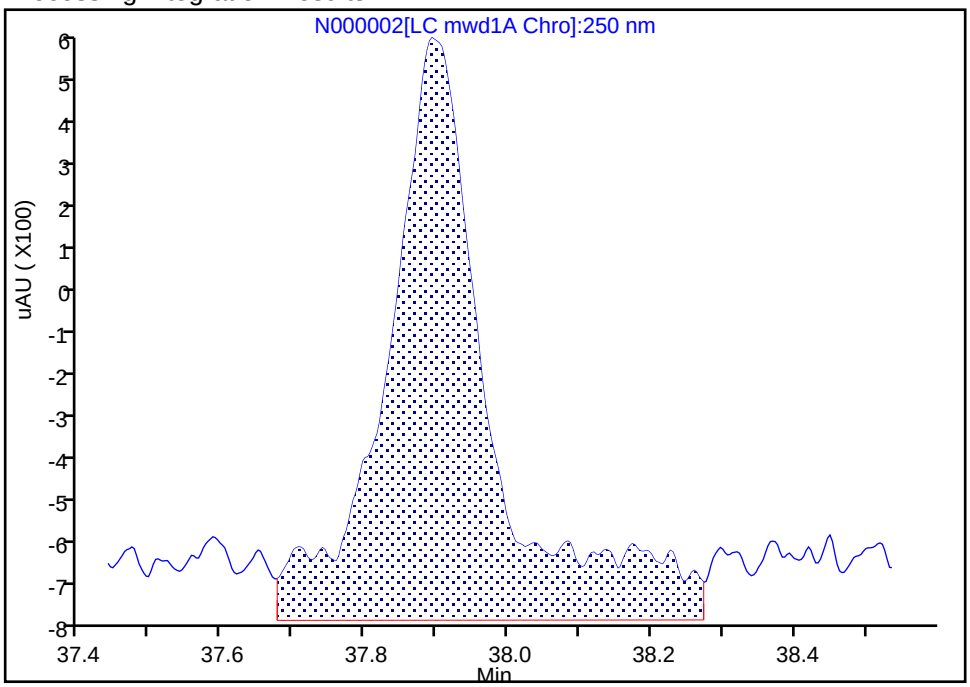
Data File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000002.D				
Injection Date:	14-May-2019 16:46:16	Instrument ID:	LC12		
Lims ID:	STD1				
Client ID:					
Operator ID:	AO	ALS Bottle#:	3	Worklist Smp#:	4
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

22 Tetryl, CAS: 479-45-8

Signal: 1

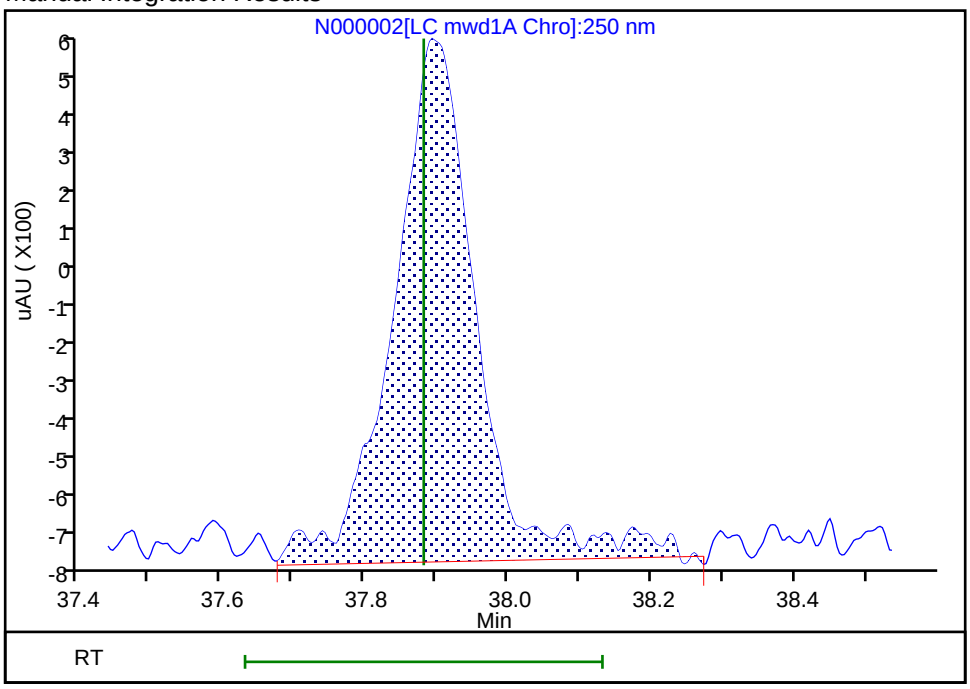
Processing Integration Results

RT: 37.89
Height: 1316
Amount: 5.534624
Amount Units: ng/ml



Manual Integration Results

RT: 37.89
Height: 1225
Amount: 5.208868
Amount Units: ng/ml



Reviewer: ortizam, 15-May-2019 08:45:40

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000003.D
Lims ID: STD2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 14-May-2019 17:43:44 ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: std2
Operator ID: AO Instrument ID: LC12
Sublist: chrom-LC12_Conf_8330*sub10

Method: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 15-May-2019 09:39:32 Calib Date: 15-May-2019 07:09:15
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0306

First Level Reviewer: ortizam Date: 15-May-2019 08:47:25

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
3 Nitrobenzene							M
1	22.167	22.152	0.015	623H	10.0	11.0	M
6 1,3-Dinitrobenzene							
1	24.557	24.525	0.032	1184H	10.0	10.1	
7 1,3,5-Trinitrobenzene							
1	26.667	26.645	0.022	1008H	10.0	10.8	
9 p-Nitrotoluene							
1	29.243	29.195	0.048	743H	10.0	10.5	
10 o-Nitrotoluene							
1	29.243	29.195	0.048	743H	10.0	10.5	
11 m-Nitrotoluene							
1	29.820	29.782	0.038	505H	10.0	9.61	
12 3,5-Dinitroaniline							
1	30.527	30.498	0.029	1007H	10.0	10.1	
13 RDX							
1	31.363	31.322	0.041	525H	10.0	8.33	
14 2,4-Dinitrotoluene							
1	32.273	32.208	0.065	1265H	10.0	10.0	
15 2,6-Dinitrotoluene							
1	32.950	32.902	0.048	979H	10.0	10.3	
16 2-Amino-4,6-dinitrotoluene							M
1	33.940	33.915	0.025	2061H	10.0	10.2	M
17 4-Amino-2,6-dinitrotoluene							M
1	34.190	34.162	0.028	18406	10.0	9.76	M
$ 18 3,4-Dinitrotoluene							
1	34.853	34.838	0.015	1423H	10.0	10.2	
19 2,4,6-Trinitrotoluene							
1	35.437	35.405	0.032	2015H	10.0	9.73	

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
20 HMX							
1	36.257	36.242	0.015	1563H	10.0	9.96	
21 Nitroglycerin							
2	36.990	36.985	0.005	1898H	10.0	9.81	
22 Tetryl							
1	37.897	37.882	0.015	2363H	10.0	10.0	
23 PETN							
2	41.150	41.138	0.012	2032H	10.0	9.39	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

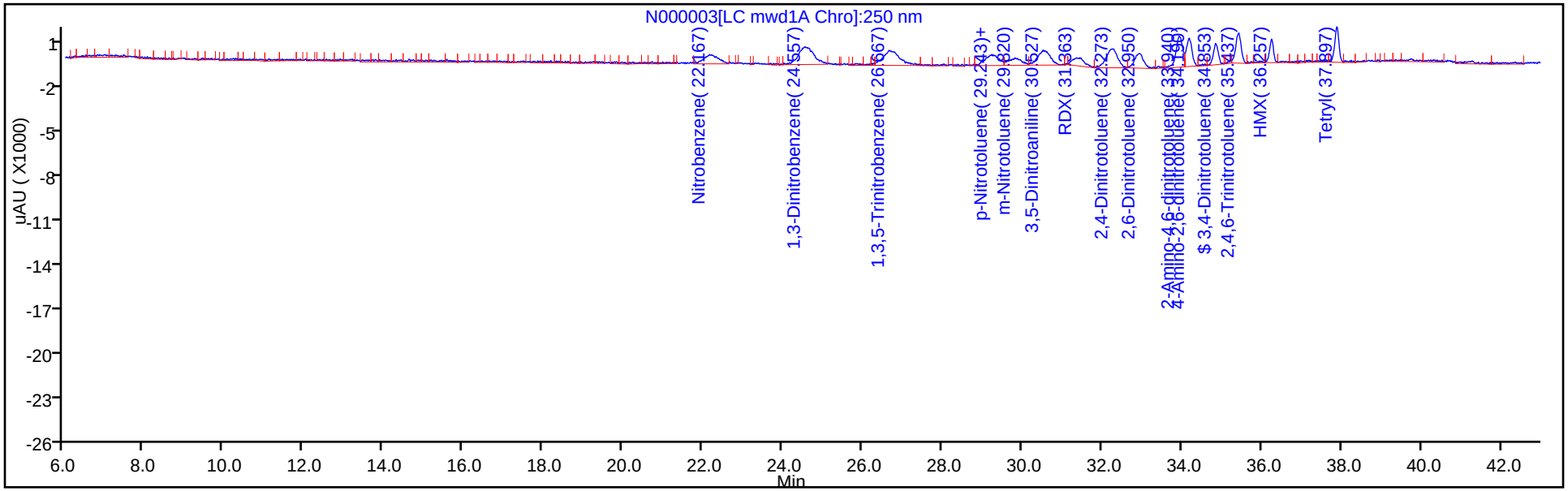
HP8330L2_00033 Amount Added: 1.00 Units: mL

Report Date: 15-May-2019 09:39:33 Chrom Revision: 2.3 12-May-2019 16:28:34

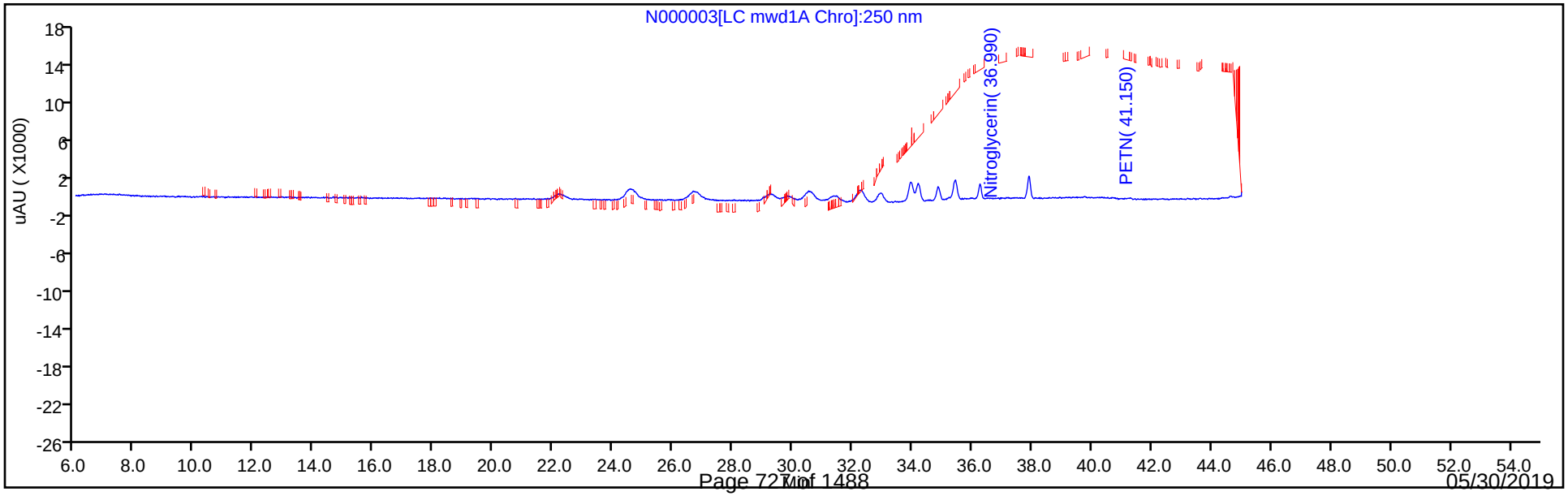
Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000003.D				
Injection Date:	14-May-2019 17:43:44	Instrument ID:	LC12	Operator ID:	AO
Lims ID:	STD2			Worklist Smp#:	5
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

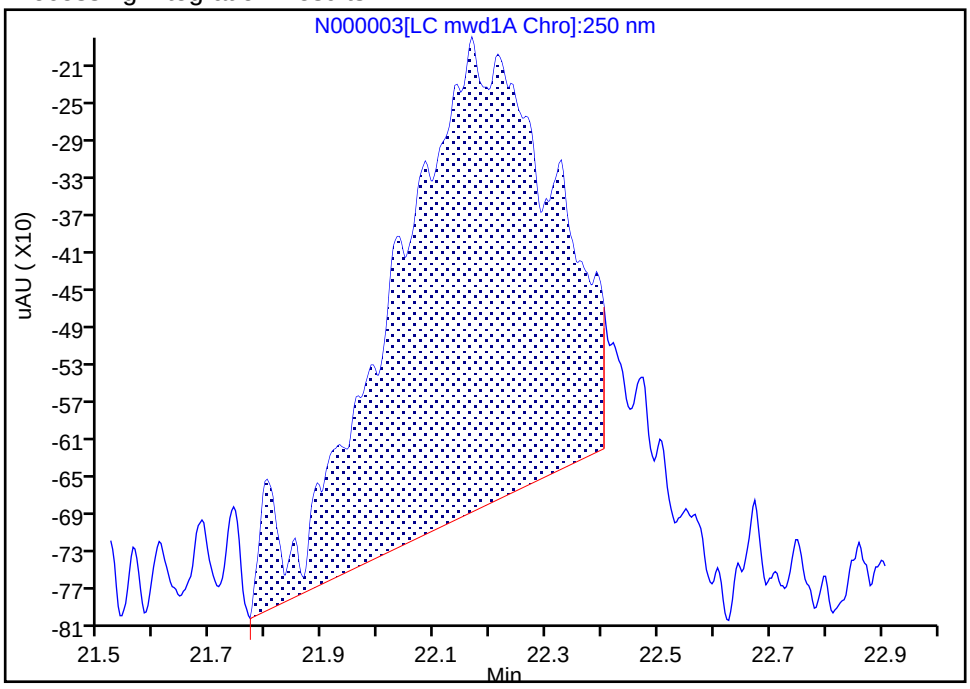
Data File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000003.D				
Injection Date:	14-May-2019 17:43:44	Instrument ID:	LC12		
Lims ID:	STD2				
Client ID:					
Operator ID:	AO	ALS Bottle#:	4	Worklist Smp#:	5
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

3 Nitrobenzene, CAS: 98-95-3

Signal: 1

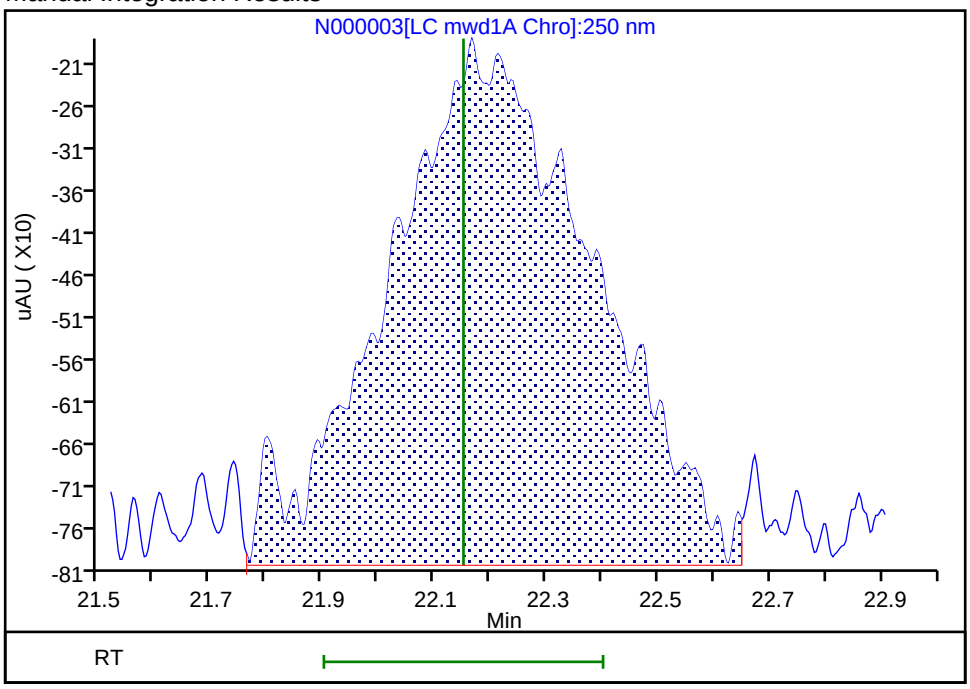
Processing Integration Results

RT: 22.17
Height: 505
Amount: 9.331338
Amount Units: ng/ml



Manual Integration Results

RT: 22.17
Height: 623
Amount: 10.972974
Amount Units: ng/ml



Reviewer: ortizam, 15-May-2019 08:46:48

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

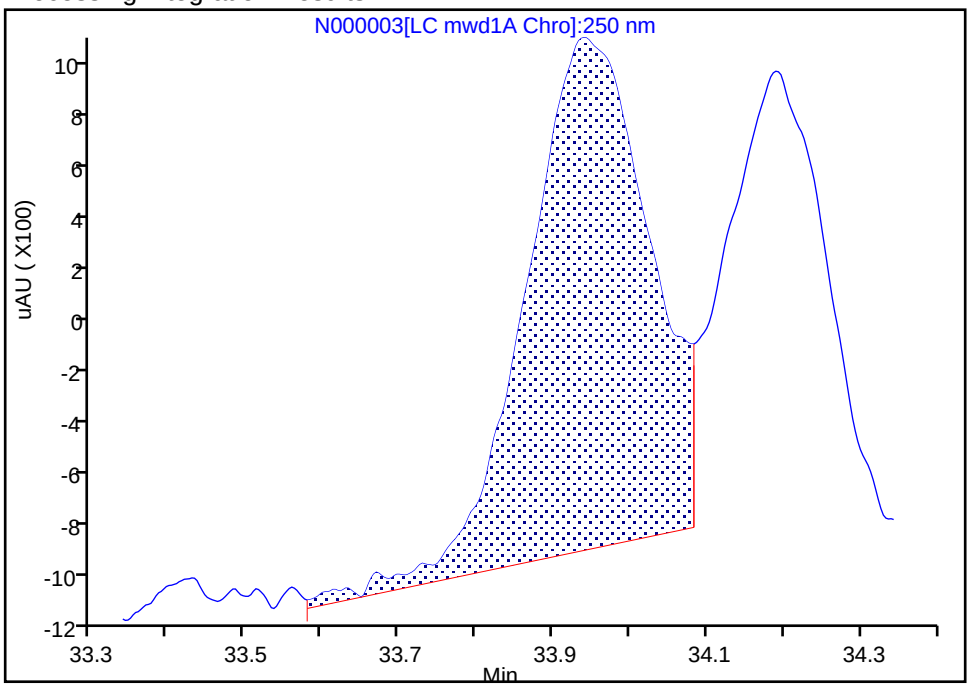
Data File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000003.D				
Injection Date:	14-May-2019 17:43:44	Instrument ID:	LC12		
Lims ID:	STD2				
Client ID:					
Operator ID:	AO	ALS Bottle#:	4	Worklist Smp#:	5
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

16 2-Amino-4,6-dinitrotoluene, CAS: 35572-78-2

Signal: 1

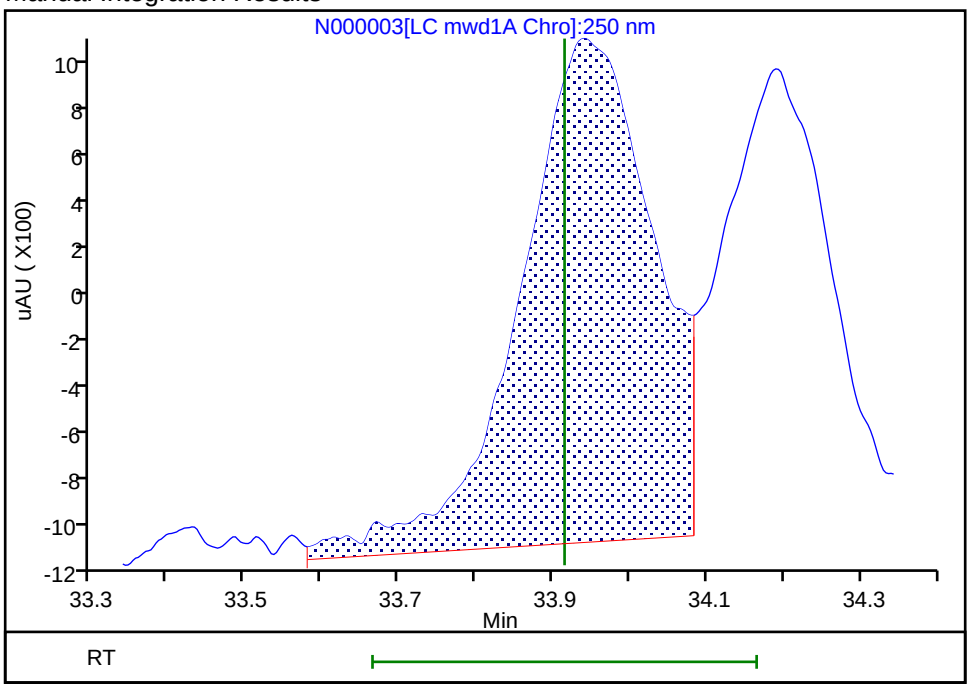
Processing Integration Results

RT: 33.94
Height: 1896
Amount: 9.485929
Amount Units: ng/ml



Manual Integration Results

RT: 33.94
Height: 2061
Amount: 10.191258
Amount Units: ng/ml



Reviewer: ortizam, 15-May-2019 08:47:04

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

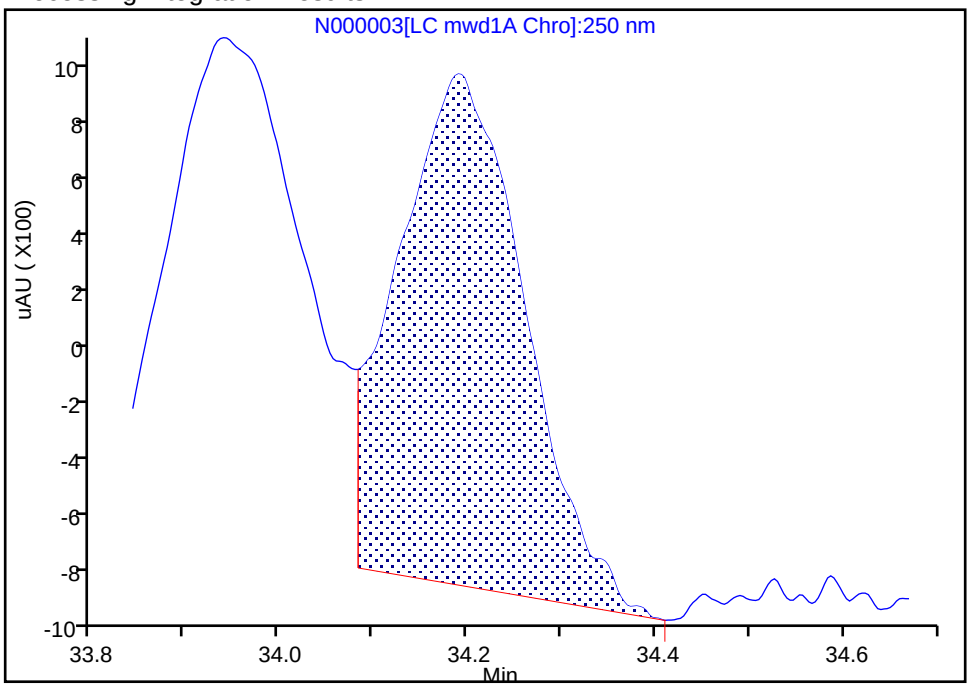
Data File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000003.D				
Injection Date:	14-May-2019 17:43:44	Instrument ID:	LC12		
Lims ID:	STD2				
Client ID:					
Operator ID:	AO	ALS Bottle#:	4	Worklist Smp#:	5
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

17 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

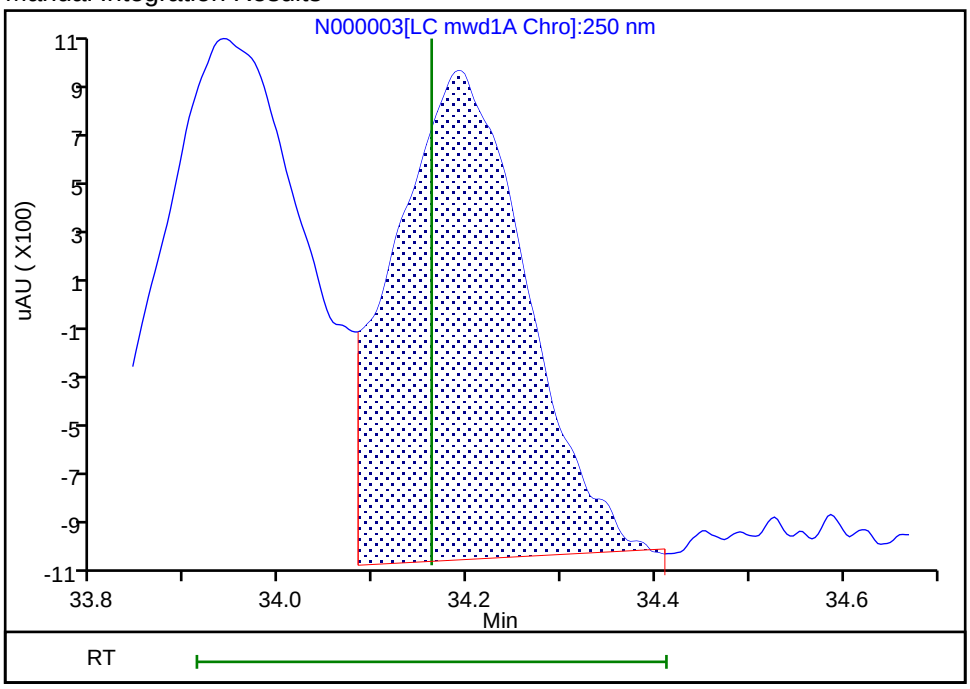
Processing Integration Results

RT: 34.19
Area: 16407
Amount: 9.803748
Amount Units: ng/ml



Manual Integration Results

RT: 34.19
Area: 18406
Amount: 9.762282
Amount Units: ng/ml



Reviewer: ortizam, 15-May-2019 08:47:04

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000004.D
Lims ID: STD3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 14-May-2019 18:41:14 ALS Bottle#: 5 Worklist Smp#: 6
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: std3
Operator ID: AO Instrument ID: LC12
Sublist: chrom-LC12_Conf_8330*sub10

Method: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 15-May-2019 09:39:35 Calib Date: 15-May-2019 07:09:15
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0306

First Level Reviewer: ortizam Date: 15-May-2019 08:48:28

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
3 Nitrobenzene							M
1	22.233	22.152	0.081	1156H	20.0	20.4	M
6 1,3-Dinitrobenzene							
1	24.573	24.525	0.048	2321H	20.0	19.9	
7 1,3,5-Trinitrobenzene							
1	26.693	26.645	0.048	1924H	20.0	20.5	
9 p-Nitrotoluene							
1	29.223	29.195	0.028	1493H	20.0	21.0	
10 o-Nitrotoluene							
1	29.223	29.195	0.028	1493H	20.0	21.0	
11 m-Nitrotoluene							
1	29.807	29.782	0.025	1003H	20.0	21.3	
12 3,5-Dinitroaniline							
1	30.527	30.498	0.029	2049H	20.0	20.5	
13 RDX							
1	31.363	31.322	0.041	1198H	20.0	21.2	
14 2,4-Dinitrotoluene							
1	32.210	32.208	0.002	2572H	20.0	20.4	
15 2,6-Dinitrotoluene							
1	32.900	32.902	-0.002	1916H	20.0	20.1	
16 2-Amino-4,6-dinitrotoluene							
1	33.937	33.915	0.022	4166H	20.0	20.6	
17 4-Amino-2,6-dinitrotoluene							
1	34.183	34.162	0.021	37905	20.0	20.6	
$ 18 3,4-Dinitrotoluene							
1	34.847	34.838	0.009	2903H	20.0	20.7	
19 2,4,6-Trinitrotoluene							M
1	35.417	35.405	0.012	4264H	20.0	20.6	M

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
20 HMX							
1	36.250	36.242	0.008	3209H	20.0	20.4	
21 Nitroglycerin							
2	36.987	36.985	0.002	3883H	20.0	20.1	
22 Tetryl							
1	37.890	37.882	0.008	4728H	20.0	20.1	
23 PETN							
2	41.150	41.138	0.012	4270H	20.0	19.7	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

HP8330L3_00036 Amount Added: 1.00 Units: mL

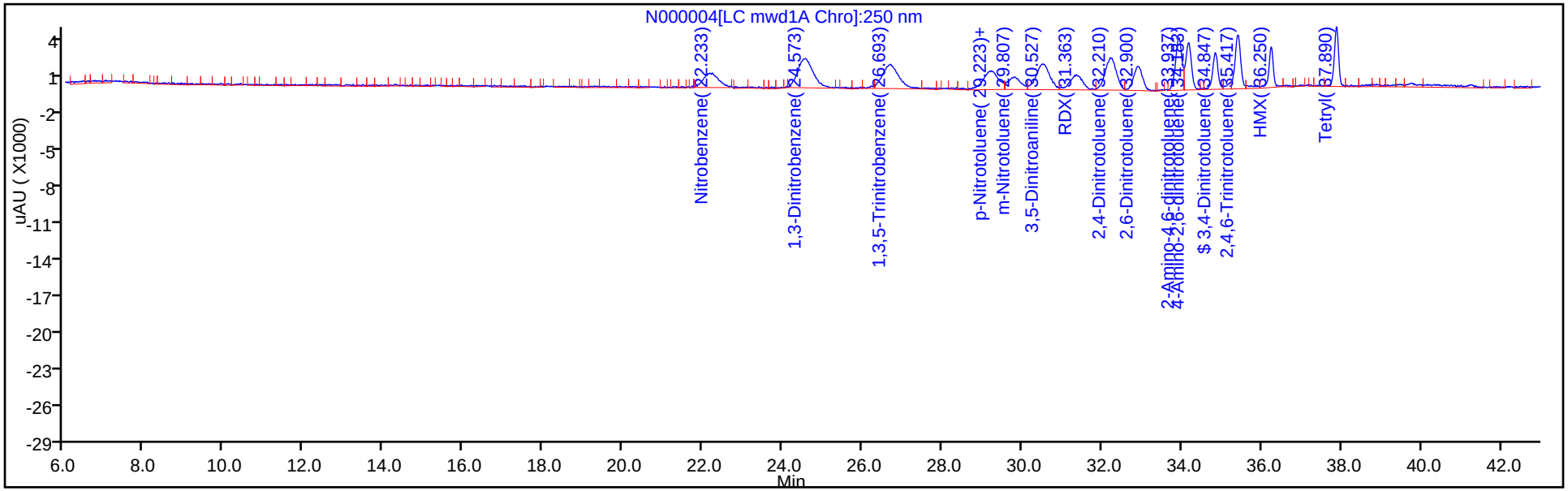
Report Date: 15-May-2019 09:39:36 Chrom Revision: 2.3 12-May-2019 16:28:34

Eurofins TestAmerica, Sacramento

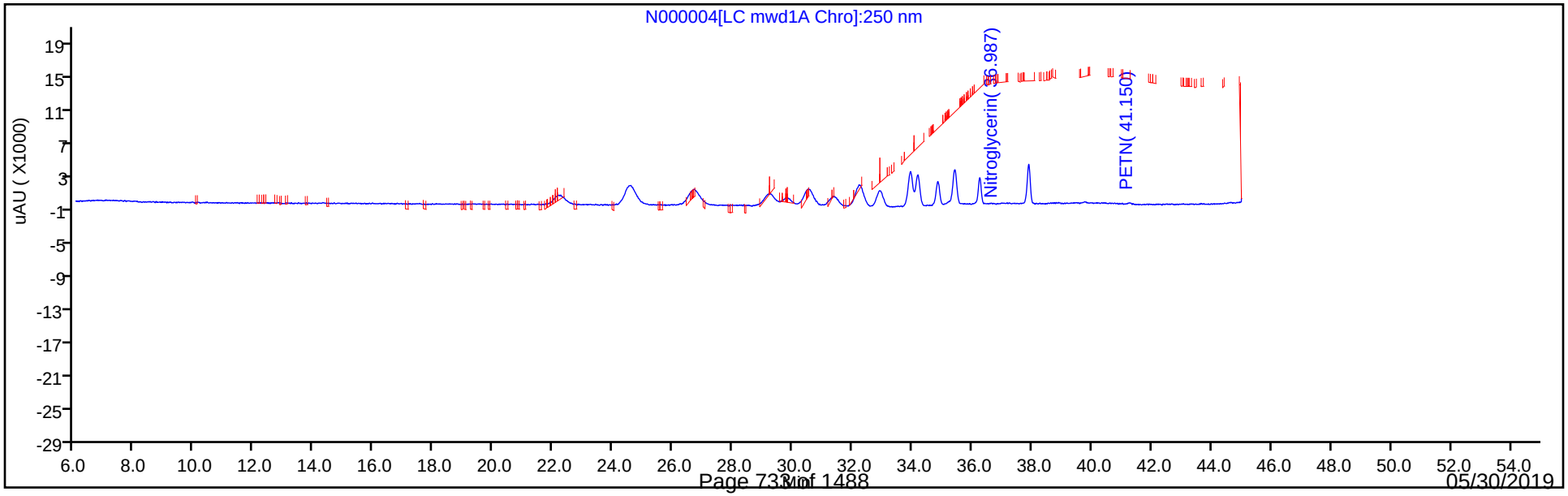
Data File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000004.D

Injection Date:	14-May-2019 18:41:14	Instrument ID:	LC12	Operator ID:	AO
Lims ID:	STD3			Worklist Smp#:	6
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

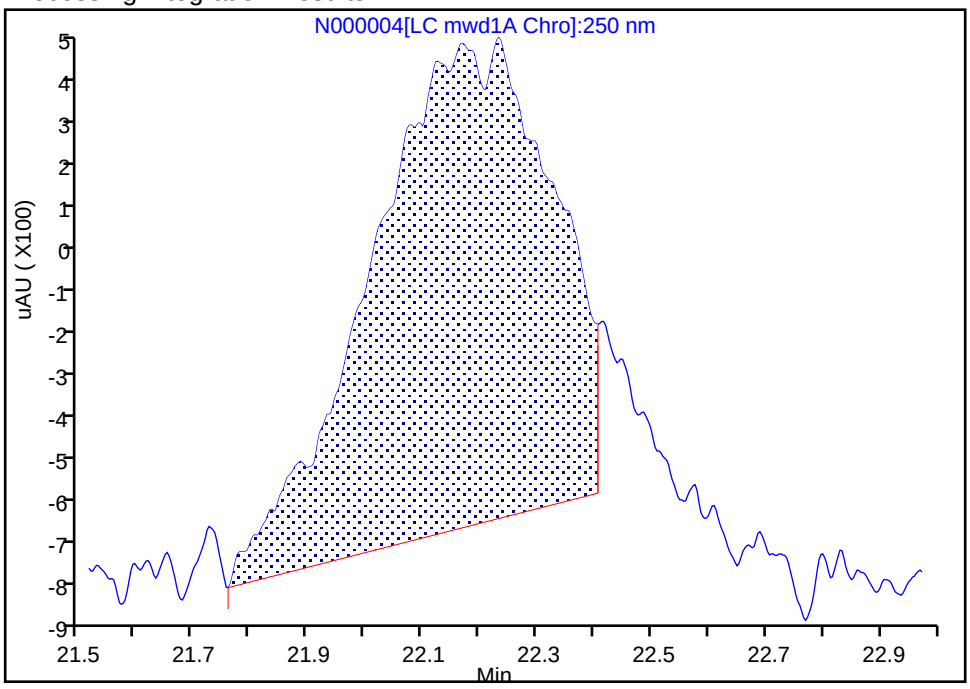
Data File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000004.D				
Injection Date:	14-May-2019 18:41:14	Instrument ID:	LC12		
Lims ID:	STD3				
Client ID:					
Operator ID:	AO	ALS Bottle#:	5	Worklist Smp#:	6
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

3 Nitrobenzene, CAS: 98-95-3

Signal: 1

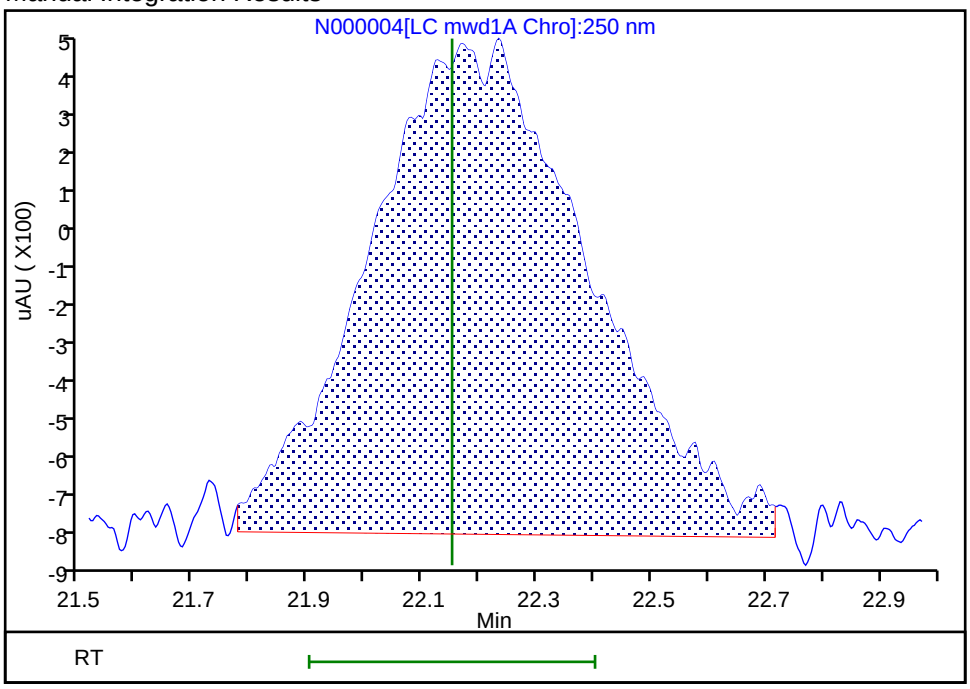
Processing Integration Results

RT: 22.17
Height: 1020
Amount: 18.278119
Amount Units: ng/ml



Manual Integration Results

RT: 22.23
Height: 1156
Amount: 20.360767
Amount Units: ng/ml



Reviewer: ortizam, 15-May-2019 08:47:45

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

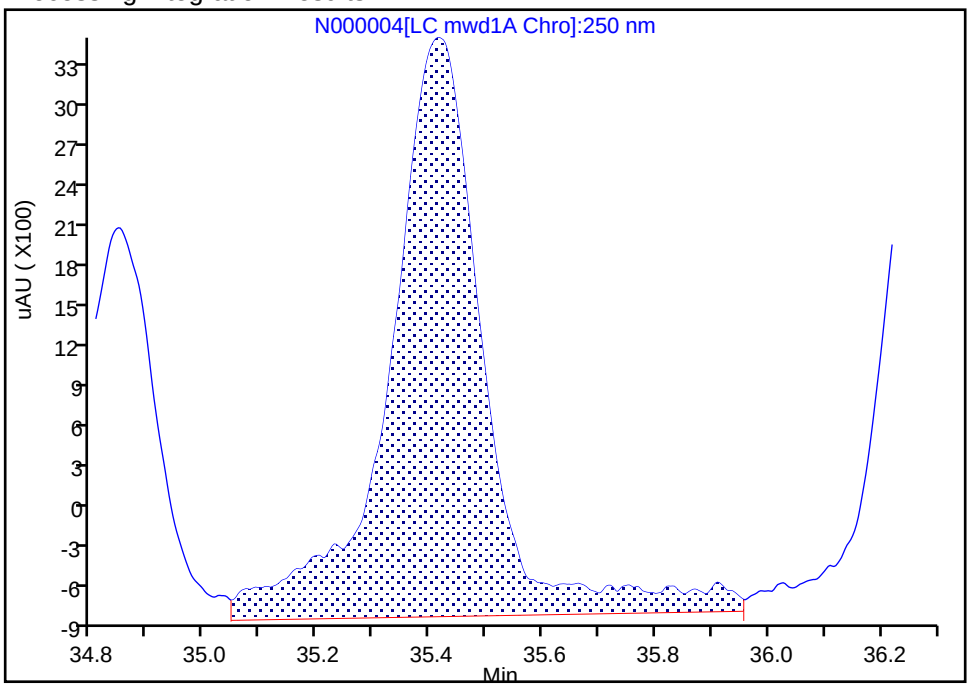
Data File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000004.D				
Injection Date:	14-May-2019 18:41:14	Instrument ID:	LC12		
Lims ID:	STD3				
Client ID:					
Operator ID:	AO	ALS Bottle#:	5	Worklist Smp#:	6
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

19 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

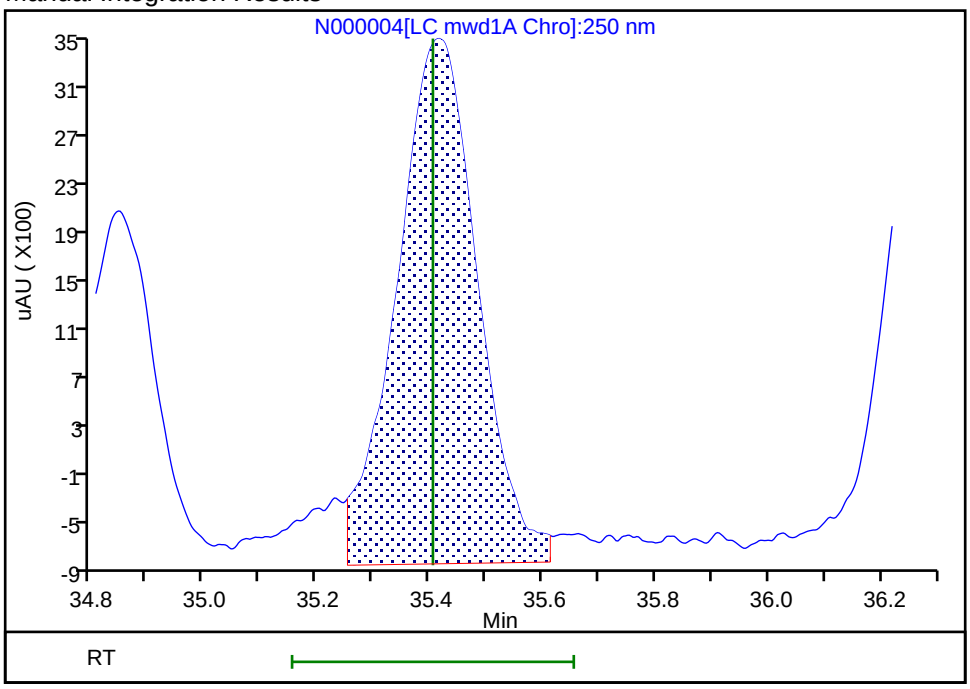
Processing Integration Results

RT: 35.42
Height: 4263
Amount: 20.589869
Amount Units: ng/ml



Manual Integration Results

RT: 35.42
Height: 4264
Amount: 20.593889
Amount Units: ng/ml



Reviewer: ortizam, 15-May-2019 08:48:12

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000005.D
Lims ID: STD4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 14-May-2019 19:38:48 ALS Bottle#: 6 Worklist Smp#: 7
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: std4
Operator ID: AO Instrument ID: LC12
Sublist: chrom-LC12_Conf_8330*sub10

Method: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 15-May-2019 09:39:38 Calib Date: 15-May-2019 07:09:15
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0306

First Level Reviewer: ortizam Date: 15-May-2019 08:43:21

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
3 Nitrobenzene							
1	22.152	22.152	0.000	2734H	50.0	48.2	
6 1,3-Dinitrobenzene							
1	24.525	24.525	0.000	5671H	50.0	48.6	
7 1,3,5-Trinitrobenzene							
1	26.645	26.645	0.000	4552H	50.0	48.6	
9 p-Nitrotoluene							
1	29.195	29.195	0.000	3445H	50.0	48.5	
10 o-Nitrotoluene							
1	29.195	29.195	0.000	3445H	50.0	48.5	
11 m-Nitrotoluene							
1	29.782	29.782	0.000	2218H	50.0	49.9	
12 3,5-Dinitroaniline							
1	30.498	30.498	0.000	4755H	50.0	47.5	
13 RDX							
1	31.322	31.322	0.000	2660H	50.0	49.2	
14 2,4-Dinitrotoluene							
1	32.208	32.208	0.000	6155H	50.0	48.8	
15 2,6-Dinitrotoluene							
1	32.902	32.902	0.000	4668H	50.0	49.1	
16 2-Amino-4,6-dinitrotoluene							
1	33.915	33.915	0.000	9933H	50.0	49.1	
17 4-Amino-2,6-dinitrotoluene							
1	34.162	34.162	0.000	90150	50.0	49.7	
$ 18 3,4-Dinitrotoluene							
1	34.838	34.838	0.000	6855H	50.0	49.0	
19 2,4,6-Trinitrotoluene							M
1	35.405	35.405	0.000	10383H	50.0	50.1	M

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
20 HMX							
1	36.242	36.242	0.000	7677H	50.0	48.9	
21 Nitroglycerin							
2	36.985	36.985	0.000	9770H	50.0	50.5	
22 Tetryl							
1	37.882	37.882	0.000	11710H	50.0	49.8	
23 PETN							
2	41.138	41.138	0.000	10929H	50.0	50.5	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

HP8330L4_00062 Amount Added: 1.00 Units: mL

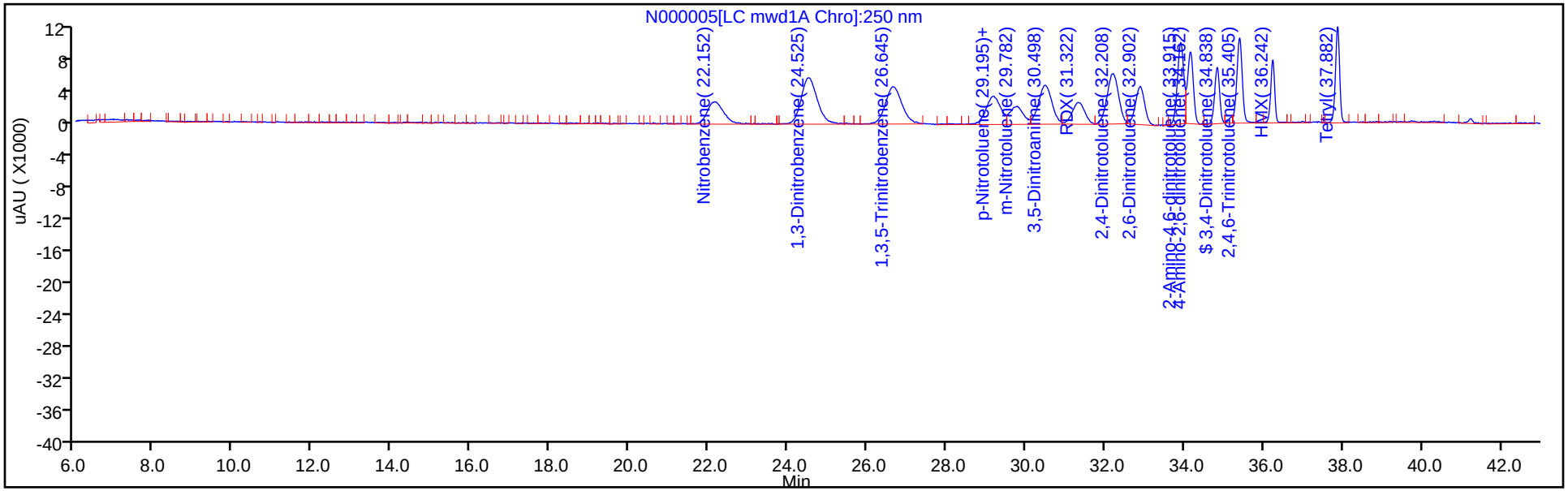
Report Date: 15-May-2019 09:39:39 Chrom Revision: 2.3 12-May-2019 16:28:34

Eurofins TestAmerica, Sacramento

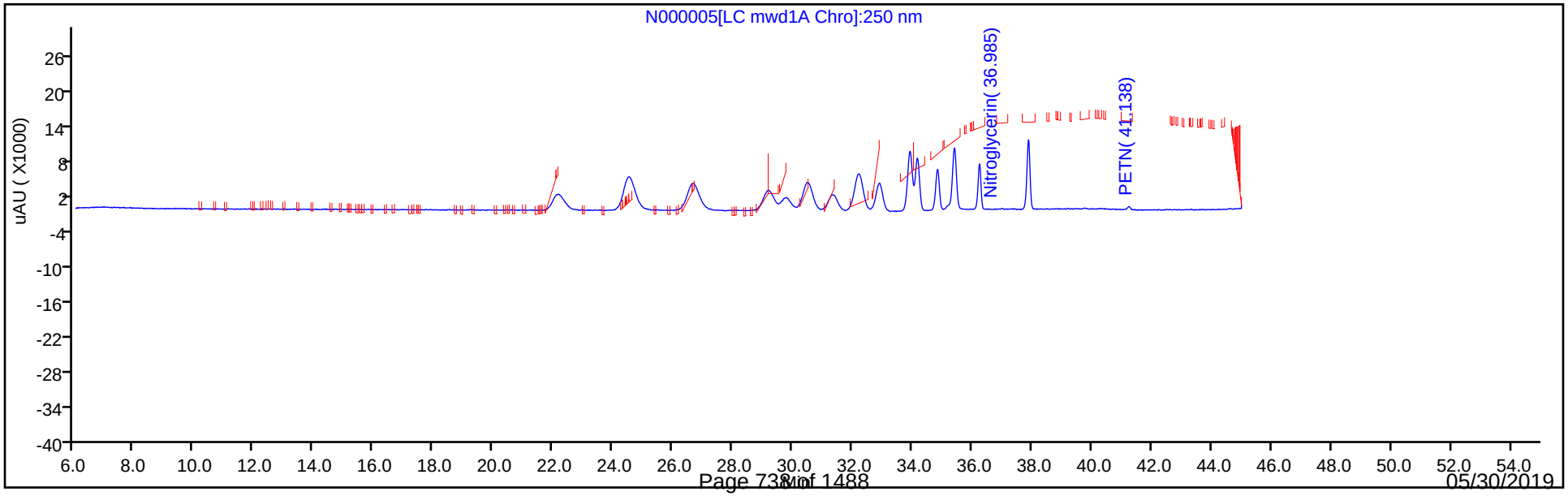
Data File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000005.D

Injection Date:	14-May-2019 19:38:48	Instrument ID:	LC12	Operator ID:	AO
Lims ID:	STD4			Worklist Smp#:	7
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

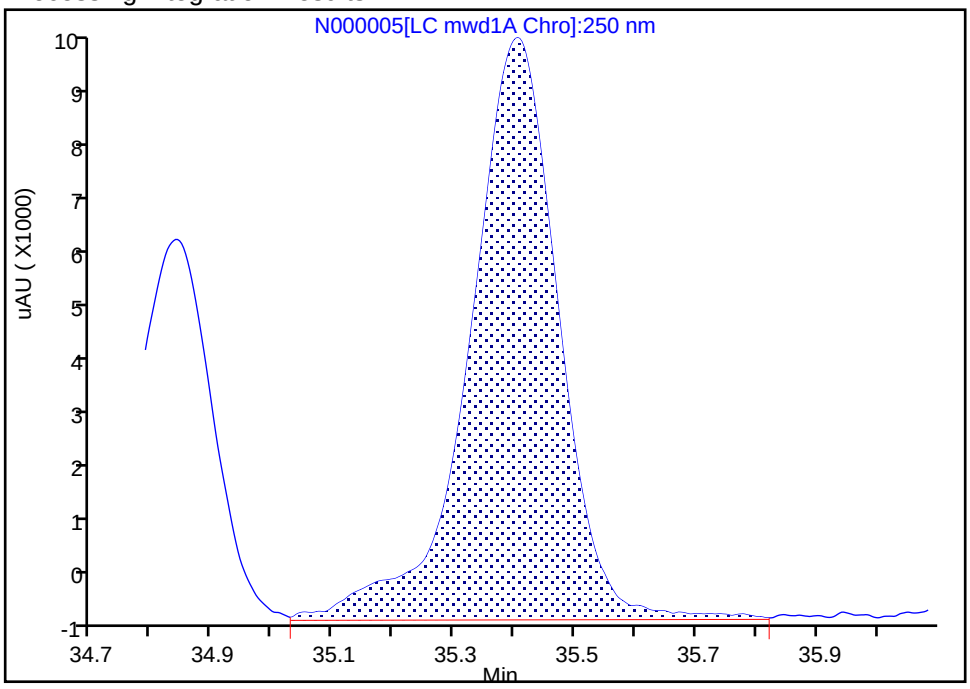
Data File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000005.D				
Injection Date:	14-May-2019 19:38:48	Instrument ID:	LC12		
Lims ID:	STD4				
Client ID:					
Operator ID:	AO	ALS Bottle#:	6	Worklist Smp#:	7
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

19 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

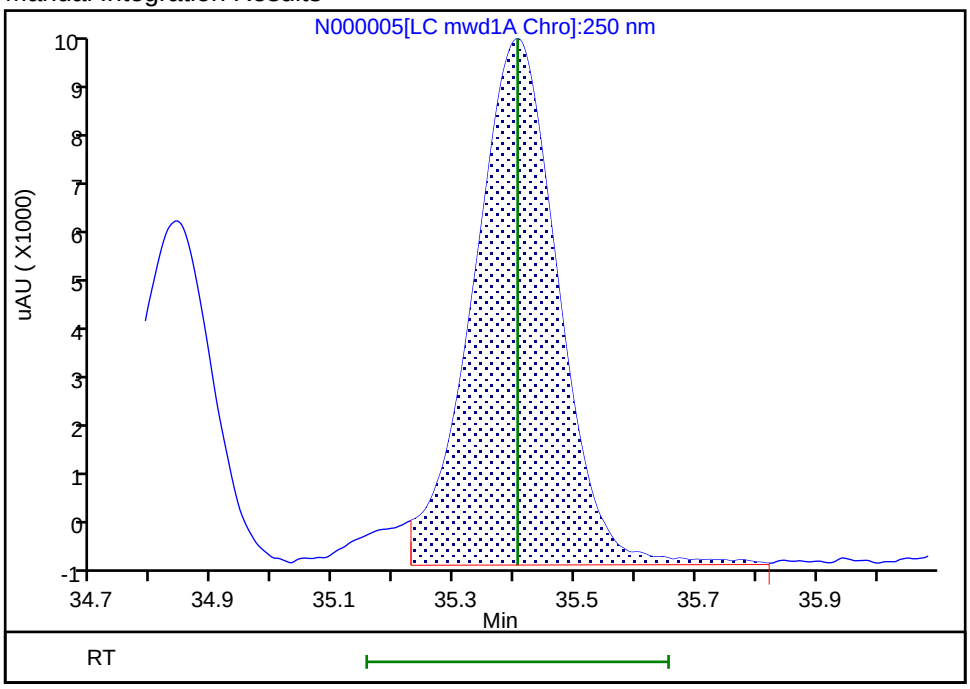
Processing Integration Results

RT: 35.41
Height: 10383
Amount: 50.147134
Amount Units: ng/ml



Manual Integration Results

RT: 35.41
Height: 10383
Amount: 50.146892
Amount Units: ng/ml



Reviewer: ortizam, 15-May-2019 08:49:15

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000006.D
Lims ID: STD5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 14-May-2019 20:36:26 ALS Bottle#: 7 Worklist Smp#: 8
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: std5
Operator ID: AO Instrument ID: LC12
Sublist: chrom-LC12_Conf_8330*sub10

Method: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 15-May-2019 09:39:41 Calib Date: 15-May-2019 07:09:15
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0306

First Level Reviewer: ortizam Date: 15-May-2019 08:43:53

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
3 Nitrobenzene							
1	22.108	22.152	-0.044	5334H	100.0	93.9	
6 1,3-Dinitrobenzene							
1	24.482	24.525	-0.043	11288H	100.0	96.7	
7 1,3,5-Trinitrobenzene							
1	26.628	26.645	-0.017	9139H	100.0	97.5	
9 p-Nitrotoluene							
1	29.138	29.195	-0.057	6785H	100.0	95.5	
10 o-Nitrotoluene							
1	29.138	29.195	-0.057	6785H	100.0	95.5	
11 m-Nitrotoluene							
1	29.718	29.782	-0.064	4363H	100.0	100.4	
12 3,5-Dinitroaniline							
1	30.462	30.498	-0.036	9461H	100.0	94.6	
13 RDX							
1	31.305	31.322	-0.017	5313H	100.0	100.0	
14 2,4-Dinitrotoluene							
1	32.168	32.208	-0.040	12465H	100.0	98.9	
15 2,6-Dinitrotoluene							
1	32.855	32.902	-0.047	9371H	100.0	98.5	
16 2-Amino-4,6-dinitrotoluene							
1	33.892	33.915	-0.023	19867H	100.0	98.2	
17 4-Amino-2,6-dinitrotoluene							
1	34.138	34.162	-0.024	179264	100.0	99.2	
$ 18 3,4-Dinitrotoluene							
1	34.812	34.838	-0.026	13620H	100.0	97.3	
19 2,4,6-Trinitrotoluene							M
1	35.378	35.405	-0.027	20715H	100.0	100.0	M

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
20 HMX							
1	36.218	36.242	-0.024	15327H	100.0	97.6	
21 Nitroglycerin							
2	36.962	36.985	-0.023	19184H	100.0	99.1	
22 Tetryl							
1	37.858	37.882	-0.024	23222H	100.0	98.7	
23 PETN							
2	41.122	41.138	-0.016	21715H	100.0	100.3	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

HP8330L5_00070 Amount Added: 1.00 Units: mL

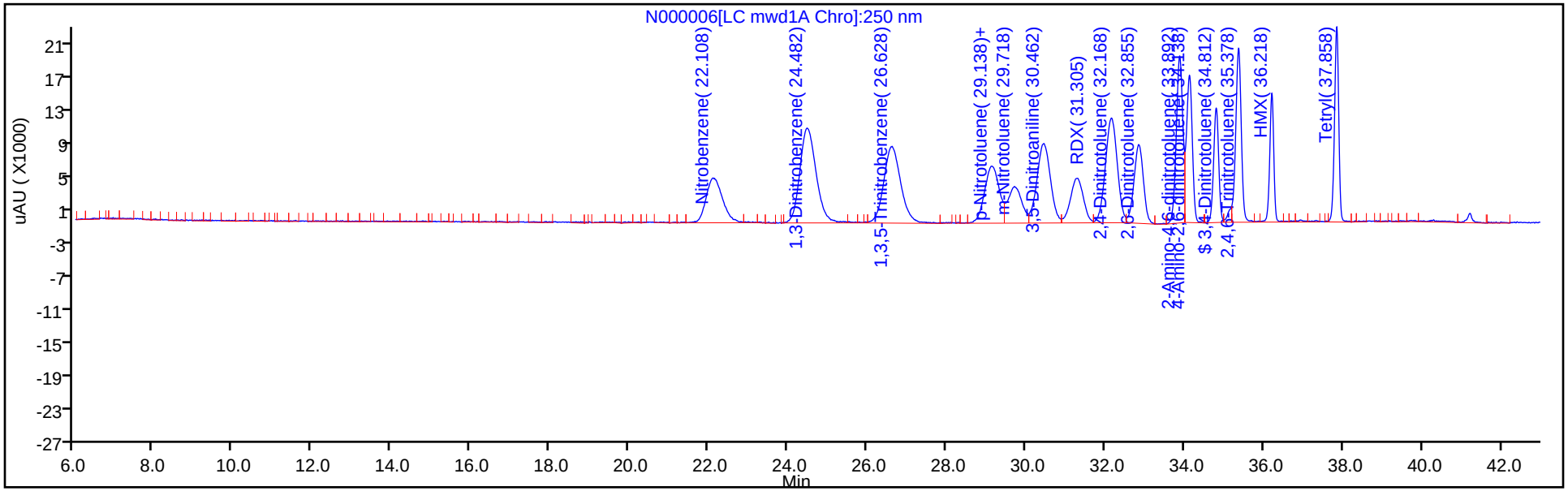
Report Date: 15-May-2019 09:39:41 Chrom Revision: 2.3 12-May-2019 16:28:34

Eurofins TestAmerica, Sacramento

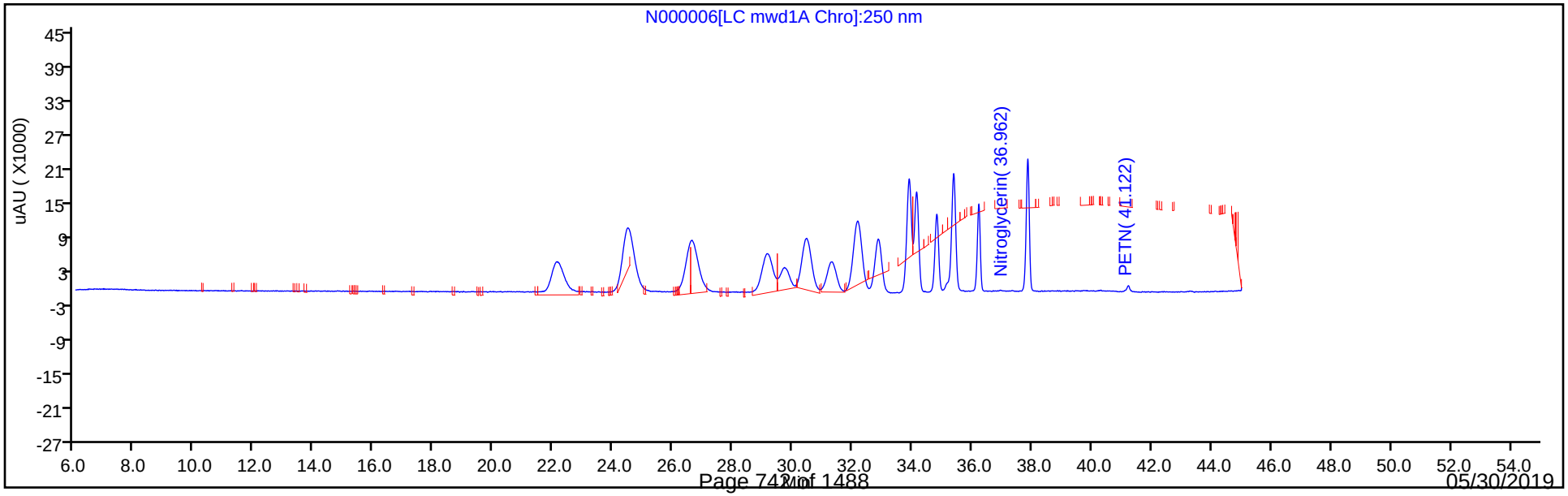
Data File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000006.D

Injection Date:	14-May-2019 20:36:26	Instrument ID:	LC12	Operator ID:	AO
Lims ID:	STD5			Worklist Smp#:	8
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

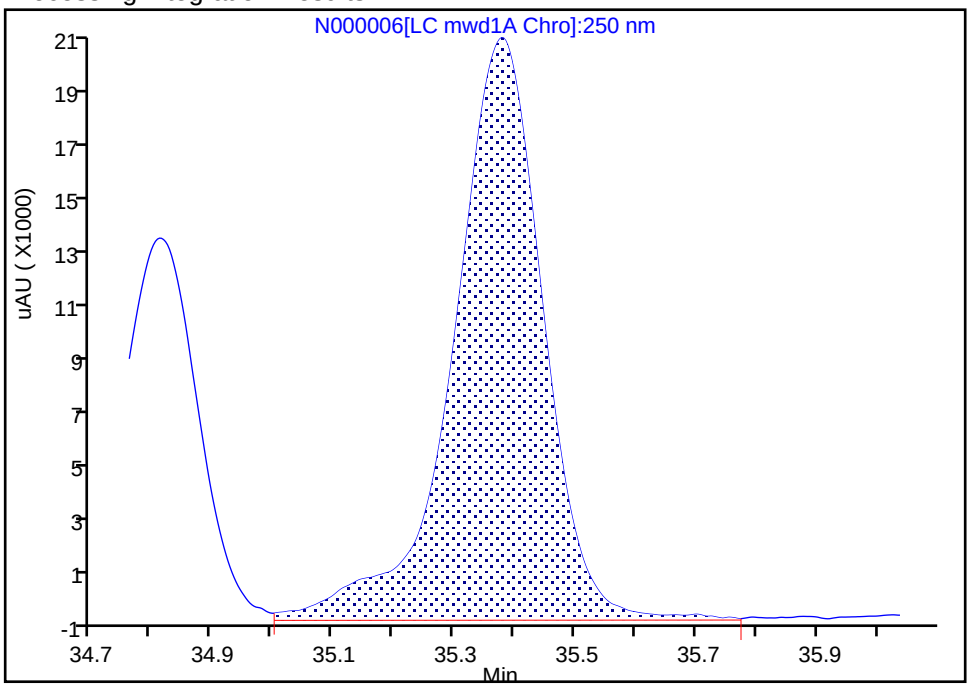
Data File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000006.D				
Injection Date:	14-May-2019 20:36:26	Instrument ID:	LC12		
Lims ID:	STD5				
Client ID:					
Operator ID:	AO	ALS Bottle#:	7	Worklist Smp#:	8
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

19 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

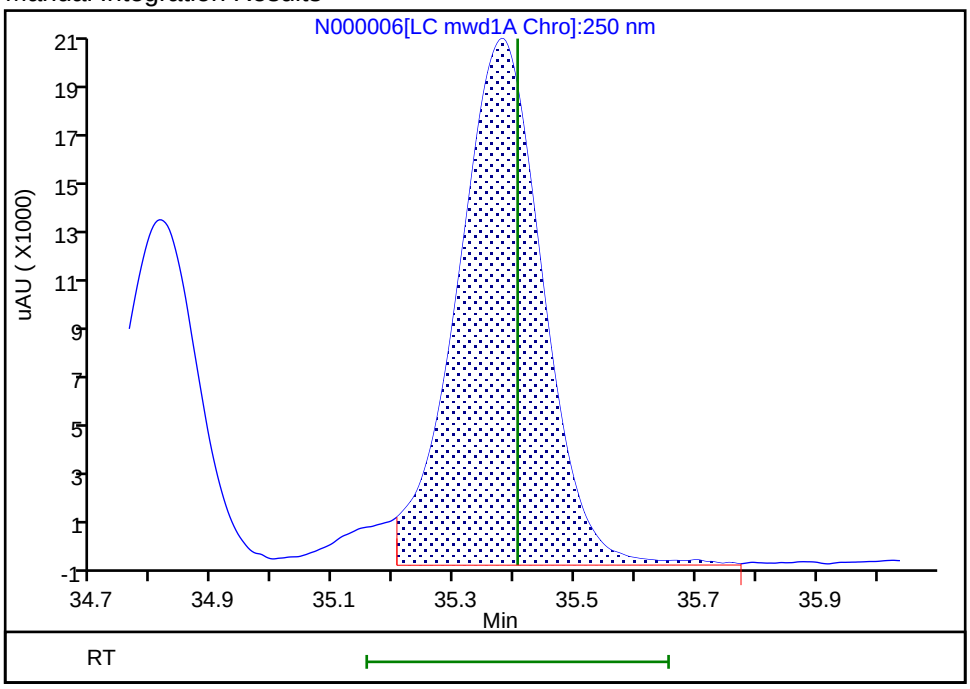
Processing Integration Results

RT: 35.38
Height: 20715
Amount: 100.0480
Amount Units: ng/ml



Manual Integration Results

RT: 35.38
Height: 20715
Amount: 100.0475
Amount Units: ng/ml



Reviewer: ortizam, 15-May-2019 08:49:49

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000007.D
Lims ID: STD6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 14-May-2019 21:33:54 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: std6
Operator ID: AO Instrument ID: LC12
Sublist: chrom-LC12_Conf_8330*sub10

Method: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 15-May-2019 09:39:43 Calib Date: 15-May-2019 07:09:15
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0306

First Level Reviewer: ortizam Date: 15-May-2019 08:50:43

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
3 Nitrobenzene							
1	22.122	22.152	-0.030	10435H	200.0	183.8	
6 1,3-Dinitrobenzene							
1	24.492	24.525	-0.033	22286H	200.0	190.8	
7 1,3,5-Trinitrobenzene							
1	26.635	26.645	-0.010	18008H	200.0	192.1	
9 p-Nitrotoluene							
1	29.168	29.195	-0.027	13294H	200.0	187.1	
10 o-Nitrotoluene							
1	29.168	29.195	-0.027	13294H	200.0	187.1	
11 m-Nitrotoluene							
1	29.738	29.782	-0.044	8520H	200.0	198.2	
12 3,5-Dinitroaniline							
1	30.482	30.498	-0.016	18783H	200.0	187.7	
13 RDX							
1	31.322	31.322	0.000	10717H	200.0	203.4	
14 2,4-Dinitrotoluene							
1	32.188	32.208	-0.020	25091H	200.0	199.0	
15 2,6-Dinitrotoluene							
1	32.882	32.902	-0.020	18787H	200.0	197.5	
16 2-Amino-4,6-dinitrotoluene							
1	33.912	33.915	-0.003	39639H	200.0	196.0	
17 4-Amino-2,6-dinitrotoluene							
1	34.158	34.162	-0.004	359001	200.0	199.2	
$ 18 3,4-Dinitrotoluene							
1	34.832	34.838	-0.006	27281H	200.0	194.8	
19 2,4,6-Trinitrotoluene							M
1	35.398	35.405	-0.007	41164H	200.0	198.8	M

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
20 HMX							
1	36.238	36.242	-0.004	30347H	200.0	193.3	
21 Nitroglycerin							
2	36.982	36.985	-0.003	38015H	200.0	196.4	
22 Tetryl							
1	37.882	37.882	0.000	46099H	200.0	196.0	
23 PETN							
2	41.145	41.138	0.007	42860H	200.0	198.0	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

HP8330L6_00051 Amount Added: 1.00 Units: mL

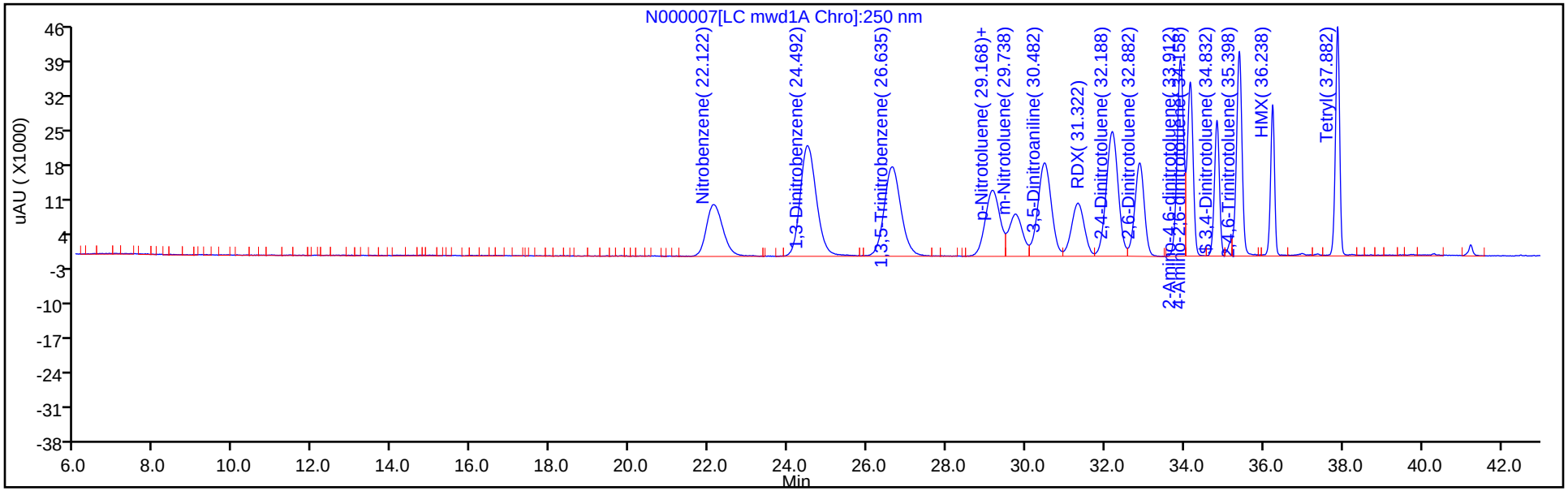
Report Date: 15-May-2019 09:39:44 Chrom Revision: 2.3 12-May-2019 16:28:34

Eurofins TestAmerica, Sacramento

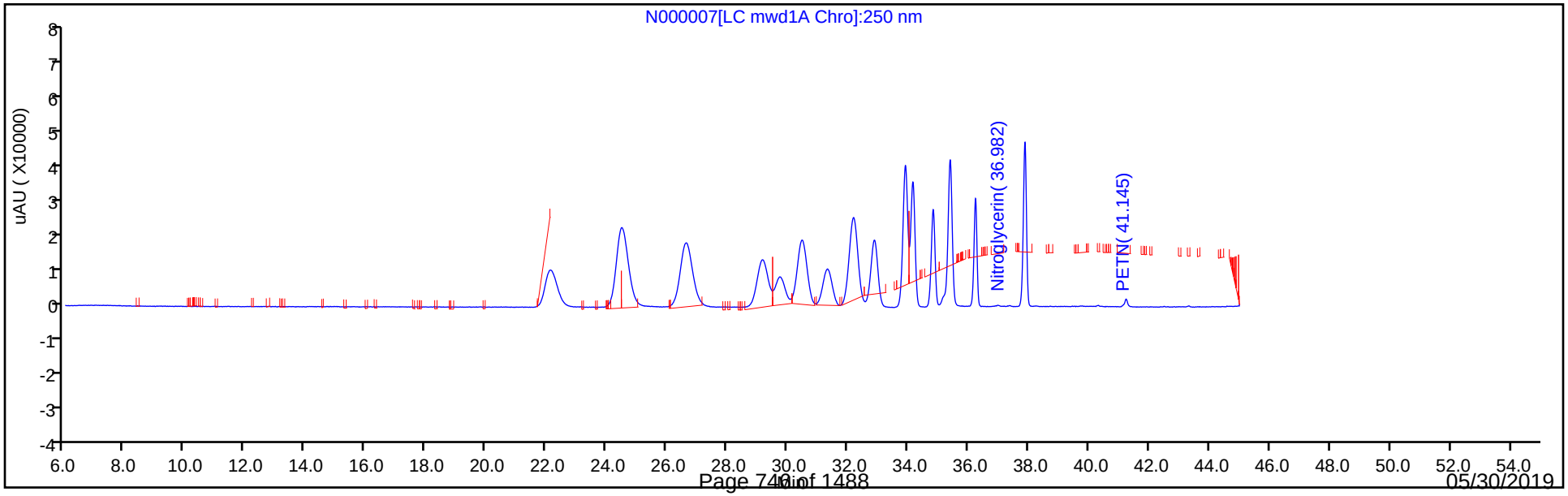
Data File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000007.D

Injection Date:	14-May-2019 21:33:54	Instrument ID:	LC12	Operator ID:	AO
Lims ID:	STD6			Worklist Smp#:	9
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

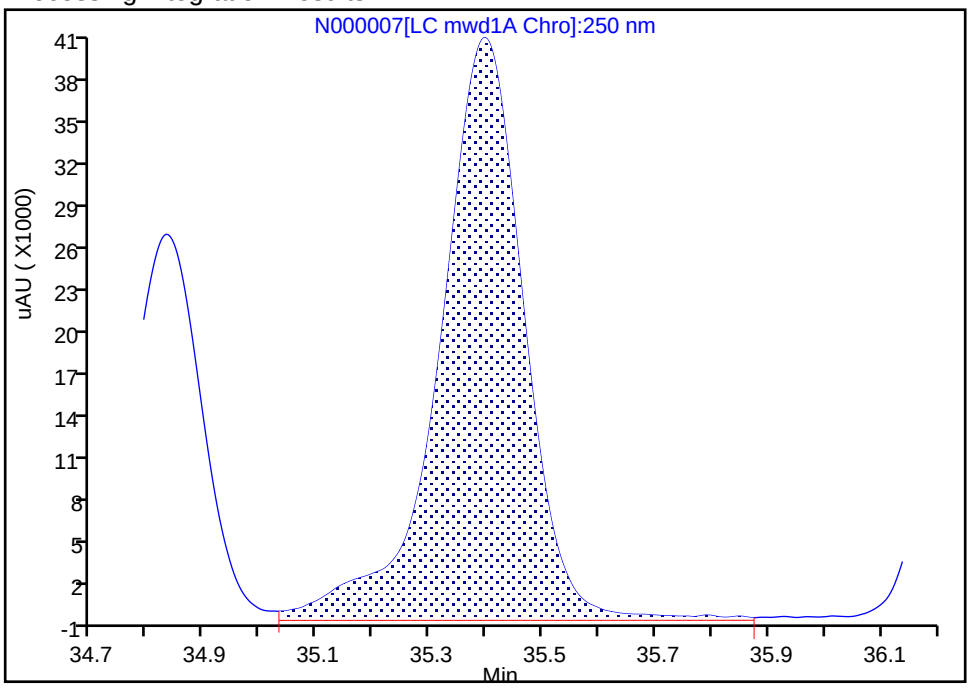
Data File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000007.D				
Injection Date:	14-May-2019 21:33:54	Instrument ID:	LC12		
Lims ID:	STD6				
Client ID:					
Operator ID:	AO	ALS Bottle#:	8	Worklist Smp#:	9
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

19 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

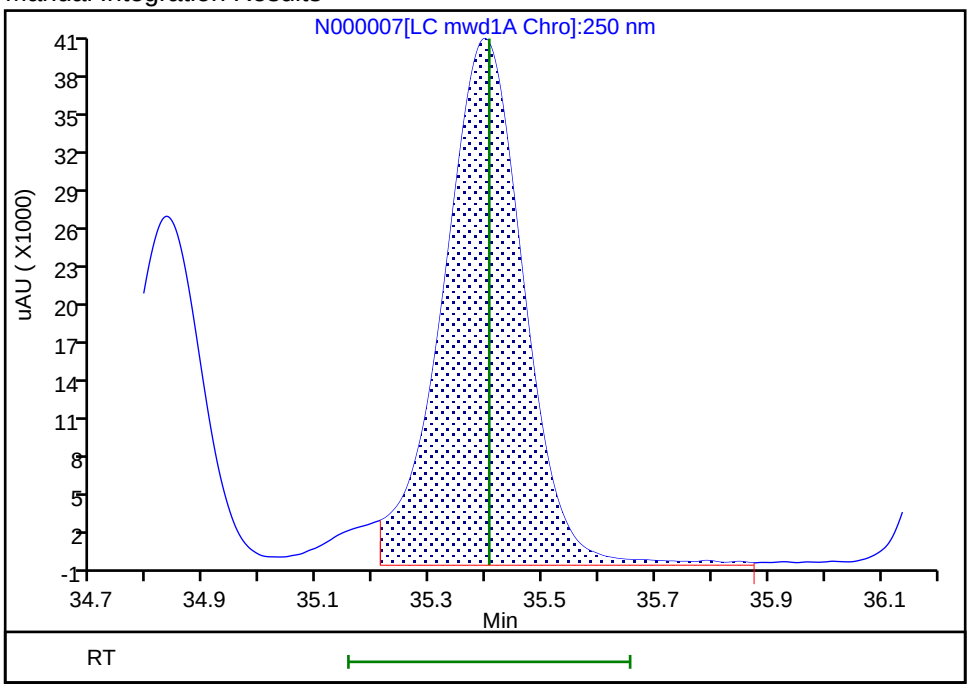
Processing Integration Results

RT: 35.40
Height: 41163
Amount: 198.8064
Amount Units: ng/ml



Manual Integration Results

RT: 35.40
Height: 41164
Amount: 198.8102
Amount Units: ng/ml



Reviewer: ortizam, 15-May-2019 08:50:29

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000008.D
Lims ID: STD7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 14-May-2019 22:31:27 ALS Bottle#: 9 Worklist Smp#: 10
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: std7
Operator ID: AO Instrument ID: LC12
Sublist: chrom-LC12_Conf_8330*sub10

Method: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 15-May-2019 09:39:47 Calib Date: 15-May-2019 07:09:15
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0306

First Level Reviewer: ortizam Date: 15-May-2019 08:55:00

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
3 Nitrobenzene							
1	22.108	22.152	-0.044	25668H	500.0	452.1	
6 1,3-Dinitrobenzene							
1	24.475	24.525	-0.050	55915H	500.0	478.8	
7 1,3,5-Trinitrobenzene							
1	26.602	26.645	-0.043	45392H	500.0	484.2	
9 p-Nitrotoluene							
1	29.148	29.195	-0.047	32513H	500.0	457.6	
10 o-Nitrotoluene							
1	29.148	29.195	-0.047	32513H	500.0	457.6	
11 m-Nitrotoluene							
1	29.722	29.782	-0.060	20824H	500.0	487.8	
12 3,5-Dinitroaniline							
1	30.455	30.498	-0.043	47494H	500.0	474.7	
13 RDX							
1	31.292	31.322	-0.030	27161H	500.0	518.2	
14 2,4-Dinitrotoluene							
1	32.158	32.208	-0.050	62652H	500.0	496.9	
15 2,6-Dinitrotoluene							
1	32.858	32.902	-0.044	46749H	500.0	491.5	
16 2-Amino-4,6-dinitrotoluene							
1	33.895	33.915	-0.020	99650H	500.0	492.8	
17 4-Amino-2,6-dinitrotoluene							
1	34.142	34.162	-0.020	905067	500.0	503.0	
$ 18 3,4-Dinitrotoluene							
1	34.822	34.838	-0.016	67798H	500.0	484.2	
19 2,4,6-Trinitrotoluene							M
1	35.385	35.405	-0.020	102816H	500.0	496.6	M

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
20 HMX							
1	36.228	36.242	-0.014	76157H	500.0	485.2	
21 Nitroglycerin							
2	36.972	36.985	-0.013	94605H	500.0	488.8	
22 Tetryl							
1	37.868	37.882	-0.014	115808H	500.0	492.4	
23 PETN							
2	41.132	41.138	-0.006	107240H	500.0	495.4	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

HP8330L7_00036 Amount Added: 1.00 Units: mL

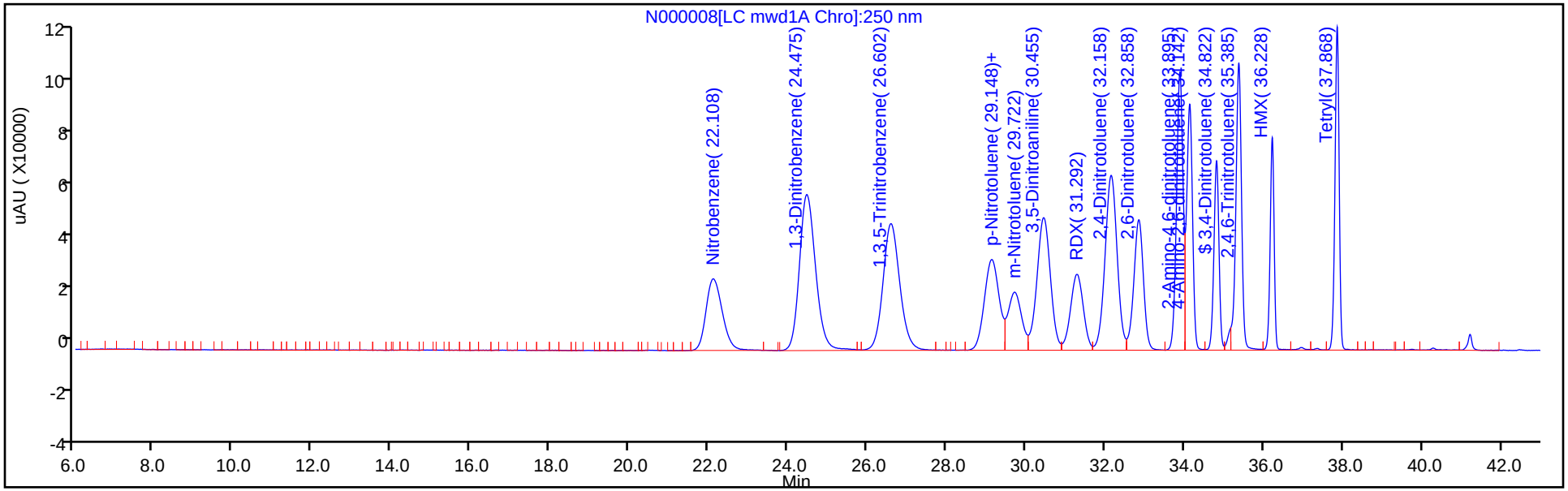
Report Date: 15-May-2019 09:39:47 Chrom Revision: 2.3 12-May-2019 16:28:34

Eurofins TestAmerica, Sacramento

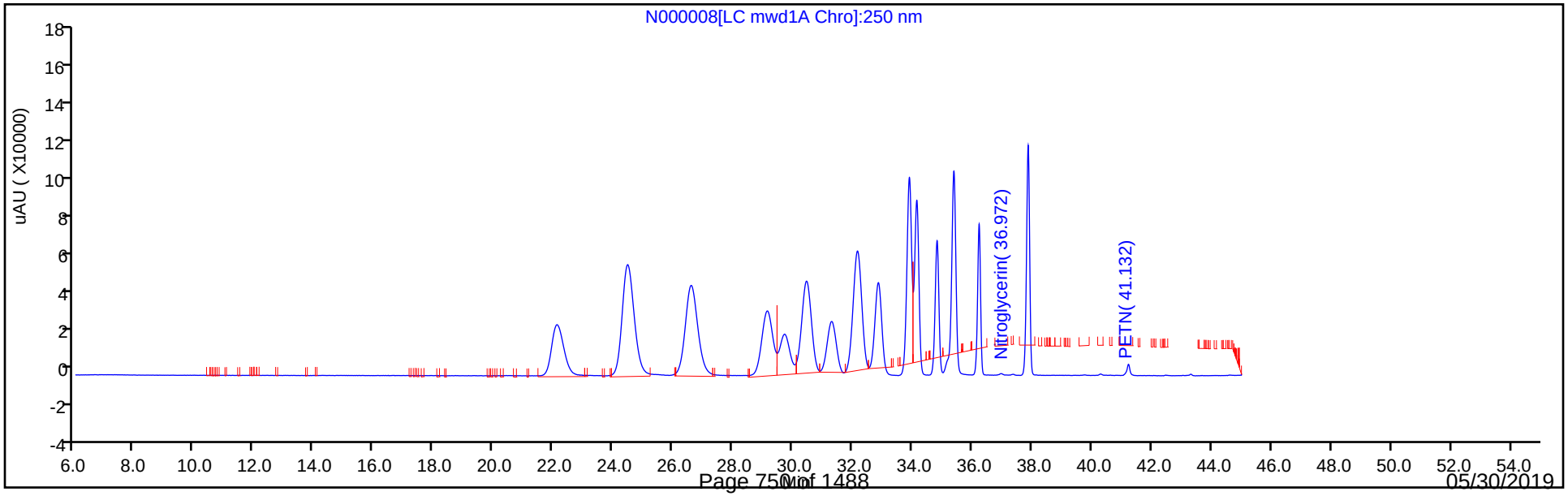
Data File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000008.D

Injection Date:	14-May-2019 22:31:27	Instrument ID:	LC12	Operator ID:	AO
Lims ID:	STD7			Worklist Smp#:	10
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

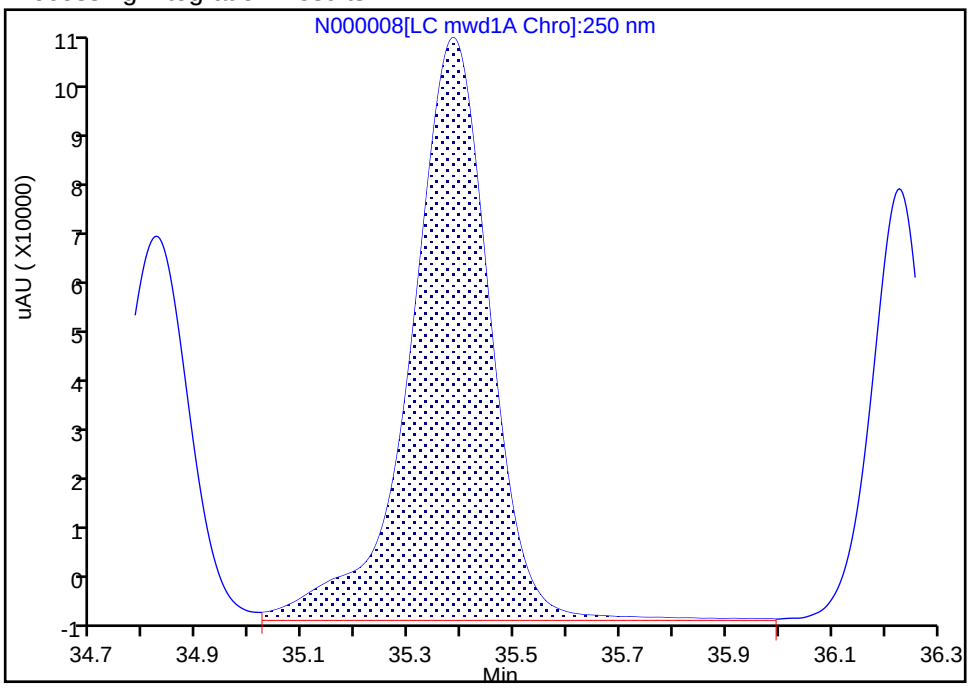
Data File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000008.D				
Injection Date:	14-May-2019 22:31:27	Instrument ID:	LC12		
Lims ID:	STD7				
Client ID:					
Operator ID:	AO	ALS Bottle#:	9	Worklist Smp#:	10
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

19 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

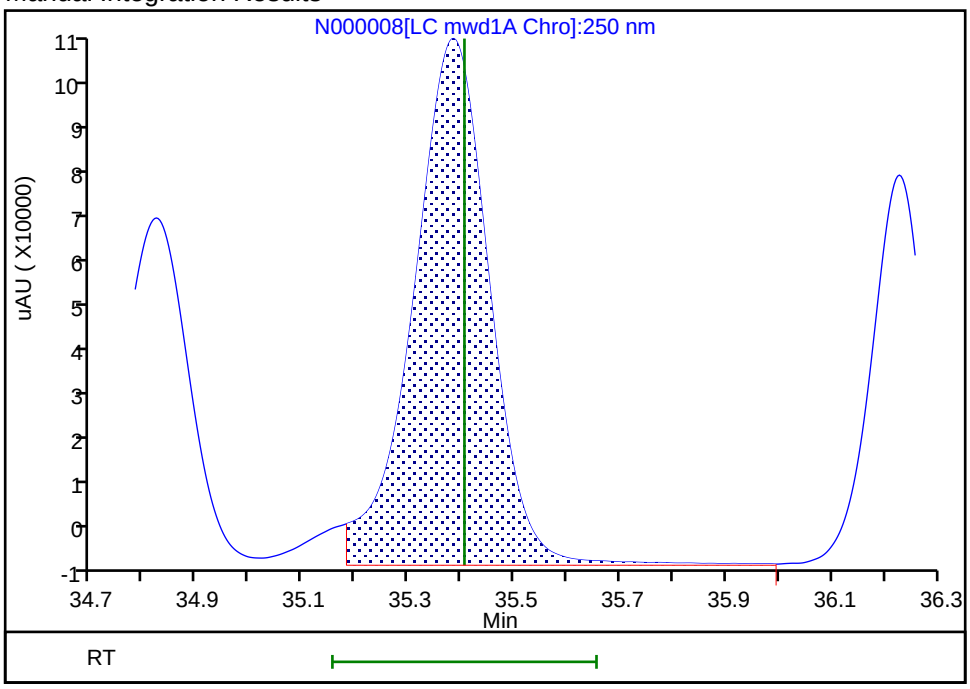
Processing Integration Results

RT: 35.39
Height: 102815
Amount: 496.5675
Amount Units: ng/ml



Manual Integration Results

RT: 35.39
Height: 102816
Amount: 496.5716
Amount Units: ng/ml



Reviewer: ortizam, 15-May-2019 08:51:03

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1 Analy Batch No.: 294594

SDG No.:

Instrument ID: LC12 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/15/2019 02:21 Calibration End Date: 05/15/2019 07:09 Calibration ID: 45344

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD2 320-294594/14	N000012.D
Level 2	STD3 320-294594/15	N000013.D
Level 3	STD4 320-294594/16	N000014.D
Level 4	STD5 320-294594/17	N000015.D
Level 5	STD6 320-294594/18	N000016.D
Level 6	STD7 320-294594/19	N000017.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6					RT WINDOW	AVG RT
TNX	17.783	17.765	17.858	17.838	17.798	17.802					17.608 - 18.108	17.807
DNX	23.207	23.215	23.252	23.295	23.185	23.178					22.982 - 23.522	23.222
MNX	27.503	27.445	27.588	27.612	27.465	27.465					27.308 - 27.868	27.513

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1 Analy Batch No.: 294594

SDG No.:

Instrument ID: LC12 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/15/2019 02:21 Calibration End Date: 05/15/2019 07:09 Calibration ID: 45344

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD2 320-294594/14	N000012.D
Level 2	STD3 320-294594/15	N000013.D
Level 3	STD4 320-294594/16	N000014.D
Level 4	STD5 320-294594/17	N000015.D
Level 5	STD6 320-294594/18	N000016.D
Level 6	STD7 320-294594/19	N000017.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
TNX	73.127 72.363	72.677 69.353	65.860	65.410	Ave		69.7982468				5.0		20.0			
DNX	64.841 61.718	62.500 59.444	57.092	56.972	Ave		60.4277888				5.2		20.0			
MNX	68.547 66.150	69.316 63.726	60.821	62.009	Ave		65.0947293				5.3		20.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1 Analy Batch No.: 294594

SDG No.:

Instrument ID: LC12 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/15/2019 02:21 Calibration End Date: 05/15/2019 07:09 Calibration ID: 45344

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD2 320-294594/14	N000012.D
Level 2	STD3 320-294594/15	N000013.D
Level 3	STD4 320-294594/16	N000014.D
Level 4	STD5 320-294594/17	N000015.D
Level 5	STD6 320-294594/18	N000016.D
Level 6	STD7 320-294594/19	N000017.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
		LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
TNX	Ave	732 34711	1455	3293	6541	14487	10.0 501	20.0	50.0	100	200
DNX	Ave	651 29841	1255	2866	5720	12393	10.0 502	20.1	50.2	100	201
MNX	Ave	802 37280	1622	3558	7255	15479	11.7 585	23.4	58.5	117	234

Curve Type Legend:
Ave = Average by Height

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000012.D
Lims ID: MET2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 15-May-2019 02:21:31 ALS Bottle#: 13 Worklist Smp#: 14
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: met2
Operator ID: AO Instrument ID: LC12
Sublist: chrom-LC12_Conf_8330*sub2

Method: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 15-May-2019 09:39:49 Calib Date: 15-May-2019 07:09:15
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0306

First Level Reviewer: ortizam Date: 15-May-2019 09:38:40

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
2 TNX							M
1	17.783	17.858	-0.075	732H	10.0	10.5	M
5 DNX							M
1	23.207	23.252	-0.045	651H	10.0	10.8	M
8 MNX							M
1	27.503	27.588	-0.085	802H	11.7	12.3	M

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

HPMETABL2_00008 Amount Added: 1.00 Units: mL

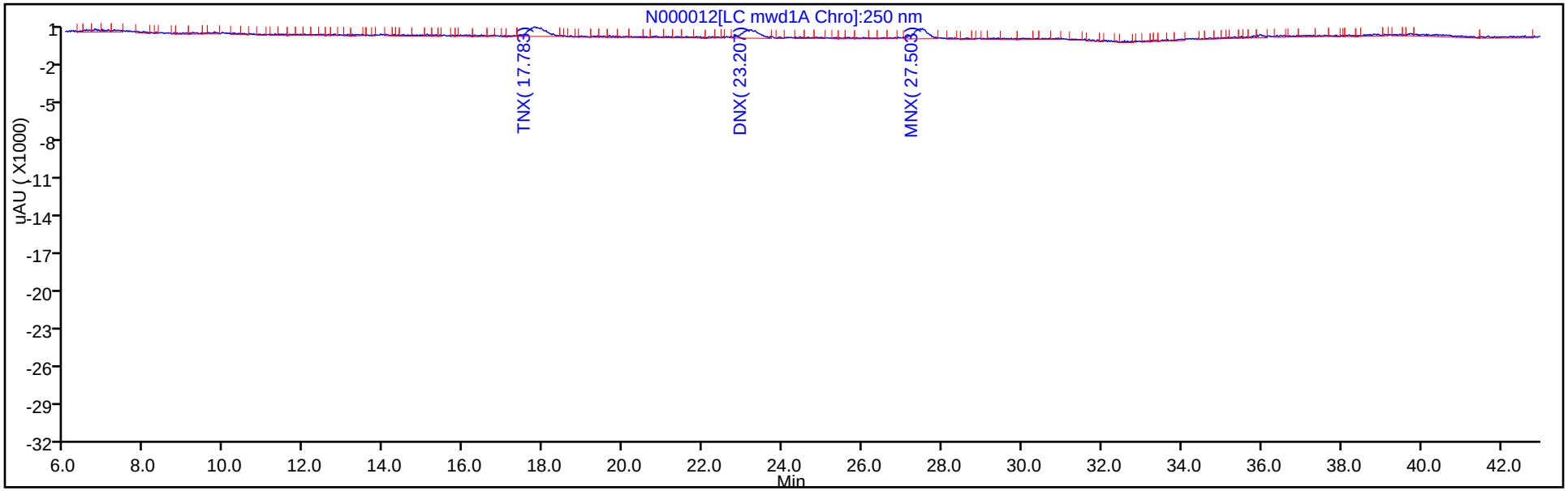
Report Date: 15-May-2019 09:39:49 Chrom Revision: 2.3 12-May-2019 16:28:34

Eurofins TestAmerica, Sacramento

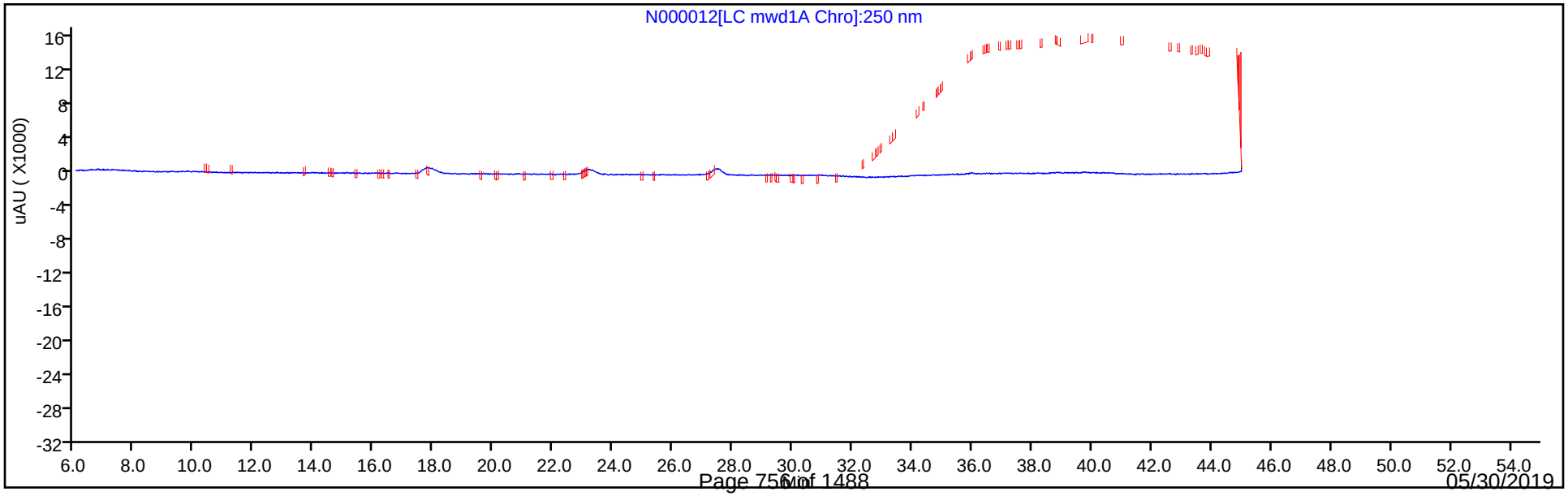
Data File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000012.D

Injection Date:	15-May-2019 02:21:31	Instrument ID:	LC12	Operator ID:	AO
Lims ID:	MET2			Worklist Smp#:	14
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

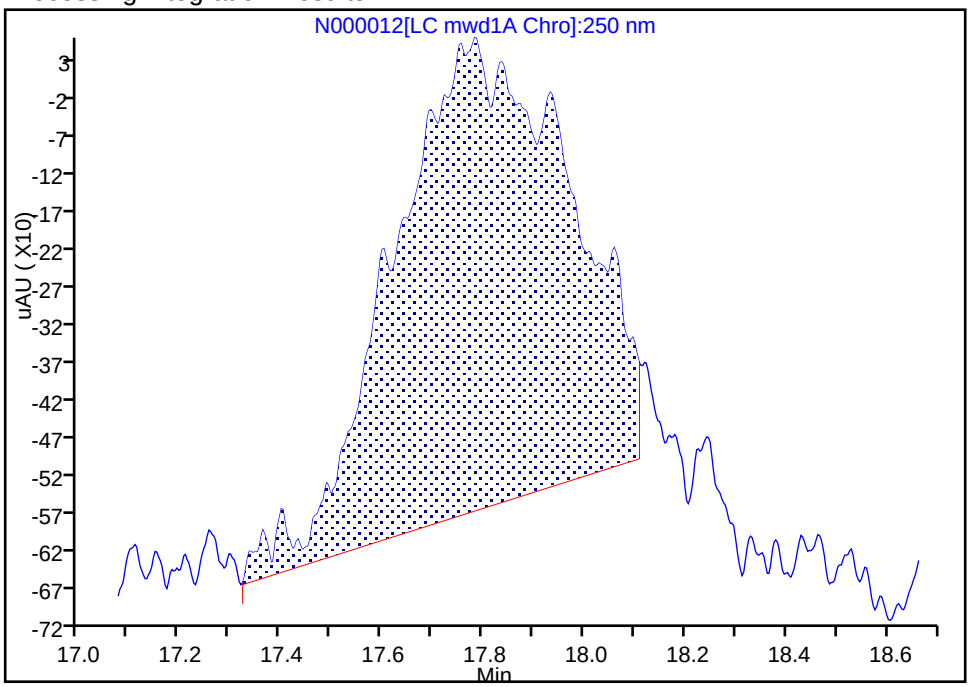
Data File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000012.D				
Injection Date:	15-May-2019 02:21:31	Instrument ID:	LC12		
Lims ID:	MET2				
Client ID:					
Operator ID:	AO	ALS Bottle#:	13	Worklist Smp#:	14
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

2 TNX, CAS: 13980-04-6

Signal: 1

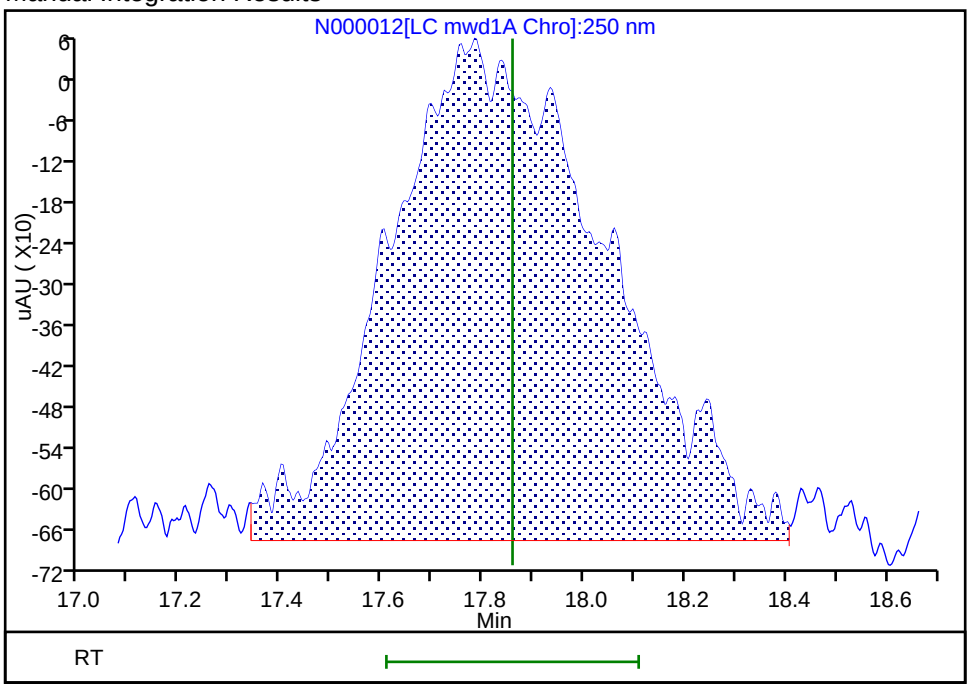
Processing Integration Results

RT: 17.78
Height: 623
Amount: 9.164002
Amount Units: ng/ml



Manual Integration Results

RT: 17.78
Height: 732
Amount: 10.487369
Amount Units: ng/ml



Reviewer: ortizam, 15-May-2019 09:38:25

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

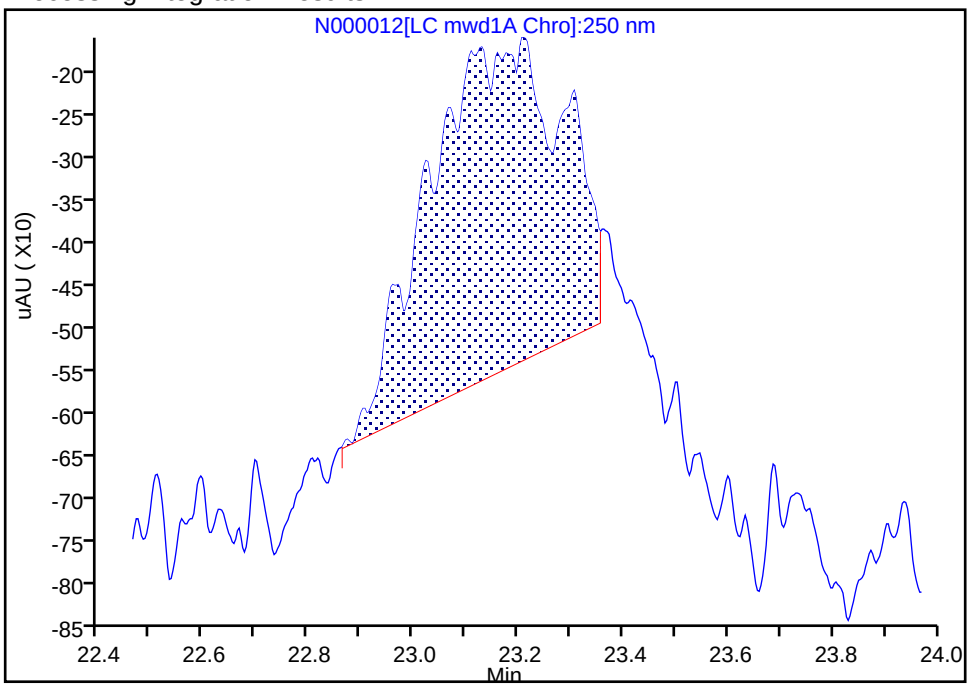
Data File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000012.D				
Injection Date:	15-May-2019 02:21:31	Instrument ID:	LC12		
Lims ID:	MET2				
Client ID:					
Operator ID:	AO	ALS Bottle#:	13	Worklist Smp#:	14
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

5 DNX, CAS: 80251-29-2

Signal: 1

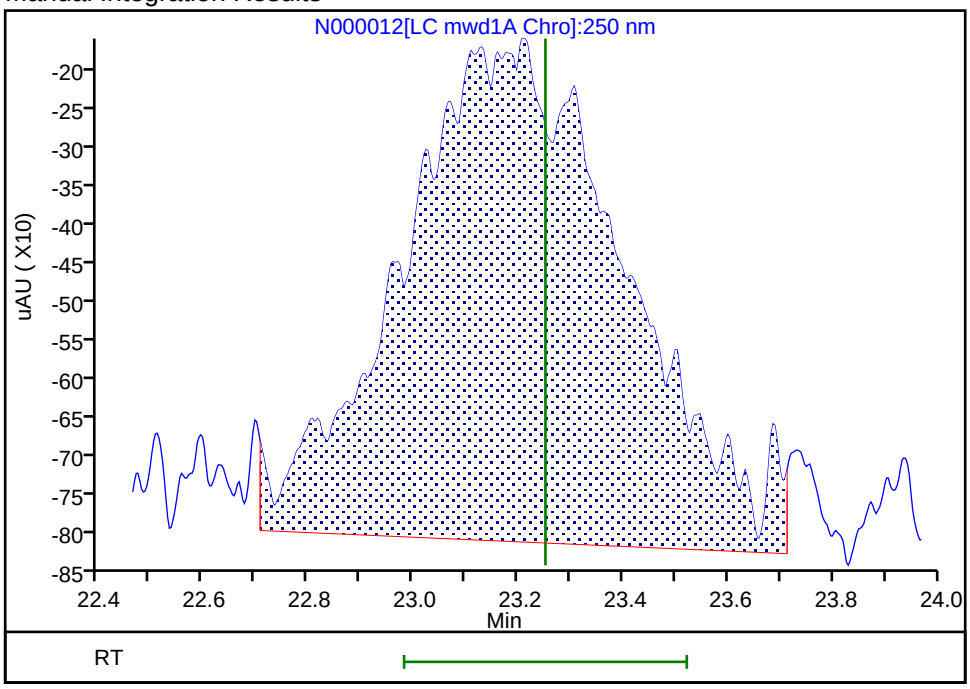
Processing Integration Results

RT: 23.13
Height: 390
Amount: 6.952476
Amount Units: ng/ml



Manual Integration Results

RT: 23.21
Height: 651
Amount: 10.773189
Amount Units: ng/ml



Reviewer: ortizam, 15-May-2019 09:38:30

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

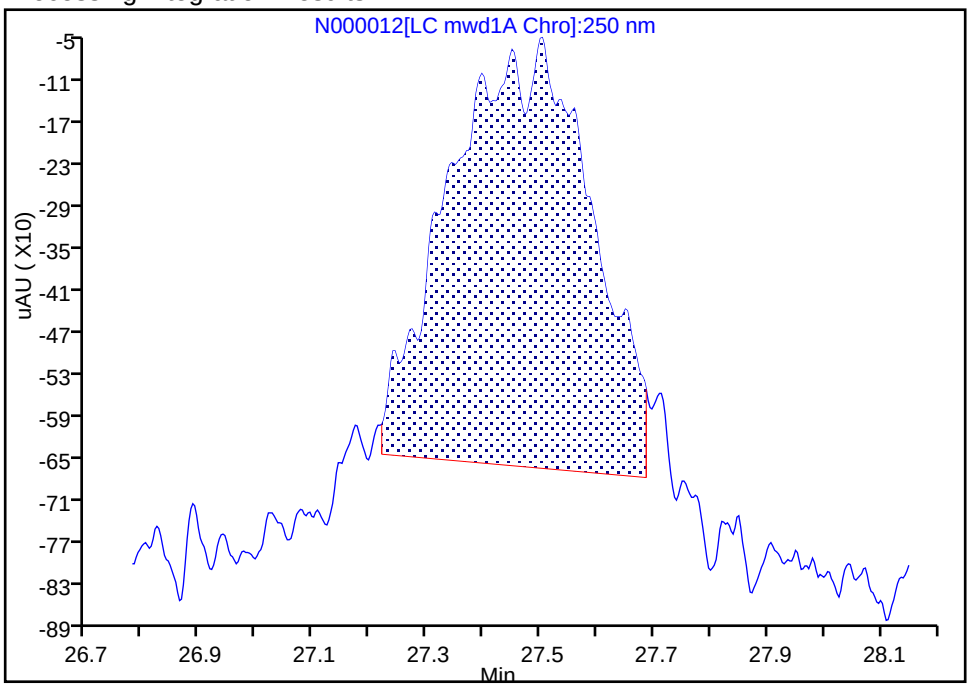
Data File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000012.D				
Injection Date:	15-May-2019 02:21:31	Instrument ID:	LC12		
Lims ID:	MET2				
Client ID:					
Operator ID:	AO	ALS Bottle#:	13	Worklist Smp#:	14
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

8 MNX, CAS: 5755-27-1

Signal: 1

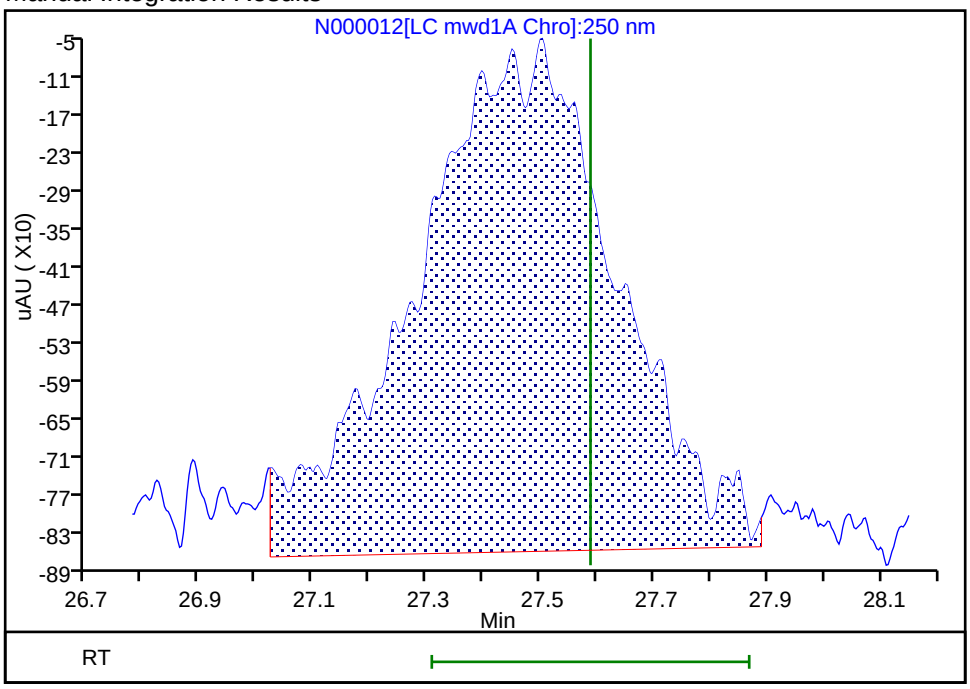
Processing Integration Results

RT: 27.45
Height: 588
Amount: 9.476795
Amount Units: ng/ml



Manual Integration Results

RT: 27.50
Height: 802
Amount: 12.320506
Amount Units: ng/ml



Reviewer: ortizam, 15-May-2019 09:38:33

Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000013.D
Lims ID: MET3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 15-May-2019 03:19:06 ALS Bottle#: 14 Worklist Smp#: 15
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: met3
Operator ID: AO Instrument ID: LC12
Sublist: chrom-LC12_Conf_8330*sub2

Method: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 15-May-2019 09:39:51 Calib Date: 15-May-2019 07:09:15
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0306

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
2 TNX							
1	17.765	17.858	-0.093	1455H	20.0	20.8	
5 DNX							
1	23.215	23.252	-0.037	1255H	20.1	20.8	
8 MNX							
1	27.445	27.588	-0.143	1622H	23.4	24.9	

Reagents:

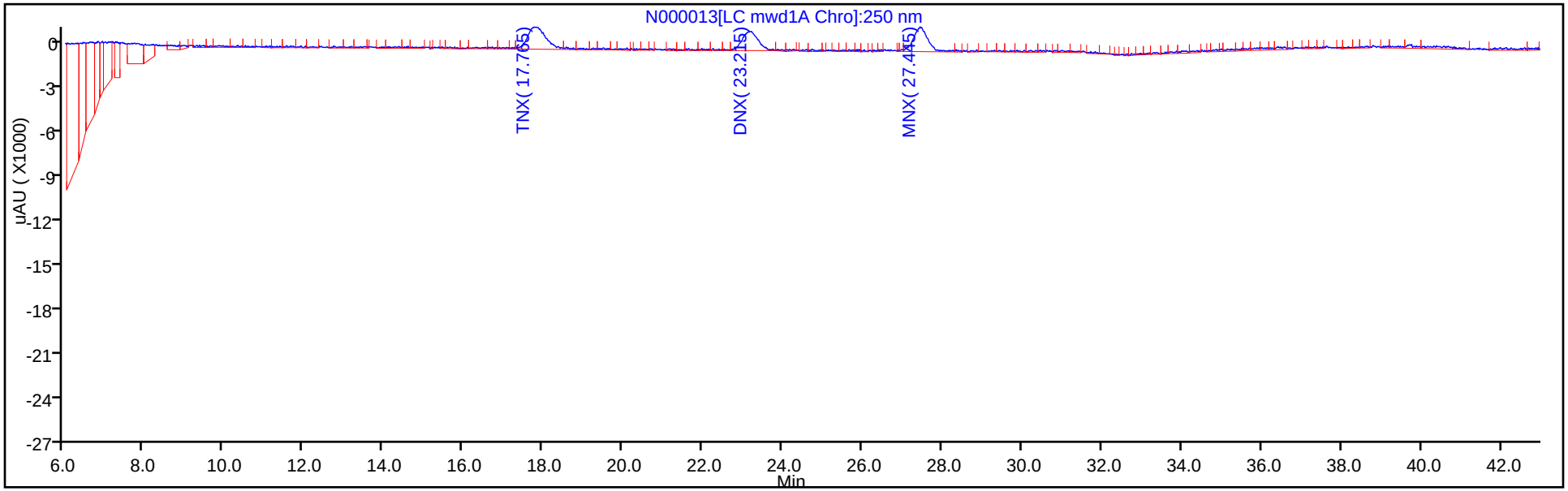
HPMETABL3_00020 Amount Added: 1.00 Units: mL

Report Date: 15-May-2019 09:39:51 Chrom Revision: 2.3 12-May-2019 16:28:34

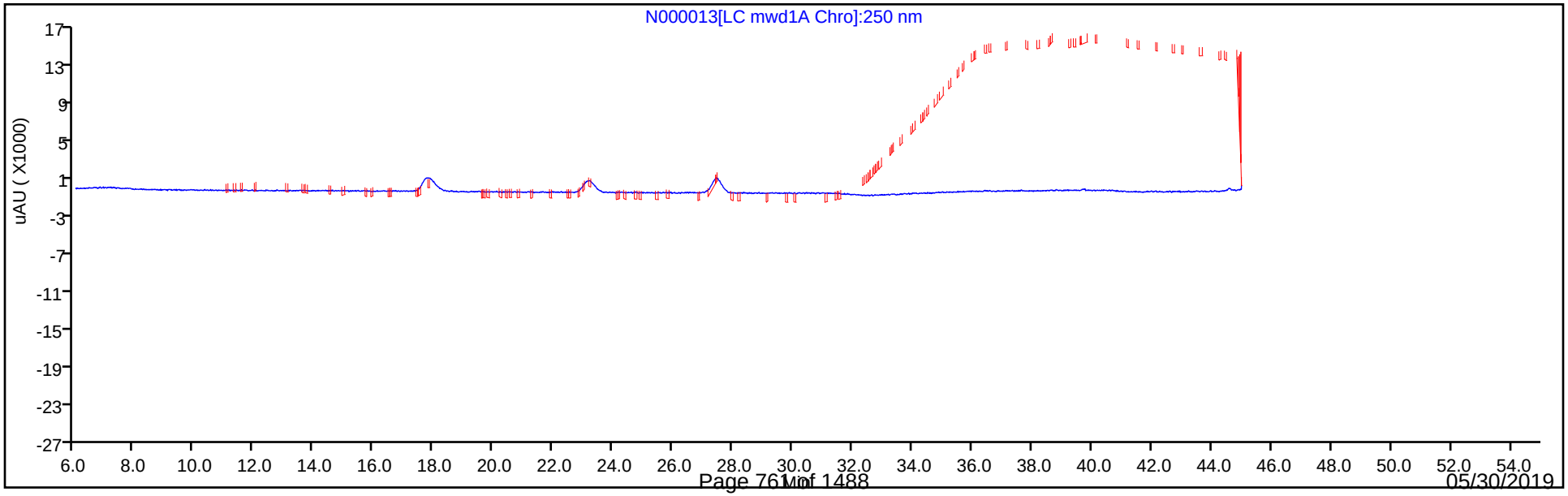
Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000013.D				
Injection Date:	15-May-2019 03:19:06	Instrument ID:	LC12	Operator ID:	AO
Lims ID:	MET3			Worklist Smp#:	15
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000014.D
Lims ID: MET4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 15-May-2019 04:16:41 ALS Bottle#: 15 Worklist Smp#: 16
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: met4
Operator ID: AO Instrument ID: LC12
Sublist: chrom-LC12_Conf_8330*sub2

Method: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 15-May-2019 09:39:52 Calib Date: 15-May-2019 07:09:15
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0306

First Level Reviewer: ortizam Date: 15-May-2019 09:33:24

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
2 TNX							
1	17.858	17.858	0.000	3293H	50.0	47.2	
5 DNX							
1	23.252	23.252	0.000	2866H	50.2	47.4	
8 MNX							
1	27.588	27.588	0.000	3558H	58.5	54.7	

Reagents:

HPMETABL4_00040 Amount Added: 1.00 Units: mL

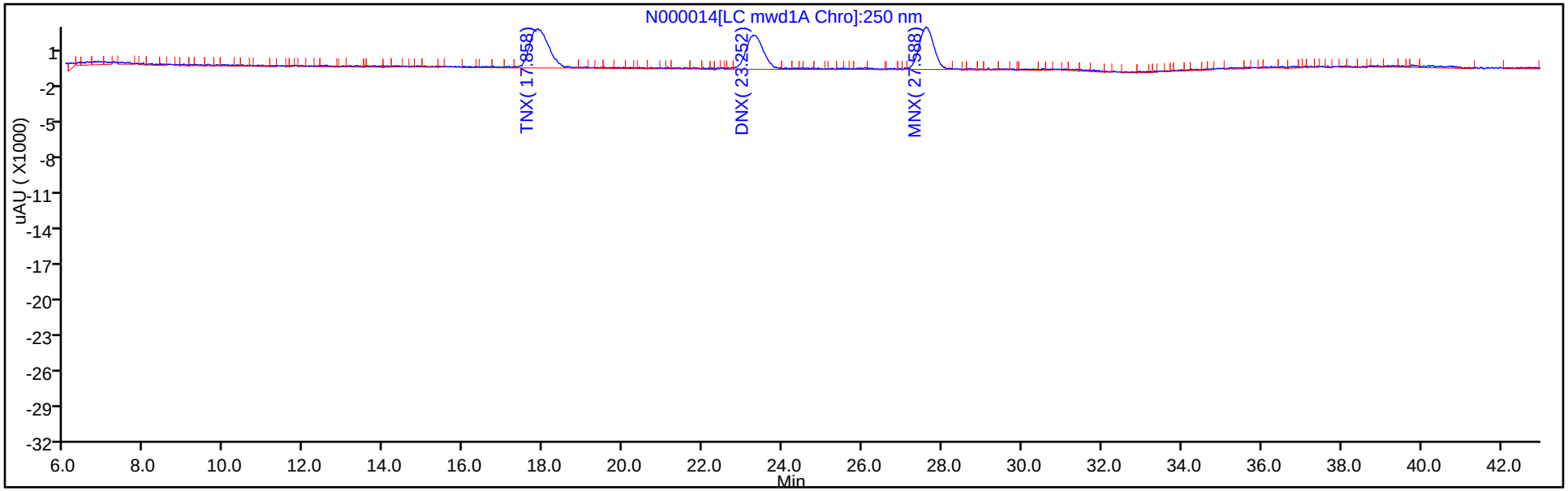
Report Date: 15-May-2019 09:39:53 Chrom Revision: 2.3 12-May-2019 16:28:34

Eurofins TestAmerica, Sacramento

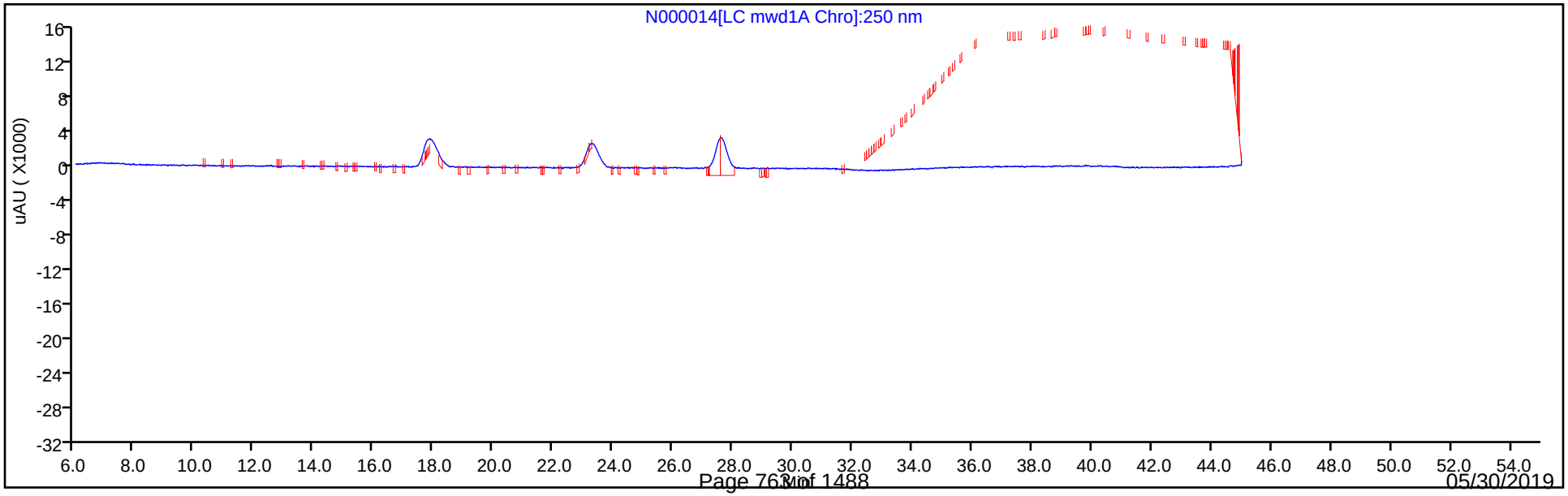
Data File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000014.D

Injection Date:	15-May-2019 04:16:41	Instrument ID:	LC12	Operator ID:	AO
Lims ID:	MET4			Worklist Smp#:	16
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000015.D				
Lims ID:	MET5				
Client ID:					
Sample Type:	IC	Calib Level:	5		
Inject. Date:	15-May-2019 05:14:12	ALS Bottle#:	16	Worklist Smp#:	17
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Sample Info:	met5				
Operator ID:	AO	Instrument ID:	LC12		
Sublist:	chrom-LC12_Conf_8330*sub2				
Method:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\LC12_Conf_8330.m				
Limit Group:	LC 8330A ICAL				
Last Update:	15-May-2019 09:39:54	Calib Date:	15-May-2019 07:09:15		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D				
Column 1 :	Zorbax Cyano CN (4.60 mm)		Det: LC mwd1A, 250 nm		
Process Host:	CTX0306				

First Level Reviewer: ortizam Date: 15-May-2019 09:37:44

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
2 TNX							
1	17.838	17.858	-0.020	6541H	100.0	93.7	
5 DNX							
1	23.295	23.252	0.043	5720H	100.4	94.7	
8 MNX							
1	27.612	27.588	0.024	7255H	117.0	111.5	

Reagents:

HPMETABL5_00041 Amount Added: 1.00 Units: mL

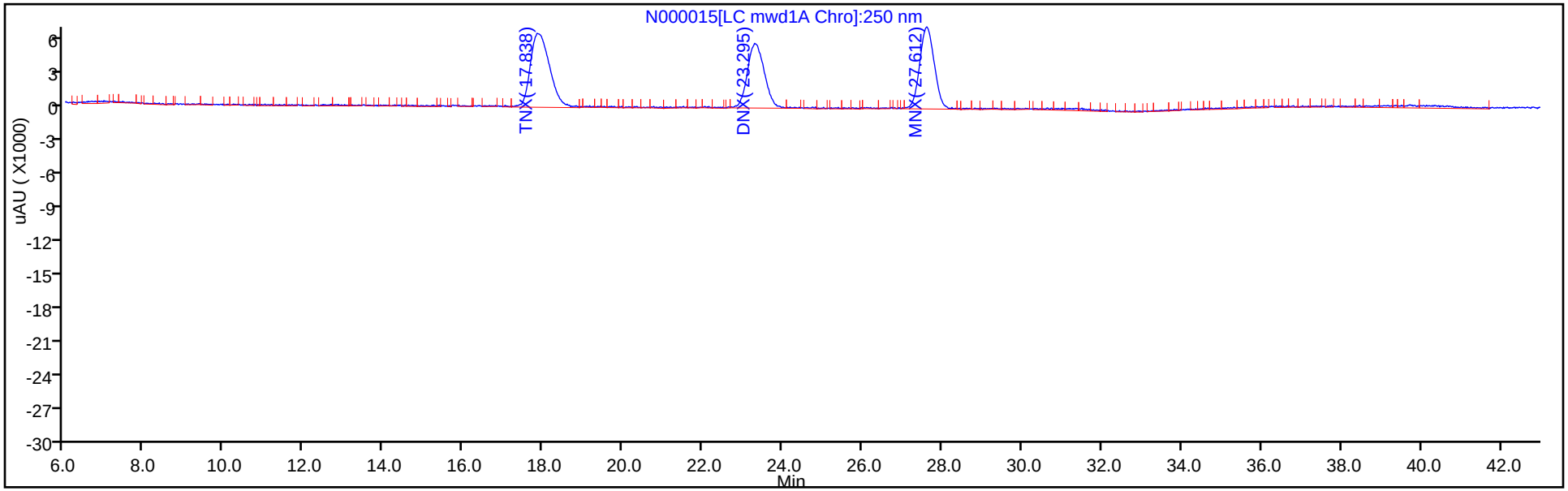
Report Date: 15-May-2019 09:39:55 Chrom Revision: 2.3 12-May-2019 16:28:34

Eurofins TestAmerica, Sacramento

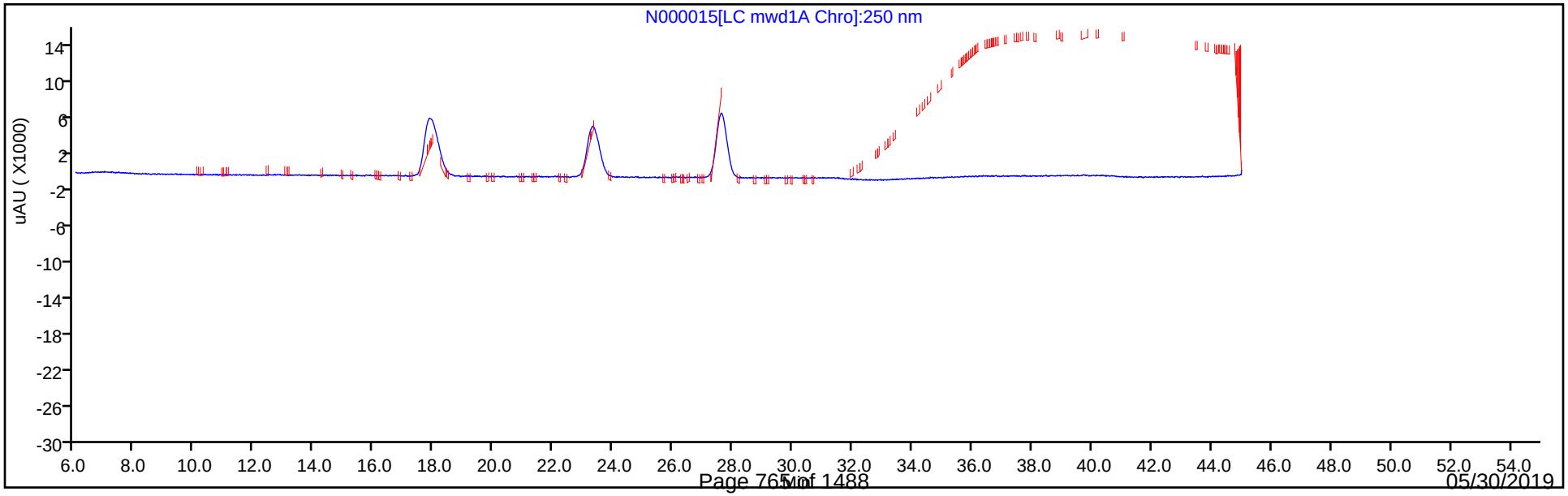
Data File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000015.D

Injection Date:	15-May-2019 05:14:12	Instrument ID:	LC12	Operator ID:	AO
Lims ID:	MET5			Worklist Smp#:	17
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000016.D
Lims ID: MET6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 15-May-2019 06:11:40 ALS Bottle#: 17 Worklist Smp#: 18
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: met6
Operator ID: AO Instrument ID: LC12
Sublist: chrom-LC12_Conf_8330*sub2

Method: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 15-May-2019 09:39:56 Calib Date: 15-May-2019 07:09:15
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0306

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
2 TNX							
1	17.798	17.858	-0.060	14487H	200.2	207.6	
5 DNX							
1	23.185	23.252	-0.067	12393H	200.8	205.1	
8 MNX							
1	27.465	27.588	-0.123	15479H	234.0	237.8	

Reagents:

HPMETABL6_00023 Amount Added: 1.00 Units: mL

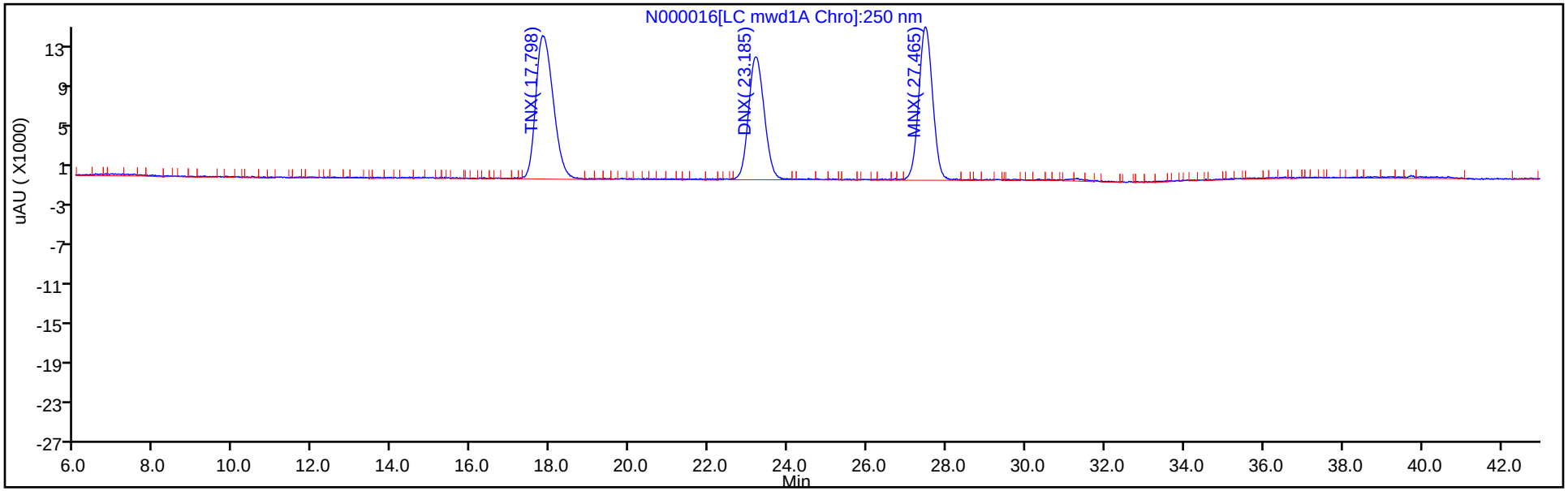
Report Date: 15-May-2019 09:39:57 Chrom Revision: 2.3 12-May-2019 16:28:34

Eurofins TestAmerica, Sacramento

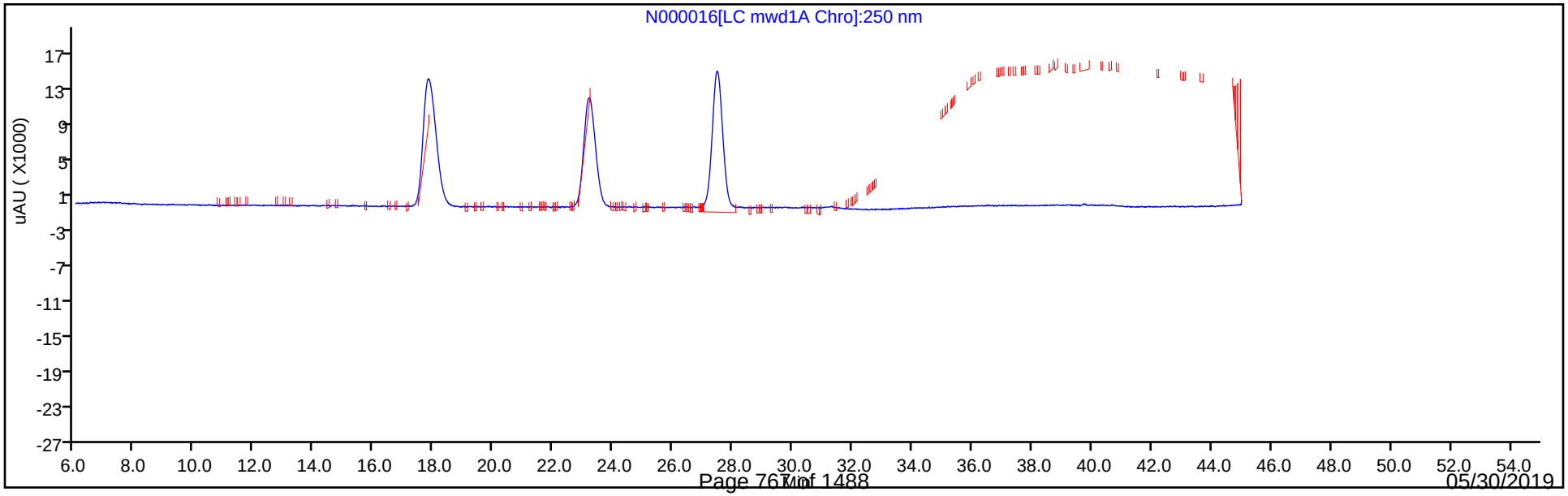
Data File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000016.D

Injection Date:	15-May-2019 06:11:40	Instrument ID:	LC12	Operator ID:	AO
Lims ID:	MET6			Worklist Smp#:	18
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D				
Lims ID:	MET7				
Client ID:					
Sample Type:	IC	Calib Level:	7		
Inject. Date:	15-May-2019 07:09:15	ALS Bottle#:	18	Worklist Smp#:	19
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Sample Info:	met7				
Operator ID:	AO	Instrument ID:	LC12		
Sublist:	chrom-LC12_Conf_8330*sub2				
Method:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\LC12_Conf_8330.m				
Limit Group:	LC 8330A ICAL				
Last Update:	15-May-2019 09:39:26	Calib Date:	15-May-2019 07:09:15		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D				
Column 1 :	Zorbax Cyano CN (4.60 mm)		Det: LC mwd1A, 250 nm		
Process Host:	CTX0306				
First Level Reviewer: ortizam		Date:	15-May-2019 09:39:26		

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
2 TNX							
1	17.802	17.858	-0.056	34711H	500.5	497.3	
5 DNX							
1	23.178	23.252	-0.074	29841H	502.0	493.8	
8 MNX							
1	27.465	27.588	-0.123	37280H	585.0	572.7	

Reagents:

HPMETABL7_00022 Amount Added: 1.00 Units: mL

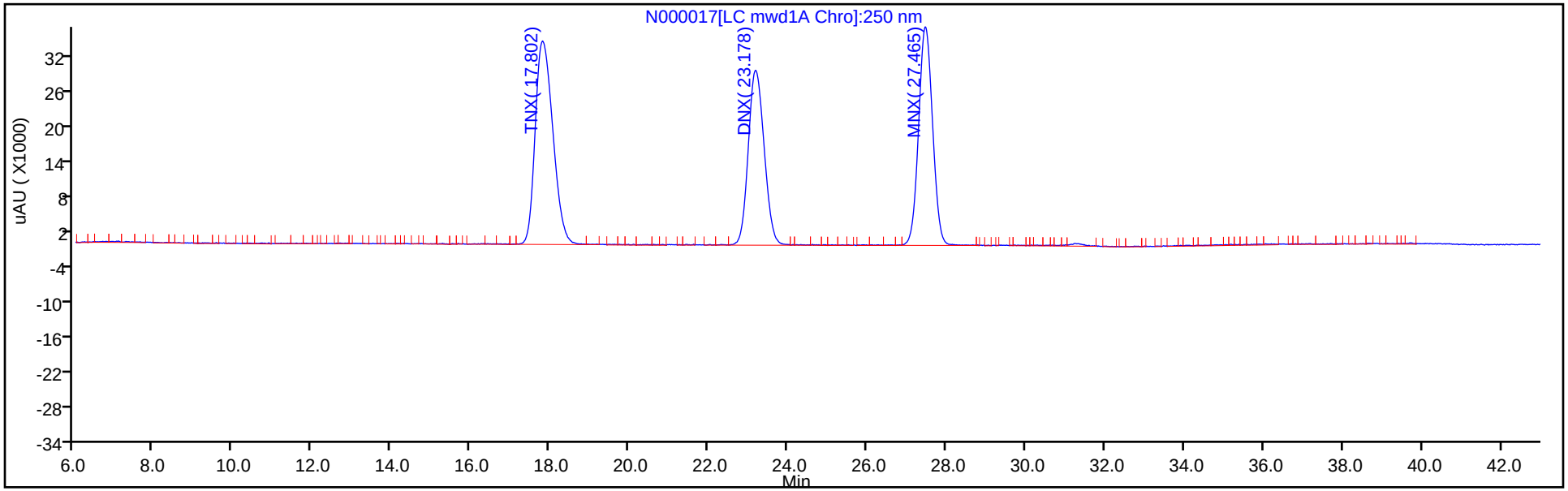
Report Date: 15-May-2019 09:39:26 Chrom Revision: 2.3 12-May-2019 16:28:34

Eurofins TestAmerica, Sacramento

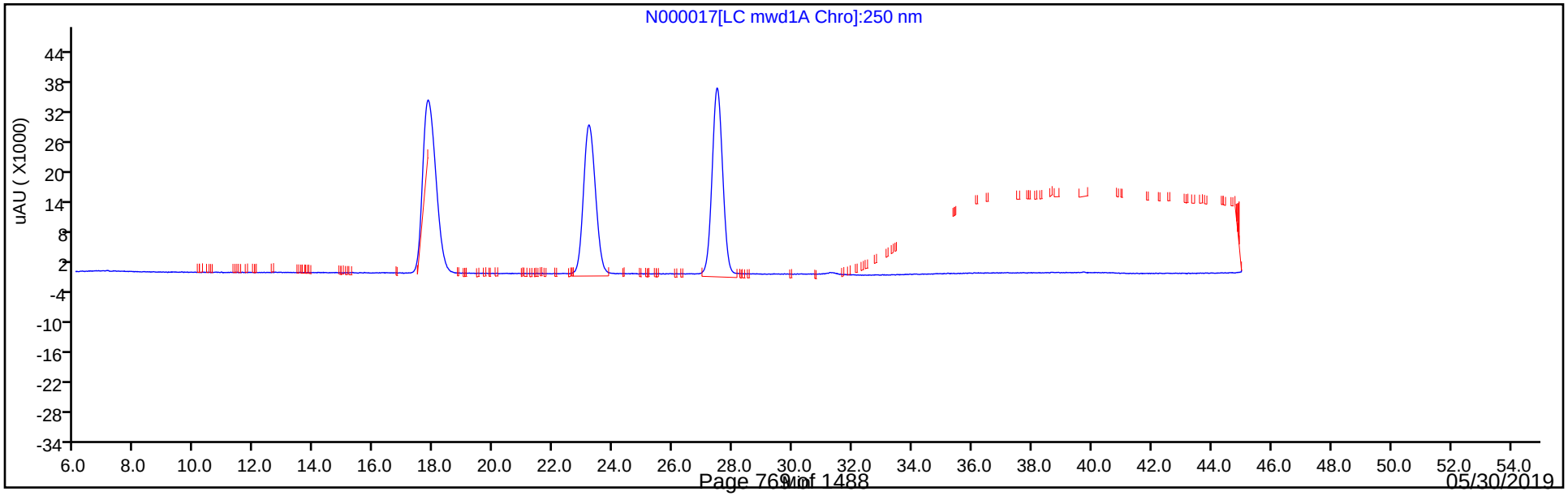
Data File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D

Injection Date:	15-May-2019 07:09:15	Instrument ID:	LC12	Operator ID:	AO
Lims ID:	MET7			Worklist Smp#:	19
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: ICV 320-278694/11 Calibration Date: 02/28/2019 02:52

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: ZAB0000011.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	80.65	73.77		183	200	-8.5	15.0
RDX	Ave	99.08	91.13		184	200	-8.0	15.0
1,3,5-Trinitrobenzene	Ave	234.3	217.1		185	200	-7.3	15.0
1,3-Dinitrobenzene	Ave	209.0	197.1		189	200	-5.7	15.0
3,5-Dinitroaniline	Ave	158.6	154.7		195	200	-2.5	15.0
Nitrobenzene	Ave	117.0	105.5		180	200	-9.8	15.0
Tetryl	Ave	104.9	105.8		202	200	0.8	15.0
Nitroglycerin	Ave	100.6	98.77		196	200	-1.9	15.0
2,4,6-Trinitrotoluene	Ave	115.1	116.1		202	200	0.8	15.0
4-Amino-2,6-dinitrotoluene	Lin2		75.58		174	200	-13.2	15.0
2-Amino-4,6-dinitrotoluene	Lin2		104.8		185	200	-7.7	15.0
2,6-Dinitrotoluene	Ave	73.33	67.61		184	200	-7.8	15.0
2,4-Dinitrotoluene	Ave	135.2	124.1		183	200	-8.3	15.0
2-Nitrotoluene	Ave	57.75	51.04		177	200	-11.6	15.0
4-Nitrotoluene	Ave	71.88	63.15		176	200	-12.2	15.0
3-Nitrotoluene	Lin2		60.35		174	200	-13.1	15.0
PETN	Lin2		50.01		184	200	-8.1	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: ICV 320-278694/11 Calibration Date: 02/28/2019 02:52

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: ZAB0000011.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	18.00	17.76	18.26
RDX	20.59	20.35	20.85
1,3,5-Trinitrobenzene	22.41	22.17	22.67
1,3-Dinitrobenzene	24.74	24.49	24.99
3,5-Dinitroaniline	25.75	25.51	26.01
Nitrobenzene	26.38	26.14	26.64
Tetryl	27.04	26.80	27.30
Nitroglycerin	27.83	27.60	28.10
2,4,6-Trinitrotoluene	28.46	28.23	28.73
4-Amino-2,6-dinitrotoluene	29.25	28.93	29.61
2-Amino-4,6-dinitrotoluene	29.93	29.57	30.33
2,6-Dinitrotoluene	31.39	31.12	31.72
2,4-Dinitrotoluene	31.82	31.54	32.16
2-Nitrotoluene	35.04	34.71	35.37
4-Nitrotoluene	36.57	36.21	36.93
3-Nitrotoluene	38.25	37.84	38.64
PETN	40.21	39.79	40.61

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000011.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 28-Feb-2019 02:52:31 ALS Bottle#: 10 Worklist Smp#: 11
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 320-0072509-011
Operator ID: AJC Instrument ID: LC11
Sublist:

Method: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 04-Mar-2019 13:22:16 Calib Date: 28-Feb-2019 01:05:14
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000009.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0304

First Level Reviewer: ortizam Date: 28-Feb-2019 15:15:01

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
3 HMX							
1	17.996	18.009	-0.013	14754H	200.0	182.9	
5 Ethylene glycol dinitrate							M
2	20.069	20.082	-0.013	238578	200.0	186.7	M
6 RDX							
1	20.589	20.595	-0.006	18226H	200.0	184.0	
8 1,3,5-Trinitrobenzene							
1	22.412	22.419	-0.007	43414H	200.0	185.3	
9 1,3-Dinitrobenzene							
1	24.739	24.742	-0.003	39413H	200.0	188.6	
10 3,5-Dinitroaniline							
1	25.752	25.762	-0.010	30948H	200.0	195.1	
11 Nitrobenzene							
1	26.379	26.389	-0.010	21106H	200.0	180.4	
12 Tetryl							
1	27.039	27.052	-0.013	21163H	200.0	201.7	
13 Nitroglycerin							M
2	27.826	27.845	-0.019	19753H	200.0	196.3	M
14 2,4,6-Trinitrotoluene							
1	28.462	28.482	-0.020	23210H	200.0	201.7	
15 4-Amino-2,6-dinitrotoluene							
1	29.249	29.272	-0.023	15115H	200.0	173.6	
17 2-Amino-4,6-dinitrotoluene							
1	29.926	29.952	-0.026	20957H	200.0	184.6	
18 2,6-Dinitrotoluene							
1	31.386	31.415	-0.029	13522H	200.0	184.4	
19 2,4-Dinitrotoluene							
1	31.819	31.845	-0.026	24810H	200.0	183.4	

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
20 o-Nitrotoluene							
1	35.039	35.042	-0.003	10207H	200.0	176.8	
21 p-Nitrotoluene							
1	36.572	36.569	0.003	12630H	200.0	175.7	
22 m-Nitrotoluene							
1	38.252	38.235	0.017	12070H	200.0	173.8	
23 PETN							
2	40.205	40.199	0.006	10001H	200.0	183.7	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

HP8330IC_00061 Amount Added: 1.00 Units: ml

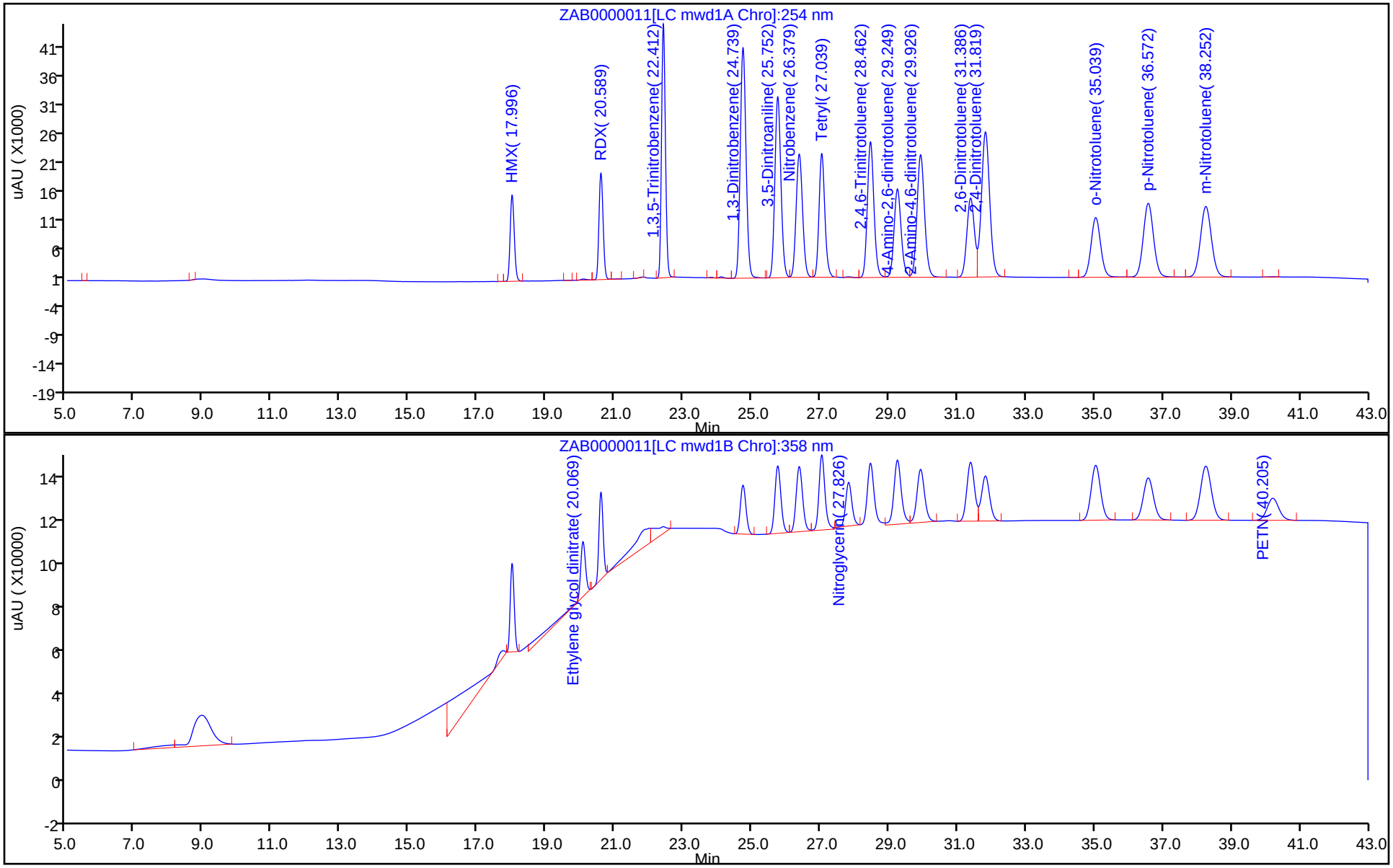
Report Date: 04-Mar-2019 13:22:17 Chrom Revision: 2.3 11-Feb-2019 16:31:10

TestAmerica Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000011.D

Injection Date:	28-Feb-2019 02:52:31	Instrument ID:	LC11	Operator ID:	AJC
Lims ID:	ICV			Worklist Smp#:	11
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

TestAmerica Sacramento

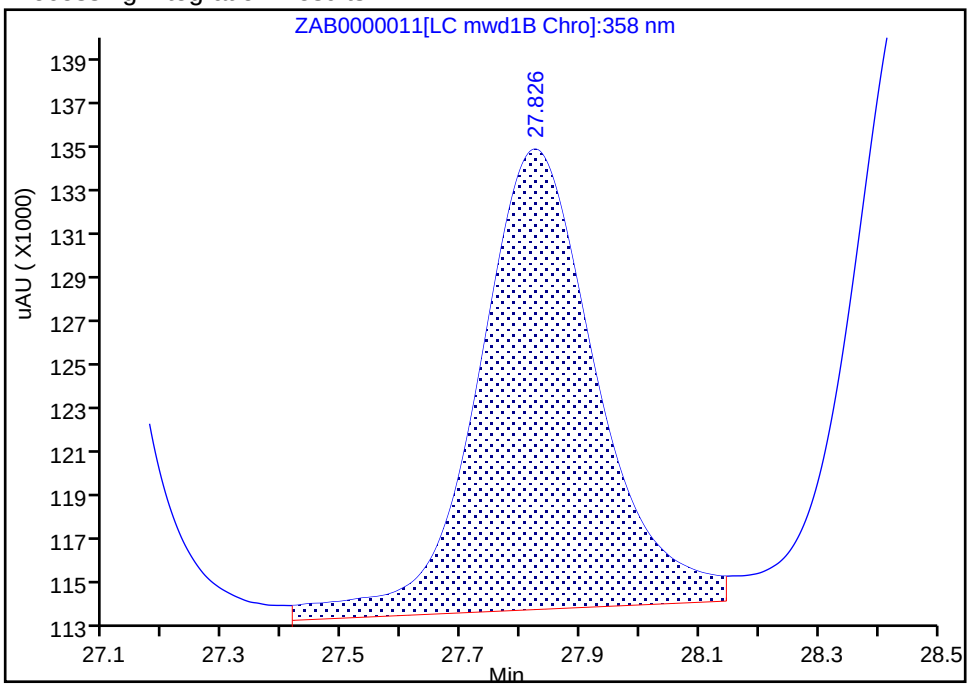
Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000011.D
Injection Date: 28-Feb-2019 02:52:31 Instrument ID: LC11
Lims ID: ICV
Client ID:
Operator ID: AJC ALS Bottle#: 10 Worklist Smp#: 11
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: 8330 Metab LC11 Limit Group: LC 8330A ICAL
Column: Detector LC mwd1B, 358 nm

13 Nitroglycerin, CAS: 55-63-0

Signal: 1

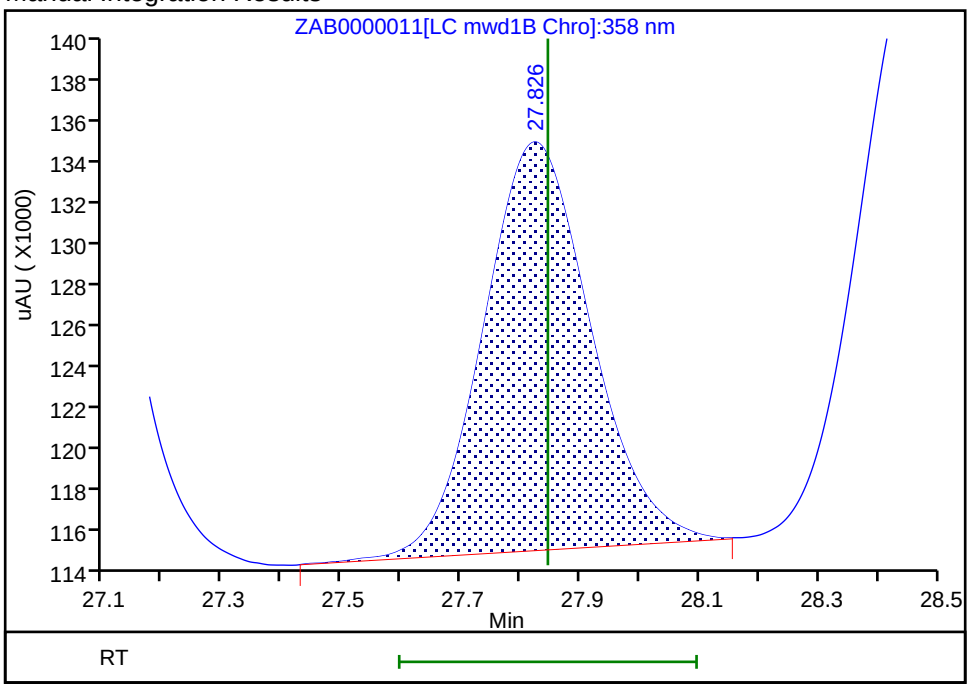
Processing Integration Results

RT: 27.83
Height: 20639
Amount: 205.0793
Amount Units: ng/ml



Manual Integration Results

RT: 27.83
Height: 19753
Amount: 196.2755
Amount Units: ng/ml



Reviewer: ortizam, 28-Feb-2019 15:14:58
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: LODV 320-278694/12 Calibration Date: 02/28/2019 03:46

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: ZAB0000012.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	80.65	88.40		5.48	5.00	9.6	
RDX	Ave	99.08	112.6		5.68	5.00	13.6	
1,3,5-Trinitrobenzene	Ave	234.3	255.0		5.44	5.00	8.8	
1,3-Dinitrobenzene	Ave	209.0	225.0		5.38	5.00	7.7	
3,5-Dinitroaniline	Ave	158.6	174.0		5.48	5.00	9.7	
Nitrobenzene	Ave	117.0	127.2		5.44	5.00	8.7	
Tetryl	Ave	104.9	116.4		5.55	5.00	10.9	
Nitroglycerin	Ave	100.6	86.60		17.2	20.0	-13.9	
2,4,6-Trinitrotoluene	Ave	115.1	132.4		5.75	5.00	15.1	
4-Amino-2,6-dinitrotoluene	Lin2		97.60		5.61	5.00	12.3	
2-Amino-4,6-dinitrotoluene	Lin2		126.6		5.65	5.00	12.9	
2,6-Dinitrotoluene	Ave	73.33	82.60		5.63	5.00	12.6	
2,4-Dinitrotoluene	Ave	135.2	146.8		5.43	5.00	8.5	
2-Nitrotoluene	Ave	57.75	62.20		5.39	5.00	7.7	
4-Nitrotoluene	Ave	71.88	79.20		5.51	5.00	10.2	
3-Nitrotoluene	Lin2		77.80		5.31	5.00	6.2	
PETN	Lin2		50.95		17.2	20.0	-13.8	

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: LODV 320-278694/12 Calibration Date: 02/28/2019 03:46

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: ZAB0000012.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	18.01	17.76	18.26
RDX	20.60	20.35	20.85
1,3,5-Trinitrobenzene	22.42	22.17	22.67
1,3-Dinitrobenzene	24.73	24.49	24.99
3,5-Dinitroaniline	25.75	25.51	26.01
Nitrobenzene	26.38	26.14	26.64
Tetryl	27.04	26.80	27.30
Nitroglycerin	27.83	27.60	28.10
2,4,6-Trinitrotoluene	28.46	28.23	28.73
4-Amino-2,6-dinitrotoluene	29.22	28.93	29.61
2-Amino-4,6-dinitrotoluene	29.93	29.57	30.33
2,6-Dinitrotoluene	31.39	31.12	31.72
2,4-Dinitrotoluene	31.81	31.54	32.16
2-Nitrotoluene	35.03	34.71	35.37
4-Nitrotoluene	36.57	36.21	36.93
3-Nitrotoluene	38.24	37.84	38.64
PETN	40.25	39.79	40.61
DNX			
MNX			
TNX			
3,4-Dinitrotoluene			

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000012.D
Lims ID: LODV
Client ID:
Sample Type: LODV
Inject. Date: 28-Feb-2019 03:46:03 ALS Bottle#: 11 Worklist Smp#: 12
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 320-0072509-012
Operator ID: AJC Instrument ID: LC11

Method: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 04-Mar-2019 13:25:38 Calib Date: 28-Feb-2019 01:05:14
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000009.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0304

First Level Reviewer: ortizam Date: 28-Feb-2019 15:15:16

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
3 HMX							
1	18.011	18.009	0.002	442H	5.00	5.48	
5 Ethylene glycol dinitrate							M
2	20.095	20.082	0.013	22707	20.0	17.8	M
6 RDX							
1	20.598	20.595	0.003	563H	5.00	5.68	
7 2,4,6-Trinitrophenol							
2	22.031	21.970	0.061	910H		NC	
1	21.821	22.007	-0.186	308H			
8 1,3,5-Trinitrobenzene							
1	22.418	22.419	-0.001	1275H	5.00	5.44	
9 1,3-Dinitrobenzene							
1	24.731	24.742	-0.011	1125H	5.00	5.38	
10 3,5-Dinitroaniline							
1	25.751	25.762	-0.011	870H	5.00	5.48	
11 Nitrobenzene							
1	26.381	26.389	-0.008	636H	5.00	5.44	
12 Tetryl							
1	27.035	27.052	-0.017	582H	5.00	5.55	
13 Nitroglycerin							M
2	27.828	27.845	-0.017	1732H	20.0	17.2	M
14 2,4,6-Trinitrotoluene							
1	28.461	28.482	-0.021	662H	5.00	5.75	
15 4-Amino-2,6-dinitrotoluene							
1	29.218	29.272	-0.054	488H	5.00	5.61	
17 2-Amino-4,6-dinitrotoluene							
1	29.928	29.952	-0.024	633H	5.00	5.65	
18 2,6-Dinitrotoluene							
1	31.391	31.415	-0.024	413H	5.00	5.63	

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
19 2,4-Dinitrotoluene							
1	31.808	31.845	-0.037	734H	5.00	5.43	
20 o-Nitrotoluene							
1	35.031	35.042	-0.011	311H	5.00	5.39	
21 p-Nitrotoluene							
1	36.568	36.569	-0.001	396H	5.00	5.51	
22 m-Nitrotoluene							
1	38.238	38.235	0.003	389H	5.00	5.31	
23 PETN							
2	40.251	40.199	0.052	1019H	20.0	17.2	

QC Flag Legend

Processing Flags
NC - Not Calibrated
H - Response Measured by Height
Review Flags
M - Manually Integrated

Reagents:

HP8330ICL_00048 Amount Added: 1.00 Units: ml

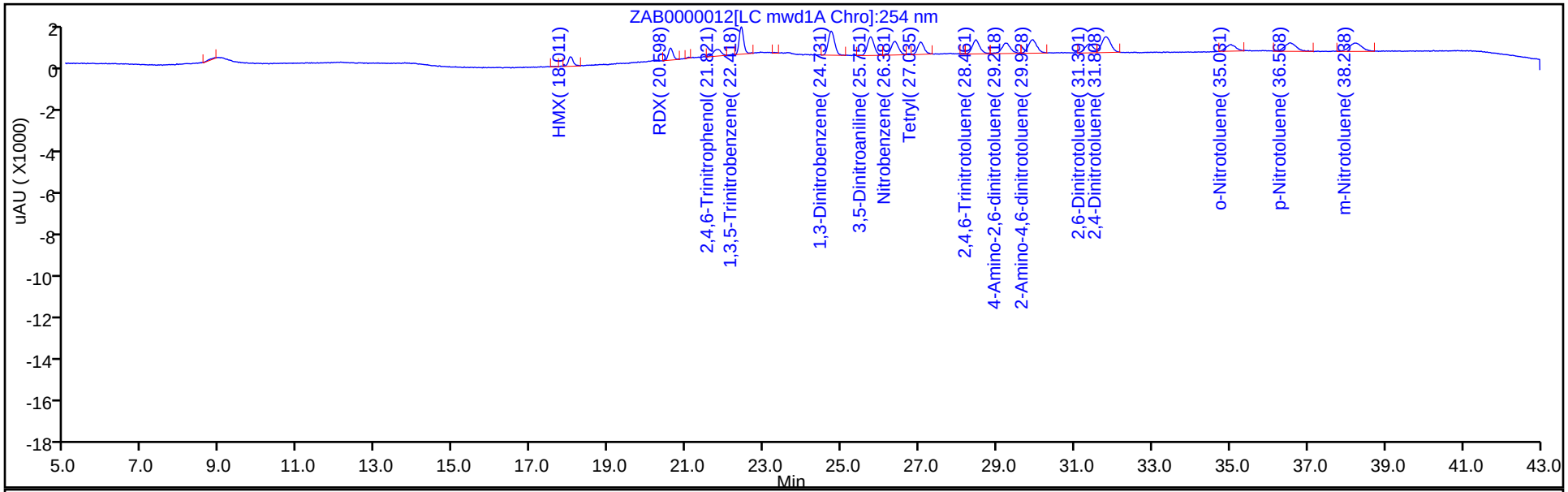
Report Date: 04-Mar-2019 13:25:54 Chrom Revision: 2.3 11-Feb-2019 16:31:10

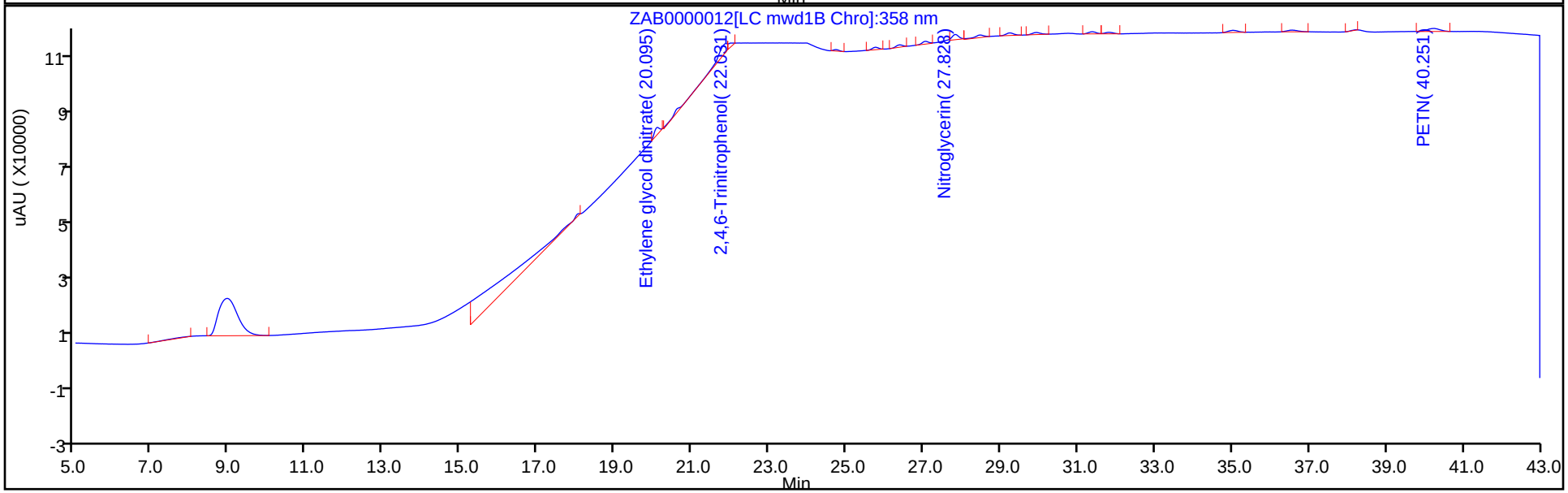
TestAmerica Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000012.D

Injection Date:	28-Feb-2019 03:46:03	Instrument ID:	LC11	Operator ID:	AJC
Lims ID:	LODV			Worklist Smp#:	12
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1





Manual Integration/User Assign Peak Report

TestAmerica Sacramento

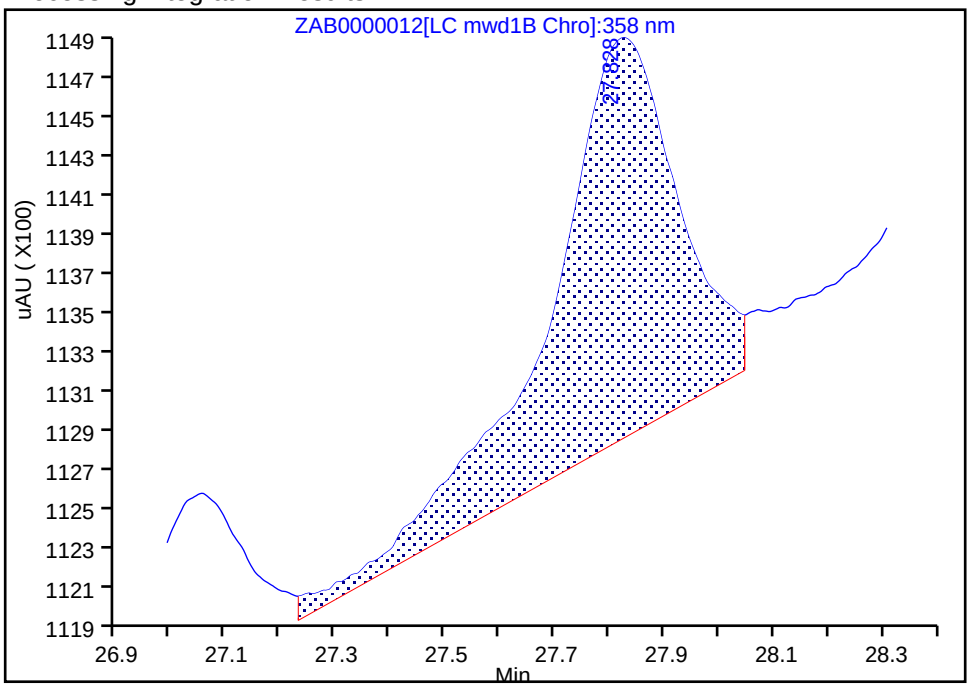
Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000012.D
Injection Date: 28-Feb-2019 03:46:03 Instrument ID: LC11
Lims ID: LODV
Client ID:
Operator ID: AJC ALS Bottle#: 11 Worklist Smp#: 12
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: 8330 Metab LC11 Limit Group: LC 8330A ICAL
Column: Detector LC mwd1B, 358 nm

13 Nitroglycerin, CAS: 55-63-0

Signal: 1

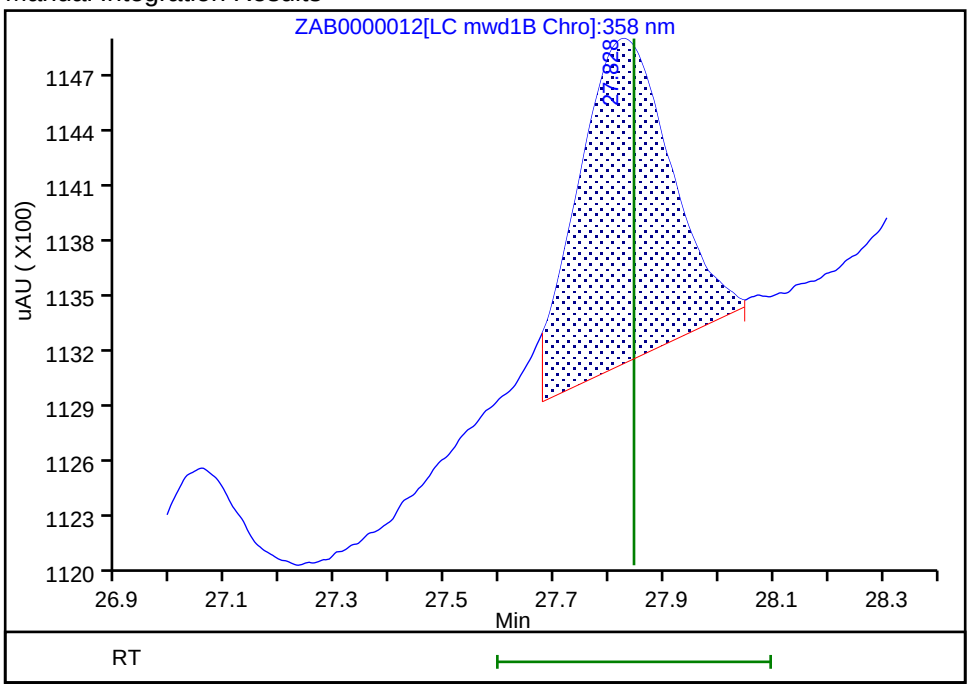
Processing Integration Results

RT: 27.83
Height: 2012
Amount: 19.992221
Amount Units: ng/ml



Manual Integration Results

RT: 27.83
Height: 1732
Amount: 17.210003
Amount Units: ng/ml



Reviewer: ortizam, 28-Feb-2019 12:26:16
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: ICV 320-278694/21 Calibration Date: 02/28/2019 11:48

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: ZAB0000021.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
TNX	Ave	52.00	49.64		95.5	100	-4.5	15.0
DNX	Ave	64.92	61.27		94.4	100	-5.6	15.0
MNX	Ave	100.2	95.54		112	117	-4.6	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: ICV 320-278694/21 Calibration Date: 02/28/2019 11:48

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: ZAB0000021.D

Analyte	RT	RT WINDOW	
		FROM	TO
TNX	12.70	12.47	12.97
DNX	16.64	16.40	16.90
MNX	19.11	18.87	19.37

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000021.D
Lims ID: ICV met
Client ID:
Sample Type: ICV
Inject. Date: 28-Feb-2019 11:48:26 ALS Bottle#: 19 Worklist Smp#: 21
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 320-0072509-021
Operator ID: AJC Instrument ID: LC11
Sublist:

Method: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 28-Feb-2019 14:33:03 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0301

First Level Reviewer: ortizam Date: 28-Feb-2019 15:13:30

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
1 TNX							
1	12.704	12.719	-0.015	4964H	100.0	95.5	
2 DNX							
1	16.637	16.646	-0.009	6127H	100.0	94.4	
4 MNX							
1	19.114	19.119	-0.005	11178H	117.0	111.6	

Reagents:

HPMETIC_00023 Amount Added: 1.00 Units: mL

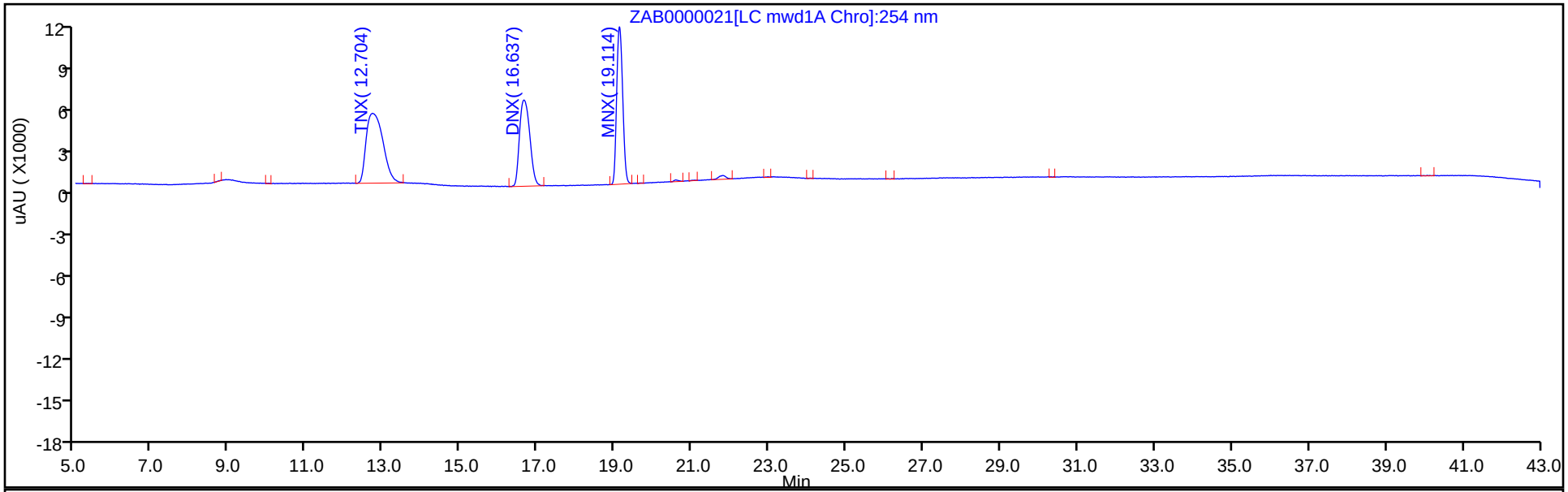
Report Date: 28-Feb-2019 15:13:30 Chrom Revision: 2.3 11-Feb-2019 16:31:10

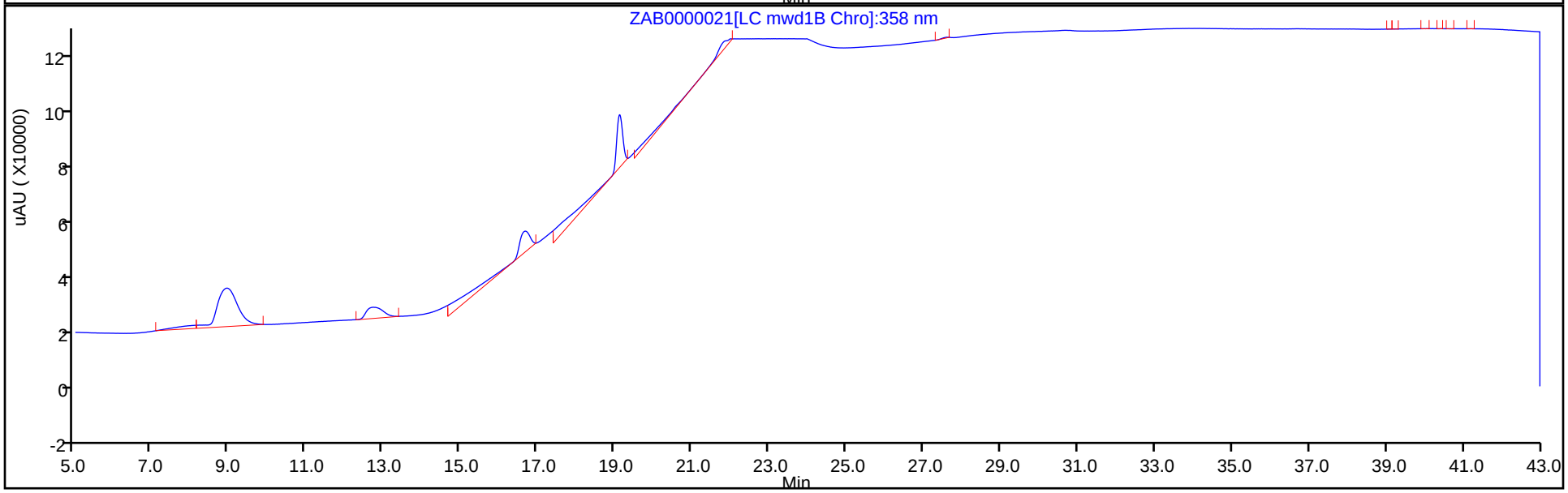
TestAmerica Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000021.D

Injection Date:	28-Feb-2019 11:48:26	Instrument ID:	LC11	Operator ID:	AJC
Lims ID:	ICV met			Worklist Smp#:	21
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1





FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: LODV 320-278694/22 Calibration Date: 02/28/2019 12:42

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: ZAB0000022.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
TNX	Ave	52.00	51.55		9.92	10.0	-0.9	
DNX	Ave	64.92	65.94		10.2	10.0	1.6	
MNX	Ave	100.2	101.3		11.8	11.7	1.1	

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: LODV 320-278694/22 Calibration Date: 02/28/2019 12:42

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: ZAB0000022.D

Analyte	RT	RT WINDOW	
		FROM	TO
TNX	12.76	12.47	12.97
DNX	16.66	16.40	16.90
MNX	19.12	18.87	19.37
1,3,5-Trinitrobenzene			
1,3-Dinitrobenzene			
2,4,6-Trinitrotoluene			
2,4-Dinitrotoluene			
2,6-Dinitrotoluene			
2-Amino-4,6-dinitrotoluene			
2-Nitrotoluene			
3,5-Dinitroaniline			
3-Nitrotoluene			
4-Amino-2,6-dinitrotoluene			
4-Nitrotoluene			
HMX			
Nitrobenzene			
Nitroglycerin			
PETN			
RDX			
Tetryl			
3,4-Dinitrotoluene			

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000022.D
Lims ID: LODV met
Client ID:
Sample Type: LODV
Inject. Date: 28-Feb-2019 12:42:06 ALS Bottle#: 20 Worklist Smp#: 22
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 320-0072509-022
Operator ID: AJC Instrument ID: LC11

Method: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 28-Feb-2019 15:13:58 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0301

First Level Reviewer: ortizam Date: 28-Feb-2019 15:13:58

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
1 TNX							M
1	12.760	12.719	0.041	516H	10.0	9.92	M
2 DNX							M
1	16.657	16.646	0.011	662H	10.0	10.2	M
4 MNX							
1	19.117	19.119	-0.002	1185H	11.7	11.8	
7 2,4,6-Trinitrophenol							
2	21.997	21.970	0.027	1348H		NC	
1	21.760	22.007	-0.247	321H			

QC Flag Legend

Processing Flags
NC - Not Calibrated
H - Response Measured by Height
Review Flags
M - Manually Integrated

Reagents:

HPMETABL2_00008 Amount Added: 1.00 Units: mL

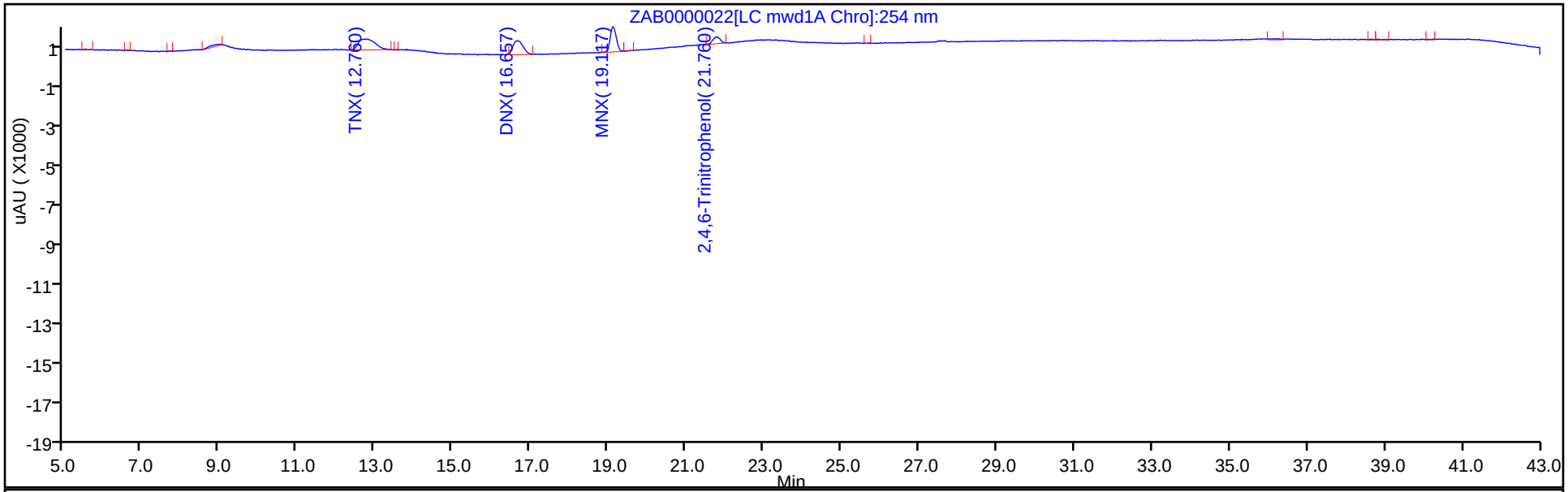
Report Date: 28-Feb-2019 15:13:58 Chrom Revision: 2.3 11-Feb-2019 16:31:10

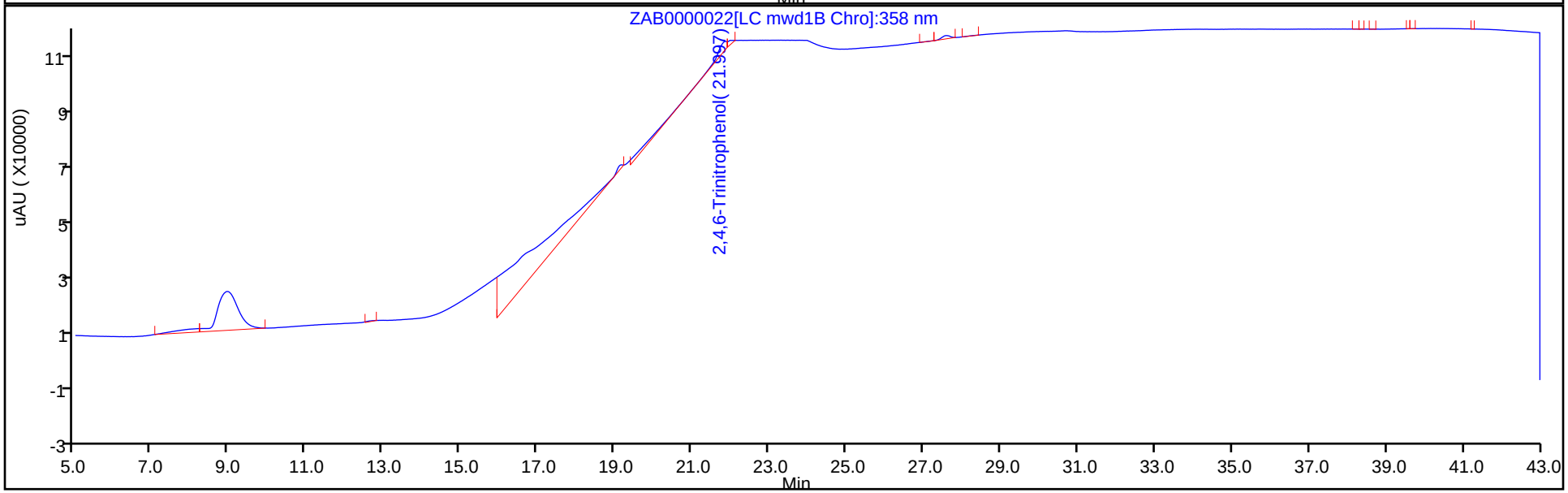
TestAmerica Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000022.D

Injection Date:	28-Feb-2019 12:42:06	Instrument ID:	LC11	Operator ID:	AJC
Lims ID:	LODV met			Worklist Smp#:	22
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1





Manual Integration/User Assign Peak Report

TestAmerica Sacramento

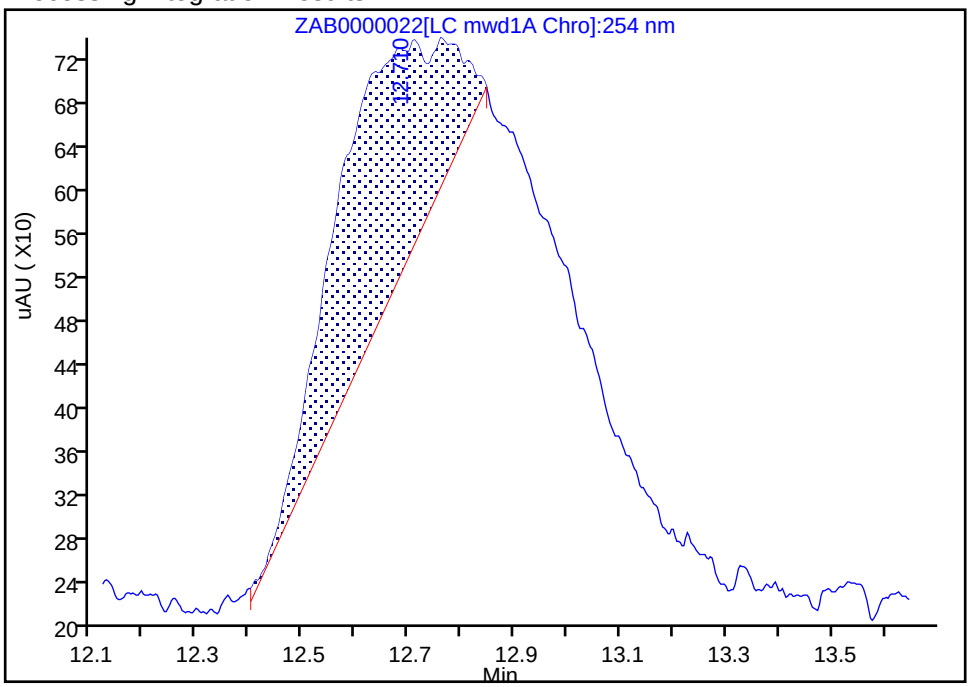
Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000022.D
Injection Date: 28-Feb-2019 12:42:06 Instrument ID: LC11
Lims ID: LODV met
Client ID:
Operator ID: AJC ALS Bottle#: 20 Worklist Smp#: 22
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: 8330 Metab LC11 Limit Group: LC 8330A ICAL
Column: Synergi Hydro-RP C18 (4.60 mm) Detector LC mwd1A, 250 nm

1 TNX, CAS: 13980-04-6

Signal: 1

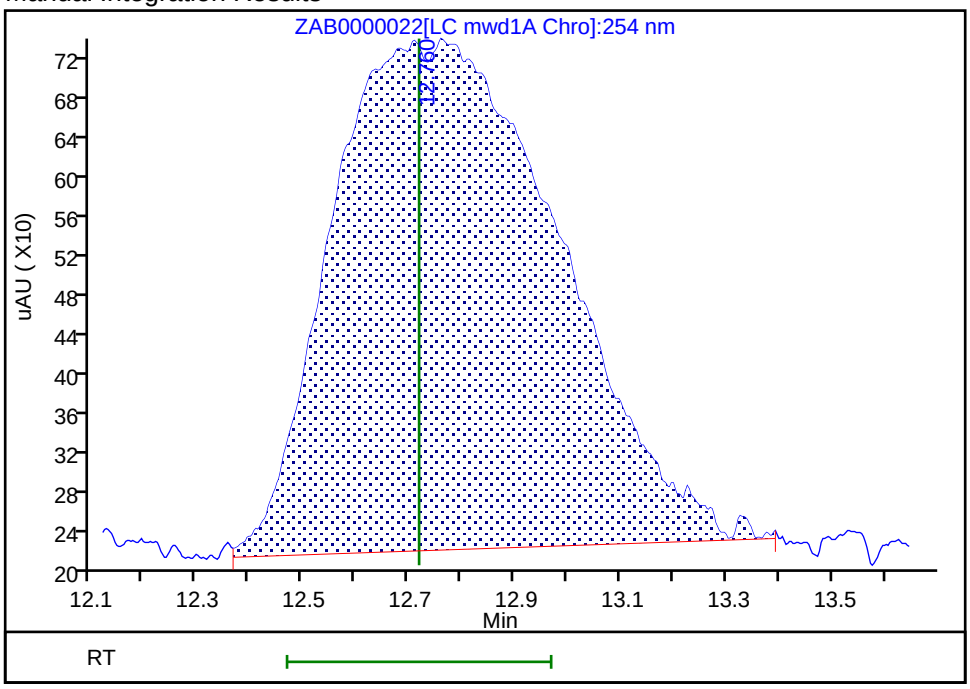
Processing Integration Results

RT: 12.71
Height: 187
Amount: 3.595866
Amount Units: ng/ml



Manual Integration Results

RT: 12.76
Height: 516
Amount: 9.922283
Amount Units: ng/ml



Reviewer: ortizam, 28-Feb-2019 15:13:45
Audit Action: Manually Integrated Audit Reason: Peak not integrated

Manual Integration/User Assign Peak Report

TestAmerica Sacramento

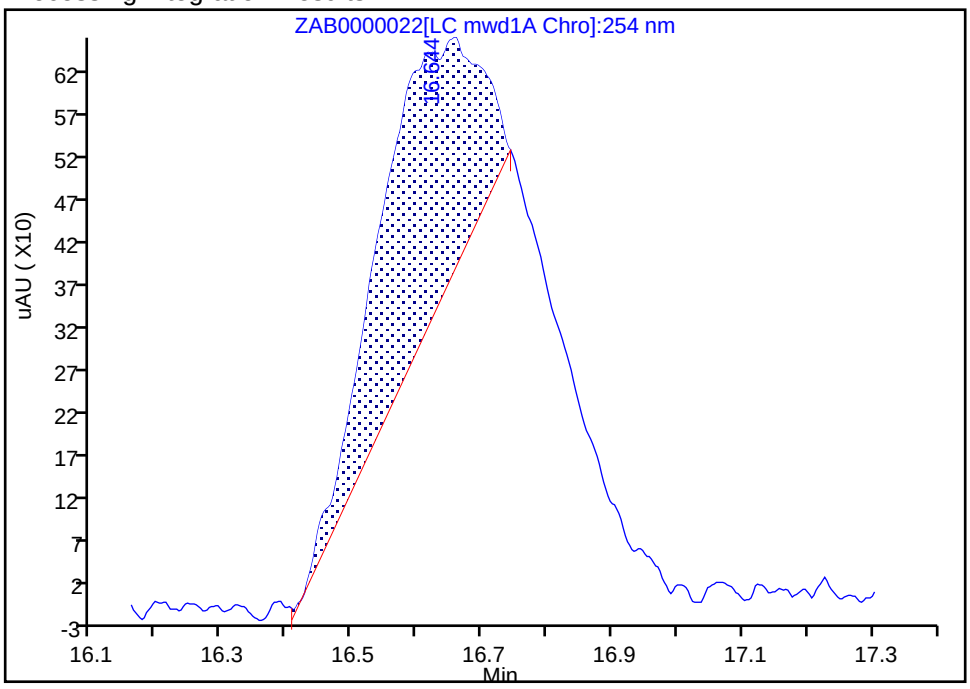
Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000022.D
Injection Date: 28-Feb-2019 12:42:06 Instrument ID: LC11
Lims ID: LODV met
Client ID:
Operator ID: AJC ALS Bottle#: 20 Worklist Smp#: 22
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: 8330 Metab LC11 Limit Group: LC 8330A ICAL
Column: Synergi Hydro-RP C18 (4.60 mm) Detector LC mwd1A, 250 nm

2 DNX, CAS: 80251-29-2

Signal: 1

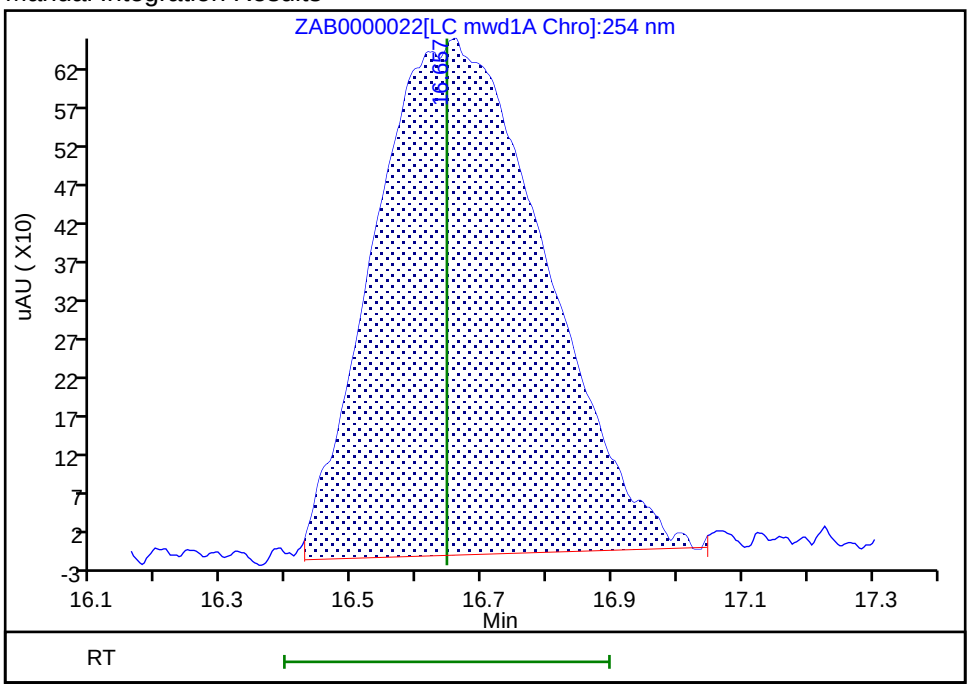
Processing Integration Results

RT: 16.64
Height: 277
Amount: 4.267064
Amount Units: ng/ml



Manual Integration Results

RT: 16.66
Height: 662
Amount: 10.197820
Amount Units: ng/ml



Reviewer: ortizam, 28-Feb-2019 15:13:55
Audit Action: Manually Integrated Audit Reason: Peak not integrated

User Disabled Compound Report

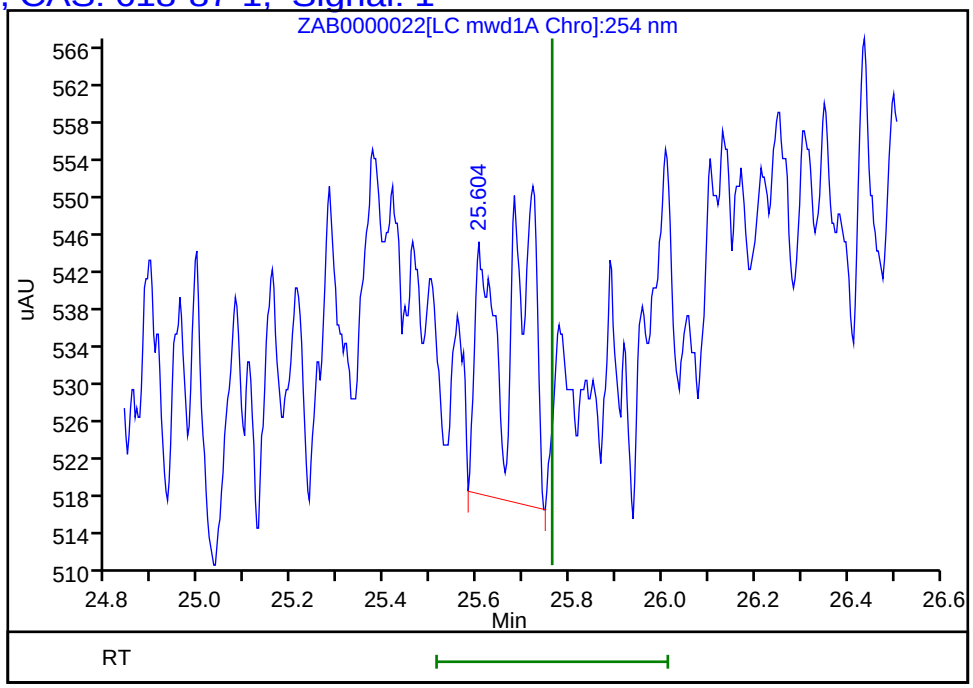
TestAmerica Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000022.D
Injection Date: 28-Feb-2019 12:42:06 Instrument ID: LC11
Lims ID: LODV met
Client ID:
Operator ID: AJC ALS Bottle#: 20 Worklist Smp#: 22
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: 8330 Metab LC11 Limit Group: LC 8330A ICAL

Column: Synergi Hydro-RP C18 (4.60 mm) Detector LC mwd1A, 250 nm

10 3,5-Dinitroaniline, CAS: 618-87-1, Signal: 1

RT: 25.60
Response: 28
Amount: 0.176510



Reviewer: ortizam, 28-Feb-2019 15:13:58
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCVRT 320-291526/3 Calibration Date: 04/30/2019 13:05

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: ZD0000002.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	80.65	73.40		45.5	50.0	-9.0	15.0
RDX	Ave	99.08	90.68		45.8	50.0	-8.5	15.0
1,3,5-Trinitrobenzene	Ave	234.3	224.9		48.0	50.0	-4.0	15.0
1,3-Dinitrobenzene	Ave	209.0	201.5		48.2	50.0	-3.6	15.0
3,5-Dinitroaniline	Ave	158.6	151.3		47.7	50.0	-4.6	15.0
Nitrobenzene	Ave	117.0	113.8		48.6	50.0	-2.7	15.0
Tetryl	Ave	104.9	103.1		49.1	50.0	-1.8	15.0
Nitroglycerin	Ave	100.6	106.8		53.1	50.0	6.1	15.0
2,4,6-Trinitrotoluene	Ave	115.1	111.6		48.5	50.0	-3.0	15.0
4-Amino-2,6-dinitrotoluene	Lin2		83.48		47.9	50.0	-4.1	15.0
2-Amino-4,6-dinitrotoluene	Lin2		108.4		47.8	50.0	-4.4	15.0
2,6-Dinitrotoluene	Ave	73.33	70.22		47.9	50.0	-4.2	15.0
2,4-Dinitrotoluene	Ave	135.2	130.4		48.2	50.0	-3.6	15.0
2-Nitrotoluene	Ave	57.75	56.54		49.0	50.0	-2.1	15.0
4-Nitrotoluene	Ave	71.88	68.42		47.6	50.0	-4.8	15.0
3-Nitrotoluene	Lin2		68.18		48.9	50.0	-2.2	15.0
PETN	Lin2		55.74		50.0	50.0	0.0	15.0
3,4-Dinitrotoluene	Ave	73.20	71.62		48.9	50.0	-2.2	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCVRT 320-291526/3 Calibration Date: 04/30/2019 13:05

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: ZD0000002.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	18.04	17.79	18.29
RDX	20.60	20.35	20.85
1,3,5-Trinitrobenzene	22.38	22.13	22.63
1,3-Dinitrobenzene	24.69	24.44	24.94
3,5-Dinitroaniline	25.72	25.47	25.97
Nitrobenzene	26.30	26.05	26.55
Tetryl	26.93	26.68	27.18
Nitroglycerin	27.69	27.44	27.94
2,4,6-Trinitrotoluene	28.33	28.08	28.58
4-Amino-2,6-dinitrotoluene	29.16	28.82	29.50
2-Amino-4,6-dinitrotoluene	29.86	29.48	30.24
2,6-Dinitrotoluene	31.26	30.96	31.56
2,4-Dinitrotoluene	31.70	31.39	32.01
2-Nitrotoluene	34.84	34.51	35.17
4-Nitrotoluene	36.36	36.00	36.72
3-Nitrotoluene	38.00	37.60	38.40
PETN	39.74	39.33	40.15
3,4-Dinitrotoluene	29.48	29.23	29.73

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000002.D
Lims ID: CCVRT
Client ID:
Sample Type: CCVRT
Inject. Date: 30-Apr-2019 13:05:16 ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: CCVRT
Operator ID: AO Instrument ID: LC11
Sublist: chrom-8330 Metab LC11*sub9

Method: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 30-Apr-2019 14:55:15 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0338

First Level Reviewer: ortizam Date: 30-Apr-2019 14:55:15

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
3 HMX							
1	18.042	18.042	0.000	3670H	50.0	45.5	
5 Ethylene glycol dinitrate							M
2	20.042	20.042	0.000	62248	50.0	48.7	M
6 RDX							
1	20.602	20.602	0.000	4534H	50.0	45.8	
8 1,3,5-Trinitrobenzene							
1	22.382	22.382	0.000	11244H	50.0	48.0	
9 1,3-Dinitrobenzene							
1	24.692	24.692	0.000	10076H	50.0	48.2	
10 3,5-Dinitroaniline							
1	25.718	25.718	0.000	7565H	50.0	47.7	
11 Nitrobenzene							
1	26.298	26.298	0.000	5691H	50.0	48.6	
12 Tetryl							
1	26.932	26.932	0.000	5154H	50.0	49.1	
13 Nitroglycerin							
2	27.685	27.685	0.000	5341H	50.0	53.1	
14 2,4,6-Trinitrotoluene							
1	28.325	28.325	0.000	5579H	50.0	48.5	
15 4-Amino-2,6-dinitrotoluene							a
1	29.162	29.162	0.000	4174H	50.0	47.9	a
$ 16 3,4-Dinitrotoluene							a
1	29.482	29.482	0.000	3581H	50.0	48.9	a
2	29.485	29.485	0.000	7621H			
17 2-Amino-4,6-dinitrotoluene							
1	29.855	29.855	0.000	5421H	50.0	47.8	
18 2,6-Dinitrotoluene							
1	31.255	31.255	0.000	3511H	50.0	47.9	

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
19 2,4-Dinitrotoluene							
1	31.695	31.695	0.000	6521H	50.0	48.2	
20 o-Nitrotoluene							
1	34.835	34.835	0.000	2827H	50.0	49.0	
21 p-Nitrotoluene							
1	36.362	36.362	0.000	3421H	50.0	47.6	
22 m-Nitrotoluene							
1	37.995	37.995	0.000	3409H	50.0	48.9	
23 PETN							
2	39.735	39.735	0.000	2787H	50.0	50.0	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

HP8330L4_00062 Amount Added: 1.00 Units: ml

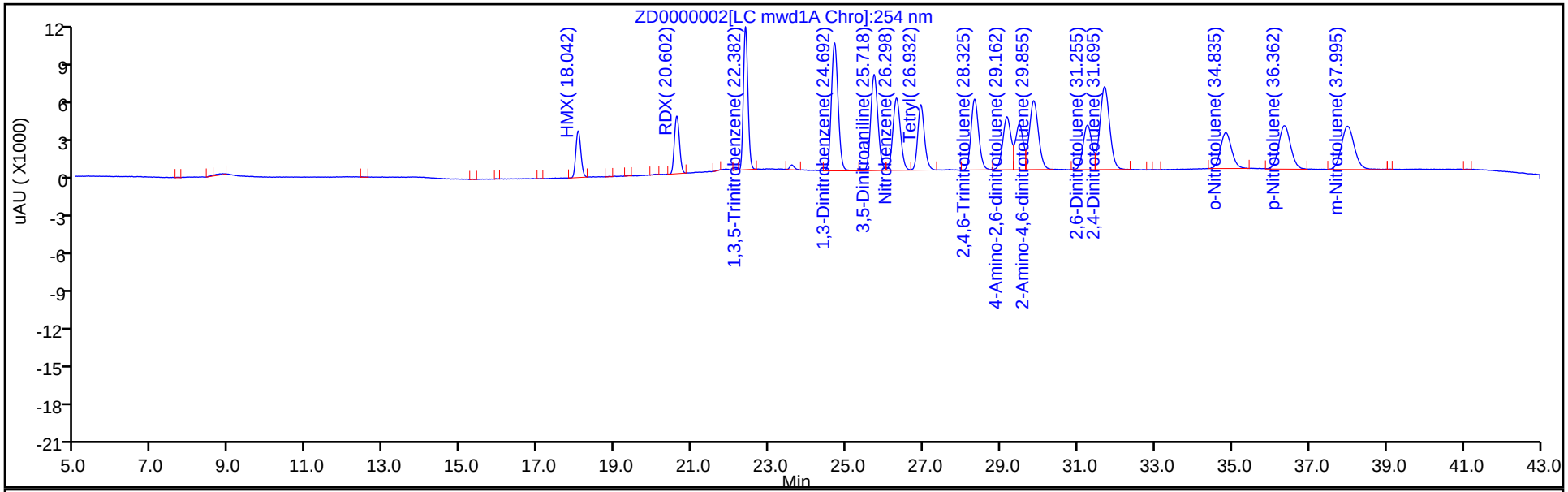
Report Date: 30-Apr-2019 14:55:15 Chrom Revision: 2.3 22-Apr-2019 19:25:52

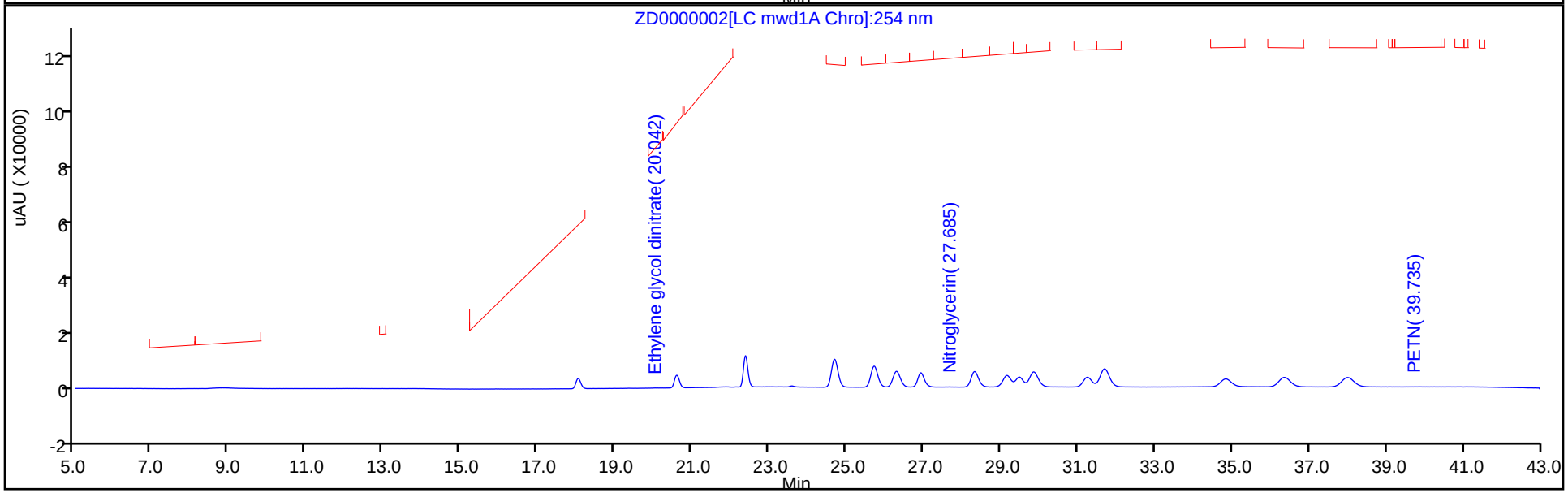
Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000002.D

Injection Date:	30-Apr-2019 13:05:16	Instrument ID:	LC11	Operator ID:	AO
Lims ID:	CCVRT			Worklist Smp#:	3
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1





Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

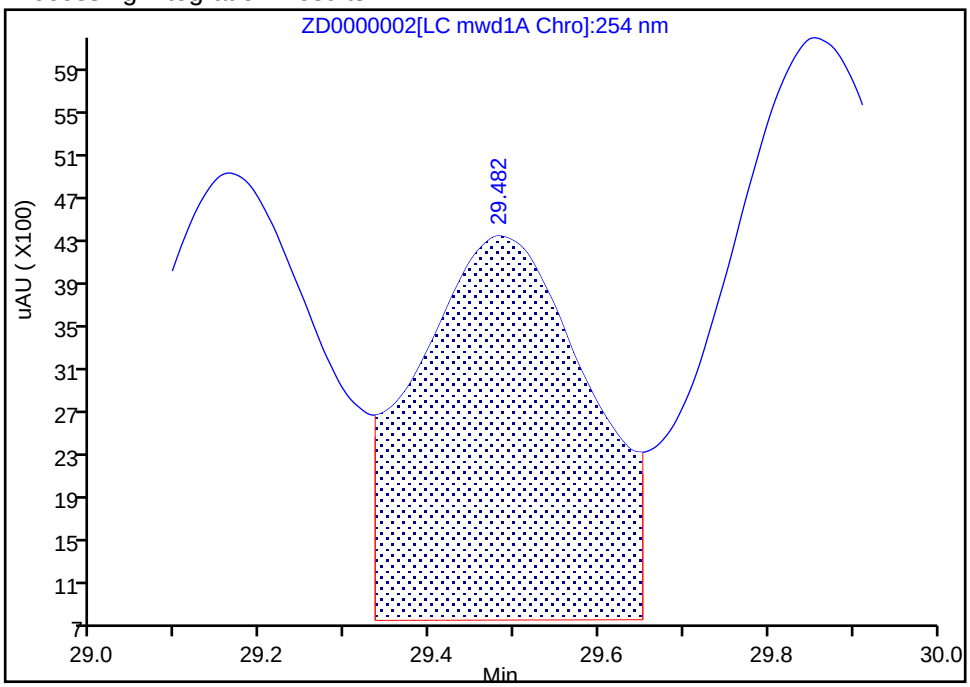
Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000002.D				
Injection Date:	30-Apr-2019 13:05:16	Instrument ID:	LC11		
Lims ID:	CCVRT				
Client ID:					
Operator ID:	AO	ALS Bottle#:	2	Worklist Smp#:	3
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

$ 16 3,4-Dinitrotoluene, CAS: 610-39-9

Signal: 1

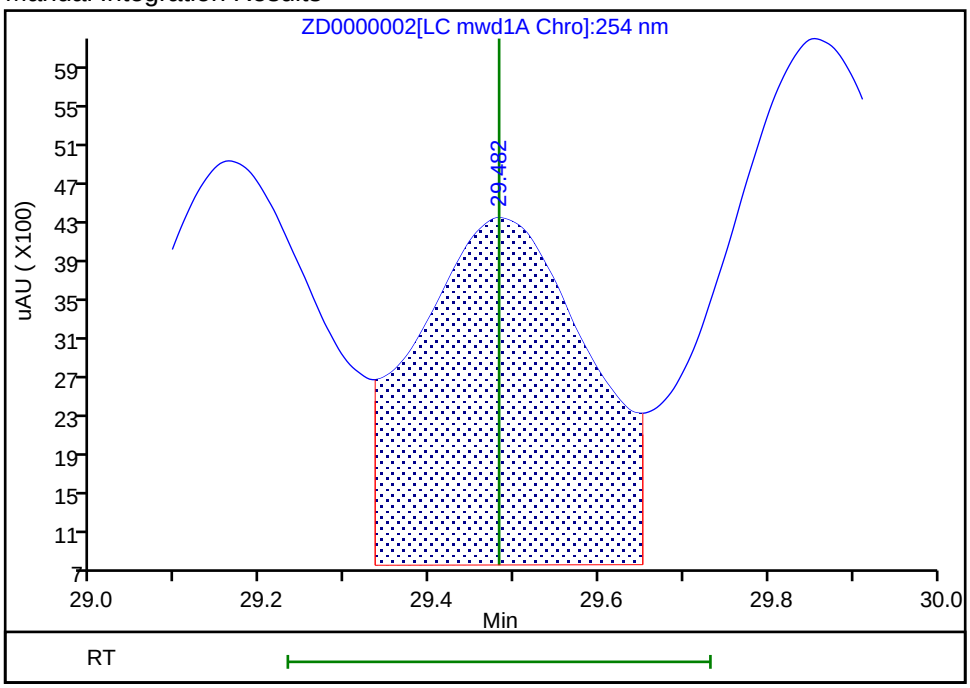
RT: 29.48
Height: 3581
Amount: 48.921242
Amount Units: ng/ml

Processing Integration Results



RT: 29.48
Height: 3581
Amount: 48.921242
Amount Units: ng/ml

Manual Integration Results



Reviewer: ortizam, 30-Apr-2019 14:55:02
Audit Action: Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

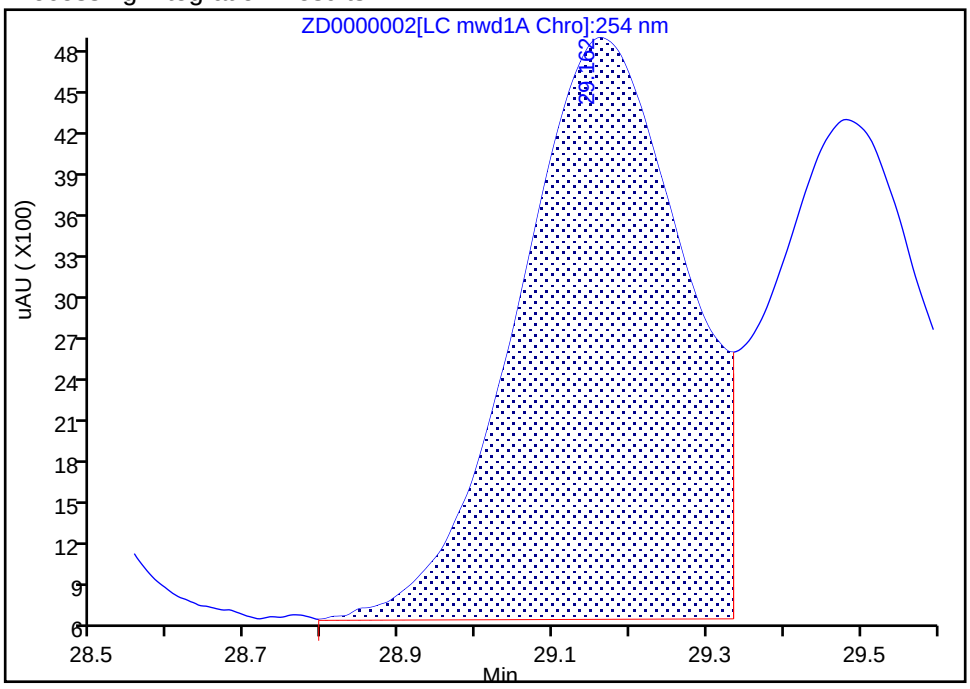
Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000002.D				
Injection Date:	30-Apr-2019 13:05:16	Instrument ID:	LC11		
Lims ID:	CCVRT				
Client ID:					
Operator ID:	AO	ALS Bottle#:	2	Worklist Smp#:	3
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

15 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

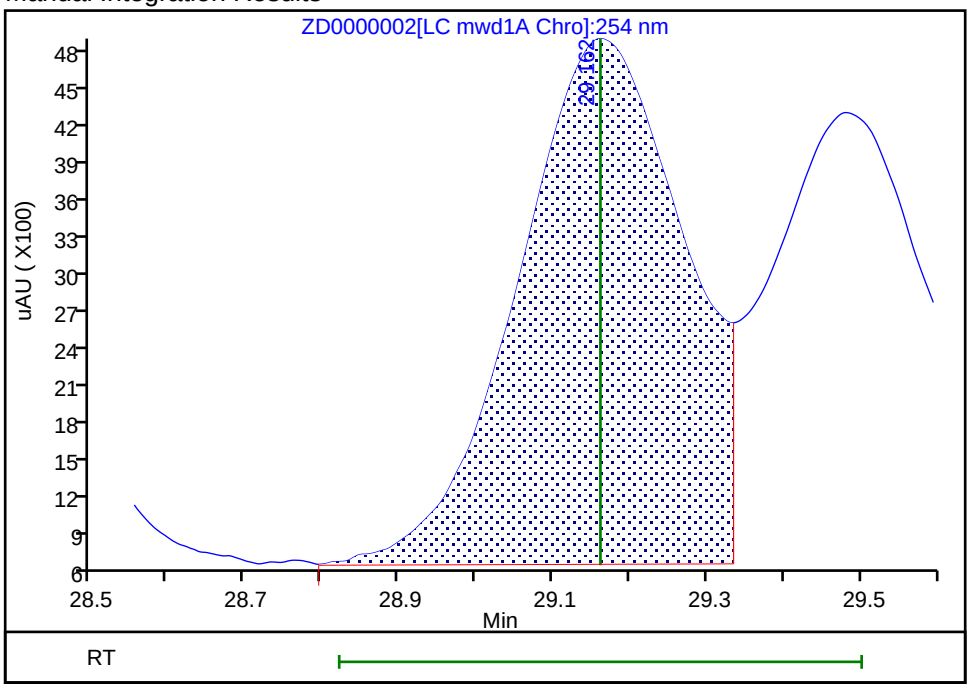
Processing Integration Results

RT: 29.16
Height: 4174
Amount: 47.946328
Amount Units: ng/ml



Manual Integration Results

RT: 29.16
Height: 4174
Amount: 47.946328
Amount Units: ng/ml



Reviewer: ortizam, 30-Apr-2019 14:55:04

Audit Action: Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

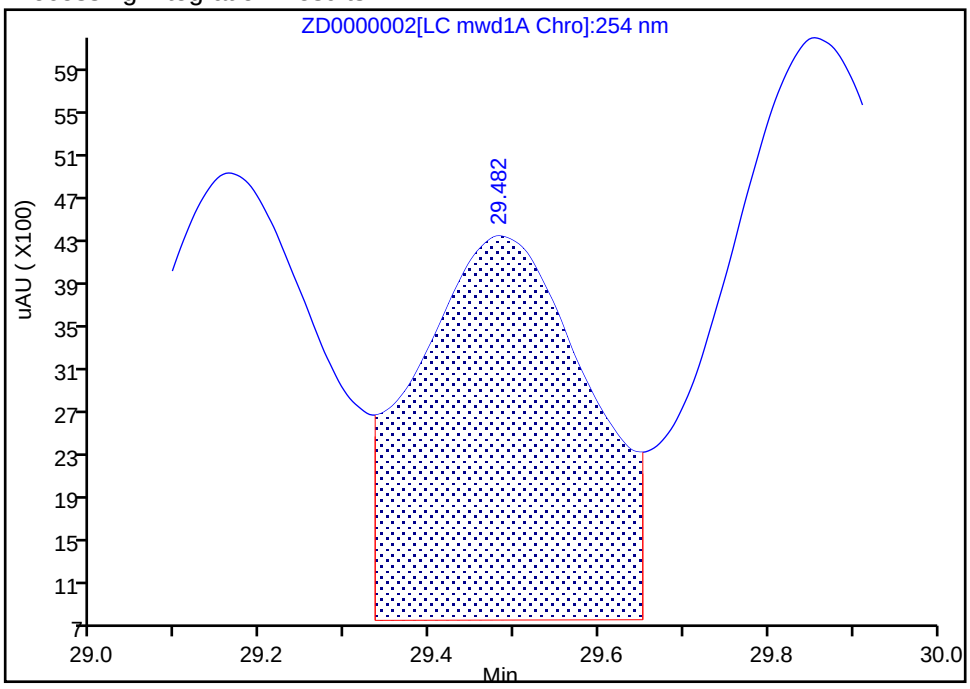
Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000002.D				
Injection Date:	30-Apr-2019 13:05:16	Instrument ID:	LC11		
Lims ID:	CCVRT				
Client ID:					
Operator ID:	AO	ALS Bottle#:	2	Worklist Smp#:	3
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

$ 16 3,4-Dinitrotoluene, CAS: 610-39-9

Signal: 1

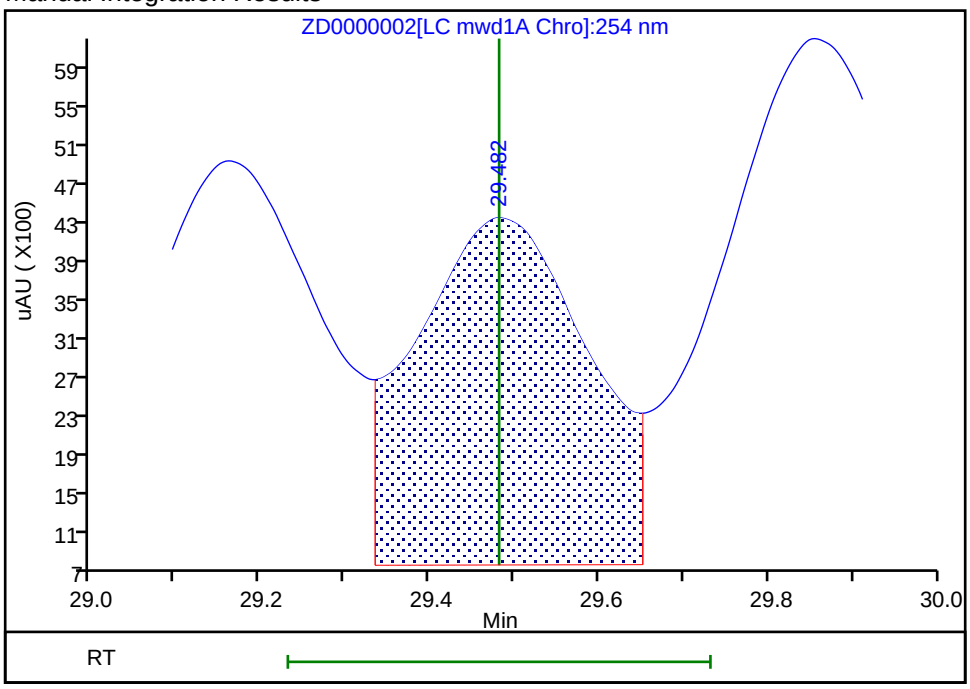
Processing Integration Results

RT: 29.48
Height: 3581
Amount: 48.921242
Amount Units: ng/ml



Manual Integration Results

RT: 29.48
Height: 3581
Amount: 48.921242
Amount Units: ng/ml



Reviewer: ortizam, 30-Apr-2019 14:55:02

Audit Action: Assigned Compound ID Audit Reason: Baseline Smoothing

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCVRT 320-291526/4 Calibration Date: 04/30/2019 13:58

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: ZD0000003.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
TNX	Ave	52.00	53.65		51.6	50.1	3.2	15.0
DNX	Ave	64.92	67.89		52.5	50.2	4.6	15.0
MNX	Ave	100.2	103.6		60.5	58.5	3.4	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCVRT 320-291526/4 Calibration Date: 04/30/2019 13:58

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: ZD0000003.D

Analyte	RT	RT WINDOW	
		FROM	TO
TNX	12.77	12.52	13.02
DNX	16.70	16.45	16.95
MNX	19.14	18.89	19.39

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000003.D
Lims ID: CCVRT MET
Client ID:
Sample Type: CCVRT
Inject. Date: 30-Apr-2019 13:58:51 ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: CCVRT MET
Operator ID: AO Instrument ID: LC11
Sublist: chrom-8330 Metab LC11*sub2

Method: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 30-Apr-2019 14:56:19 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0338

First Level Reviewer: ortizam Date: 30-Apr-2019 14:56:19

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
1 TNX							
1	12.771	12.771	0.000	2685H	50.1	51.6	
2 DNX							
1	16.704	16.704	0.000	3408H	50.2	52.5	
4 MNX							
1	19.144	19.144	0.000	6058H	58.5	60.5	

Reagents:

HPMETABL4_00039 Amount Added: 1.00 Units: ml

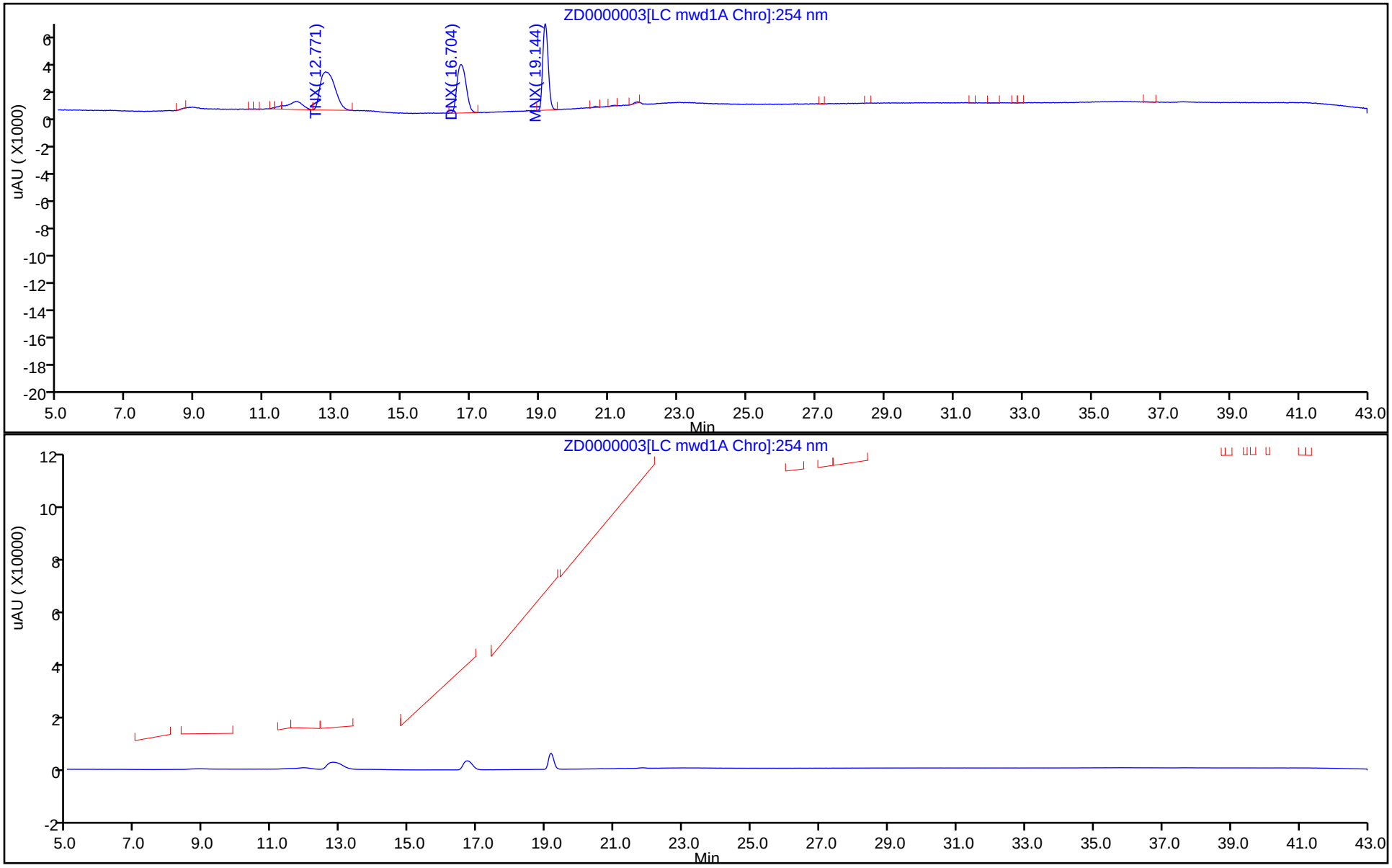
Report Date: 30-Apr-2019 14:56:20 Chrom Revision: 2.3 22-Apr-2019 19:25:52

Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000003.D

Injection Date:	30-Apr-2019 13:58:51	Instrument ID:	LC11	Operator ID:	AO
Lims ID:	CCVRT MET			Worklist Smp#:	4
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-291526/51 Calibration Date: 05/02/2019 09:12

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: ZD0000050.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	80.65	73.08		45.3	50.0	-9.4	15.0
RDX	Ave	99.08	90.62		45.7	50.0	-8.5	15.0
1,3,5-Trinitrobenzene	Ave	234.3	225.8		48.2	50.0	-3.6	15.0
1,3-Dinitrobenzene	Ave	209.0	202.3		48.4	50.0	-3.2	15.0
3,5-Dinitroaniline	Ave	158.6	151.7		47.8	50.0	-4.4	15.0
Nitrobenzene	Ave	117.0	111.7		47.7	50.0	-4.6	15.0
Tetryl	Ave	104.9	103.1		49.1	50.0	-1.8	15.0
Nitroglycerin	Ave	100.6	103.8		51.6	50.0	3.1	15.0
2,4,6-Trinitrotoluene	Ave	115.1	112.6		48.9	50.0	-2.2	15.0
4-Amino-2,6-dinitrotoluene	Lin2		83.86		48.2	50.0	-3.7	15.0
2-Amino-4,6-dinitrotoluene	Lin2		109.3		48.2	50.0	-3.6	15.0
2,6-Dinitrotoluene	Ave	73.33	70.64		48.2	50.0	-3.7	15.0
2,4-Dinitrotoluene	Ave	135.2	131.0		48.4	50.0	-3.1	15.0
2-Nitrotoluene	Ave	57.75	54.46		47.2	50.0	-5.7	15.0
4-Nitrotoluene	Ave	71.88	67.56		47.0	50.0	-6.0	15.0
3-Nitrotoluene	Lin2		66.42		47.6	50.0	-4.8	15.0
PETN	Lin2		55.86		50.1	50.0	0.2	15.0
3,4-Dinitrotoluene	Ave	73.20	72.08		49.2	50.0	-1.5	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-291526/51 Calibration Date: 05/02/2019 09:12

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: ZD0000050.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	18.05	17.80	18.30
RDX	20.60	20.35	20.85
1,3,5-Trinitrobenzene	22.37	22.12	22.62
1,3-Dinitrobenzene	24.67	24.42	24.92
3,5-Dinitroaniline	25.70	25.45	25.95
Nitrobenzene	26.28	26.03	26.53
Tetryl	26.92	26.67	27.17
Nitroglycerin	27.67	27.42	27.92
2,4,6-Trinitrotoluene	28.31	28.06	28.56
4-Amino-2,6-dinitrotoluene	29.15	28.81	29.49
2-Amino-4,6-dinitrotoluene	29.83	29.45	30.21
2,6-Dinitrotoluene	31.22	30.92	31.52
2,4-Dinitrotoluene	31.66	31.35	31.97
2-Nitrotoluene	34.81	34.48	35.14
4-Nitrotoluene	36.34	35.98	36.70
3-Nitrotoluene	37.99	37.59	38.39
PETN	39.77	39.36	40.18
3,4-Dinitrotoluene	29.47	29.22	29.72

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000050.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 02-May-2019 09:12:19 ALS Bottle#: 6 Worklist Smp#: 51
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 320-0075622-051
Operator ID: AO Instrument ID: LC11
Sublist: chrom-8330 Metab LC11*sub9

Method: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 02-May-2019 10:18:21 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0324

First Level Reviewer: ortizam Date: 02-May-2019 10:18:21

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
3 HMX							
1	18.047	18.047	0.000	3654H	50.0	45.3	
5 Ethylene glycol dinitrate							
2	20.027	20.027	0.000	173369	50.0	135.7	
6 RDX							
1	20.597	20.597	0.000	4531H	50.0	45.7	
8 1,3,5-Trinitrobenzene							
1	22.371	22.371	0.000	11290H	50.0	48.2	
9 1,3-Dinitrobenzene							
1	24.674	24.674	0.000	10115H	50.0	48.4	
10 3,5-Dinitroaniline							
1	25.704	25.704	0.000	7584H	50.0	47.8	
11 Nitrobenzene							
1	26.277	26.277	0.000	5583H	50.0	47.7	
12 Tetryl							
1	26.921	26.921	0.000	5153H	50.0	49.1	
13 Nitroglycerin							
2	27.667	27.667	0.000	5189H	50.0	51.6	
14 2,4,6-Trinitrotoluene							
1	28.307	28.307	0.000	5628H	50.0	48.9	
15 4-Amino-2,6-dinitrotoluene							
1	29.147	29.147	0.000	4193H	50.0	48.2	
$ 16 3,4-Dinitrotoluene							
1	29.471	29.471	0.000	3604H	50.0	49.2	
2	29.471	29.471	0.000	7763H			
17 2-Amino-4,6-dinitrotoluene							
1	29.834	29.834	0.000	5467H	50.0	48.2	
18 2,6-Dinitrotoluene							
1	31.217	31.217	0.000	3532H	50.0	48.2	

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
19 2,4-Dinitrotoluene							
1	31.661	31.661	0.000	6552H	50.0	48.4	
20 o-Nitrotoluene							
1	34.807	34.807	0.000	2723H	50.0	47.2	
21 p-Nitrotoluene							
1	36.340	36.340	0.000	3378H	50.0	47.0	
22 m-Nitrotoluene							
1	37.987	37.987	0.000	3321H	50.0	47.6	
23 PETN							
2	39.770	39.770	0.000	2793H	50.0	50.1	

Reagents:

HP8330L4_00061 Amount Added: 1.00 Units: mL

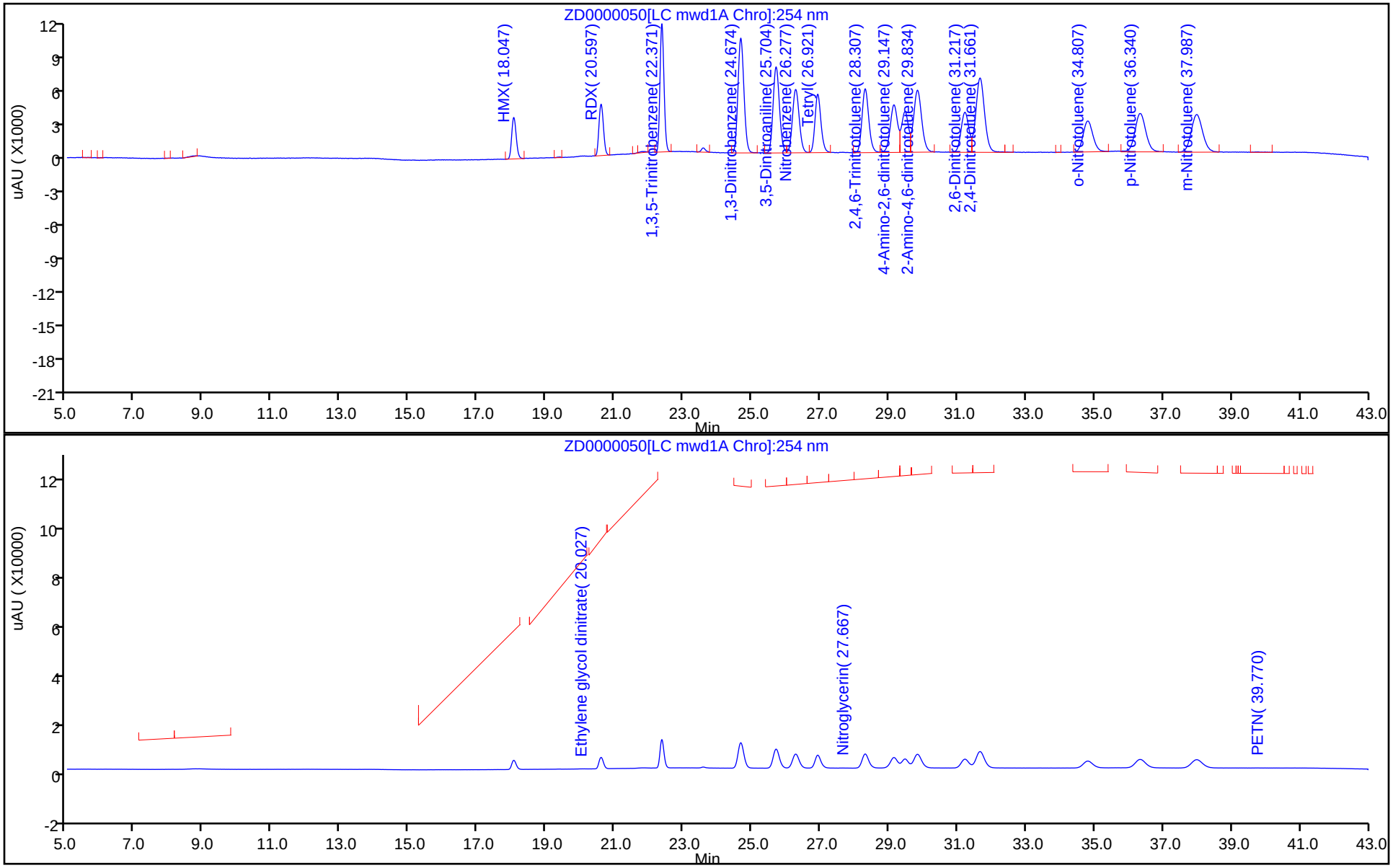
Report Date: 02-May-2019 10:18:24 Chrom Revision: 2.3 01-May-2019 12:41:30

Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000050.D

Injection Date:	02-May-2019 09:12:19	Instrument ID:	LC11	Operator ID:	AO
Lims ID:	CCV			Worklist Smp#:	51
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-291526/52 Calibration Date: 05/02/2019 10:05

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: ZD0000051.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
TNX	Ave	52.00	53.09		51.1	50.1	2.1	15.0
DNX	Ave	64.92	67.67		52.3	50.2	4.2	15.0
MNX	Ave	100.2	103.1		60.2	58.5	3.0	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-291526/52 Calibration Date: 05/02/2019 10:05

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: ZD0000051.D

Analyte	RT	RT WINDOW	
		FROM	TO
TNX	12.79	12.54	13.04
DNX	16.70	16.45	16.95
MNX	19.13	18.88	19.38

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000051.D
Lims ID: CCV MET
Client ID:
Sample Type: CCV
Inject. Date: 02-May-2019 10:05:55 ALS Bottle#: 7 Worklist Smp#: 52
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 320-0075622-052
Operator ID: AO Instrument ID: LC11
Sublist: chrom-8330 Metab LC11*sub2

Method: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 02-May-2019 13:05:36 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0324

First Level Reviewer: ortizam Date: 02-May-2019 13:05:36

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
1 TNX							
1	12.785	12.785	0.000	2657H	50.1	51.1	
2 DNX							
1	16.695	16.695	0.000	3397H	50.2	52.3	
4 MNX							
1	19.132	19.132	0.000	6033H	58.5	60.2	

Reagents:

HPMETABL4_00039 Amount Added: 1.00 Units: mL

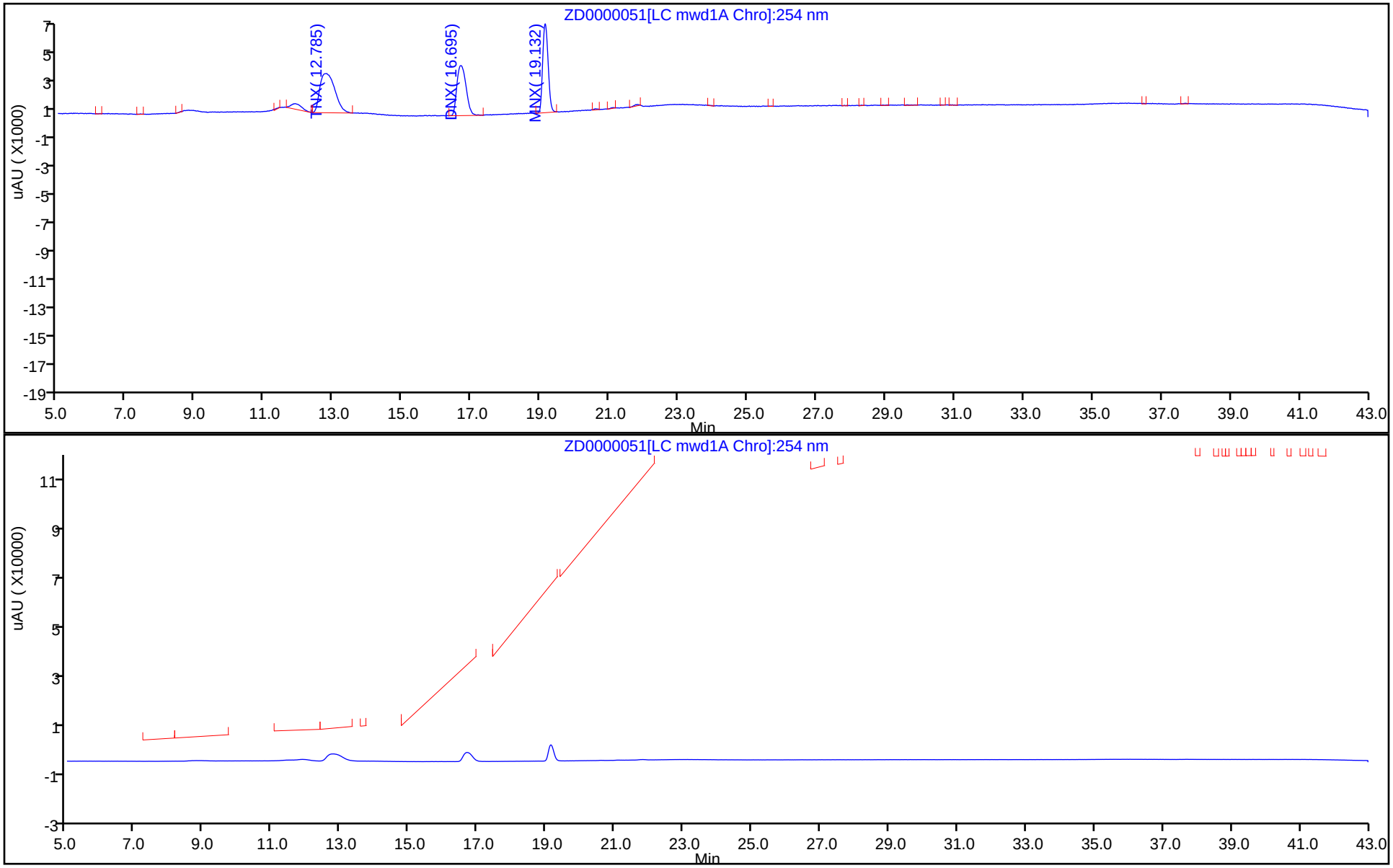
Report Date: 02-May-2019 13:05:38 Chrom Revision: 2.3 01-May-2019 12:41:30

Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000051.D

Injection Date:	02-May-2019 10:05:55	Instrument ID:	LC11	Operator ID:	AO
Lims ID:	CCV MET			Worklist Smp#:	52
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-291526/63 Calibration Date: 05/02/2019 20:49

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: ZD0000063.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	80.65	72.94		45.2	50.0	-9.6	15.0
RDX	Ave	99.08	90.10		45.5	50.0	-9.1	15.0
1,3,5-Trinitrobenzene	Ave	234.3	226.4		48.3	50.0	-3.3	15.0
1,3-Dinitrobenzene	Ave	209.0	201.9		48.3	50.0	-3.4	15.0
3,5-Dinitroaniline	Ave	158.6	151.9		47.9	50.0	-4.3	15.0
Nitrobenzene	Ave	117.0	114.0		48.7	50.0	-2.6	15.0
Tetryl	Ave	104.9	102.9		49.0	50.0	-1.9	15.0
Nitroglycerin	Ave	100.6	99.24		49.3	50.0	-1.4	15.0
2,4,6-Trinitrotoluene	Ave	115.1	112.9		49.1	50.0	-1.9	15.0
4-Amino-2,6-dinitrotoluene	Lin2		85.60		49.2	50.0	-1.7	15.0
2-Amino-4,6-dinitrotoluene	Lin2		111.6		49.2	50.0	-1.6	15.0
2,6-Dinitrotoluene	Ave	73.33	71.02		48.4	50.0	-3.2	15.0
2,4-Dinitrotoluene	Ave	135.2	132.1		48.8	50.0	-2.3	15.0
2-Nitrotoluene	Ave	57.75	56.56		49.0	50.0	-2.1	15.0
4-Nitrotoluene	Ave	71.88	70.02		48.7	50.0	-2.6	15.0
3-Nitrotoluene	Lin2		69.12		49.6	50.0	-0.9	15.0
PETN	Lin2		58.02		52.1	50.0	4.2	15.0
3,4-Dinitrotoluene	Ave	73.20	71.86		49.1	50.0	-1.8	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-291526/63 Calibration Date: 05/02/2019 20:49

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: ZD0000063.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	18.03	17.78	18.28
RDX	20.57	20.32	20.82
1,3,5-Trinitrobenzene	22.37	22.12	22.62
1,3-Dinitrobenzene	24.64	24.39	24.89
3,5-Dinitroaniline	25.64	25.39	25.89
Nitrobenzene	26.25	26.00	26.50
Tetryl	26.90	26.65	27.15
Nitroglycerin	27.67	27.42	27.92
2,4,6-Trinitrotoluene	28.29	28.04	28.54
4-Amino-2,6-dinitrotoluene	29.07	28.73	29.41
2-Amino-4,6-dinitrotoluene	29.75	29.37	30.13
2,6-Dinitrotoluene	31.16	30.86	31.46
2,4-Dinitrotoluene	31.59	31.28	31.90
2-Nitrotoluene	34.70	34.37	35.03
4-Nitrotoluene	36.20	35.84	36.56
3-Nitrotoluene	37.81	37.41	38.21
PETN	39.60	39.19	40.01
3,4-Dinitrotoluene	29.44	29.19	29.69

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000063.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 02-May-2019 20:49:57 ALS Bottle#: 4 Worklist Smp#: 63
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 320-0075622-063
Operator ID: AO Instrument ID: LC11
Sublist: chrom-8330 Metab LC11*sub9

Method: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 03-May-2019 09:23:27 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0325

First Level Reviewer: ortizam Date: 03-May-2019 09:23:27

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
3 HMX							
1	18.027	18.027	0.000	3647H	50.0	45.2	
5 Ethylene glycol dinitrate							
2	20.030	20.030	0.000	151480	50.0	118.5	
6 RDX							
1	20.573	20.573	0.000	4505H	50.0	45.5	
8 1,3,5-Trinitrobenzene							
1	22.367	22.367	0.000	11322H	50.0	48.3	
9 1,3-Dinitrobenzene							
1	24.643	24.643	0.000	10093H	50.0	48.3	
10 3,5-Dinitroaniline							
1	25.640	25.640	0.000	7594H	50.0	47.9	
11 Nitrobenzene							
1	26.253	26.253	0.000	5701H	50.0	48.7	
12 Tetryl							
1	26.897	26.897	0.000	5147H	50.0	49.0	
13 Nitroglycerin							
2	27.667	27.667	0.000	4962H	50.0	49.3	
14 2,4,6-Trinitrotoluene							
1	28.290	28.290	0.000	5645H	50.0	49.1	
15 4-Amino-2,6-dinitrotoluene							a
1	29.073	29.073	0.000	4280H	50.0	49.2	a
$ 16 3,4-Dinitrotoluene							a
1	29.437	29.437	0.000	3593H	50.0	49.1	a
2	29.437	29.437	0.000	7454H			
17 2-Amino-4,6-dinitrotoluene							
1	29.747	29.747	0.000	5579H	50.0	49.2	
18 2,6-Dinitrotoluene							
1	31.160	31.160	0.000	3551H	50.0	48.4	

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
19 2,4-Dinitrotoluene							
1	31.590	31.590	0.000	6604H	50.0	48.8	
20 o-Nitrotoluene							
1	34.697	34.697	0.000	2828H	50.0	49.0	
21 p-Nitrotoluene							
1	36.197	36.197	0.000	3501H	50.0	48.7	
22 m-Nitrotoluene							
1	37.810	37.810	0.000	3456H	50.0	49.6	
23 PETN							
2	39.597	39.597	0.000	2901H	50.0	52.1	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

HP8330L4_00061 Amount Added: 1.00 Units: mL

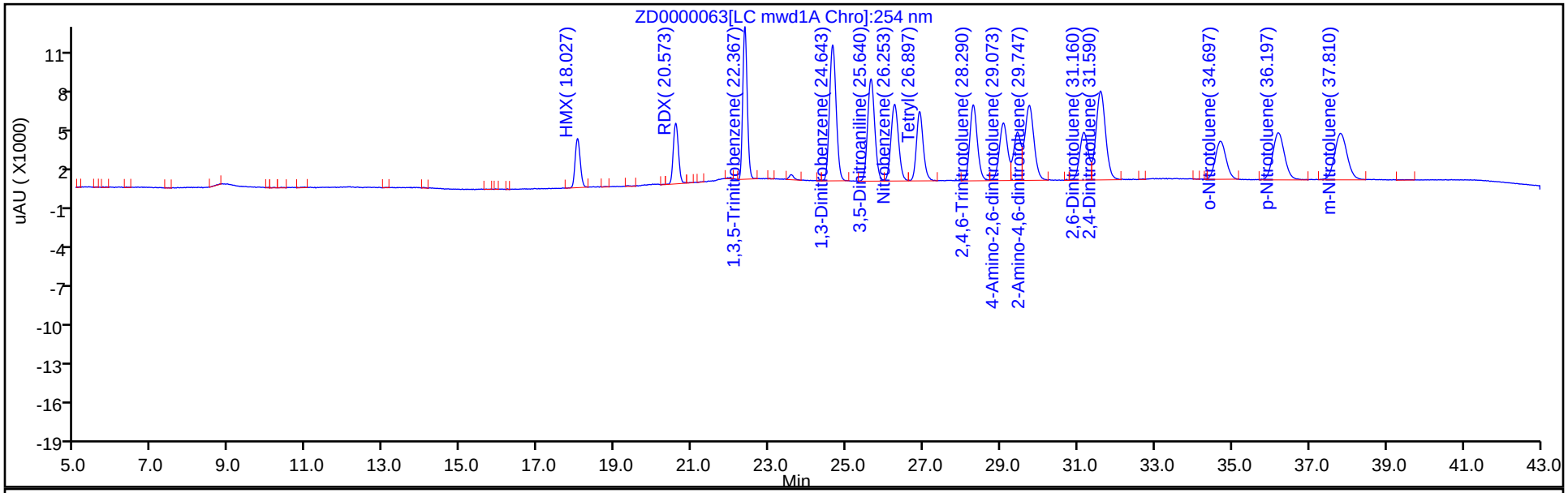
Report Date: 03-May-2019 09:23:29 Chrom Revision: 2.3 01-May-2019 12:41:30

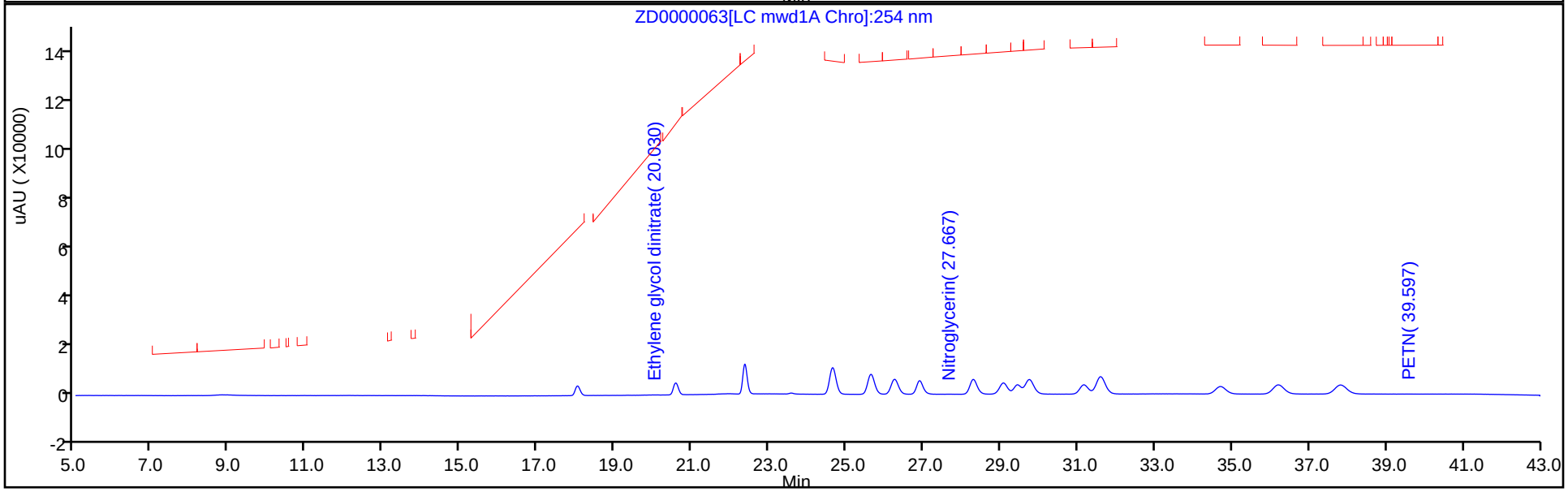
Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000063.D

Injection Date:	02-May-2019 20:49:57	Instrument ID:	LC11	Operator ID:	AO
Lims ID:	CCV			Worklist Smp#:	63
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1





Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

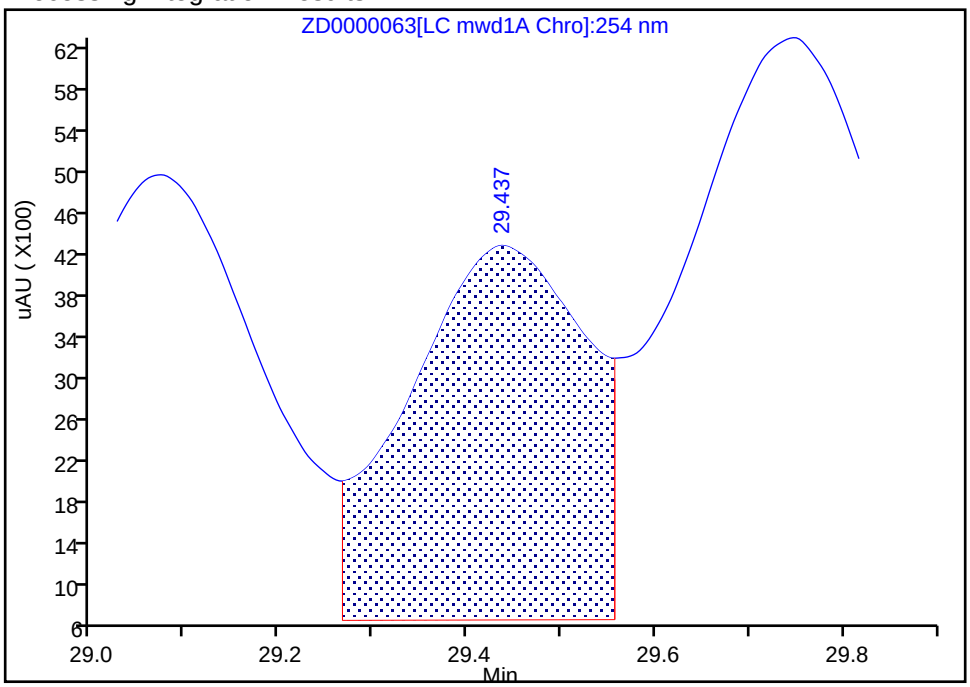
Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000063.D				
Injection Date:	02-May-2019 20:49:57	Instrument ID:	LC11		
Lims ID:	CCV				
Client ID:					
Operator ID:	AO	ALS Bottle#:	4	Worklist Smp#:	63
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

$ 16 3,4-Dinitrotoluene, CAS: 610-39-9

Signal: 1

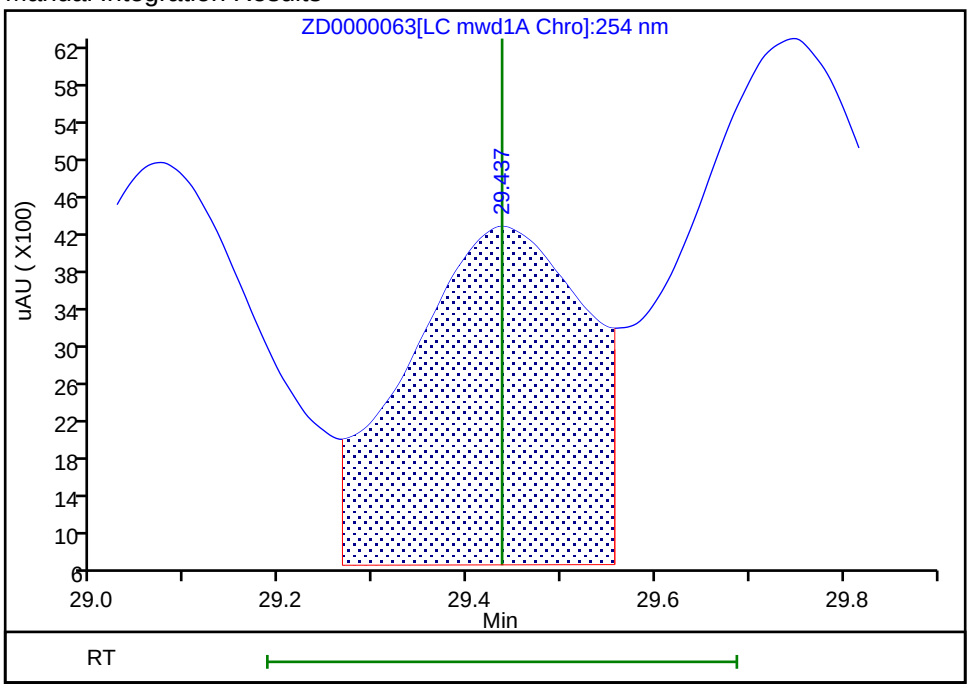
RT: 29.44
Height: 3593
Amount: 49.085178
Amount Units: ng/ml

Processing Integration Results



RT: 29.44
Height: 3593
Amount: 49.085178
Amount Units: ng/ml

Manual Integration Results



Reviewer: ortizam, 03-May-2019 09:23:22
Audit Action: Assigned Compound ID Audit Reason:

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

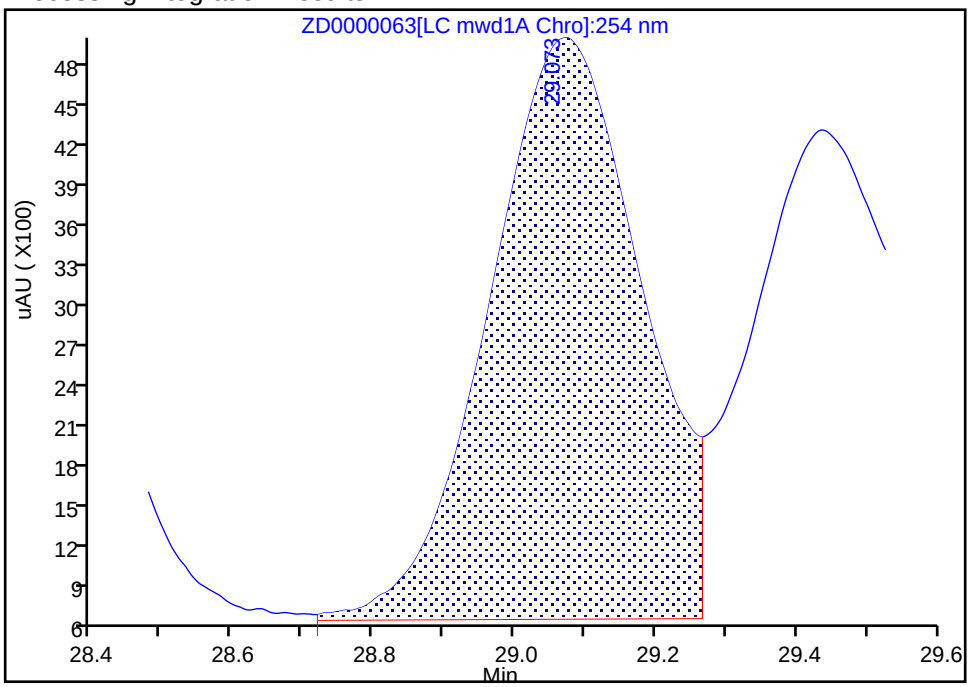
Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000063.D				
Injection Date:	02-May-2019 20:49:57	Instrument ID:	LC11		
Lims ID:	CCV				
Client ID:					
Operator ID:	AO	ALS Bottle#:	4	Worklist Smp#:	63
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

15 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

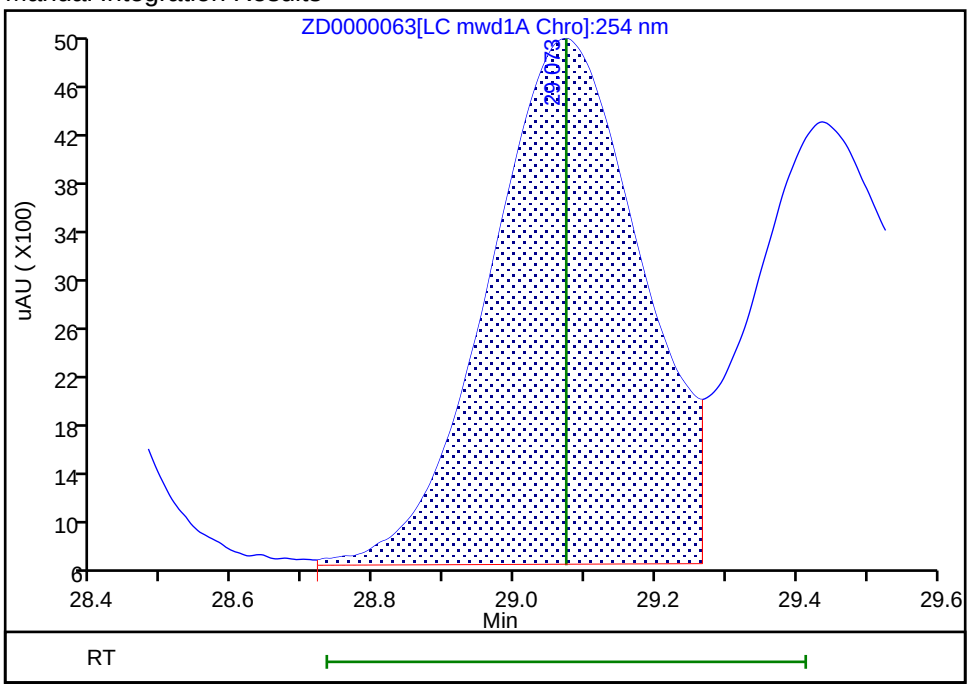
Processing Integration Results

RT: 29.07
Height: 4280
Amount: 49.163695
Amount Units: ng/ml



Manual Integration Results

RT: 29.07
Height: 4280
Amount: 49.163695
Amount Units: ng/ml



Reviewer: ortizam, 03-May-2019 09:23:24
Audit Action: Assigned Compound ID Audit Reason:

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

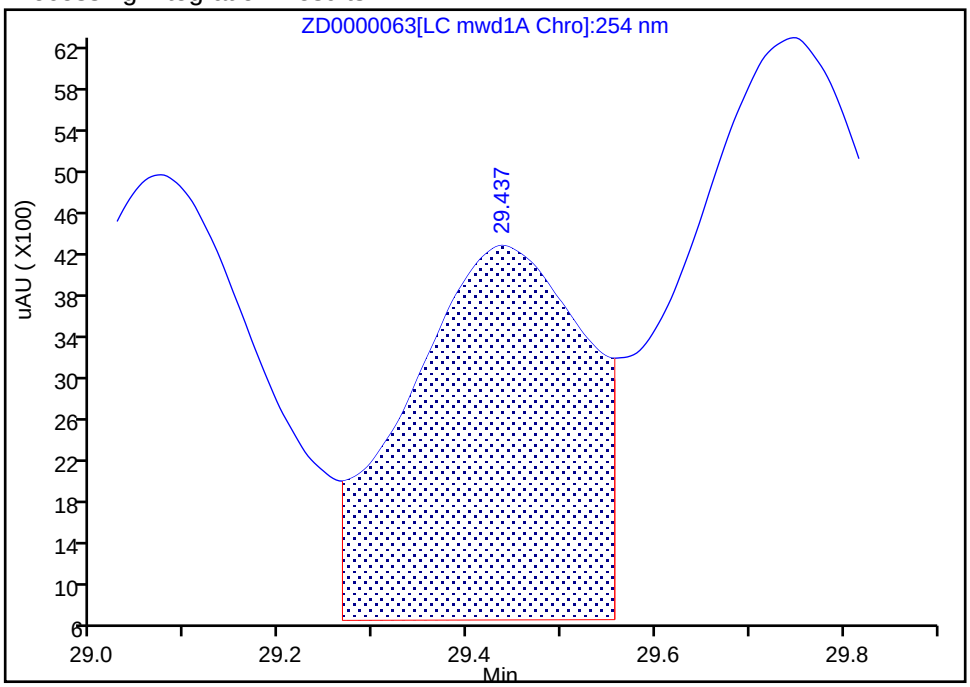
Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000063.D				
Injection Date:	02-May-2019 20:49:57	Instrument ID:	LC11		
Lims ID:	CCV				
Client ID:					
Operator ID:	AO	ALS Bottle#:	4	Worklist Smp#:	63
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

$ 16 3,4-Dinitrotoluene, CAS: 610-39-9

Signal: 1

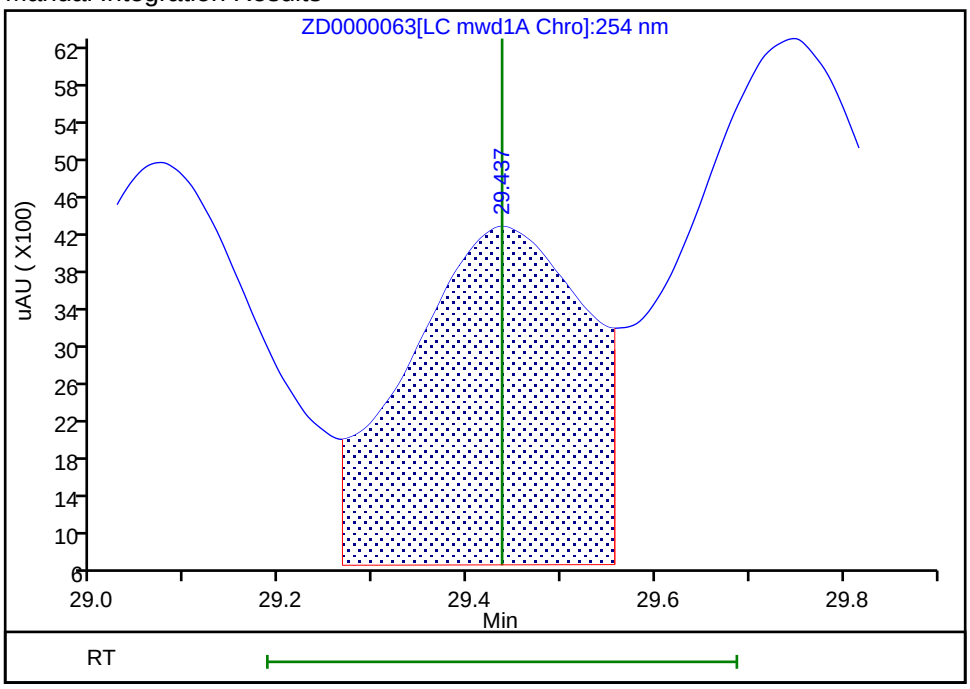
Processing Integration Results

RT: 29.44
Height: 3593
Amount: 49.085178
Amount Units: ng/ml



Manual Integration Results

RT: 29.44
Height: 3593
Amount: 49.085178
Amount Units: ng/ml



Reviewer: ortizam, 03-May-2019 09:23:22
Audit Action: Assigned Compound ID Audit Reason:

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-291526/64 Calibration Date: 05/02/2019 21:43

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: ZD0000064.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
TNX	Ave	52.00	53.01		51.0	50.1	1.9	15.0
DNX	Ave	64.92	67.05		51.9	50.2	3.3	15.0
MNX	Ave	100.2	104.0		60.7	58.5	3.8	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-291526/64 Calibration Date: 05/02/2019 21:43

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: ZD0000064.D

Analyte	RT	RT WINDOW	
		FROM	TO
TNX	12.75	12.50	13.00
DNX	16.68	16.43	16.93
MNX	19.14	18.89	19.39

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000064.D				
Lims ID:	CCV MET				
Client ID:					
Sample Type:	CCV				
Inject. Date:	02-May-2019 21:43:35	ALS Bottle#:	5	Worklist Smp#:	64
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Sample Info:	320-0075622-064				
Operator ID:	AO	Instrument ID:	LC11		
Sublist:	chrom-8330 Metab LC11*sub2				
Method:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\8330 Metab LC11.m				
Limit Group:	LC 8330A ICAL				
Last Update:	03-May-2019 09:23:38	Calib Date:	28-Feb-2019 10:01:13		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D				
Column 1 :	Synergi Hydro-RP C18 (4.60 mm)		Det: LC mwd1A, 250 nm		
Process Host:	CTX0325				
First Level Reviewer: ortizam		Date:	03-May-2019 09:23:38		

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
1 TNX							
1	12.753	12.753	0.000	2653H	50.1	51.0	
2 DNX							
1	16.679	16.679	0.000	3366H	50.2	51.9	
4 MNX							
1	19.139	19.139	0.000	6082H	58.5	60.7	

Reagents:

HPMETABL4_00039 Amount Added: 1.00 Units: mL

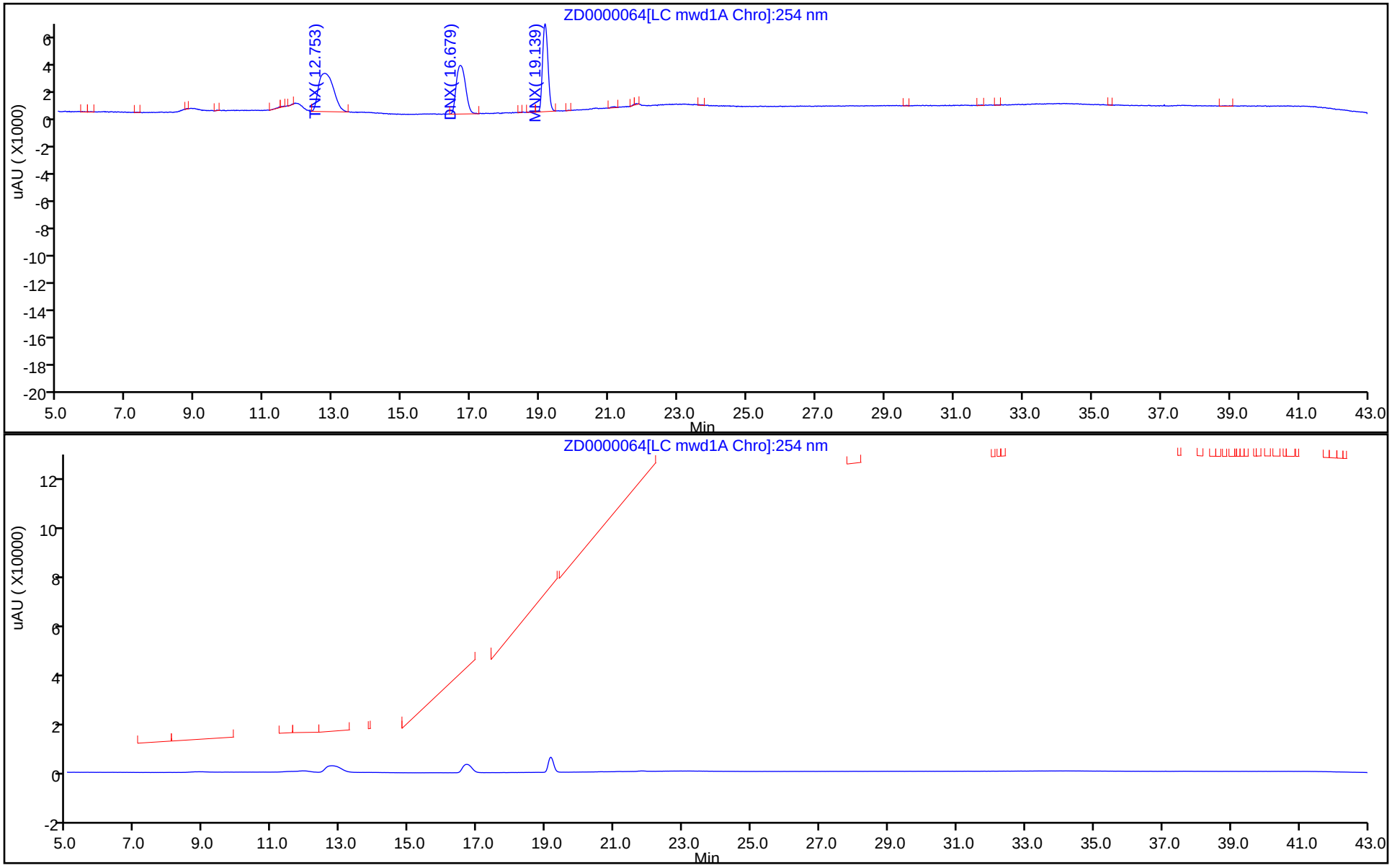
Report Date: 03-May-2019 09:23:39 Chrom Revision: 2.3 01-May-2019 12:41:30

Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000064.D

Injection Date:	02-May-2019 21:43:35	Instrument ID:	LC11	Operator ID:	AO
Lims ID:	CCV MET			Worklist Smp#:	64
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-291526/75 Calibration Date: 05/03/2019 07:33

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: ZD0000075.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	80.65	72.76		45.1	50.0	-9.8	15.0
RDX	Ave	99.08	90.26		45.5	50.0	-8.9	15.0
1,3,5-Trinitrobenzene	Ave	234.3	225.3		48.1	50.0	-3.8	15.0
1,3-Dinitrobenzene	Ave	209.0	201.2		48.1	50.0	-3.7	15.0
3,5-Dinitroaniline	Ave	158.6	151.0		47.6	50.0	-4.8	15.0
Nitrobenzene	Ave	117.0	111.1		47.5	50.0	-5.1	15.0
Tetryl	Ave	104.9	102.1		48.6	50.0	-2.7	15.0
Nitroglycerin	Ave	100.6	108.8		54.1	50.0	8.1	15.0
2,4,6-Trinitrotoluene	Ave	115.1	112.4		48.8	50.0	-2.3	15.0
4-Amino-2,6-dinitrotoluene	Lin2		82.82		47.6	50.0	-4.9	15.0
2-Amino-4,6-dinitrotoluene	Lin2		108.3		47.8	50.0	-4.5	15.0
2,6-Dinitrotoluene	Ave	73.33	70.30		47.9	50.0	-4.1	15.0
2,4-Dinitrotoluene	Ave	135.2	130.4		48.2	50.0	-3.6	15.0
2-Nitrotoluene	Ave	57.75	53.96		46.7	50.0	-6.6	15.0
4-Nitrotoluene	Ave	71.88	67.38		46.9	50.0	-6.3	15.0
3-Nitrotoluene	Lin2		65.42		46.9	50.0	-6.2	15.0
PETN	Lin2		54.52		48.9	50.0	-2.3	15.0
3,4-Dinitrotoluene	Ave	73.20	72.08		49.2	50.0	-1.5	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-291526/75 Calibration Date: 05/03/2019 07:33

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: ZD0000075.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	18.06	17.81	18.31
RDX	20.61	20.36	20.86
1,3,5-Trinitrobenzene	22.38	22.13	22.63
1,3-Dinitrobenzene	24.70	24.45	24.95
3,5-Dinitroaniline	25.75	25.50	26.00
Nitrobenzene	26.31	26.06	26.56
Tetryl	26.96	26.71	27.21
Nitroglycerin	27.70	27.45	27.95
2,4,6-Trinitrotoluene	28.34	28.09	28.59
4-Amino-2,6-dinitrotoluene	29.20	28.86	29.54
2-Amino-4,6-dinitrotoluene	29.90	29.52	30.28
2,6-Dinitrotoluene	31.28	30.98	31.58
2,4-Dinitrotoluene	31.72	31.41	32.03
2-Nitrotoluene	34.89	34.56	35.22
4-Nitrotoluene	36.43	36.07	36.79
3-Nitrotoluene	38.10	37.70	38.50
PETN	39.87	39.46	40.28
3,4-Dinitrotoluene	29.52	29.27	29.77

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000075.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 03-May-2019 07:33:41 ALS Bottle#: 4 Worklist Smp#: 75
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 320-0075622-075
Operator ID: AO Instrument ID: LC11
Sublist: chrom-8330 Metab LC11*sub9

Method: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 03-May-2019 09:58:34 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0325

First Level Reviewer: ortizam Date: 03-May-2019 09:58:34

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
3 HMX							
1	18.062	18.062	0.000	3638H	50.0	45.1	
5 Ethylene glycol dinitrate							
2	20.029	20.029	0.000	141245	50.0	110.5	
6 RDX							
1	20.612	20.612	0.000	4513H	50.0	45.5	
8 1,3,5-Trinitrobenzene							
1	22.382	22.382	0.000	11263H	50.0	48.1	
9 1,3-Dinitrobenzene							
1	24.702	24.702	0.000	10059H	50.0	48.1	
10 3,5-Dinitroaniline							
1	25.746	25.746	0.000	7548H	50.0	47.6	
11 Nitrobenzene							
1	26.306	26.306	0.000	5553H	50.0	47.5	
12 Tetryl							
1	26.956	26.956	0.000	5103H	50.0	48.6	
13 Nitroglycerin							
2	27.696	27.696	0.000	5441H	50.0	54.1	
14 2,4,6-Trinitrotoluene							
1	28.342	28.342	0.000	5621H	50.0	48.8	
15 4-Amino-2,6-dinitrotoluene							
1	29.202	29.202	0.000	4141H	50.0	47.6	
$ 16 3,4-Dinitrotoluene							
1	29.516	29.516	0.000	3604H	50.0	49.2	
2	29.516	29.516	0.000	7885H			
17 2-Amino-4,6-dinitrotoluene							
1	29.899	29.899	0.000	5415H	50.0	47.8	
18 2,6-Dinitrotoluene							
1	31.279	31.279	0.000	3515H	50.0	47.9	

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
19 2,4-Dinitrotoluene							
1	31.722	31.722	0.000	6519H	50.0	48.2	
20 o-Nitrotoluene							
1	34.892	34.892	0.000	2698H	50.0	46.7	
21 p-Nitrotoluene							
1	36.432	36.432	0.000	3369H	50.0	46.9	
22 m-Nitrotoluene							
1	38.096	38.096	0.000	3271H	50.0	46.9	
23 PETN							a
2	39.872	39.872	0.000	2726H	50.0	48.9	a

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

HP8330L4_00061 Amount Added: 1.00 Units: mL

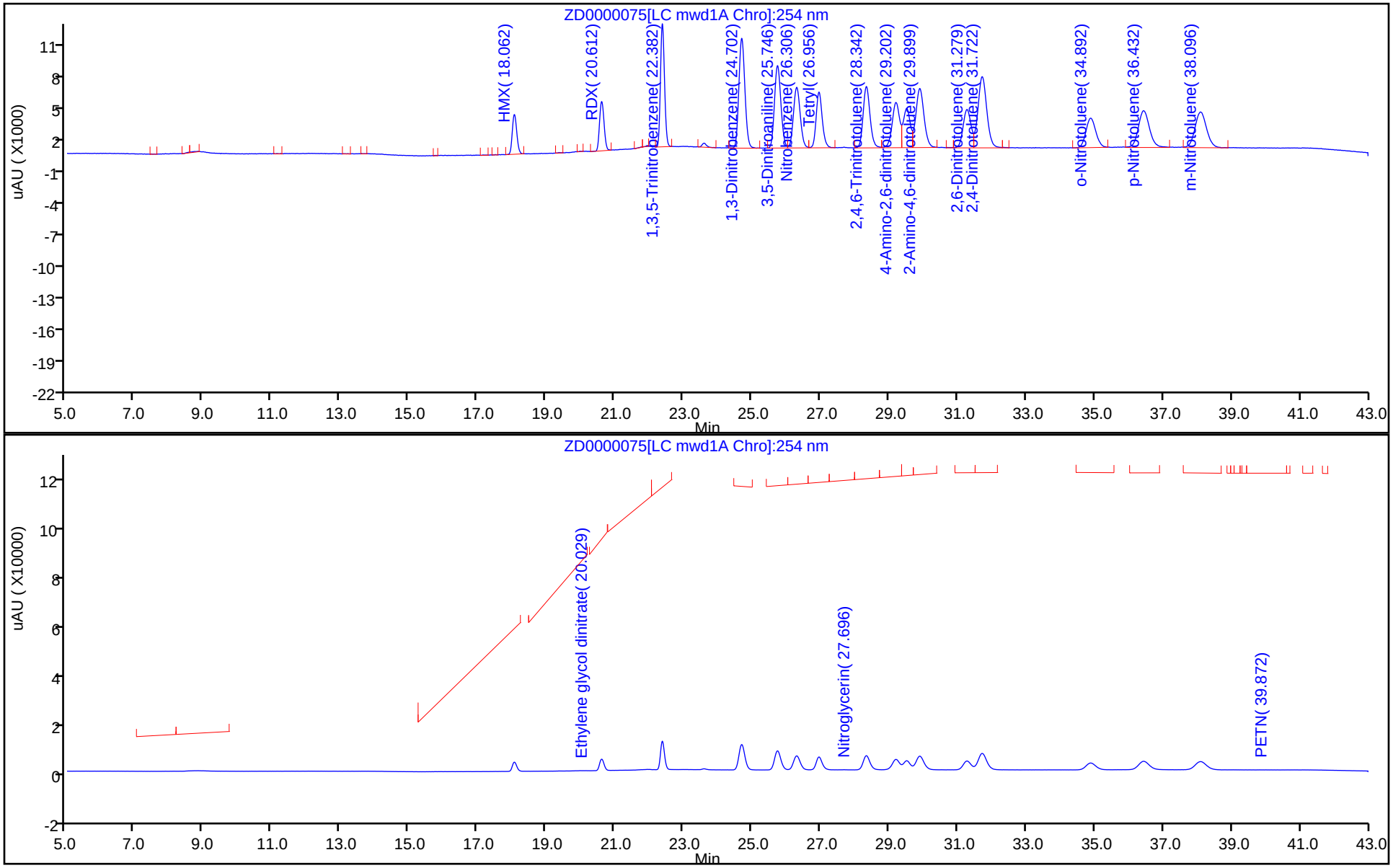
Report Date: 03-May-2019 09:58:35 Chrom Revision: 2.3 01-May-2019 12:41:30

Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000075.D

Injection Date:	03-May-2019 07:33:41	Instrument ID:	LC11	Operator ID:	AO
Lims ID:	CCV			Worklist Smp#:	75
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

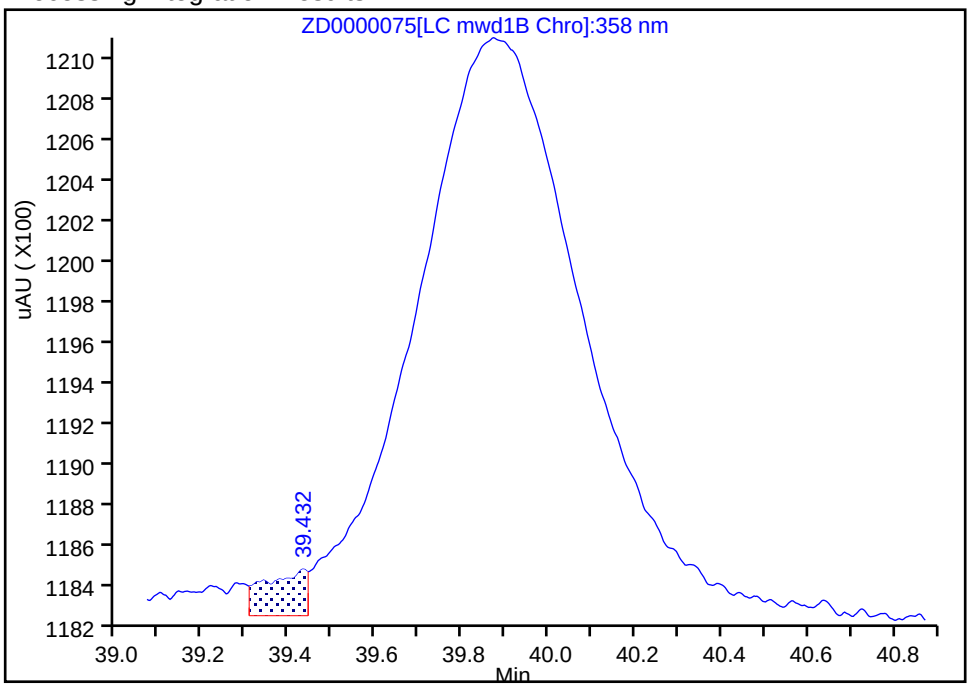
Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000075.D				
Injection Date:	03-May-2019 07:33:41	Instrument ID:	LC11		
Lims ID:	CCV				
Client ID:					
Operator ID:	AO	ALS Bottle#:	4	Worklist Smp#:	75
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:		Detector	LC mwd1B, 358 nm		

23 PETN, CAS: 78-11-5

Signal: 1

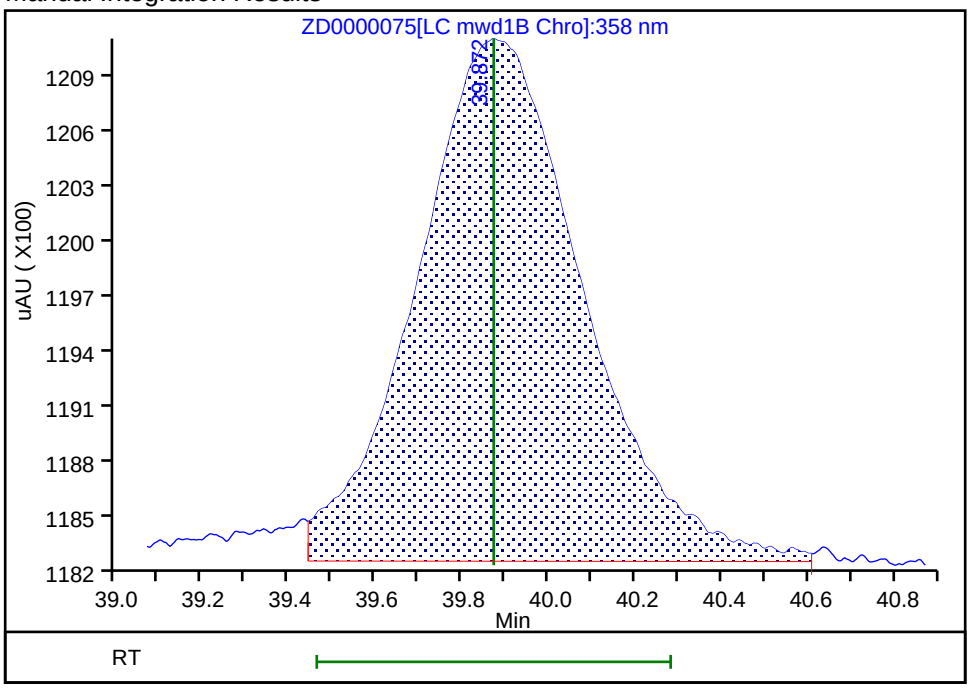
Processing Integration Results

RT: 39.43
Height: 219
Amount: 2.402374
Amount Units: ng/ml



Manual Integration Results

RT: 39.87
Height: 2726
Amount: 48.874544
Amount Units: ng/ml



Reviewer: ortizam, 03-May-2019 09:58:24
Audit Action: Assigned Compound ID Audit Reason:

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-291526/76 Calibration Date: 05/03/2019 08:27

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: ZD0000076.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
TNX	Ave	52.00	53.77		51.7	50.1	3.4	15.0
DNX	Ave	64.92	68.49		53.0	50.2	5.5	15.0
MNX	Ave	100.2	103.7		60.6	58.5	3.5	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-291526/76 Calibration Date: 05/03/2019 08:27

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: ZD0000076.D

Analyte	RT	RT WINDOW	
		FROM	TO
TNX	12.80	12.55	13.05
DNX	16.71	16.46	16.96
MNX	19.16	18.91	19.41

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000076.D
Lims ID: CCV MET
Client ID:
Sample Type: CCV
Inject. Date: 03-May-2019 08:27:22 ALS Bottle#: 5 Worklist Smp#: 76
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 320-0075622-076
Operator ID: AO Instrument ID: LC11
Sublist: chrom-8330 Metab LC11*sub2

Method: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 03-May-2019 09:58:42 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0325

First Level Reviewer: ortizam Date: 03-May-2019 09:58:42

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
1 TNX							
1	12.798	12.798	0.000	2691H	50.1	51.7	
2 DNX							
1	16.714	16.714	0.000	3438H	50.2	53.0	
4 MNX							
1	19.158	19.158	0.000	6067H	58.5	60.6	

Reagents:

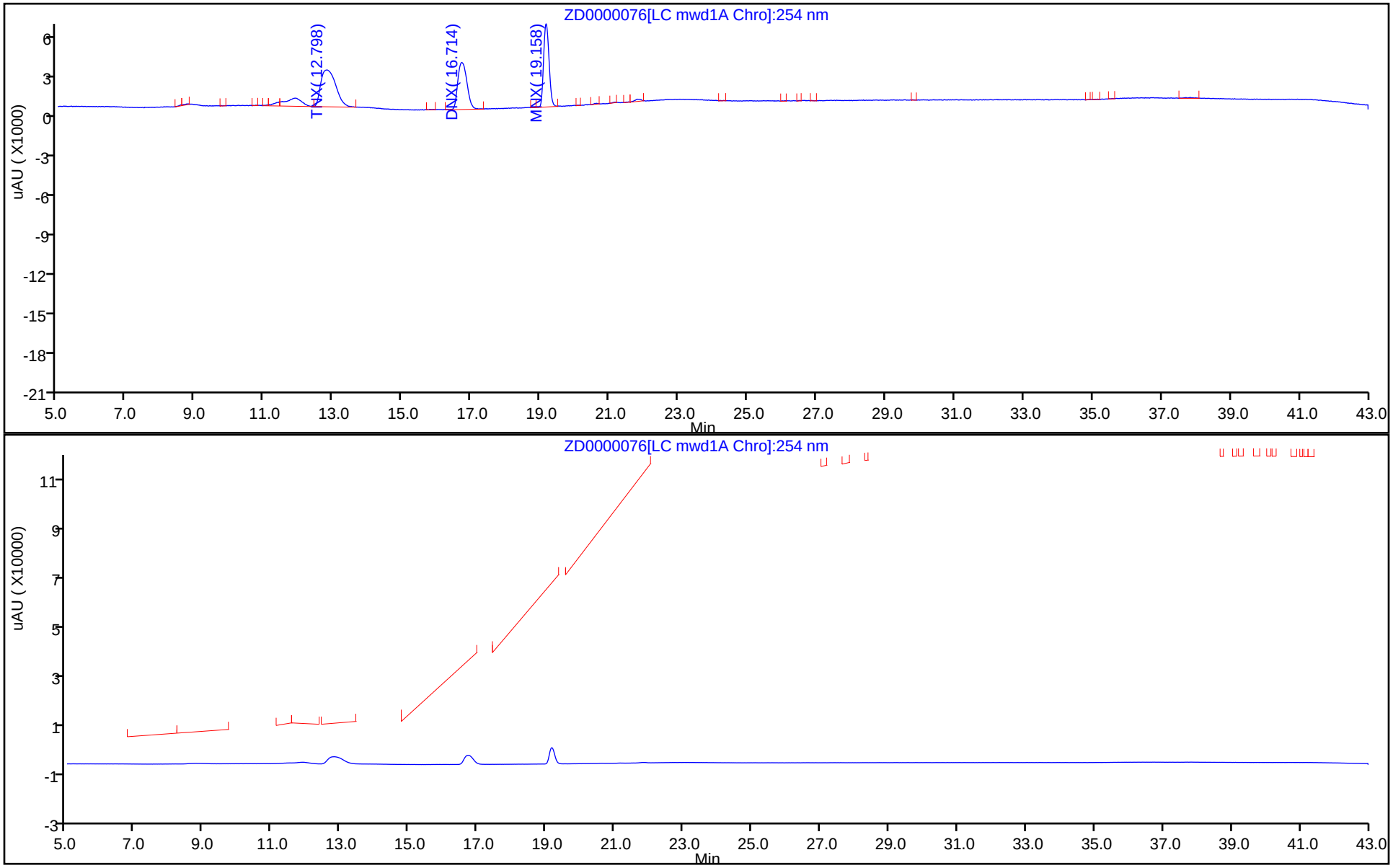
HPMETABL4_00039 Amount Added: 1.00 Units: mL

Report Date: 03-May-2019 09:58:43 Chrom Revision: 2.3 01-May-2019 12:41:30

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000076.D				
Injection Date:	03-May-2019 08:27:22	Instrument ID:	LC11	Operator ID:	AO
Lims ID:	CCV MET			Worklist Smp#:	76
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-291526/84 Calibration Date: 05/03/2019 12:55

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: ZD0000081.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	80.65	73.02		45.3	50.0	-9.5	15.0
RDX	Ave	99.08	90.66		45.8	50.0	-8.5	15.0
1,3,5-Trinitrobenzene	Ave	234.3	228.1		48.7	50.0	-2.6	15.0
1,3-Dinitrobenzene	Ave	209.0	203.5		48.7	50.0	-2.6	15.0
3,5-Dinitroaniline	Ave	158.6	153.2		48.3	50.0	-3.4	15.0
Nitrobenzene	Ave	117.0	106.4		45.5	50.0	-9.0	15.0
Tetryl	Ave	104.9	103.6		49.4	50.0	-1.2	15.0
Nitroglycerin	Ave	100.6	97.44		48.4	50.0	-3.2	15.0
2,4,6-Trinitrotoluene	Ave	115.1	112.8		49.0	50.0	-2.0	15.0
4-Amino-2,6-dinitrotoluene	Lin2		84.94		48.8	50.0	-2.4	15.0
2-Amino-4,6-dinitrotoluene	Lin2		111.3		49.1	50.0	-1.8	15.0
2,6-Dinitrotoluene	Ave	73.33	71.24		48.6	50.0	-2.9	15.0
2,4-Dinitrotoluene	Ave	135.2	132.5		49.0	50.0	-2.0	15.0
2-Nitrotoluene	Ave	57.75	52.34		45.3	50.0	-9.4	15.0
4-Nitrotoluene	Ave	71.88	66.48		46.2	50.0	-7.5	15.0
3-Nitrotoluene	Lin2		64.52		46.2	50.0	-7.5	15.0
PETN	Lin2		55.64		49.9	50.0	-0.2	15.0
3,4-Dinitrotoluene	Ave	73.20	71.76		49.0	50.0	-2.0	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-291526/84 Calibration Date: 05/03/2019 12:55

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: ZD0000081.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	17.97	17.72	18.22
RDX	20.55	20.30	20.80
1,3,5-Trinitrobenzene	22.34	22.09	22.59
1,3-Dinitrobenzene	24.62	24.37	24.87
3,5-Dinitroaniline	25.61	25.36	25.86
Nitrobenzene	26.22	25.97	26.47
Tetryl	26.86	26.61	27.11
Nitroglycerin	27.63	27.38	27.88
2,4,6-Trinitrotoluene	28.26	28.01	28.51
4-Amino-2,6-dinitrotoluene	29.05	28.71	29.39
2-Amino-4,6-dinitrotoluene	29.72	29.34	30.10
2,6-Dinitrotoluene	31.13	30.83	31.43
2,4-Dinitrotoluene	31.57	31.26	31.88
2-Nitrotoluene	34.68	34.35	35.01
4-Nitrotoluene	36.18	35.82	36.54
3-Nitrotoluene	37.80	37.40	38.20
PETN	39.56	39.15	39.97
3,4-Dinitrotoluene	29.40	29.15	29.65

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000081.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 03-May-2019 12:55:47 ALS Bottle#: 4 Worklist Smp#: 84
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 320-0075622-075
Operator ID: AO Instrument ID: LC11
Sublist: chrom-8330 Metab LC11*sub9

Method: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 03-May-2019 14:25:14 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0325

First Level Reviewer: ortizam Date: 03-May-2019 14:25:14

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
3 HMX							
1	17.966	17.966	0.000	3651H	50.0	45.3	
5 Ethylene glycol dinitrate							
2	19.993	19.993	0.000	171560	50.0	134.3	
6 RDX							
1	20.550	20.550	0.000	4533H	50.0	45.8	
8 1,3,5-Trinitrobenzene							
1	22.340	22.340	0.000	11404H	50.0	48.7	
9 1,3-Dinitrobenzene							
1	24.616	24.616	0.000	10177H	50.0	48.7	
10 3,5-Dinitroaniline							
1	25.613	25.613	0.000	7660H	50.0	48.3	
11 Nitrobenzene							
1	26.223	26.223	0.000	5322H	50.0	45.5	
12 Tetryl							
1	26.863	26.863	0.000	5182H	50.0	49.4	
13 Nitroglycerin							
2	27.626	27.626	0.000	4872H	50.0	48.4	
14 2,4,6-Trinitrotoluene							
1	28.256	28.256	0.000	5639H	50.0	49.0	
15 4-Amino-2,6-dinitrotoluene							a
1	29.046	29.046	0.000	4247H	50.0	48.8	a
$ 16 3,4-Dinitrotoluene							a
1	29.403	29.403	0.000	3588H	50.0	49.0	a
2	29.406	29.406	0.000	7519H			
17 2-Amino-4,6-dinitrotoluene							
1	29.720	29.720	0.000	5566H	50.0	49.1	
18 2,6-Dinitrotoluene							
1	31.130	31.130	0.000	3562H	50.0	48.6	

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
19 2,4-Dinitrotoluene							
1	31.566	31.566	0.000	6627H	50.0	49.0	
20 o-Nitrotoluene							
1	34.680	34.680	0.000	2617H	50.0	45.3	
21 p-Nitrotoluene							
1	36.180	36.180	0.000	3324H	50.0	46.2	
22 m-Nitrotoluene							
1	37.803	37.803	0.000	3226H	50.0	46.2	
23 PETN							
2	39.560	39.560	0.000	2782H	50.0	49.9	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

HP8330L4_00061 Amount Added: 1.00 Units: mL

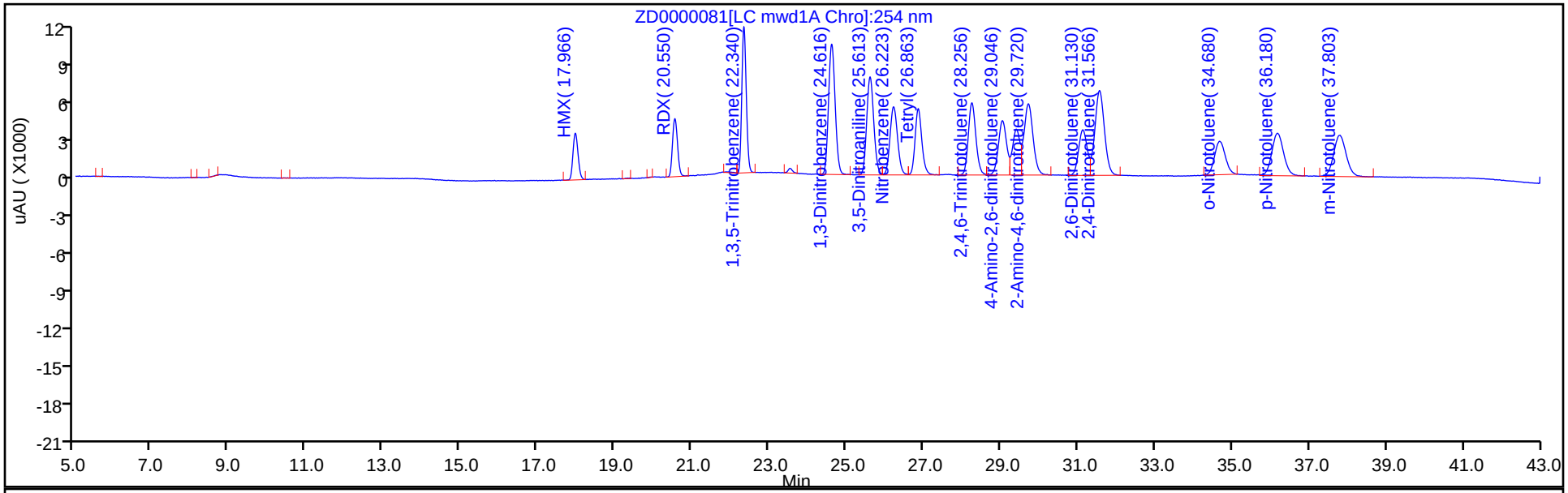
Report Date: 03-May-2019 14:25:16 Chrom Revision: 2.3 01-May-2019 12:41:30

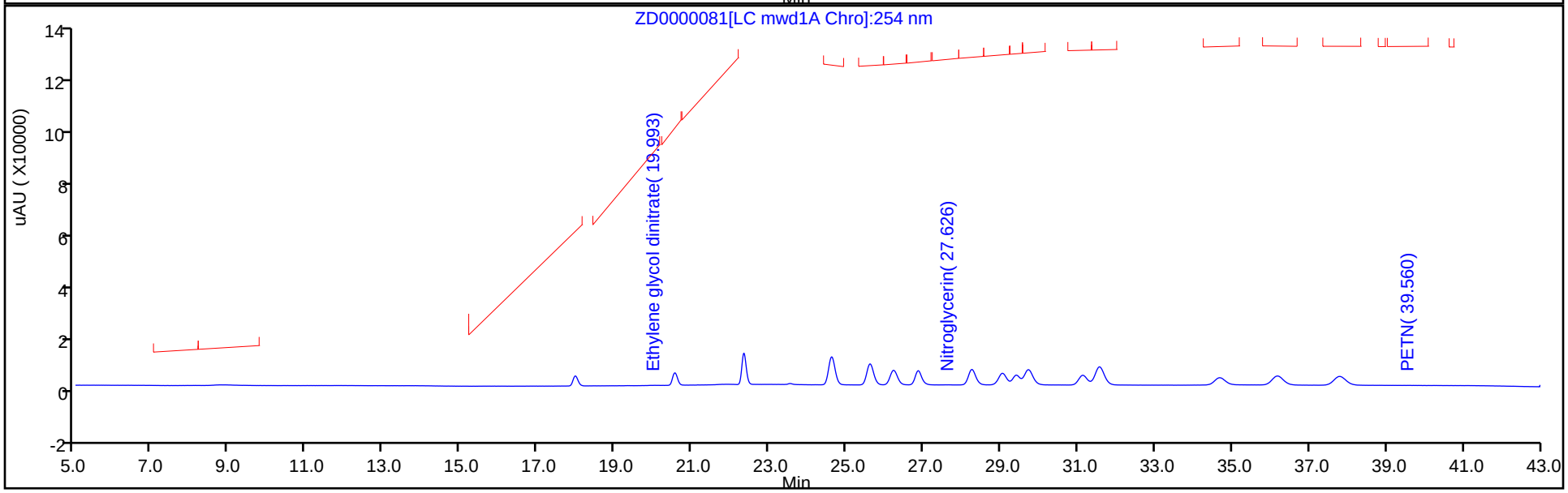
Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000081.D

Injection Date:	03-May-2019 12:55:47	Instrument ID:	LC11	Operator ID:	AO
Lims ID:	CCV			Worklist Smp#:	84
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1





Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

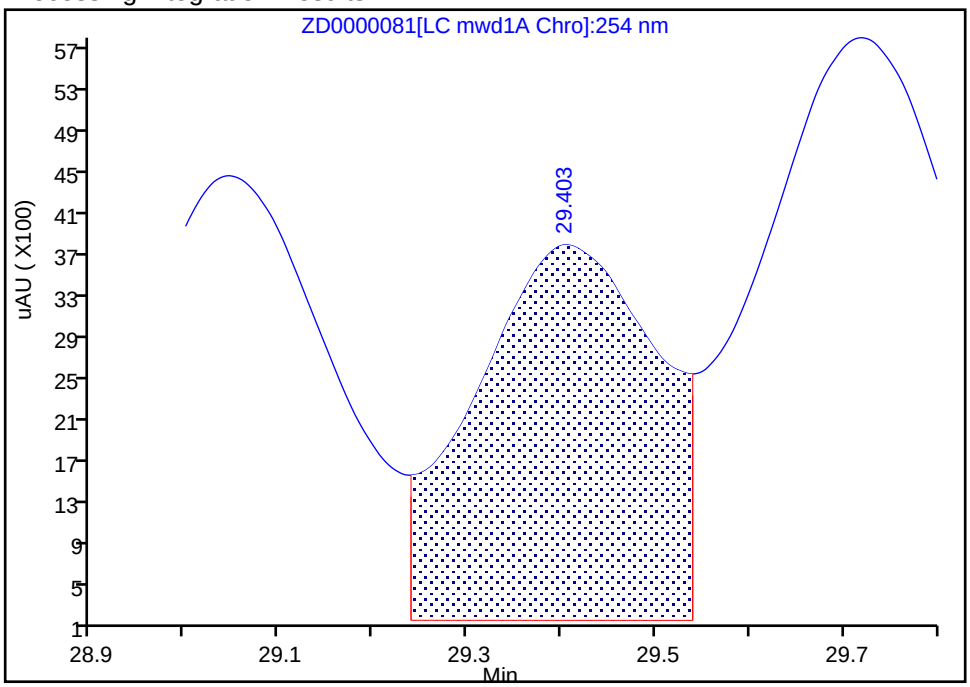
Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000081.D				
Injection Date:	03-May-2019 12:55:47	Instrument ID:	LC11		
Lims ID:	CCV				
Client ID:					
Operator ID:	AO	ALS Bottle#:	4	Worklist Smp#:	84
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

$ 16 3,4-Dinitrotoluene, CAS: 610-39-9

Signal: 1

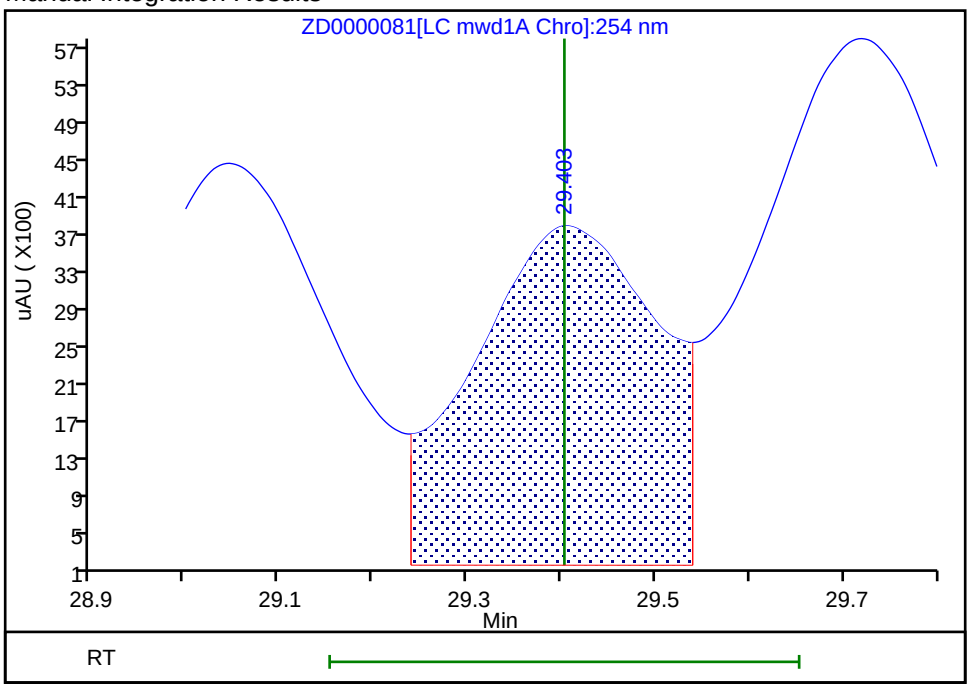
RT: 29.40
Height: 3588
Amount: 49.016872
Amount Units: ng/ml

Processing Integration Results



RT: 29.40
Height: 3588
Amount: 49.016872
Amount Units: ng/ml

Manual Integration Results



Reviewer: ortizam, 03-May-2019 14:25:08
Audit Action: Assigned Compound ID Audit Reason:

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

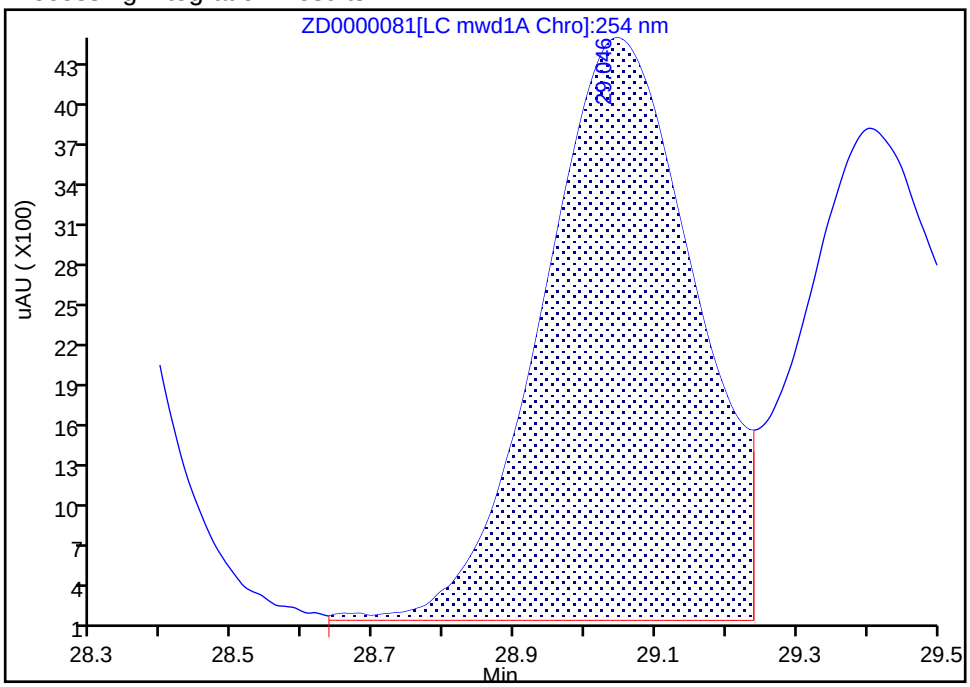
Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000081.D				
Injection Date:	03-May-2019 12:55:47	Instrument ID:	LC11		
Lims ID:	CCV				
Client ID:					
Operator ID:	AO	ALS Bottle#:	4	Worklist Smp#:	84
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

15 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

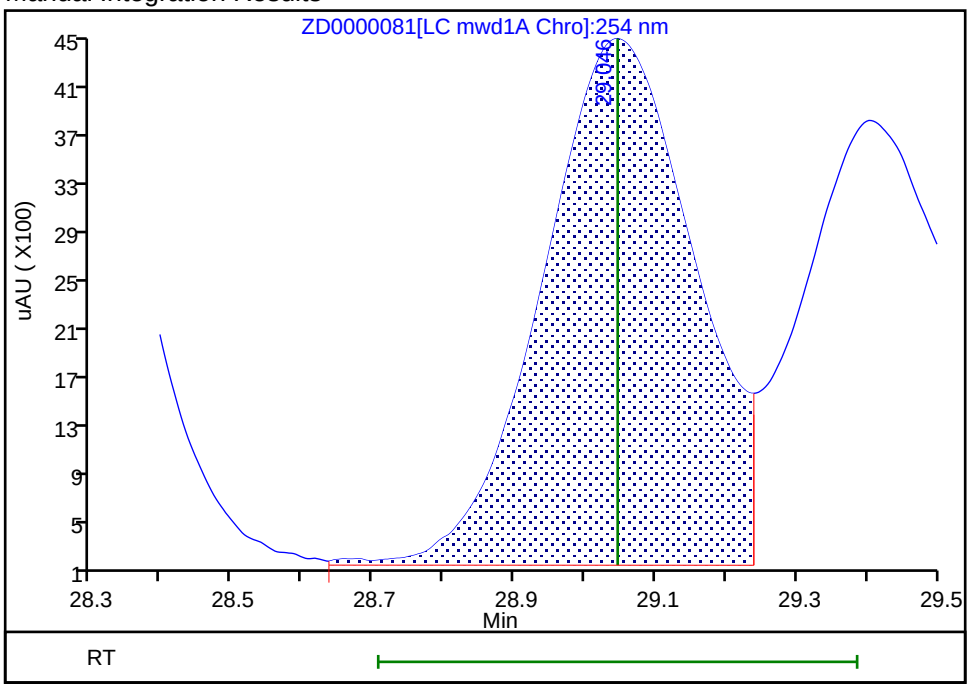
Processing Integration Results

RT: 29.05
Height: 4247
Amount: 48.784703
Amount Units: ng/ml



Manual Integration Results

RT: 29.05
Height: 4247
Amount: 48.784703
Amount Units: ng/ml



Reviewer: ortizam, 03-May-2019 14:25:10
Audit Action: Assigned Compound ID Audit Reason:

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

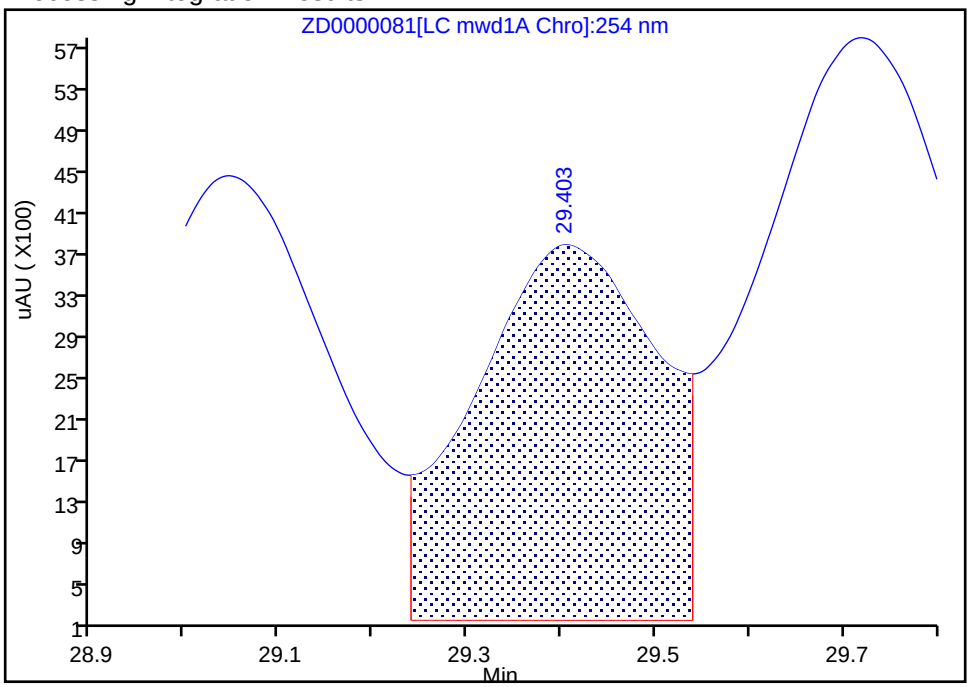
Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000081.D				
Injection Date:	03-May-2019 12:55:47	Instrument ID:	LC11		
Lims ID:	CCV				
Client ID:					
Operator ID:	AO	ALS Bottle#:	4	Worklist Smp#:	84
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

$ 16 3,4-Dinitrotoluene, CAS: 610-39-9

Signal: 1

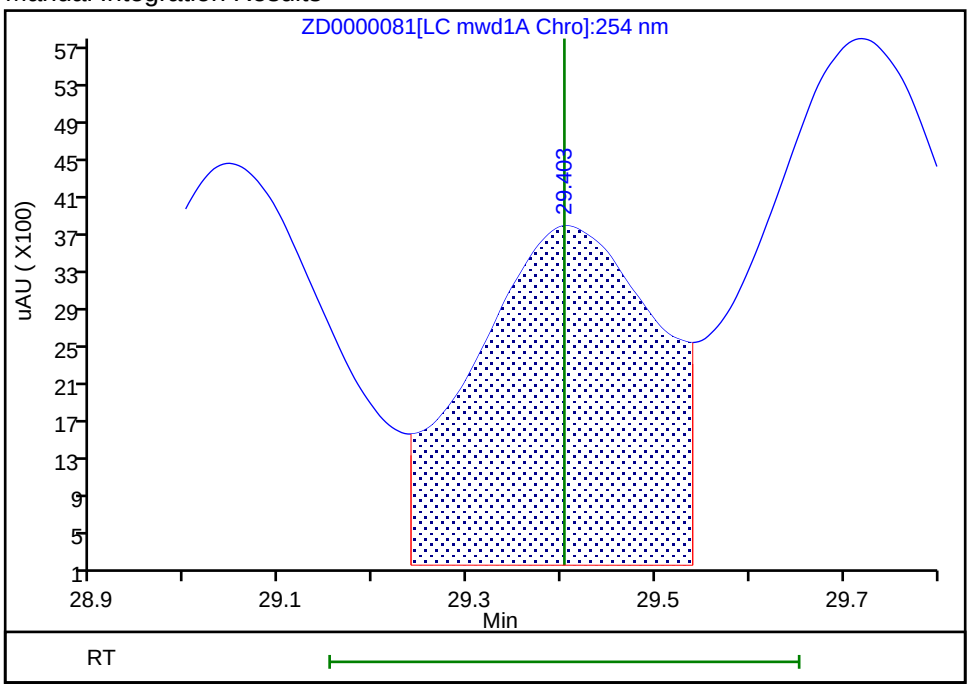
RT: 29.40
Height: 3588
Amount: 49.016872
Amount Units: ng/ml

Processing Integration Results



RT: 29.40
Height: 3588
Amount: 49.016872
Amount Units: ng/ml

Manual Integration Results



Reviewer: ortizam, 03-May-2019 14:25:08
Audit Action: Assigned Compound ID Audit Reason:

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-291526/85 Calibration Date: 05/03/2019 13:49

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: ZD0000082.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
TNX	Ave	52.00	53.69		51.7	50.1	3.2	15.0
DNX	Ave	64.92	67.51		52.2	50.2	4.0	15.0
MNX	Ave	100.2	103.8		60.6	58.5	3.7	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-291526/85 Calibration Date: 05/03/2019 13:49

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: ZD0000082.D

Analyte	RT	RT WINDOW	
		FROM	TO
TNX	12.65	12.40	12.90
DNX	16.59	16.34	16.84
MNX	19.06	18.81	19.31

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000082.D
Lims ID: CCV MET
Client ID:
Sample Type: CCV
Inject. Date: 03-May-2019 13:49:27 ALS Bottle#: 5 Worklist Smp#: 85
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 320-0075622-076
Operator ID: AO Instrument ID: LC11
Sublist: chrom-8330 Metab LC11*sub2

Method: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 03-May-2019 14:25:30 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0325

First Level Reviewer: ortizam Date: 03-May-2019 14:25:30

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
1 TNX							
1	12.653	12.653	0.000	2687H	50.1	51.7	
2 DNX							
1	16.590	16.590	0.000	3389H	50.2	52.2	
4 MNX							
1	19.063	19.063	0.000	6074H	58.5	60.6	

Reagents:

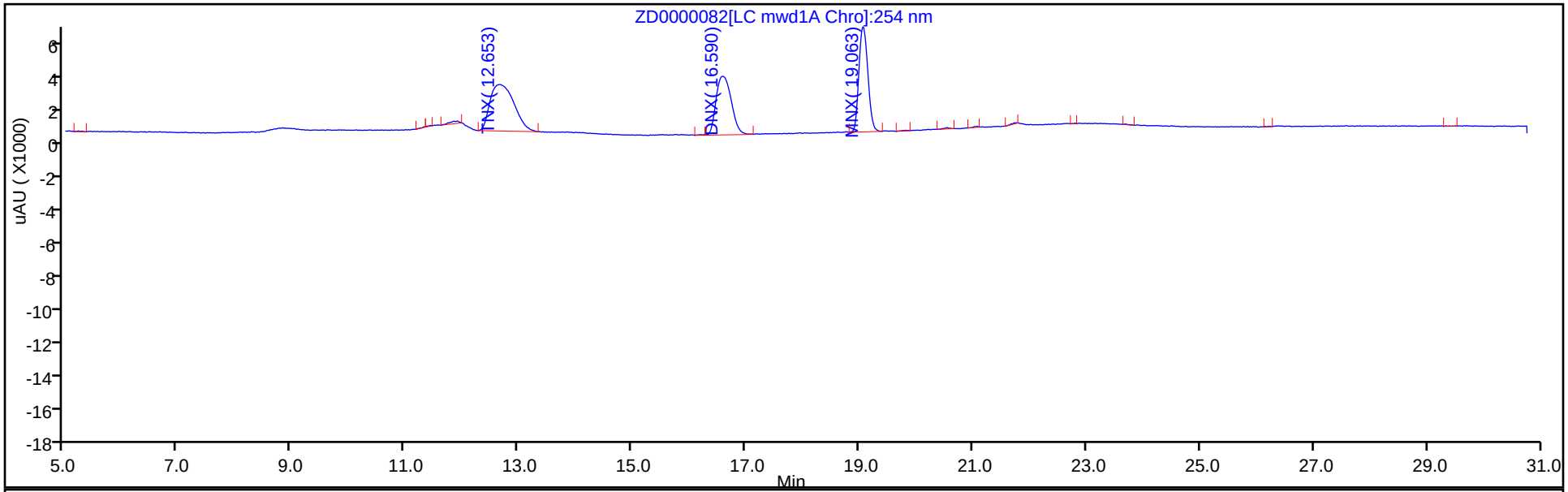
HPMETABL4_00039 Amount Added: 1.00 Units: mL

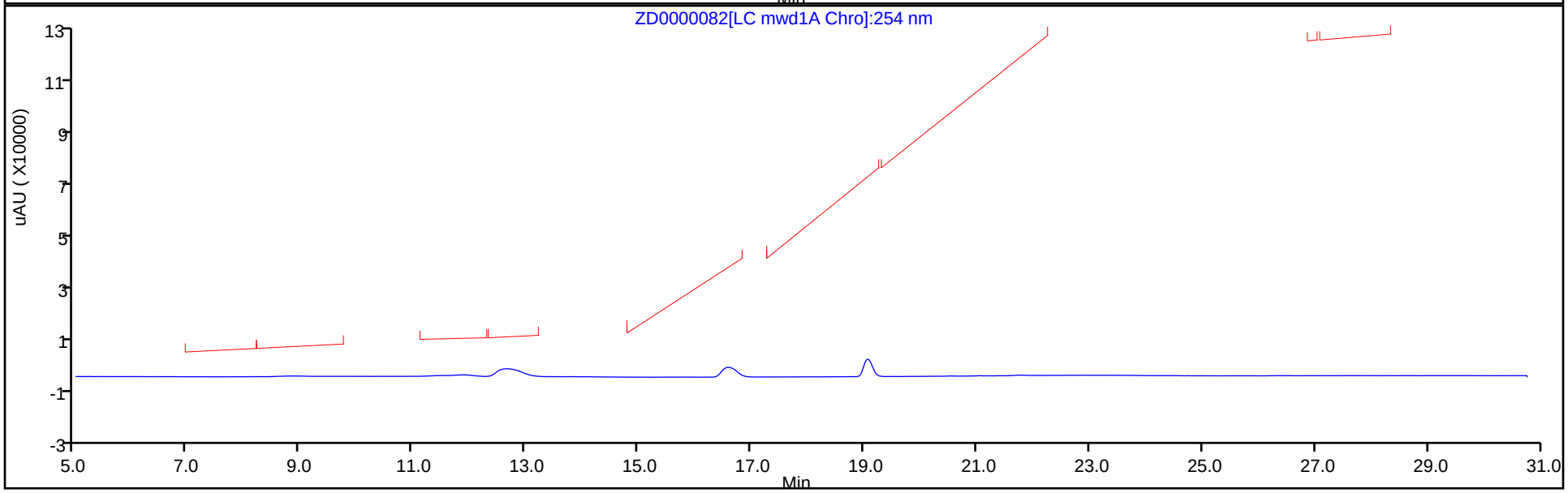
Report Date: 03-May-2019 14:25:31 Chrom Revision: 2.3 01-May-2019 12:41:30

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000082.D				
Injection Date:	03-May-2019 13:49:27	Instrument ID:	LC11	Operator ID:	AO
Lims ID:	CCV MET			Worklist Smp#:	85
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1





FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCVRT 320-292661/3 Calibration Date: 05/06/2019 15:04

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: F0000003.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	80.65	73.61		91.3	100	-8.7	15.0
RDX	Ave	99.08	87.96		88.8	100	-11.2	15.0
1,3,5-Trinitrobenzene	Ave	234.3	215.5		92.0	100	-8.0	15.0
1,3-Dinitrobenzene	Ave	209.0	193.7		92.7	100	-7.3	15.0
3,5-Dinitroaniline	Ave	158.6	146.1		92.1	100	-7.9	15.0
Nitrobenzene	Ave	117.0	109.5		93.5	100	-6.5	15.0
Tetryl	Ave	104.9	100.5		95.8	100	-4.2	15.0
Nitroglycerin	Ave	100.6	92.03		91.4	100	-8.6	15.0
2,4,6-Trinitrotoluene	Ave	115.1	109.6		95.3	100	-4.7	15.0
4-Amino-2,6-dinitrotoluene	Lin2		83.06		95.4	100	-4.6	15.0
2-Amino-4,6-dinitrotoluene	Lin2		109.8		96.7	100	-3.3	15.0
2,6-Dinitrotoluene	Ave	73.33	68.94		94.0	100	-6.0	15.0
2,4-Dinitrotoluene	Ave	135.2	129.3		95.6	100	-4.4	15.0
2-Nitrotoluene	Ave	57.75	56.09		97.1	100	-2.9	15.0
4-Nitrotoluene	Ave	71.88	68.20		94.9	100	-5.1	15.0
3-Nitrotoluene	Lin2		67.59		97.2	100	-2.8	15.0
PETN	Lin2		55.41		101	100	1.1	15.0
3,4-Dinitrotoluene	Ave	73.20	71.26		97.4	100	-2.6	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCVRT 320-292661/3 Calibration Date: 05/06/2019 15:04

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: F0000003.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	18.27	18.02	18.52
RDX	20.72	20.47	20.97
1,3,5-Trinitrobenzene	22.49	22.24	22.74
1,3-Dinitrobenzene	24.79	24.54	25.04
3,5-Dinitroaniline	25.83	25.58	26.08
Nitrobenzene	26.39	26.14	26.64
Tetryl	27.12	26.87	27.37
Nitroglycerin	27.87	27.62	28.12
2,4,6-Trinitrotoluene	28.51	28.26	28.76
4-Amino-2,6-dinitrotoluene	29.30	28.96	29.64
2-Amino-4,6-dinitrotoluene	29.98	29.60	30.36
2,6-Dinitrotoluene	31.39	31.09	31.69
2,4-Dinitrotoluene	31.83	31.52	32.14
2-Nitrotoluene	34.95	34.62	35.28
4-Nitrotoluene	36.49	36.13	36.85
3-Nitrotoluene	38.11	37.71	38.51
PETN	40.07	39.66	40.48
3,4-Dinitrotoluene	29.66	29.41	29.91

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190506-75892.b\F0000003.D
Lims ID: CCVRT
Client ID:
Sample Type: CCVRT
Inject. Date: 06-May-2019 15:04:42 ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: CCVRT
Operator ID: AC Instrument ID: LC11
Sublist: chrom-8330 Metab LC11*sub9

Method: \\chromna\Sacramento\ChromData\LC11\20190506-75892.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 07-May-2019 09:56:32 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0328

First Level Reviewer: cartiera Date: 06-May-2019 16:19:22

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
3 HMX							
1	18.273	18.273	0.000	7361H	100.0	91.3	
5 Ethylene glycol dinitrate							M
2	20.173	20.173	0.000	126530	100.0	99.0	M
6 RDX							
1	20.717	20.717	0.000	8796H	100.0	88.8	
8 1,3,5-Trinitrobenzene							
1	22.493	22.493	0.000	21553H	100.0	92.0	
9 1,3-Dinitrobenzene							
1	24.793	24.793	0.000	19365H	100.0	92.7	
10 3,5-Dinitroaniline							
1	25.827	25.827	0.000	14605H	100.0	92.1	
11 Nitrobenzene							
1	26.393	26.393	0.000	10945H	100.0	93.5	
12 Tetryl							
1	27.117	27.117	0.000	10054H	100.0	95.8	
13 Nitroglycerin							M
2	27.873	27.873	0.000	9203H	100.0	91.4	M
14 2,4,6-Trinitrotoluene							
1	28.510	28.510	0.000	10962H	100.0	95.3	
15 4-Amino-2,6-dinitrotoluene							
1	29.297	29.297	0.000	8306H	100.0	95.4	
$ 16 3,4-Dinitrotoluene							M
1	29.663	29.663	0.000	7126H	100.0	97.4	
2	29.297	29.297	0.000	15394H			M
17 2-Amino-4,6-dinitrotoluene							
1	29.980	29.980	0.000	10975H	100.0	96.7	
18 2,6-Dinitrotoluene							
1	31.390	31.390	0.000	6894H	100.0	94.0	

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
19 2,4-Dinitrotoluene							
1	31.833	31.833	0.000	12928H	100.0	95.6	
20 o-Nitrotoluene							
1	34.953	34.953	0.000	5609H	100.0	97.1	
21 p-Nitrotoluene							
1	36.490	36.490	0.000	6820H	100.0	94.9	
22 m-Nitrotoluene							
1	38.113	38.113	0.000	6759H	100.0	97.2	
23 PETN							
2	40.073	40.073	0.000	5541H	100.0	101.1	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

HP8330L5_00070 Amount Added: 1.00 Units: mL

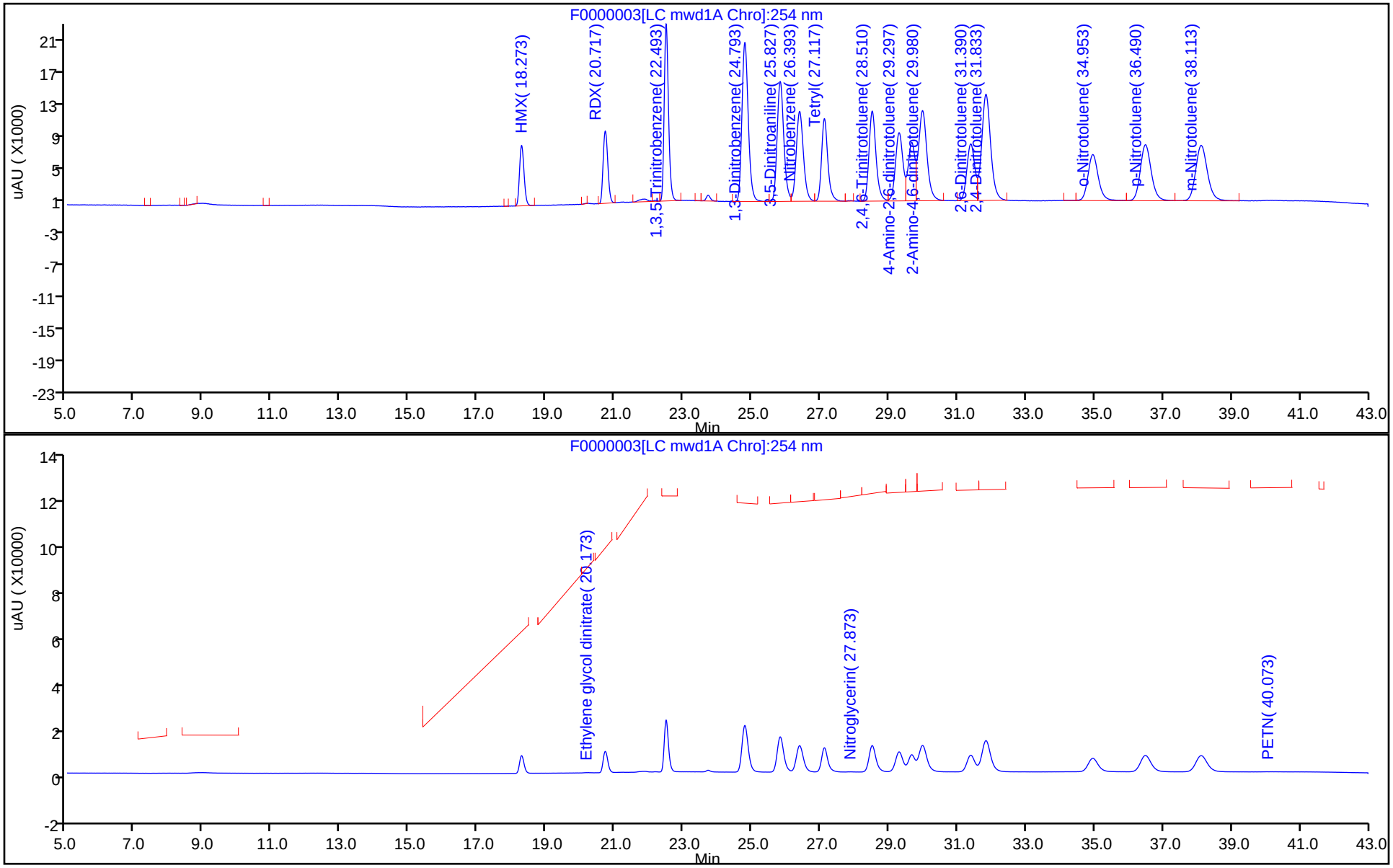
Report Date: 07-May-2019 09:56:33 Chrom Revision: 2.3 03-May-2019 15:47:48

Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190506-75892.b\F0000003.D

Injection Date:	06-May-2019 15:04:42	Instrument ID:	LC11	Operator ID:	AC
Lims ID:	CCVRT			Worklist Smp#:	3
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

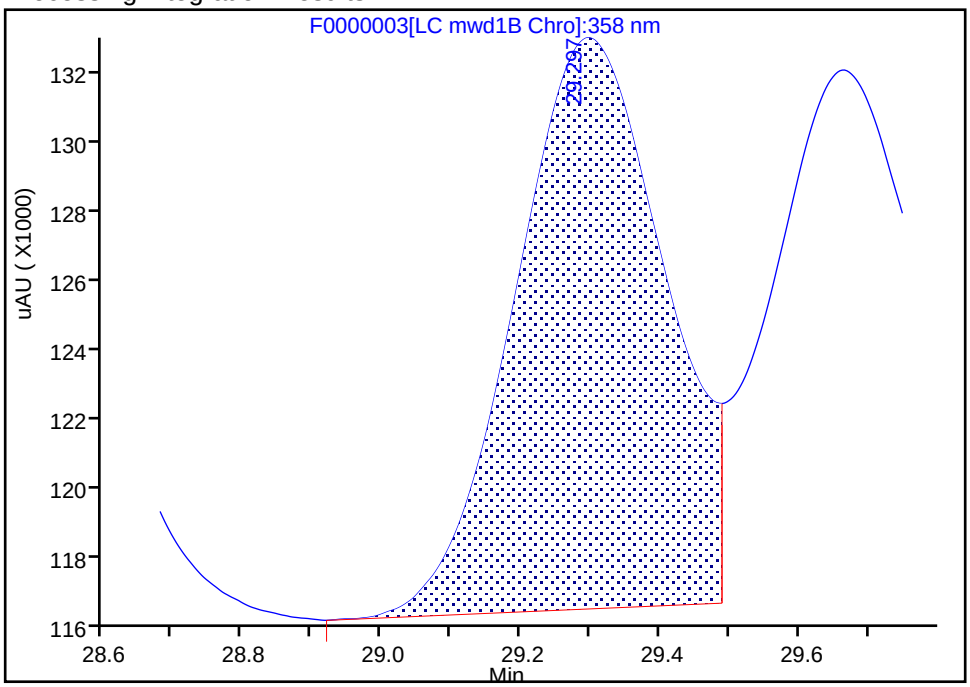
Data File:	\\chromna\Sacramento\ChromData\LC11\20190506-75892.b\F0000003.D				
Injection Date:	06-May-2019 15:04:42	Instrument ID:	LC11		
Lims ID:	CCVRT				
Client ID:					
Operator ID:	AC	ALS Bottle#:	2	Worklist Smp#:	3
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:		Detector	LC mwd1B, 358 nm		

$ 16 3,4-Dinitrotoluene, CAS: 610-39-9

Signal: 2

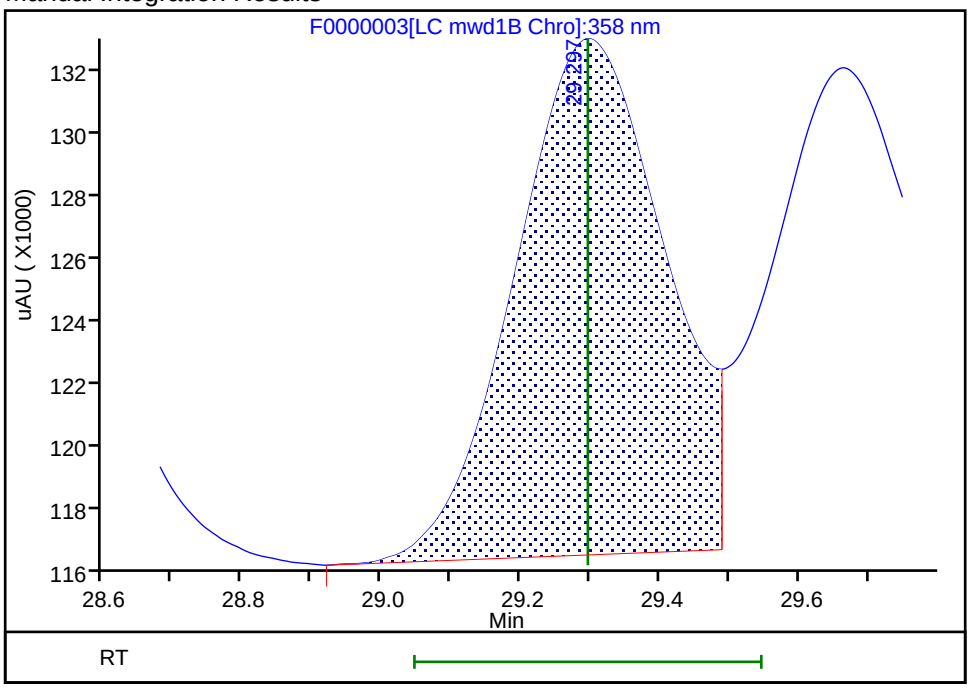
Processing Integration Results

RT: 29.30
Height: 15988
Amount: 97.350677
Amount Units: ng/ml



Manual Integration Results

RT: 29.30
Height: 15394
Amount: 97.350677
Amount Units: ng/ml



Reviewer: cartiera, 06-May-2019 16:19:09

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

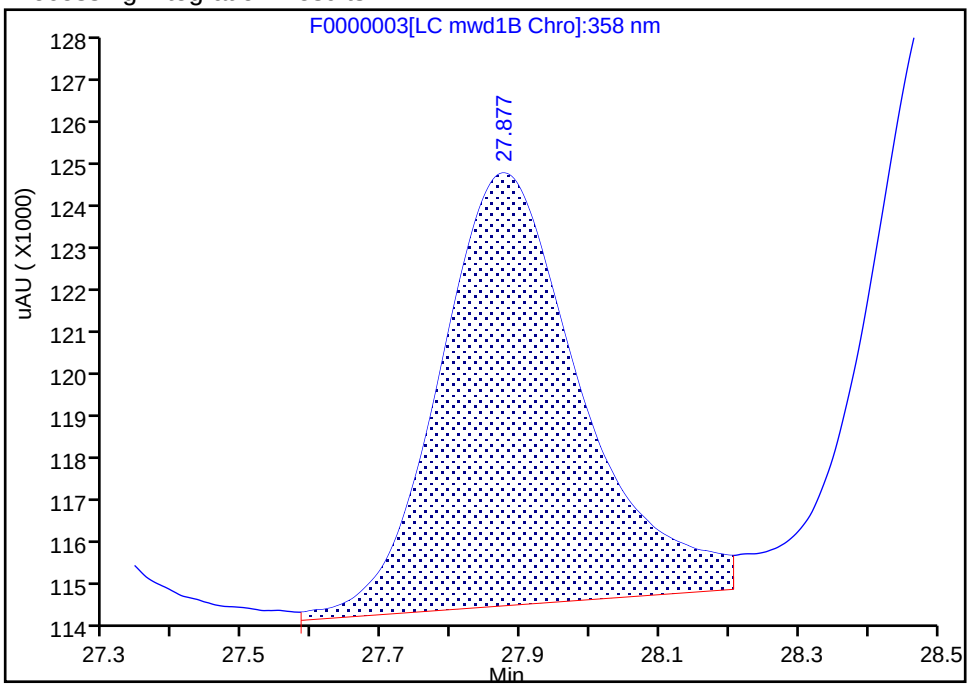
Data File:	\\chromna\Sacramento\ChromData\LC11\20190506-75892.b\F0000003.D				
Injection Date:	06-May-2019 15:04:42	Instrument ID:	LC11		
Lims ID:	CCVRT				
Client ID:					
Operator ID:	AC	ALS Bottle#:	2	Worklist Smp#:	3
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:		Detector	LC mwd1B, 358 nm		

13 Nitroglycerin, CAS: 55-63-0

Signal: 1

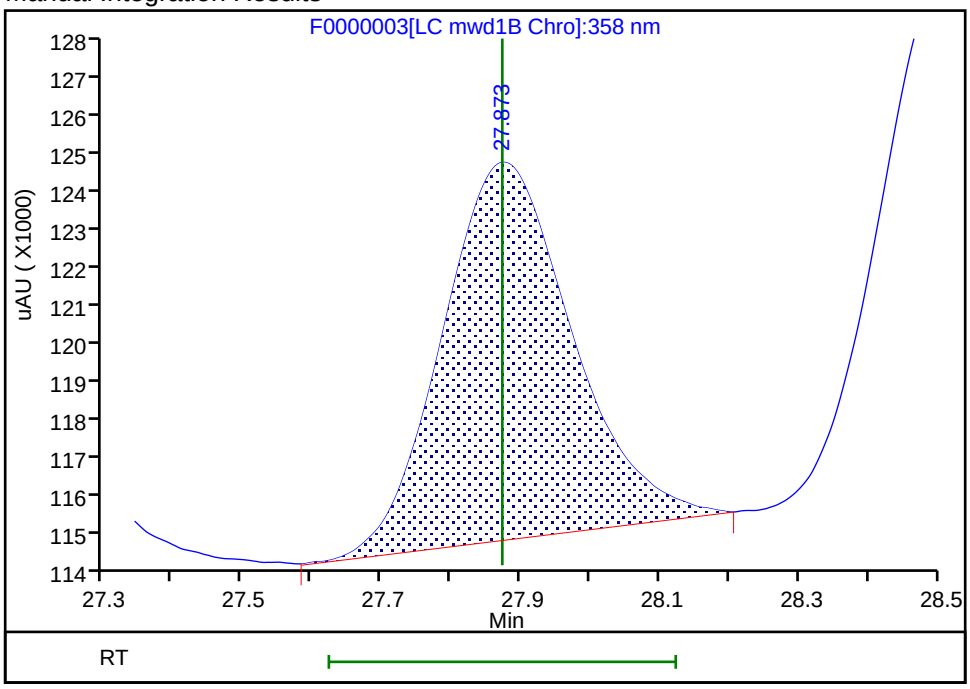
Processing Integration Results

RT: 27.88
Height: 9629
Amount: 95.678478
Amount Units: ng/ml



Manual Integration Results

RT: 27.87
Height: 9203
Amount: 91.445532
Amount Units: ng/ml



Reviewer: cartiera, 06-May-2019 16:18:58

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

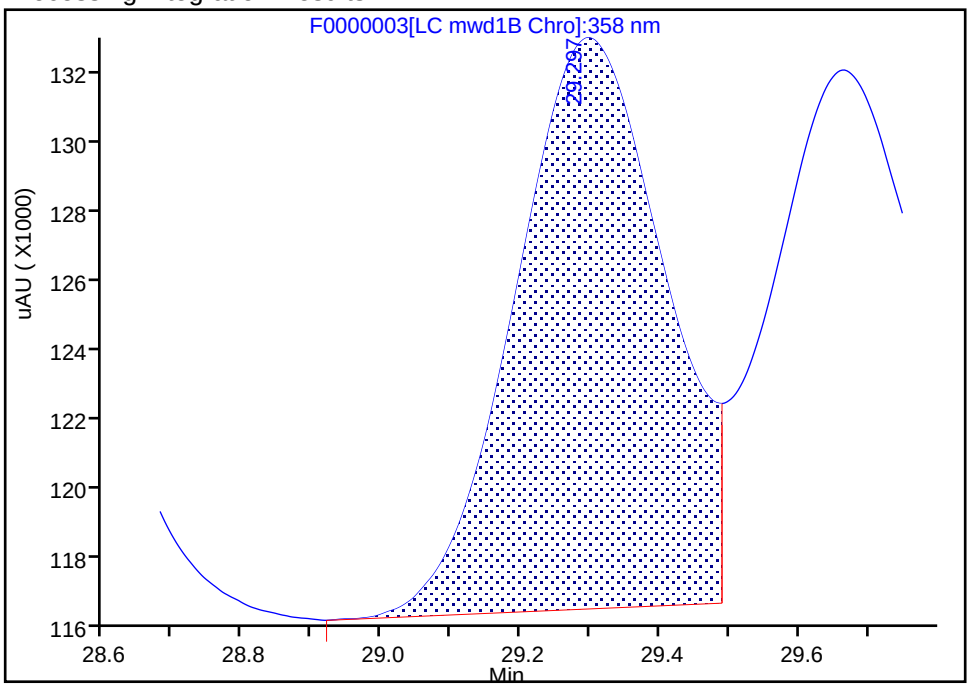
Data File:	\\chromna\Sacramento\ChromData\LC11\20190506-75892.b\F0000003.D				
Injection Date:	06-May-2019 15:04:42	Instrument ID:	LC11		
Lims ID:	CCVRT				
Client ID:					
Operator ID:	AC	ALS Bottle#:	2	Worklist Smp#:	3
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:		Detector	LC mwd1B, 358 nm		

$ 16 3,4-Dinitrotoluene, CAS: 610-39-9

Signal: 2

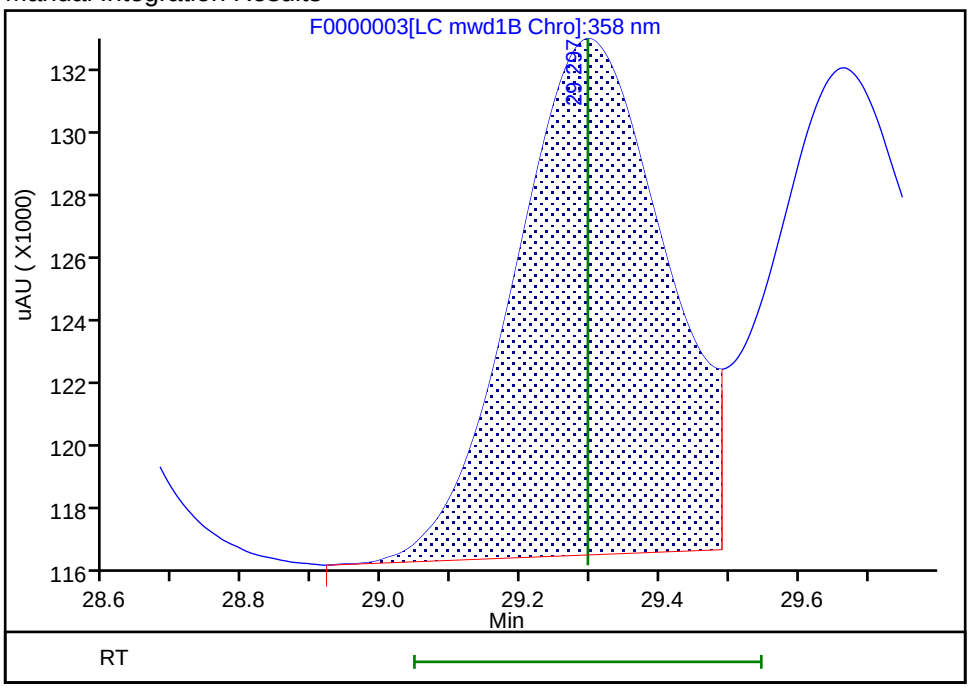
Processing Integration Results

RT: 29.30
Height: 15988
Amount: 97.350677
Amount Units: ng/ml



Manual Integration Results

RT: 29.30
Height: 15394
Amount: 97.350677
Amount Units: ng/ml



Reviewer: cartiera, 06-May-2019 16:19:09

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCVRT 320-292661/4 Calibration Date: 05/06/2019 15:58

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: F0000004.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
TNX	Ave	52.00	52.46		101	100	0.9	15.0
DNX	Ave	64.92	67.11		104	100	3.4	15.0
MNX	Ave	100.2	101.0		118	117	0.9	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCVRT 320-292661/4 Calibration Date: 05/06/2019 15:58

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: F0000004.D

Analyte	RT	RT WINDOW	
		FROM	TO
TNX	12.95	12.70	13.20
DNX	16.86	16.61	17.11
MNX	19.28	19.03	19.53

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190506-75892.b\F0000004.D
Lims ID: CCVRT MET
Client ID:
Sample Type: CCVRT
Inject. Date: 06-May-2019 15:58:21 ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: CCVRT MET
Operator ID: AC Instrument ID: LC11
Sublist: chrom-8330 Metab LC11*sub2

Method: \\chromna\Sacramento\ChromData\LC11\20190506-75892.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 07-May-2019 09:56:09 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0328

First Level Reviewer: cartiera Date: 07-May-2019 09:56:09

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
1 TNX							
1	12.949	12.949	0.000	5251H	100.1	101.0	
2 DNX							
1	16.859	16.859	0.000	6738H	100.4	103.8	
4 MNX							
1	19.275	19.275	0.000	11821H	117.0	118.0	

Reagents:

HPMETABL5_00040 Amount Added: 1.00 Units: mL

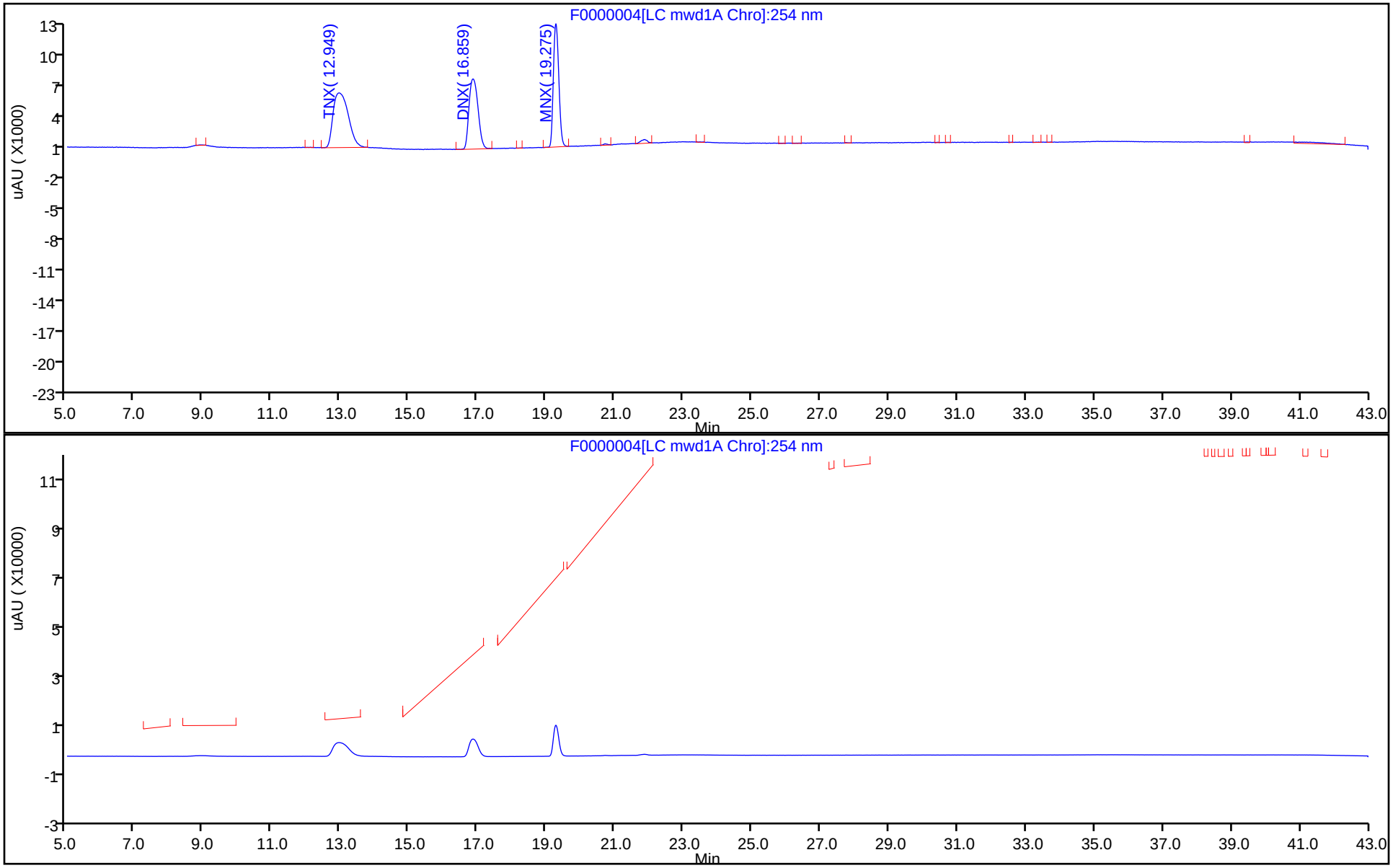
Report Date: 07-May-2019 09:56:10 Chrom Revision: 2.3 03-May-2019 15:47:48

Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190506-75892.b\F0000004.D

Injection Date:	06-May-2019 15:58:21	Instrument ID:	LC11	Operator ID:	AC
Lims ID:	CCVRT MET			Worklist Smp#:	4
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-292661/26 Calibration Date: 05/07/2019 02:41

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: F0000016.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	80.65	72.18		44.7	50.0	-10.5	15.0
RDX	Ave	99.08	87.90		44.4	50.0	-11.3	15.0
1,3,5-Trinitrobenzene	Ave	234.3	214.0		45.7	50.0	-8.7	15.0
1,3-Dinitrobenzene	Ave	209.0	191.6		45.8	50.0	-8.3	15.0
3,5-Dinitroaniline	Ave	158.6	143.8		45.3	50.0	-9.3	15.0
Nitrobenzene	Ave	117.0	108.6		46.4	50.0	-7.2	15.0
Tetryl	Ave	104.9	98.76		47.1	50.0	-5.9	15.0
Nitroglycerin	Ave	100.6	90.58		45.0	50.0	-10.0	15.0
2,4,6-Trinitrotoluene	Ave	115.1	108.3		47.0	50.0	-5.9	15.0
4-Amino-2,6-dinitrotoluene	Lin2		80.68		46.3	50.0	-7.3	15.0
2-Amino-4,6-dinitrotoluene	Lin2		106.0		46.7	50.0	-6.5	15.0
2,6-Dinitrotoluene	Ave	73.33	67.96		46.3	50.0	-7.3	15.0
2,4-Dinitrotoluene	Ave	135.2	127.3		47.1	50.0	-5.8	15.0
2-Nitrotoluene	Ave	57.75	53.90		46.7	50.0	-6.7	15.0
4-Nitrotoluene	Ave	71.88	66.62		46.3	50.0	-7.3	15.0
3-Nitrotoluene	Lin2		65.40		46.9	50.0	-6.2	15.0
PETN	Lin2		54.78		49.1	50.0	-1.8	15.0
3,4-Dinitrotoluene	Ave	73.20	70.76		48.3	50.0	-3.3	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-292661/26 Calibration Date: 05/07/2019 02:41

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: F0000016.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	18.12	17.87	18.37
RDX	20.62	20.37	20.87
1,3,5-Trinitrobenzene	22.39	22.14	22.64
1,3-Dinitrobenzene	24.68	24.43	24.93
3,5-Dinitroaniline	25.74	25.49	25.99
Nitrobenzene	26.27	26.02	26.52
Tetryl	26.98	26.73	27.23
Nitroglycerin	27.70	27.45	27.95
2,4,6-Trinitrotoluene	28.35	28.10	28.60
4-Amino-2,6-dinitrotoluene	29.18	28.84	29.52
2-Amino-4,6-dinitrotoluene	29.87	29.49	30.25
2,6-Dinitrotoluene	31.22	30.92	31.52
2,4-Dinitrotoluene	31.67	31.36	31.98
2-Nitrotoluene	34.76	34.43	35.09
4-Nitrotoluene	36.30	35.94	36.66
3-Nitrotoluene	37.94	37.54	38.34
PETN	39.82	39.41	40.23
3,4-Dinitrotoluene	29.51	29.26	29.76

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190506-75892.b\F0000016.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 07-May-2019 02:41:59 ALS Bottle#: 4 Worklist Smp#: 26
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: AC Instrument ID: LC11
Sublist: chrom-8330 Metab LC11*sub9

Method: \\chromna\Sacramento\ChromData\LC11\20190506-75892.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 07-May-2019 14:16:08 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0328

First Level Reviewer: cartiera Date: 07-May-2019 09:53:50

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
3 HMX							
1	18.117	18.117	0.000	3609H	50.0	44.7	
5 Ethylene glycol dinitrate							
2	20.050	20.050	0.000	175657	50.0	137.5	
6 RDX							
1	20.623	20.623	0.000	4395H	50.0	44.4	
8 1,3,5-Trinitrobenzene							
1	22.390	22.390	0.000	10698H	50.0	45.7	
9 1,3-Dinitrobenzene							
1	24.683	24.683	0.000	9579H	50.0	45.8	
10 3,5-Dinitroaniline							
1	25.737	25.737	0.000	7192H	50.0	45.3	
11 Nitrobenzene							
1	26.273	26.273	0.000	5429H	50.0	46.4	
12 Tetryl							
1	26.980	26.980	0.000	4938H	50.0	47.1	
13 Nitroglycerin							M
2	27.700	27.700	0.000	4529H	50.0	45.0	M
14 2,4,6-Trinitrotoluene							
1	28.347	28.347	0.000	5413H	50.0	47.0	
15 4-Amino-2,6-dinitrotoluene							a
1	29.183	29.183	0.000	4034H	50.0	46.3	a
$ 16 3,4-Dinitrotoluene							a
1	29.510	29.510	0.000	3538H	50.0	48.3	a
2	29.513	29.513	0.000	7670H			
17 2-Amino-4,6-dinitrotoluene							
1	29.867	29.867	0.000	5299H	50.0	46.7	
18 2,6-Dinitrotoluene							
1	31.220	31.220	0.000	3398H	50.0	46.3	

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
19 2,4-Dinitrotoluene							
1	31.670	31.670	0.000	6367H	50.0	47.1	
20 o-Nitrotoluene							
1	34.763	34.763	0.000	2695H	50.0	46.7	
21 p-Nitrotoluene							
1	36.300	36.300	0.000	3331H	50.0	46.3	
22 m-Nitrotoluene							
1	37.936	37.936	0.000	3270H	50.0	46.9	
23 PETN							
2	39.816	39.816	0.000	2739H	50.0	49.1	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

HP8330L4_00061 Amount Added: 1.00 Units: mL

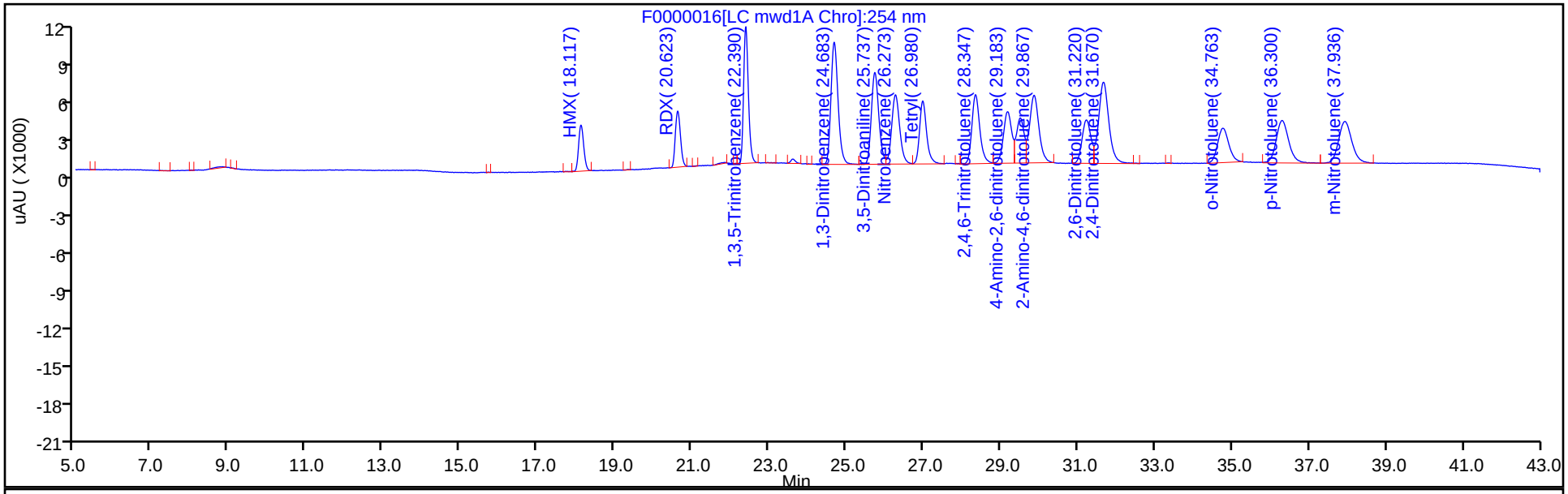
Report Date: 07-May-2019 14:16:14 Chrom Revision: 2.3 03-May-2019 15:47:48

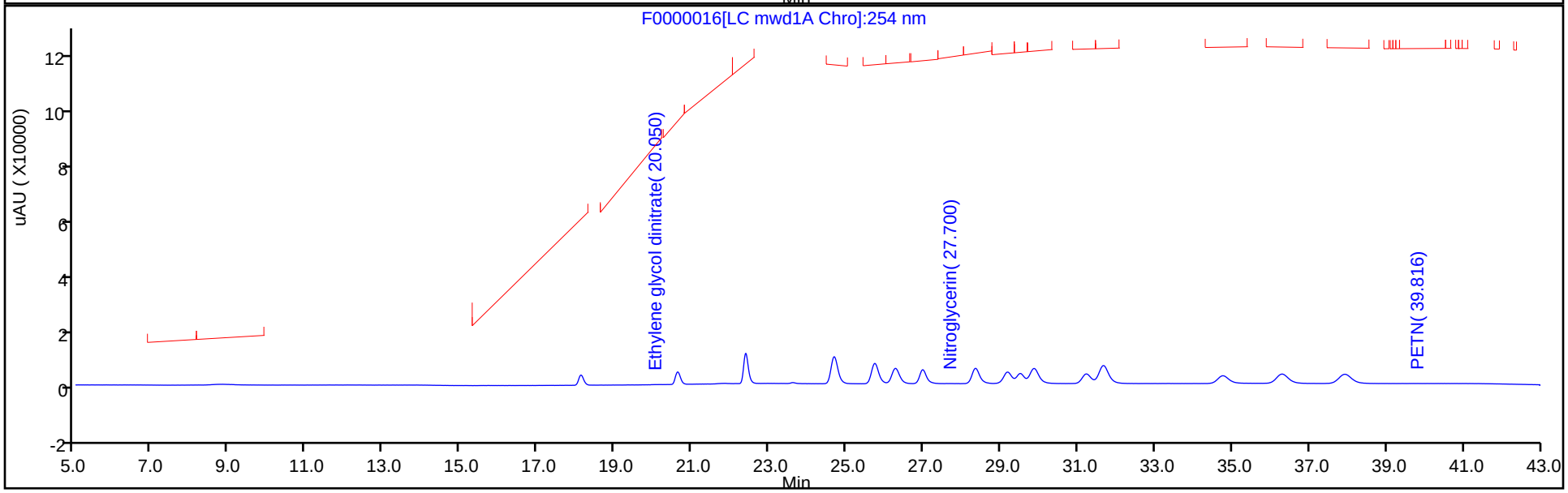
Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190506-75892.b\F0000016.D

Injection Date:	07-May-2019 02:41:59	Instrument ID:	LC11	Operator ID:	AC
Lims ID:	CCV			Worklist Smp#:	26
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1





Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

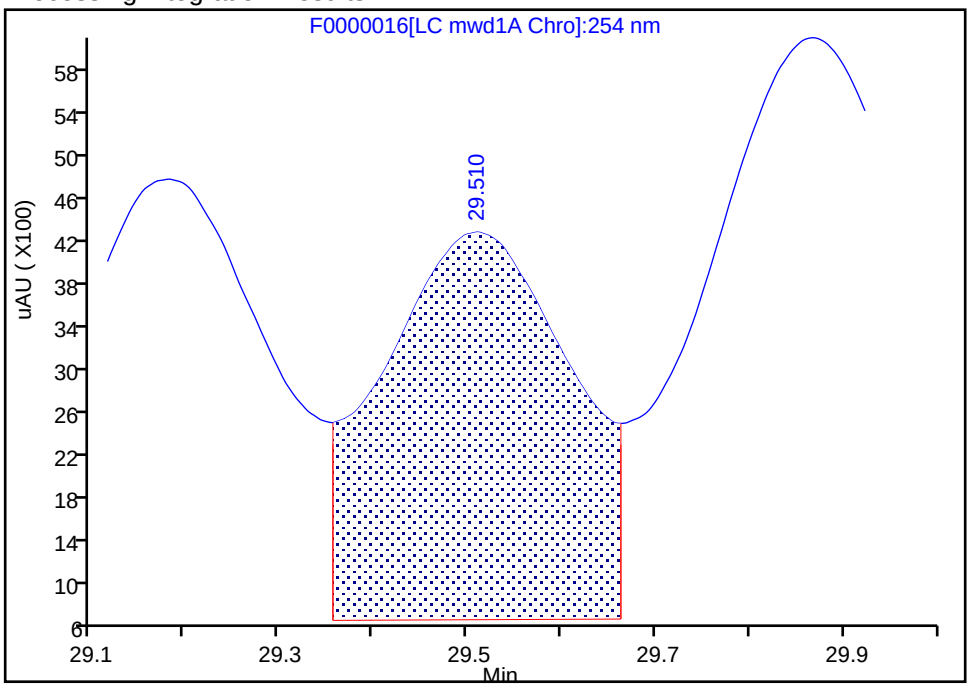
Data File:	\\chromna\Sacramento\ChromData\LC11\20190506-75892.b\F0000016.D				
Injection Date:	07-May-2019 02:41:59	Instrument ID:	LC11		
Lims ID:	CCV				
Client ID:					
Operator ID:	AC	ALS Bottle#:	4	Worklist Smp#:	26
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

$ 16 3,4-Dinitrotoluene, CAS: 610-39-9

Signal: 1

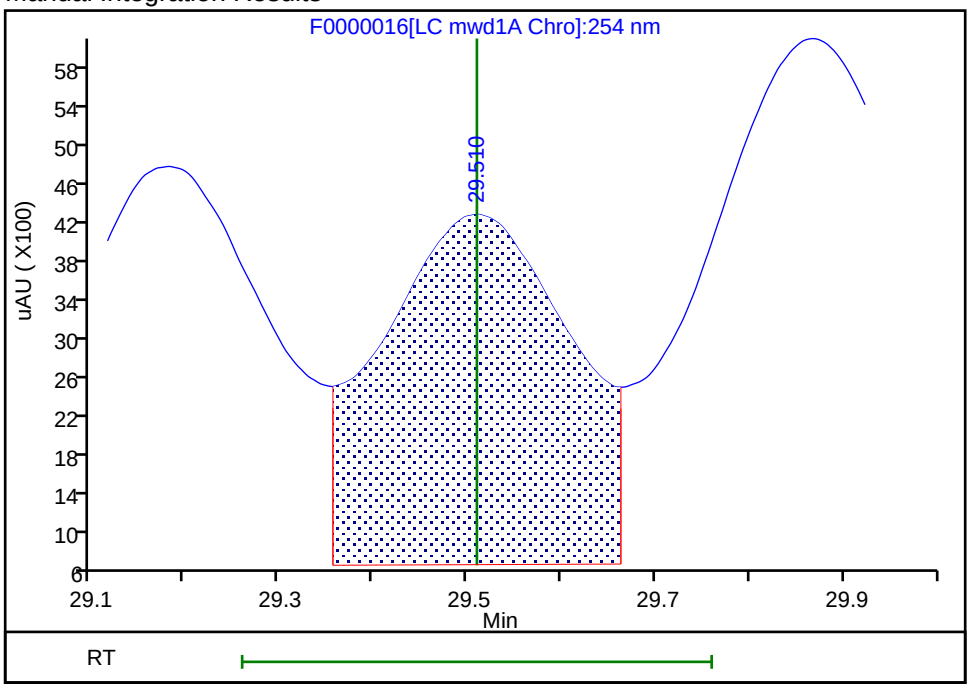
Processing Integration Results

RT: 29.51
Height: 3538
Amount: 48.333805
Amount Units: ng/ml



Manual Integration Results

RT: 29.51
Height: 3538
Amount: 48.333805
Amount Units: ng/ml



Reviewer: cartiera, 07-May-2019 14:15:10

Audit Action: Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

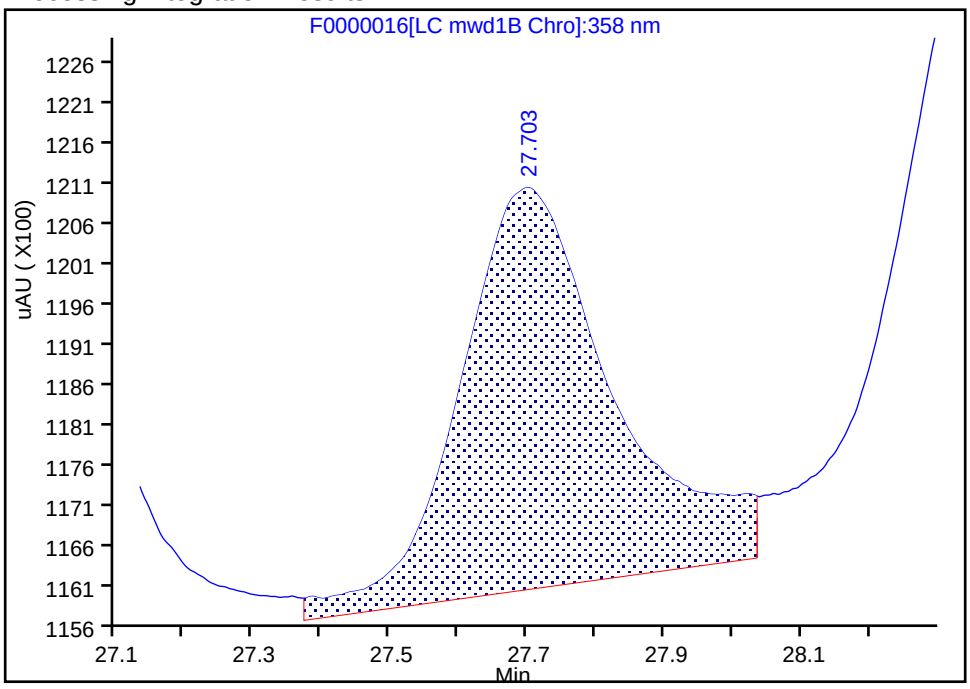
Data File:	\\chromna\Sacramento\ChromData\LC11\20190506-75892.b\F0000016.D				
Injection Date:	07-May-2019 02:41:59	Instrument ID:	LC11		
Lims ID:	CCV				
Client ID:					
Operator ID:	AC	ALS Bottle#:	4	Worklist Smp#:	26
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:		Detector	LC mwd1B, 358 nm		

13 Nitroglycerin, CAS: 55-63-0

Signal: 1

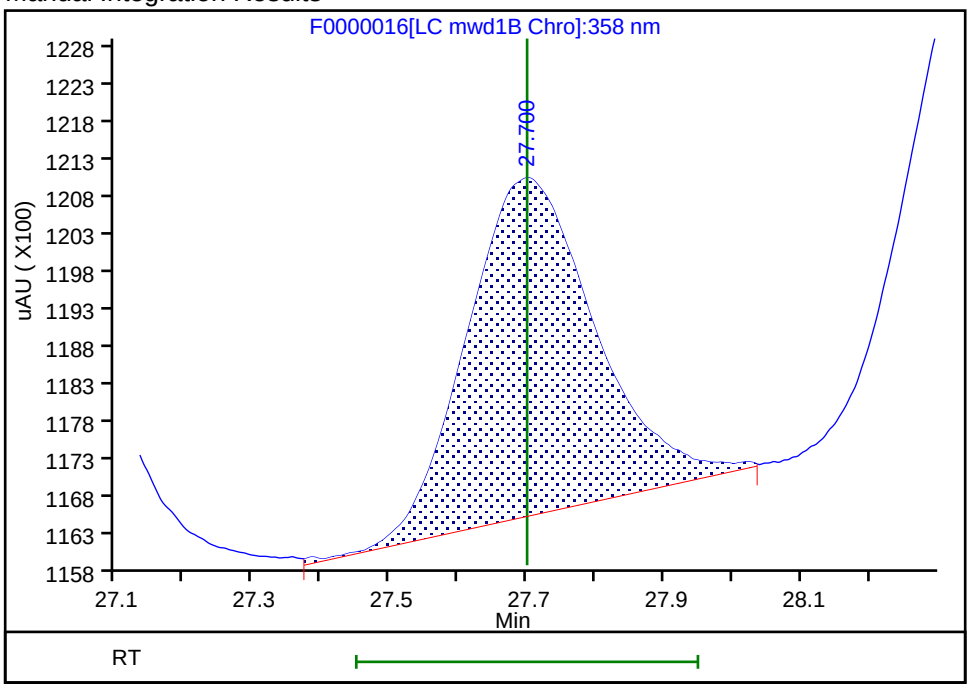
Processing Integration Results

RT: 27.70
Height: 4985
Amount: 49.343263
Amount Units: ng/ml



Manual Integration Results

RT: 27.70
Height: 4529
Amount: 45.002371
Amount Units: ng/ml



Reviewer: cartiera, 07-May-2019 14:14:59

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

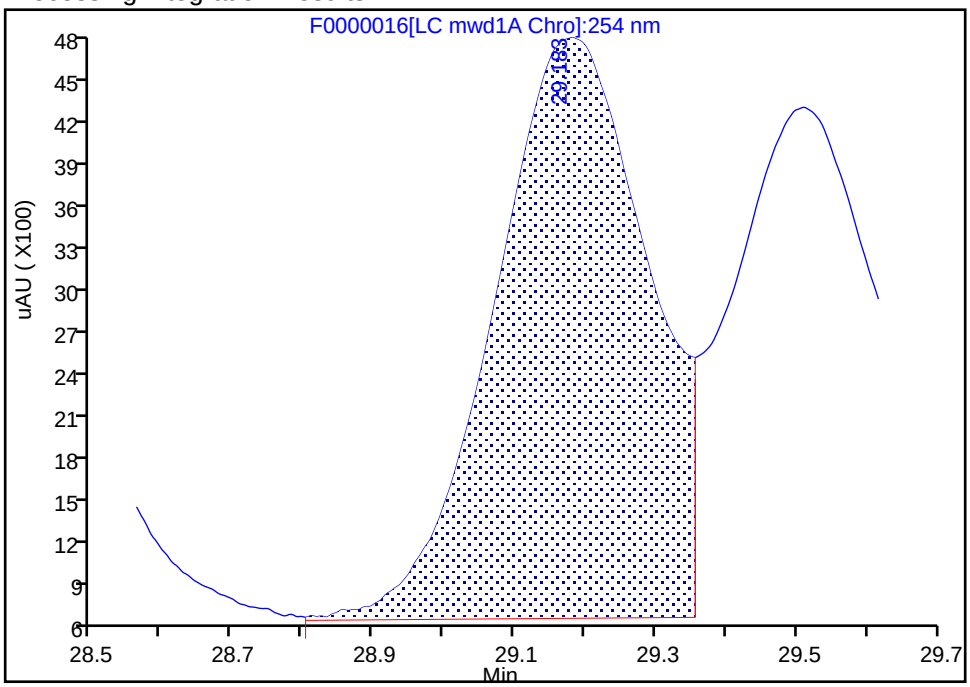
Data File:	\\chromna\Sacramento\ChromData\LC11\20190506-75892.b\F0000016.D				
Injection Date:	07-May-2019 02:41:59	Instrument ID:	LC11		
Lims ID:	CCV				
Client ID:					
Operator ID:	AC	ALS Bottle#:	4	Worklist Smp#:	26
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

15 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

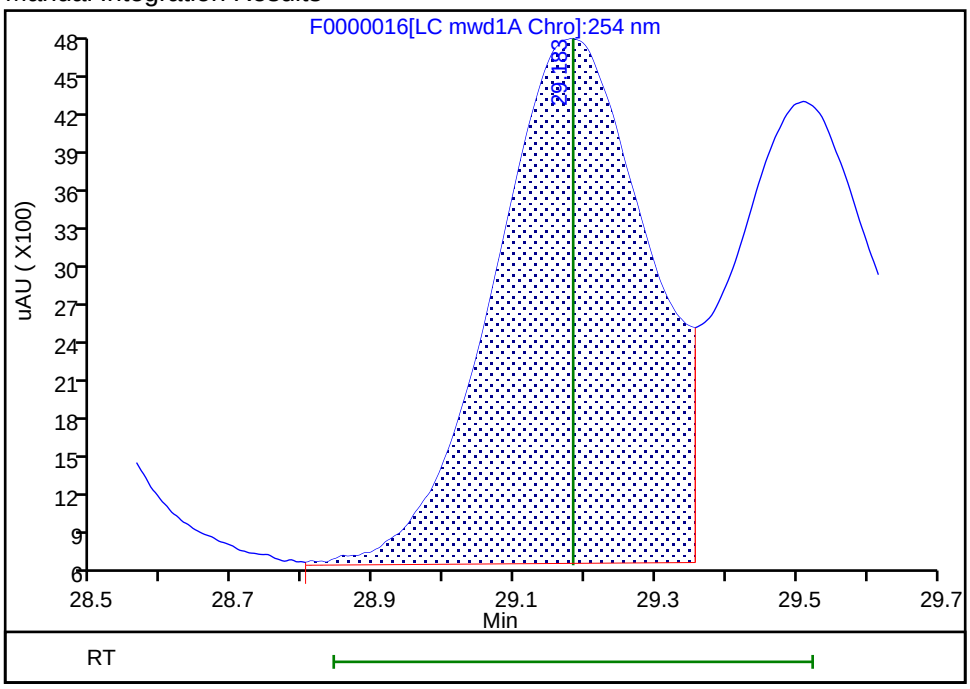
RT: 29.18
Height: 4034
Amount: 46.338486
Amount Units: ng/ml

Processing Integration Results



RT: 29.18
Height: 4034
Amount: 46.338486
Amount Units: ng/ml

Manual Integration Results



Reviewer: cartiera, 07-May-2019 14:15:12

Audit Action: Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

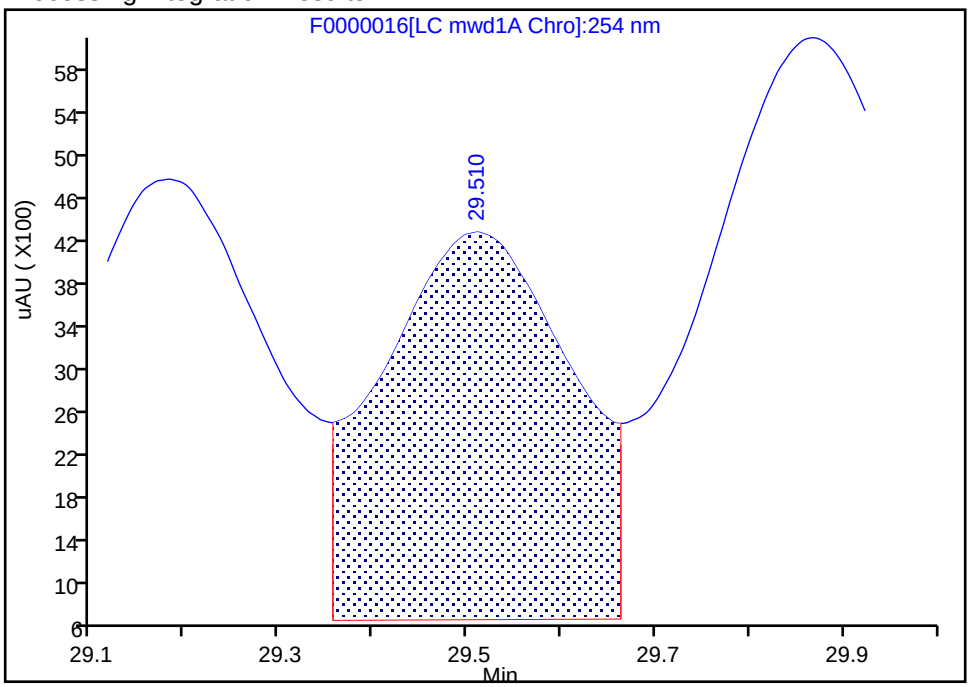
Data File:	\\chromna\Sacramento\ChromData\LC11\20190506-75892.b\F0000016.D				
Injection Date:	07-May-2019 02:41:59	Instrument ID:	LC11		
Lims ID:	CCV				
Client ID:					
Operator ID:	AC	ALS Bottle#:	4	Worklist Smp#:	26
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

$ 16 3,4-Dinitrotoluene, CAS: 610-39-9

Signal: 1

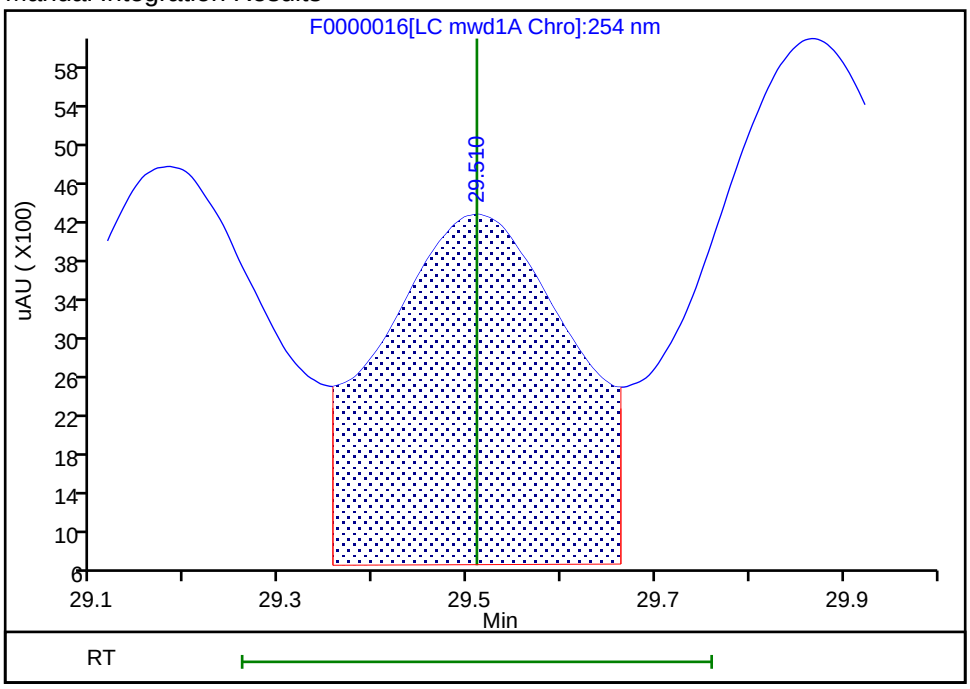
RT: 29.51
Height: 3538
Amount: 48.333805
Amount Units: ng/ml

Processing Integration Results



RT: 29.51
Height: 3538
Amount: 48.333805
Amount Units: ng/ml

Manual Integration Results



Reviewer: cartiera, 07-May-2019 14:15:10

Audit Action: Assigned Compound ID Audit Reason: Baseline Smoothing

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-292661/27 Calibration Date: 05/07/2019 03:35

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: F0000017.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
TNX	Ave	52.00	53.79		51.8	50.1	3.4	15.0
DNX	Ave	64.92	68.80		53.2	50.2	6.0	15.0
MNX	Ave	100.2	103.0		60.2	58.5	2.8	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-292661/27 Calibration Date: 05/07/2019 03:35

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: F0000017.D

Analyte	RT	RT WINDOW	
		FROM	TO
TNX	12.84	12.59	13.09
DNX	16.75	16.50	17.00
MNX	19.19	18.94	19.44

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190506-75892.b\F0000017.D
Lims ID: CCV MET
Client ID:
Sample Type: CCV
Inject. Date: 07-May-2019 03:35:41 ALS Bottle#: 5 Worklist Smp#: 27
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: CCV MET
Operator ID: AC Instrument ID: LC11
Sublist: chrom-8330 Metab LC11*sub2

Method: \\chromna\Sacramento\ChromData\LC11\20190506-75892.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 07-May-2019 14:16:24 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0328

First Level Reviewer: cartiera Date: 07-May-2019 09:53:58

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
1 TNX							
1	12.844	12.844	0.000	2692H	50.1	51.8	
2 DNX							
1	16.751	16.751	0.000	3454H	50.2	53.2	
4 MNX							
1	19.187	19.187	0.000	6025H	58.5	60.2	

Reagents:

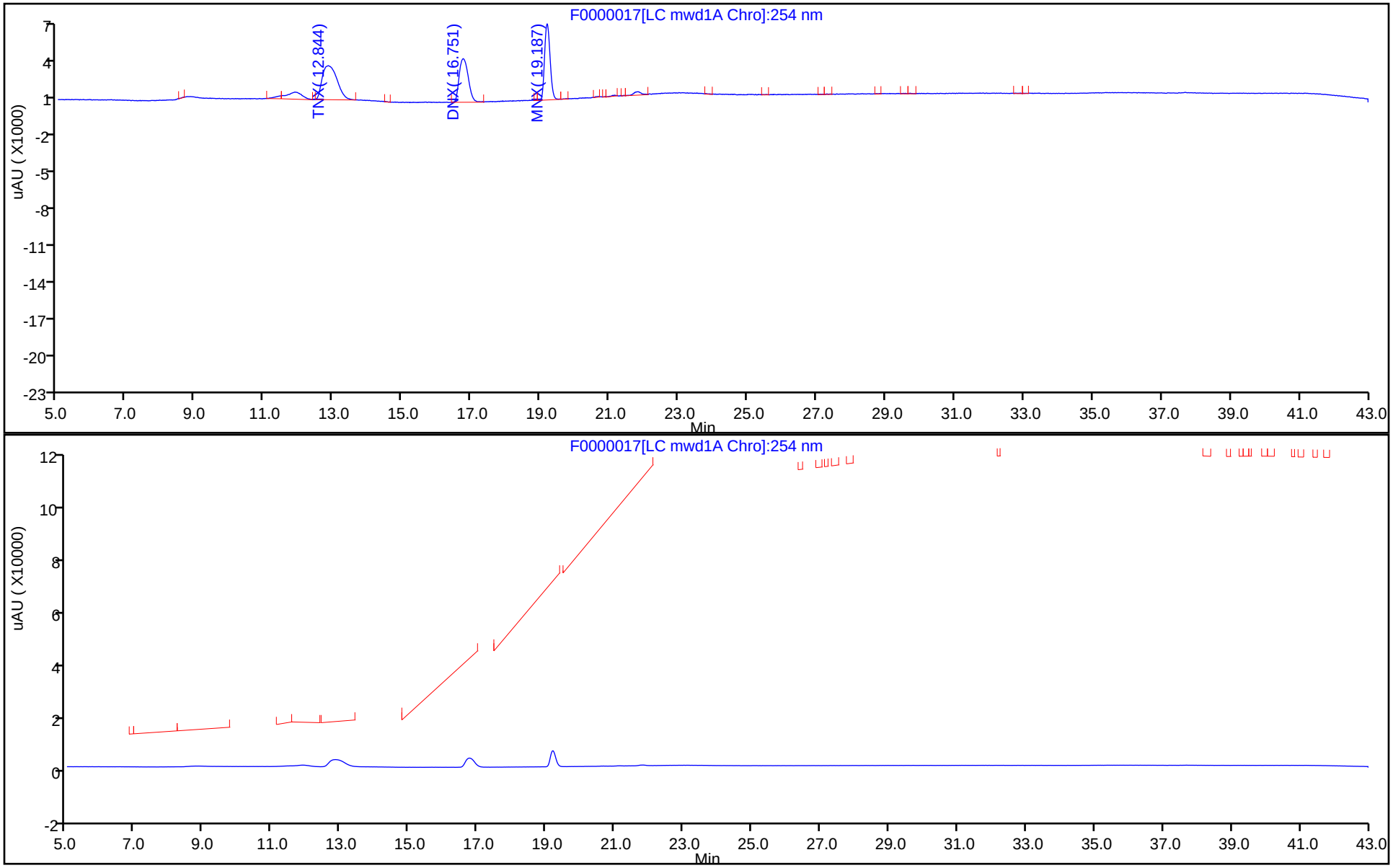
HPMETABL4_00039 Amount Added: 1.00 Units: mL

Report Date: 07-May-2019 14:16:28 Chrom Revision: 2.3 03-May-2019 15:47:48

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC11\20190506-75892.b\F0000017.D				
Injection Date:	07-May-2019 03:35:41	Instrument ID:	LC11	Operator ID:	AC
Lims ID:	CCV MET			Worklist Smp#:	27
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-292661/47 Calibration Date: 05/07/2019 13:25

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: F0000028.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	80.65	71.94		44.6	50.0	-10.8	15.0
RDX	Ave	99.08	87.06		43.9	50.0	-12.1	15.0
1,3,5-Trinitrobenzene	Ave	234.3	219.6		46.9	50.0	-6.3	15.0
1,3-Dinitrobenzene	Ave	209.0	193.5		46.3	50.0	-7.4	15.0
3,5-Dinitroaniline	Ave	158.6	146.6		46.2	50.0	-7.6	15.0
Nitrobenzene	Ave	117.0	107.1		45.8	50.0	-8.5	15.0
Tetryl	Ave	104.9	100.2		47.8	50.0	-4.5	15.0
Nitroglycerin	Ave	100.6	92.06		45.7	50.0	-8.5	15.0
2,4,6-Trinitrotoluene	Ave	115.1	109.3		47.5	50.0	-5.0	15.0
4-Amino-2,6-dinitrotoluene	Lin2		82.42		47.3	50.0	-5.3	15.0
2-Amino-4,6-dinitrotoluene	Lin2		108.8		48.0	50.0	-4.1	15.0
2,6-Dinitrotoluene	Ave	73.33	68.94		47.0	50.0	-6.0	15.0
2,4-Dinitrotoluene	Ave	135.2	129.1		47.7	50.0	-4.5	15.0
2-Nitrotoluene	Ave	57.75	54.72		47.4	50.0	-5.2	15.0
4-Nitrotoluene	Ave	71.88	66.34		46.1	50.0	-7.7	15.0
3-Nitrotoluene	Lin2		66.48		47.7	50.0	-4.7	15.0
PETN	Lin2		53.14		47.6	50.0	-4.8	15.0
3,4-Dinitrotoluene	Ave	73.20	71.66		48.9	50.0	-2.1	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-292661/47 Calibration Date: 05/07/2019 13:25

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: F0000028.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	18.00	17.75	18.25
RDX	20.57	20.32	20.82
1,3,5-Trinitrobenzene	22.35	22.10	22.60
1,3-Dinitrobenzene	24.65	24.40	24.90
3,5-Dinitroaniline	25.66	25.41	25.91
Nitrobenzene	26.25	26.00	26.50
Tetryl	26.89	26.64	27.14
Nitroglycerin	27.64	27.39	27.89
2,4,6-Trinitrotoluene	28.28	28.03	28.53
4-Amino-2,6-dinitrotoluene	29.11	28.77	29.45
2-Amino-4,6-dinitrotoluene	29.79	29.41	30.17
2,6-Dinitrotoluene	31.18	30.88	31.48
2,4-Dinitrotoluene	31.62	31.31	31.93
2-Nitrotoluene	34.73	34.40	35.06
4-Nitrotoluene	36.25	35.89	36.61
3-Nitrotoluene	37.89	37.49	38.29
PETN	39.61	39.20	40.02
3,4-Dinitrotoluene	29.44	29.19	29.69

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190506-75892.b\F0000028.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 07-May-2019 13:25:39 ALS Bottle#: 4 Worklist Smp#: 47
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: AC Instrument ID: LC11
Sublist: chrom-8330 Metab LC11*sub9

Method: \\chromna\Sacramento\ChromData\LC11\20190506-75892.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 07-May-2019 14:54:51 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0328

First Level Reviewer: cartiera Date: 07-May-2019 14:54:51

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
3 HMX							
1	17.996	17.996	0.000	3597H	50.0	44.6	
5 Ethylene glycol dinitrate							M
2	20.010	20.010	0.000	55551	50.0	43.5	M
6 RDX							
1	20.573	20.573	0.000	4353H	50.0	43.9	
8 1,3,5-Trinitrobenzene							
1	22.353	22.353	0.000	10981H	50.0	46.9	
9 1,3-Dinitrobenzene							
1	24.646	24.646	0.000	9673H	50.0	46.3	
10 3,5-Dinitroaniline							
1	25.660	25.660	0.000	7332H	50.0	46.2	
11 Nitrobenzene							
1	26.250	26.250	0.000	5354H	50.0	45.8	
12 Tetryl							
1	26.890	26.890	0.000	5012H	50.0	47.8	
13 Nitroglycerin							M
2	27.640	27.640	0.000	4603H	50.0	45.7	M
14 2,4,6-Trinitrotoluene							
1	28.280	28.280	0.000	5466H	50.0	47.5	
15 4-Amino-2,6-dinitrotoluene							a
1	29.106	29.106	0.000	4121H	50.0	47.3	a
$ 16 3,4-Dinitrotoluene							a
1	29.440	29.440	0.000	3583H	50.0	48.9	a
2	29.443	29.443	0.000	7432H			
17 2-Amino-4,6-dinitrotoluene							
1	29.790	29.790	0.000	5438H	50.0	48.0	
18 2,6-Dinitrotoluene							
1	31.176	31.176	0.000	3447H	50.0	47.0	

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
19 2,4-Dinitrotoluene							
1	31.620	31.620	0.000	6455H	50.0	47.7	
20 o-Nitrotoluene							
1	34.733	34.733	0.000	2736H	50.0	47.4	
21 p-Nitrotoluene							
1	36.250	36.250	0.000	3317H	50.0	46.1	
22 m-Nitrotoluene							
1	37.886	37.886	0.000	3324H	50.0	47.7	
23 PETN							
2	39.606	39.606	0.000	2657H	50.0	47.6	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

HP8330L4_00062 Amount Added: 1.00 Units: mL

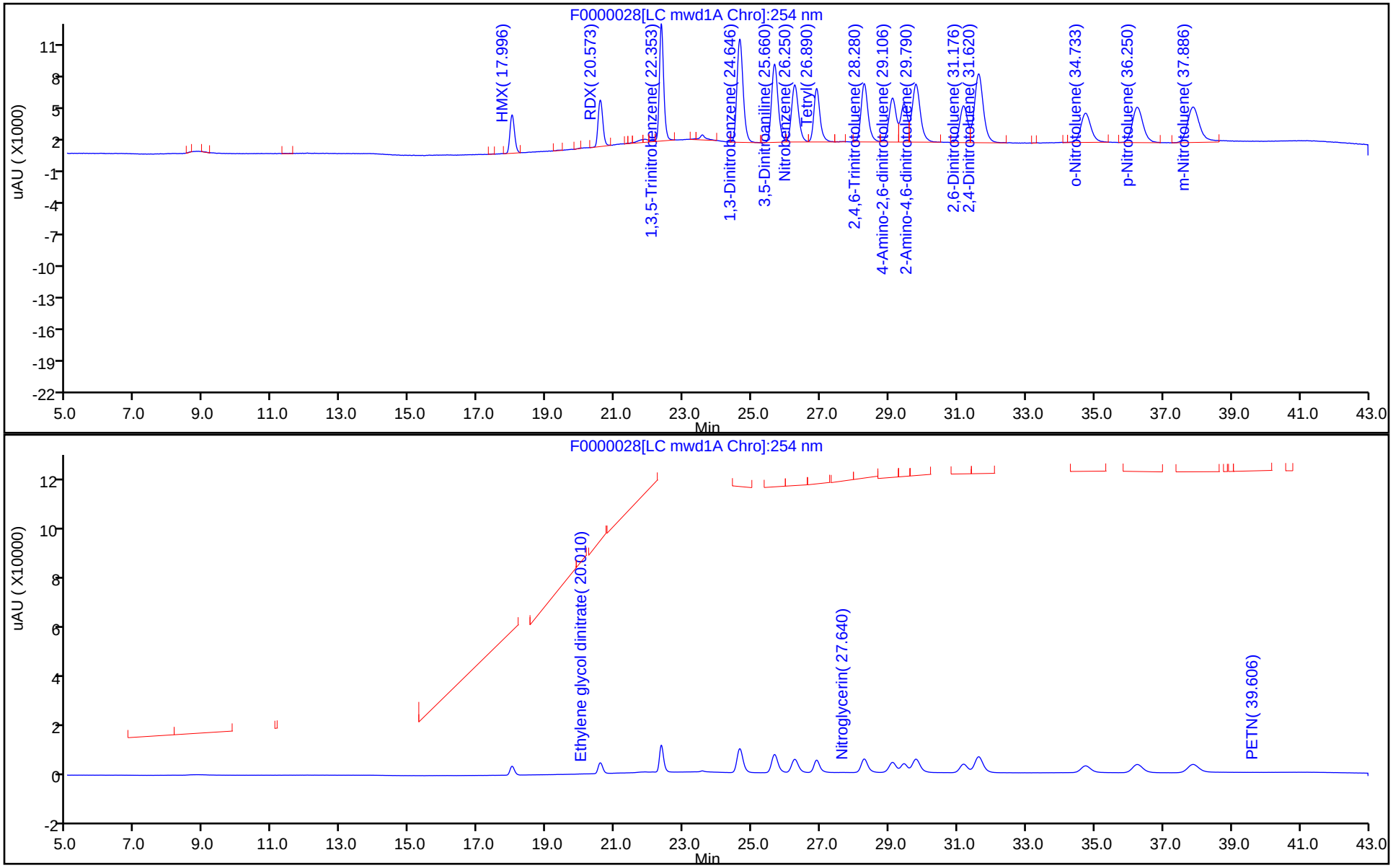
Report Date: 07-May-2019 14:54:53 Chrom Revision: 2.3 03-May-2019 15:47:48

Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190506-75892.b\F0000028.D

Injection Date:	07-May-2019 13:25:39	Instrument ID:	LC11	Operator ID:	AC
Lims ID:	CCV			Worklist Smp#:	47
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

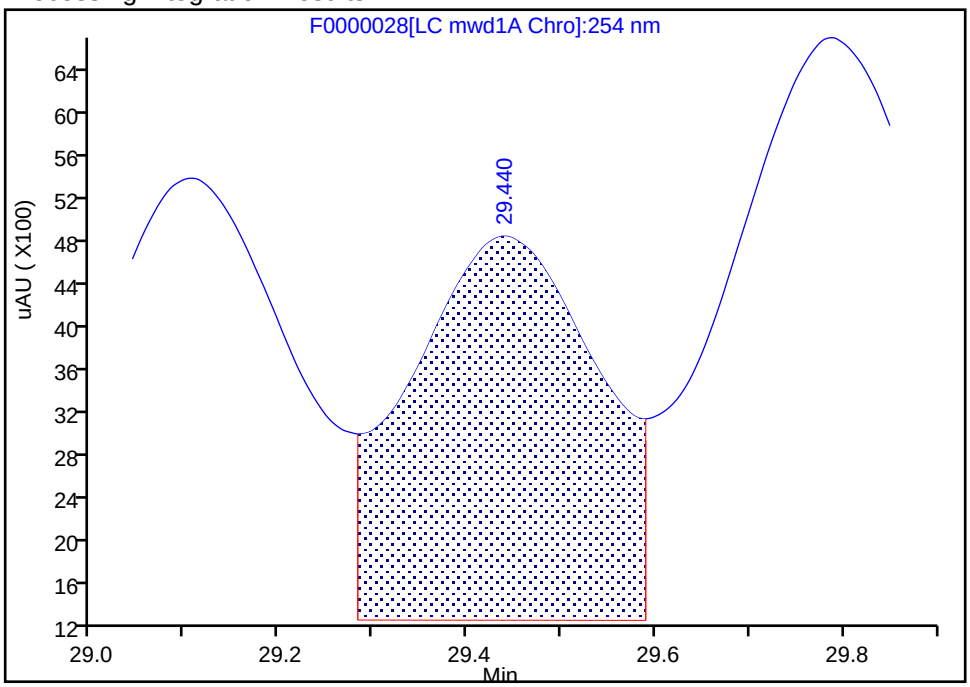
Data File:	\\chromna\Sacramento\ChromData\LC11\20190506-75892.b\F0000028.D				
Injection Date:	07-May-2019 13:25:39	Instrument ID:	LC11		
Lims ID:	CCV				
Client ID:					
Operator ID:	AC	ALS Bottle#:	4	Worklist Smp#:	47
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

$ 16 3,4-Dinitrotoluene, CAS: 610-39-9

Signal: 1

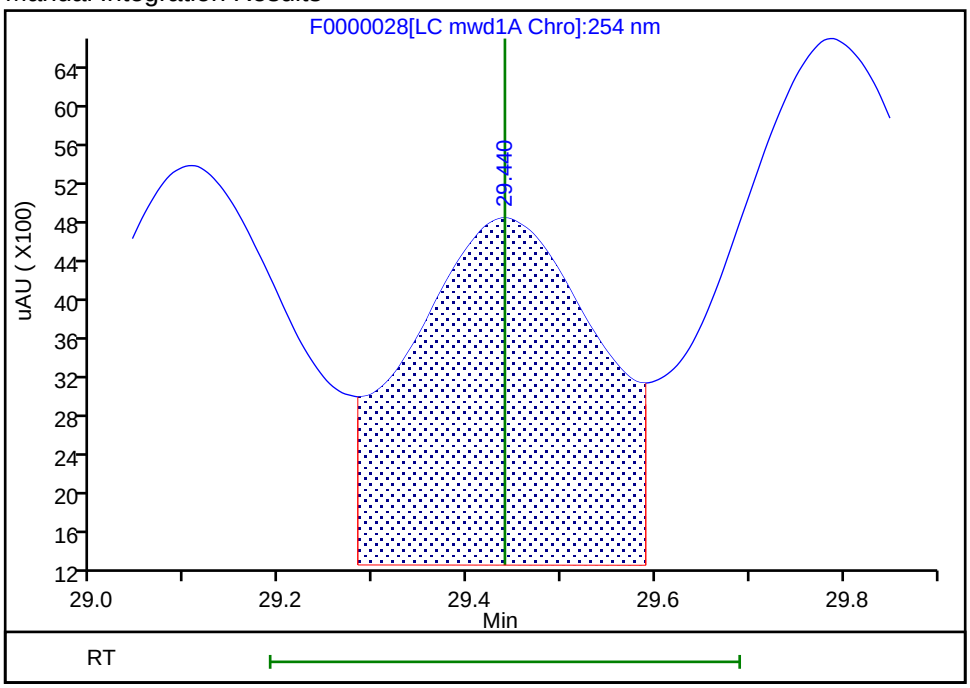
Processing Integration Results

RT: 29.44
Height: 3583
Amount: 48.948565
Amount Units: ng/ml



Manual Integration Results

RT: 29.44
Height: 3583
Amount: 48.948565
Amount Units: ng/ml



Reviewer: cartiera, 07-May-2019 14:54:13

Audit Action: Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

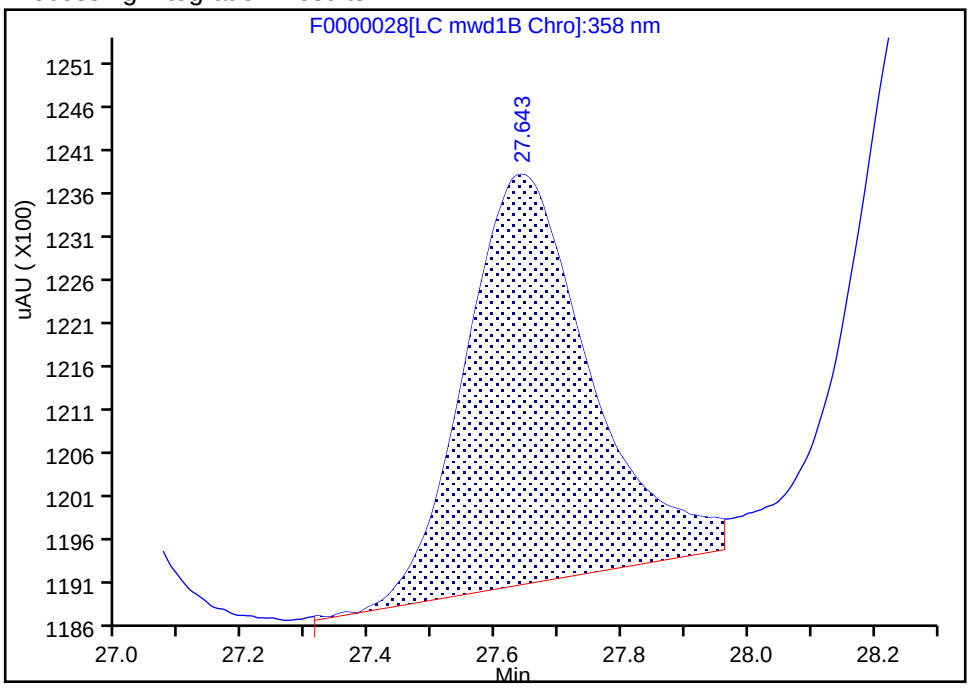
Data File: \\chromna\Sacramento\ChromData\LC11\20190506-75892.b\F0000028.D
Injection Date: 07-May-2019 13:25:39 Instrument ID: LC11
Lims ID: CCV
Client ID:
Operator ID: AC ALS Bottle#: 4 Worklist Smp#: 47
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: 8330 Metab LC11 Limit Group: LC 8330A ICAL
Column: Detector LC mwd1B, 358 nm

13 Nitroglycerin, CAS: 55-63-0

Signal: 1

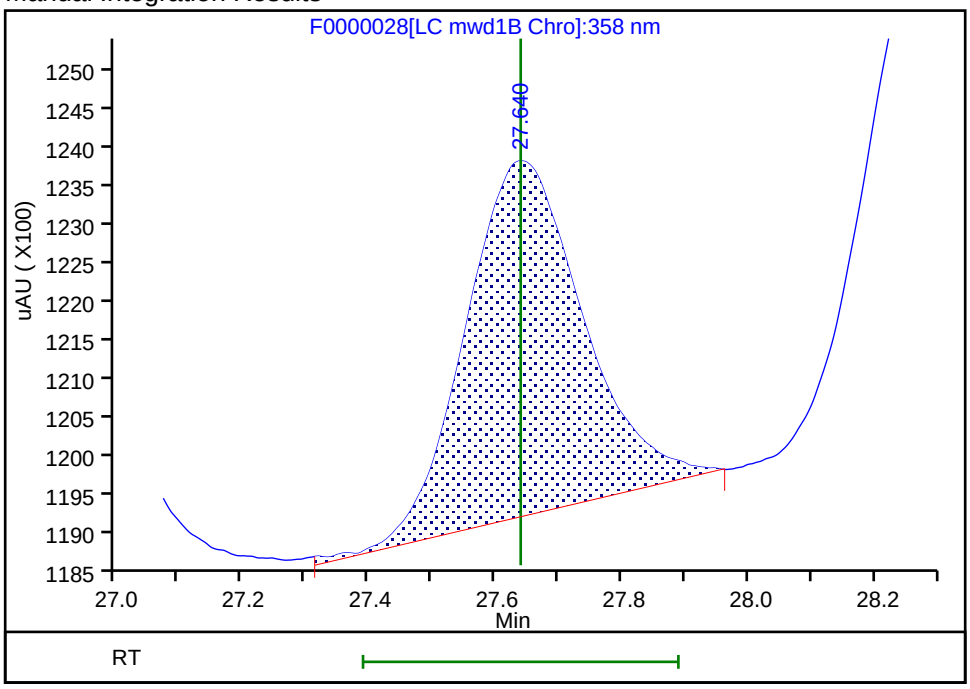
Processing Integration Results

RT: 27.64
Height: 4750
Amount: 47.022308
Amount Units: ng/ml



Manual Integration Results

RT: 27.64
Height: 4603
Amount: 45.737671
Amount Units: ng/ml



Reviewer: cartiera, 07-May-2019 14:54:07
Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

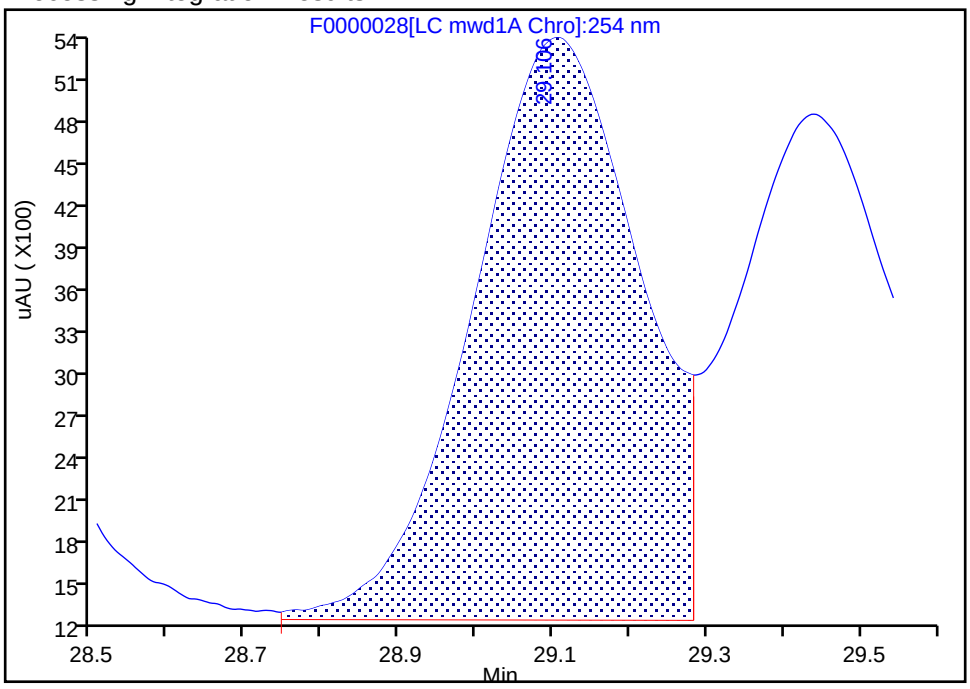
Data File:	\\chromna\Sacramento\ChromData\LC11\20190506-75892.b\F0000028.D				
Injection Date:	07-May-2019 13:25:39	Instrument ID:	LC11		
Lims ID:	CCV				
Client ID:					
Operator ID:	AC	ALS Bottle#:	4	Worklist Smp#:	47
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

15 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

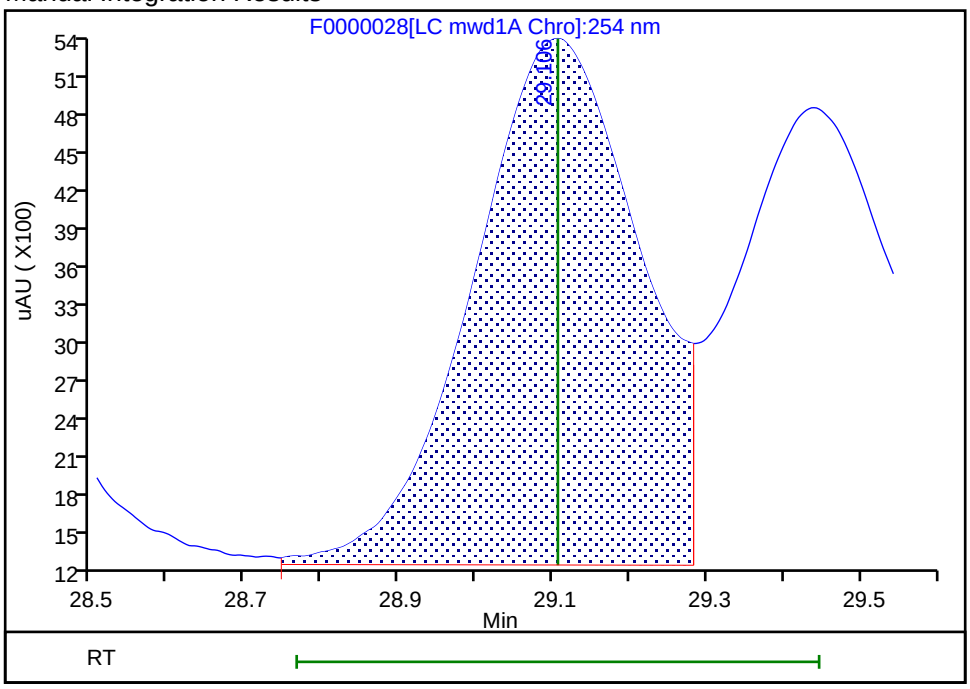
RT: 29.11
Height: 4121
Amount: 47.337645
Amount Units: ng/ml

Processing Integration Results



RT: 29.11
Height: 4121
Amount: 47.337645
Amount Units: ng/ml

Manual Integration Results



Reviewer: cartiera, 07-May-2019 14:54:15
Audit Action: Assigned Compound ID Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

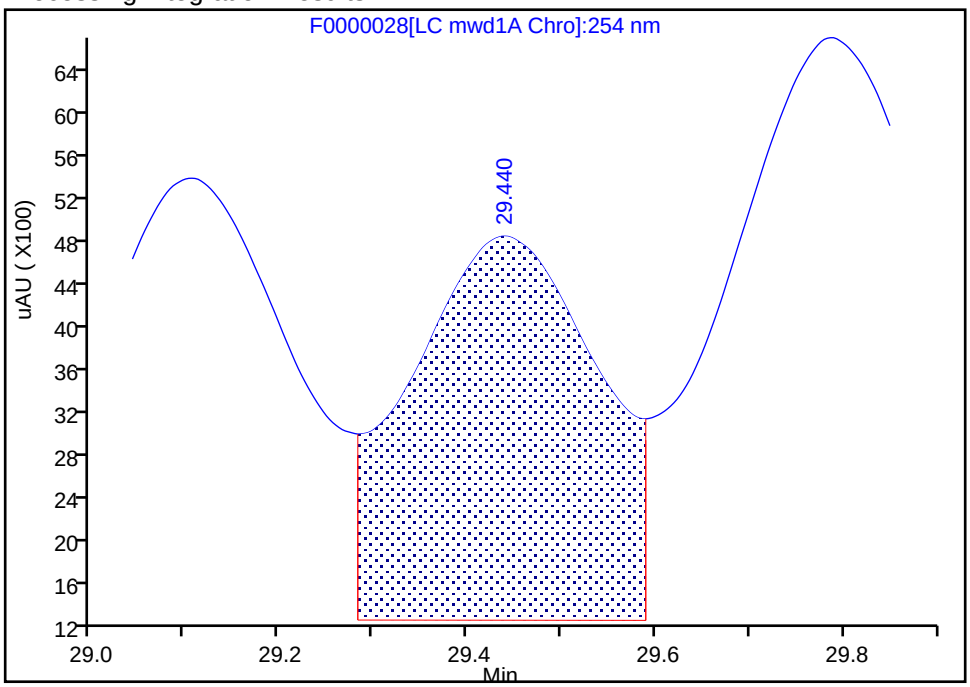
Data File:	\\chromna\Sacramento\ChromData\LC11\20190506-75892.b\F0000028.D				
Injection Date:	07-May-2019 13:25:39	Instrument ID:	LC11		
Lims ID:	CCV				
Client ID:					
Operator ID:	AC	ALS Bottle#:	4	Worklist Smp#:	47
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

$ 16 3,4-Dinitrotoluene, CAS: 610-39-9

Signal: 1

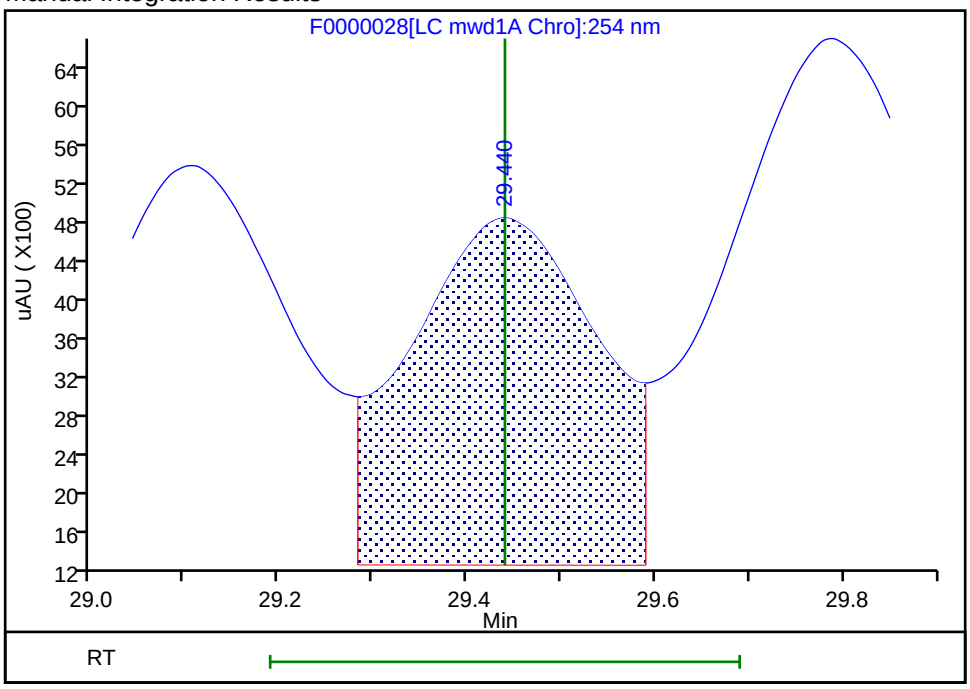
RT: 29.44
Height: 3583
Amount: 48.948565
Amount Units: ng/ml

Processing Integration Results



RT: 29.44
Height: 3583
Amount: 48.948565
Amount Units: ng/ml

Manual Integration Results



Reviewer: cartiera, 07-May-2019 14:54:13
Audit Action: Assigned Compound ID Audit Reason: Baseline Smoothing

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-292661/48 Calibration Date: 05/07/2019 14:19

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: F0000029.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
TNX	Ave	52.00	53.79		51.8	50.1	3.4	15.0
DNX	Ave	64.92	67.33		52.1	50.2	3.7	15.0
MNX	Ave	100.2	102.2		59.7	58.5	2.0	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-292661/48 Calibration Date: 05/07/2019 14:19

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: F0000029.D

Analyte	RT	RT WINDOW	
		FROM	TO
TNX	12.73	12.48	12.98
DNX	16.66	16.41	16.91
MNX	19.10	18.85	19.35

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190506-75892.b\F0000029.D
Lims ID: CCV MET
Client ID:
Sample Type: CCV
Inject. Date: 07-May-2019 14:19:20 ALS Bottle#: 5 Worklist Smp#: 48
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: CCV MET
Operator ID: AC Instrument ID: LC11
Sublist: chrom-8330 Metab LC11*sub2

Method: \\chromna\Sacramento\ChromData\LC11\20190506-75892.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 07-May-2019 15:36:27 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0328

First Level Reviewer: cartiera Date: 07-May-2019 15:36:27

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
1 TNX							
1	12.733	12.733	0.000	2692H	50.1	51.8	
2 DNX							
1	16.660	16.660	0.000	3380H	50.2	52.1	
4 MNX							
1	19.103	19.103	0.000	5976H	58.5	59.7	

Reagents:

HPMETABL4_00039 Amount Added: 1.00 Units: mL

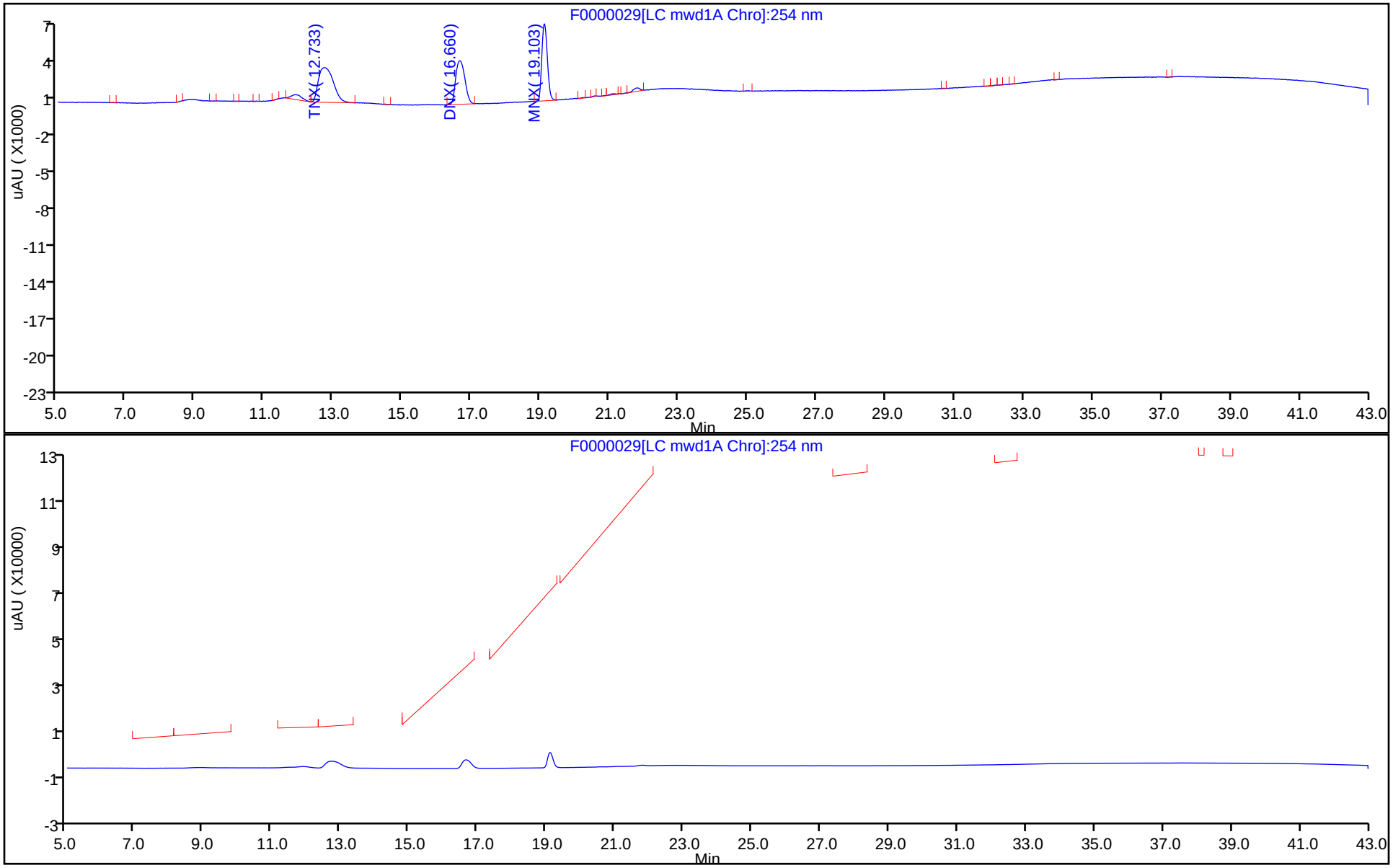
Report Date: 07-May-2019 15:36:27 Chrom Revision: 2.3 03-May-2019 15:47:48

Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190506-75892.b\F0000029.D

Injection Date:	07-May-2019 14:19:20	Instrument ID:	LC11	Operator ID:	AC
Lims ID:	CCV MET			Worklist Smp#:	48
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCVRT 320-296662/1 Calibration Date: 05/23/2019 18:55

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: T0000087.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	80.65	72.74		45.1	50.0	-9.8	15.0
RDX	Ave	99.08	89.34		45.1	50.0	-9.8	15.0
1,3,5-Trinitrobenzene	Ave	234.3	227.2		48.5	50.0	-3.0	15.0
1,3-Dinitrobenzene	Ave	209.0	202.7		48.5	50.0	-3.0	15.0
3,5-Dinitroaniline	Ave	158.6	152.5		48.1	50.0	-3.9	15.0
Nitrobenzene	Ave	117.0	113.3		48.4	50.0	-3.2	15.0
Tetryl	Ave	104.9	103.8		49.5	50.0	-1.1	15.0
Nitroglycerin	Ave	100.6	102.8		51.1	50.0	2.1	15.0
2,4,6-Trinitrotoluene	Ave	115.1	114.4		49.7	50.0	-0.6	15.0
4-Amino-2,6-dinitrotoluene	Lin2		85.58		49.2	50.0	-1.7	15.0
2-Amino-4,6-dinitrotoluene	Lin2		112.2		49.5	50.0	-1.1	15.0
2,6-Dinitrotoluene	Ave	73.33	71.82		49.0	50.0	-2.1	15.0
2,4-Dinitrotoluene	Ave	135.2	134.2		49.6	50.0	-0.8	15.0
2-Nitrotoluene	Ave	57.75	57.16		49.5	50.0	-1.0	15.0
4-Nitrotoluene	Ave	71.88	70.06		48.7	50.0	-2.5	15.0
3-Nitrotoluene	Lin2		69.72		50.0	50.0	-0.0	15.0
PETN	Lin2		55.60		49.9	50.0	-0.2	15.0
3,4-Dinitrotoluene	Ave	73.20	73.16		50.0	50.0	-0.0	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCVRT 320-296662/1 Calibration Date: 05/23/2019 18:55

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: T0000087.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	18.00	17.75	18.25
RDX	20.55	20.30	20.80
1,3,5-Trinitrobenzene	22.33	22.08	22.58
1,3-Dinitrobenzene	24.60	24.35	24.85
3,5-Dinitroaniline	25.62	25.37	25.87
Nitrobenzene	26.19	25.94	26.44
Tetryl	26.84	26.59	27.09
Nitroglycerin	27.57	27.32	27.82
2,4,6-Trinitrotoluene	28.21	27.96	28.46
4-Amino-2,6-dinitrotoluene	29.02	28.68	29.36
2-Amino-4,6-dinitrotoluene	29.70	29.32	30.08
2,6-Dinitrotoluene	31.07	30.77	31.37
2,4-Dinitrotoluene	31.50	31.19	31.81
2-Nitrotoluene	34.59	34.26	34.92
4-Nitrotoluene	36.09	35.73	36.45
3-Nitrotoluene	37.70	37.30	38.10
PETN	39.37	38.96	39.78
3,4-Dinitrotoluene	29.37	29.12	29.62

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190523-76793.b\T0000087.D
Lims ID: CCVRT
Client ID:
Sample Type: CCVRT
Inject. Date: 23-May-2019 18:55:50 ALS Bottle#: 2 Worklist Smp#: 1
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 320-0076793-001
Operator ID: AO Instrument ID: LC11
Sublist: chrom-8330 Metab LC11*sub9

Method: \\chromna\Sacramento\ChromData\LC11\20190523-76793.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 24-May-2019 09:09:30 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0317

First Level Reviewer: ortizam Date: 24-May-2019 09:09:30

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
3 HMX							
1	17.999	17.999	0.000	3637H	50.0	45.1	
5 Ethylene glycol dinitrate							M
2	19.976	19.976	0.000	61890	50.0	48.4	M
6 RDX							
1	20.552	20.552	0.000	4467H	50.0	45.1	
8 1,3,5-Trinitrobenzene							
1	22.329	22.329	0.000	11361H	50.0	48.5	
9 1,3-Dinitrobenzene							
1	24.599	24.599	0.000	10137H	50.0	48.5	
10 3,5-Dinitroaniline							
1	25.616	25.616	0.000	7623H	50.0	48.1	
11 Nitrobenzene							
1	26.192	26.192	0.000	5664H	50.0	48.4	
12 Tetryl							
1	26.836	26.836	0.000	5191H	50.0	49.5	
13 Nitroglycerin							
2	27.572	27.572	0.000	5140H	50.0	51.1	
14 2,4,6-Trinitrotoluene							
1	28.209	28.209	0.000	5718H	50.0	49.7	
15 4-Amino-2,6-dinitrotoluene							
1	29.022	29.022	0.000	4279H	50.0	49.2	
$ 16 3,4-Dinitrotoluene							
1	29.369	29.369	0.000	3658H	50.0	50.0	
2	29.369	29.369	0.000	7709H			
17 2-Amino-4,6-dinitrotoluene							
1	29.699	29.699	0.000	5609H	50.0	49.5	
18 2,6-Dinitrotoluene							
1	31.066	31.066	0.000	3591H	50.0	49.0	

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
19 2,4-Dinitrotoluene							
1	31.502	31.502	0.000	6710H	50.0	49.6	
20 o-Nitrotoluene							
1	34.592	34.592	0.000	2858H	50.0	49.5	
21 p-Nitrotoluene							
1	36.089	36.089	0.000	3503H	50.0	48.7	
22 m-Nitrotoluene							
1	37.699	37.699	0.000	3486H	50.0	50.0	
23 PETN							
2	39.369	39.369	0.000	2780H	50.0	49.9	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

HP8330L4_00061 Amount Added: 1.00 Units: ml

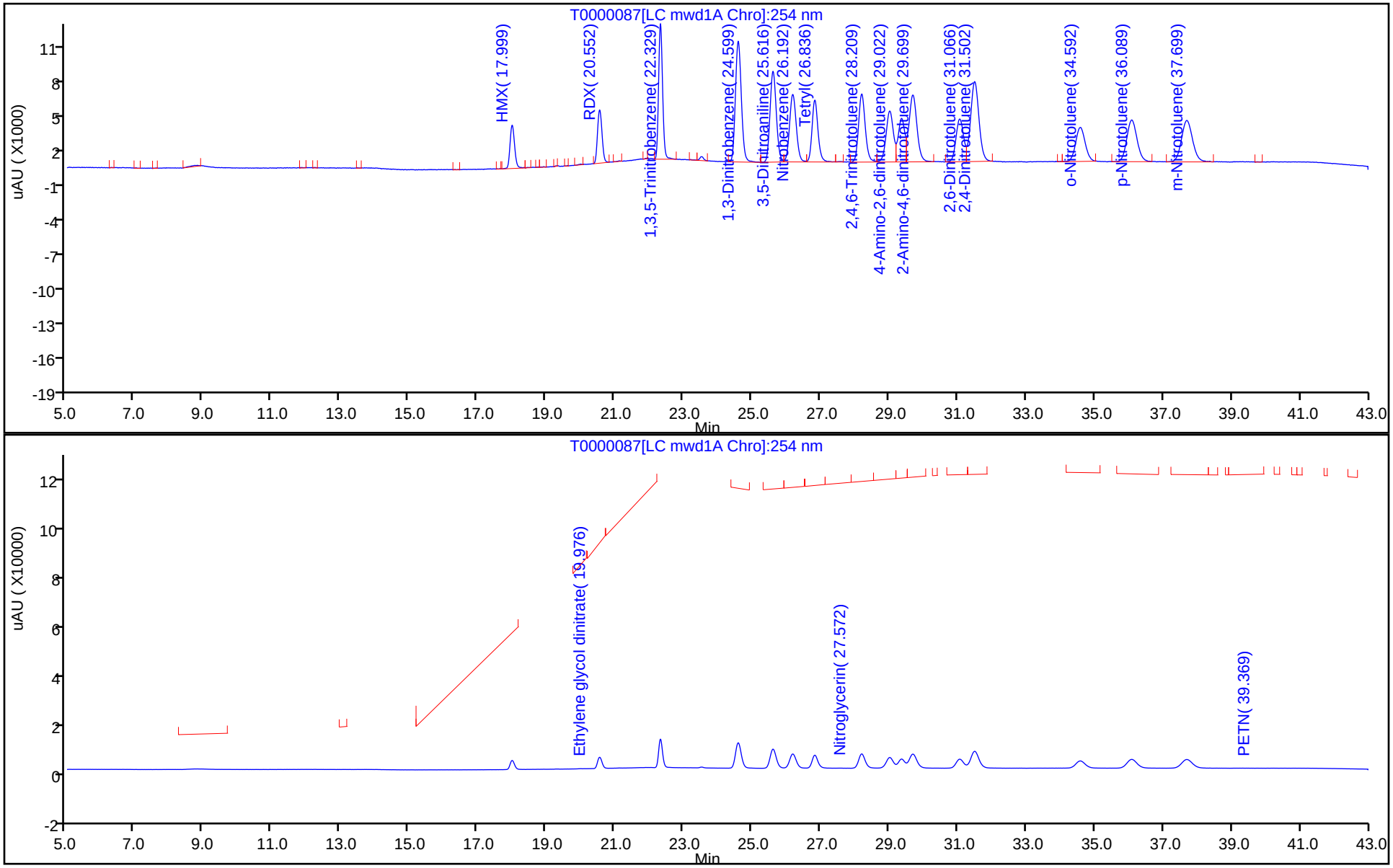
Report Date: 24-May-2019 09:09:31 Chrom Revision: 2.3 12-May-2019 16:28:34

Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190523-76793.b\T0000087.D

Injection Date:	23-May-2019 18:55:50	Instrument ID:	LC11	Operator ID:	AO
Lims ID:	CCVRT			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCVRT 320-296662/2 Calibration Date: 05/23/2019 19:49

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: T0000088.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
TNX	Ave	52.00	45.38		43.6	50.0	-12.7	15.0
DNX	Ave	64.92	55.44		42.9	50.2	-14.6	15.0
MNX	Ave	100.2	87.40		51.0	58.5	-12.7	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCVRT 320-296662/2 Calibration Date: 05/23/2019 19:49

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: T0000088.D

Analyte	RT	RT WINDOW	
		FROM	TO
TNX	12.69	12.44	12.94
DNX	16.64	16.39	16.89
MNX	19.09	18.84	19.34

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190523-76793.b\T0000088.D
Lims ID: CCVRT MET
Client ID:
Sample Type: CCVRT
Inject. Date: 23-May-2019 19:49:26 ALS Bottle#: 3 Worklist Smp#: 2
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 320-0076793-002
Operator ID: AO Instrument ID: LC11
Sublist: chrom-8330 Metab LC11*sub2

Method: \\chromna\Sacramento\ChromData\LC11\20190523-76793.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 24-May-2019 09:08:45 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0317

First Level Reviewer: ortizam Date: 24-May-2019 09:07:56

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
1 TNX							
1	12.688	12.688	0.000	2269H	50.0	43.6	
2 DNX							
1	16.644	16.644	0.000	2783H	50.2	42.9	
4 MNX							
1	19.094	19.094	0.000	5113H	58.5	51.0	

Reagents:

HPMETABL4_00040 Amount Added: 1.00 Units: mL

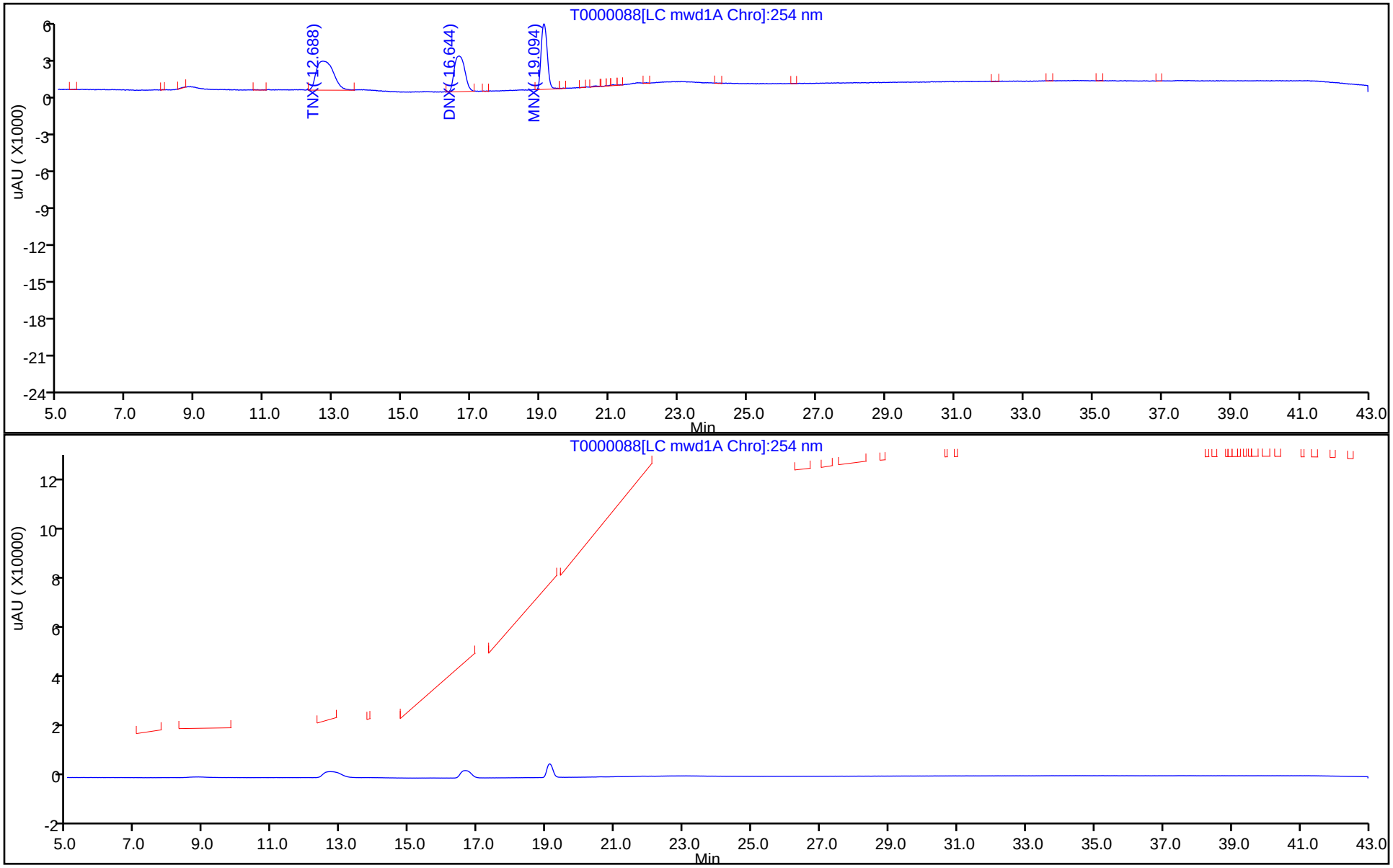
Report Date: 24-May-2019 09:08:46 Chrom Revision: 2.3 12-May-2019 16:28:34

Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190523-76793.b\T0000088.D

Injection Date:	23-May-2019 19:49:26	Instrument ID:	LC11	Operator ID:	AO
Lims ID:	CCVRT MET			Worklist Smp#:	2
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-296662/13 Calibration Date: 05/24/2019 05:39

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: T0000099.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	80.65	73.36		45.5	50.0	-9.0	15.0
RDX	Ave	99.08	89.74		45.3	50.0	-9.4	15.0
1,3,5-Trinitrobenzene	Ave	234.3	225.7		48.2	50.0	-3.7	15.0
1,3-Dinitrobenzene	Ave	209.0	202.5		48.4	50.0	-3.1	15.0
3,5-Dinitroaniline	Ave	158.6	151.5		47.8	50.0	-4.5	15.0
Nitrobenzene	Ave	117.0	113.1		48.3	50.0	-3.3	15.0
Tetryl	Ave	104.9	103.1		49.1	50.0	-1.8	15.0
Nitroglycerin	Ave	100.6	103.0		51.2	50.0	2.3	15.0
2,4,6-Trinitrotoluene	Ave	115.1	113.2		49.2	50.0	-1.6	15.0
4-Amino-2,6-dinitrotoluene	Lin2		83.88		48.2	50.0	-3.6	15.0
2-Amino-4,6-dinitrotoluene	Lin2		109.9		48.4	50.0	-3.1	15.0
2,6-Dinitrotoluene	Ave	73.33	70.30		47.9	50.0	-4.1	15.0
2,4-Dinitrotoluene	Ave	135.2	131.2		48.5	50.0	-3.0	15.0
2-Nitrotoluene	Ave	57.75	56.08		48.6	50.0	-2.9	15.0
4-Nitrotoluene	Ave	71.88	68.66		47.8	50.0	-4.5	15.0
3-Nitrotoluene	Lin2		68.18		48.9	50.0	-2.2	15.0
PETN	Lin2		55.40		49.7	50.0	-0.6	15.0
3,4-Dinitrotoluene	Ave	73.20	72.84		49.8	50.0	-0.5	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-296662/13 Calibration Date: 05/24/2019 05:39

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: T0000099.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	18.07	17.82	18.32
RDX	20.59	20.34	20.84
1,3,5-Trinitrobenzene	22.34	22.09	22.59
1,3-Dinitrobenzene	24.63	24.38	24.88
3,5-Dinitroaniline	25.68	25.43	25.93
Nitrobenzene	26.21	25.96	26.46
Tetryl	26.87	26.62	27.12
Nitroglycerin	27.59	27.34	27.84
2,4,6-Trinitrotoluene	28.23	27.98	28.48
4-Amino-2,6-dinitrotoluene	29.11	28.77	29.45
2-Amino-4,6-dinitrotoluene	29.79	29.41	30.17
2,6-Dinitrotoluene	31.15	30.85	31.45
2,4-Dinitrotoluene	31.59	31.28	31.90
2-Nitrotoluene	34.73	34.40	35.06
4-Nitrotoluene	36.26	35.90	36.62
3-Nitrotoluene	37.89	37.49	38.29
PETN	39.58	39.17	39.99
3,4-Dinitrotoluene	29.42	29.17	29.67

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190523-76793.b\T0000099.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 24-May-2019 05:39:01 ALS Bottle#: 4 Worklist Smp#: 13
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 320-0076793-013
Operator ID: AO Instrument ID: LC11
Sublist: chrom-8330 Metab LC11*sub9

Method: \\chromna\Sacramento\ChromData\LC11\20190523-76793.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 24-May-2019 09:23:57 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0317

First Level Reviewer: ortizam Date: 24-May-2019 09:23:57

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
3 HMX							
1	18.066	18.066	0.000	3668H	50.0	45.5	
5 Ethylene glycol dinitrate							
2	19.990	19.990	0.000	181860	50.0	142.3	
6 RDX							
1	20.590	20.590	0.000	4487H	50.0	45.3	
8 1,3,5-Trinitrobenzene							
1	22.343	22.343	0.000	11283H	50.0	48.2	
9 1,3-Dinitrobenzene							
1	24.630	24.630	0.000	10125H	50.0	48.4	
10 3,5-Dinitroaniline							
1	25.680	25.680	0.000	7577H	50.0	47.8	
11 Nitrobenzene							
1	26.213	26.213	0.000	5657H	50.0	48.3	
12 Tetryl							
1	26.870	26.870	0.000	5154H	50.0	49.1	
13 Nitroglycerin							
2	27.586	27.586	0.000	5150H	50.0	51.2	
14 2,4,6-Trinitrotoluene							
1	28.233	28.233	0.000	5662H	50.0	49.2	
15 4-Amino-2,6-dinitrotoluene							
1	29.110	29.110	0.000	4194H	50.0	48.2	
$ 16 3,4-Dinitrotoluene							
1	29.420	29.420	0.000	3642H	50.0	49.8	
2	29.420	29.420	0.000	7695H			
17 2-Amino-4,6-dinitrotoluene							
1	29.793	29.793	0.000	5494H	50.0	48.4	
18 2,6-Dinitrotoluene							
1	31.146	31.146	0.000	3515H	50.0	47.9	

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
19 2,4-Dinitrotoluene							
1	31.590	31.590	0.000	6562H	50.0	48.5	
20 o-Nitrotoluene							
1	34.730	34.730	0.000	2804H	50.0	48.6	
21 p-Nitrotoluene							
1	36.256	36.256	0.000	3433H	50.0	47.8	
22 m-Nitrotoluene							
1	37.889	37.889	0.000	3409H	50.0	48.9	
23 PETN							
2	39.583	39.583	0.000	2770H	50.0	49.7	

Reagents:

HP8330L4_00062 Amount Added: 1.00 Units: mL

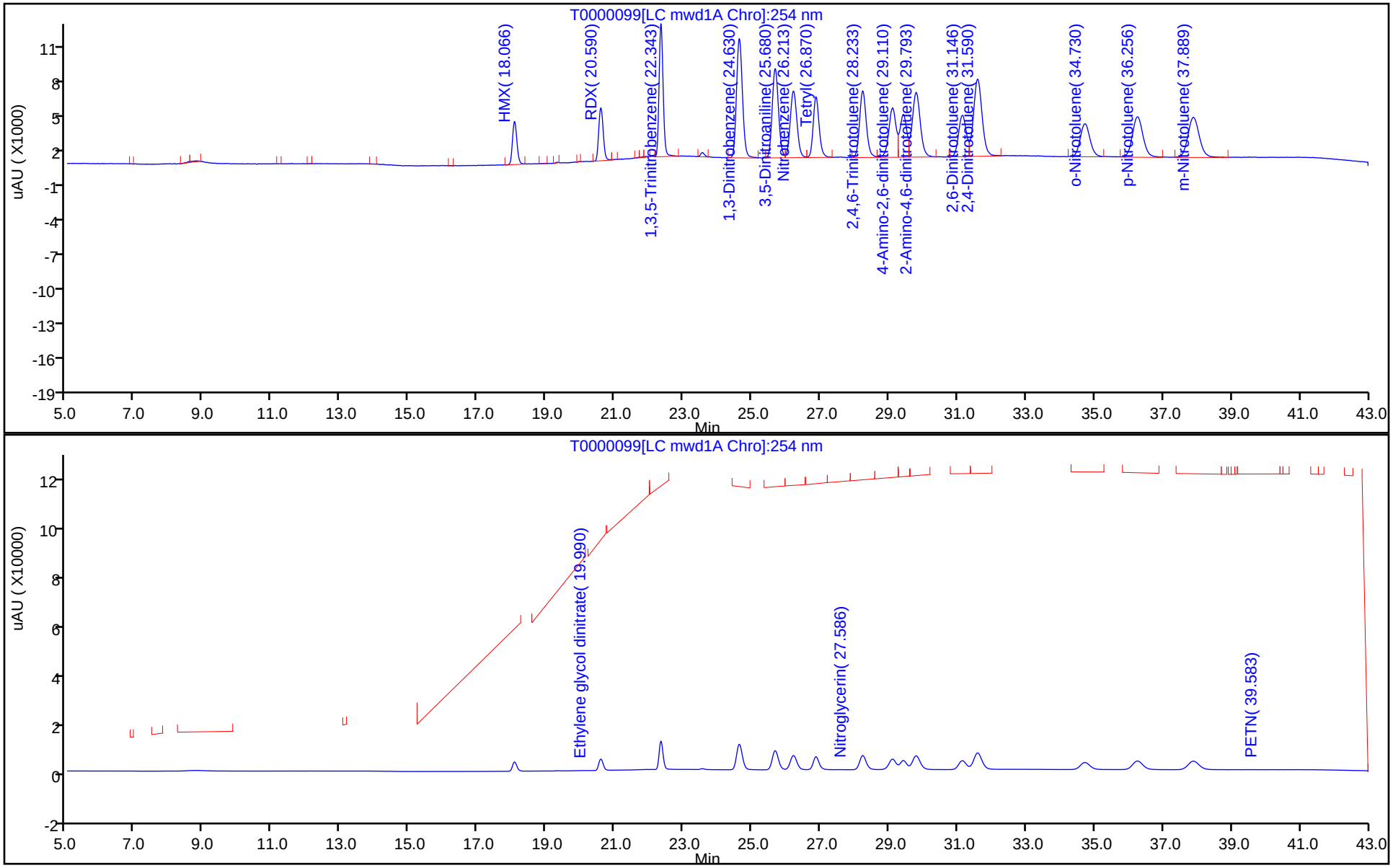
Report Date: 24-May-2019 09:23:58 Chrom Revision: 2.3 12-May-2019 16:28:34

Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190523-76793.b\T0000099.D

Injection Date:	24-May-2019 05:39:01	Instrument ID:	LC11	Operator ID:	AO
Lims ID:	CCV			Worklist Smp#:	13
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-296662/14 Calibration Date: 05/24/2019 06:32

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: T0000100.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
TNX	Ave	52.00	45.80		44.0	50.0	-11.9	15.0
DNX	Ave	64.92	57.81		44.7	50.2	-10.9	15.0
MNX	Ave	100.2	89.32		52.2	58.5	-10.8	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-296662/14 Calibration Date: 05/24/2019 06:32

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: T0000100.D

Analyte	RT	RT WINDOW	
		FROM	TO
TNX	12.73	12.48	12.98
DNX	16.67	16.42	16.92
MNX	19.12	18.87	19.37

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190523-76793.b\T0000100.D
Lims ID: CCV MET
Client ID:
Sample Type: CCV
Inject. Date: 24-May-2019 06:32:41 ALS Bottle#: 5 Worklist Smp#: 14
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 320-0076793-014
Operator ID: AO Instrument ID: LC11
Sublist: chrom-8330 Metab LC11*sub2

Method: \\chromna\Sacramento\ChromData\LC11\20190523-76793.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 24-May-2019 10:45:13 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0337

First Level Reviewer: cartiera Date: 24-May-2019 10:45:13

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
1 TNX							
1	12.727	12.727	0.000	2290H	50.0	44.0	
2 DNX							
1	16.671	16.671	0.000	2902H	50.2	44.7	
4 MNX							
1	19.124	19.124	0.000	5225H	58.5	52.2	

Reagents:

HPMETABL4_00040 Amount Added: 1.00 Units: mL

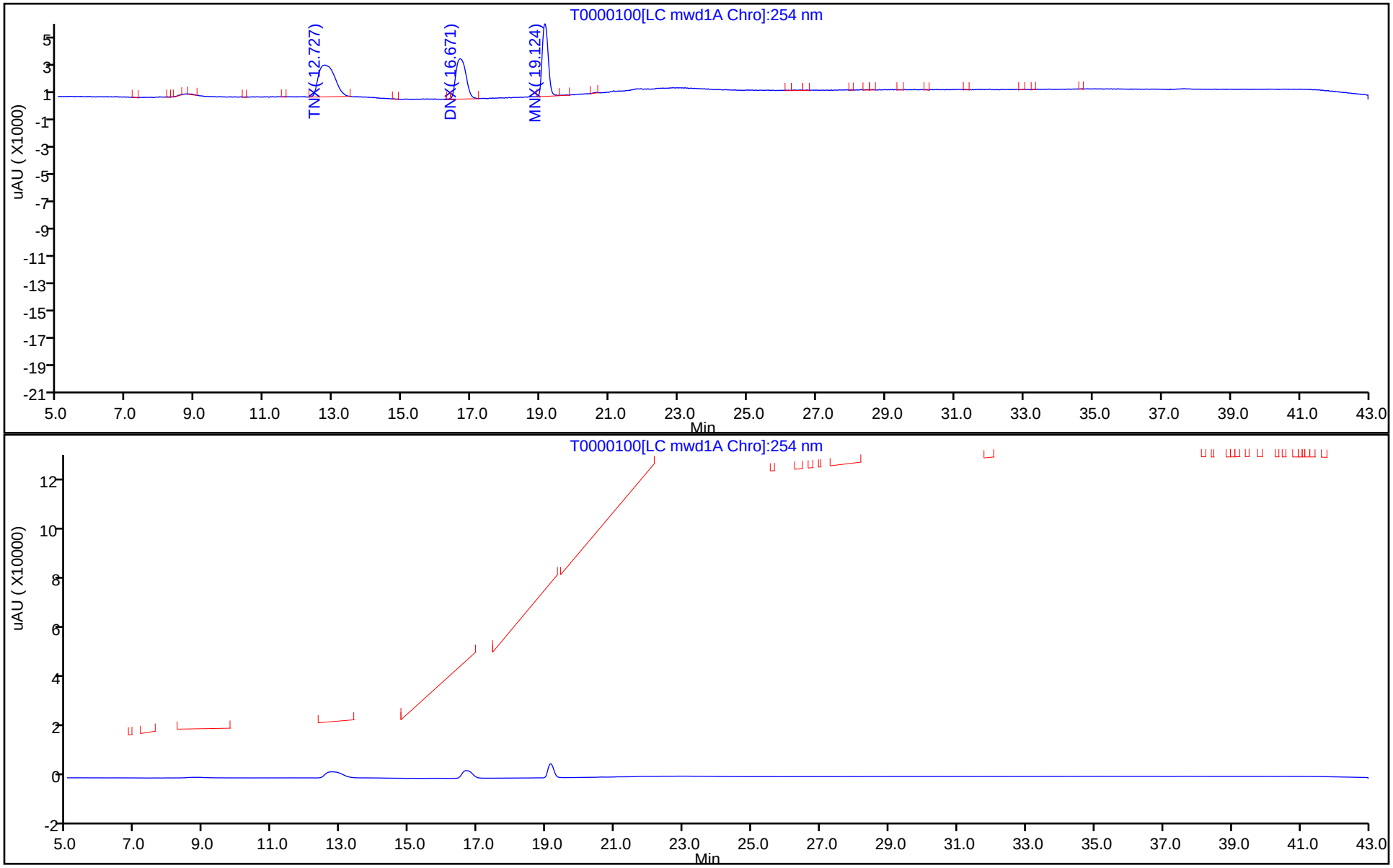
Report Date: 24-May-2019 10:45:14 Chrom Revision: 2.3 12-May-2019 16:28:34

Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190523-76793.b\T0000100.D

Injection Date:	24-May-2019 06:32:41	Instrument ID:	LC11	Operator ID:	AO
Lims ID:	CCV MET			Worklist Smp#:	14
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-296662/25 Calibration Date: 05/24/2019 16:22

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: T0000111.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	80.65	72.86		45.2	50.0	-9.7	15.0
RDX	Ave	99.08	90.36		45.6	50.0	-8.8	15.0
1,3,5-Trinitrobenzene	Ave	234.3	238.3		50.9	50.0	1.7	15.0
1,3-Dinitrobenzene	Ave	209.0	204.0		48.8	50.0	-2.4	15.0
3,5-Dinitroaniline	Ave	158.6	153.6		48.4	50.0	-3.2	15.0
Nitrobenzene	Ave	117.0	112.6		48.1	50.0	-3.8	15.0
Tetryl	Ave	104.9	104.5		49.8	50.0	-0.4	15.0
Nitroglycerin	Ave	100.6	99.02		49.2	50.0	-1.6	15.0
2,4,6-Trinitrotoluene	Ave	115.1	114.4		49.7	50.0	-0.6	15.0
4-Amino-2,6-dinitrotoluene	Lin2		85.74		49.2	50.0	-1.5	15.0
2-Amino-4,6-dinitrotoluene	Lin2		112.6		49.7	50.0	-0.7	15.0
2,6-Dinitrotoluene	Ave	73.33	72.18		49.2	50.0	-1.6	15.0
2,4-Dinitrotoluene	Ave	135.2	133.7		49.4	50.0	-1.1	15.0
2-Nitrotoluene	Ave	57.75	55.70		48.2	50.0	-3.5	15.0
4-Nitrotoluene	Ave	71.88	69.22		48.1	50.0	-3.7	15.0
3-Nitrotoluene	Lin2		68.56		49.2	50.0	-1.7	15.0
PETN	Lin2		59.94		53.9	50.0	7.8	15.0
3,4-Dinitrotoluene	Ave	73.20	73.00		49.9	50.0	-0.3	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-296662/25 Calibration Date: 05/24/2019 16:22

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: T0000111.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	17.96	17.71	18.21
RDX	20.53	20.28	20.78
1,3,5-Trinitrobenzene	22.32	22.07	22.57
1,3-Dinitrobenzene	24.59	24.34	24.84
3,5-Dinitroaniline	25.59	25.34	25.84
Nitrobenzene	26.18	25.93	26.43
Tetryl	26.80	26.55	27.05
Nitroglycerin	27.54	27.29	27.79
2,4,6-Trinitrotoluene	28.17	27.92	28.42
4-Amino-2,6-dinitrotoluene	28.98	28.64	29.32
2-Amino-4,6-dinitrotoluene	29.66	29.28	30.04
2,6-Dinitrotoluene	31.03	30.73	31.33
2,4-Dinitrotoluene	31.47	31.16	31.78
2-Nitrotoluene	34.57	34.24	34.90
4-Nitrotoluene	36.08	35.72	36.44
3-Nitrotoluene	37.70	37.30	38.10
PETN	39.35	38.94	39.76
3,4-Dinitrotoluene	29.33	29.08	29.58

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190523-76793.b\T0000111.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 24-May-2019 16:22:27 ALS Bottle#: 6 Worklist Smp#: 25
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 320-0076793-025
Operator ID: AO Instrument ID: LC11
Sublist: chrom-8330 Metab LC11*sub9

Method: \\chromna\Sacramento\ChromData\LC11\20190523-76793.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 24-May-2019 17:17:34 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0313

First Level Reviewer: ortizam Date: 24-May-2019 17:17:34

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
3 HMX							
1	17.958	17.958	0.000	3643H	50.0	45.2	
5 Ethylene glycol dinitrate							
2	19.958	19.958	0.000	185713	50.0	145.3	
6 RDX							
1	20.534	20.534	0.000	4518H	50.0	45.6	
8 1,3,5-Trinitrobenzene							
1	22.318	22.318	0.000	11916H	50.0	50.9	
9 1,3-Dinitrobenzene							
1	24.588	24.588	0.000	10201H	50.0	48.8	
10 3,5-Dinitroaniline							
1	25.591	25.591	0.000	7681H	50.0	48.4	
11 Nitrobenzene							
1	26.181	26.181	0.000	5630H	50.0	48.1	
12 Tetryl							
1	26.801	26.801	0.000	5226H	50.0	49.8	
13 Nitroglycerin							
2	27.544	27.544	0.000	4951H	50.0	49.2	
14 2,4,6-Trinitrotoluene							
1	28.168	28.168	0.000	5718H	50.0	49.7	
15 4-Amino-2,6-dinitrotoluene							a
1	28.984	28.984	0.000	4287H	50.0	49.2	a
$ 16 3,4-Dinitrotoluene							a
1	29.331	29.331	0.000	3650H	50.0	49.9	a
2	29.331	29.331	0.000	7639H			
17 2-Amino-4,6-dinitrotoluene							
1	29.658	29.658	0.000	5632H	50.0	49.7	
18 2,6-Dinitrotoluene							
1	31.031	31.031	0.000	3609H	50.0	49.2	

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
19 2,4-Dinitrotoluene							
1	31.471	31.471	0.000	6687H	50.0	49.4	
20 o-Nitrotoluene							
1	34.571	34.571	0.000	2785H	50.0	48.2	
21 p-Nitrotoluene							
1	36.084	36.084	0.000	3461H	50.0	48.1	
22 m-Nitrotoluene							
1	37.698	37.698	0.000	3428H	50.0	49.2	
23 PETN							
2	39.351	39.351	0.000	2997H	50.0	53.9	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

HP8330L4_00062 Amount Added: 1.00 Units: mL

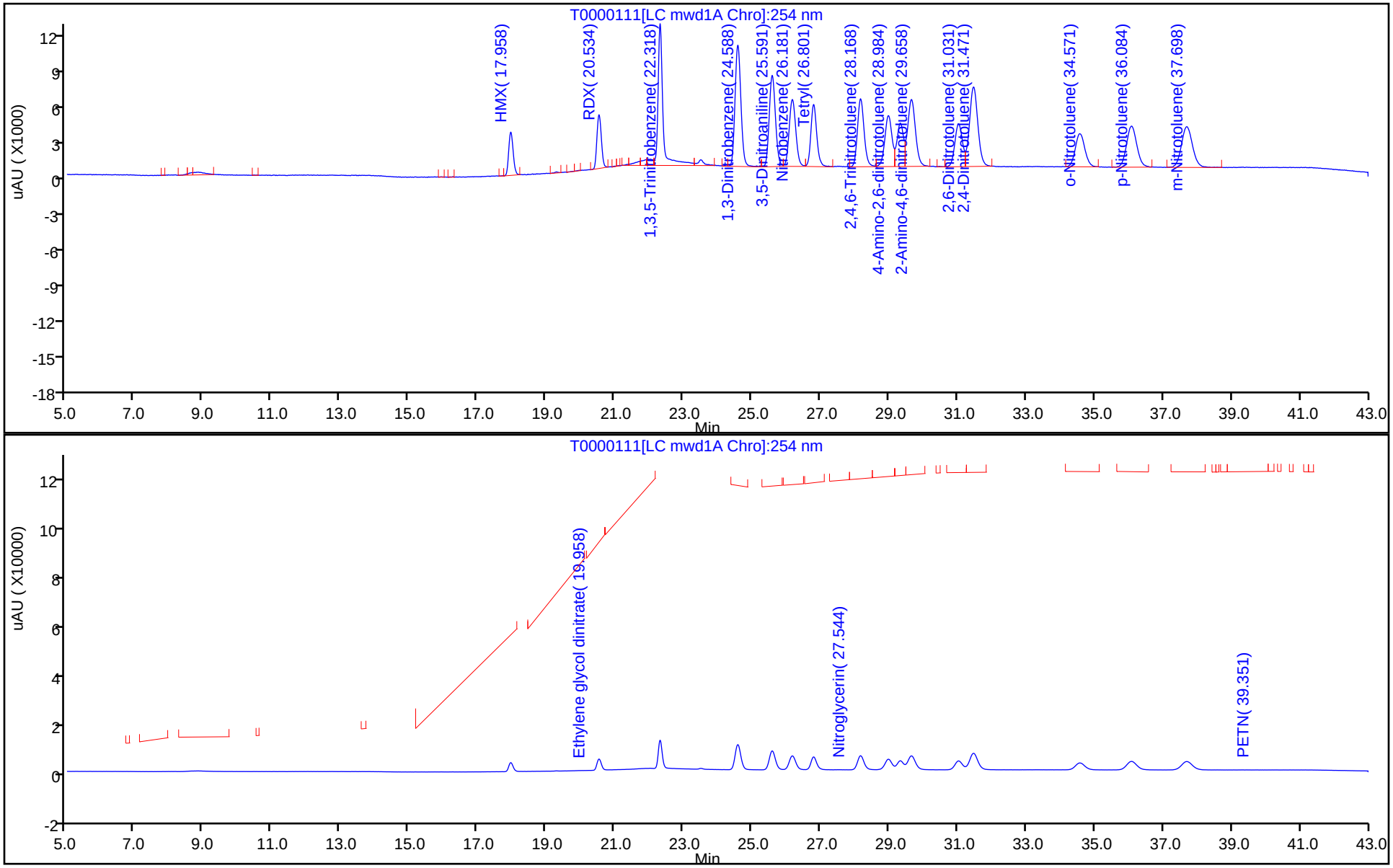
Report Date: 24-May-2019 17:17:34 Chrom Revision: 2.3 12-May-2019 16:28:34

Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190523-76793.b\T0000111.D

Injection Date:	24-May-2019 16:22:27	Instrument ID:	LC11	Operator ID:	AO
Lims ID:	CCV			Worklist Smp#:	25
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

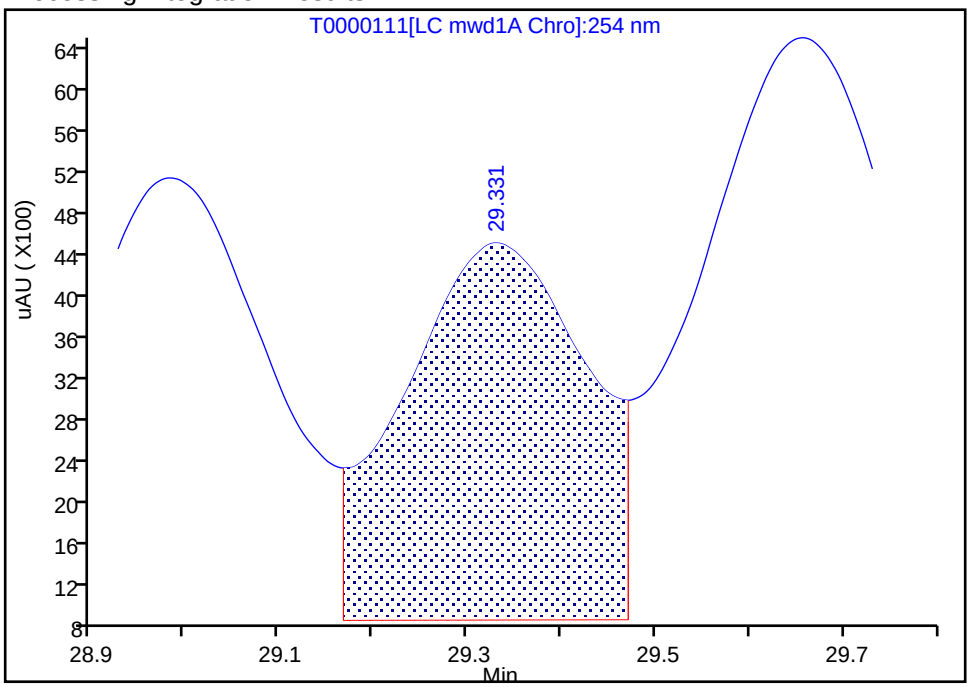
Data File:	\\chromna\Sacramento\ChromData\LC11\20190523-76793.b\T0000111.D				
Injection Date:	24-May-2019 16:22:27	Instrument ID:	LC11		
Lims ID:	CCV				
Client ID:					
Operator ID:	AO	ALS Bottle#:	6	Worklist Smp#:	25
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

$ 16 3,4-Dinitrotoluene, CAS: 610-39-9

Signal: 1

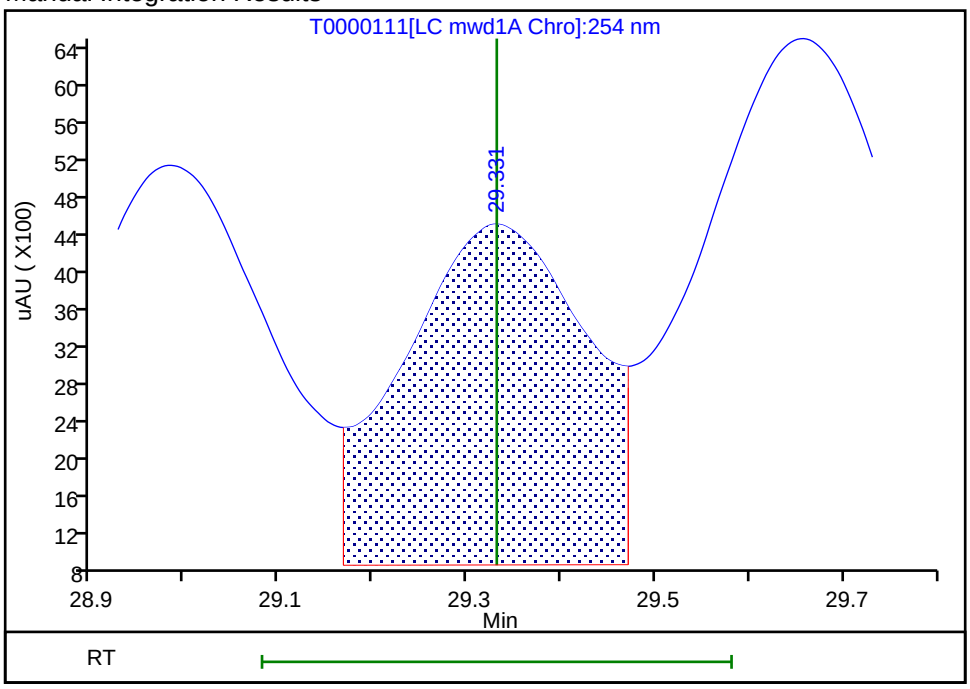
RT: 29.33
Height: 3650
Amount: 49.863875
Amount Units: ng/ml

Processing Integration Results



RT: 29.33
Height: 3650
Amount: 49.863875
Amount Units: ng/ml

Manual Integration Results



Reviewer: ortizam, 24-May-2019 17:17:29
Audit Action: Assigned Compound ID Audit Reason:

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

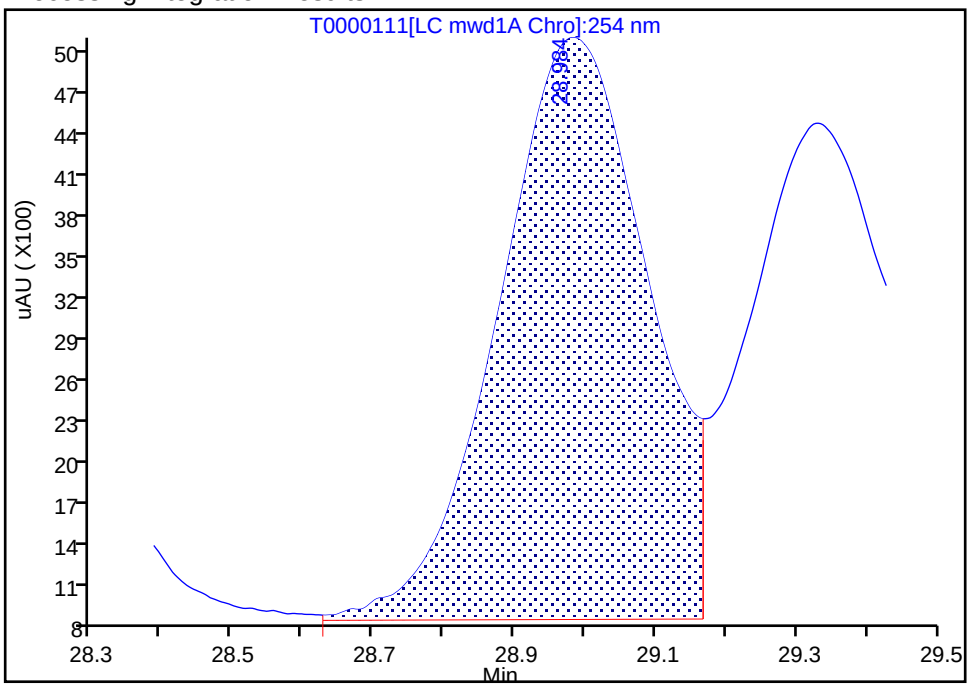
Data File:	\\chromna\Sacramento\ChromData\LC11\20190523-76793.b\T0000111.D				
Injection Date:	24-May-2019 16:22:27	Instrument ID:	LC11		
Lims ID:	CCV				
Client ID:					
Operator ID:	AO	ALS Bottle#:	6	Worklist Smp#:	25
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

15 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

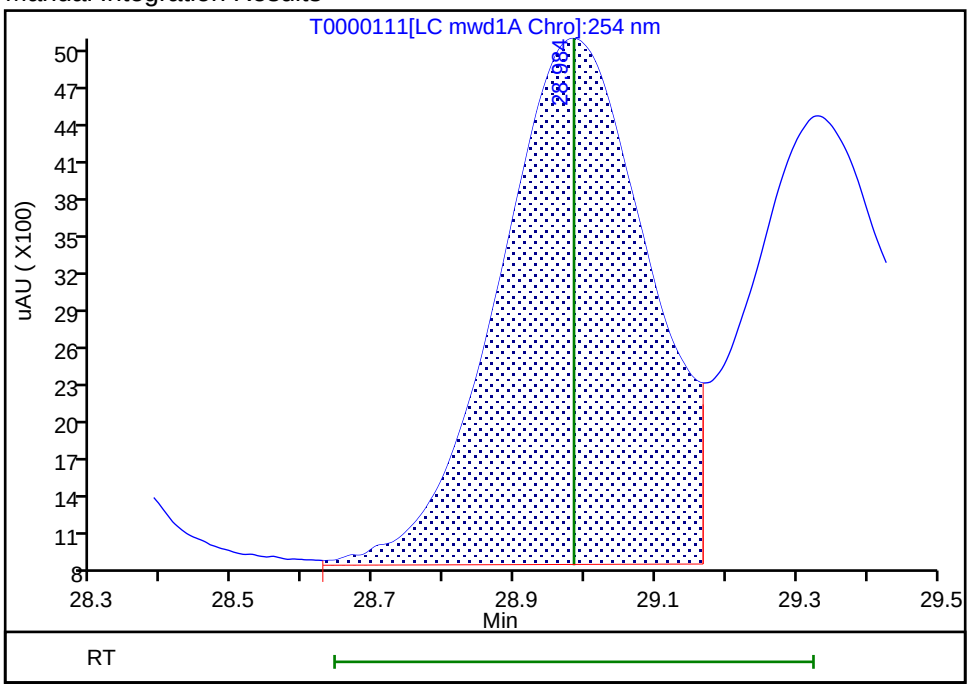
Processing Integration Results

RT: 28.98
Height: 4287
Amount: 49.244087
Amount Units: ng/ml



Manual Integration Results

RT: 28.98
Height: 4287
Amount: 49.244087
Amount Units: ng/ml



Reviewer: ortizam, 24-May-2019 17:17:31

Audit Action: Assigned Compound ID Audit Reason:

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

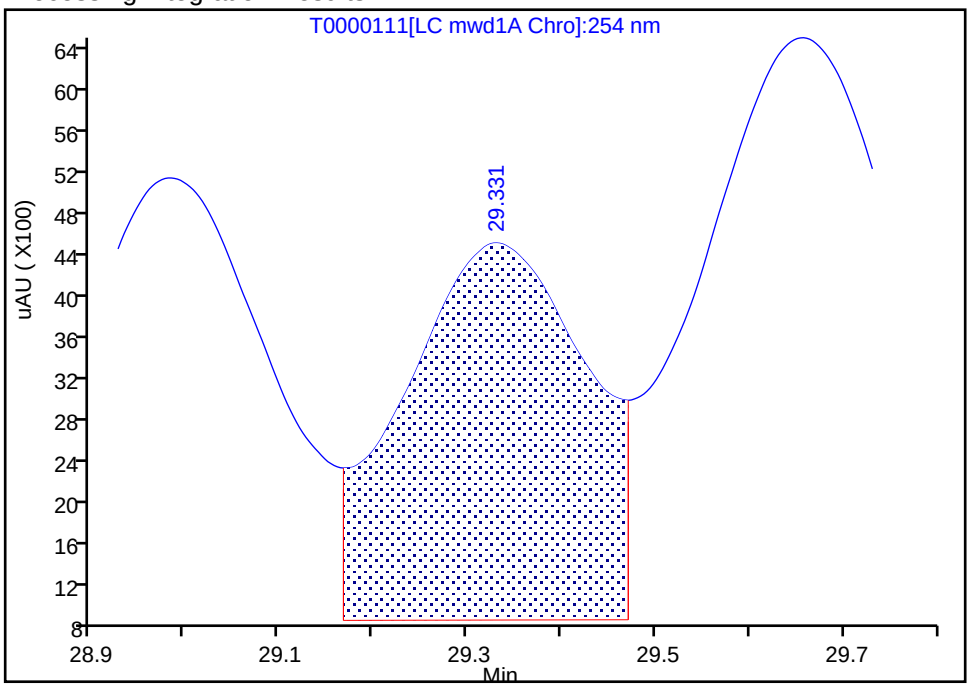
Data File:	\\chromna\Sacramento\ChromData\LC11\20190523-76793.b\T0000111.D				
Injection Date:	24-May-2019 16:22:27	Instrument ID:	LC11		
Lims ID:	CCV				
Client ID:					
Operator ID:	AO	ALS Bottle#:	6	Worklist Smp#:	25
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

$ 16 3,4-Dinitrotoluene, CAS: 610-39-9

Signal: 1

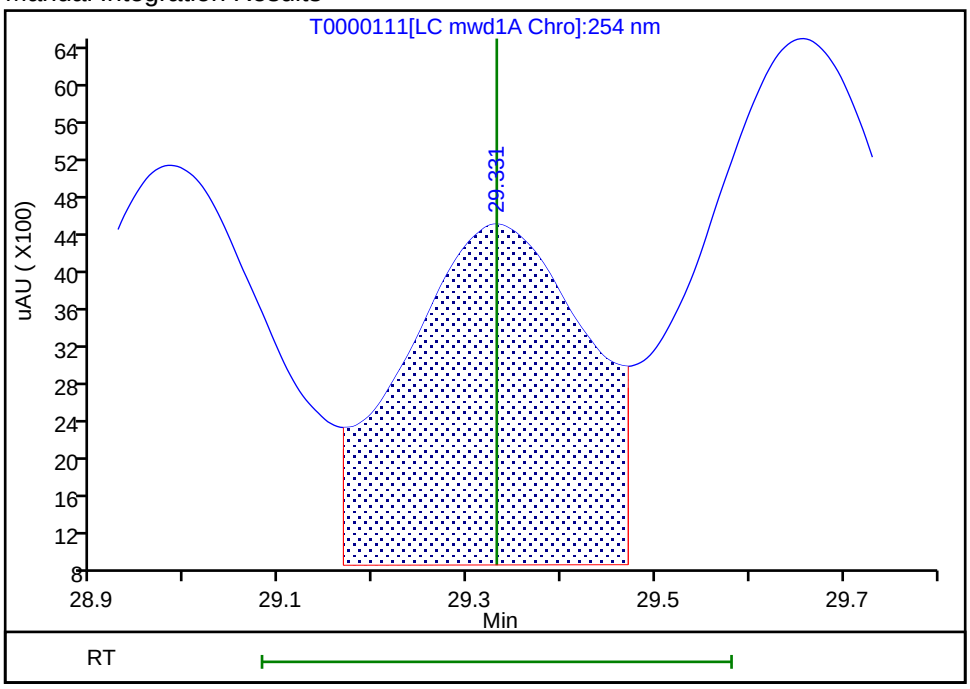
RT: 29.33
Height: 3650
Amount: 49.863875
Amount Units: ng/ml

Processing Integration Results



RT: 29.33
Height: 3650
Amount: 49.863875
Amount Units: ng/ml

Manual Integration Results



Reviewer: ortizam, 24-May-2019 17:17:29
Audit Action: Assigned Compound ID Audit Reason:

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-296662/26 Calibration Date: 05/24/2019 17:16

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: T0000112.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
TNX	Ave	52.00	45.26		43.5	50.0	-13.0	15.0
DNX	Ave	64.92	56.00		43.3	50.2	-13.7	15.0
MNX	Ave	100.2	87.69		51.2	58.5	-12.4	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-296662/26 Calibration Date: 05/24/2019 17:16

Instrument ID: LC11 Calib Start Date: 02/27/2019 19:43

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 02/28/2019 10:01

Lab File ID: T0000112.D

Analyte	RT	RT WINDOW	
		FROM	TO
TNX	12.66	12.41	12.91
DNX	16.62	16.37	16.87
MNX	19.08	18.83	19.33

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190523-76793.b\T0000112.D
Lims ID: CCV MET
Client ID:
Sample Type: CCV
Inject. Date: 24-May-2019 17:16:09 ALS Bottle#: 7 Worklist Smp#: 26
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 320-0076793-026
Operator ID: AO Instrument ID: LC11
Sublist: chrom-8330 Metab LC11*sub2

Method: \\chromna\Sacramento\ChromData\LC11\20190523-76793.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 25-May-2019 10:38:20 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0333

First Level Reviewer: ortizam Date: 25-May-2019 10:38:20

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
1 TNX							
1	12.660	12.660	0.000	2263H	50.0	43.5	
2 DNX							
1	16.617	16.617	0.000	2811H	50.2	43.3	
4 MNX							
1	19.084	19.084	0.000	5130H	58.5	51.2	

Reagents:

HPMETABL4_00040 Amount Added: 1.00 Units: mL

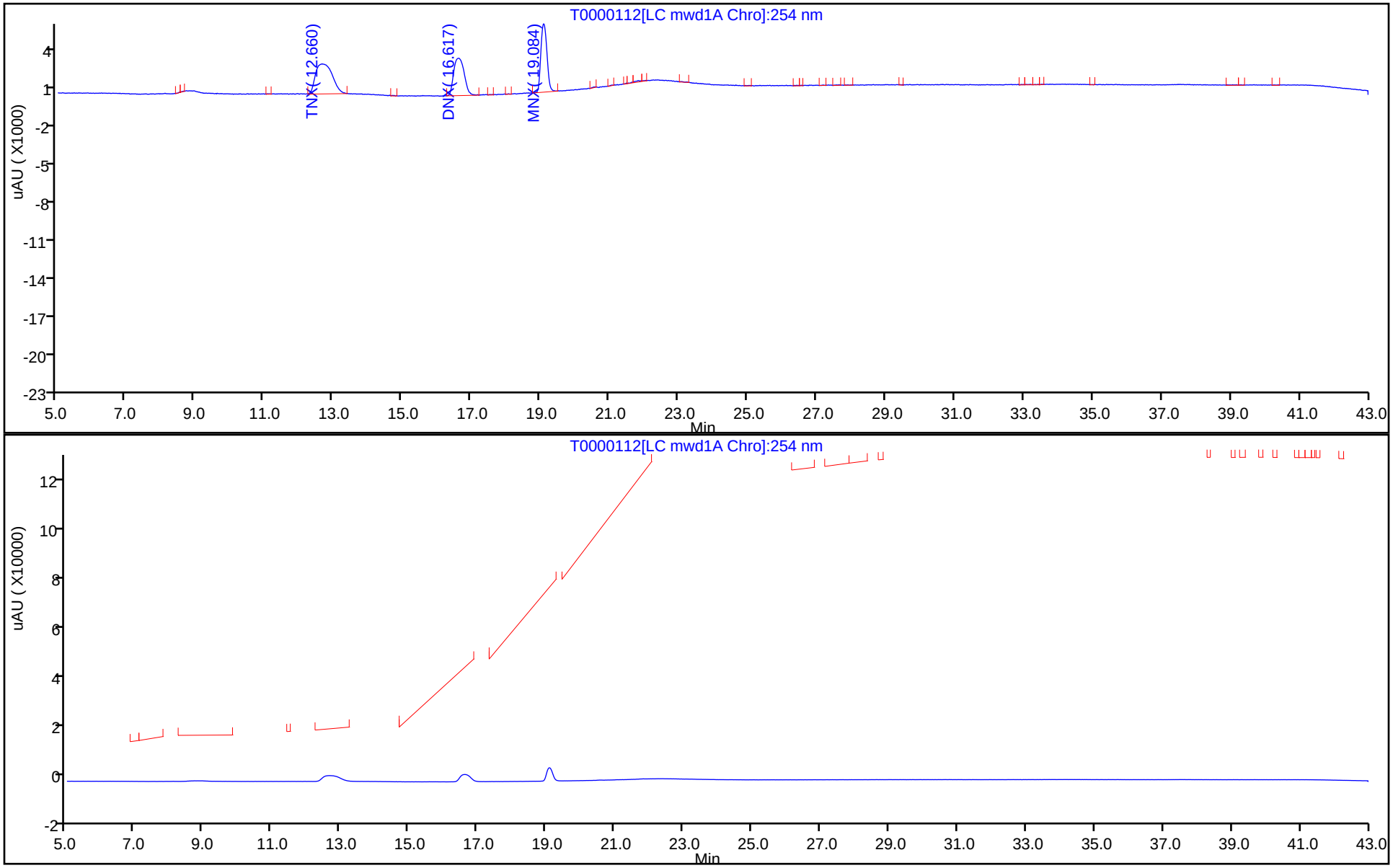
Report Date: 25-May-2019 10:38:21 Chrom Revision: 2.3 12-May-2019 16:28:34

Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190523-76793.b\T0000112.D

Injection Date:	24-May-2019 17:16:09	Instrument ID:	LC11	Operator ID:	AO
Lims ID:	CCV MET			Worklist Smp#:	26
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: ICV 320-287393/11 Calibration Date: 04/10/2019 05:48

Instrument ID: LC12 Calib Start Date: 04/09/2019 22:07

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 04/10/2019 14:25

Lab File ID: H000040.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Nitrobenzene	Ave	49.14	46.39		189	200	-5.6	15.0
1,3-Dinitrobenzene	Ave	98.89	94.47		191	200	-4.5	15.0
1,3,5-Trinitrobenzene	Ave	78.39	73.15		187	200	-6.7	15.0
2-Nitrotoluene	Ave	59.31	54.73		185	200	-7.7	15.0
4-Nitrotoluene	Ave	59.31	54.73		185	200	-7.7	15.0
3-Nitrotoluene	Ave	42.57	37.98		178	200	-10.8	15.0
3,5-Dinitroaniline	Ave	78.04	73.53		188	200	-5.8	15.0
RDX	Ave	45.45	42.26		186	200	-7.0	15.0
2,4-Dinitrotoluene	Ave	90.82	85.00		187	200	-6.4	15.0
2,6-Dinitrotoluene	Ave	56.36	53.82		191	200	-4.5	15.0
2-Amino-4,6-dinitrotoluene	Ave	119.5	111.7		187	200	-6.6	15.0
4-Amino-2,6-dinitrotoluene	Ave	123.7	112.2		181	200	-9.3	15.0
2,4,6-Trinitrotoluene	Ave	128.9	126.3		196	200	-1.9	15.0
HMX	Ave	100.7	94.01		187	200	-6.7	15.0
Nitroglycerin	Ave	131.1	130.8		199	200	-0.3	15.0
Tetryl	Ave	156.7	158.1		202	200	0.9	15.0
PETN	Ave	147.8	134.3		182	200	-9.1	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: ICV 320-287393/11 Calibration Date: 04/10/2019 05:48

Instrument ID: LC12 Calib Start Date: 04/09/2019 22:07

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 04/10/2019 14:25

Lab File ID: H000040.D

Analyte	RT	RT WINDOW	
		FROM	TO
Nitrobenzene	20.78	20.58	21.08
1,3-Dinitrobenzene	23.05	22.79	23.29
1,3,5-Trinitrobenzene	24.65	24.32	25.00
2-Nitrotoluene	27.58	27.33	27.83
4-Nitrotoluene	27.58	27.33	27.83
3-Nitrotoluene	28.10	27.84	28.34
3,5-Dinitroaniline	29.04	28.77	29.29
RDX	29.92	29.66	30.16
2,4-Dinitrotoluene	30.62	30.37	30.87
2,6-Dinitrotoluene	31.46	31.21	31.71
2-Amino-4,6-dinitrotoluene	33.09	32.83	33.33
4-Amino-2,6-dinitrotoluene	33.35	33.09	33.59
2,4,6-Trinitrotoluene	34.60	34.33	34.83
HMX	35.84	35.58	36.08
Nitroglycerin	36.47	36.21	36.71
Tetryl	37.44	37.19	37.69
PETN	40.88	40.65	41.15

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000040.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 10-Apr-2019 05:48:00 ALS Bottle#: 70 Worklist Smp#: 11
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Operator ID: AJC Instrument ID: LC12
Sublist:

Method: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 12-Apr-2019 10:24:58 Calib Date: 10-Apr-2019 03:52:46
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000038.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0331

First Level Reviewer: ortizam Date: 10-Apr-2019 12:48:16

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
4 Ethylene glycol dinitrate							
2	20.740	20.747	-0.007	19221H	200.0	187.8	
3 Nitrobenzene							
1	20.784	20.827	-0.043	9278H	200.0	188.8	
6 1,3-Dinitrobenzene							
1	23.050	23.044	0.006	18894H	200.0	191.1	
7 1,3,5-Trinitrobenzene							
1	24.654	24.657	-0.003	14629H	200.0	186.6	
9 p-Nitrotoluene							
1	27.580	27.577	0.003	10946H	200.0	184.6	
10 o-Nitrotoluene							
1	27.580	27.577	0.003	10946H	200.0	184.6	
11 m-Nitrotoluene							
1	28.104	28.090	0.014	7595H	200.0	178.4	
12 3,5-Dinitroaniline							
1	29.040	29.030	0.010	14705H	200.0	188.4	
13 RDX							
1	29.924	29.914	0.010	8451H	200.0	186.0	
14 2,4-Dinitrotoluene							
1	30.617	30.620	-0.003	17000H	200.0	187.2	
15 2,6-Dinitrotoluene							
1	31.460	31.457	0.003	10763H	200.0	191.0	
16 2-Amino-4,6-dinitrotoluene							
1	33.094	33.084	0.010	22338H	200.0	186.9	
17 4-Amino-2,6-dinitrotoluene							
1	33.347	33.340	0.007	22435H	200.0	181.4	
19 2,4,6-Trinitrotoluene							
1	34.597	34.584	0.013	25269H	200.0	196.1	

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
20 HMX							
1	35.837	35.830	0.007	18802H	200.0	186.6	
21 Nitroglycerin							
2	36.474	36.464	0.010	26153H	200.0	199.5	
22 Tetryl							
1	37.444	37.440	0.004	31628H	200.0	201.9	
23 PETN							
2	40.884	40.897	-0.013	26852H	200.0	181.7	

Reagents:

HP8330IC_00061 Amount Added: 1.00 Units: mL

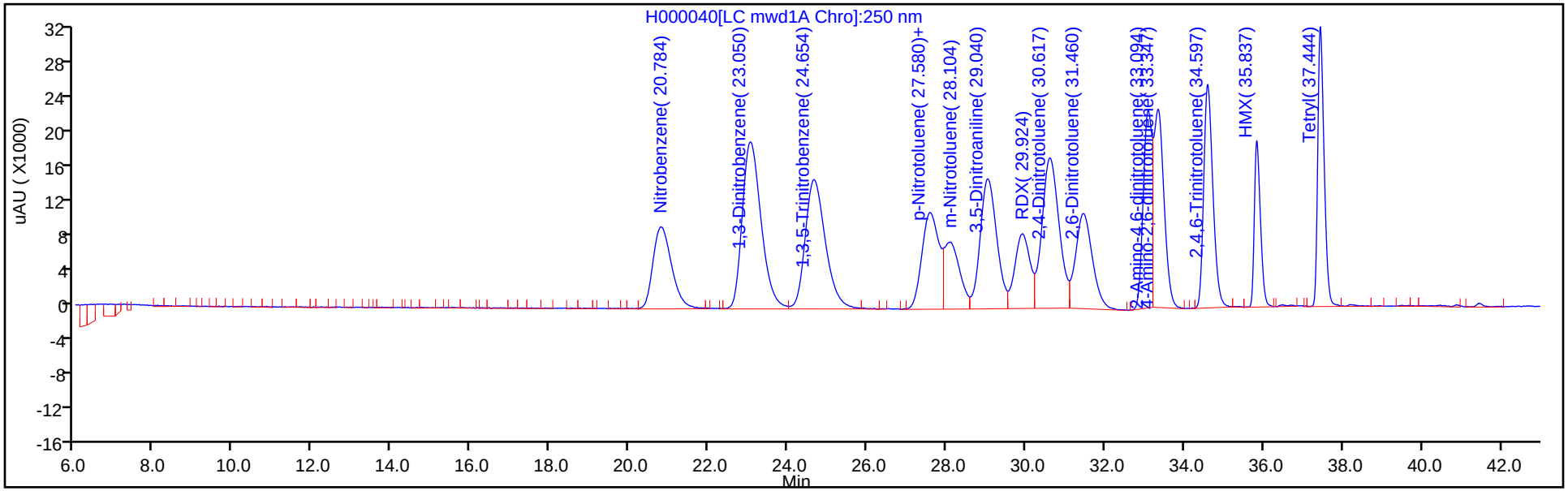
Report Date: 12-Apr-2019 10:24:59 Chrom Revision: 2.3 24-Mar-2019 20:11:04

Eurofins TestAmerica, Sacramento

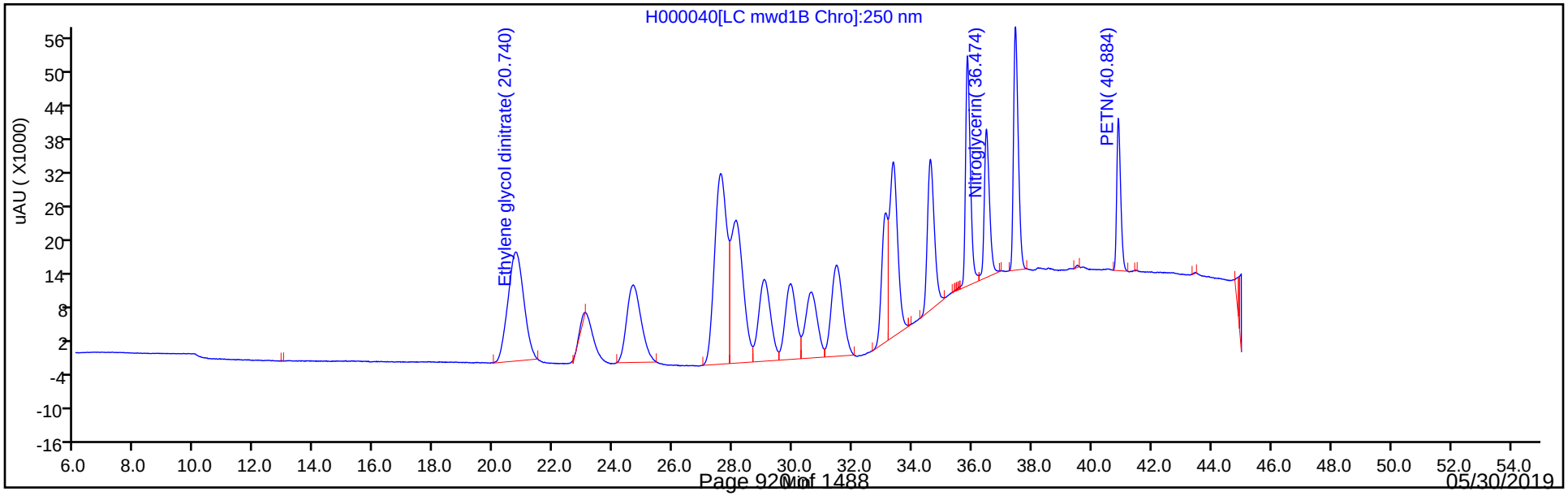
Data File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000040.D

Injection Date:	10-Apr-2019 05:48:00	Instrument ID:	LC12	Operator ID:	AJC
Lims ID:	ICV			Worklist Smp#:	11
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	70
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: ICV 320-287393/21 Calibration Date: 04/10/2019 16:21

Instrument ID: LC12 Calib Start Date: 04/09/2019 22:07

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 04/10/2019 14:25

Lab File ID: H000051.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
TNX	Ave	65.14	60.53		92.9	100	-7.1	15.0
DNX	Ave	53.14	48.79		91.8	100	-8.2	15.0
MNX	Ave	53.60	49.85		109	117	-7.0	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: ICV 320-287393/21 Calibration Date: 04/10/2019 16:21

Instrument ID: LC12 Calib Start Date: 04/09/2019 22:07

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 04/10/2019 14:25

Lab File ID: H000051.D

Analyte	RT	RT WINDOW	
		FROM	TO
TNX	16.79	16.53	17.03
DNX	21.93	21.62	22.16
MNX	26.03	25.71	26.27

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000051.D				
Lims ID:	ICV met				
Client ID:					
Sample Type:	ICV				
Inject. Date:	10-Apr-2019 16:21:13	ALS Bottle#:	79	Worklist Smp#:	21
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Sample Info:	MICV				
Operator ID:	AJC	Instrument ID:	LC12		
Sublist:					
Method:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\LC12_Conf_8330.m				
Limit Group:	LC 8330A ICAL				
Last Update:	12-Apr-2019 10:32:27	Calib Date:	10-Apr-2019 14:25:56		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000049.D				
Column 1 :	Zorbax Cyano CN (4.60 mm)		Det: LC mwd1A, 250 nm		
Process Host:	CTX0331				
First Level Reviewer: ortizam		Date:	10-Apr-2019 17:22:22		

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
2 TNX							
1	16.794	16.784	0.010	6053H	100.0	92.9	
5 DNX							
1	21.927	21.920	0.007	4879H	100.0	91.8	
8 MNX							
1	26.034	26.017	0.017	5832H	117.0	108.8	

Reagents:

HPMETIC_00023 Amount Added: 1.00 Units: mL

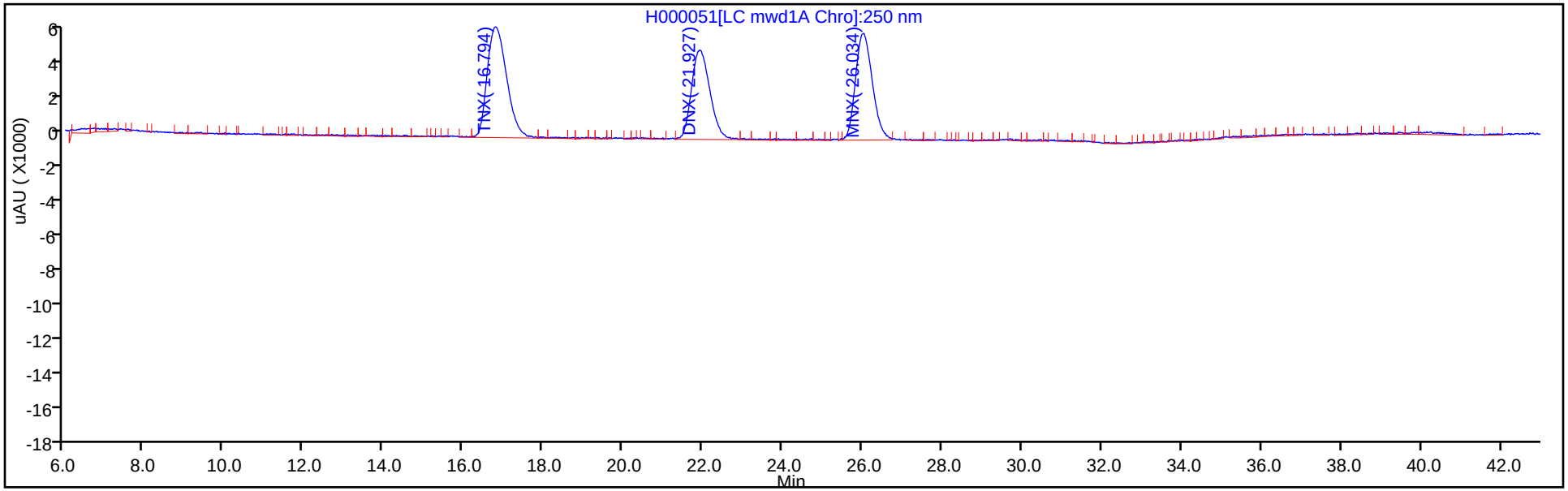
Report Date: 12-Apr-2019 10:32:30 Chrom Revision: 2.3 24-Mar-2019 20:11:04

Eurofins TestAmerica, Sacramento

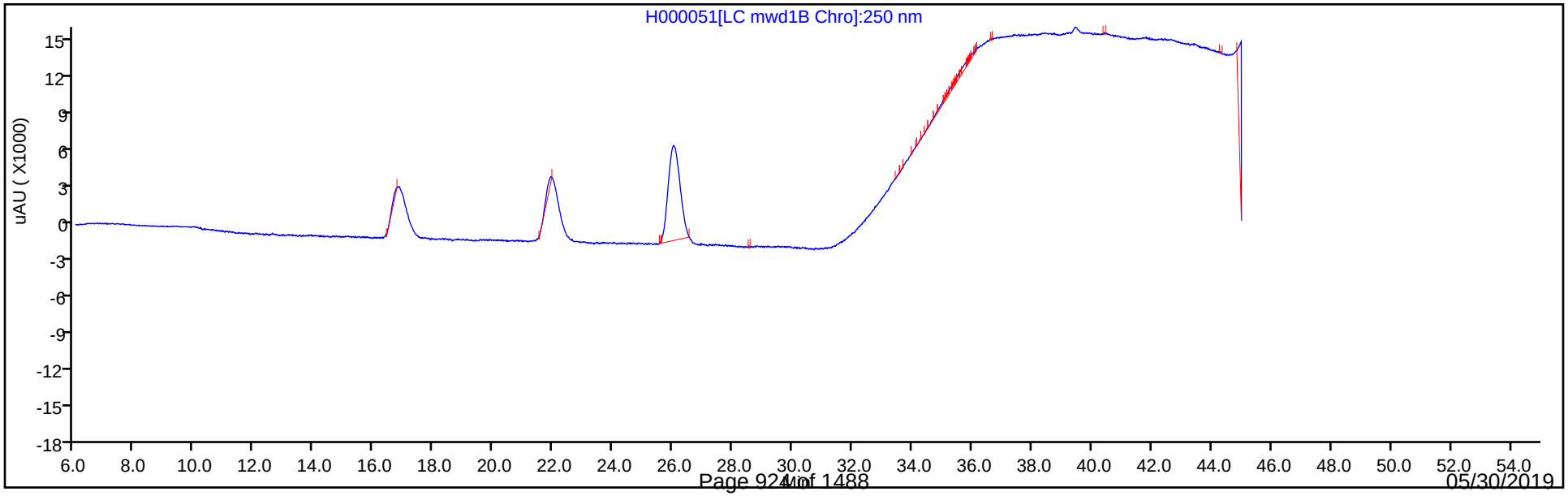
Data File: \\chromna\Sacramento\ChromData\LC12\20190410-74597.b\H000051.D

Injection Date:	10-Apr-2019 16:21:13	Instrument ID:	LC12	Operator ID:	AJC
Lims ID:	ICV met			Worklist Smp#:	21
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	79
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCVRT 320-295993/3 Calibration Date: 05/21/2019 18:53

Instrument ID: LC12 Calib Start Date: 05/14/2019 16:46

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 05/14/2019 22:31

Lab File ID: U000003.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Nitrobenzene	Ave	56.78	51.59		90.9	100	-9.1	15.0
1,3-Dinitrobenzene	Ave	116.8	105.4		90.3	100	-9.7	15.0
1,3,5-Trinitrobenzene	Ave	93.75	84.15		89.8	100	-10.2	15.0
2-Nitrotoluene	Ave	71.06	64.84		91.3	100	-8.7	15.0
4-Nitrotoluene	Ave	71.06	64.84		91.3	100	-8.7	15.0
3-Nitrotoluene	Lin2		41.00		94.2	100	-5.8	15.0
3,5-Dinitroaniline	Ave	100.1	86.23		86.2	100	-13.8	15.0
RDX	Lin2		49.13		92.3	100	-7.7	15.0
2,4-Dinitrotoluene	Ave	126.1	115.6		91.7	100	-8.3	15.0
2,6-Dinitrotoluene	Ave	95.11	86.05		90.5	100	-9.5	15.0
2-Amino-4,6-dinitrotoluene	Ave	202.2	180.5		89.3	100	-10.7	15.0
4-Amino-2,6-dinitrotoluene	Lin2		1787		99.0	100	-1.0	15.0
2,4,6-Trinitrotoluene	Ave	207.1	185.0		89.3	100	-10.7	15.0
HMX	Ave	157.0	134.6		85.7	100	-14.3	15.0
Nitroglycerin	Ave	193.6	172.0		88.9	100	-11.1	15.0
Tetryl	Ave	235.2	203.8		86.7	100	-13.3	15.0
PETN	Ave	216.5	190.7		88.1	100	-11.9	15.0
3,4-Dinitrotoluene	Ave	140.0	120.6		86.1	100	-13.9	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCVRT 320-295993/3 Calibration Date: 05/21/2019 18:53

Instrument ID: LC12 Calib Start Date: 05/14/2019 16:46

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 05/14/2019 22:31

Lab File ID: U000003.D

Analyte	RT	RT WINDOW	
		FROM	TO
Nitrobenzene	22.14	21.89	22.39
1,3-Dinitrobenzene	24.57	24.32	24.82
1,3,5-Trinitrobenzene	26.71	26.37	27.05
2-Nitrotoluene	29.23	28.98	29.48
4-Nitrotoluene	29.23	28.98	29.48
3-Nitrotoluene	29.80	29.55	30.05
3,5-Dinitroaniline	30.58	30.32	30.84
RDX	31.42	31.17	31.67
2,4-Dinitrotoluene	32.26	32.01	32.51
2,6-Dinitrotoluene	32.94	32.69	33.19
2-Amino-4,6-dinitrotoluene	33.95	33.70	34.20
4-Amino-2,6-dinitrotoluene	34.20	33.95	34.45
2,4,6-Trinitrotoluene	35.43	35.18	35.68
HMX	36.26	36.01	36.51
Nitroglycerin	37.00	36.75	37.25
Tetryl	37.89	37.64	38.14
PETN	41.15	40.90	41.40
3,4-Dinitrotoluene	34.85	34.60	35.10

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000003.D
Lims ID: CCVRT
Client ID:
Sample Type: CCVRT
Inject. Date: 21-May-2019 18:53:30 ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 320-0076638-003
Operator ID: AO Instrument ID: LC12
Sublist: chrom-LC12_Conf_8330*sub10

Method: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 22-May-2019 09:22:13 Calib Date: 15-May-2019 07:09:15
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0335

First Level Reviewer: ortizam Date: 22-May-2019 09:22:13

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
3 Nitrobenzene							
1	22.142	22.142	0.000	5159H	100.0	90.9	
4 Ethylene glycol dinitrate							
2	24.335	24.335	0.000	115H	100.0	2.15	
6 1,3-Dinitrobenzene							
1	24.568	24.568	0.000	10543H	100.0	90.3	
7 1,3,5-Trinitrobenzene							
1	26.705	26.705	0.000	8415H	100.0	89.8	
9 p-Nitrotoluene							
1	29.232	29.232	0.000	6484H	100.0	91.3	
10 o-Nitrotoluene							
1	29.232	29.232	0.000	6484H	100.0	91.3	
11 m-Nitrotoluene							
1	29.798	29.798	0.000	4100H	100.0	94.2	
12 3,5-Dinitroaniline							
1	30.582	30.582	0.000	8623H	100.0	86.2	
13 RDX							
1	31.415	31.415	0.000	4913H	100.0	92.3	
14 2,4-Dinitrotoluene							
1	32.262	32.262	0.000	11559H	100.0	91.7	
15 2,6-Dinitrotoluene							
1	32.942	32.942	0.000	8605H	100.0	90.5	
16 2-Amino-4,6-dinitrotoluene							
1	33.952	33.952	0.000	18054H	100.0	89.3	
17 4-Amino-2,6-dinitrotoluene							
1	34.198	34.198	0.000	178743	100.0	99.0	
$ 18 3,4-Dinitrotoluene							
1	34.852	34.852	0.000	12060H	100.0	86.1	

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
19 2,4,6-Trinitrotoluene							
1	35.425	35.425	0.000	18496H	100.0	89.3	
20 HMX							
1	36.262	36.262	0.000	13458H	100.0	85.7	
21 Nitroglycerin							
2	36.995	36.995	0.000	17198H	100.0	88.9	
22 Tetryl							
1	37.888	37.888	0.000	20380H	100.0	86.7	
23 PETN							
2	41.148	41.148	0.000	19066H	100.0	88.1	

Reagents:

HP8330L5_00070 Amount Added: 1.00 Units: mL

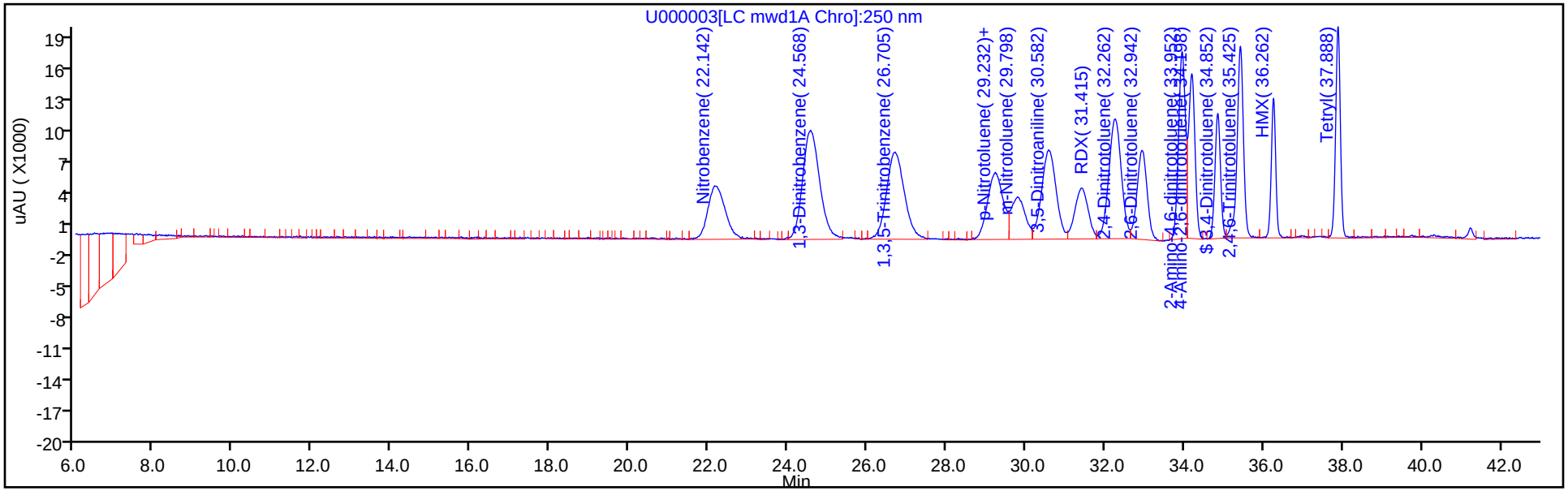
Report Date: 22-May-2019 09:22:13 Chrom Revision: 2.3 12-May-2019 16:28:34

Eurofins TestAmerica, Sacramento

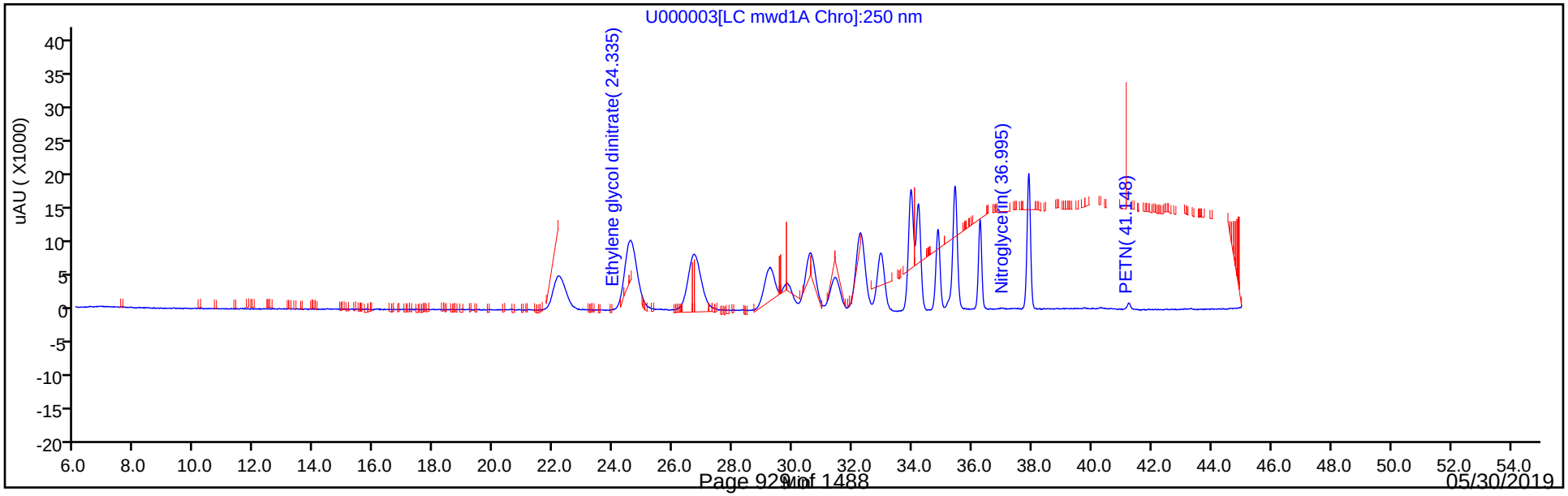
Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000003.D

Injection Date:	21-May-2019 18:53:30	Instrument ID:	LC12	Operator ID:	AO
Lims ID:	CCVRT			Worklist Smp#:	3
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCVRT 320-295993/4 Calibration Date: 05/21/2019 19:51

Instrument ID: LC12 Calib Start Date: 05/15/2019 02:21

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 05/15/2019 07:09

Lab File ID: U000004.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
TNX	Ave	69.80	64.68		92.7	100	-7.3	15.0
DNX	Ave	60.43	55.56		92.3	100	-8.1	15.0
MNX	Ave	65.09	58.78		106	117	-9.7	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCVRT 320-295993/4 Calibration Date: 05/21/2019 19:51

Instrument ID: LC12 Calib Start Date: 05/15/2019 02:21

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 05/15/2019 07:09

Lab File ID: U000004.D

Analyte	RT	RT WINDOW	
		FROM	TO
TNX	17.86	17.61	18.11
DNX	23.27	23.00	23.54
MNX	27.54	27.26	27.82

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000004.D
Lims ID: CCVRT MET
Client ID:
Sample Type: CCV
Inject. Date: 21-May-2019 19:51:04 ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 320-0076638-004
Operator ID: AO Instrument ID: LC12
Sublist: chrom-LC12_Conf_8330*sub2

Method: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 22-May-2019 09:26:18 Calib Date: 15-May-2019 07:09:15
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0335

First Level Reviewer: ortizam Date: 22-May-2019 09:26:18

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
2 TNX							
1	17.855	17.855	0.000	6468H	100.0	92.7	
5 DNX							
1	23.268	23.268	0.000	5578H	100.4	92.3	
8 MNX							
1	27.538	27.538	0.000	6877H	117.0	105.6	

Reagents:

HPMETABL5_00041 Amount Added: 1.00 Units: mL

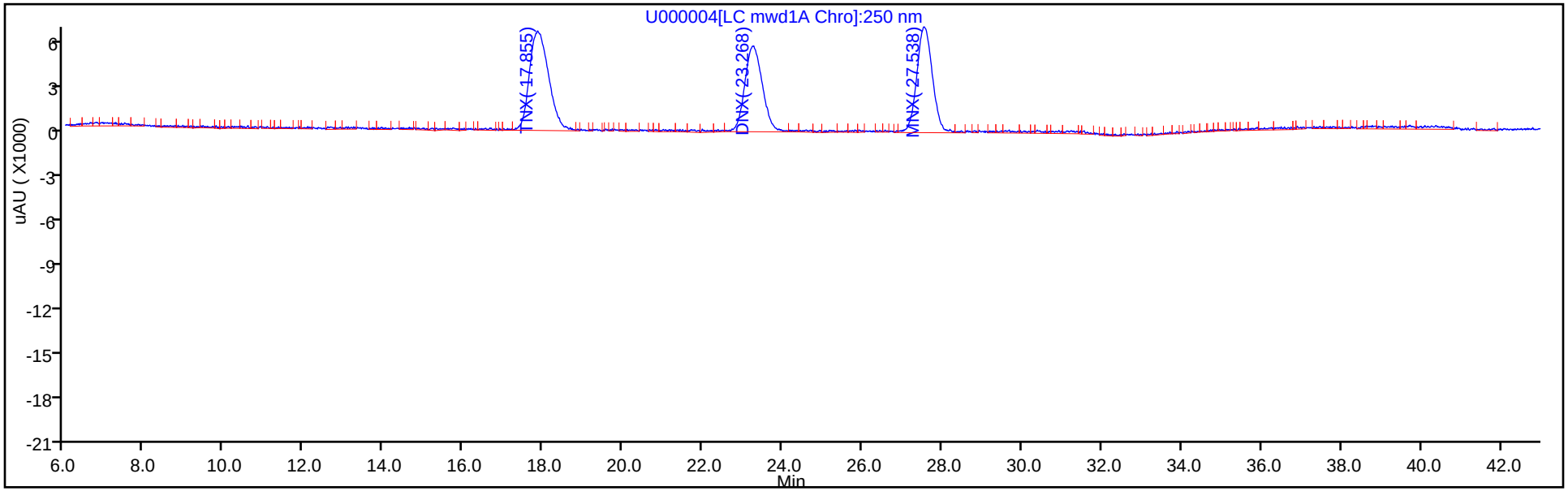
Report Date: 22-May-2019 09:26:19 Chrom Revision: 2.3 12-May-2019 16:28:34

Eurofins TestAmerica, Sacramento

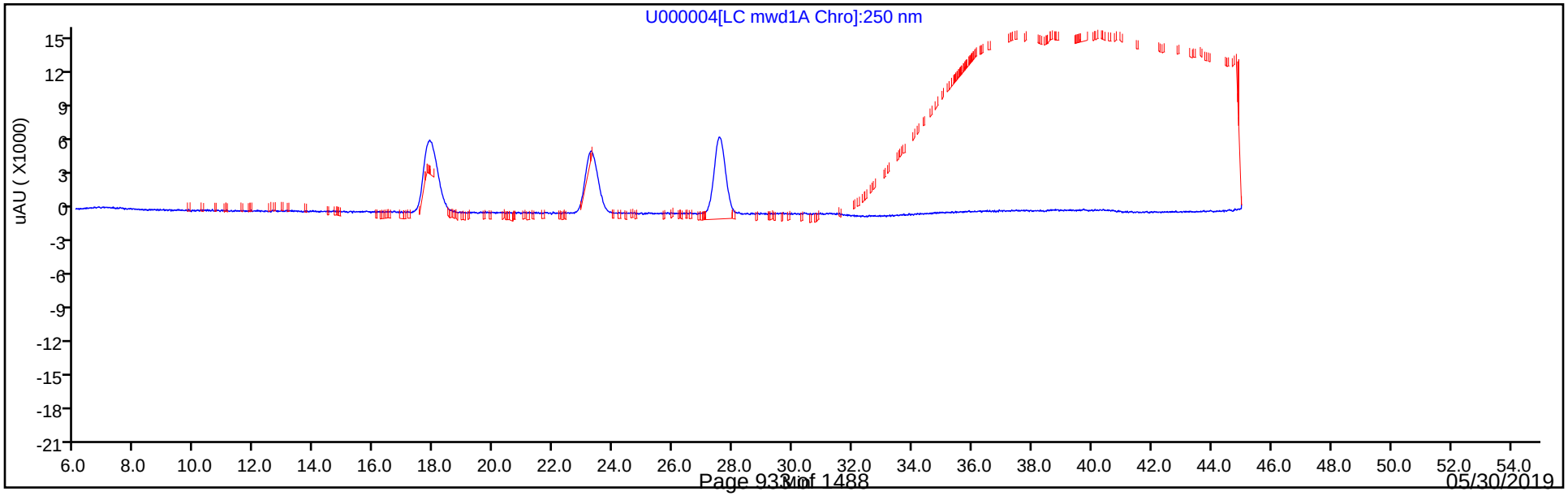
Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000004.D

Injection Date:	21-May-2019 19:51:04	Instrument ID:	LC12	Operator ID:	AO
Lims ID:	CCVRT MET			Worklist Smp#:	4
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-295993/47 Calibration Date: 05/23/2019 13:08

Instrument ID: LC12 Calib Start Date: 05/14/2019 16:46

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 05/14/2019 22:31

Lab File ID: U000049.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Nitrobenzene	Ave	56.78	53.64		47.2	50.0	-5.5	15.0
1,3-Dinitrobenzene	Ave	116.8	110.3		47.2	50.0	-5.5	15.0
1,3,5-Trinitrobenzene	Ave	93.75	88.72		47.3	50.0	-5.4	15.0
2-Nitrotoluene	Ave	71.06	66.50		46.8	50.0	-6.4	15.0
4-Nitrotoluene	Ave	71.06	66.50		46.8	50.0	-6.4	15.0
3-Nitrotoluene	Lin2		41.64		46.7	50.0	-6.6	15.0
3,5-Dinitroaniline	Ave	100.1	89.34		44.6	50.0	-10.7	15.0
RDX	Lin2		50.82		46.9	50.0	-6.2	15.0
2,4-Dinitrotoluene	Ave	126.1	116.2		46.1	50.0	-7.9	15.0
2,6-Dinitrotoluene	Ave	95.11	86.84		45.7	50.0	-8.7	15.0
2-Amino-4,6-dinitrotoluene	Ave	202.2	183.9		45.5	50.0	-9.1	15.0
4-Amino-2,6-dinitrotoluene	Lin2		1791		49.3	50.0	-1.3	15.0
2,4,6-Trinitrotoluene	Ave	207.1	191.3		46.2	50.0	-7.6	15.0
HMX	Ave	157.0	140.7		44.8	50.0	-10.4	15.0
Nitroglycerin	Ave	193.6	176.5		45.6	50.0	-8.8	15.0
Tetryl	Ave	235.2	211.5		45.0	50.0	-10.1	15.0
PETN	Ave	216.5	193.1		44.6	50.0	-10.8	15.0
3,4-Dinitrotoluene	Ave	140.0	125.1		44.7	50.0	-10.6	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-295993/47 Calibration Date: 05/23/2019 13:08

Instrument ID: LC12 Calib Start Date: 05/14/2019 16:46

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 05/14/2019 22:31

Lab File ID: U000049.D

Analyte	RT	RT WINDOW	
		FROM	TO
Nitrobenzene	22.17	21.92	22.42
1,3-Dinitrobenzene	24.52	24.27	24.77
1,3,5-Trinitrobenzene	26.64	26.30	26.98
2-Nitrotoluene	29.19	28.94	29.44
4-Nitrotoluene	29.19	28.94	29.44
3-Nitrotoluene	29.78	29.53	30.03
3,5-Dinitroaniline	30.52	30.26	30.78
RDX	31.34	31.09	31.59
2,4-Dinitrotoluene	32.22	31.97	32.47
2,6-Dinitrotoluene	32.91	32.66	33.16
2-Amino-4,6-dinitrotoluene	33.93	33.68	34.18
4-Amino-2,6-dinitrotoluene	34.17	33.92	34.42
2,4,6-Trinitrotoluene	35.40	35.15	35.65
HMX	36.25	36.00	36.50
Nitroglycerin	36.98	36.73	37.23
Tetryl	37.88	37.63	38.13
PETN	41.14	40.89	41.39
3,4-Dinitrotoluene	34.84	34.59	35.09

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000049.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 23-May-2019 13:08:35 ALS Bottle#: 6 Worklist Smp#: 47
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: AO Instrument ID: LC12
Sublist: chrom-LC12_Conf_8330*sub10

Method: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 23-May-2019 14:13:49 Calib Date: 15-May-2019 07:09:15
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0322

First Level Reviewer: ortizam Date: 23-May-2019 14:13:49

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
3 Nitrobenzene							
1	22.172	22.172	0.000	2682H	50.0	47.2	
4 Ethylene glycol dinitrate							
2	24.482	24.482	0.000	678H	50.0	12.7	
6 1,3-Dinitrobenzene							
1	24.518	24.518	0.000	5517H	50.0	47.2	
7 1,3,5-Trinitrobenzene							
1	26.635	26.635	0.000	4436H	50.0	47.3	
9 p-Nitrotoluene							
1	29.188	29.188	0.000	3325H	50.0	46.8	
10 o-Nitrotoluene							
1	29.188	29.188	0.000	3325H	50.0	46.8	
11 m-Nitrotoluene							
1	29.778	29.778	0.000	2082H	50.0	46.7	
12 3,5-Dinitroaniline							
1	30.518	30.518	0.000	4467H	50.0	44.6	
13 RDX							
1	31.342	31.342	0.000	2541H	50.0	46.9	
14 2,4-Dinitrotoluene							
1	32.222	32.222	0.000	5809H	50.0	46.1	
15 2,6-Dinitrotoluene							
1	32.908	32.908	0.000	4342H	50.0	45.7	
16 2-Amino-4,6-dinitrotoluene							
1	33.925	33.925	0.000	9194H	50.0	45.5	
17 4-Amino-2,6-dinitrotoluene							
1	34.172	34.172	0.000	89537	50.0	49.3	
$ 18 3,4-Dinitrotoluene							
1	34.835	34.835	0.000	6256H	50.0	44.7	

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
19 2,4,6-Trinitrotoluene							
1	35.395	35.395	0.000	9566H	50.0	46.2	
20 HMX							
1	36.248	36.248	0.000	7034H	50.0	44.8	
21 Nitroglycerin							
2	36.975	36.975	0.000	8827H	50.0	45.6	
22 Tetryl							
1	37.878	37.878	0.000	10575H	50.0	45.0	
23 PETN							
2	41.135	41.135	0.000	9656H	50.0	44.6	

Reagents:

HP8330L4_00062 Amount Added: 1.00 Units: mL

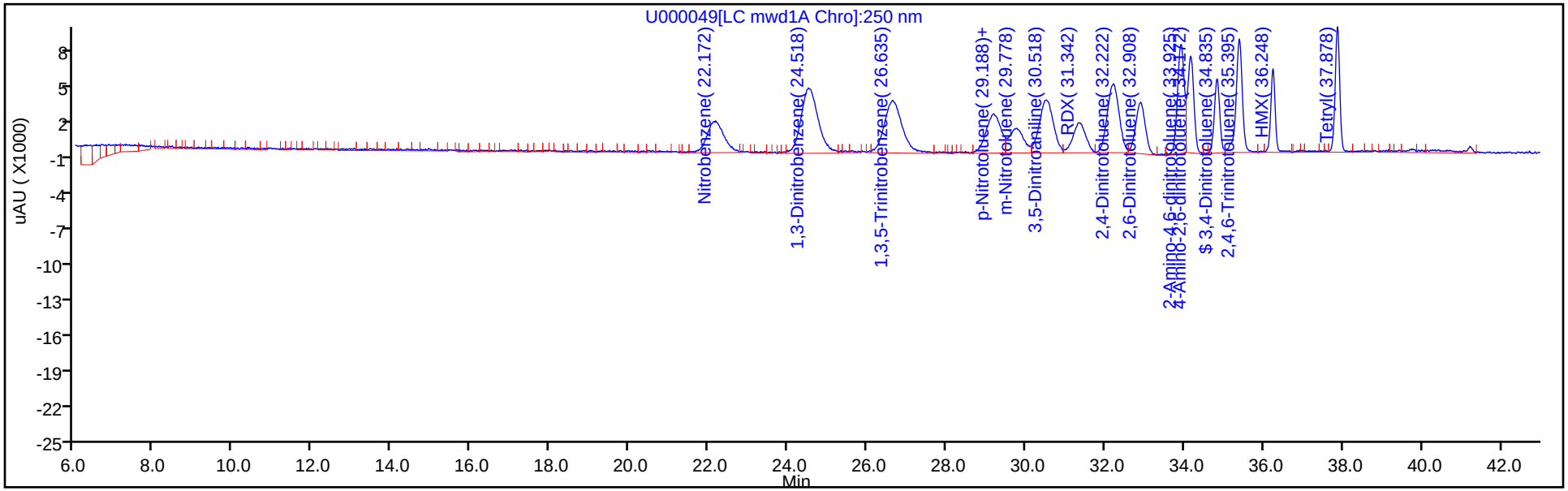
Report Date: 23-May-2019 14:13:50 Chrom Revision: 2.3 12-May-2019 16:28:34

Eurofins TestAmerica, Sacramento

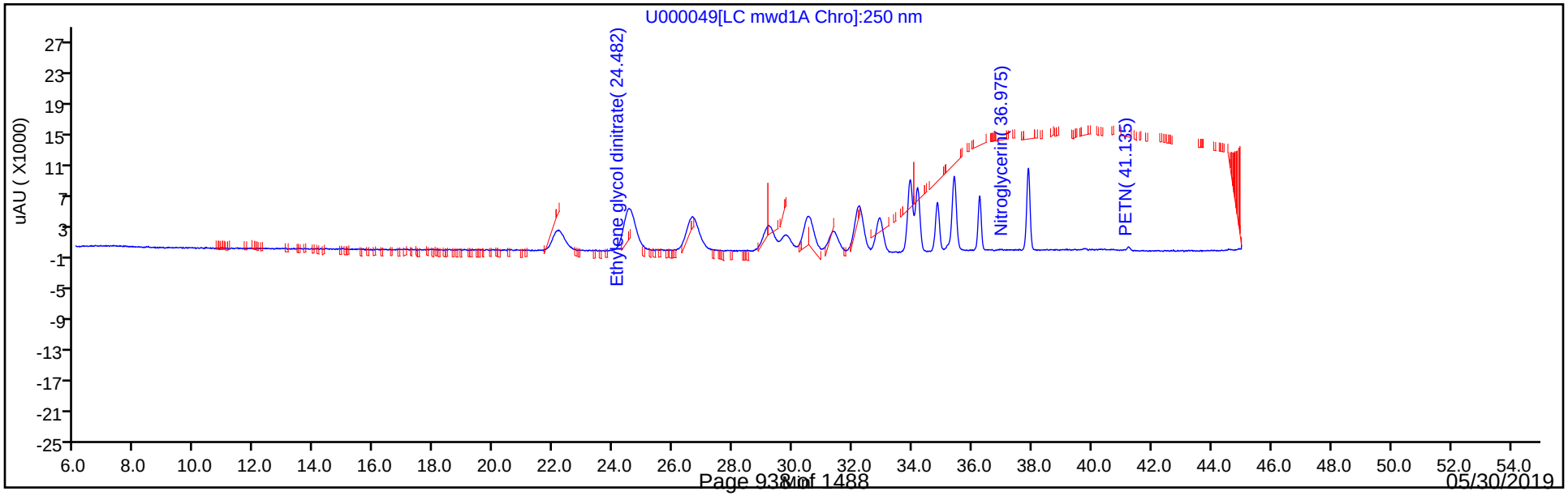
Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000049.D

Injection Date:	23-May-2019 13:08:35	Instrument ID:	LC12	Operator ID:	AO
Lims ID:	CCV			Worklist Smp#:	47
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-295993/48 Calibration Date: 05/23/2019 14:05

Instrument ID: LC12 Calib Start Date: 05/15/2019 02:21

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 05/15/2019 07:09

Lab File ID: U000050.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
TNX	Ave	69.80	64.86		46.5	50.0	-7.1	15.0
DNX	Ave	60.43	56.24		46.7	50.2	-6.9	15.0
MNX	Ave	65.09	59.73		53.7	58.5	-8.2	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-295993/48 Calibration Date: 05/23/2019 14:05

Instrument ID: LC12 Calib Start Date: 05/15/2019 02:21

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 05/15/2019 07:09

Lab File ID: U000050.D

Analyte	RT	RT WINDOW	
		FROM	TO
TNX	17.80	17.55	18.05
DNX	23.20	22.93	23.47
MNX	27.51	27.23	27.79

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000050.D				
Lims ID:	CCV MET				
Client ID:					
Sample Type:	CCV				
Inject. Date:	23-May-2019 14:05:13	ALS Bottle#:	7	Worklist Smp#:	48
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Sample Info:	CCV MET				
Operator ID:	AO	Instrument ID:	LC12		
Sublist:	chrom-LC12_Conf_8330*sub2				
Method:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\LC12_Conf_8330.m				
Limit Group:	LC 8330A ICAL				
Last Update:	23-May-2019 15:33:19	Calib Date:	15-May-2019 07:09:15		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D				
Column 1 :	Zorbax Cyano CN (4.60 mm)		Det: LC mwd1A, 250 nm		
Process Host:	CTX0322				
First Level Reviewer: ortizam		Date:	23-May-2019 15:33:19		

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
2 TNX							
1	17.797	17.797	0.000	3243H	50.0	46.5	
5 DNX							
1	23.203	23.203	0.000	2823H	50.2	46.7	
8 MNX							
1	27.507	27.507	0.000	3494H	58.5	53.7	

Reagents:

HPMETABL4_00040 Amount Added: 1.00 Units: mL

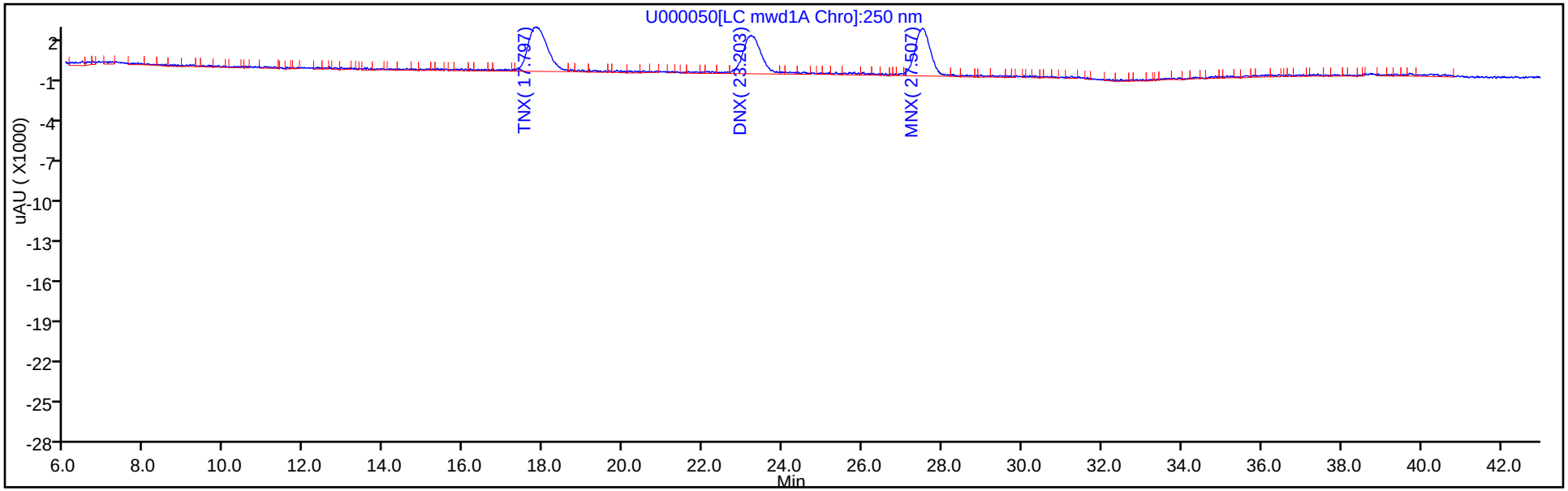
Report Date: 23-May-2019 15:33:20 Chrom Revision: 2.3 12-May-2019 16:28:34

Eurofins TestAmerica, Sacramento

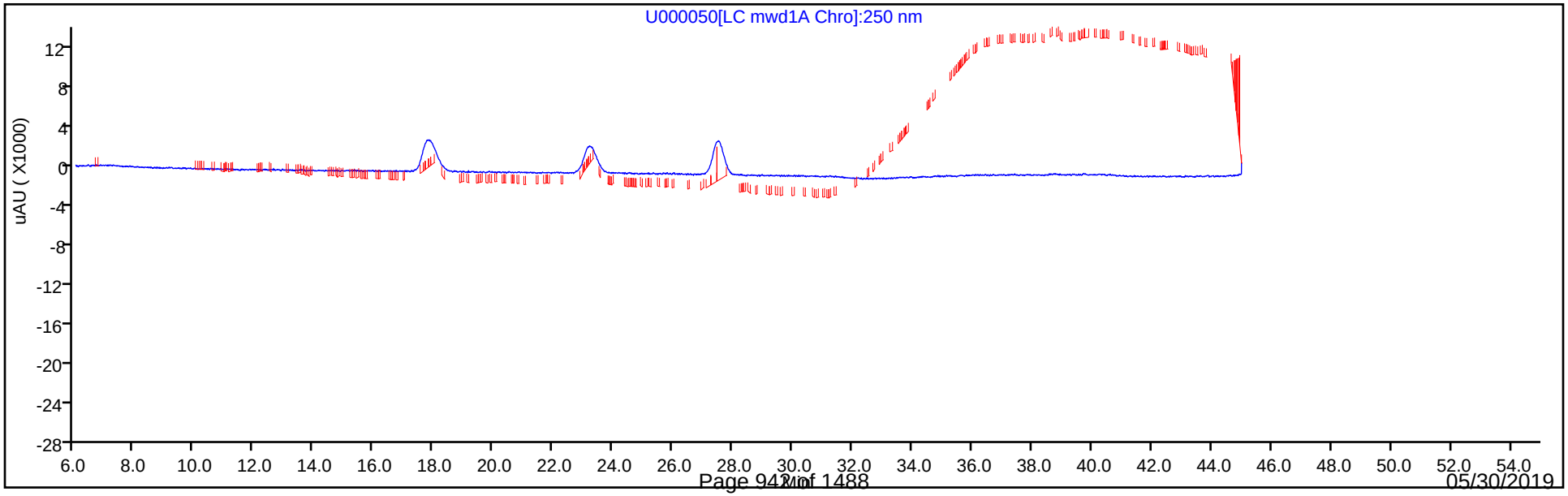
Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000050.D

Injection Date:	23-May-2019 14:05:13	Instrument ID:	LC12	Operator ID:	AO
Lims ID:	CCV MET			Worklist Smp#:	48
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-295993/51 Calibration Date: 05/24/2019 01:36

Instrument ID: LC12 Calib Start Date: 05/14/2019 16:46

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 05/14/2019 22:31

Lab File ID: U000062.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Nitrobenzene	Ave	56.78	54.42		47.9	50.0	-4.1	15.0
1,3-Dinitrobenzene	Ave	116.8	110.0		47.1	50.0	-5.8	15.0
1,3,5-Trinitrobenzene	Ave	93.75	87.42		46.6	50.0	-6.8	15.0
2-Nitrotoluene	Ave	71.06	66.94		47.1	50.0	-5.8	15.0
4-Nitrotoluene	Ave	71.06	66.94		47.1	50.0	-5.8	15.0
3-Nitrotoluene	Lin2		44.10		49.6	50.0	-0.8	15.0
3,5-Dinitroaniline	Ave	100.1	90.94		45.4	50.0	-9.1	15.0
RDX	Lin2		51.42		47.5	50.0	-5.0	15.0
2,4-Dinitrotoluene	Ave	126.1	118.5		47.0	50.0	-6.0	15.0
2,6-Dinitrotoluene	Ave	95.11	88.52		46.5	50.0	-6.9	15.0
2-Amino-4,6-dinitrotoluene	Ave	202.2	187.5		46.3	50.0	-7.3	15.0
4-Amino-2,6-dinitrotoluene	Lin2		1815		50.0	50.0	0.0	15.0
2,4,6-Trinitrotoluene	Ave	207.1	192.8		46.6	50.0	-6.9	15.0
HMX	Ave	157.0	140.2		44.7	50.0	-10.7	15.0
Nitroglycerin	Ave	193.6	179.4		46.3	50.0	-7.3	15.0
Tetryl	Ave	235.2	211.4		44.9	50.0	-10.1	15.0
PETN	Ave	216.5	198.8		45.9	50.0	-8.2	15.0
3,4-Dinitrotoluene	Ave	140.0	126.8		45.3	50.0	-9.4	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-295993/51 Calibration Date: 05/24/2019 01:36

Instrument ID: LC12 Calib Start Date: 05/14/2019 16:46

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 05/14/2019 22:31

Lab File ID: U000062.D

Analyte	RT	RT WINDOW	
		FROM	TO
Nitrobenzene	22.14	21.89	22.39
1,3-Dinitrobenzene	24.52	24.27	24.77
1,3,5-Trinitrobenzene	26.61	26.27	26.95
2-Nitrotoluene	29.17	28.92	29.42
4-Nitrotoluene	29.17	28.92	29.42
3-Nitrotoluene	29.74	29.49	29.99
3,5-Dinitroaniline	30.55	30.29	30.81
RDX	31.39	31.14	31.64
2,4-Dinitrotoluene	32.22	31.97	32.47
2,6-Dinitrotoluene	32.89	32.64	33.14
2-Amino-4,6-dinitrotoluene	33.92	33.67	34.17
4-Amino-2,6-dinitrotoluene	34.17	33.92	34.42
2,4,6-Trinitrotoluene	35.40	35.15	35.65
HMX	36.24	35.99	36.49
Nitroglycerin	36.97	36.72	37.22
Tetryl	37.87	37.62	38.12
PETN	41.12	40.87	41.37
3,4-Dinitrotoluene	34.82	34.57	35.07

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000062.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 24-May-2019 01:36:06 ALS Bottle#: 8 Worklist Smp#: 51
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: AO Instrument ID: LC12
Sublist: chrom-LC12_Conf_8330*sub10

Method: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 24-May-2019 10:18:51 Calib Date: 15-May-2019 07:09:15
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0337

First Level Reviewer: cartiera Date: 24-May-2019 09:41:33

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
3 Nitrobenzene							
1	22.135	22.135	0.000	2721H	50.0	47.9	
4 Ethylene glycol dinitrate							
2	24.475	24.475	0.000	758H	50.0	14.2	
6 1,3-Dinitrobenzene							
1	24.515	24.515	0.000	5502H	50.0	47.1	
7 1,3,5-Trinitrobenzene							
1	26.612	26.612	0.000	4371H	50.0	46.6	
9 p-Nitrotoluene							
1	29.165	29.165	0.000	3347H	50.0	47.1	
10 o-Nitrotoluene							
1	29.165	29.165	0.000	3347H	50.0	47.1	
11 m-Nitrotoluene							
1	29.735	29.735	0.000	2205H	50.0	49.6	
12 3,5-Dinitroaniline							
1	30.548	30.548	0.000	4547H	50.0	45.4	
13 RDX							
1	31.385	31.385	0.000	2571H	50.0	47.5	
14 2,4-Dinitrotoluene							
1	32.222	32.222	0.000	5926H	50.0	47.0	
15 2,6-Dinitrotoluene							
1	32.892	32.892	0.000	4426H	50.0	46.5	
16 2-Amino-4,6-dinitrotoluene							
1	33.922	33.922	0.000	9373H	50.0	46.3	
17 4-Amino-2,6-dinitrotoluene							
1	34.168	34.168	0.000	90737	50.0	50.0	
$ 18 3,4-Dinitrotoluene							
1	34.822	34.822	0.000	6342H	50.0	45.3	

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
19 2,4,6-Trinitrotoluene							M
1	35.395	35.395	0.000	9642H	50.0	46.6	M
20 HMX							
1	36.235	36.235	0.000	7011H	50.0	44.7	
21 Nitroglycerin							
2	36.965	36.965	0.000	8969H	50.0	46.3	
22 Tetryl							
1	37.865	37.865	0.000	10570H	50.0	44.9	
23 PETN							
2	41.118	41.118	0.000	9939H	50.0	45.9	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

HP8330L4_00062 Amount Added: 1.00 Units: mL

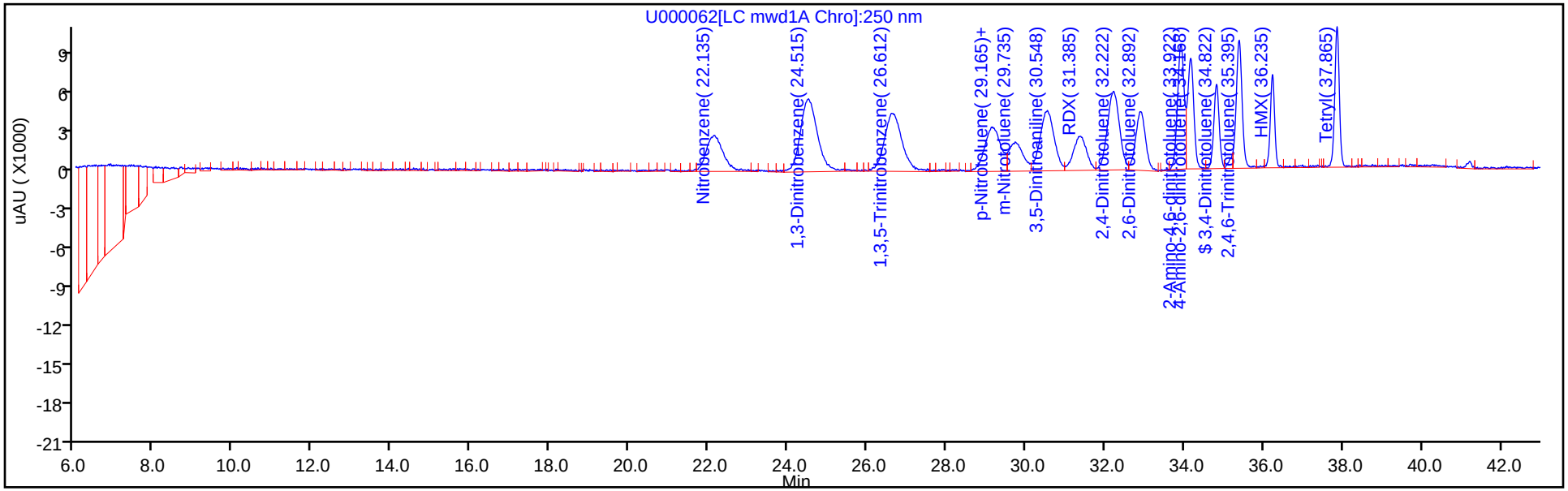
Report Date: 24-May-2019 10:18:55 Chrom Revision: 2.3 12-May-2019 16:28:34

Eurofins TestAmerica, Sacramento

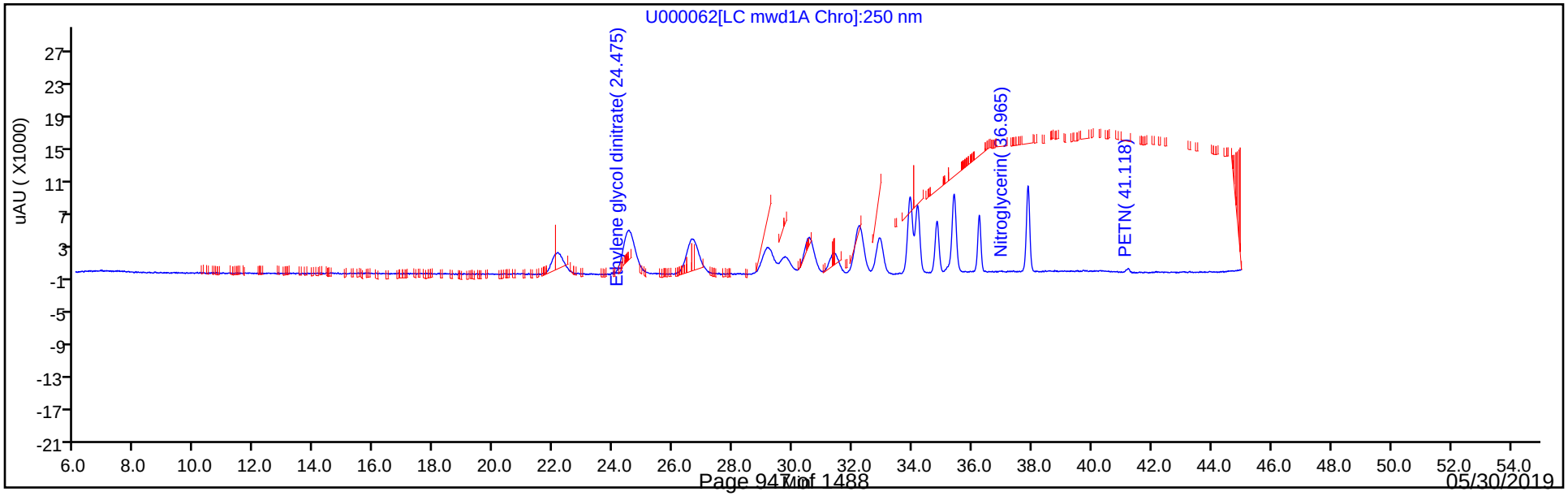
Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000062.D

Injection Date:	24-May-2019 01:36:06	Instrument ID:	LC12	Operator ID:	AO
Lims ID:	CCV			Worklist Smp#:	51
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

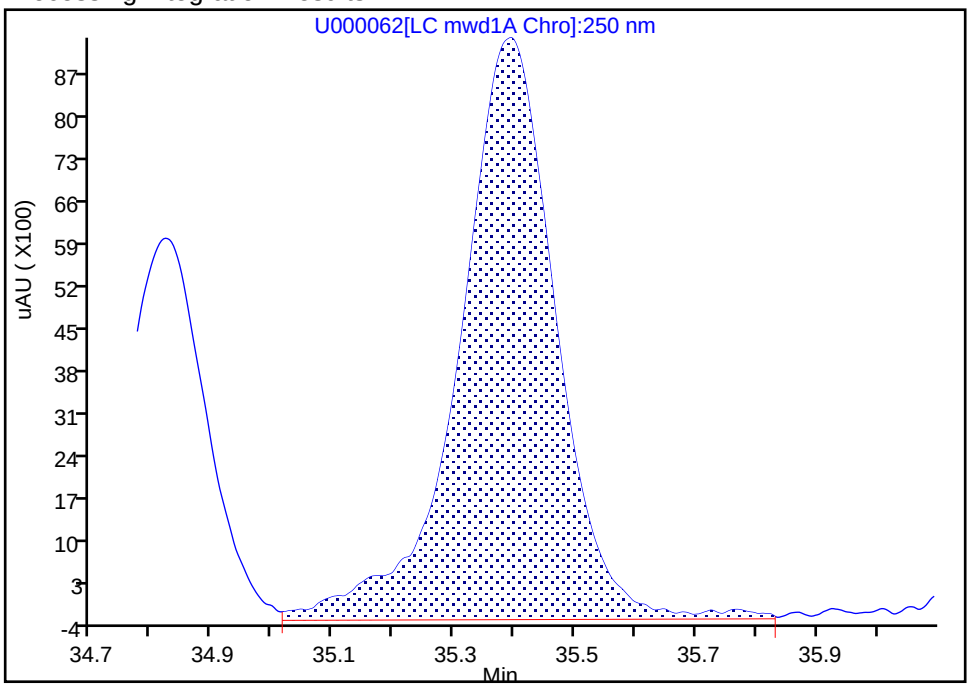
Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000062.D				
Injection Date:	24-May-2019 01:36:06	Instrument ID:	LC12		
Lims ID:	CCV				
Client ID:					
Operator ID:	AO	ALS Bottle#:	8	Worklist Smp#:	51
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

19 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

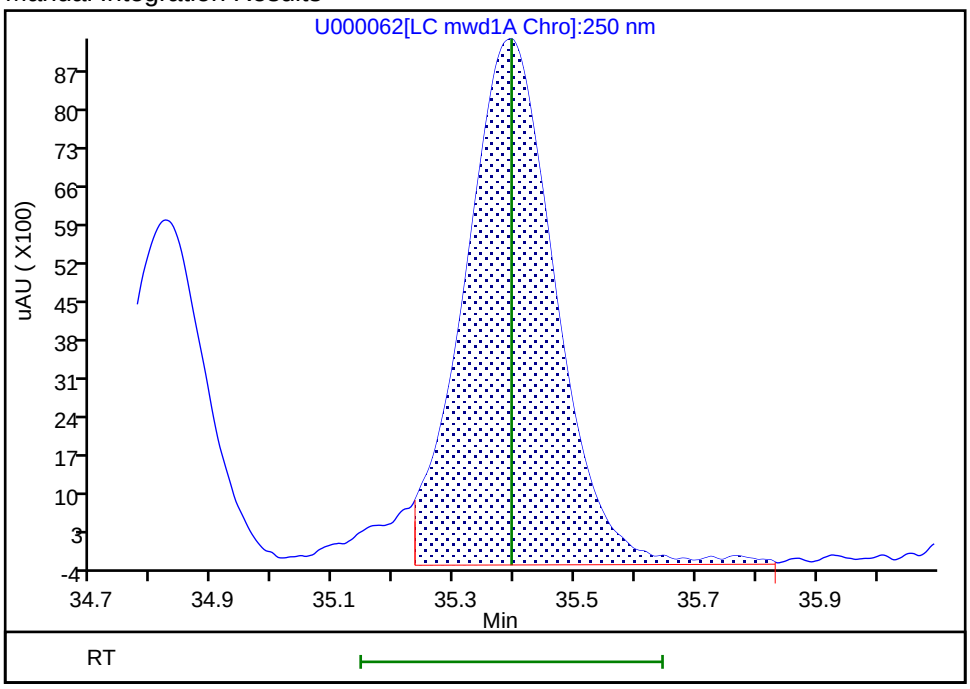
Processing Integration Results

RT: 35.40
Height: 9642
Amount: 46.568076
Amount Units: ng/ml



Manual Integration Results

RT: 35.40
Height: 9642
Amount: 46.568076
Amount Units: ng/ml



Reviewer: cartiera, 24-May-2019 09:41:21

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-295993/52 Calibration Date: 05/24/2019 02:33

Instrument ID: LC12 Calib Start Date: 05/15/2019 02:21

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 05/15/2019 07:09

Lab File ID: U000063.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
TNX	Ave	69.80	64.42		46.1	50.0	-7.7	15.0
DNX	Ave	60.43	56.14		46.6	50.2	-7.1	15.0
MNX	Ave	65.09	59.04		53.1	58.5	-9.3	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-295993/52 Calibration Date: 05/24/2019 02:33

Instrument ID: LC12 Calib Start Date: 05/15/2019 02:21

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 05/15/2019 07:09

Lab File ID: U000063.D

Analyte	RT	RT WINDOW	
		FROM	TO
TNX	17.88	17.63	18.13
DNX	23.27	23.00	23.54
MNX	27.53	27.25	27.81

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000063.D
Lims ID: CCV MET
Client ID:
Sample Type: CCV
Inject. Date: 24-May-2019 02:33:41 ALS Bottle#: 9 Worklist Smp#: 52
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: CCV MET
Operator ID: AO Instrument ID: LC12
Sublist: chrom-LC12_Conf_8330*sub2

Method: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 24-May-2019 09:42:22 Calib Date: 15-May-2019 07:09:15
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0337

First Level Reviewer: cartiera Date: 24-May-2019 09:42:22

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
2 TNX							
1	17.875	17.875	0.000	3221H	50.0	46.1	
5 DNX							
1	23.265	23.265	0.000	2818H	50.2	46.6	
8 MNX							
1	27.528	27.528	0.000	3454H	58.5	53.1	

Reagents:

HPMETABL4_00040 Amount Added: 1.00 Units: mL

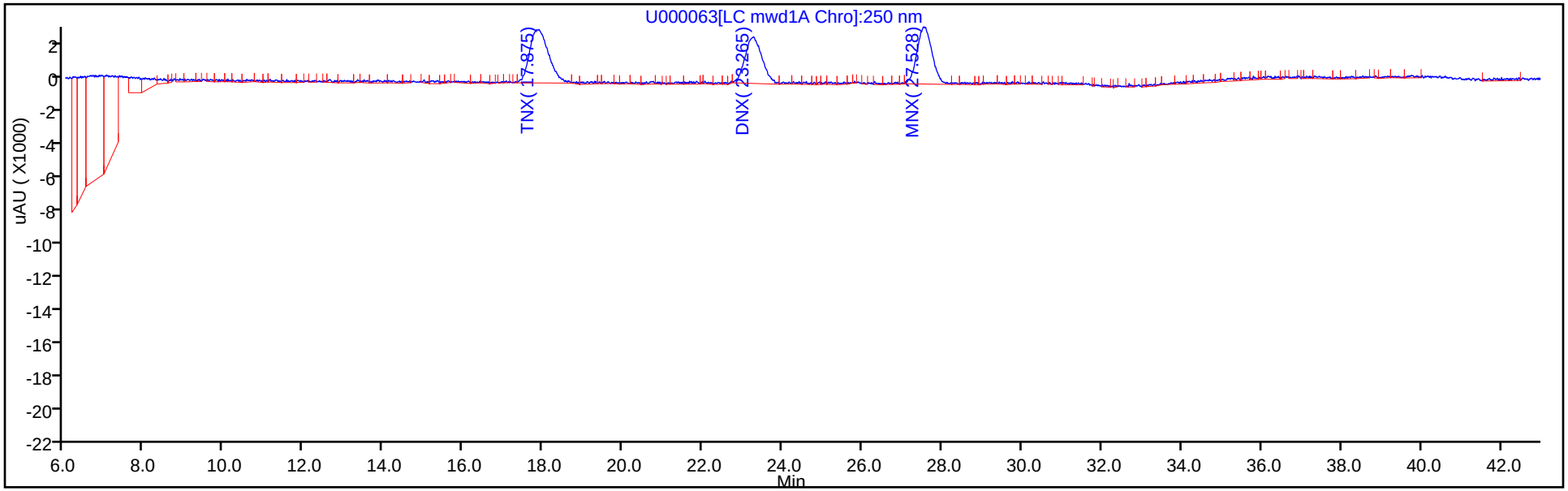
Report Date: 24-May-2019 09:42:22 Chrom Revision: 2.3 12-May-2019 16:28:34

Eurofins TestAmerica, Sacramento

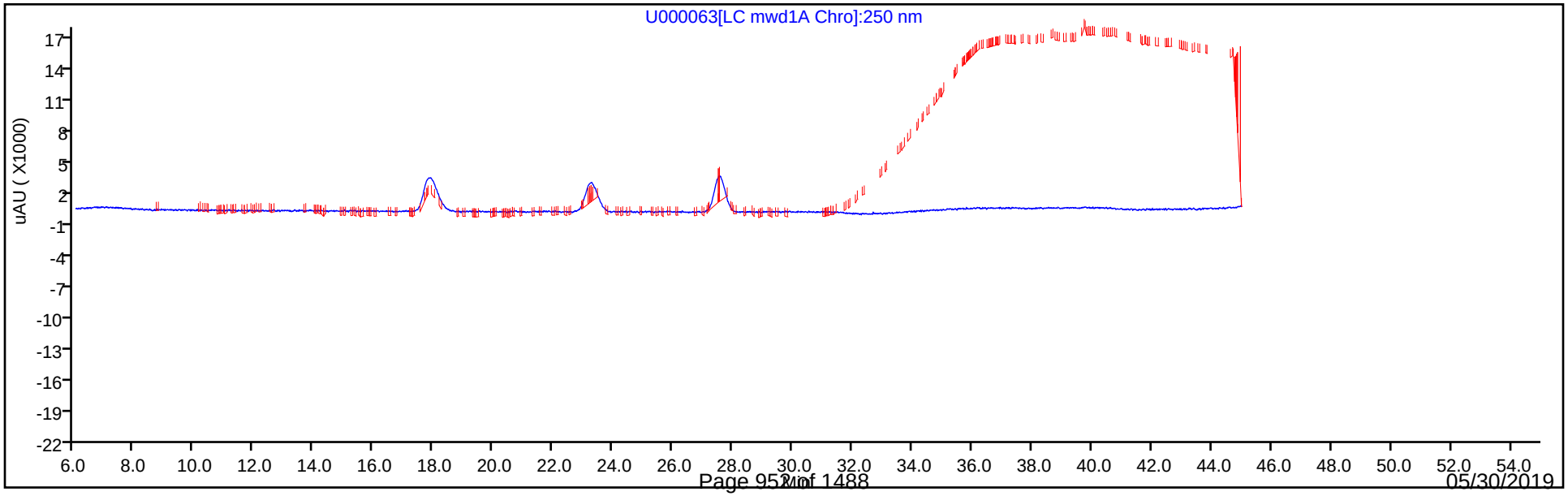
Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000063.D

Injection Date:	24-May-2019 02:33:41	Instrument ID:	LC12	Operator ID:	AO
Lims ID:	CCV MET			Worklist Smp#:	52
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-295993/72 Calibration Date: 05/24/2019 13:07

Instrument ID: LC12 Calib Start Date: 05/14/2019 16:46

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 05/14/2019 22:31

Lab File ID: U000074.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Nitrobenzene	Ave	56.78	52.16		45.9	50.0	-8.1	15.0
1,3-Dinitrobenzene	Ave	116.8	108.5		46.5	50.0	-7.1	15.0
1,3,5-Trinitrobenzene	Ave	93.75	87.40		46.6	50.0	-6.8	15.0
2-Nitrotoluene	Ave	71.06	65.38		46.0	50.0	-8.0	15.0
4-Nitrotoluene	Ave	71.06	65.38		46.0	50.0	-8.0	15.0
3-Nitrotoluene	Lin2		40.14		45.0	50.0	-10.1	15.0
3,5-Dinitroaniline	Ave	100.1	89.72		44.8	50.0	-10.3	15.0
RDX	Lin2		49.96		46.1	50.0	-7.8	15.0
2,4-Dinitrotoluene	Ave	126.1	114.9		45.6	50.0	-8.8	15.0
2,6-Dinitrotoluene	Ave	95.11	86.44		45.4	50.0	-9.1	15.0
2-Amino-4,6-dinitrotoluene	Ave	202.2	182.1		45.0	50.0	-10.0	15.0
4-Amino-2,6-dinitrotoluene	Lin2		1803		49.7	50.0	-0.7	15.0
2,4,6-Trinitrotoluene	Ave	207.1	188.9		45.6	50.0	-8.8	15.0
HMX	Ave	157.0	141.5		45.1	50.0	-9.9	15.0
Nitroglycerin	Ave	193.6	178.0		46.0	50.0	-8.1	15.0
Tetryl	Ave	235.2	211.9		45.1	50.0	-9.9	15.0
PETN	Ave	216.5	196.3		45.4	50.0	-9.3	15.0
3,4-Dinitrotoluene	Ave	140.0	124.4		44.4	50.0	-11.1	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-295993/72 Calibration Date: 05/24/2019 13:07

Instrument ID: LC12 Calib Start Date: 05/14/2019 16:46

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 05/14/2019 22:31

Lab File ID: U000074.D

Analyte	RT	RT WINDOW	
		FROM	TO
Nitrobenzene	22.07	21.82	22.32
1,3-Dinitrobenzene	24.45	24.20	24.70
1,3,5-Trinitrobenzene	26.61	26.27	26.95
2-Nitrotoluene	29.10	28.85	29.35
4-Nitrotoluene	29.10	28.85	29.35
3-Nitrotoluene	29.72	29.47	29.97
3,5-Dinitroaniline	30.44	30.18	30.70
RDX	31.25	31.00	31.50
2,4-Dinitrotoluene	32.13	31.88	32.38
2,6-Dinitrotoluene	32.82	32.57	33.07
2-Amino-4,6-dinitrotoluene	33.86	33.61	34.11
4-Amino-2,6-dinitrotoluene	34.11	33.86	34.36
2,4,6-Trinitrotoluene	35.35	35.10	35.60
HMX	36.20	35.95	36.45
Nitroglycerin	36.93	36.68	37.18
Tetryl	37.83	37.58	38.08
PETN	41.09	40.84	41.34
3,4-Dinitrotoluene	34.78	34.53	35.03

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000074.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 24-May-2019 13:07:16 ALS Bottle#: 8 Worklist Smp#: 72
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: AO Instrument ID: LC12
Sublist: chrom-LC12_Conf_8330*sub10

Method: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 24-May-2019 15:49:23 Calib Date: 15-May-2019 07:09:15
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0337

First Level Reviewer: cartiera Date: 24-May-2019 15:48:10

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
3 Nitrobenzene							
1	22.073	22.073	0.000	2608H	50.0	45.9	
6 1,3-Dinitrobenzene							
1	24.453	24.453	0.000	5426H	50.0	46.5	
4 Ethylene glycol dinitrate							
2	24.480	24.480	0.000	270H	50.0	5.05	
7 1,3,5-Trinitrobenzene							
1	26.613	26.613	0.000	4370H	50.0	46.6	
9 p-Nitrotoluene							
1	29.097	29.097	0.000	3269H	50.0	46.0	
10 o-Nitrotoluene							
1	29.097	29.097	0.000	3269H	50.0	46.0	
11 m-Nitrotoluene							
1	29.720	29.720	0.000	2007H	50.0	45.0	
12 3,5-Dinitroaniline							
1	30.440	30.440	0.000	4486H	50.0	44.8	
13 RDX							
1	31.250	31.250	0.000	2498H	50.0	46.1	
14 2,4-Dinitrotoluene							
1	32.133	32.133	0.000	5747H	50.0	45.6	
15 2,6-Dinitrotoluene							
1	32.823	32.823	0.000	4322H	50.0	45.4	
16 2-Amino-4,6-dinitrotoluene							
1	33.860	33.860	0.000	9104H	50.0	45.0	
17 4-Amino-2,6-dinitrotoluene							
1	34.113	34.113	0.000	90143	50.0	49.7	
$ 18 3,4-Dinitrotoluene							
1	34.783	34.783	0.000	6222H	50.0	44.4	

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
19 2,4,6-Trinitrotoluene							M
1	35.347	35.347	0.000	9444H	50.0	45.6	M
20 HMX							
1	36.200	36.200	0.000	7074H	50.0	45.1	
21 Nitroglycerin							
2	36.933	36.933	0.000	8898H	50.0	46.0	
22 Tetryl							
1	37.827	37.827	0.000	10596H	50.0	45.1	
23 PETN							
2	41.093	41.093	0.000	9817H	50.0	45.4	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

HP8330L4_00062 Amount Added: 1.00 Units: mL

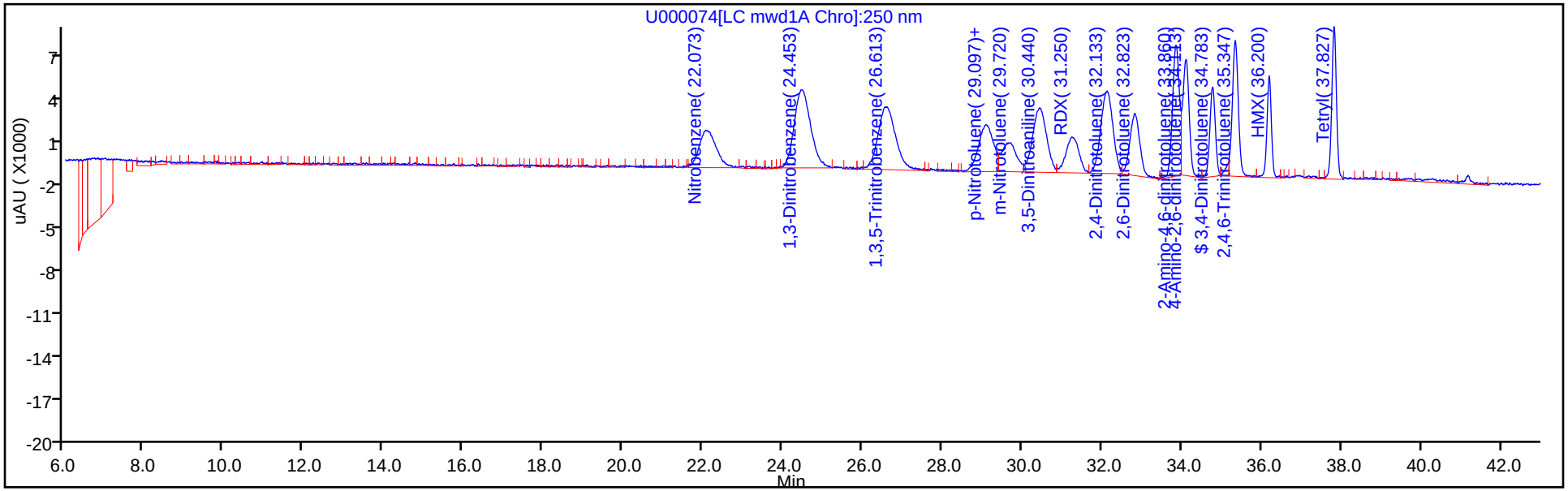
Report Date: 24-May-2019 15:49:24 Chrom Revision: 2.3 12-May-2019 16:28:34

Eurofins TestAmerica, Sacramento

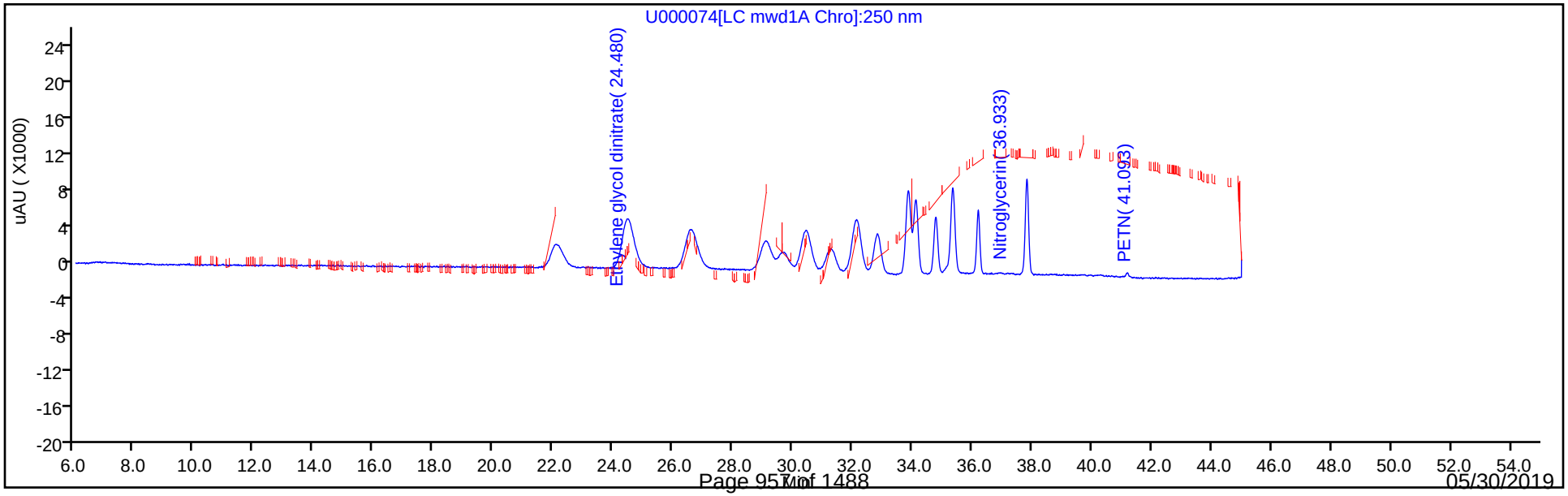
Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000074.D

Injection Date:	24-May-2019 13:07:16	Instrument ID:	LC12	Operator ID:	AO
Lims ID:	CCV			Worklist Smp#:	72
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

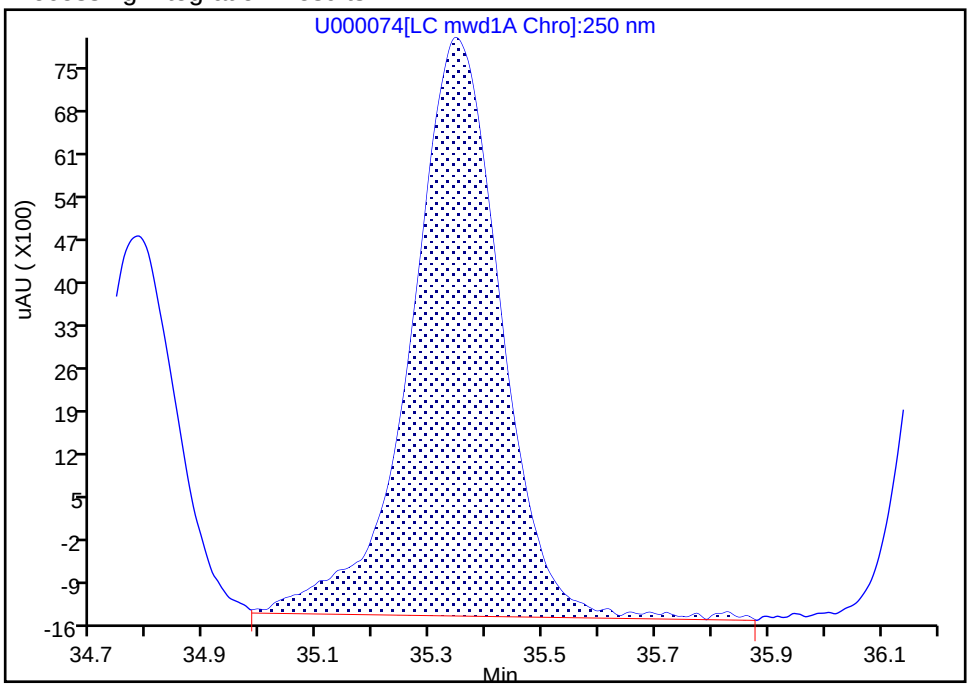
Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000074.D				
Injection Date:	24-May-2019 13:07:16	Instrument ID:	LC12		
Lims ID:	CCV				
Client ID:					
Operator ID:	AO	ALS Bottle#:	8	Worklist Smp#:	72
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

19 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

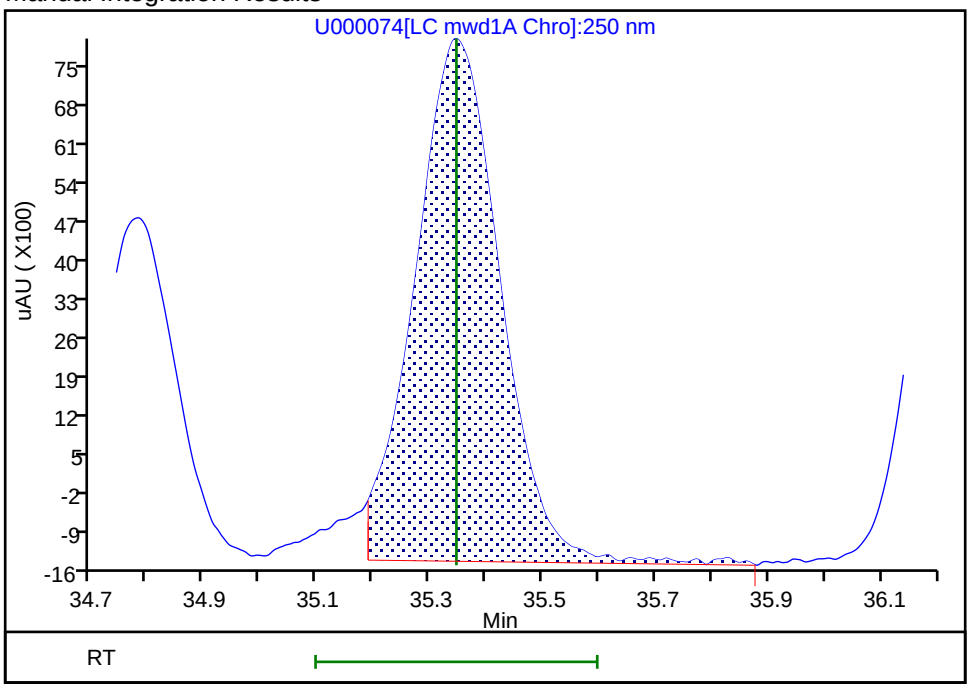
Processing Integration Results

RT: 35.35
Height: 9444
Amount: 45.611793
Amount Units: ng/ml



Manual Integration Results

RT: 35.35
Height: 9444
Amount: 45.611793
Amount Units: ng/ml



Reviewer: cartiera, 24-May-2019 15:48:03

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-295993/73 Calibration Date: 05/24/2019 14:04

Instrument ID: LC12 Calib Start Date: 05/15/2019 02:21

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 05/15/2019 07:09

Lab File ID: U000075.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
TNX	Ave	69.80	65.32		46.8	50.0	-6.4	15.0
DNX	Ave	60.43	57.21		47.5	50.2	-5.3	15.0
MNX	Ave	65.09	60.38		54.3	58.5	-7.2	15.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Lab Sample ID: CCV 320-295993/73 Calibration Date: 05/24/2019 14:04

Instrument ID: LC12 Calib Start Date: 05/15/2019 02:21

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 05/15/2019 07:09

Lab File ID: U000075.D

Analyte	RT	RT WINDOW	
		FROM	TO
TNX	17.78	17.53	18.03
DNX	23.15	22.88	23.42
MNX	27.43	27.15	27.71

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000075.D
Lims ID: CCV MET
Client ID:
Sample Type: CCV
Inject. Date: 24-May-2019 14:04:48 ALS Bottle#: 9 Worklist Smp#: 73
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: CCV MET
Operator ID: AO Instrument ID: LC12
Sublist: chrom-LC12_Conf_8330*sub2

Method: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 24-May-2019 15:49:27 Calib Date: 15-May-2019 07:09:15
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0337

First Level Reviewer: cartiera Date: 24-May-2019 15:48:44

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
2 TNX							
1	17.775	17.775	0.000	3266H	50.0	46.8	
5 DNX							
1	23.145	23.145	0.000	2872H	50.2	47.5	
8 MNX							
1	27.432	27.432	0.000	3532H	58.5	54.3	

Reagents:

HPMETABL4_00040 Amount Added: 1.00 Units: mL

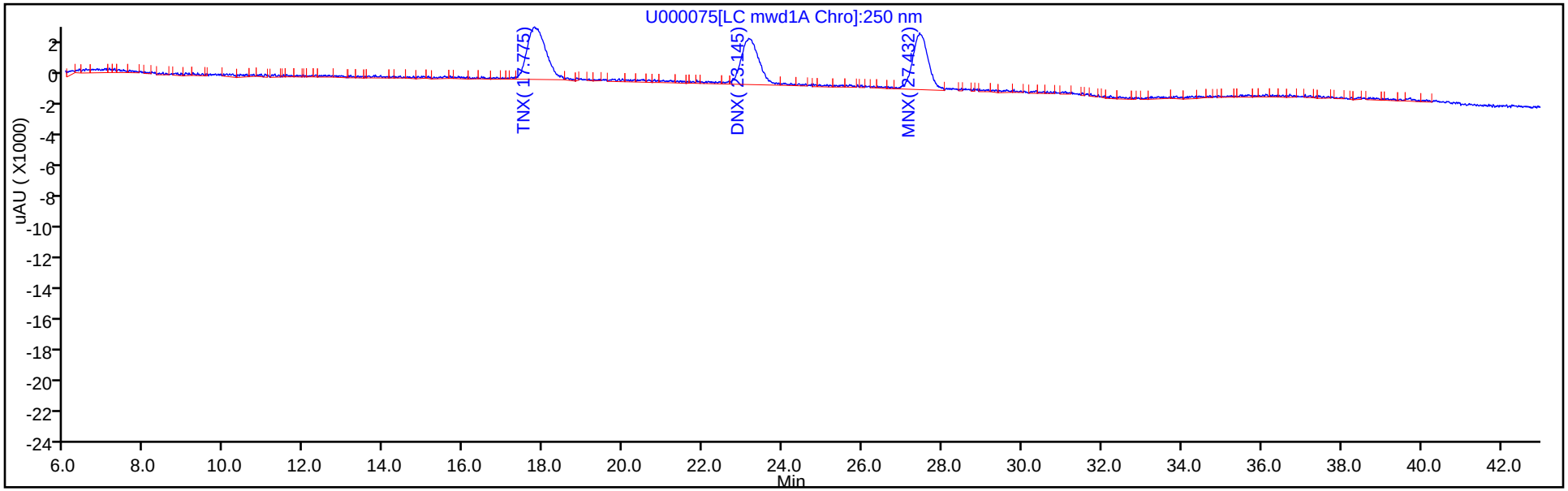
Report Date: 24-May-2019 15:49:28 Chrom Revision: 2.3 12-May-2019 16:28:34

Eurofins TestAmerica, Sacramento

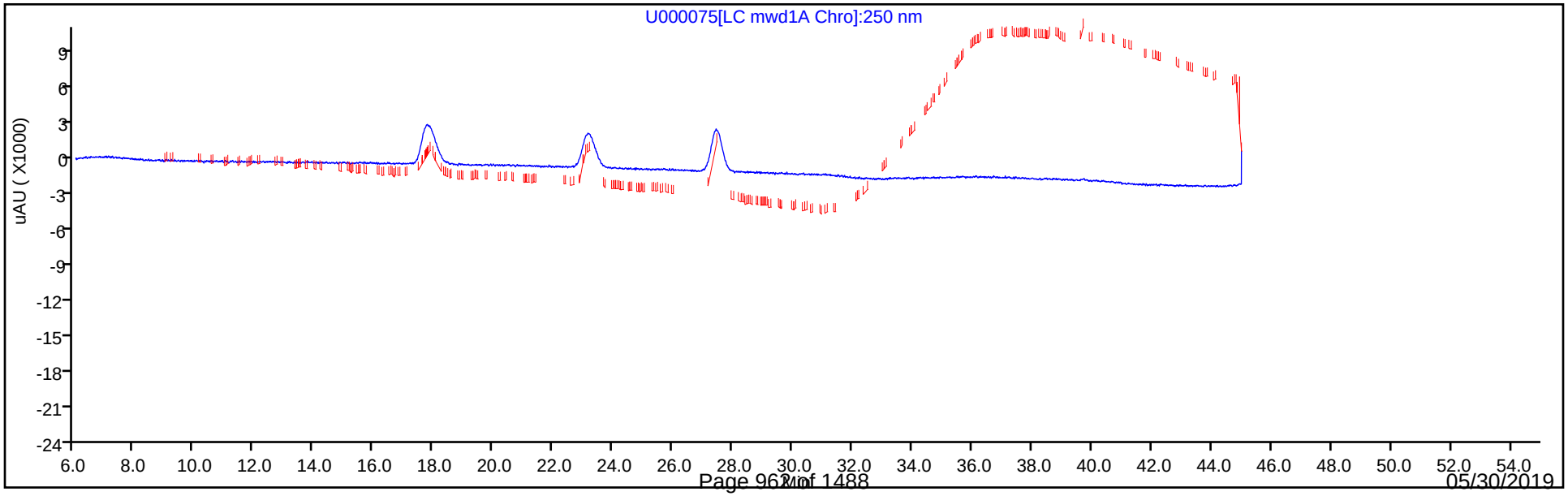
Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000075.D

Injection Date:	24-May-2019 14:04:48	Instrument ID:	LC12	Operator ID:	AO
Lims ID:	CCV MET			Worklist Smp#:	73
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 320-291065/1-A

Matrix: Water Lab File ID: ZD0000059.D

Analysis Method: 8330A Date Collected:

Extraction Method: 8330-Prep Date Extracted: 04/29/2019 06:59

Sample wt/vol: 1000(mL) Date Analyzed: 05/02/2019 17:15

Con. Extract Vol.: 20(mL) Dilution Factor: 1

Injection Volume: 500(uL) GC Column: Synergi C18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 291526 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	0.10	U M	0.15	0.10	0.031
99-65-0	1,3-Dinitrobenzene	0.10	U	0.15	0.10	0.050
118-96-7	2,4,6-Trinitrotoluene	0.10	U M	0.15	0.10	0.050
121-14-2	2,4-Dinitrotoluene	0.10	U	0.13	0.10	0.050
606-20-2	2,6-Dinitrotoluene	0.10	U	0.13	0.10	0.050
35572-78-2	2-Amino-4,6-dinitrotoluene	0.10	U	0.15	0.10	0.030
88-72-2	2-Nitrotoluene	0.20	U	0.50	0.20	0.088
99-08-1	3-Nitrotoluene	0.20	U	0.50	0.20	0.057
19406-51-0	4-Amino-2,6-dinitrotoluene	0.10	U	0.15	0.10	0.050
99-99-0	4-Nitrotoluene	0.20	U	0.50	0.20	0.088
2691-41-0	HMX	0.10	U	0.15	0.10	0.036
5755-27-1	MNX	0.10	U	0.50	0.10	0.028
98-95-3	Nitrobenzene	0.10	U	0.15	0.10	0.050
121-82-4	RDX	0.10	U	0.15	0.10	0.036
479-45-8	Tetryl	0.10	U	0.15	0.10	0.050

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	95		79-111

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000059.D
Lims ID: MB 320-291065/1-A
Client ID:
Sample Type: MB
Inject. Date: 02-May-2019 17:15:20 ALS Bottle#: 60 Worklist Smp#: 59
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: 320-0075622-059
Operator ID: AO Instrument ID: LC11

Method: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 03-May-2019 09:45:56 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0325

First Level Reviewer: ortizam Date: 03-May-2019 09:45:56

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
7 2,4,6-Trinitrophenol							
2	21.984	22.020	-0.036	324H		NC	
1	21.977	22.017	-0.040	705H			
$ 16 3,4-Dinitrotoluene							
1	29.407	29.471	-0.064	8715H	125.0	119.1	
2	29.407	29.471	-0.064	17858H			

QC Flag Legend

Processing Flags
NC - Not Calibrated
H - Response Measured by Height

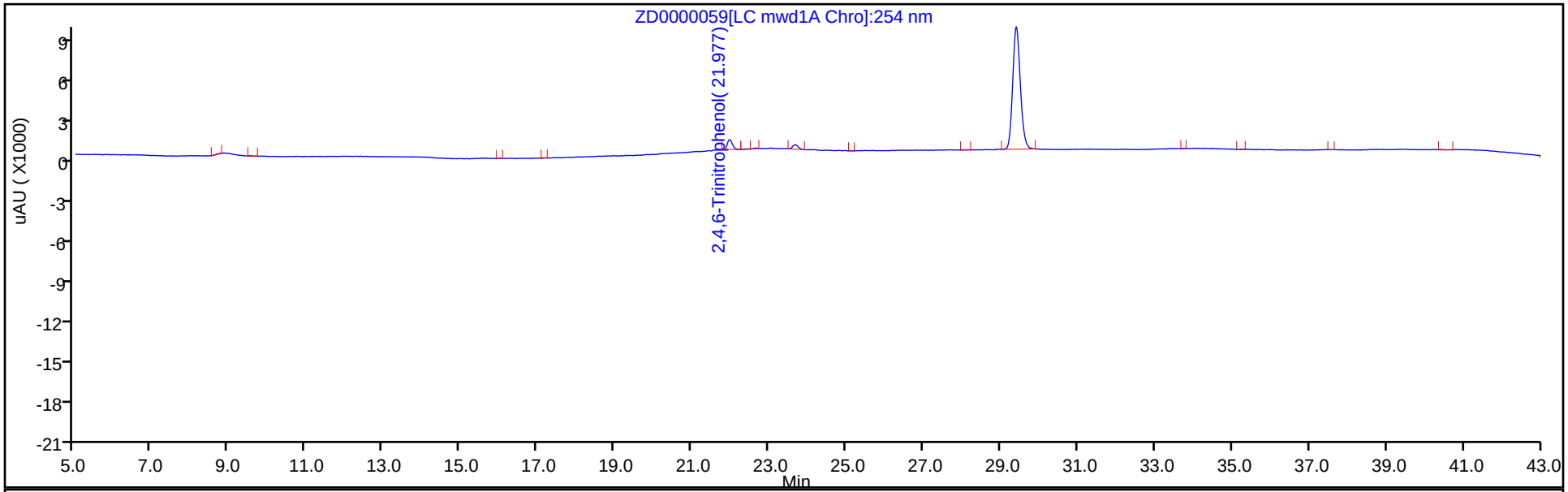
Report Date: 03-May-2019 09:45:57 Chrom Revision: 2.3 01-May-2019 12:41:30

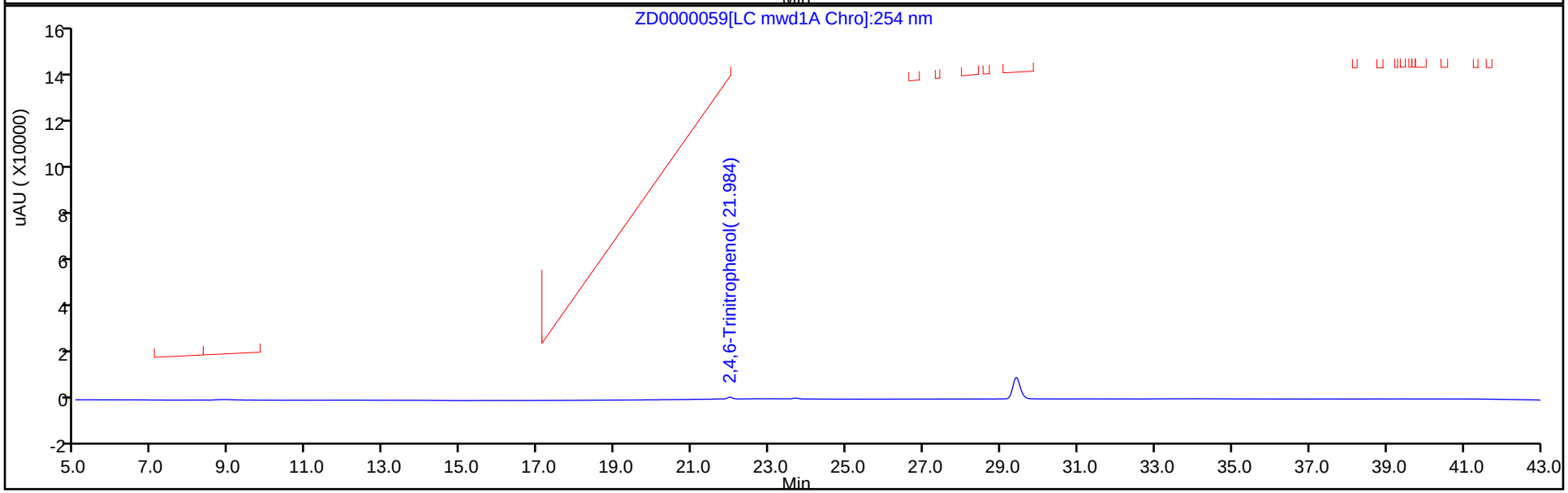
Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000059.D

Injection Date:	02-May-2019 17:15:20	Instrument ID:	LC11	Operator ID:	AO
Lims ID:	MB 320-291065/1-A			Worklist Smp#:	59
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	60
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1





Eurofins TestAmerica, Sacramento

Recovery Report

Data File:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000059.D				
Lims ID:	MB 320-291065/1-A				
Client ID:					
Sample Type:	MB				
Inject. Date:	02-May-2019 17:15:20	ALS Bottle#:	60	Worklist Smp#:	59
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Sample Info:	320-0075622-059				
Operator ID:	AO	Instrument ID:	LC11		
Method:	\\chromna\Sacramento\ChromData\LC11\20190430-75622.b\8330 Metab LC11.m				
Limit Group:	LC 8330A ICAL				
Last Update:	03-May-2019 09:45:56	Calib Date:	28-Feb-2019 10:01:13		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D				
Column 1 :	Synergi Hydro-RP C18 (4.60 mm)		Det: LC mwd1A, 250 nm		
Process Host:	CTX0325				
First Level Reviewer: ortizam		Date:	03-May-2019 09:45:56		

Compound	Amount Added	Amount Recovered	% Rec.
$ 16 3,4-Dinitrotoluene	125.0	119.1	95.25

User Disabled Compound Report

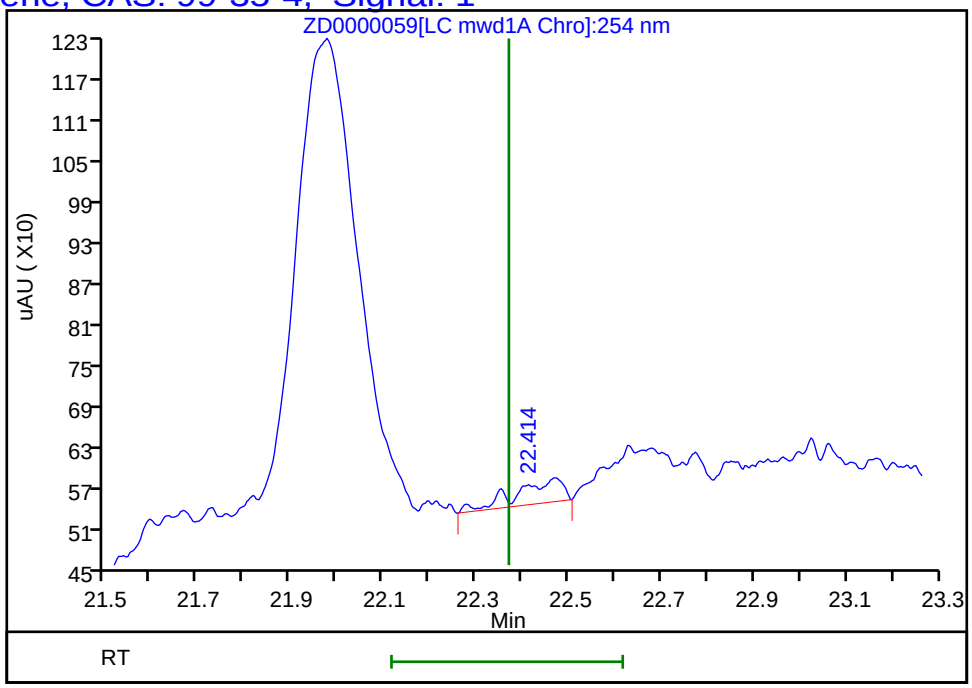
Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000059.D
Injection Date: 02-May-2019 17:15:20 Instrument ID: LC11
Lims ID: MB 320-291065/1-A
Client ID:
Operator ID: AO ALS Bottle#: 60 Worklist Smp#: 59
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: 8330 Metab LC11 Limit Group: LC 8330A ICAL

Column: Synergi Hydro-RP C18 (4.60 mm) Detector LC mwd1A, 250 nm

8 1,3,5-Trinitrobenzene, CAS: 99-35-4, Signal: 1

RT: 22.41
Response: 30
Amount: 0.128058



Reviewer: ortizam, 03-May-2019 09:45:56
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

User Disabled Compound Report

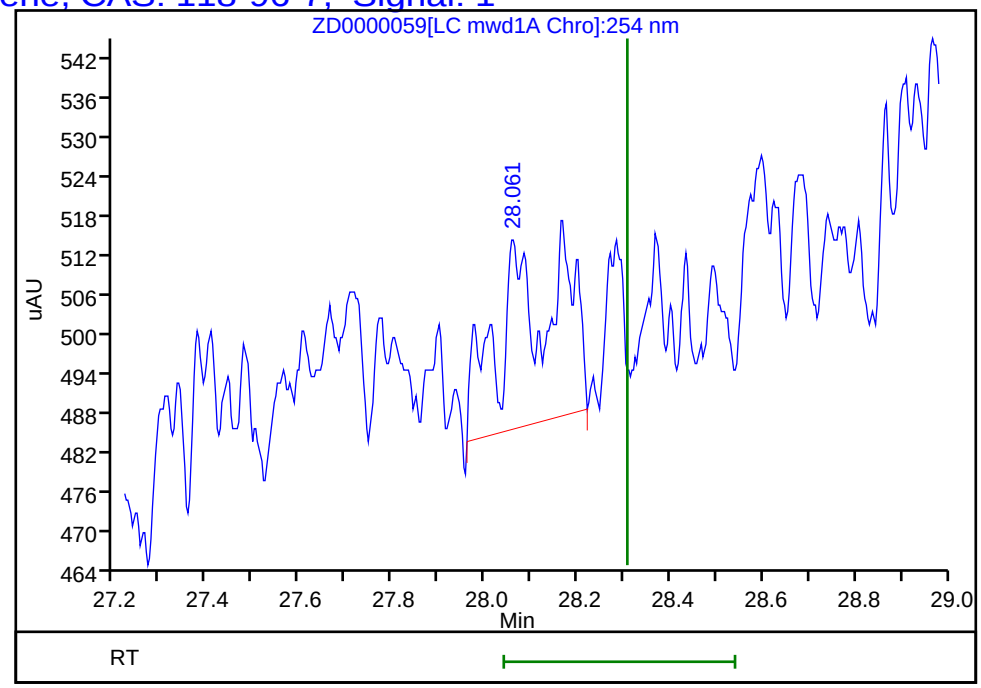
Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190430-75622.b\ZD0000059.D
Injection Date: 02-May-2019 17:15:20 Instrument ID: LC11
Lims ID: MB 320-291065/1-A
Client ID:
Operator ID: AO ALS Bottle#: 60 Worklist Smp#: 59
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: 8330 Metab LC11 Limit Group: LC 8330A ICAL

Column: Synergi Hydro-RP C18 (4.60 mm) Detector LC mwd1A, 250 nm

14 2,4,6-Trinitrotoluene, CAS: 118-96-7, Signal: 1

RT: 28.06
Response: 30
Amount: 0.260701



Reviewer: ortizam, 03-May-2019 09:45:56
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 320-291065/1-A

Matrix: Water Lab File ID: U000053.D

Analysis Method: 8330A Date Collected:

Extraction Method: 8330-Prep Date Extracted: 04/29/2019 06:59

Sample wt/vol: 1000(mL) Date Analyzed: 05/23/2019 16:57

Con. Extract Vol.: 20(mL) Dilution Factor: 1

Injection Volume: 500(uL) GC Column: Zorbax CN ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 295993 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	94		79-111

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000053.D
Lims ID: MB 320-291065/1-A
Client ID:
Sample Type: MB
Inject. Date: 23-May-2019 16:57:56 ALS Bottle#: 46 Worklist Smp#: 53
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-291065/1-a
Operator ID: AO Instrument ID: LC12

Method: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 24-May-2019 09:44:12 Calib Date: 15-May-2019 07:09:15
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0337

First Level Reviewer: cartiera Date: 24-May-2019 09:44:12

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
1 2,4,6-Trinitrophenol							
2	3.792	3.785	0.007	2910H		NC	
1	0.138	0.102	0.036	260H			
4 Ethylene glycol dinitrate							
2	24.488	24.482	0.006	216H		4.04	
7 1,3,5-Trinitrobenzene							
1	26.695	26.635	0.060	1800H		19.2	
$ 18 3,4-Dinitrotoluene							
1	34.842	34.835	0.007	16471H	125.0	117.6	

QC Flag Legend

Processing Flags
NC - Not Calibrated
H - Response Measured by Height

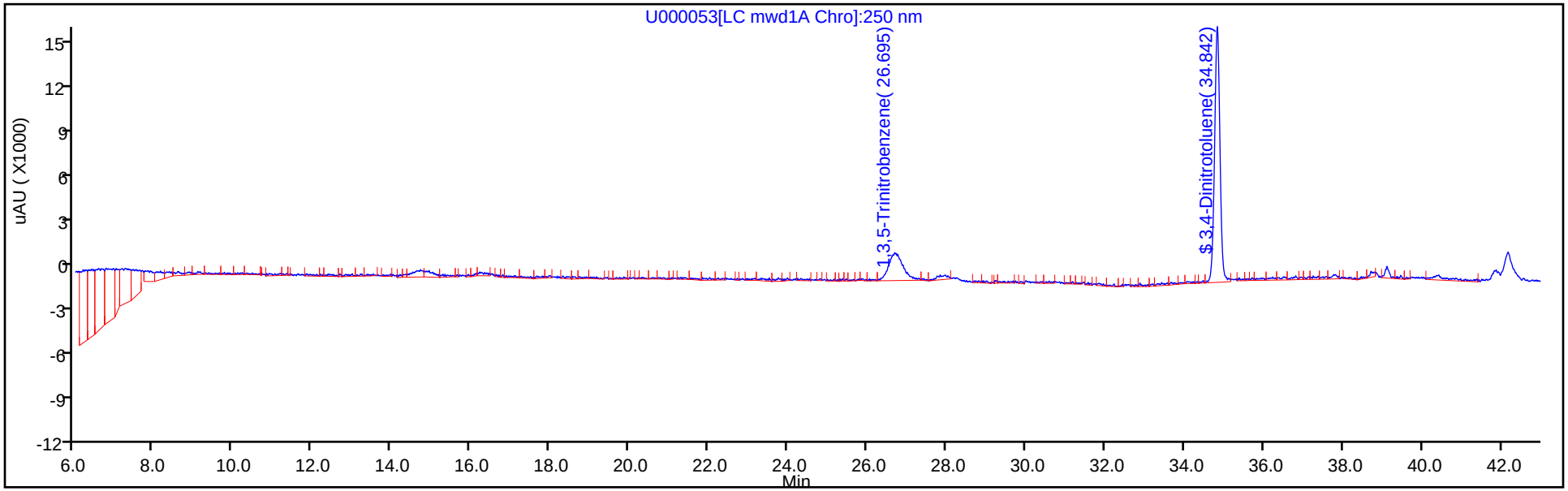
Report Date: 24-May-2019 09:44:13 Chrom Revision: 2.3 12-May-2019 16:28:34

Eurofins TestAmerica, Sacramento

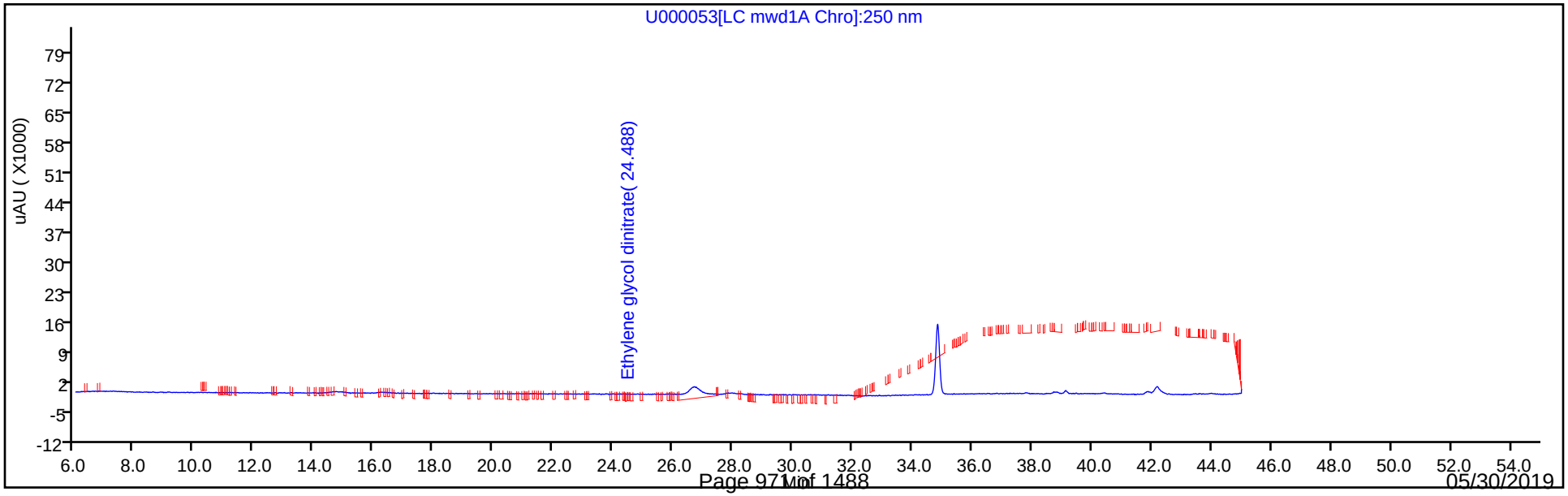
Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000053.D

Injection Date:	23-May-2019 16:57:56	Instrument ID:	LC12	Operator ID:	AO
Lims ID:	MB 320-291065/1-A			Worklist Smp#:	53
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	46
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



Eurofins TestAmerica, Sacramento
Recovery Report

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000053.D				
Lims ID:	MB 320-291065/1-A				
Client ID:					
Sample Type:	MB				
Inject. Date:	23-May-2019 16:57:56	ALS Bottle#:	46	Worklist Smp#:	53
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Sample Info:	mb 320-291065/1-a				
Operator ID:	AO	Instrument ID:	LC12		
Method:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\LC12_Conf_8330.m				
Limit Group:	LC 8330A ICAL				
Last Update:	24-May-2019 09:44:12	Calib Date:	15-May-2019 07:09:15		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D				
Column 1 :	Zorbax Cyano CN (4.60 mm)		Det: LC mwd1A, 250 nm		
Process Host:	CTX0337				

First Level Reviewer: cartiera Date: 24-May-2019 09:44:12

Compound	Amount Added	Amount Recovered	% Rec.
$ 18 3,4-Dinitrotoluene	125.0	117.6	94.11

User Disabled Compound Report

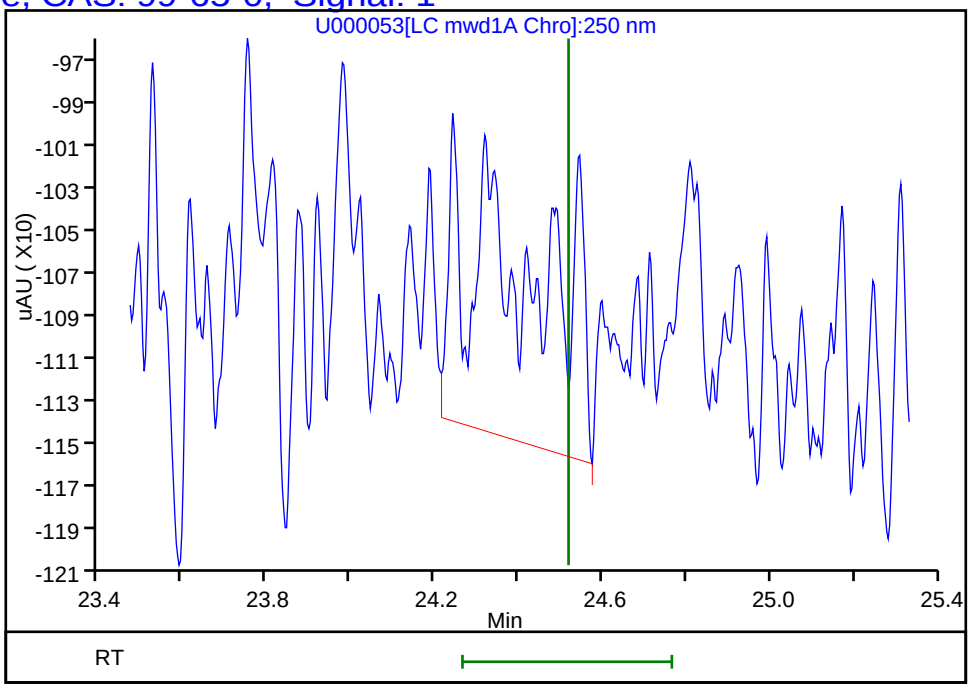
Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000053.D
Injection Date: 23-May-2019 16:57:56 Instrument ID: LC12
Lims ID: MB 320-291065/1-A
Client ID:
Operator ID: AO ALS Bottle#: 46 Worklist Smp#: 53
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: LC12_Conf_8330 Limit Group: LC 8330A ICAL

Column: Zorbax Cyano CN (4.60 mm) Detector LC mwd1A, 250 nm

6 1,3-Dinitrobenzene, CAS: 99-65-0, Signal: 1

RT: 24.32
Response: 134
Amount: 1.147527



Reviewer: cartiera, 24-May-2019 09:44:12
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

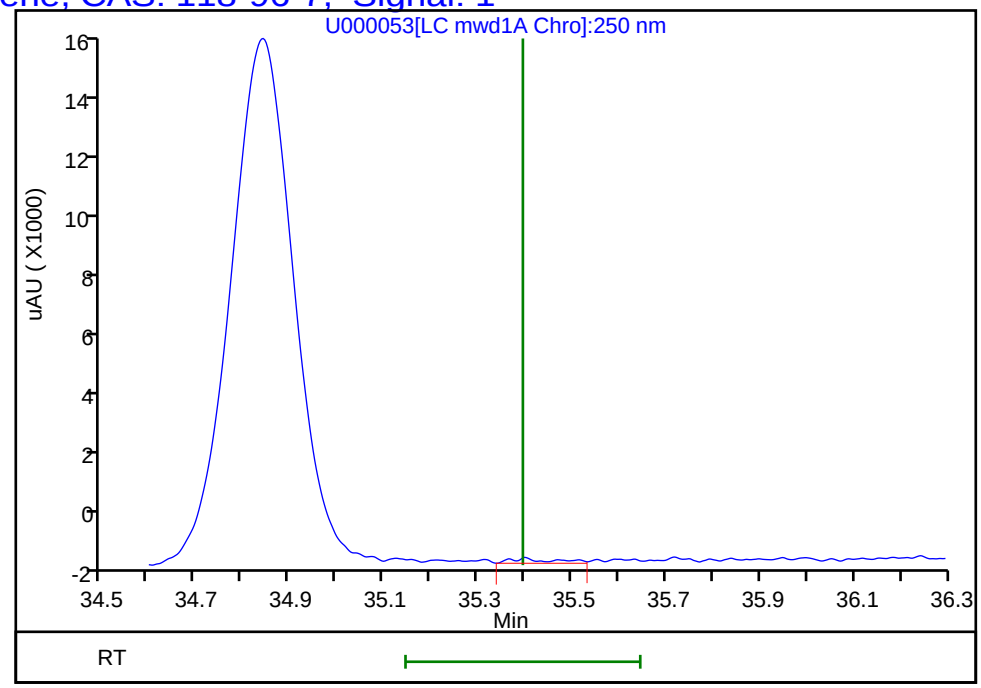
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000053.D				
Injection Date:	23-May-2019 16:57:56	Instrument ID:	LC12		
Lims ID:	MB 320-291065/1-A				
Client ID:					
Operator ID:	AO	ALS Bottle#:	46	Worklist Smp#:	53
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

19 2,4,6-Trinitrotoluene, CAS: 118-96-7, Signal: 1

RT: 35.40
Response: 184
Amount: 0.888667



Reviewer: cartiera, 24-May-2019 09:44:12
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

User Disabled Compound Report

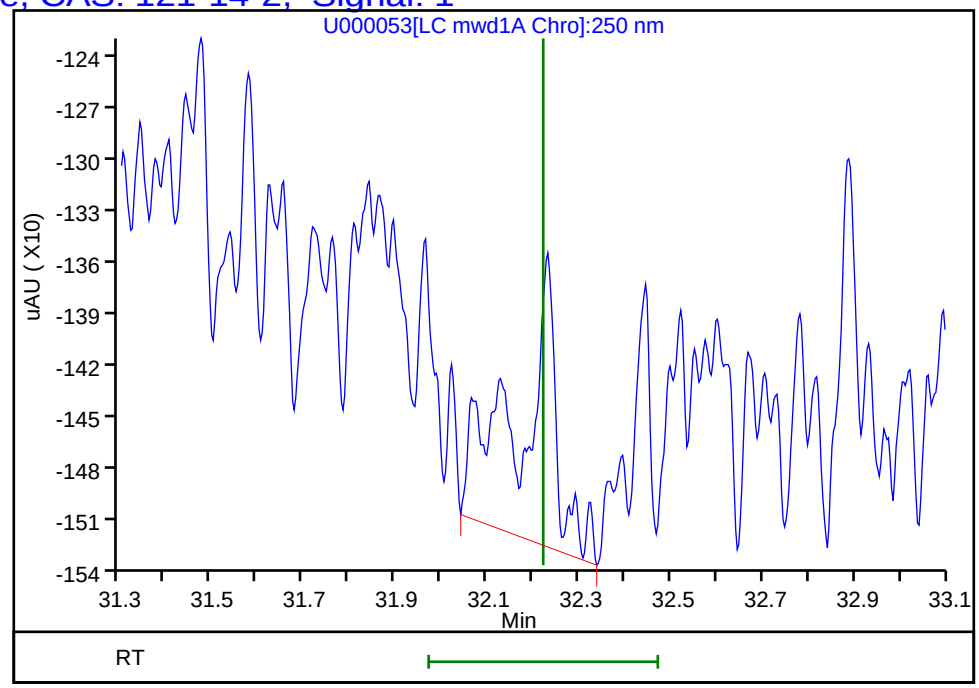
Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000053.D
Injection Date: 23-May-2019 16:57:56 Instrument ID: LC12
Lims ID: MB 320-291065/1-A
Client ID:
Operator ID: AO ALS Bottle#: 46 Worklist Smp#: 53
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: LC12_Conf_8330 Limit Group: LC 8330A ICAL

Column: Zorbax Cyano CN (4.60 mm) Detector LC mwd1A, 250 nm

14 2,4-Dinitrotoluene, CAS: 121-14-2, Signal: 1

RT: 32.23
Response: 168
Amount: 1.332413



Reviewer: cartiera, 24-May-2019 09:44:12
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

User Disabled Compound Report

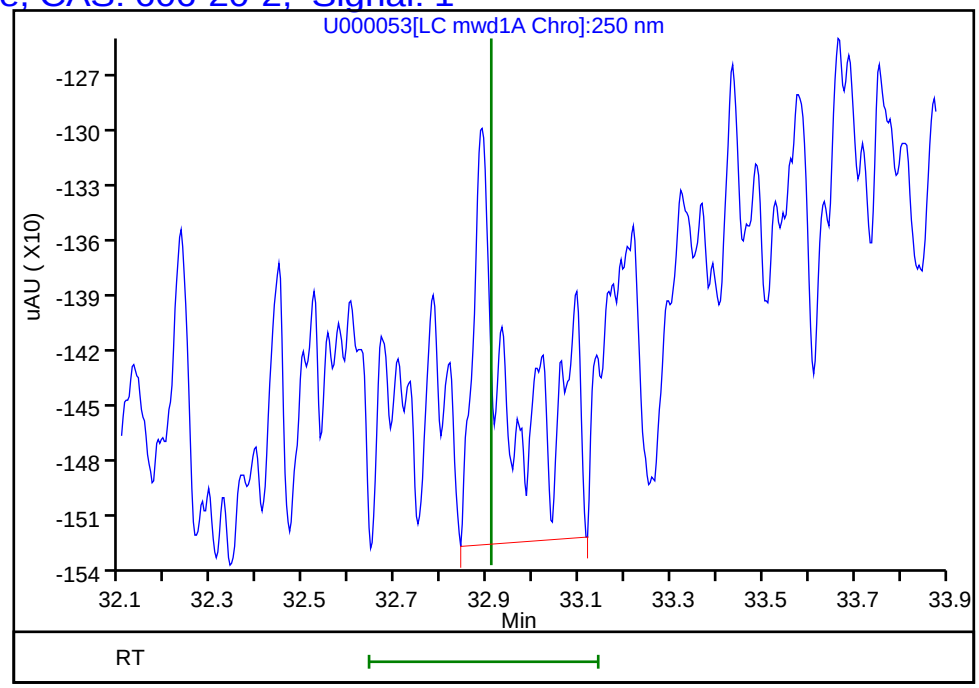
Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000053.D
Injection Date: 23-May-2019 16:57:56 Instrument ID: LC12
Lims ID: MB 320-291065/1-A
Client ID:
Operator ID: AO ALS Bottle#: 46 Worklist Smp#: 53
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: LC12_Conf_8330 Limit Group: LC 8330A ICAL

Column: Zorbax Cyano CN (4.60 mm) Detector LC mwd1A, 250 nm

15 2,6-Dinitrotoluene, CAS: 606-20-2, Signal: 1

RT: 32.89
Response: 222
Amount: 2.334024



Reviewer: cartiera, 24-May-2019 09:44:12
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

User Disabled Compound Report

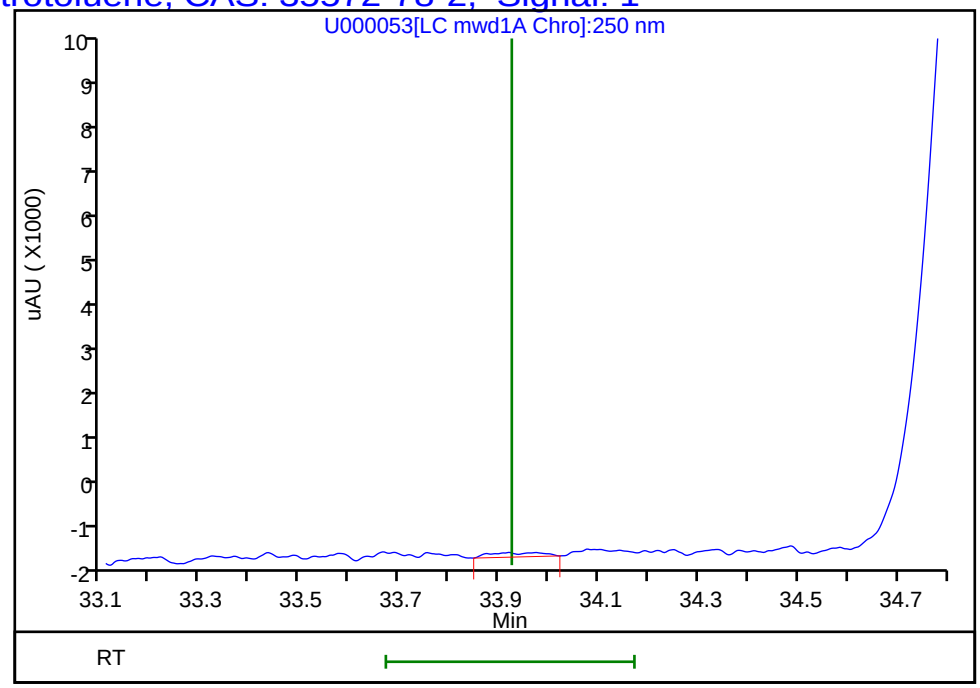
Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000053.D
Injection Date: 23-May-2019 16:57:56 Instrument ID: LC12
Lims ID: MB 320-291065/1-A
Client ID:
Operator ID: AO ALS Bottle#: 46 Worklist Smp#: 53
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: LC12_Conf_8330 Limit Group: LC 8330A ICAL

Column: Zorbax Cyano CN (4.60 mm) Detector LC mwd1A, 250 nm

16 2-Amino-4,6-dinitrotoluene, CAS: 35572-78-2, Signal: 1

RT: 33.92
Response: 96
Amount: 0.474702



Reviewer: cartiera, 24-May-2019 09:44:12
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

User Disabled Compound Report

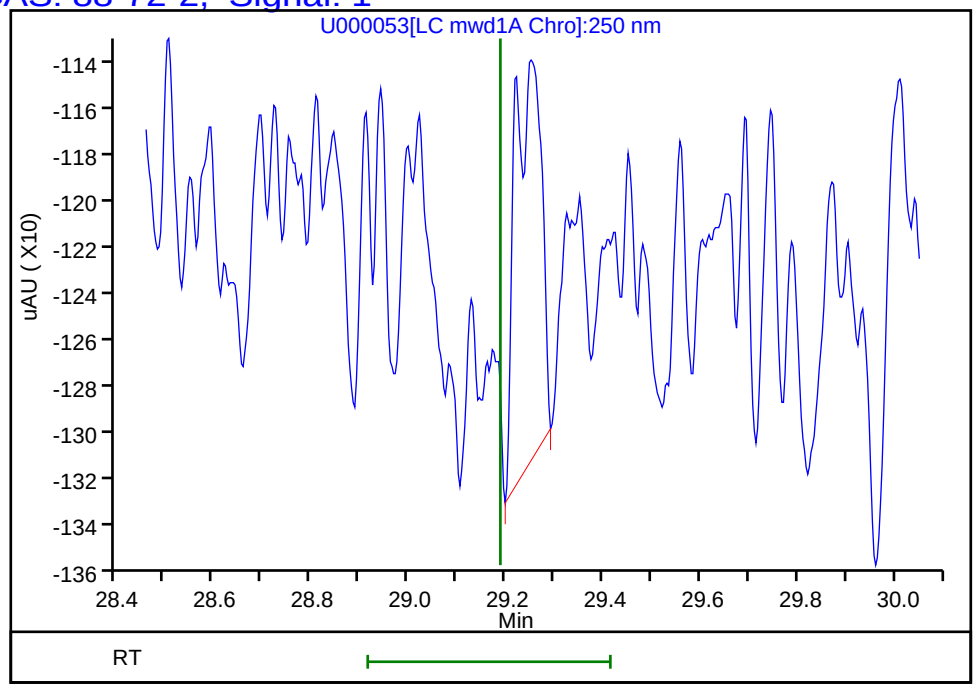
Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000053.D
Injection Date: 23-May-2019 16:57:56 Instrument ID: LC12
Lims ID: MB 320-291065/1-A
Client ID:
Operator ID: AO ALS Bottle#: 46 Worklist Smp#: 53
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: LC12_Conf_8330 Limit Group: LC 8330A ICAL

Column: Zorbax Cyano CN (4.60 mm) Detector LC mwd1A, 250 nm

10 o-Nitrotoluene, CAS: 88-72-2, Signal: 1

RT: 29.25
Response: 167
Amount: 2.350240



Reviewer: cartiera, 24-May-2019 09:44:12
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

User Disabled Compound Report

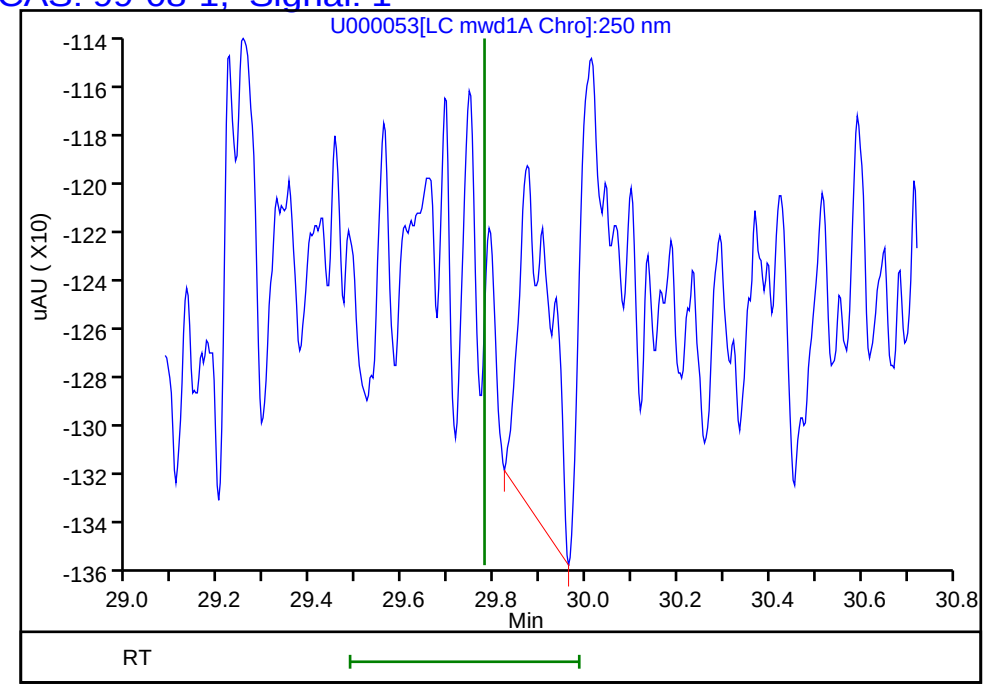
Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000053.D
Injection Date: 23-May-2019 16:57:56 Instrument ID: LC12
Lims ID: MB 320-291065/1-A
Client ID:
Operator ID: AO ALS Bottle#: 46 Worklist Smp#: 53
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: LC12_Conf_8330 Limit Group: LC 8330A ICAL

Column: Zorbax Cyano CN (4.60 mm) Detector LC mwd1A, 250 nm

11 m-Nitrotoluene, CAS: 99-08-1, Signal: 1

RT: 29.87
Response: 135
Amount: 0.898581



Reviewer: cartiera, 24-May-2019 09:44:12
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

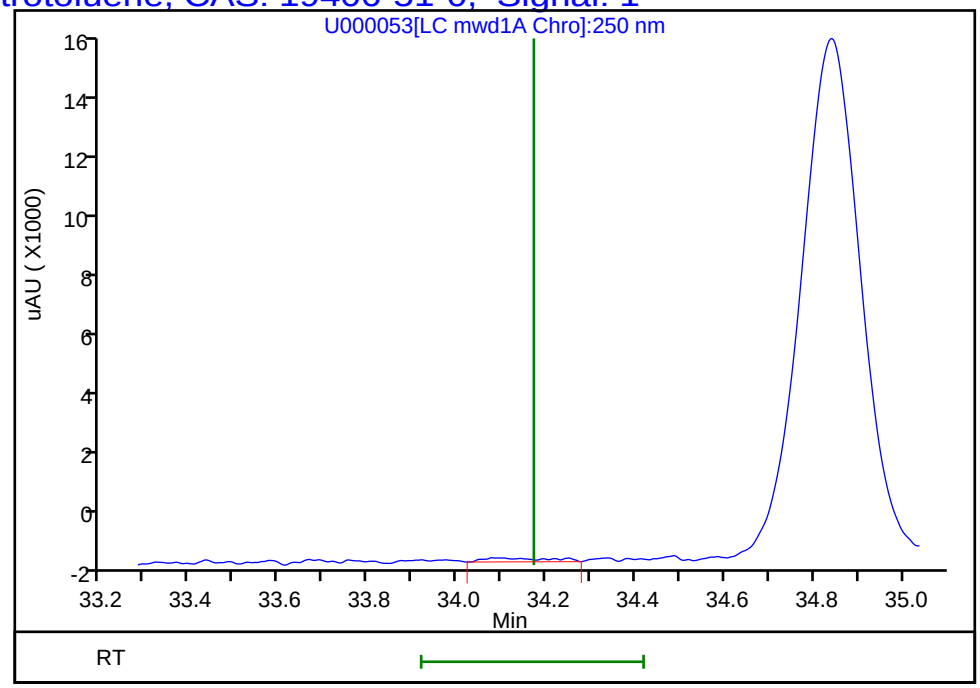
User Disabled Compound Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000053.D				
Injection Date:	23-May-2019 16:57:56	Instrument ID:	LC12		
Lims ID:	MB 320-291065/1-A				
Client ID:					
Operator ID:	AO	ALS Bottle#:	46	Worklist Smp#:	53
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

17 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0, Signal: 1

RT: 34.10
Response: 1276
Amount: 0.694250



Reviewer: cartiera, 24-May-2019 09:44:12

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

User Disabled Compound Report

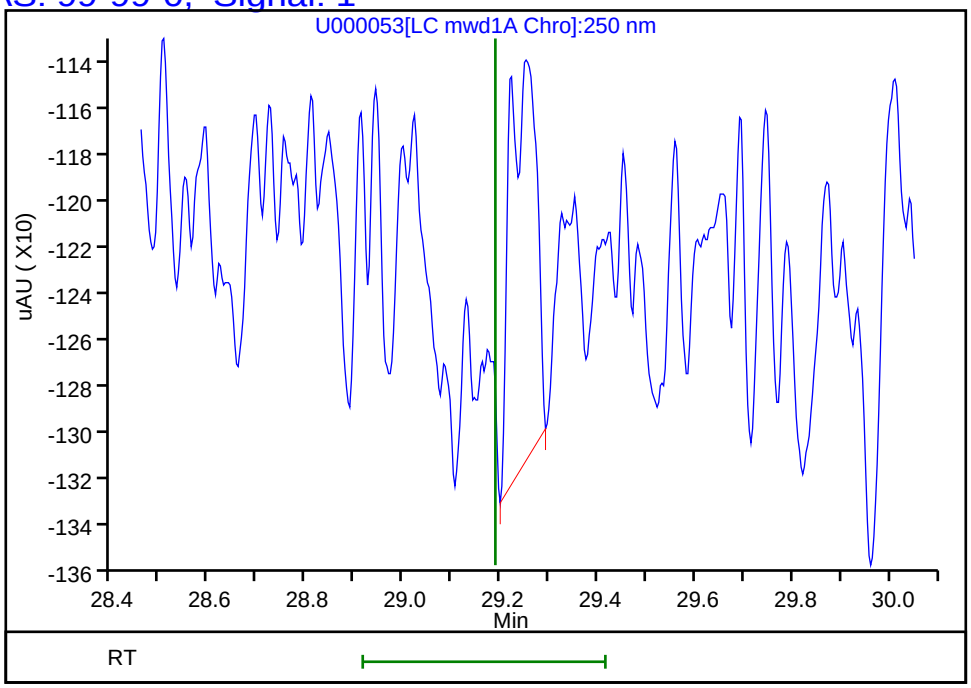
Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000053.D
Injection Date: 23-May-2019 16:57:56 Instrument ID: LC12
Lims ID: MB 320-291065/1-A
Client ID:
Operator ID: AO ALS Bottle#: 46 Worklist Smp#: 53
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: LC12_Conf_8330 Limit Group: LC 8330A ICAL

Column: Zorbax Cyano CN (4.60 mm) Detector LC mwd1A, 250 nm

9 p-Nitrotoluene, CAS: 99-99-0, Signal: 1

RT: 29.25
Response: 167
Amount: 2.350240



Reviewer: cartiera, 24-May-2019 09:44:12
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

User Disabled Compound Report

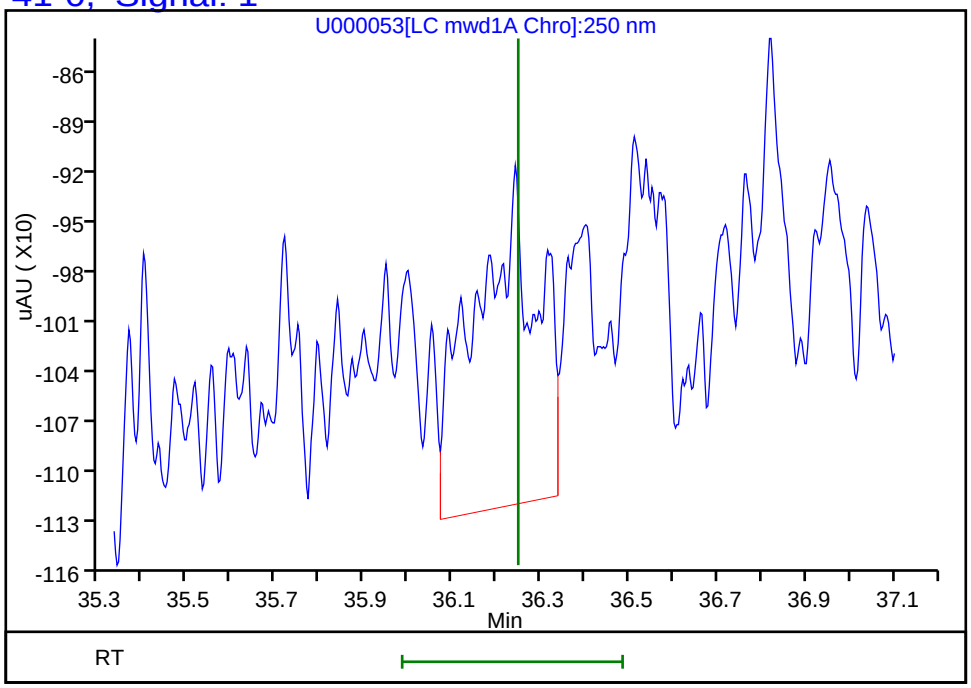
Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000053.D
Injection Date: 23-May-2019 16:57:56 Instrument ID: LC12
Lims ID: MB 320-291065/1-A
Client ID:
Operator ID: AO ALS Bottle#: 46 Worklist Smp#: 53
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: LC12_Conf_8330 Limit Group: LC 8330A ICAL

Column: Zorbax Cyano CN (4.60 mm) Detector LC mwd1A, 250 nm

20 HMX, CAS: 2691-41-0, Signal: 1

RT: 36.24
Response: 200
Amount: 1.274107



Reviewer: cartiera, 24-May-2019 09:44:12
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

User Disabled Compound Report

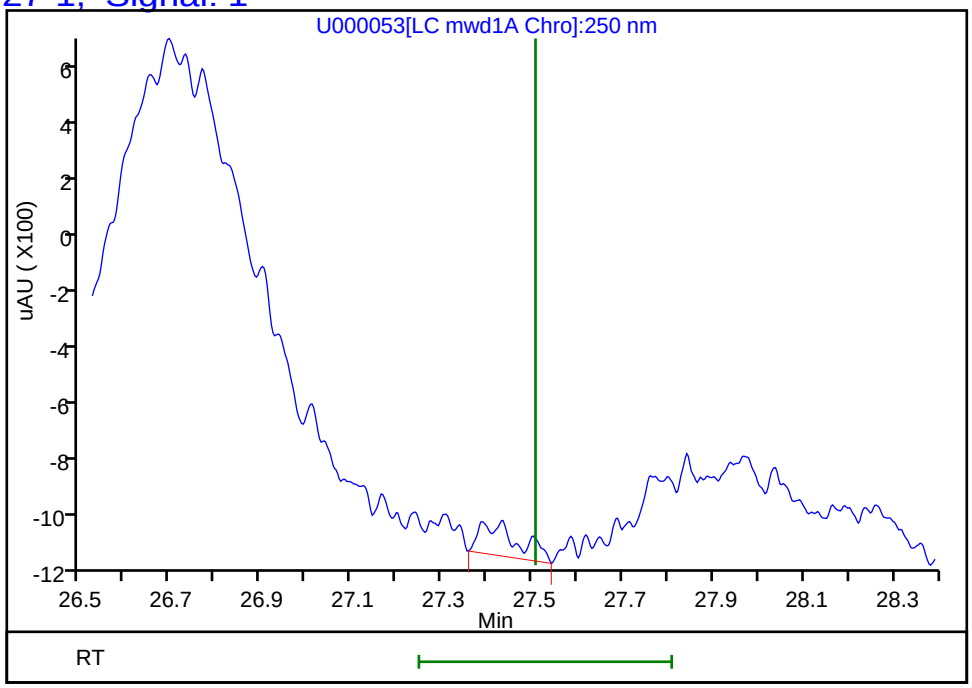
Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000053.D
Injection Date: 23-May-2019 16:57:56 Instrument ID: LC12
Lims ID: MB 320-291065/1-A
Client ID:
Operator ID: AO ALS Bottle#: 46 Worklist Smp#: 53
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: LC12_Conf_8330 Limit Group: LC 8330A ICAL

Column: Zorbax Cyano CN (4.60 mm) Detector LC mwd1A, 250 nm

8 MNX, CAS: 5755-27-1, Signal: 1

RT: 27.43
Response: 123
Amount: 1.889554



Reviewer: cartiera, 24-May-2019 09:44:12
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

User Disabled Compound Report

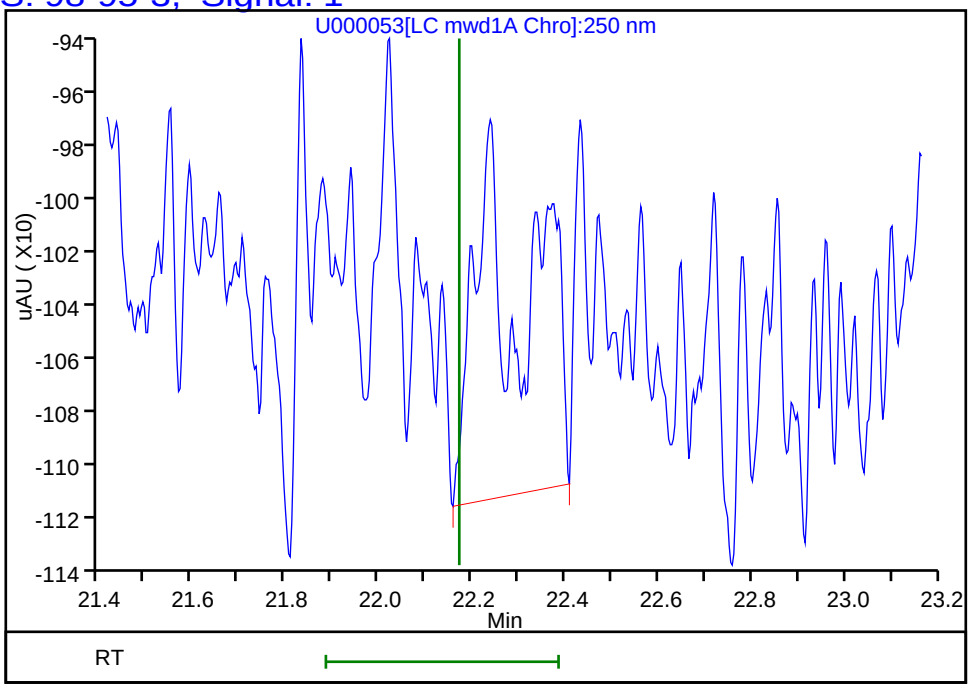
Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000053.D
Injection Date: 23-May-2019 16:57:56 Instrument ID: LC12
Lims ID: MB 320-291065/1-A
Client ID:
Operator ID: AO ALS Bottle#: 46 Worklist Smp#: 53
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: LC12_Conf_8330 Limit Group: LC 8330A ICAL

Column: Zorbax Cyano CN (4.60 mm) Detector LC mwd1A, 250 nm

3 Nitrobenzene, CAS: 98-95-3, Signal: 1

RT: 22.24
Response: 135
Amount: 2.377771



Reviewer: cartiera, 24-May-2019 09:44:12
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

User Disabled Compound Report

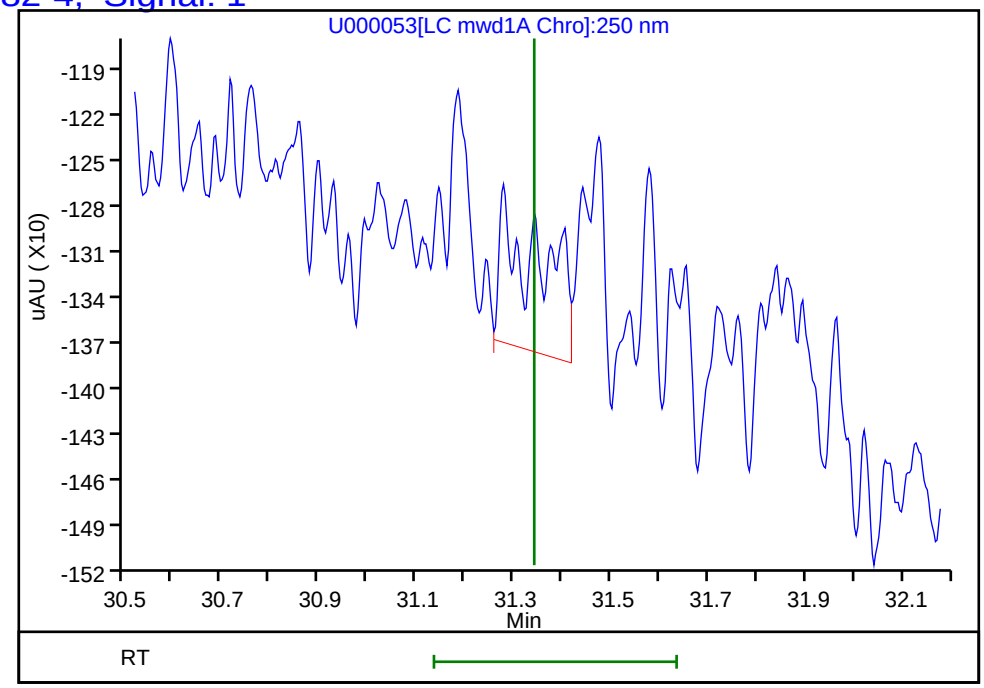
Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000053.D
Injection Date: 23-May-2019 16:57:56 Instrument ID: LC12
Lims ID: MB 320-291065/1-A
Client ID:
Operator ID: AO ALS Bottle#: 46 Worklist Smp#: 53
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: LC12_Conf_8330 Limit Group: LC 8330A ICAL

Column: Zorbax Cyano CN (4.60 mm) Detector LC mwd1A, 250 nm

13 RDX, CAS: 121-82-4, Signal: 1

RT: 31.34
Response: 88
Amount: 1.538319



Reviewer: cartiera, 24-May-2019 09:44:12
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

User Disabled Compound Report

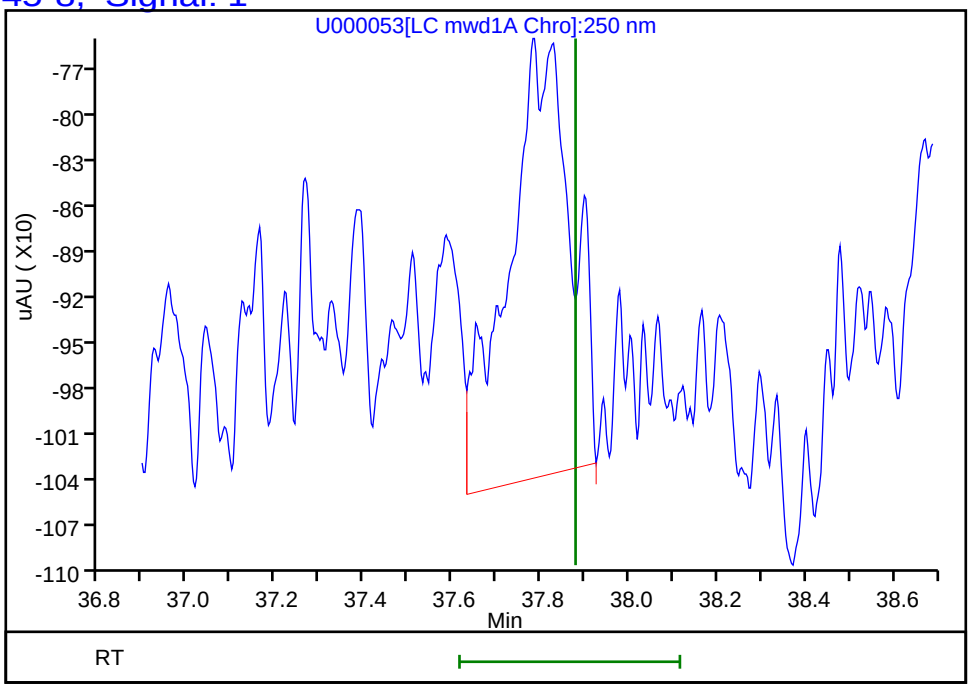
Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000053.D
Injection Date: 23-May-2019 16:57:56 Instrument ID: LC12
Lims ID: MB 320-291065/1-A
Client ID:
Operator ID: AO ALS Bottle#: 46 Worklist Smp#: 53
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Method: LC12_Conf_8330 Limit Group: LC 8330A ICAL

Column: Zorbax Cyano CN (4.60 mm) Detector LC mwd1A, 250 nm

22 Tetryl, CAS: 479-45-8, Signal: 1

RT: 37.78
Response: 279
Amount: 1.186346



Reviewer: cartiera, 24-May-2019 09:44:12
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 320-291065/2-A

Matrix: Water Lab File ID: F0000015.D

Analysis Method: 8330A Date Collected:

Extraction Method: 8330-Prep Date Extracted: 04/29/2019 06:59

Sample wt/vol: 1000(mL) Date Analyzed: 05/07/2019 01:48

Con. Extract Vol.: 20(mL) Dilution Factor: 1

Injection Volume: 500(uL) GC Column: Synergi C18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 292661 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	0.957		0.15	0.10	0.031
99-65-0	1,3-Dinitrobenzene	0.977		0.15	0.10	0.050
118-96-7	2,4,6-Trinitrotoluene	0.873		0.15	0.10	0.050
121-14-2	2,4-Dinitrotoluene	0.953		0.13	0.10	0.050
606-20-2	2,6-Dinitrotoluene	0.940		0.13	0.10	0.050
35572-78-2	2-Amino-4,6-dinitrotoluene	0.977		0.15	0.10	0.030
88-72-2	2-Nitrotoluene	0.931		0.50	0.20	0.088
99-08-1	3-Nitrotoluene	0.932		0.50	0.20	0.057
19406-51-0	4-Amino-2,6-dinitrotoluene	1.01	M	0.15	0.10	0.050
99-99-0	4-Nitrotoluene	0.918		0.50	0.20	0.088
2691-41-0	HMX	0.984		0.15	0.10	0.036
5755-27-1	MNX	5.15		0.50	0.10	0.028
98-95-3	Nitrobenzene	0.977		0.15	0.10	0.050
121-82-4	RDX	1.08		0.15	0.10	0.036
479-45-8	Tetryl	0.872		0.15	0.10	0.050

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	93	M	79-111

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190506-75892.b\F0000015.D
Lims ID: LCS 320-291065/2-A
Client ID:
Sample Type: LCS
Inject. Date: 07-May-2019 01:48:23 ALS Bottle#: 21 Worklist Smp#: 6
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: LCS 320-291065/2-A
Operator ID: AC Instrument ID: LC11

Method: \\chromna\Sacramento\ChromData\LC11\20190506-75892.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 07-May-2019 14:14:19 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0328

First Level Reviewer: cartiera Date: 07-May-2019 14:14:19

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
1 TNX							
1	12.867	12.949	-0.082	10363H	200.2	199.3	
2 DNX							
1	16.764	16.859	-0.095	14647H	200.8	225.6	
3 HMX							
1	18.090	18.117	-0.027	3969H	50.0	49.2	
4 MNX							
1	19.190	19.275	-0.085	25789H	234.0	257.5	
6 RDX							
1	20.630	20.623	0.007	5339H	50.0	53.9	
8 1,3,5-Trinitrobenzene							
1	22.394	22.390	0.004	11213H	50.0	47.9	
9 1,3-Dinitrobenzene							
1	24.700	24.683	0.017	10206H	50.0	48.8	
10 3,5-Dinitroaniline							
1	25.754	25.737	0.017	7489H	50.0	47.2	
11 Nitrobenzene							
1	26.290	26.273	0.017	5717H	50.0	48.9	
12 Tetryl							
1	26.964	26.980	-0.016	4574H	50.0	43.6	
14 2,4,6-Trinitrotoluene							
1	28.337	28.347	-0.010	5023H	50.0	43.7	
15 4-Amino-2,6-dinitrotoluene							a
1	29.197	29.183	0.014	4376H	50.0	50.3	a
$ 16 3,4-Dinitrotoluene							a
1	29.510	29.510	0.000	8502H	125.0	116.1	a
2	29.510	29.513	-0.003	17384H			
17 2-Amino-4,6-dinitrotoluene							
1	29.887	29.867	0.020	5539H	50.0	48.8	

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
18 2,6-Dinitrotoluene							
1	31.247	31.220	0.027	3445H	50.0	47.0	
19 2,4-Dinitrotoluene							
1	31.694	31.670	0.024	6447H	50.0	47.7	
20 o-Nitrotoluene							
1	34.804	34.763	0.041	2687H	50.0	46.5	
21 p-Nitrotoluene							
1	36.347	36.300	0.047	3300H	50.0	45.9	
22 m-Nitrotoluene							
1	37.983	37.936	0.047	3252H	50.0	46.6	

QC Flag Legend

Review Flags

a - User Assigned ID

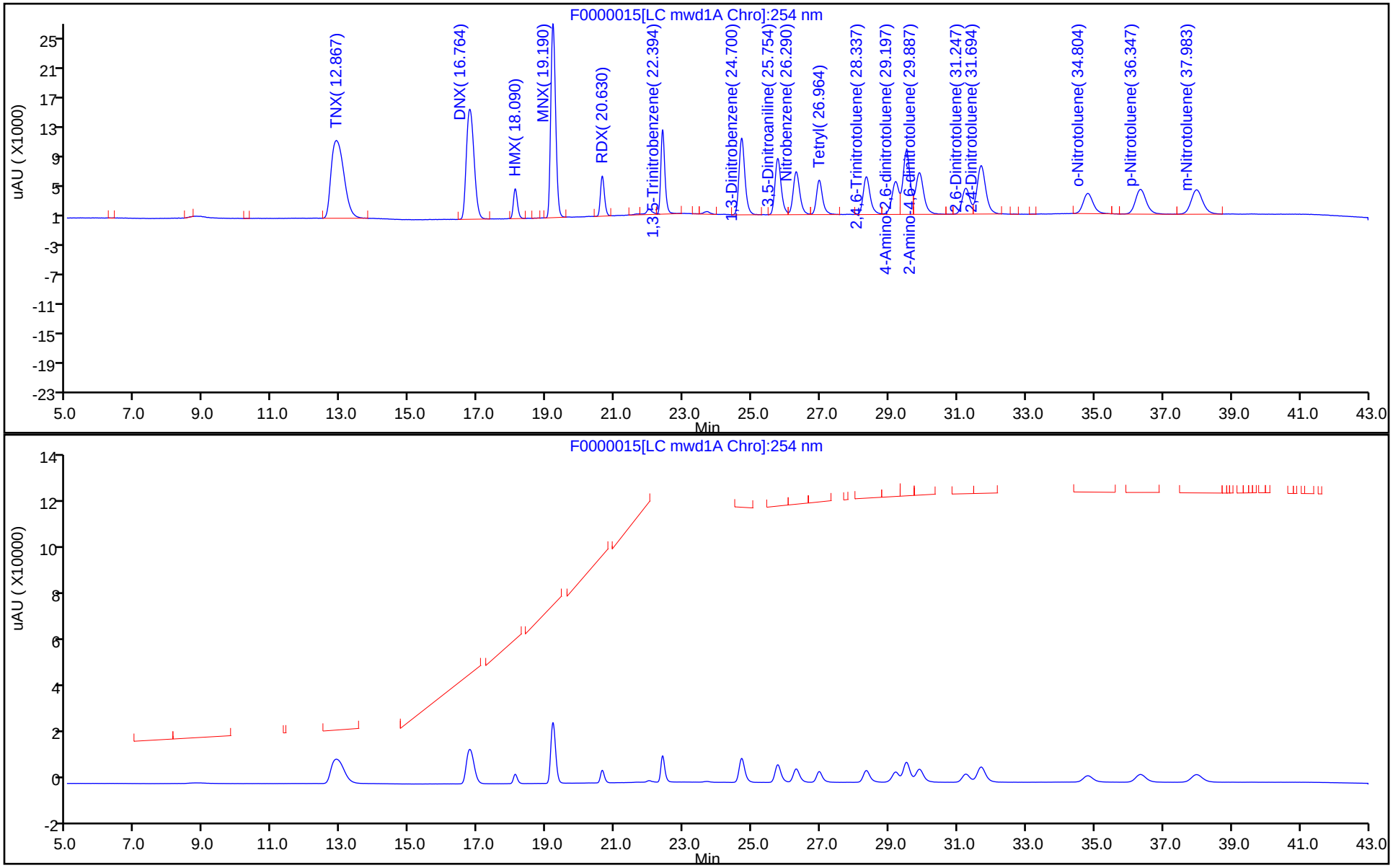
Report Date: 07-May-2019 14:14:20 Chrom Revision: 2.3 03-May-2019 15:47:48

Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190506-75892.b\F0000015.D

Injection Date:	07-May-2019 01:48:23	Instrument ID:	LC11	Operator ID:	AC
Lims ID:	LCS 320-291065/2-A			Worklist Smp#:	6
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	21
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins TestAmerica, Sacramento
Recovery Report

Data File:	\\chromna\Sacramento\ChromData\LC11\20190506-75892.b\F0000015.D				
Lims ID:	LCS 320-291065/2-A				
Client ID:					
Sample Type:	LCS				
Inject. Date:	07-May-2019 01:48:23	ALS Bottle#:	21	Worklist Smp#:	6
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCS 320-291065/2-A				
Operator ID:	AC	Instrument ID:	LC11		
Method:	\\chromna\Sacramento\ChromData\LC11\20190506-75892.b\8330 Metab LC11.m				
Limit Group:	LC 8330A ICAL				
Last Update:	07-May-2019 14:14:19	Calib Date:	28-Feb-2019 10:01:13		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D				
Column 1 :	Synergi Hydro-RP C18 (4.60 mm)		Det: LC mwd1A, 250 nm		
Process Host:	CTX0328				

First Level Reviewer: cartiera Date: 07-May-2019 14:14:19

Compound	Amount Added	Amount Recovered	% Rec.
$ 16 3,4-Dinitrotoluene	125.0	116.1	92.92

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

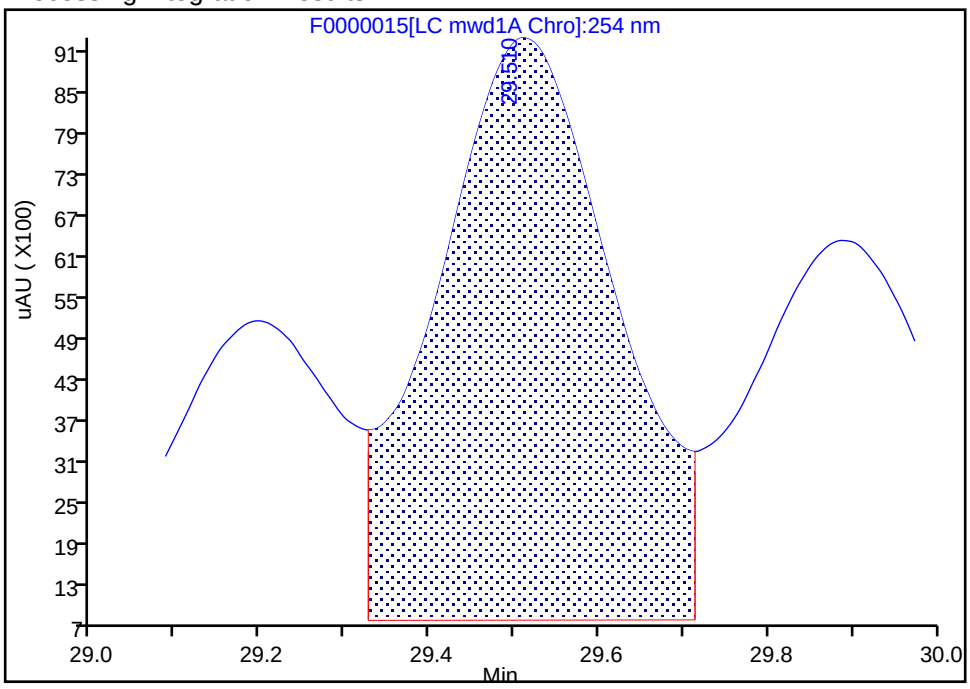
Data File:	\\chromna\Sacramento\ChromData\LC11\20190506-75892.b\F0000015.D				
Injection Date:	07-May-2019 01:48:23	Instrument ID:	LC11		
Lims ID:	LCS 320-291065/2-A				
Client ID:					
Operator ID:	AC	ALS Bottle#:	21	Worklist Smp#:	6
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

$ 16 3,4-Dinitrotoluene, CAS: 610-39-9

Signal: 1

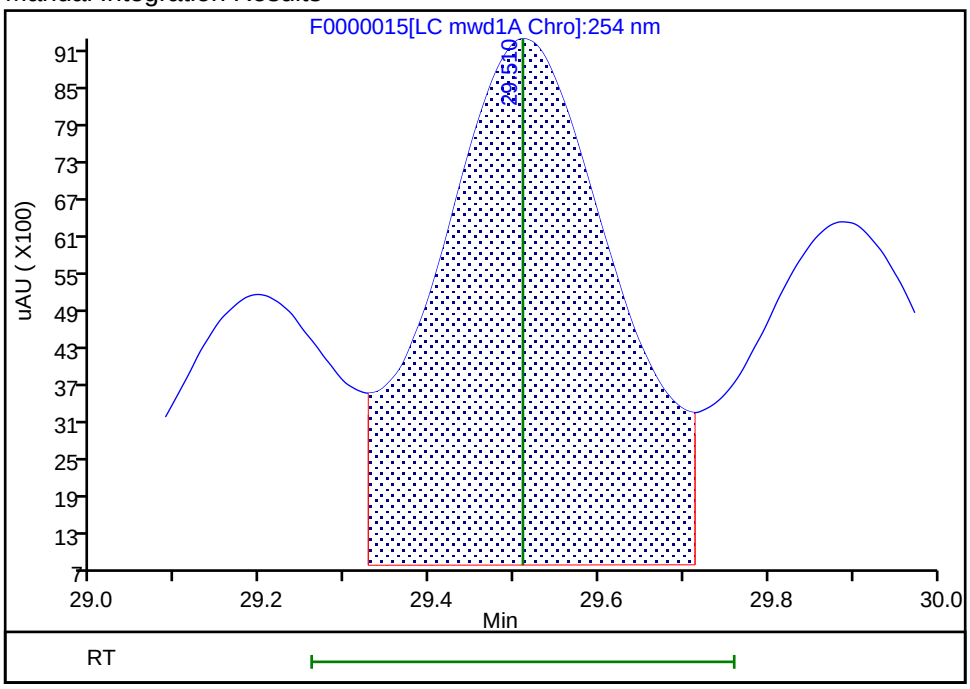
Processing Integration Results

RT: 29.51
Height: 8502
Amount: 116.1487
Amount Units: ng/ml



Manual Integration Results

RT: 29.51
Height: 8502
Amount: 116.1487
Amount Units: ng/ml



Reviewer: cartiera, 07-May-2019 14:13:49
Audit Action: Assigned Compound ID Audit Reason:

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

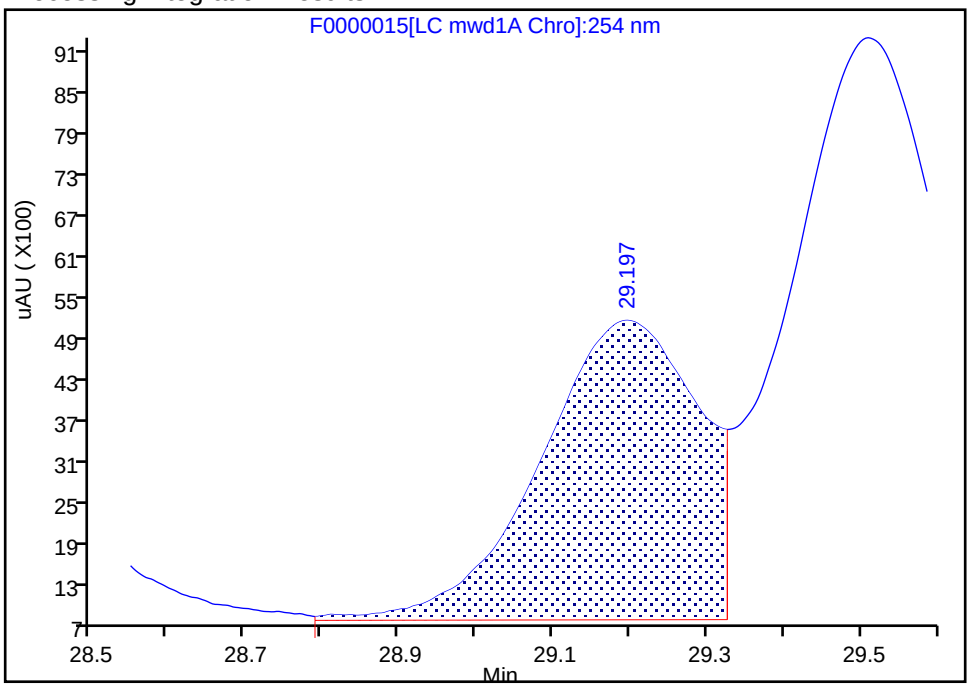
Data File:	\\chromna\Sacramento\ChromData\LC11\20190506-75892.b\F0000015.D				
Injection Date:	07-May-2019 01:48:23	Instrument ID:	LC11		
Lims ID:	LCS 320-291065/2-A				
Client ID:					
Operator ID:	AC	ALS Bottle#:	21	Worklist Smp#:	6
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		
Column:	Synergi Hydro-RP C18 (4.60 mm)	Detector	LC mwd1A, 250 nm		

15 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

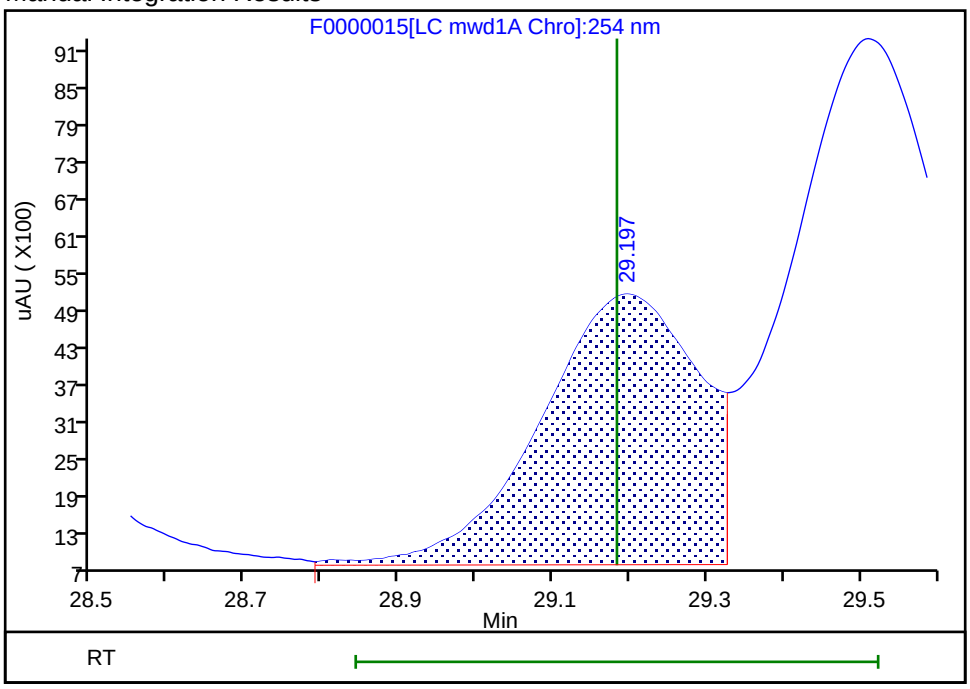
Processing Integration Results

RT: 29.20
Height: 4376
Amount: 50.266215
Amount Units: ng/ml



Manual Integration Results

RT: 29.20
Height: 4376
Amount: 50.266215
Amount Units: ng/ml



Reviewer: cartiera, 07-May-2019 14:13:52
Audit Action: Assigned Compound ID Audit Reason:

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 320-291065/2-A

Matrix: Water Lab File ID: U000054.D

Analysis Method: 8330A Date Collected:

Extraction Method: 8330-Prep Date Extracted: 04/29/2019 06:59

Sample wt/vol: 1000(mL) Date Analyzed: 05/23/2019 17:55

Con. Extract Vol.: 20(mL) Dilution Factor: 1

Injection Volume: 500(uL) GC Column: Synergi C18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 295993 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	89		79-111

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000054.D
Lims ID: LCS 320-291065/2-A
Client ID:
Sample Type: LCS
Inject. Date: 23-May-2019 17:55:35 ALS Bottle#: 47 Worklist Smp#: 54
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: lcs 320-291065/2-a
Operator ID: AO Instrument ID: LC12

Method: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 24-May-2019 09:50:37 Calib Date: 15-May-2019 07:09:15
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0337

First Level Reviewer: cartiera Date: 24-May-2019 09:50:37

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
2 TNX							
1	17.890	17.797	0.093	12879H	200.2	184.5	
3 Nitrobenzene							
1	22.207	22.172	0.035	2959H	50.0	52.1	
5 DNX							
1	23.283	23.203	0.080	12256H	200.8	202.8	
6 1,3-Dinitrobenzene							
1	24.560	24.518	0.042	5774H	50.0	49.4	
7 1,3,5-Trinitrobenzene							
1	26.657	26.635	0.022	5526H	50.0	58.9	
8 MNX							
1	27.580	27.507	0.073	15554H	234.0	238.9	
9 p-Nitrotoluene							
1	29.230	29.188	0.042	3324H	50.0	46.8	
10 o-Nitrotoluene							
1	29.230	29.188	0.042	3324H	50.0	46.8	
11 m-Nitrotoluene							
1	29.810	29.778	0.032	2061H	50.0	46.2	
12 3,5-Dinitroaniline							
1	30.557	30.518	0.039	4511H	50.0	45.1	
13 RDX							
1	31.410	31.342	0.068	2843H	50.0	52.7	
14 2,4-Dinitrotoluene							M
1	32.227	32.222	0.005	6119H	50.0	48.5	M
15 2,6-Dinitrotoluene							M
1	32.930	32.908	0.022	4674H	50.0	49.1	M
16 2-Amino-4,6-dinitrotoluene							M
1	33.947	33.925	0.022	9598H	50.0	47.5	M

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
17 4-Amino-2,6-dinitrotoluene							M
1	34.190	34.172	0.018	88244	50.0	48.6	M
$ 18 3,4-Dinitrotoluene							
1	34.857	34.835	0.022	15626H	125.0	111.6	
19 2,4,6-Trinitrotoluene							M
1	35.410	35.395	0.015	8684H	50.0	41.9	M
20 HMX							
1	36.263	36.248	0.015	6954H	50.0	44.3	
22 Tetryl							
1	37.890	37.878	0.012	9649H	50.0	41.0	

QC Flag Legend

Review Flags

M - Manually Integrated

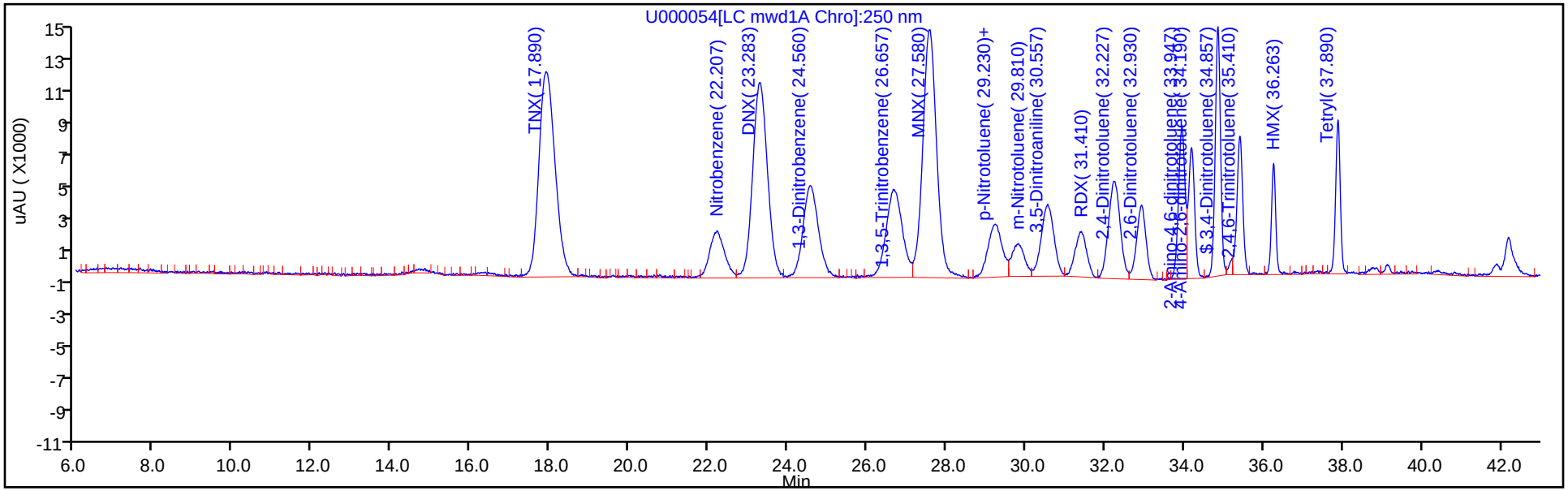
Report Date: 24-May-2019 09:50:39 Chrom Revision: 2.3 12-May-2019 16:28:34

Eurofins TestAmerica, Sacramento

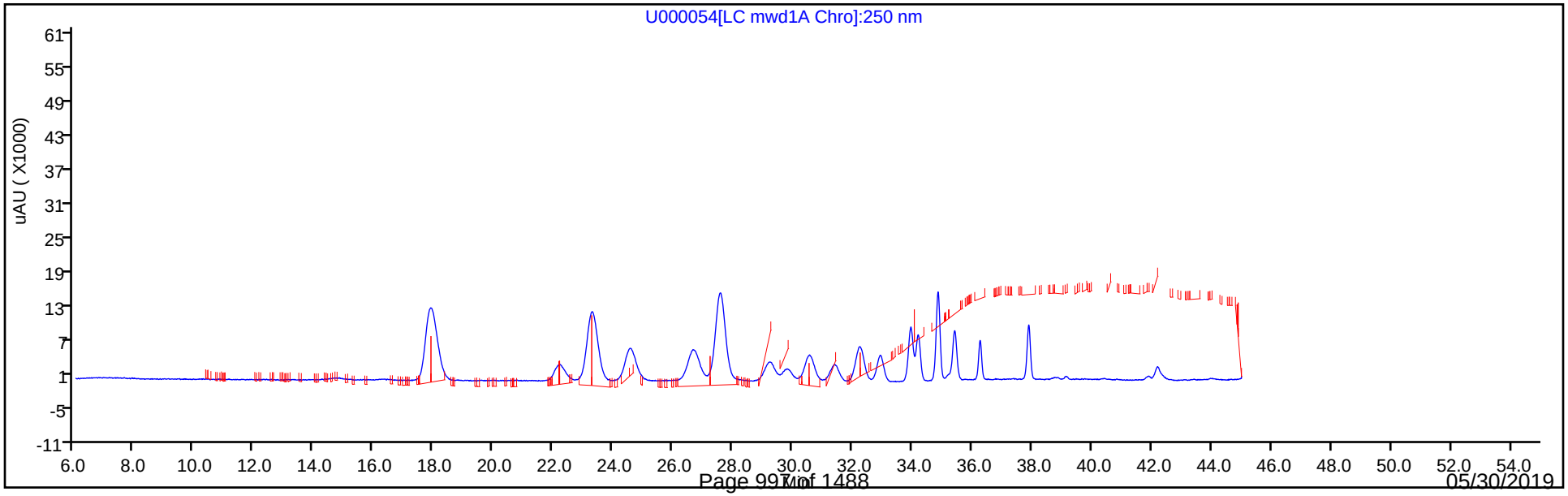
Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000054.D

Injection Date:	23-May-2019 17:55:35	Instrument ID:	LC12	Operator ID:	AO
Lims ID:	LCS 320-291065/2-A			Worklist Smp#:	54
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	47
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



Eurofins TestAmerica, Sacramento
Recovery Report

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000054.D				
Lims ID:	LCS 320-291065/2-A				
Client ID:					
Sample Type:	LCS				
Inject. Date:	23-May-2019 17:55:35	ALS Bottle#:	47	Worklist Smp#:	54
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Sample Info:	lcs 320-291065/2-a				
Operator ID:	AO	Instrument ID:	LC12		
Method:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\LC12_Conf_8330.m				
Limit Group:	LC 8330A ICAL				
Last Update:	24-May-2019 09:50:37	Calib Date:	15-May-2019 07:09:15		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D				
Column 1 :	Zorbax Cyano CN (4.60 mm)		Det: LC mwd1A, 250 nm		
Process Host:	CTX0337				

First Level Reviewer: cartiera Date: 24-May-2019 09:50:37

Compound	Amount Added	Amount Recovered	% Rec.
$ 18 3,4-Dinitrotoluene	125.0	111.6	89.28

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

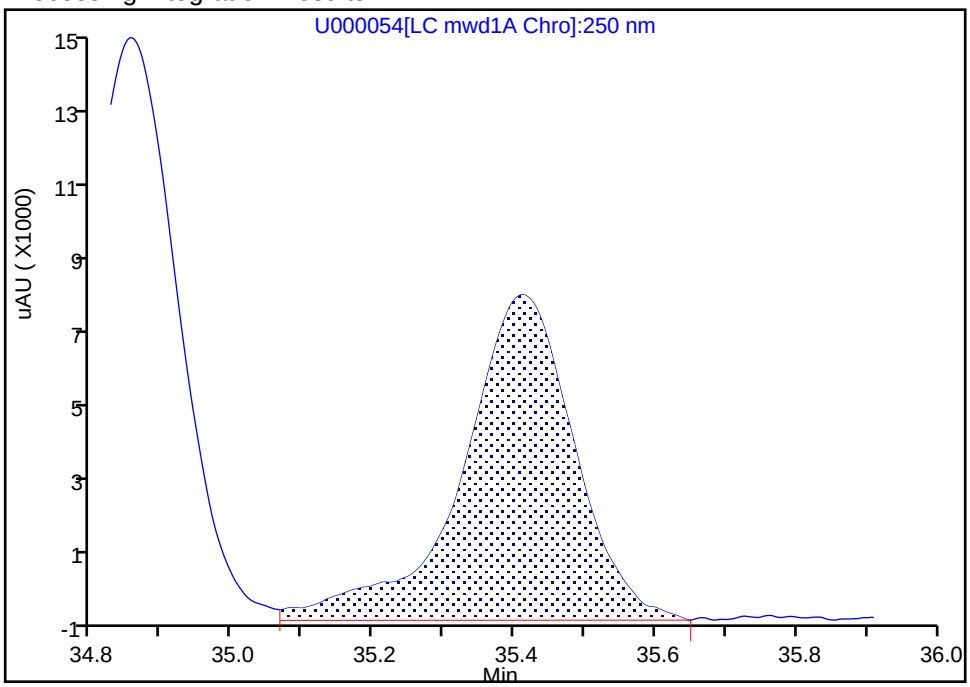
Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000054.D				
Injection Date:	23-May-2019 17:55:35	Instrument ID:	LC12		
Lims ID:	LCS 320-291065/2-A				
Client ID:					
Operator ID:	AO	ALS Bottle#:	47	Worklist Smp#:	54
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

19 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

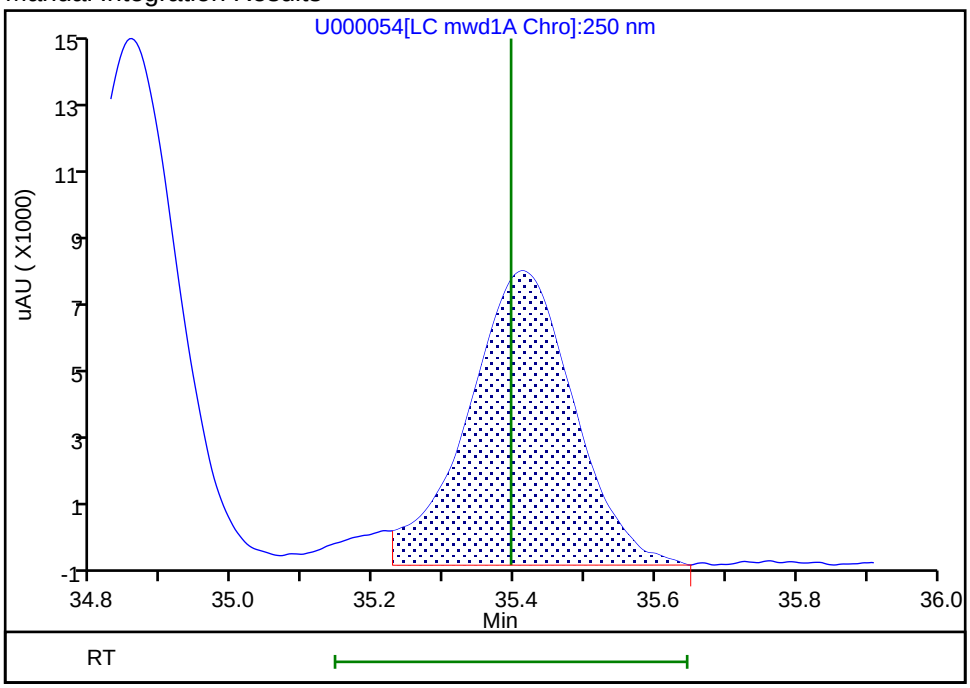
Processing Integration Results

RT: 35.41
Height: 8683
Amount: 41.936383
Amount Units: ng/ml



Manual Integration Results

RT: 35.41
Height: 8684
Amount: 41.941213
Amount Units: ng/ml



Reviewer: cartiera, 24-May-2019 09:48:20

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

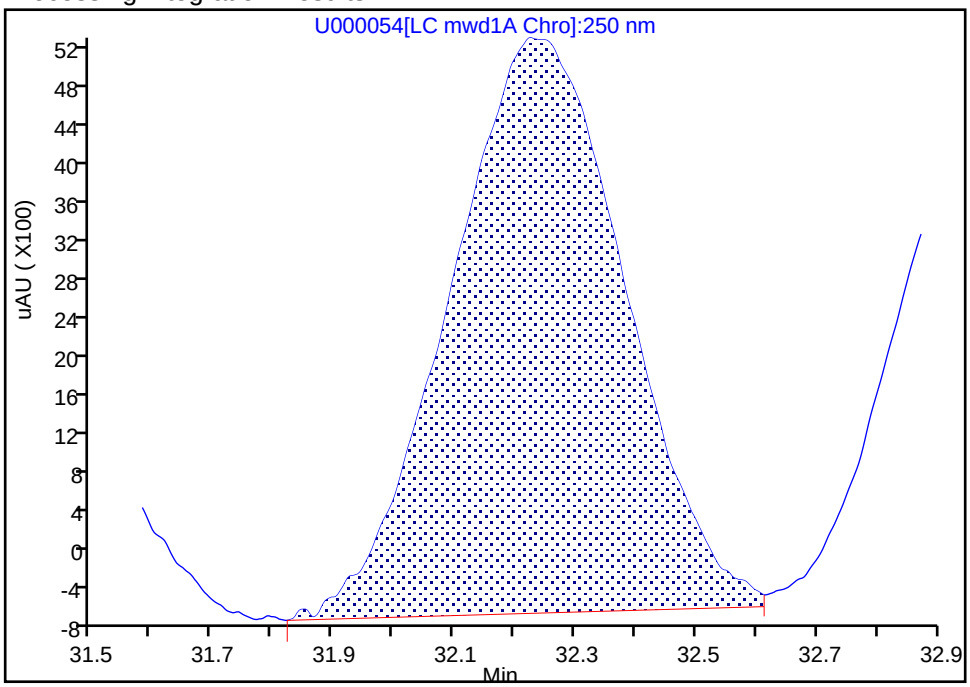
Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000054.D				
Injection Date:	23-May-2019 17:55:35	Instrument ID:	LC12		
Lims ID:	LCS 320-291065/2-A				
Client ID:					
Operator ID:	AO	ALS Bottle#:	47	Worklist Smp#:	54
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

14 2,4-Dinitrotoluene, CAS: 121-14-2

Signal: 1

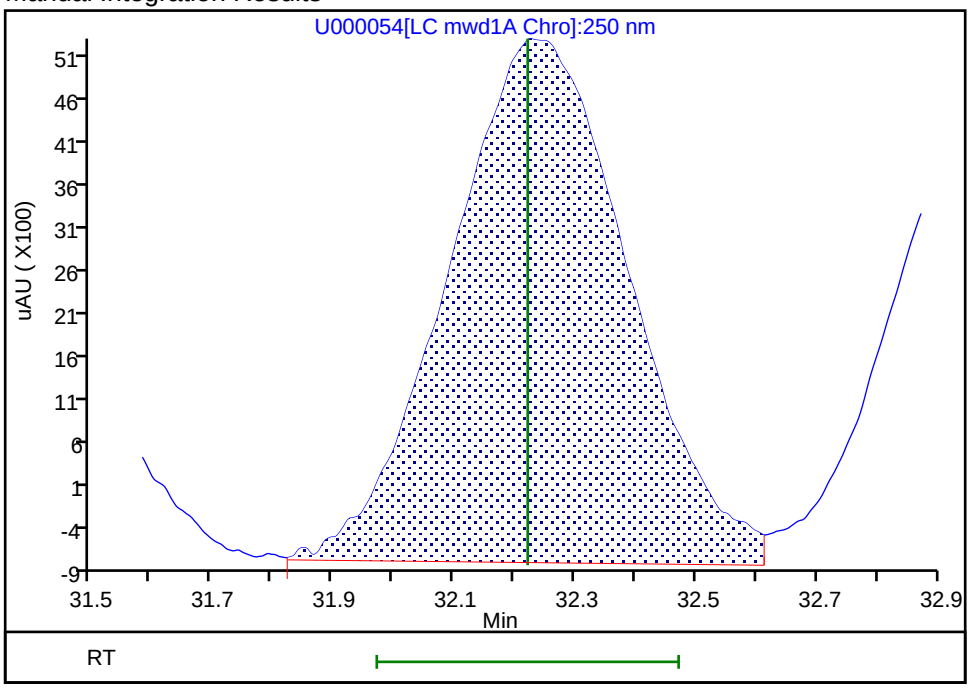
Processing Integration Results

RT: 32.23
Height: 5987
Amount: 47.483087
Amount Units: ng/ml



Manual Integration Results

RT: 32.23
Height: 6119
Amount: 48.529983
Amount Units: ng/ml



Reviewer: cartiera, 24-May-2019 09:48:50

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

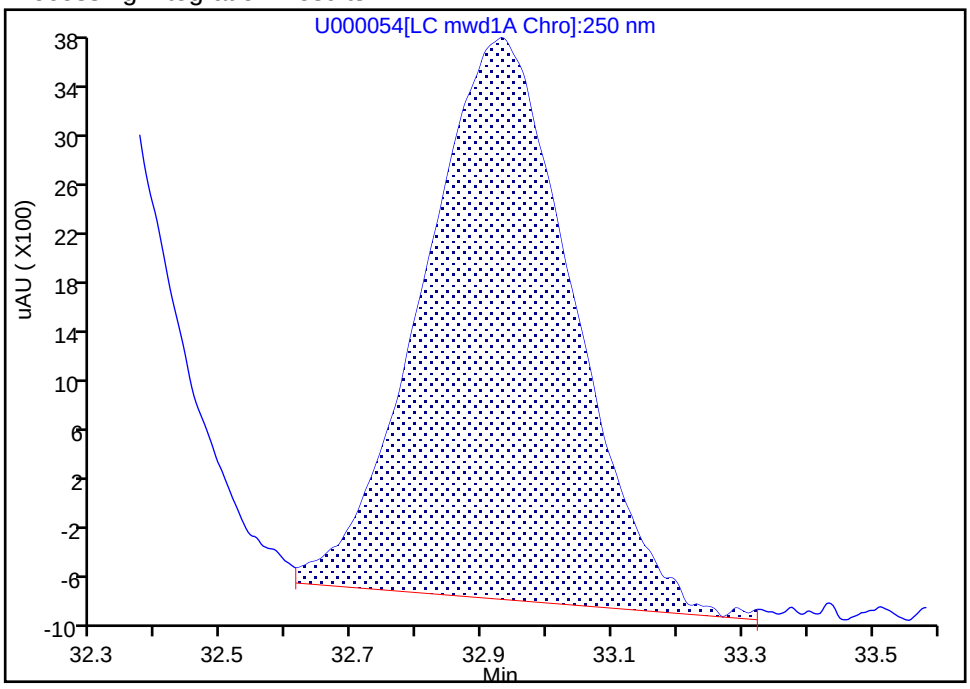
Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000054.D				
Injection Date:	23-May-2019 17:55:35	Instrument ID:	LC12		
Lims ID:	LCS 320-291065/2-A				
Client ID:					
Operator ID:	AO	ALS Bottle#:	47	Worklist Smp#:	54
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

15 2,6-Dinitrotoluene, CAS: 606-20-2

Signal: 1

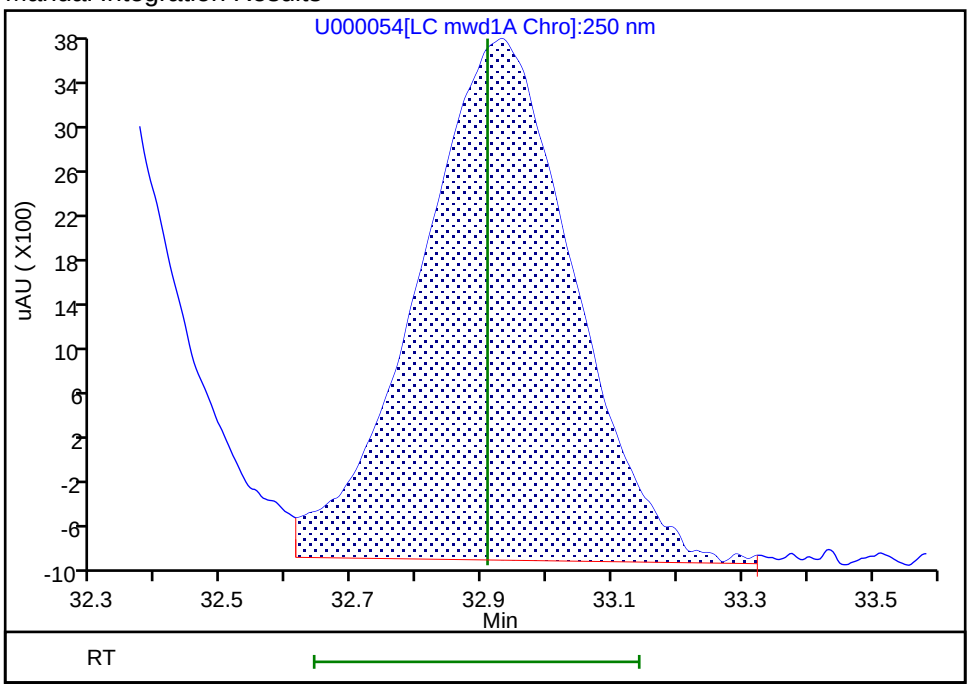
Processing Integration Results

RT: 32.93
Height: 4549
Amount: 47.826459
Amount Units: ng/ml



Manual Integration Results

RT: 32.93
Height: 4674
Amount: 49.140662
Amount Units: ng/ml



Reviewer: cartiera, 24-May-2019 09:48:50

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

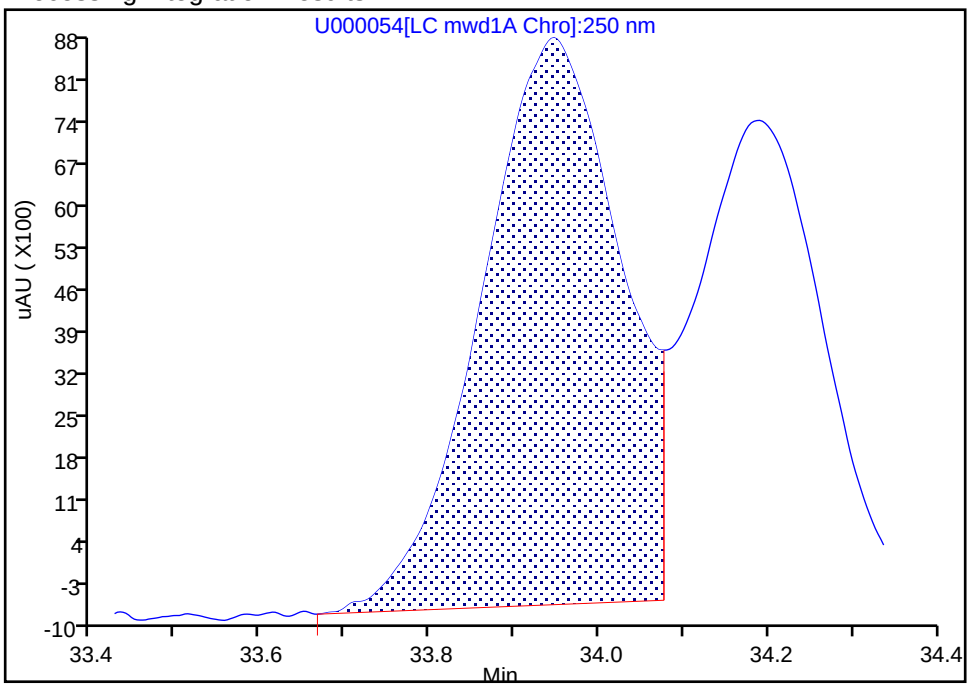
Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000054.D				
Injection Date:	23-May-2019 17:55:35	Instrument ID:	LC12		
Lims ID:	LCS 320-291065/2-A				
Client ID:					
Operator ID:	AO	ALS Bottle#:	47	Worklist Smp#:	54
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

16 2-Amino-4,6-dinitrotoluene, CAS: 35572-78-2

Signal: 1

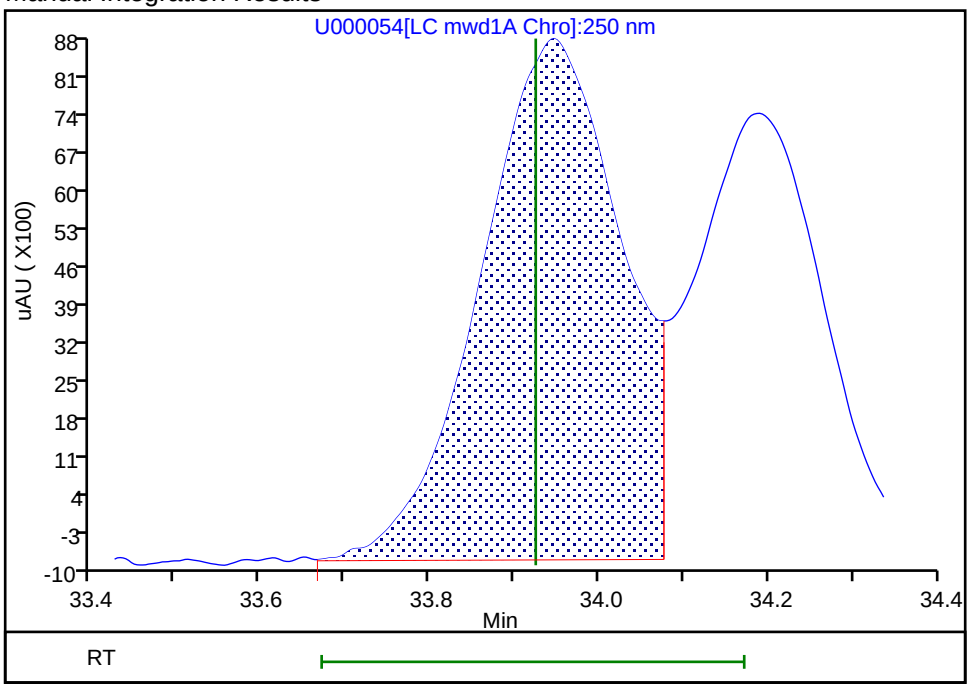
Processing Integration Results

RT: 33.95
Height: 9436
Amount: 46.659249
Amount Units: ng/ml



Manual Integration Results

RT: 33.95
Height: 9598
Amount: 47.460309
Amount Units: ng/ml



Reviewer: cartiera, 24-May-2019 09:48:45

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

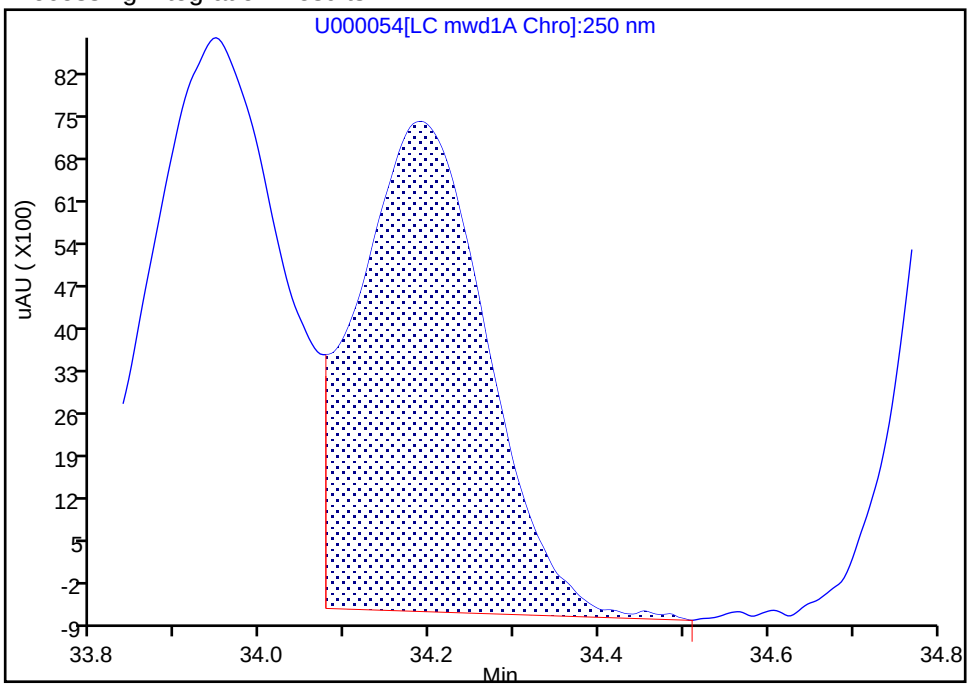
Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000054.D				
Injection Date:	23-May-2019 17:55:35	Instrument ID:	LC12		
Lims ID:	LCS 320-291065/2-A				
Client ID:					
Operator ID:	AO	ALS Bottle#:	47	Worklist Smp#:	54
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

17 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

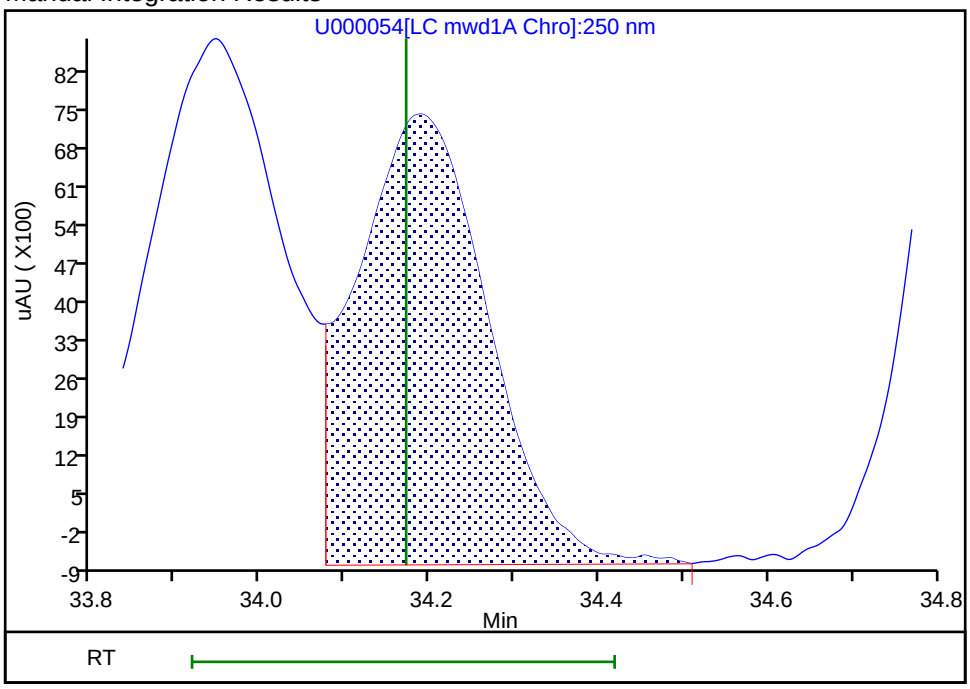
Processing Integration Results

RT: 34.19
Area: 85202
Amount: 44.643084
Amount Units: ng/ml



Manual Integration Results

RT: 34.19
Area: 88244
Amount: 48.611326
Amount Units: ng/ml



Reviewer: cartiera, 24-May-2019 09:48:45

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 320-291065/3-A

Matrix: Water Lab File ID: F0000018.D

Analysis Method: 8330A Date Collected:

Extraction Method: 8330-Prep Date Extracted: 04/29/2019 06:59

Sample wt/vol: 1000(mL) Date Analyzed: 05/07/2019 04:29

Con. Extract Vol.: 20(mL) Dilution Factor: 1

Injection Volume: 500(uL) GC Column: Synergi C18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 292661 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	0.968		0.15	0.10	0.031
99-65-0	1,3-Dinitrobenzene	0.984		0.15	0.10	0.050
118-96-7	2,4,6-Trinitrotoluene	0.879		0.15	0.10	0.050
121-14-2	2,4-Dinitrotoluene	0.960		0.13	0.10	0.050
606-20-2	2,6-Dinitrotoluene	0.951		0.13	0.10	0.050
35572-78-2	2-Amino-4,6-dinitrotoluene	0.974		0.15	0.10	0.030
88-72-2	2-Nitrotoluene	0.962		0.50	0.20	0.088
99-08-1	3-Nitrotoluene	0.936		0.50	0.20	0.057
19406-51-0	4-Amino-2,6-dinitrotoluene	0.940		0.15	0.10	0.050
99-99-0	4-Nitrotoluene	0.930		0.50	0.20	0.088
2691-41-0	HMX	1.02		0.15	0.10	0.036
5755-27-1	MNX	5.23		0.50	0.10	0.028
98-95-3	Nitrobenzene	0.979		0.15	0.10	0.050
121-82-4	RDX	1.08		0.15	0.10	0.036
479-45-8	Tetryl	0.880		0.15	0.10	0.050

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	94		79-111

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC11\20190506-75892.b\F0000018.D
Lims ID: LCSD 320-291065/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 07-May-2019 04:29:19 ALS Bottle#: 22 Worklist Smp#: 7
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: LCSD 320-291065/3-A
Operator ID: AC Instrument ID: LC11

Method: \\chromna\Sacramento\ChromData\LC11\20190506-75892.b\8330 Metab LC11.m
Limit Group: LC 8330A ICAL
Last Update: 07-May-2019 14:16:24 Calib Date: 28-Feb-2019 10:01:13
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D

Column 1 : Synergi Hydro-RP C18 (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0328

First Level Reviewer: cartiera Date: 07-May-2019 14:19:22

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
1 TNX							
1	12.907	12.844	0.063	10585H	200.2	203.5	
2 DNX							
1	16.787	16.751	0.036	15072H	200.8	232.2	
3 HMX							
1	18.114	18.117	-0.003	4110H	50.0	51.0	
4 MNX							
1	19.201	19.187	0.014	26211H	234.0	261.7	
6 RDX							
1	20.637	20.623	0.014	5344H	50.0	53.9	
8 1,3,5-Trinitrobenzene							
1	22.391	22.390	0.001	11340H	50.0	48.4	
9 1,3-Dinitrobenzene							
1	24.714	24.683	0.031	10287H	50.0	49.2	
10 3,5-Dinitroaniline							
1	25.774	25.737	0.037	7582H	50.0	47.8	
11 Nitrobenzene							
1	26.314	26.273	0.041	5726H	50.0	48.9	
12 Tetryl							
1	26.967	26.980	-0.013	4617H	50.0	44.0	
14 2,4,6-Trinitrotoluene							
1	28.351	28.347	0.004	5057H	50.0	43.9	
15 4-Amino-2,6-dinitrotoluene							
1	29.221	29.183	0.038	4090H	50.0	47.0	
$ 16 3,4-Dinitrotoluene							
1	29.524	29.510	0.014	8630H	125.0	117.9	
2	29.524	29.513	0.011	17957H			
17 2-Amino-4,6-dinitrotoluene							
1	29.914	29.867	0.047	5524H	50.0	48.7	

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
18 2,6-Dinitrotoluene							
1	31.277	31.220	0.057	3486H	50.0	47.5	
19 2,4-Dinitrotoluene							
1	31.714	31.670	0.044	6495H	50.0	48.0	
20 o-Nitrotoluene							
1	34.834	34.763	0.071	2777H	50.0	48.1	
21 p-Nitrotoluene							
1	36.367	36.300	0.067	3343H	50.0	46.5	
22 m-Nitrotoluene							
1	38.000	37.936	0.064	3266H	50.0	46.8	

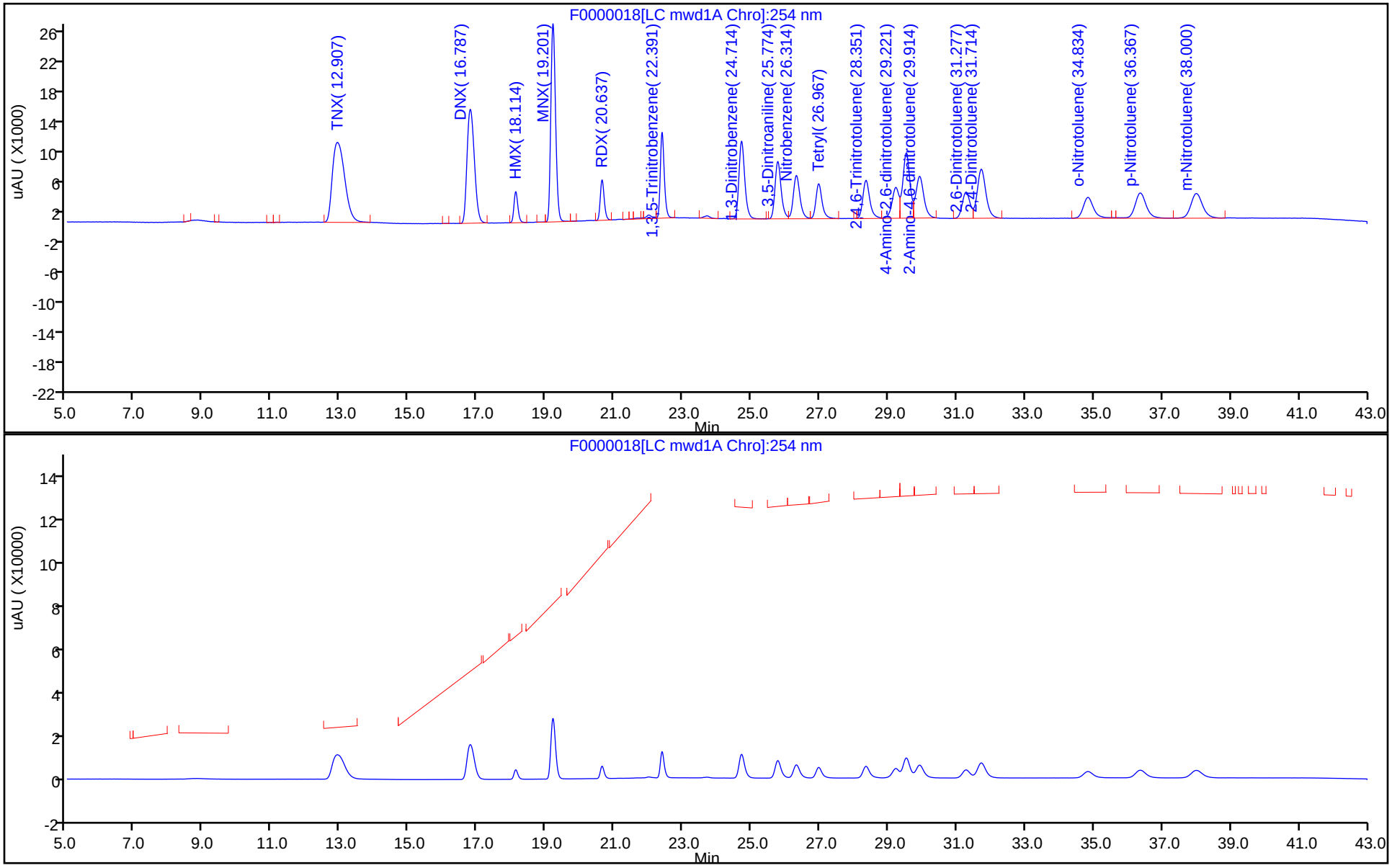
Report Date: 07-May-2019 14:19:23 Chrom Revision: 2.3 03-May-2019 15:47:48

Eurofins TestAmerica, Sacramento

Data File: \\chromna\Sacramento\ChromData\LC11\20190506-75892.b\F0000018.D

Injection Date:	07-May-2019 04:29:19	Instrument ID:	LC11	Operator ID:	AC
Lims ID:	LCSD 320-291065/3-A			Worklist Smp#:	7
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	8330 Metab LC11	Limit Group:	LC 8330A ICAL		

Column: Synergi Hydro-RP C18 (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Eurofins TestAmerica, Sacramento
Recovery Report

Data File:	\\chromna\Sacramento\ChromData\LC11\20190506-75892.b\F0000018.D				
Lims ID:	LCSD 320-291065/3-A				
Client ID:					
Sample Type:	LCSD				
Inject. Date:	07-May-2019 04:29:19	ALS Bottle#:	22	Worklist Smp#:	7
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCSD 320-291065/3-A				
Operator ID:	AC	Instrument ID:	LC11		
Method:	\\chromna\Sacramento\ChromData\LC11\20190506-75892.b\8330 Metab LC11.m				
Limit Group:	LC 8330A ICAL				
Last Update:	07-May-2019 14:16:24	Calib Date:	28-Feb-2019 10:01:13		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Sacramento\ChromData\LC11\20190227-72509.b\ZAB0000019.D				
Column 1 :	Synergi Hydro-RP C18 (4.60 mm)		Det: LC mwd1A, 250 nm		
Process Host:	CTX0328				
First Level Reviewer: cartiera		Date:	07-May-2019 14:19:22		

Compound	Amount Added	Amount Recovered	% Rec.
$ 16 3,4-Dinitrotoluene	125.0	117.9	94.32

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 320-291065/3-A

Matrix: Water Lab File ID: U000055.D

Analysis Method: 8330A Date Collected:

Extraction Method: 8330-Prep Date Extracted: 04/29/2019 06:59

Sample wt/vol: 1000(mL) Date Analyzed: 05/23/2019 18:53

Con. Extract Vol.: 20(mL) Dilution Factor: 1

Injection Volume: 500(uL) GC Column: Synergi C18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 295993 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	88		79-111

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000055.D
Lims ID: LCSD 320-291065/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 23-May-2019 18:53:06 ALS Bottle#: 48 Worklist Smp#: 55
Injection Vol: 500.0 ul Dil. Factor: 1.0000
Sample Info: lcsd 320-291065/3-a
Operator ID: AO Instrument ID: LC12

Method: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\LC12_Conf_8330.m
Limit Group: LC 8330A ICAL
Last Update: 24-May-2019 09:53:09 Calib Date: 15-May-2019 07:09:15
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D

Column 1 : Zorbax Cyano CN (4.60 mm) Det: LC mwd1A, 250 nm
Process Host: CTX0337

First Level Reviewer: cartiera Date: 24-May-2019 09:53:09

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
2 TNX							
1	17.913	17.797	0.116	12819H	200.2	183.7	
3 Nitrobenzene							
1	22.187	22.172	0.015	2892H	50.0	50.9	
5 DNX							
1	23.297	23.203	0.094	12074H	200.8	199.8	
6 1,3-Dinitrobenzene							
1	24.560	24.518	0.042	5680H	50.0	48.6	
7 1,3,5-Trinitrobenzene							
1	26.670	26.635	0.035	4791H	50.0	51.1	
8 MNX							
1	27.570	27.507	0.063	15253H	234.0	234.3	
9 p-Nitrotoluene							M
1	29.217	29.188	0.029	3362H	50.0	47.3	M
10 o-Nitrotoluene							M
1	29.217	29.188	0.029	3362H	50.0	47.3	M
11 m-Nitrotoluene							M
1	29.813	29.778	0.035	2107H	50.0	47.3	M
12 3,5-Dinitroaniline							M
1	30.563	30.518	0.045	4605H	50.0	46.0	M
13 RDX							M
1	31.400	31.342	0.058	2846H	50.0	52.8	M
14 2,4-Dinitrotoluene							M
1	32.237	32.222	0.015	6131H	50.0	48.6	M
15 2,6-Dinitrotoluene							M
1	32.917	32.908	0.009	4539H	50.0	47.7	M
16 2-Amino-4,6-dinitrotoluene							M
1	33.933	33.925	0.008	9333H	50.0	46.1	M

Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
17 4-Amino-2,6-dinitrotoluene							M
1	34.183	34.172	0.011	85593	50.0	47.1	M
$ 18 3,4-Dinitrotoluene							
1	34.843	34.835	0.008	15408H	125.0	110.0	
19 2,4,6-Trinitrotoluene							M
1	35.403	35.395	0.008	8479H	50.0	41.0	M
20 HMX							
1	36.257	36.248	0.009	6758H	50.0	43.1	
22 Tetryl							
1	37.883	37.878	0.005	9401H	50.0	40.0	

QC Flag Legend

Review Flags

M - Manually Integrated

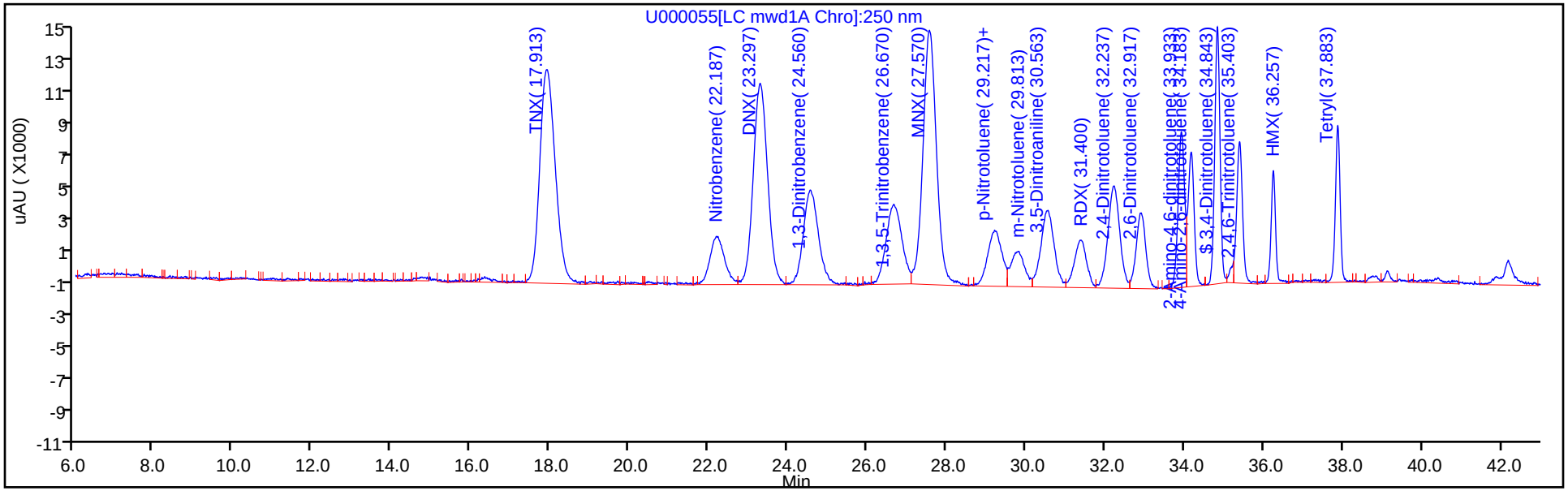
Report Date: 24-May-2019 09:53:10 Chrom Revision: 2.3 12-May-2019 16:28:34

Eurofins TestAmerica, Sacramento

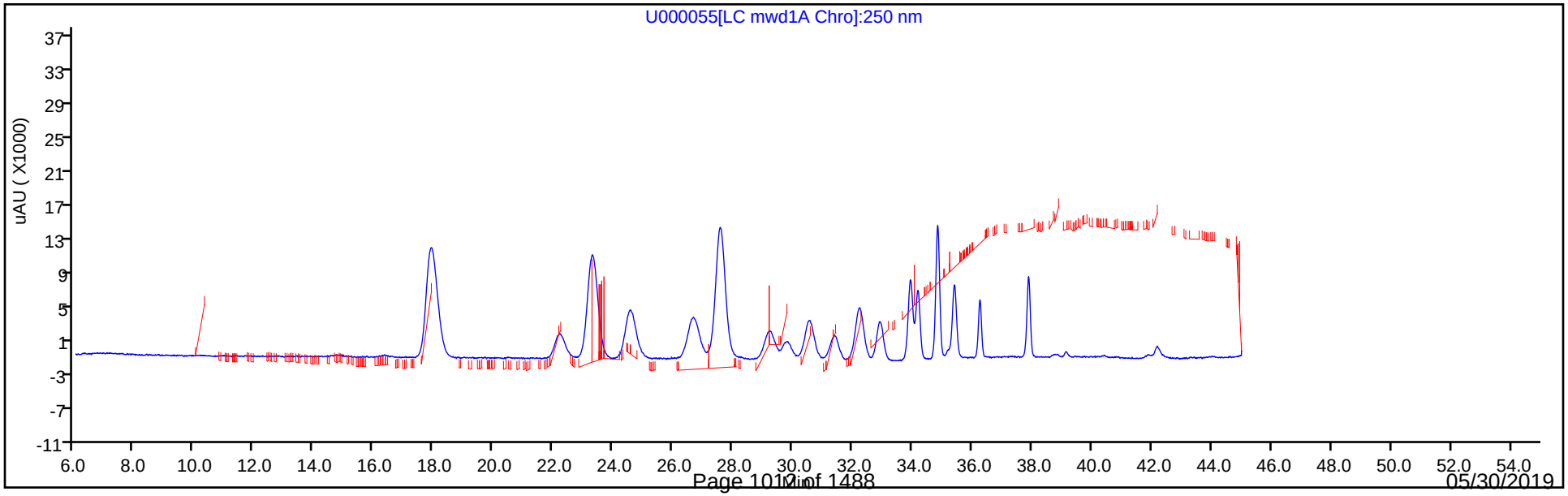
Data File: \\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000055.D

Injection Date:	23-May-2019 18:53:06	Instrument ID:	LC12	Operator ID:	AO
Lims ID:	LCSD 320-291065/3-A			Worklist Smp#:	55
Client ID:					
Injection Vol:	500.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	48
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		

Column: Zorbax Cyano CN (4.60 mm)



Column: Zorbax Cyano CN (4.60 mm)



Eurofins TestAmerica, Sacramento

Recovery Report

Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000055.D				
Lims ID:	LCSD 320-291065/3-A				
Client ID:					
Sample Type:	LCSD				
Inject. Date:	23-May-2019 18:53:06	ALS Bottle#:	48	Worklist Smp#:	55
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Sample Info:	lcsd 320-291065/3-a				
Operator ID:	AO	Instrument ID:	LC12		
Method:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\LC12_Conf_8330.m				
Limit Group:	LC 8330A ICAL				
Last Update:	24-May-2019 09:53:09	Calib Date:	15-May-2019 07:09:15		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Sacramento\ChromData\LC12\20190515-76328.b\N000017.D				
Column 1 :	Zorbax Cyano CN (4.60 mm)		Det: LC mwd1A, 250 nm		
Process Host:	CTX0337				

First Level Reviewer: cartiera Date: 24-May-2019 09:53:09

Compound	Amount Added	Amount Recovered	% Rec.
$ 18 3,4-Dinitrotoluene	125.0	110.0	88.03

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

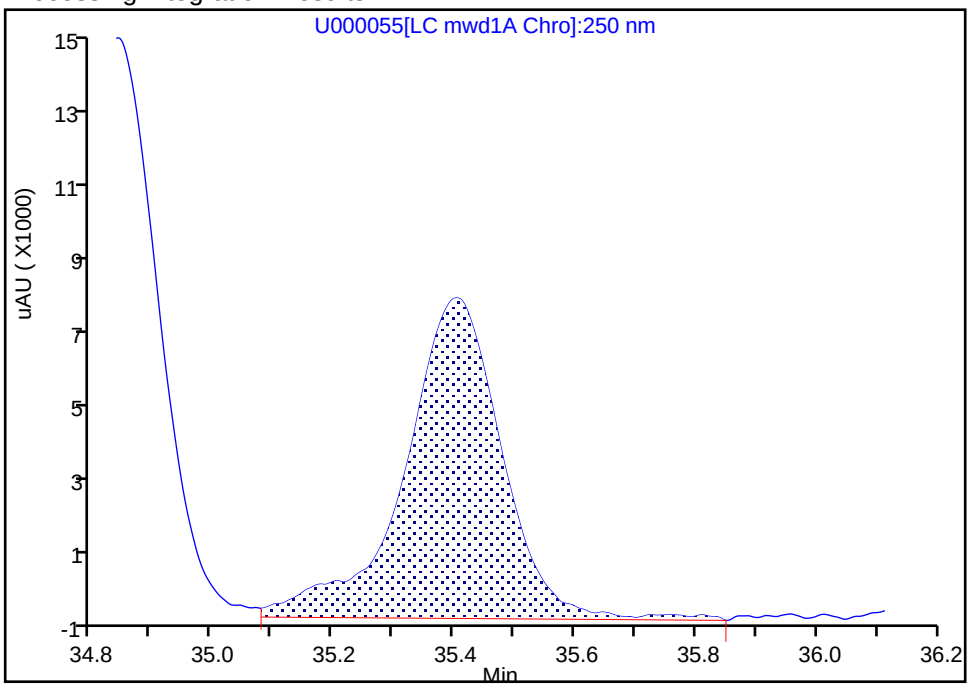
Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000055.D				
Injection Date:	23-May-2019 18:53:06	Instrument ID:	LC12		
Lims ID:	LCSD 320-291065/3-A				
Client ID:					
Operator ID:	AO	ALS Bottle#:	48	Worklist Smp#:	55
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

19 2,4,6-Trinitrotoluene, CAS: 118-96-7

Signal: 1

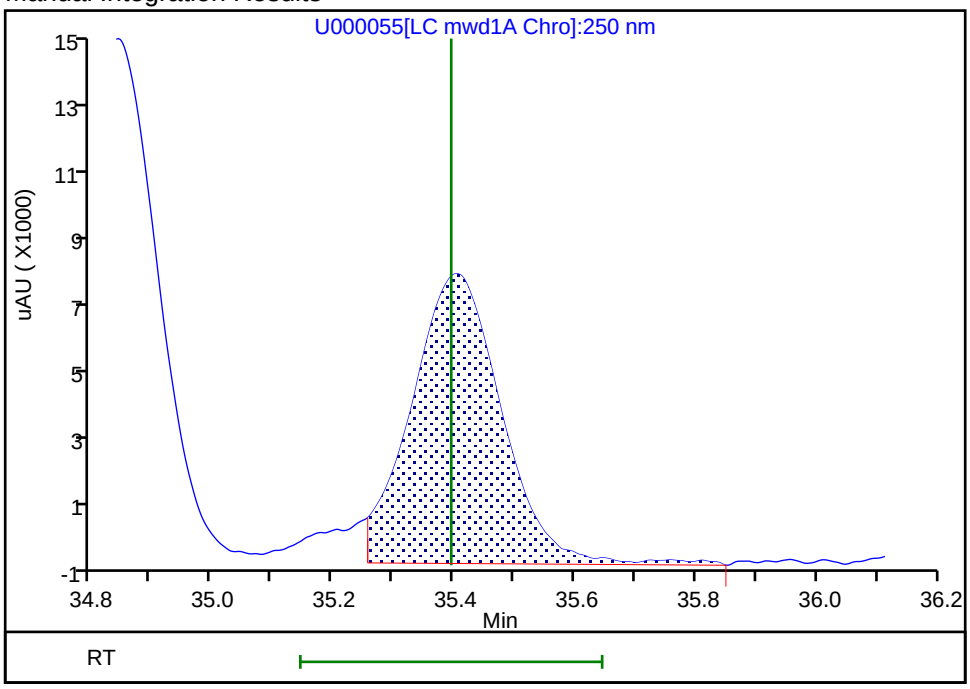
Processing Integration Results

RT: 35.40
Height: 8479
Amount: 40.951122
Amount Units: ng/ml



Manual Integration Results

RT: 35.40
Height: 8479
Amount: 40.951122
Amount Units: ng/ml



Reviewer: cartiera, 24-May-2019 09:51:13

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

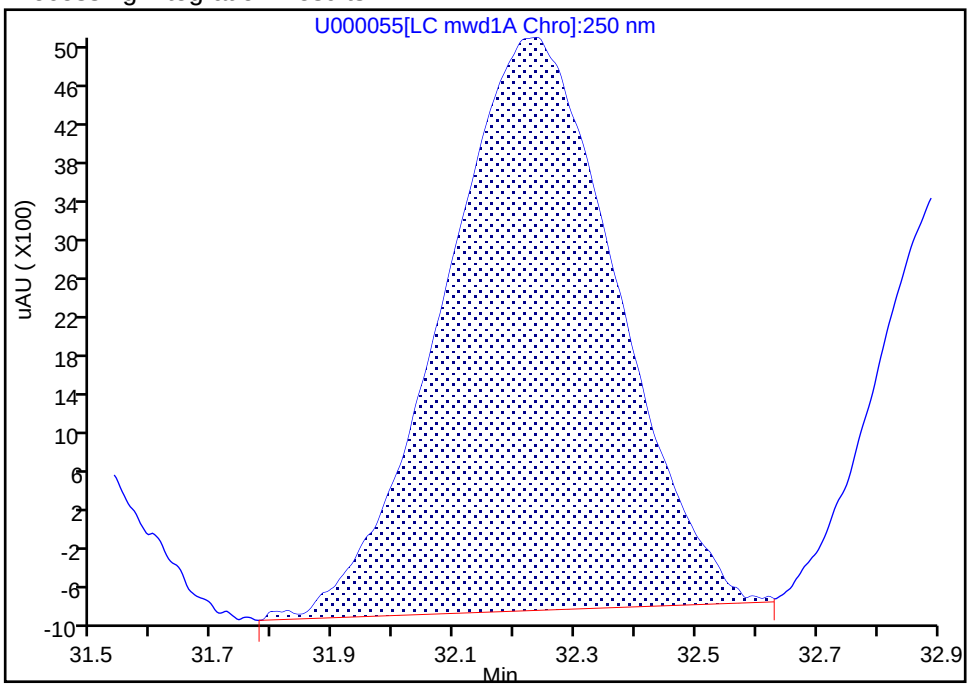
Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000055.D				
Injection Date:	23-May-2019 18:53:06	Instrument ID:	LC12		
Lims ID:	LCSD 320-291065/3-A				
Client ID:					
Operator ID:	AO	ALS Bottle#:	48	Worklist Smp#:	55
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

14 2,4-Dinitrotoluene, CAS: 121-14-2

Signal: 1

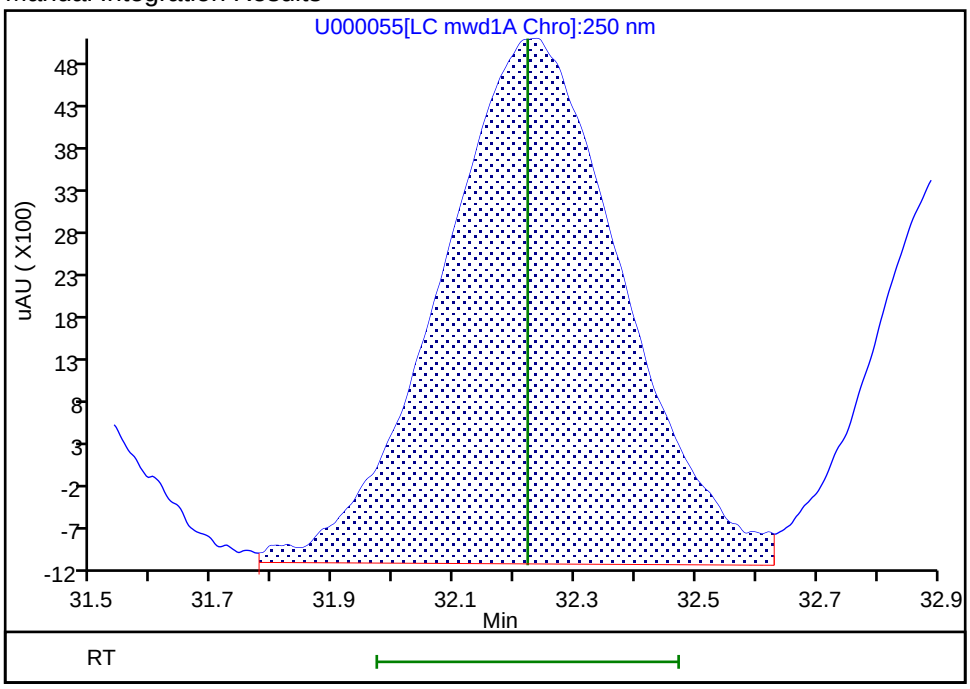
Processing Integration Results

RT: 32.24
Height: 5903
Amount: 46.816880
Amount Units: ng/ml



Manual Integration Results

RT: 32.24
Height: 6131
Amount: 48.625156
Amount Units: ng/ml



Reviewer: cartiera, 24-May-2019 09:52:07

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

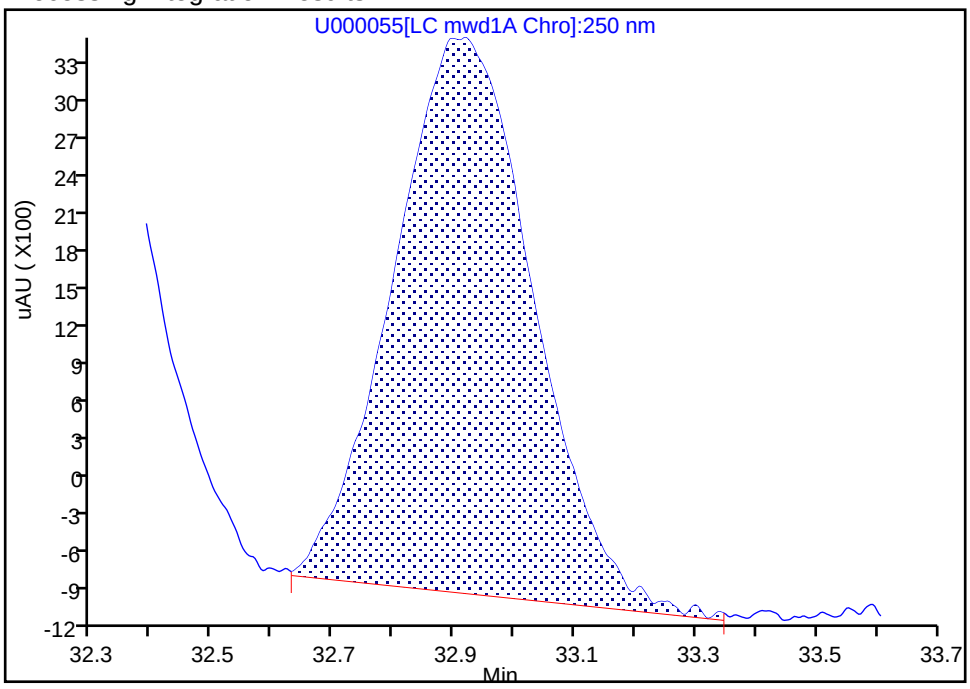
Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000055.D				
Injection Date:	23-May-2019 18:53:06	Instrument ID:	LC12		
Lims ID:	LCSD 320-291065/3-A				
Client ID:					
Operator ID:	AO	ALS Bottle#:	48	Worklist Smp#:	55
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

15 2,6-Dinitrotoluene, CAS: 606-20-2

Signal: 1

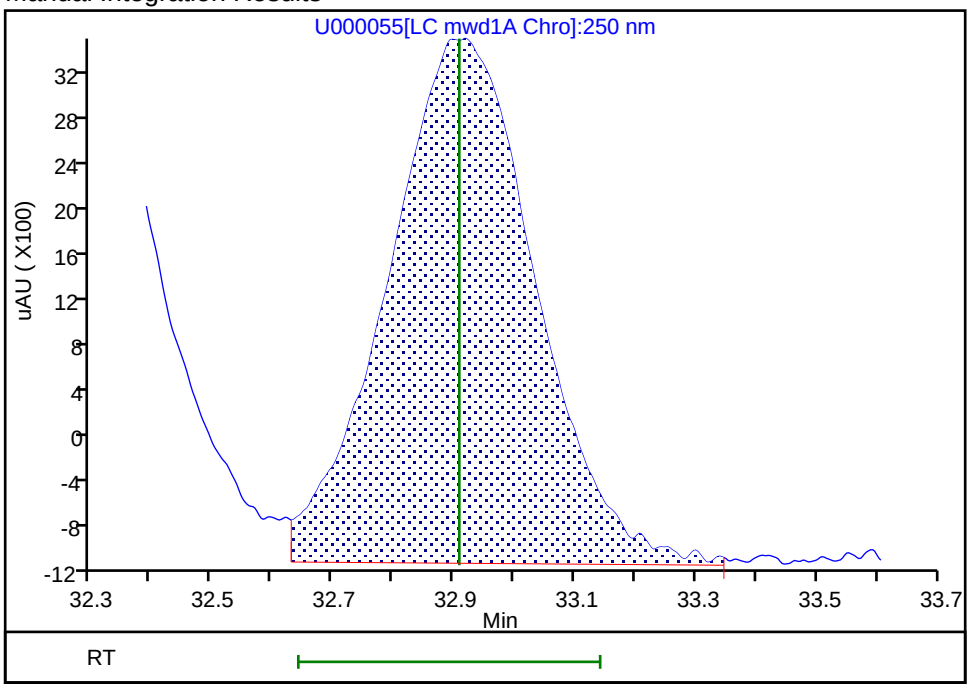
Processing Integration Results

RT: 32.92
Height: 4337
Amount: 45.597572
Amount Units: ng/ml



Manual Integration Results

RT: 32.92
Height: 4539
Amount: 47.721323
Amount Units: ng/ml



Reviewer: cartiera, 24-May-2019 09:52:07

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

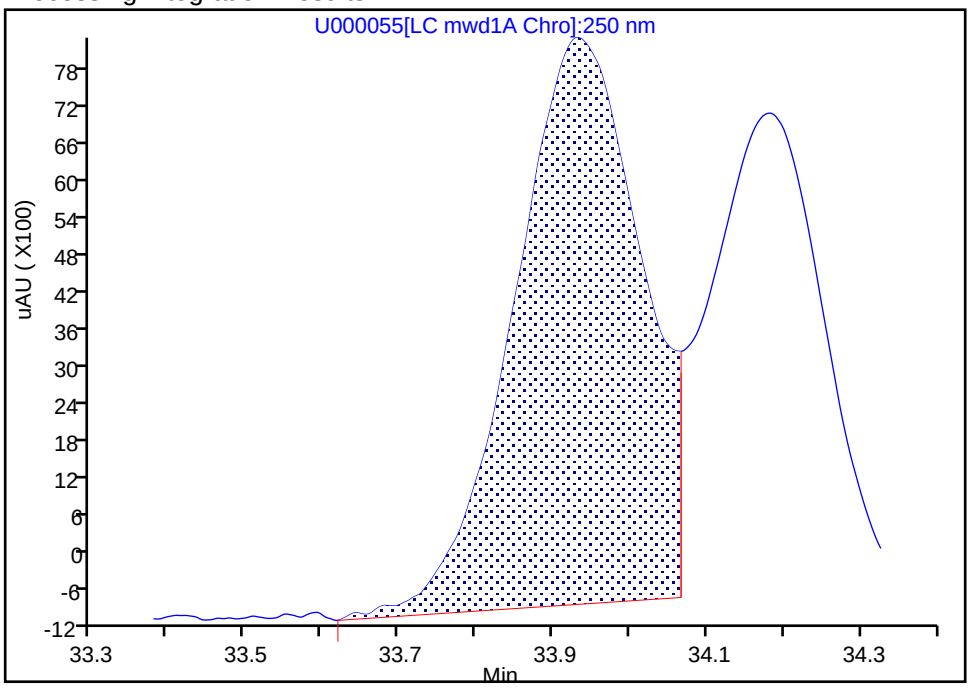
Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000055.D				
Injection Date:	23-May-2019 18:53:06	Instrument ID:	LC12		
Lims ID:	LCSD 320-291065/3-A				
Client ID:					
Operator ID:	AO	ALS Bottle#:	48	Worklist Smp#:	55
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

16 2-Amino-4,6-dinitrotoluene, CAS: 35572-78-2

Signal: 1

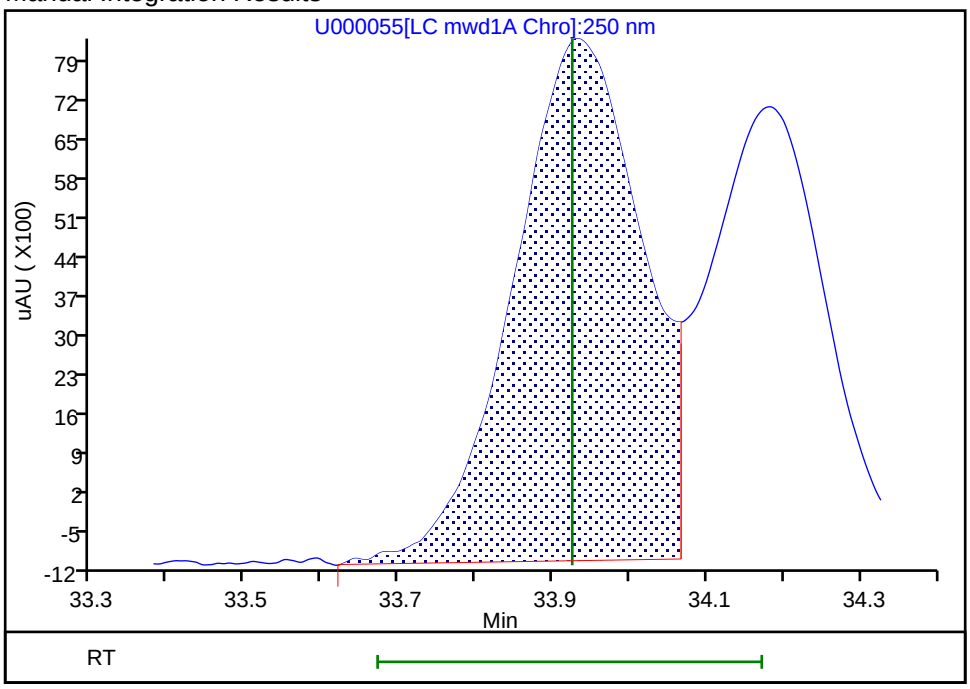
Processing Integration Results

RT: 33.93
Height: 9156
Amount: 45.274702
Amount Units: ng/ml



Manual Integration Results

RT: 33.93
Height: 9333
Amount: 46.149934
Amount Units: ng/ml



Reviewer: cartiera, 24-May-2019 09:52:12

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

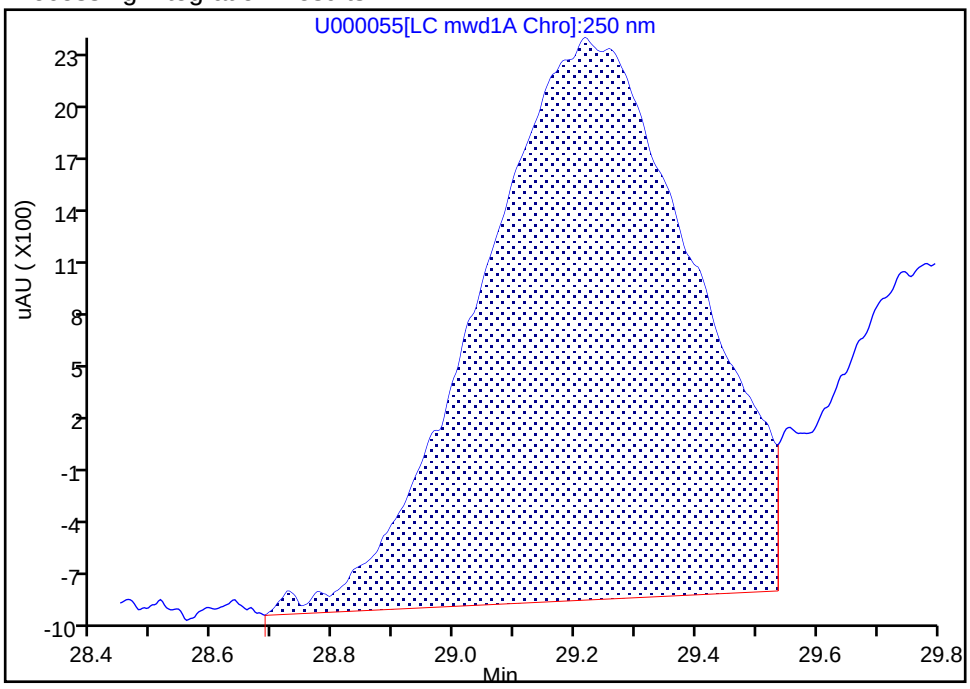
Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000055.D				
Injection Date:	23-May-2019 18:53:06	Instrument ID:	LC12		
Lims ID:	LCSD 320-291065/3-A				
Client ID:					
Operator ID:	AO	ALS Bottle#:	48	Worklist Smp#:	55
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

10 o-Nitrotoluene, CAS: 88-72-2

Signal: 1

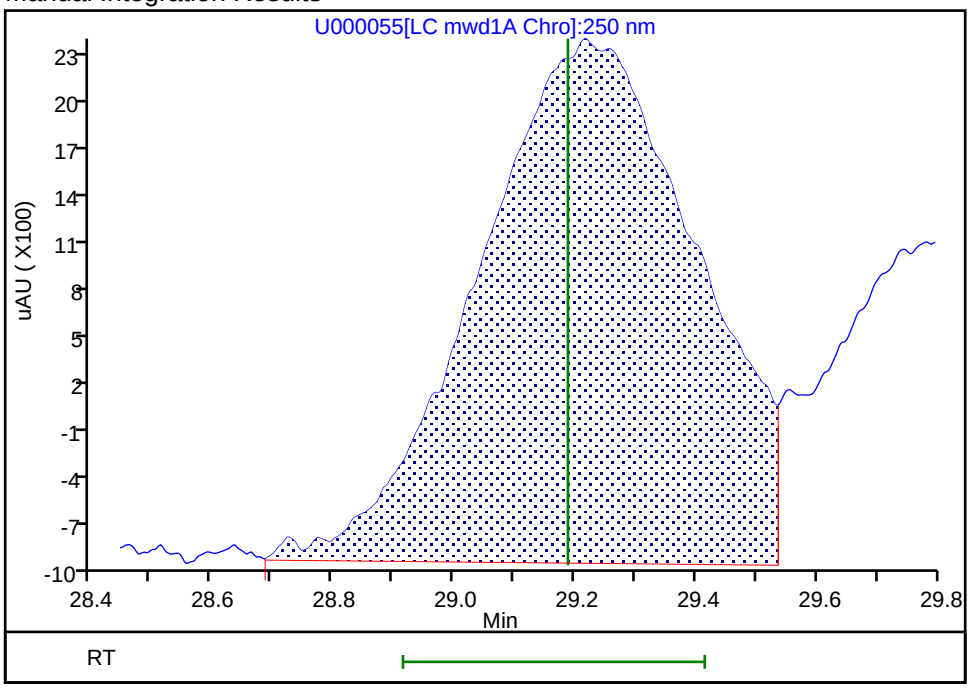
Processing Integration Results

RT: 29.22
Height: 3247
Amount: 45.695985
Amount Units: ng/ml



Manual Integration Results

RT: 29.22
Height: 3362
Amount: 47.314413
Amount Units: ng/ml



Reviewer: cartiera, 24-May-2019 09:52:07

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

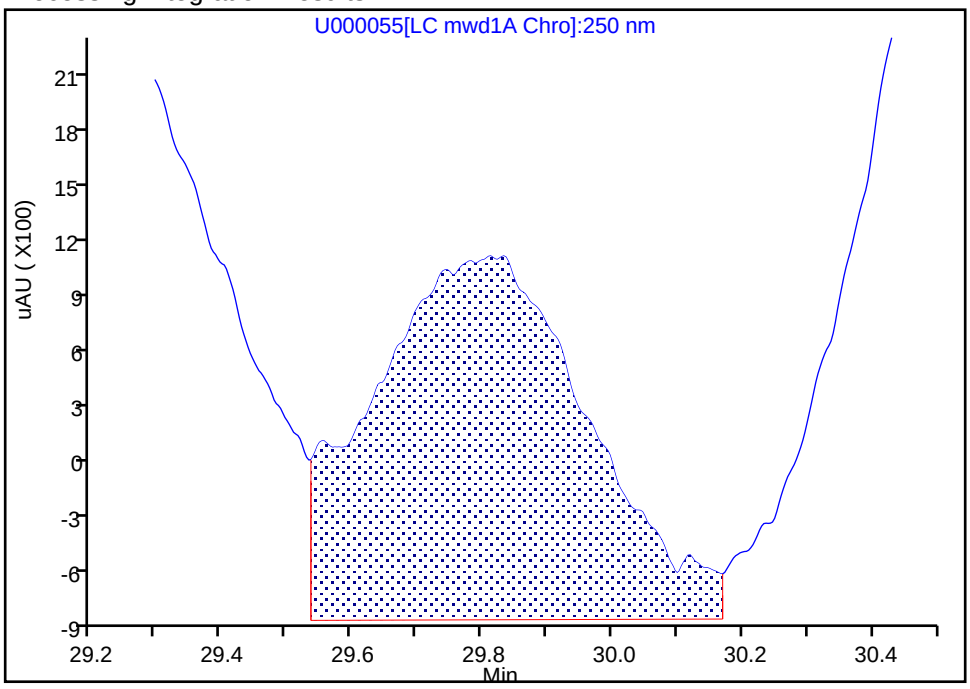
Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000055.D				
Injection Date:	23-May-2019 18:53:06	Instrument ID:	LC12		
Lims ID:	LCSD 320-291065/3-A				
Client ID:					
Operator ID:	AO	ALS Bottle#:	48	Worklist Smp#:	55
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

11 m-Nitrotoluene, CAS: 99-08-1

Signal: 1

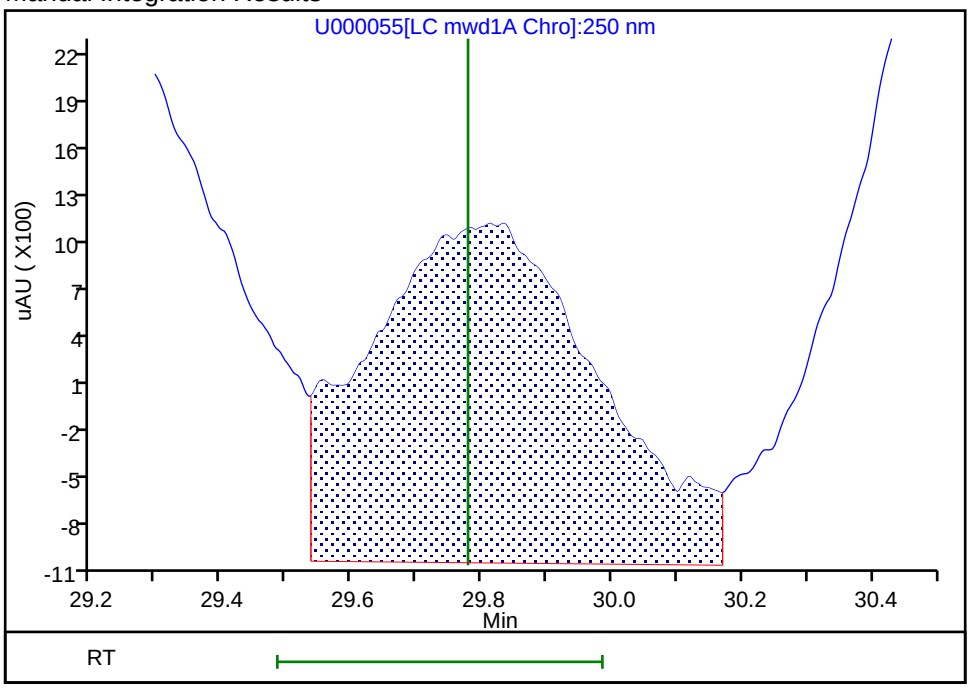
Processing Integration Results

RT: 29.83
Height: 1912
Amount: 42.721824
Amount Units: ng/ml



Manual Integration Results

RT: 29.81
Height: 2107
Amount: 47.311319
Amount Units: ng/ml



Reviewer: cartiera, 24-May-2019 09:52:07

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

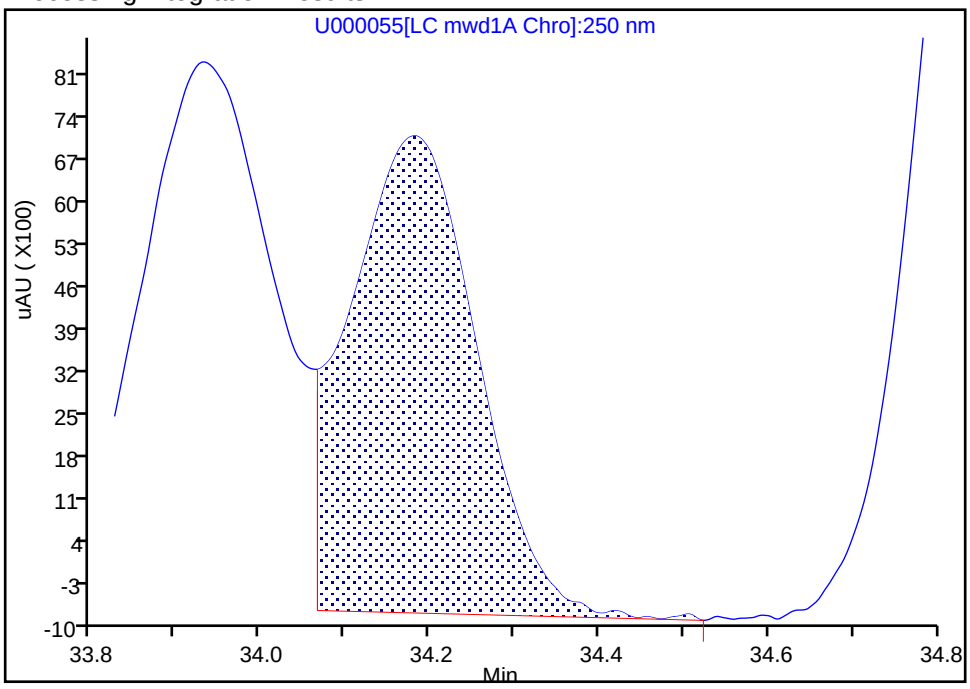
Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000055.D				
Injection Date:	23-May-2019 18:53:06	Instrument ID:	LC12		
Lims ID:	LCSD 320-291065/3-A				
Client ID:					
Operator ID:	AO	ALS Bottle#:	48	Worklist Smp#:	55
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

17 4-Amino-2,6-dinitrotoluene, CAS: 19406-51-0

Signal: 1

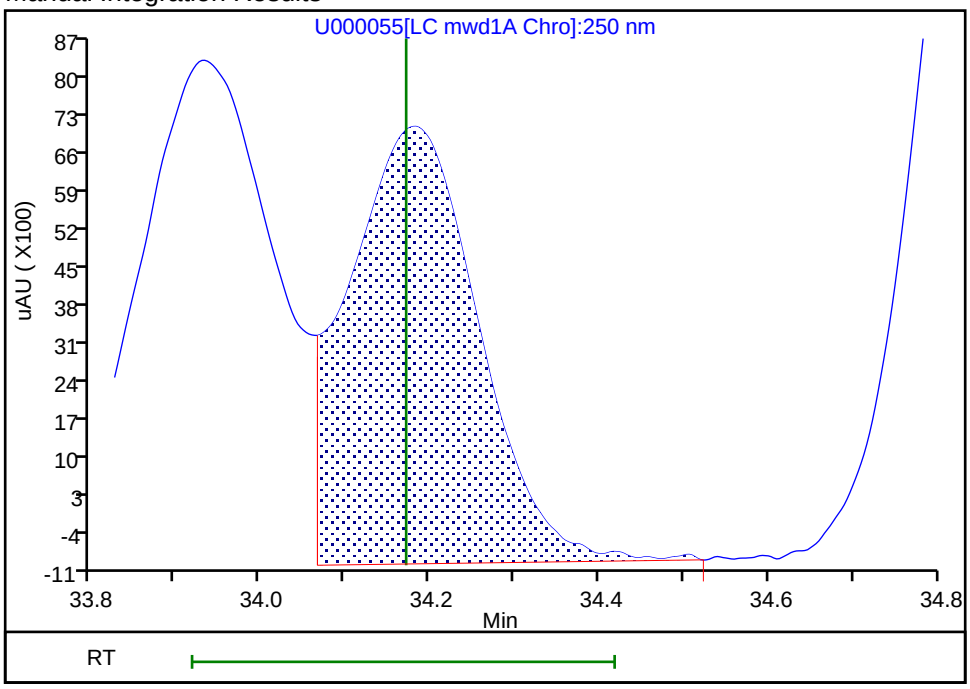
Processing Integration Results

RT: 34.18
Area: 82127
Amount: 43.698903
Amount Units: ng/ml



Manual Integration Results

RT: 34.18
Area: 85593
Amount: 47.136645
Amount Units: ng/ml



Reviewer: cartiera, 24-May-2019 09:52:12

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

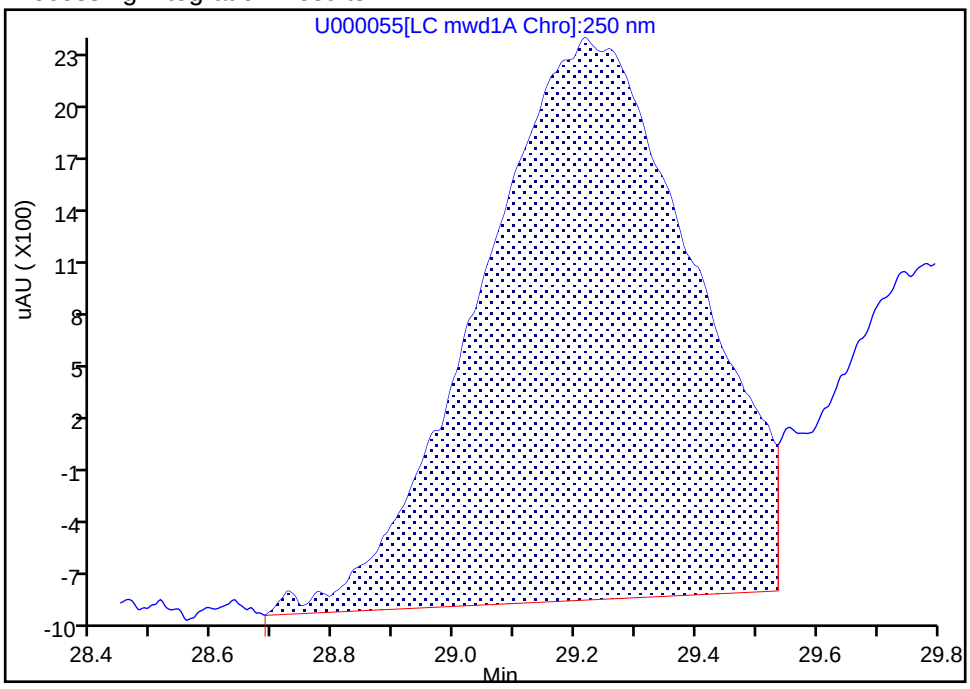
Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000055.D				
Injection Date:	23-May-2019 18:53:06	Instrument ID:	LC12		
Lims ID:	LCSD 320-291065/3-A				
Client ID:					
Operator ID:	AO	ALS Bottle#:	48	Worklist Smp#:	55
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

9 p-Nitrotoluene, CAS: 99-99-0

Signal: 1

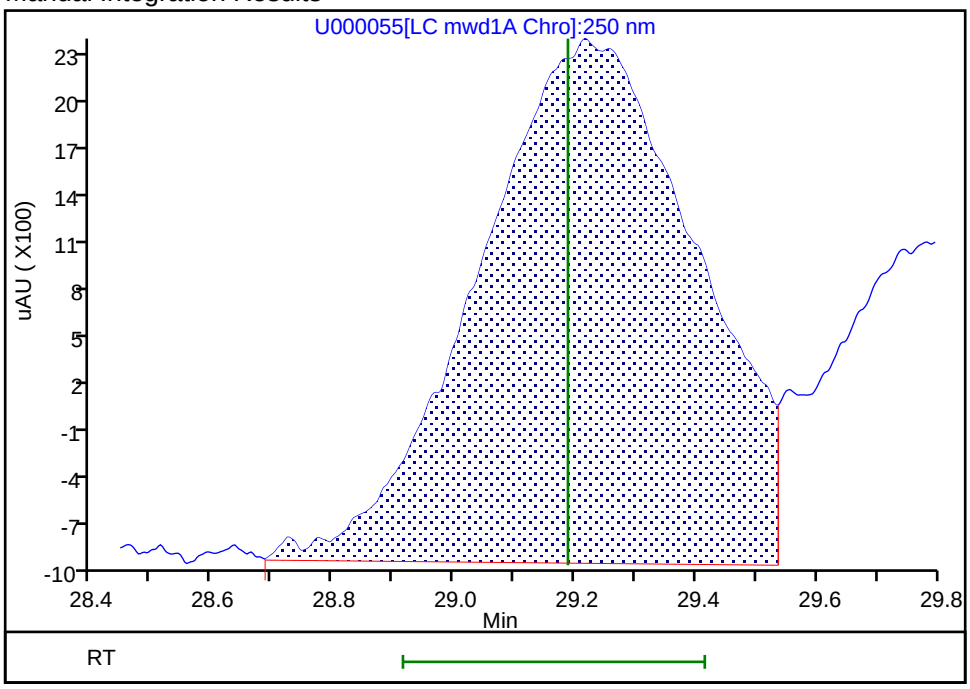
Processing Integration Results

RT: 29.22
Height: 3247
Amount: 45.695985
Amount Units: ng/ml



Manual Integration Results

RT: 29.22
Height: 3362
Amount: 47.314413
Amount Units: ng/ml



Reviewer: cartiera, 24-May-2019 09:52:07

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

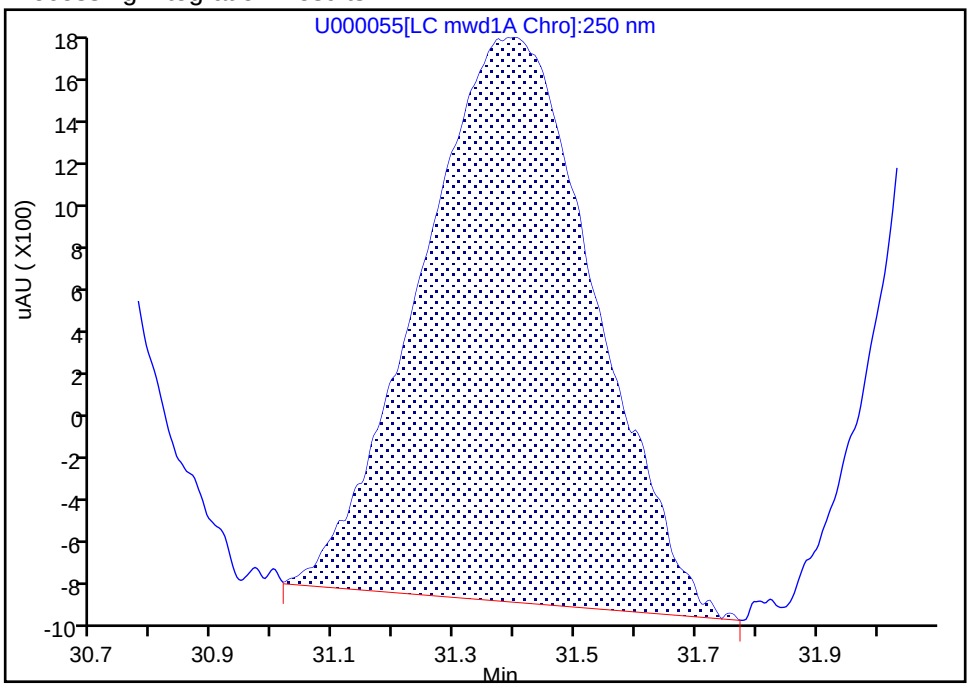
Data File:	\\chromna\Sacramento\ChromData\LC12\20190521-76638.b\U000055.D				
Injection Date:	23-May-2019 18:53:06	Instrument ID:	LC12		
Lims ID:	LCSD 320-291065/3-A				
Client ID:					
Operator ID:	AO	ALS Bottle#:	48	Worklist Smp#:	55
Injection Vol:	500.0 ul	Dil. Factor:	1.0000		
Method:	LC12_Conf_8330	Limit Group:	LC 8330A ICAL		
Column:	Zorbax Cyano CN (4.60 mm)	Detector	LC mwd1A, 250 nm		

13 RDX, CAS: 121-82-4

Signal: 1

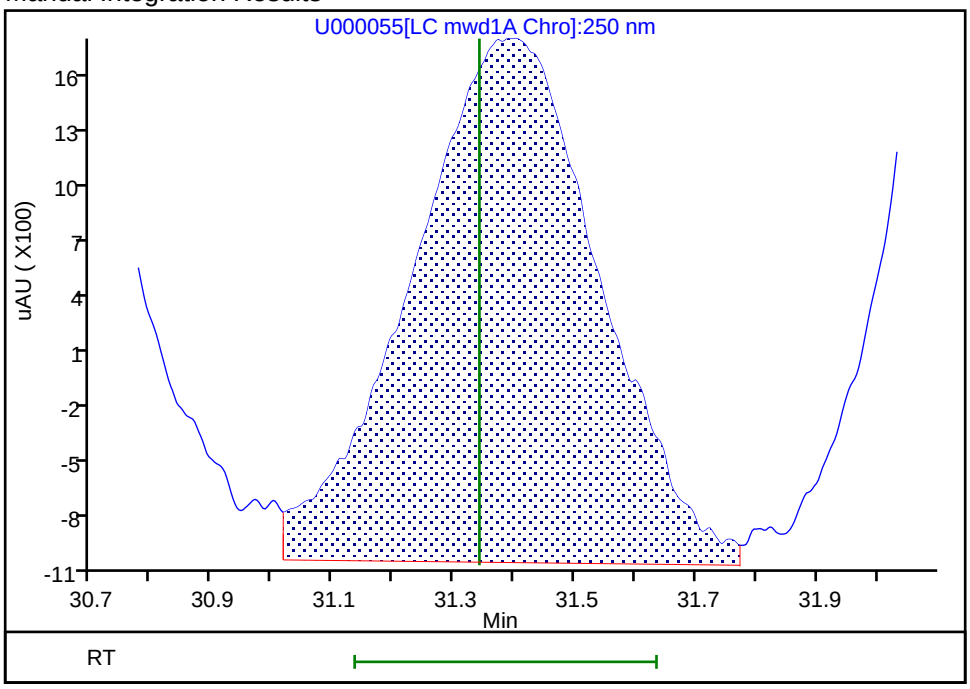
Processing Integration Results

RT: 31.40
Height: 2668
Amount: 46.639047
Amount Units: ng/ml



Manual Integration Results

RT: 31.40
Height: 2846
Amount: 52.757083
Amount Units: ng/ml



Reviewer: cartiera, 24-May-2019 09:52:07

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Instrument ID: LC11 Start Date: 02/27/2019 19:43

Analysis Batch Number: 278694 End Date: 02/28/2019 12:42

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD1 320-278694/3 IC		02/27/2019 19:43	1	ZAB0000003.D	Synergi C18 4.6(mm)
STD2 320-278694/4 IC		02/27/2019 20:37	1	ZAB0000004.D	Synergi C18 4.6(mm)
STD3 320-278694/5 IC		02/27/2019 21:30	1	ZAB0000005.D	Synergi C18 4.6(mm)
STD4 320-278694/6 IC		02/27/2019 22:24	1	ZAB0000006.D	Synergi C18 4.6(mm)
STD5 320-278694/7 IC		02/27/2019 23:17	1	ZAB0000007.D	Synergi C18 4.6(mm)
STD6 320-278694/8 IC		02/28/2019 00:11	1	ZAB0000008.D	Synergi C18 4.6(mm)
STD7 320-278694/9 IC		02/28/2019 01:05	1	ZAB0000009.D	Synergi C18 4.6(mm)
ICV 320-278694/11		02/28/2019 02:52	1	ZAB0000011.D	Synergi C18 4.6(mm)
LODV 320-278694/12		02/28/2019 03:46	1	ZAB0000012.D	Synergi C18 4.6(mm)
STD 320-278694/14 IC		02/28/2019 05:33	1	ZAB0000014.D	Synergi C18 4.6(mm)
STD 320-278694/15 IC		02/28/2019 06:26	1	ZAB0000015.D	Synergi C18 4.6(mm)
STD 320-278694/16 IC		02/28/2019 07:20	1	ZAB0000016.D	Synergi C18 4.6(mm)
STD 320-278694/17 IC		02/28/2019 08:13	1	ZAB0000017.D	Synergi C18 4.6(mm)
STD 320-278694/18 IC		02/28/2019 09:07	1	ZAB0000018.D	Synergi C18 4.6(mm)
STD 320-278694/19 IC		02/28/2019 10:01	1	ZAB0000019.D	Synergi C18 4.6(mm)
ICV 320-278694/21		02/28/2019 11:48	1	ZAB0000021.D	Synergi C18 4.6(mm)
LODV 320-278694/22		02/28/2019 12:42	1	ZAB0000022.D	Synergi C18 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Instrument ID: LC12 Start Date: 04/09/2019 22:07

Analysis Batch Number: 287393 End Date: 04/10/2019 16:21

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD1 320-287393/3 IC		04/09/2019 22:07	1	H000032.D	Zorbax CN 4.6(mm)
STD2 320-287393/4 IC		04/09/2019 23:04	1	H000033.D	Zorbax CN 4.6(mm)
STD3 320-287393/5 IC		04/10/2019 00:02	1	H000034.D	Zorbax CN 4.6(mm)
STD4 320-287393/6 IC		04/10/2019 01:00	1	H000035.D	Zorbax CN 4.6(mm)
STD5 320-287393/7 IC		04/10/2019 01:57	1	H000036.D	Zorbax CN 4.6(mm)
STD6 320-287393/8 IC		04/10/2019 02:55	1	H000037.D	Zorbax CN 4.6(mm)
STD7 320-287393/9 IC		04/10/2019 03:52	1	H000038.D	Zorbax CN 4.6(mm)
ICV 320-287393/11		04/10/2019 05:48	1	H000040.D	Zorbax CN 4.6(mm)
STD2 320-287393/14 IC		04/10/2019 09:38	1	H000044.D	Zorbax CN 4.6(mm)
STD3 320-287393/15 IC		04/10/2019 10:35	1	H000045.D	Zorbax CN 4.6(mm)
STD4 320-287393/16 IC		04/10/2019 11:33	1	H000046.D	Zorbax CN 4.6(mm)
STD5 320-287393/17 IC		04/10/2019 12:30	1	H000047.D	Zorbax CN 4.6(mm)
STD6 320-287393/18 IC		04/10/2019 13:28	1	H000048.D	Zorbax CN 4.6(mm)
STD7 320-287393/19 IC		04/10/2019 14:25	1	H000049.D	Zorbax CN 4.6(mm)
ICV 320-287393/21		04/10/2019 16:21	1	H000051.D	Zorbax CN 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Instrument ID: LC11 Start Date: 04/30/2019 13:05

Analysis Batch Number: 291526 End Date: 05/03/2019 13:49

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 320-291526/3		04/30/2019 13:05	1	ZD0000002.D	Synergi C18 4.6(mm)
CCVRT 320-291526/4		04/30/2019 13:58	1	ZD0000003.D	Synergi C18 4.6(mm)
CCV 320-291526/16		05/01/2019 01:54	1		Synergi C18 4.6(mm)
CCV 320-291526/17		05/01/2019 02:48	1		Synergi C18 4.6(mm)
CCV 320-291526/28		05/01/2019 12:38	1		Synergi C18 4.6(mm)
CCV 320-291526/29		05/01/2019 13:31	1		Synergi C18 4.6(mm)
CCV 320-291526/39		05/01/2019 22:28	1		Synergi C18 4.6(mm)
CCV 320-291526/40		05/01/2019 23:22	1		Synergi C18 4.6(mm)
CCV 320-291526/51		05/02/2019 09:12	1	ZD0000050.D	Synergi C18 4.6(mm)
CCV 320-291526/52		05/02/2019 10:05	1	ZD0000051.D	Synergi C18 4.6(mm)
MB 320-291065/1-A		05/02/2019 17:15	1	ZD0000059.D	Synergi C18 4.6(mm)
CCV 320-291526/63		05/02/2019 20:49	1	ZD0000063.D	Synergi C18 4.6(mm)
CCV 320-291526/64		05/02/2019 21:43	1	ZD0000064.D	Synergi C18 4.6(mm)
280-123009-1		05/03/2019 05:46	1	ZD0000073.D	Synergi C18 4.6(mm)
280-123009-2		05/03/2019 06:40	1	ZD0000074.D	Synergi C18 4.6(mm)
CCV 320-291526/75		05/03/2019 07:33	1	ZD0000075.D	Synergi C18 4.6(mm)
CCV 320-291526/76		05/03/2019 08:27	1	ZD0000076.D	Synergi C18 4.6(mm)
280-123009-3		05/03/2019 09:21	1	ZD0000077.D	Synergi C18 4.6(mm)
280-123009-4		05/03/2019 10:14	1	ZD0000078.D	Synergi C18 4.6(mm)
280-123009-5		05/03/2019 11:08	1	ZD0000079.D	Synergi C18 4.6(mm)
CCV 320-291526/84		05/03/2019 12:55	1	ZD0000081.D	Synergi C18 4.6(mm)
CCV 320-291526/85		05/03/2019 13:49	1	ZD0000082.D	Synergi C18 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Instrument ID: LC11 Start Date: 05/06/2019 15:04

Analysis Batch Number: 292661 End Date: 05/09/2019 09:15

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 320-292661/3		05/06/2019 15:04	1	F0000003.D	Synergi C18 4.6(mm)
CCVRT 320-292661/4		05/06/2019 15:58	1	F0000004.D	Synergi C18 4.6(mm)
LCS 320-291065/2-A		05/07/2019 01:48	1	F0000015.D	Synergi C18 4.6(mm)
CCV 320-292661/26		05/07/2019 02:41	1	F0000016.D	Synergi C18 4.6(mm)
CCV 320-292661/27		05/07/2019 03:35	1	F0000017.D	Synergi C18 4.6(mm)
LCSD 320-291065/3-A		05/07/2019 04:29	1	F0000018.D	Synergi C18 4.6(mm)
CCV 320-292661/47		05/07/2019 13:25	1	F0000028.D	Synergi C18 4.6(mm)
CCV 320-292661/48		05/07/2019 14:19	1	F0000029.D	Synergi C18 4.6(mm)
CCV 320-292661/49		05/08/2019 00:09	1		Synergi C18 4.6(mm)
CCV 320-292661/60		05/08/2019 10:53	1		Synergi C18 4.6(mm)
CCV 320-292661/61		05/08/2019 11:47	1		Synergi C18 4.6(mm)
CCV 320-292661/72		05/08/2019 21:37	1		Synergi C18 4.6(mm)
CCV 320-292661/73		05/08/2019 22:31	1		Synergi C18 4.6(mm)
CCV 320-292661/84		05/09/2019 08:22	1		Synergi C18 4.6(mm)
CCV 320-292661/85		05/09/2019 09:15	1		Synergi C18 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Instrument ID: LC12 Start Date: 05/14/2019 16:46

Analysis Batch Number: 294594 End Date: 05/15/2019 13:23

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD1 320-294594/4 IC		05/14/2019 16:46	1	N000002.D	Zorbax CN 4.6(mm)
STD2 320-294594/5 IC		05/14/2019 17:43	1	N000003.D	Zorbax CN 4.6(mm)
STD3 320-294594/6 IC		05/14/2019 18:41	1	N000004.D	Zorbax CN 4.6(mm)
STD4 320-294594/7 IC		05/14/2019 19:38	1	N000005.D	Zorbax CN 4.6(mm)
STD5 320-294594/8 IC		05/14/2019 20:36	1	N000006.D	Zorbax CN 4.6(mm)
STD6 320-294594/9 IC		05/14/2019 21:33	1	N000007.D	Zorbax CN 4.6(mm)
STD7 320-294594/10 IC		05/14/2019 22:31	1	N000008.D	Zorbax CN 4.6(mm)
ICV 320-294594/12		05/15/2019 00:26	1		Zorbax CN 4.6(mm)
STD2 320-294594/14 IC		05/15/2019 02:21	1	N000012.D	Zorbax CN 4.6(mm)
STD3 320-294594/15 IC		05/15/2019 03:19	1	N000013.D	Zorbax CN 4.6(mm)
STD4 320-294594/16 IC		05/15/2019 04:16	1	N000014.D	Zorbax CN 4.6(mm)
STD5 320-294594/17 IC		05/15/2019 05:14	1	N000015.D	Zorbax CN 4.6(mm)
STD6 320-294594/18 IC		05/15/2019 06:11	1	N000016.D	Zorbax CN 4.6(mm)
STD7 320-294594/19 IC		05/15/2019 07:09	1	N000017.D	Zorbax CN 4.6(mm)
ICV 320-294594/23		05/15/2019 13:23	1		Zorbax CN 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Instrument ID: LC12 Start Date: 05/21/2019 18:53

Analysis Batch Number: 295993 End Date: 05/24/2019 14:04

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 320-295993/3		05/21/2019 18:53	1	U000003.D	Zorbax CN 4.6(mm)
CCVRT 320-295993/4		05/21/2019 19:51	1	U000004.D	Zorbax CN 4.6(mm)
ZZZZZ		05/21/2019 21:46	1		Zorbax CN 4.6(mm)
CCV 320-295993/16		05/22/2019 07:21	1		Zorbax CN 4.6(mm)
CCV 320-295993/17		05/22/2019 08:19	1		Zorbax CN 4.6(mm)
CCV 320-295993/28		05/22/2019 19:49	1		Zorbax CN 4.6(mm)
CCV 320-295993/29		05/22/2019 20:47	1		Zorbax CN 4.6(mm)
CCV 320-295993/40		05/23/2019 07:20	1		Zorbax CN 4.6(mm)
CCV 320-295993/41		05/23/2019 08:18	1		Zorbax CN 4.6(mm)
CCV 320-295993/47		05/23/2019 13:08	1	U000049.D	Zorbax CN 4.6(mm)
CCV 320-295993/48		05/23/2019 14:05	1	U000050.D	Zorbax CN 4.6(mm)
MB 320-291065/1-A		05/23/2019 16:57	1	U000053.D	Zorbax CN 4.6(mm)
LCS 320-291065/2-A		05/23/2019 17:55	1	U000054.D	Zorbax CN 4.6(mm)
LCSD 320-291065/3-A		05/23/2019 18:53	1	U000055.D	Zorbax CN 4.6(mm)
CCV 320-295993/51		05/24/2019 01:36	1	U000062.D	Zorbax CN 4.6(mm)
CCV 320-295993/52		05/24/2019 02:33	1	U000063.D	Zorbax CN 4.6(mm)
280-123009-1		05/24/2019 06:24	1	U000067.D	Zorbax CN 4.6(mm)
280-123009-2		05/24/2019 07:21	1	U000068.D	Zorbax CN 4.6(mm)
280-123009-3		05/24/2019 08:19	1	U000069.D	Zorbax CN 4.6(mm)
280-123009-4		05/24/2019 09:16	1	U000070.D	Zorbax CN 4.6(mm)
280-123009-5		05/24/2019 10:14	1	U000071.D	Zorbax CN 4.6(mm)
280-123009-1 DL		05/24/2019 11:12	5	U000072.D	Zorbax CN 4.6(mm)
280-123009-5 DL		05/24/2019 12:09	5	U000073.D	Zorbax CN 4.6(mm)
CCV 320-295993/72		05/24/2019 13:07	1	U000074.D	Zorbax CN 4.6(mm)
CCV 320-295993/73		05/24/2019 14:04	1	U000075.D	Zorbax CN 4.6(mm)

8330A

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 280-123009-1

SDG No.:

Instrument ID: LC11 Start Date: 05/23/2019 18:55

Analysis Batch Number: 296662 End Date: 05/24/2019 21:44

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 320-296662/1		05/23/2019 18:55	1	T0000087.D	Synergi C18 4.6(mm)
CCVRT 320-296662/2		05/23/2019 19:49	1	T0000088.D	Synergi C18 4.6(mm)
CCV 320-296662/13		05/24/2019 05:39	1	T0000099.D	Synergi C18 4.6(mm)
CCV 320-296662/14		05/24/2019 06:32	1	T0000100.D	Synergi C18 4.6(mm)
280-123009-1 DL		05/24/2019 14:35	5	T0000109.D	Synergi C18 4.6(mm)
280-123009-5 DL		05/24/2019 15:28	5	T0000110.D	Synergi C18 4.6(mm)
CCV 320-296662/25		05/24/2019 16:22	1	T0000111.D	Synergi C18 4.6(mm)
CCV 320-296662/26		05/24/2019 17:16	1	T0000112.D	Synergi C18 4.6(mm)
CCV 320-296662/31		05/24/2019 20:50	1		Synergi C18 4.6(mm)
CCV 320-296662/32		05/24/2019 21:44	1		Synergi C18 4.6(mm)

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 280-123009-1

SDG No.:

Batch Number: 291065 Batch Start Date: 04/29/19 06:59 Batch Analyst: Kuzmenko, Natalia

Batch Method: 8330-Prep Batch End Date: 05/01/19 11:19

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	HP34DNTSU 00112	HP8330SP 00108
MB 320-291065/1		8330-Prep, 8330A				1000 mL	20 mL	50 uL	
LCS 320-291065/2		8330-Prep, 8330A				1000 mL	20 mL	50 uL	20 uL
LCSD 320-291065/3		8330-Prep, 8330A				1000 mL	20 mL	50 uL	20 uL
280-123009-A-1	SP-S2	8330-Prep, 8330A	T	1514.4 g	527.57 g	986.8 mL	20 mL	50 uL	
280-123009-A-2	SP-S6	8330-Prep, 8330A	T	1526.4 g	506.92 g	1019.5 mL	20 mL	50 uL	
280-123009-A-3	SP-S8	8330-Prep, 8330A	T	1511.6 g	505.75 g	1005.9 mL	20 mL	50 uL	
280-123009-A-4	SP-E1	8330-Prep, 8330A	T	1513.3 g	506.59 g	1006.7 mL	20 mL	50 uL	
280-123009-B-5	SP-S22	8330-Prep, 8330A	T	1514.3 g	522.41 g	991.9 mL	20 mL	50 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	HPMETSP 00054	AnalysisComment				
MB 320-291065/1		8330-Prep, 8330A			SPE 5 Port 5				
LCS 320-291065/2		8330-Prep, 8330A		80 uL	SPE 5 Port 6				
LCSD 320-291065/3		8330-Prep, 8330A		80 uL	SPE 5 Port 1				
280-123009-A-1	SP-S2	8330-Prep, 8330A	T		SPE 3 Port 1				
280-123009-A-2	SP-S6	8330-Prep, 8330A	T		SPE 3 Port 2				
280-123009-A-3	SP-S8	8330-Prep, 8330A	T		SPE 3 Port 3				
280-123009-A-4	SP-E1	8330-Prep, 8330A	T		SPE 3 Port 4				
280-123009-B-5	SP-S22	8330-Prep, 8330A	T		SPE 3 Port 5				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 280-123009-1

SDG No.:

Batch Number: 291065 Batch Start Date: 04/29/19 06:59 Batch Analyst: Kuzmenko, Natalia

Batch Method: 8330-Prep Batch End Date: 05/01/19 11:19

Batch Notes	
0.1% HOAc/CAN ID	0.1% HOAc/ACN_00107 Dispenser lot 01-A-5335
Balance ID	QA-036
Batch Comment	Labels match the client IDs. Pipette ID: 48487M; 2 mL pipette lot:#11162018
Analyst ID - Concentration	TJA 4/29/19
Date of Clean up	5/01/19
Date Dilution Performed	5/01/19
Analyst ID - Dilution	NGK
Filter ID	R8PA33636
Date of Final Volume	5/01/19
Vendor lot number	0.1% HOAc/ACN_00107
Millipore Water Dispense Date	04/25/19
Prep Solvent Volume Used	5 mL
Analyst ID - Reagent Drop Witness	SC 4/29/19
Solvent	0.1% HOAc/ACN
SPE Cartridge Lot ID	004938274A

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

West Sacramento
Dilution Report Form – LC Tests

Use this form for documenting dilutions. All dilutions are based on removing sample from the original extract, unless otherwise noted. The final volume for the dilutions listed is 1 mL.
Attach the completed form to the original bench sheet, for archive with the lot data.

Table 1: How Dilutions Are Made

Dilution required	Amount of "daughter" sample (mL) to be added to solvent	Amount of Solvent (mL) Method 8330: Water Method DAT: 1.3g/L CaCl2
2X	2.5	2.5
5X	1	4
10X	0.5	4.5
20X	0.25	4.75
50X	0.1	4.9
100X	0.05	4.95
200X	2.5*	2.5
500X	1*	4
1000X	0.5*	4.5

* *Volume of 100x dilution used to make a serial dilution*

Table 2: Sample Dilutions Made

Sample ID	Dilution made	Analyst	Date
320-49346-14 (W)	10x	AJC	7 May 2019
320-49346-6 (W)	5X	↓	8 May 2019
320-49497-16 (S)	20X	↓	↓
320-49346-11 (S)	2X	↓	↓
320-49346-14 (S)	10X	↓	↓
280-123009-1	AJC 5/8/19 ~~2X~~ 5X	↓	23 May '19
280-123009-5	5X	↓	↓

AJC 28 May 2019

METALS

COVER PAGE
METALS

Lab Name: Eurofins TestAmerica, Denver Job Number: 280-123009-1

SDG No.:

Project: Cornhusker (CHAAP)

Client Sample ID	Lab Sample ID
SP-E1	280-123011-2
SP-E11	280-123011-3

Comments:

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: SP-E1 Lab Sample ID: 280-123011-2

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG ID.:

Matrix: Water Date Sampled: 04/24/2019 08:51

Reporting Basis: WET Date Received: 04/25/2019 08:40

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Selenium	1.2	5.0	1.0	0.37	ug/L	J		1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: SP-E11 Lab Sample ID: 280-123011-3

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG ID.:

Matrix: Water Date Sampled: 04/24/2019 08:51

Reporting Basis: WET Date Received: 04/25/2019 08:40

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Selenium	1.1	5.0	1.0	0.37	ug/L	J		1	6020A

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

ICV Source: ms 77 icv_02035 Concentration Units: ug/L

CCV Source: ms 77 ccv_02039

Analyte	ICV 280-457404/5 05/07/2019 10:52				CCV 280-457404/50 05/07/2019 13:49				CCV 280-457404/61 05/07/2019 14:32			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Selenium	39.7		40.0	99	48.3		50.0	97	46.4		50.0	93

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

ICV Source: ms 77 icv_02035 Concentration Units: ug/L

CCV Source: ms 77 ccv_02039

Analyte	CCV 280-457404/69 05/07/2019 15:03				CCV 280-457404/82 05/07/2019 15:54							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Selenium	49.7		50.0	99	48.8		50.0	98				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

ICV Source: MS 77 LLCCV_01842 Concentration Units: ug/L

CCV Source: MS 77 LLCCV_01842

Analyte	ICVL 280-457404/7 05/07/2019 11:00				CCVL 280-457404/52 05/07/2019 13:57				CCVL 280-457404/63 05/07/2019 14:40			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Selenium	4.97	J	5.00	99	4.99	J	5.00	100	4.62	J	5.00	92

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

ICV Source: MS 77 LLCCV_01842 Concentration Units: ug/L

CCV Source: MS 77 LLCCV_01842

Analyte	CCVL 280-457404/71 05/07/2019 15:11				CCVL 280-457404/84 05/07/2019 16:02							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Selenium	5.22		5.00	104	5.07		5.00	101				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Method: 6020A Instrument ID: MT_077

Lab Sample ID: CRI 280-457404/9 Concentration Units: ug/L

CRQL Check Standard Source: ms 77 alt RL_01198

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Selenium	5.00	4.86	J	97	80-120

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 280-457404/6 05/07/2019 10:56		CCB 280-457404/51 05/07/2019 13:53		CCB 280-457404/62 05/07/2019 14:36		CCB 280-457404/70 05/07/2019 15:07	
		Found	C	Found	C	Found	C	Found	C
Selenium	5.0	1.0	U	1.0	U	1.0	U	1.0	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 280-457404/83 05/07/2019 15:58							
		Found	C	Found	C	Found	C	Found	C
Selenium	5.0	1.0	U						

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 280-456592/1-A

Instrument Code: MT_077 Batch No.: 457404

CAS No.	Analyte	Concentration	C	Q	Method
7782-49-2	Selenium	1.0	U		6020A_DOD5

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Lab Sample ID: ICSA 280-457404/11 Instrument ID: MT_077

Lab File ID: 029ICSA.d ICS Source: ms 77 icsa_00417

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Selenium		**0.115**	
Antimony		*0.0840*	
Arsenic		*0.0810*	
Barium		*0.752*	
Beryllium		*0.0310*	
Cadmium		*0.546*	
Chromium		*1.34*	
Cobalt		*0.186*	
Copper		*1.03*	
Lead		*0.297*	
Manganese		*0.718*	
Molybdenum	*2000*	*2247*	*112*
Nickel		*0.307*	
Silver		*0.0640*	
Thallium		*0.0440*	
Vanadium		*1.57*	
Zn		*0.802*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Lab Sample ID: ICSAB 280-457404/12 Instrument ID: MT_077

Lab File ID: 030ICSB.d ICS Source: ms 77 icsab_00417

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Selenium	**100**	**103**	**103**
Antimony	*100*	*115*	*115*
Arsenic	*100*	*101*	*101*
Barium	*100*	*106*	*106*
Beryllium	*100*	*98.1*	*98*
Cadmium	*100*	*105*	*105*
Chromium	*100*	*96.4*	*96*
Cobalt	*100*	*96.7*	*97*
Copper	*100*	*95.6*	*96*
Lead	*100*	*96.5*	*96*
Manganese	*100*	*101*	*101*
Molybdenum	*2100*	*2343*	*112*
Nickel	*100*	*96.1*	*96*
Silver	*100*	*102*	*102*
Thallium	*100*	*96.4*	*96*
Vanadium	*100*	*100*	*100*
Zn	*100*	*98.4*	*98*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Lab Sample ID: ICSA 280-457404/133 Instrument ID: MT_077

Lab File ID: 151ICSA.d ICS Source: ms 77 icsa_00417

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Selenium		**0.514**	
Antimony		*0.224*	
Arsenic		*0.123*	
Barium		*0.673*	
Beryllium		*-0.0490*	
Cadmium		*0.344*	
Chromium		*1.41*	
Copper		*0.918*	
Lead		*0.290*	
Manganese		*0.474*	
Molybdenum	*2000*	*2157*	*108*
Nickel		*0.154*	
Silver		*0.0570*	
Thallium		*0.0180*	
Vanadium		*0.0870*	
Zn		*1.23*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Lab Sample ID: ICSAB 280-457404/134 Instrument ID: MT_077

Lab File ID: 152ICSB.d ICS Source: ms 77 icsab_00417

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Selenium	**100**	**99.6**	**100**
Antimony	*100*	*114*	*114*
Arsenic	*100*	*102*	*102*
Barium	*100*	*108*	*108*
Beryllium	*100*	*102*	*102*
Cadmium	*100*	*101*	*101*
Chromium	*100*	*97.8*	*98*
Cobalt	*100*	*95.6*	*96*
Copper	*100*	*92.5*	*92*
Lead	*100*	*96.7*	*97*
Manganese	*100*	*101*	*101*
Molybdenum	*2100*	*2409*	*115*
Nickel	*100*	*93.7*	*94*
Silver	*100*	*98.3*	*98*
Thallium	*100*	*95.4*	*95*
Vanadium	*100*	*104*	*104*
Zn	*100*	*92.0*	*92*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 280-456592/2-A

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

Sample Matrix: Water LCS Source: MS CALSTD-1_00136

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Selenium	40.0	39.1		98	80	120		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
LAB CONTROL SAMPLE DUPLICATE
METALS

Lab ID: LCSD 280-456592/3-A

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

Sample Matrix: Water LCS Source: MS CALSTD-1_00136

Analyte	(SDR)	C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Selenium	37.9		40.0	95	80-120	3	20		6020A

SDR = Spike Duplicate Results
Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

9-IN
DETECTION LIMITS
METALS

Lab Name: Eurofins TestAmerica, Denver Job Number: 280-123009-1

SDG Number:

Matrix: Water Instrument ID: MT_077

Method: 6020A DL Date: 02/03/2019 00:00

Prep Method: 3020A

Analyte	Wavelength/ Mass	LOQ (ug/L)	DL (ug/L)
Selenium	78	5	0.373

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: Eurofins TestAmerica, Denver Job Number: 280-123009-1

SDG Number:

Matrix: Water Instrument ID: MT_077

Method: 6020A XMDL Date: 02/03/2019 00:00

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Selenium		5	0.373

11-IN
LINEAR RANGES
METALS

Lab Name: Eurofins TestAmerica, Denver Job No: 280-123009-1

SDG No.:

Instrument ID: MT_077 Date: 04/09/2019 07:07

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Selenium		3600	6020A

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Prep Method: 3020A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 280-456592/1-A	05/06/2019 17:30	456592		50	50
LCS 280-456592/2-A	05/06/2019 17:30	456592		50	50
LCSD 280-456592/3-A	05/06/2019 17:30	456592		50	50
280-123011-2	05/06/2019 17:30	456592		50	50
280-123011-3	05/06/2019 17:30	456592		50	50

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Instrument ID: MT_077 Analysis Method: 6020A

Start Date: 05/07/2019 10:36 End Date: 05/07/2019 20:44

Lab Sample Id	D/F	Type	Time	Analytes
				Se
RINSE 280-457404/1			10:36	
RINSE 280-457404/2			10:40	
ICIS 280-457404/3			10:44	X
IC 280-457404/4	1		10:48	X
ICV 280-457404/5	1		10:52	X
ICB 280-457404/6	1		10:56	X
ICVL 280-457404/7	1		11:00	X
CRI 280-457404/8			11:04	
CRI 280-457404/9	1		11:09	X
ZZZZZZ			11:13	
ICSA 280-457404/11	1		11:17	X
ICSAB 280-457404/12	1		11:21	X
RINSE 280-457404/13			11:25	
LRA 280-457404/14			11:29	
RINSE 280-457404/15			11:33	
CCV 280-457404/16			11:37	
CCB 280-457404/17			11:40	
CCVL 280-457404/18			11:44	
ZZZZZZ			11:48	
ZZZZZZ			11:52	
ZZZZZZ			11:56	
ZZZZZZ			12:00	
ZZZZZZ			12:04	
ZZZZZZ			12:08	
ZZZZZZ			12:12	
ZZZZZZ			12:16	
ZZZZZZ			12:19	
CCV 280-457404/28			12:23	
CCB 280-457404/29			12:27	
CCVL 280-457404/30			12:31	
ZZZZZZ			12:35	
ZZZZZZ			12:39	
ZZZZZZ			12:43	
ZZZZZZ			12:47	
ZZZZZZ			12:51	
ZZZZZZ			12:55	
ZZZZZZ			12:58	
CCV 280-457404/38			13:02	
CCB 280-457404/39			13:06	
CCVL 280-457404/40			13:10	
ZZZZZZ			13:14	
ZZZZZZ			13:18	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Instrument ID: MT_077 Analysis Method: 6020A

Start Date: 05/07/2019 10:36 End Date: 05/07/2019 20:44

Lab Sample Id	D/F	Type	Time	Analytes
				Se
ZZZZZZ			13:22	
ZZZZZZ			13:26	
ZZZZZZ			13:30	
ZZZZZZ			13:33	
ZZZZZZ			13:37	
ZZZZZZ			13:41	
ZZZZZZ			13:45	
CCV 280-457404/50	1		13:49	X
CCB 280-457404/51	1		13:53	X
CCVL 280-457404/52	1		13:57	X
ZZZZZZ			14:01	
ZZZZZZ			14:04	
ZZZZZZ			14:08	
ZZZZZZ			14:12	
ZZZZZZ			14:16	
ZZZZZZ			14:20	
280-123011-2	1	T	14:24	X
280-123011-3	1	T	14:28	X
CCV 280-457404/61	1		14:32	X
CCB 280-457404/62	1		14:36	X
CCVL 280-457404/63	1		14:40	X
RINSE 280-457404/64			14:44	
RINSE 280-457404/65			14:48	
RINSE 280-457404/66			14:52	
ICIS 280-457404/67			14:56	X
IC 280-457404/68	1		14:59	X
CCV 280-457404/69	1		15:03	X
CCB 280-457404/70	1		15:07	X
CCVL 280-457404/71	1		15:11	X
MB 280-456592/1-A	1	T	15:15	X
LCS 280-456592/2-A	1	T	15:19	X
LCSD 280-456592/3-A	1	T	15:23	X
ZZZZZZ			15:27	
ZZZZZZ			15:31	
ZZZZZZ			15:35	
ZZZZZZ			15:38	
ZZZZZZ			15:42	
ZZZZZZ			15:46	
ZZZZZZ			15:50	
CCV 280-457404/82	1		15:54	X
CCB 280-457404/83	1		15:58	X
CCVL 280-457404/84	1		16:02	X

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Instrument ID: MT_077 Analysis Method: 6020A

Start Date: 05/07/2019 10:36 End Date: 05/07/2019 20:44

Lab Sample Id	D/F	Type	Time	Analytes
				Se
ZZZZZZ			16:06	
ZZZZZZ			16:09	
ZZZZZZ			16:13	
ZZZZZZ			16:17	
ZZZZZZ			16:21	
ZZZZZZ			16:25	
ZZZZZZ			16:29	
ZZZZZZ			16:33	
ZZZZZZ			16:36	
CCV 280-457404/94			16:40	
CCB 280-457404/95			16:44	
CCVL 280-457404/96			16:48	
ZZZZZZ			16:52	
ZZZZZZ			16:56	
ZZZZZZ			17:00	
ZZZZZZ			17:04	
ZZZZZZ			17:07	
ZZZZZZ			17:11	
ZZZZZZ			17:15	
ZZZZZZ			17:19	
ZZZZZZ			17:23	
ZZZZZZ			17:27	
CCV 280-457404/107			17:31	
CCB 280-457404/108			17:35	
CCVL 280-457404/109			17:39	
ZZZZZZ			17:42	
ZZZZZZ			17:46	
ZZZZZZ			17:50	
ZZZZZZ			17:54	
CCV 280-457404/114			17:58	
CCB 280-457404/115			18:02	
CCVL 280-457404/116			18:06	
ZZZZZZ			18:10	
ZZZZZZ			18:13	
ZZZZZZ			18:17	
ZZZZZZ			18:21	
ZZZZZZ			18:25	
ZZZZZZ			18:29	
CCV 280-457404/123			18:33	
CCB 280-457404/124			18:37	
RINSE 280-457404/125			18:41	
RINSE 280-457404/126			18:44	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Instrument ID: MT_077 Analysis Method: 6020A

Start Date: 05/07/2019 10:36 End Date: 05/07/2019 20:44

Lab Sample Id	D/F	Type	Time	Analytes
				Se
RINSE 280-457404/127			18:48	
ICIS 280-457404/128			18:52	X
IC 280-457404/129			18:56	X
CCV 280-457404/130			19:00	
CCB 280-457404/131			19:04	
CCVL 280-457404/132			19:08	
ICSA 280-457404/133	1		19:12	X
ICSAB 280-457404/134	1		19:15	X
RINSE 280-457404/135			19:19	
CCV 280-457404/136			19:23	
CCB 280-457404/137			19:27	
CCVL 280-457404/138			19:31	
ZZZZZZ			19:35	
ZZZZZZ			19:39	
ZZZZZZ			19:43	
ZZZZZZ			19:47	
ZZZZZZ			19:50	
ZZZZZZ			19:54	
ZZZZZZ			19:58	
ZZZZZZ			20:02	
ZZZZZZ			20:06	
CCV 280-457404/148			20:10	
CCB 280-457404/149			20:14	
CCVL 280-457404/150			20:17	
ZZZZZZ			20:21	
ZZZZZZ			20:25	
ZZZZZZ			20:29	
ZZZZZZ			20:33	
CCV 280-457404/155			20:37	
CCB 280-457404/156			20:41	
CCVL 280-457404/157			20:44	

Prep Types:
T = Total/NA

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

ICP-MS Instrument ID: MT_077 Start Date: 05/07/2019 End Date: 05/07/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6/1	Q	Element Li-6/2	Q	Element Sc/1	Q	Element Sc/2	Q	Element Sc/3	Q
IC 280-457404/4	10:48	94		100		100		100		101	
ICV 280-457404/5	10:52	93		100		99		99		99	
ICB 280-457404/6	10:56	94		99		99		99		101	
ICVL 280-457404/7	11:00	94		101		100		100		100	
CRI 280-457404/9	11:09	94		99		99		98		100	
ICSA 280-457404/11	11:17	80		88		87		85		86	
ICSAB 280-457404/12	11:21	79		88		88		90		86	
CCV 280-457404/50	13:49	70		84		82		88		74	
CCB 280-457404/51	13:53	69		82		80		86		73	
CCVL 280-457404/52	13:57	69		81		79		85		73	
280-123011-2	14:24	63		76		78		85		72	
280-123011-3	14:28	62		74		77		85		71	
CCV 280-457404/61	14:32	66		78		79		84		68	
CCB 280-457404/62	14:36	65		78		76		83		67	
CCVL 280-457404/63	14:40	65		78		76		82		68	
IC 280-457404/68	14:59	101		101		101		102		102	
CCV 280-457404/69	15:03	101		101		102		102		102	
CCB 280-457404/70	15:07	102		102		102		101		101	
CCVL 280-457404/71	15:11	102		102		102		103		103	
MB 280-456592/1-A	15:15	98		99		100		104		103	
LCS 280-456592/2-A	15:19	99		100		101		104		105	
LCSD 280-456592/3-A	15:23	98		99		102		104		103	
CCV 280-457404/82	15:54	104		101		102		103		103	
CCB 280-457404/83	15:58	101		102		101		100		101	
CCVL 280-457404/84	16:02	101		102		100		100		103	
ICSA 280-457404/133	19:12	88		89		91		93		91	
ICSAB 280-457404/134	19:15	90		93		97		102		92	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

ICP-MS Instrument ID: MT_077 Start Date: 05/07/2019 End Date: 05/07/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Ge/1	Q	Element Ge/2	Q	Element In	Q	Element Ho-165	Q	Element	Q
IC 280-457404/4	10:48	101		101		100		100			
ICV 280-457404/5	10:52	100		100		98		99			
ICB 280-457404/6	10:56	99		99		100		99			
ICVL 280-457404/7	11:00	100		99		100		100			
CRI 280-457404/9	11:09	99		98		98		99			
ICSA 280-457404/11	11:17	86		86		84		94			
ICSAB 280-457404/12	11:21	88		91		88		96			
CCV 280-457404/50	13:49	83		90		94		95			
CCB 280-457404/51	13:53	81		87		92		95			
CCVL 280-457404/52	13:57	81		87		92		94			
280-123011-2	14:24	78		86		91		94			
280-123011-3	14:28	78		86		90		93			
CCV 280-457404/61	14:32	80		87		93		94			
CCB 280-457404/62	14:36	78		84		91		93			
CCVL 280-457404/63	14:40	77		84		90		93			
IC 280-457404/68	14:59	101		103		100		100			
CCV 280-457404/69	15:03	102		103		100		100			
CCB 280-457404/70	15:07	101		101		100		100			
CCVL 280-457404/71	15:11	101		102		100		101			
MB 280-456592/1-A	15:15	99		103		101		102			
LCS 280-456592/2-A	15:19	100		103		99		100			
LCSD 280-456592/3-A	15:23	101		103		100		100			
CCV 280-457404/82	15:54	103		103		100		101			
CCB 280-457404/83	15:58	101		101		100		100			
CCVL 280-457404/84	16:02	100		101		101		100			
ICSA 280-457404/133	19:12	91		92		90		96			
ICSAB 280-457404/134	19:15	95		101		96		101			

METALS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Batch Number: 456592 Batch Start Date: 05/06/19 17:30 Batch Analyst: Lodl, Dagmara A

Batch Method: 3020A Batch End Date: 05/06/19 23:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	MS CALSTD-1 00136	MS spike 2 00080	
MB 280-456592/1		3020A, 6020A			50 mL	50 mL			
LCS 280-456592/2		3020A, 6020A			50 mL	50 mL	0.1 mL	0.1 mL	
LCSD 280-456592/3		3020A, 6020A			50 mL	50 mL	0.1 mL	0.1 mL	
280-123011-E-2	SP-E1	3020A, 6020A	T	<2	50 mL	50 mL			
280-123011-A-3	SP-E11	3020A, 6020A	T	<2	50 mL	50 mL			

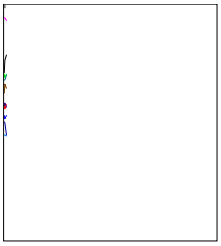
Batch Notes	
Temperature - Corrected - End	94 Degrees C
Temperature - Corrected - Start	92 Degrees C
Digestion End Time	2330
Digestion Start Time	17:30
Digestion Unit ID	05
Lot # of Nitric Acid	0000216908-05/03
pH Indicator ID	QA-51
Pipette/Syringe/Dispenser ID	MET-88
Thermometer ID	QA-48
Digestion Tube/Cup ID	1808354
Temperature - Uncorrected - End	95 Degrees C
Temperature - Uncorrected - Start	93 Degrees C

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Current Signal

[No Gas]



Mass	Range	Count	Avg. Count	RSD [%]
7	50000	28778	28547.2	2.02
9	50000	35335	35032.4	1.15
59	50000	26420	26242.6	1.65
66	2000	2153	2184.0	2.25
70	2000	1242	1304.9	4.22
75	5000	5251	5279.5	0.51
89	50000	46648	47013.5	0.69
105	200	233	210.7	9.26
118	1000	785	753.5	5.06
137	10000	6460	6446.1	3.15
140	50000	55516	54220.1	2.07
205	50000	35097	34428.3	1.68
6	10000	4410	4438.1	0.54
70/140	5	2.236 %	2.409 %	6.20
156/140	2	1.128 %	1.145 %	1.60

Integration Time [sec] 0.10

Tune Parameters

Plasma Parameters

Plasma Mode	HMI		Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas	0.00	
RF Power	1550	W	Carrier Gas	0.98	L/min	S/C Temp	2	℃	Plasma Gas	15.0	
RF Matching	1.67	V	Option Gas	0.0	%	Gas Switch	Dilution Gas		Auxiliary Gas	0.9	

Lenses Parameters

Extract 1	0.0	V	Omega Bias	-85	V	Cell Entrance	-30	V	Deflect	14.4	V
Extract 2	-160.0	V	Omega Lens	6.9	V	Cell Exit	-50	V	Plate Bias	-55	V

Cell Parameters

Use Gas	false		H2 Flow	0.0	mL/min	OctP Bias	-8.0	V	Energy Discrimination	3.0	
He Flow	0.0	mL/min	3rd Gas Flow	0	%	OctP RF	200	V			

Qpole Parameters

Mass Gain	139		Axis Gain	1.0020		QP Bias	-5.0	V			
Mass Offset	125		Axis Offset	0.03							

Torch Axis Parameters

Torch H	-1.2	mm	Torch V	-0.6	mm						

EM Parameters

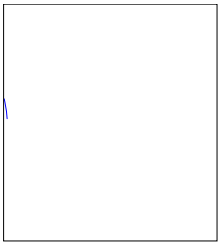
Discriminator	4.5	mV	Analog HV	1833	V	Pulse HV	1467	V			

Meters

IF/BK Press	2.29E+2	Pa	Water RF/WC/IF	1.63	L/min	Reflected Power	5	W			
Analyzer Press	8.38E-5	Pa	Water Temp	18.5	℃						

Current Signal

[HMI He]



Mass	Range	Count	Avg. Count	RSD [%]
7	50	15	16.0	23.39
51	200	125	118.0	24.54
59	5000	2585	2811.2	6.66
66	200	182	165.5	11.23
70	200	83	102.8	16.49
75	20	4	2.5	51.64
78	20	0	0.5	200.00
115	5000	2841	2952.3	6.83
118	100	72	66.3	13.30
137	500	483	494.6	3.83
140	10000	8169	8356.9	3.73
205	10000	8254	8707.2	6.19
51/59	5	4.835 %	4.247 %	28.70
70/140	2	1.016 %	1.229 %	15.67
156/140	1	0.171 %	0.255 %	32.27

Integration Time [sec] 0.10

Tune Parameters

Plasma Parameters

Plasma Mode	HMI		Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas	0.23	
RF Power	1550	W	Carrier Gas	0.66	L/min	S/C Temp	2	℃	Plasma Gas	15.0	
RF Matching	1.67	V	Option Gas	0.0	%	Gas Switch	Dilution Gas		Auxiliary Gas	0.9	

Lenses Parameters

Extract 1	0.0	V	Omega Bias	-85	V	Cell Entrance	-40	V	Deflect	-0.7	V
Extract 2	-175.0	V	Omega Lens	7.1	V	Cell Exit	-60	V	Plate Bias	-40	V

Cell Parameters

Use Gas	true		H2 Flow	0.0	mL/min	OctP Bias	-18.0	V	Energy Discrimination	3.0	
He Flow	5.0	mL/min	3rd Gas Flow	0	%	OctP RF	200	V			

Qpole Parameters

Mass Gain	139		Axis Gain	1.0020		QP Bias	-15.0	V			
Mass Offset	125		Axis Offset	0.03							

Torch Axis Parameters

Torch H	-1.2	mm	Torch V	-0.6	mm						

EM Parameters

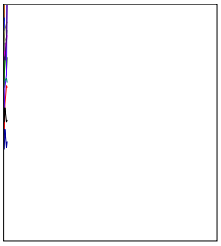
Discriminator	4.5	mV	Analog HV	1833	V	Pulse HV	1467	V			

Meters

IF/BK Press	2.27E+2	Pa	Water RF/WC/IF	1.63	L/min	Reflected Power	4	W			
Analyzer Press	1.08E-4	Pa	Water Temp	18.5	℃						

Current Signal

[HMI H2]



Mass Range		Count	Avg. Count	RSD [%]
7	500	324	289.5	17.60
9	1000	1418	1193.5	17.41
59	2000	2703	2283.1	16.66
63	1000	1261	1161.2	13.70
70	500	388	373.3	10.84
78	20	23	15.3	34.85
89	20000	17401	16579.1	4.78
115	20000	17825	17027.0	4.12
118	500	254	259.0	5.70
137	2000	2467	2533.5	4.38
140	20000	18529	17924.2	4.05
205	20000	13424	13525.3	1.23
238	20000	21325	21254.8	1.01
70/140	5	2.094 %	2.081 %	9.29
156/140	1	1.015 %	0.851 %	13.40

Integration Time [sec] 0.10

Tune Parameters

Plasma Parameters

Plasma Mode	HMI		Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas	0.23	
RF Power	1550	W	Carrier Gas	0.66	L/min	S/C Temp	2	℃	Plasma Gas	15.0	
RF Matching	1.67	V	Option Gas	0.0	%	Gas Switch	Dilution Gas		Auxiliary Gas	0.9	

Lenses Parameters

Extract 1	0.0	V	Omega Bias	-85	V	Cell Entrance	-40	V	Deflect	-0.7	V
Extract 2	-185.0	V	Omega Lens	8.2	V	Cell Exit	-60	V	Plate Bias	-40	V

Cell Parameters

Use Gas	true		H2 Flow	4.0	mL/min	OctP Bias	-18.0	V	Energy Discrimination	3.0
He Flow	0.0	mL/min	3rd Gas Flow	0	%	OctP RF	200	V		

Qpole Parameters

Mass Gain	139	Axis Gain	1.0020	QP Bias	-15.0 V
Mass Offset	125	Axis Offset	0.03		

Torch Axis Parameters

Torch H	-1.2	mm	Torch V	-0.6 mm

EM Parameters

Discriminator	4.5	mV	Analog HV	1833	V	Pulse HV	1467 V

Meters

IF/BK Press	2.63E+2	Pa	Water RF/WC/IF	1.63	L/min	Reflected Power	4	W
Analyzer Press	3.35E-4	Pa	Water Temp	18.5	℃			

US EPA Tune Check Sample Report

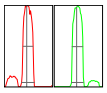
Batch Folder D:\MassHunter Data\LI050719.b
Report Comment
Instrument Name G3281A JP09320047

[HMI H2]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
7	2332	1.52	5.00	
9	9221	1.11	5.00	

Mas	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
7	2371	2289	2316	2366	2318
9	9181	9169	9169	9404	9184

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width-X% (Flag)
7	387	6.95	6.9 - 7.1		0.787	0.750	[F]
9	1480	8.95	8.9 - 9.1		0.777	0.750	[F]

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 60.9 **Y Axis =** Linear

Tune Parameters

 # # Plasma Paramters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1550	W	Carrier Gas	0.66	L/min	S/C Temp	2	°C
RF Matching	1.67	V	Option Gas	0.0	%	Makeup/Dilution Gas	0.23	L/min
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Gas Switch	Dilution Gas	

 # # Lenses Parameters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	8.2	V	Deflect	-0.7	V
Extract 2	-185.0	V	Cell Entrance	-40	V	Plate Bias	-40	V
Omega Bias	-85	V	Cell Exit	-60	V			

 # # Cell Parameters # #

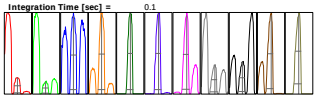
ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
OctP Bias	-18.0	V	He Flow	0.0	mL/min	Energy Discrimination	3.0	V
OctP RF	200	V	H2 Flow	4.0	mL/min			
Use Gas	true		3rd Gas Flow	0	%			

[HMI He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
24	4599	7.26	5.00	[F]
25	648	8.46	5.00	[F]
26	818	9.49	5.00	[F]
59	16052	1.55	5.00	
103	44976	0.97	5.00	
115	15666	0.87	5.00	
205	46790	1.04	5.00	
206	17245	1.57	5.00	
207	14211	1.75	5.00	
208	35409	1.22	5.00	
238	83181	0.99	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
24	5095	4775	4477	4295	4351
25	714	697	634	589	608
26	897	903	797	739	755
59	16138	15967	16425	15979	15752
103	45486	45384	44735	44796	44479
115	15826	15472	15760	15655	15617
205	47430	46999	46821	46571	46128
206	17657	17351	17195	17005	17015
207	14559	14311	14236	13936	14015
208	36076	35582	35227	35180	34981
238	84223	83297	83659	82536	82189

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	W-X% (Flag)
24	736	24.000	23.9 - 24.1		0.779	0.750	[F]
25	108	25.000	24.9 - 25.1		0.758	0.750	[F]
26	134	25.950	25.9 - 26.1		0.772	0.750	[F]
59	2764	58.950	58.9 - 59.1		0.752	0.750	[F]
103	8236	103.050	102.9 - 103.1		0.739	0.750	
115	2820	115.050	114.9 - 115.1		0.756	0.750	[F]
205	8359	205.050	204.9 - 205.1		0.800	0.750	[F]
206	2991	206.050	205.9 - 206.1		0.810	0.750	[F]
207	2598	207.000	206.9 - 207.1		0.777	0.750	[F]
208	6286	208.050	207.9 - 208.1		0.784	0.750	[F]
238	13942	238.000	237.9 - 238.1		0.816	0.750	[F]

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 283 **Y Axis =** Linear

Tune Parameters

 # # Plasma Paramters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1550	W	Carrier Gas	0.66	L/min	S/C Temp	2	°C
RF Matching	1.67	V	Option Gas	0.0	%	Makeup/Dilution Gas	0.23	L/min
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Gas Switch	Dilution Gas	

 # # Lenses Parameters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	7.1	V	Deflect	-0.7	V
Extract 2	-175.0	V	Cell Entrance	-40	V	Plate Bias	-40	V
Omega Bias	-85	V	Cell Exit	-60	V			

 # # Cell Parameters # #

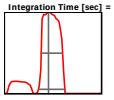
ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
OctP Bias	-18.0	V	He Flow	5.0	mL/min	Energy Discrimination	3.0	V
OctP RF	200	V	H2 Flow	0.0	mL/min			
Use Gas	true		3rd Gas Flow	0	%			

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
7	197737	1.69	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
7	202887	198774	197286	194539	195200

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	W-X% (Flag)
7	30944	6.900	6.9 - 7.1		0.817	0.750	[F]

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 36.9 **Y Axis =** Linear

Tune Parameters

 # # Plasma Paramters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1550	W	Carrier Gas	0.98	L/min	S/C Temp	2	°C
RF Matching	1.67	V	Option Gas	0.0	%	Makeup/Dilution Gas	0.00	L/min
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Gas Switch	Dilution Gas	

 # # Lenses Parameters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	6.9	V	Deflect	14.4	V
Extract 2	-160.0	V	Cell Entrance	-30	V	Plate Bias	-55	V
Omega Bias	-85	V	Cell Exit	-50	V			

 # # Cell Parameters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
OctP Bias	-8.0	V	He Flow	0.0	mL/min	Energy Discrimination	3.0	V
OctP RF	200	V	H2 Flow	0.0	mL/min			
Use Gas	false		3rd Gas Flow	0	%			

US EPA Tune Check Sample Report

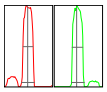
Batch Folder D:\MassHunter Data\LI050719.b
Report Comment
Instrument Name G3281A JP09320047

[HMI H2]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
7	2280	1.59	5.00	
9	9103	0.79	5.00	

Mas	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
7	2287	2281	2290	2343	2241
9	9050	9022	9201	9141	9101

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width-X% (Flag)
7	376	7.00	6.9 - 7.1		0.788	0.750	[F]
9	1457	8.95	8.9 - 9.1		0.781	0.750	[F]

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 60.9 **Y Axis =** Linear

Tune Parameters

 # # Plasma Paramters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1550	W	Carrier Gas	0.66	L/min	S/C Temp	2	°C
RF Matching	1.67	V	Option Gas	0.0	%	Makeup/Dilution Gas	0.23	L/min
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Gas Switch	Dilution Gas	

 # # Lenses Parameters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	8.2	V	Deflect	-0.7	V
Extract 2	-185.0	V	Cell Entrance	-40	V	Plate Bias	-40	V
Omega Bias	-85	V	Cell Exit	-60	V			

 # # Cell Parameters # #

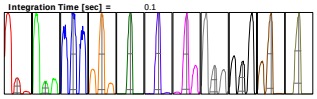
ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
OctP Bias	-18.0	V	He Flow	0.0	mL/min	Energy Discrimination	3.0	V
OctP RF	200	V	H2 Flow	4.0	mL/min			
Use Gas	true		3rd Gas Flow	0	%			

[HMI He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
24	3866	1.32	5.00	
25	543	4.29	5.00	
26	679	4.86	5.00	
59	15776	1.34	5.00	
103	44373	0.37	5.00	
115	15341	0.86	5.00	
205	46718	0.74	5.00	
206	16936	0.56	5.00	
207	14232	0.74	5.00	
208	35029	0.39	5.00	
238	82150	0.43	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
24	3901	3836	3796	3923	3874
25	545	549	505	568	548
26	708	671	706	685	627
59	15475	15880	15777	16044	15704
103	44186	44372	44615	44429	44266
115	15327	15340	15309	15547	15181
205	46301	46500	47197	46697	46897
206	16856	16819	16972	17049	16982
207	14130	14111	14313	14265	14343
208	35136	34915	35025	34872	35194
238	82163	82182	81995	82689	81723

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	W-X% (Flag)
24	824	23.950	23.9 - 24.1		0.780	0.750	[F]
25	92	24.950	24.9 - 25.1		0.752	0.750	[F]
26	115	25.900	25.9 - 26.1		0.766	0.750	[F]
59	2721	59.000	58.9 - 59.1		0.750	0.750	
103	8057	103.050	102.9 - 103.1		0.742	0.750	
115	2752	115.050	114.9 - 115.1		0.760	0.750	[F]
205	8275	205.050	204.9 - 205.1		0.802	0.750	[F]
206	2923	206.050	205.9 - 206.1		0.808	0.750	[F]
207	2498	207.000	206.9 - 207.1		0.784	0.750	[F]
208	6186	208.050	207.9 - 208.1		0.786	0.750	[F]
238	13706	238.000	237.9 - 238.1		0.818	0.750	[F]

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 283 **Y Axis =** Linear

Tune Parameters

 # # Plasma Paramters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1550	W	Carrier Gas	0.66	L/min	S/C Temp	2	°C
RF Matching	1.67	V	Option Gas	0.0	%	Makeup/Dilution Gas	0.23	L/min
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Gas Switch	Dilution Gas	

 # # Lenses Parameters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	7.8	V	Deflect	-0.7	V
Extract 2	-185.0	V	Cell Entrance	-40	V	Plate Bias	-40	V
Omega Bias	-90	V	Cell Exit	-60	V			

 # # Cell Parameters # #

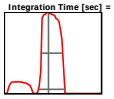
ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
OctP Bias	-18.0	V	He Flow	5.0	mL/min	Energy Discrimination	3.0	V
OctP RF	200	V	H2 Flow	0.0	mL/min			
Use Gas	true		3rd Gas Flow	0	%			

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
7	199991	0.95	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
7	202691	201045	199622	198529	198065

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	W-X% (Flag)
7	31180	6.900	6.9 - 7.1		0.817	0.750	[F]

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 36.9 **Y Axis =** Linear

Tune Parameters

 # # Plasma Paramters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1550	W	Carrier Gas	0.98	L/min	S/C Temp	2	°C
RF Matching	1.67	V	Option Gas	0.0	%	Makeup/Dilution Gas	0.00	L/min
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Gas Switch	Dilution Gas	

 # # Lenses Parameters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	6.9	V	Deflect	14.4	V
Extract 2	-160.0	V	Cell Entrance	-30	V	Plate Bias	-55	V
Omega Bias	-85	V	Cell Exit	-50	V			

 # # Cell Parameters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
OctP Bias	-8.0	V	He Flow	0.0	mL/min	Energy Discrimination	3.0	V
OctP RF	200	V	H2 Flow	0.0	mL/min			
Use Gas	false		3rd Gas Flow	0	%			

	Mass	Element Name	Current Value
	9		0.105906320995131
	23		0.116389117121844
	24		0.121546784011484
	27		0.126696168082034
	39		0.127743190313757
	45		0.128948811700798
	51		0.132528266687425
	55		0.138845512439122
	56		0.127817940218639
	59		0.142663241634331
	60		0.141617154062828
	63		0.144982528049858
	66		0.145512081545614
	72		0.142966373840916
	75		0.142718233714321
	77		Signal too low
	82		Signal too low
	95		0.14264455938322
	100		0.146204975360374
	101		0.1464688628292
	102		0.149799398351503
	104		0.150642302632882
	105		0.150724870248879
	106		0.152837497180193
	111		0.152636538967301
	114		0.15630355087514

	Mass	Element Name	Current Value
	115		0.157159957493534
	118		0.153461977289306
	121		0.154788214063747
	137		0.149031265741963
	175		0.164590654212509
	193		0.163429057715843
	208		0.168808148412867
	209		0.167887555721844
	232		0.16629004027235
	238		0.16700080594635

Blank Report

Sample Table

Sample Name	rinse-5672981
Data File Name	001WASH.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T09:22:24-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Blank Report

Sample Table

Sample Name	rinse-5672981
Data File Name	002WASH.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T09:26:18-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Blank Report

Sample Table

Sample Name	rinse-5672981
Data File Name	003WASH.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T09:30:14-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Blank Report

Sample Table

Sample Name	rinse-5672981
Data File Name	004WASH.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T09:34:08-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Blank Report

Sample Table

Sample Name	rinse-5672981
Data File Name	005WASH.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T09:38:04-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Blank Report

Sample Table

Sample Name	rinse-5672981
Data File Name	006WASH.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T09:41:58-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Blank Report

Sample Table

Sample Name	rinse-5672981
Data File Name	007WASH.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T09:45:51-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Calibration Blank Report

Sample Table

Sample Name	icis-5688508
Data File Name	008CALB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T09:49:45-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	105807	0.00
Li	7	2	HMI He	5098	0.13
Li	7	3	No Gas	8910118	0.00
Be	9	1	HMI H2	17	749.40
B	11	1	HMI H2	357	1.98
Na	23	1	HMI H2	254502	0.00
Na	23	2	HMI He	17254	0.01
Mg	24	2	HMI He	100	36.06
Al	27	2	HMI He	33	226.50
K	39	2	HMI He	38378	0.01
Ca	44	2	HMI He	80	31.26
Ti	47	2	HMI He	0	#VALUE!
V	51	2	HMI He	4267	0.16
Cr	52	2	HMI He	220	18.94
Mn	55	2	HMI He	67	46.84
Fe	57	2	HMI He	63	94.38
Co	59	2	HMI He	1217	0.92
Ni	60	2	HMI He	77	68.76
Cu	63	2	HMI He	973	0.60
Zn	66	2	HMI He	160	3.91
As	75	2	HMI He	34	76.56
Se	78	1	HMI H2	52	82.36
Sr	88	2	HMI He	23	280.57
Zr	90	2	HMI He	70	40.82
Nb	93	2	HMI He	157	30.58
Mo	95	2	HMI He	53	88.47
Pd	105	2	HMI He	30	192.45
Ag	107	2	HMI He	20	250.00
Cd	111	2	HMI He	7	1299.04
Sn	120	2	HMI He	180	21.60
Sb	121	2	HMI He	20	433.01
Ba	137	2	HMI He	53	123.47
W	182	2	HMI He	610	0.93
Pt	195	2	HMI He	3	5196.15
Tl	205	2	HMI He	450	6.79
Pb	208	2	HMI He	743	1.36
Th	232	2	HMI He	1123	1.68
U	238	2	HMI He	277	5.44

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li-6 Internal Standard	6	1	HMI H2	1027959	0.72
Sc (IS)	45	1	HMI H2	19016276	0.43
Sc (IS)	45	2	HMI He	790882	0.45
Sc (IS)	45	3	No Gas	72922524	1.94
Ge Internal Standard	72	1	HMI H2	8060459	0.24
Ge Internal Standard	72	2	HMI He	1026732	0.32
In Internal Standard	115	2	HMI He	3879298	0.88
Ho-165	165	2	HMI He	16868467	0.41

Calibration Standard Report

Sample Table

Sample Name	ic-5688509
Data File Name	009CALS.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T09:53:37-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	008CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	165597	0.00
Li	7	2	HMI He	7546	0.05
Li	7	3	No Gas	13777030	0.00
Be	9	1	HMI H2	30465	0.01
B	11	1	HMI H2	1307	0.49
Na	23	1	HMI H2	5310766	0.00
Na	23	2	HMI He	384435	0.00
Mg	24	2	HMI He	163555	0.00
Al	27	2	HMI He	43893	0.01
K	39	1	HMI H2	14978601	0.00
K	39	2	HMI He	142726	0.00
Ca	40	1	HMI H2	7879380	0.00
Ca	44	2	HMI He	7135	0.10
Ti	47	2	HMI He	2234	0.05
V	51	2	HMI He	99736	0.00
Cr	52	2	HMI He	122780	0.00
Mn	55	2	HMI He	49198	0.00
Fe	57	2	HMI He	45599	0.00
Co	59	2	HMI He	213516	0.00
Ni	60	2	HMI He	60002	0.00
Cu	63	2	HMI He	170167	0.00
Zn	66	2	HMI He	24765	0.01
As	75	2	HMI He	20337	0.00
Se	78	1	HMI H2	20502	0.01
Sr	88	2	HMI He	123901	0.00
Zr	90	2	HMI He	233	9.24
Nb	93	2	HMI He	310474	0.00
Mo	95	2	HMI He	85196	0.00
Pd	105	2	HMI He	138094	0.00
Ag	107	2	HMI He	287907	0.00
Cd	111	2	HMI He	39096	0.00
Sn	120	2	HMI He	108221	0.00
Sb	121	2	HMI He	105245	0.00
Ba	137	2	HMI He	36155	0.01
Nd	146	2	HMI He	115012	0.00
Sm	147	2	HMI He	98688	0.00
Sm	150	2	HMI He	95613	0.00
Gd	156	1	HMI H2	456043	0.00
Gd	157	1	HMI H2	347081	0.00
W	182	2	HMI He	375241	0.00
Pt	195	2	HMI He	300530	0.00
Tl	205	2	HMI He	739538	0.00
Pb	208	2	HMI He	1003431	0.00
Th	232	2	HMI He	1252410	0.00
U	238	2	HMI He	1248218	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	934428	8.15	1027959	90.90	60	120	
Sc (IS)	45	1	HMI H2	18709855	0.86	19016276	98.39	60	120	
Sc (IS)	45	2	HMI He	761760	0.33	790882	96.32	60	120	
Sc (IS)	45	3	No Gas	70893794	0.40	72922524	97.22	60	120	
Ge Internal Standard	72	1	HMI H2	7934228	0.32	8060459	98.43	60	120	
Ge Internal Standard	72	2	HMI He	1004968	0.53	1026732	97.88	60	120	
In Internal Standard	115	2	HMI He	3781848	0.43	3879298	97.49	60	120	
Ho-165	165	2	HMI He	16745730	0.21	16868467	99.27	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-5688511
Data File Name	010_ICV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T09:57:31-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	008CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	84.451	ppb	2.878	126867	400	21.1	90	110	>+\-10%
Li	7	2	45	80.901	ppb	9.873	5898	400	20.2	90	110	>+\-10%
Li	7	3	45	77.964	ppb	6.035	10737071	400	19.5	90	110	>+\-10%
Be	9	1	6	44.922	ppb	4.614	12429	40	112.3	90	110	>+\-10%
B	11	1	6	64.889	ppb	10.638	870	40	162.2	90	110	>+\-10%
Na	23	1	45	833.802	ppb	1.356	2301851	800	104.2	90	110	
Na	23	2	45	795.801	ppb	2.095	160832	800	99.5	90	110	
Mg	24	2	45	793.824	ppb	0.609	64123	800	99.2	90	110	
Al	27	2	45	782.733	ppb	3.469	16970	800	97.8	90	110	
K	39	1	45	1175.572	ppb	1.790	13002298	800	146.9	90	110	>+\-10%
K	39	2	45	804.130	ppb	2.984	78449	800	100.5	90	110	
Ca	40	1	45	821.917	ppb	0.623	3180678	800	102.7	90	110	
Ca	44	2	45	799.532	ppb	2.066	2860	800	99.9	90	110	
Ti	47	2	45	42.016	ppb	11.845	927	40	105.0	90	110	
V	51	2	72	42.337	ppb	2.323	43730	40	105.8	90	110	
Cr	52	2	72	41.087	ppb	1.977	49545	40	102.7	90	110	
Mn	55	2	72	40.686	ppb	3.290	19651	40	101.7	90	110	
Fe	57	2	72	814.728	ppb	2.972	18239	4000	20.4	90	110	>+\-10%
Co	59	2	72	40.793	ppb	0.622	86025	40	102.0	90	110	
Ni	60	2	72	41.267	ppb	3.321	24308	40	103.2	90	110	
Cu	63	2	72	42.268	ppb	0.441	71011	40	105.7	90	110	
Zn	66	2	72	44.856	ppb	3.169	10968	40	112.1	90	110	>+\-10%
As	75	2	72	40.929	ppb	4.091	8173	40	102.3	90	110	
Se	78	1	72	39.108	ppb	1.120	7880	40	97.8	90	110	
Sr	88	2	72	80.476	ppb	1.702	48865	80	100.6	90	110	
Zr	90	2	72	47.077	ppb	39.180	143	40	117.7	90	110	>+\-10%
Nb	93	2	72	89.127	ppb	0.533	135645	80	111.4	90	110	>+\-10%
Mo	95	2	115	40.910	ppb	1.691	34239	40	102.3	90	110	
Pd	105	2	115	39.896	ppb	0.668	54101	40	99.7	90	110	
Ag	107	2	115	40.596	ppb	0.528	114745	40	101.5	90	110	
Cd	111	2	115	39.783	ppb	2.346	15272	40	99.5	90	110	
Sn	120	2	115	40.023	ppb	0.341	42619	40	100.1	90	110	
Sb	121	2	115	43.004	ppb	2.052	44436	40	107.5	90	110	
Ba	137	2	115	41.036	ppb	3.307	14595	40	102.6	90	110	
W	182	2	165	40.719	ppb	0.431	150014	40	101.8	90	110	
Pt	195	2	165	40.081	ppb	0.674	117990	40	100.2	90	110	
Tl	205	2	165	40.370	ppb	0.791	292687	40	100.9	90	110	
Pb	208	2	165	41.124	ppb	0.963	404605	40	102.8	90	110	
Th	232	2	165	40.396	ppb	0.893	496189	40	101.0	90	110	
U	238	2	165	40.837	ppb	1.275	499430	40	102.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	844552	0.32	1027959	82.16	60	120	
Sc (IS)	45	1	HMI H2	18249271	0.61	19016276	95.97	60	120	
Sc (IS)	45	2	HMI He	751795	0.89	790882	95.06	60	120	
Sc (IS)	45	3	No Gas	71429984	1.23	72922524	97.95	60	120	
Ge Internal Standard	72	1	HMI H2	7767754	1.02	8060459	96.37	60	120	
Ge Internal Standard	72	2	HMI He	984626	0.90	1026732	95.90	60	120	
In Internal Standard	115	2	HMI He	3712301	0.73	3879298	95.70	60	120	
Ho-165	165	2	HMI He	16402489	0.51	16868467	97.24	60	120	

Blank Report

Sample Table

Sample Name	rinse-5672981
Data File Name	011WASH.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T10:01:25-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	008CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	0.051	ppb	148.2980118	30	0.5
Na	23	2	45	0.690	ppb	2512.904537	15689	25
Mg	24	2	45	0.873	ppb	163.9288372	147	25
Al	27	2	45	0.483	ppb	78.16209393	40	15
K	39	2	45	-36.676	ppb	-251.8204687	33115	50
Ca	44	2	45	12.767	ppb	76.59787627	117	25
V	51	2	72	2.048	ppb	39.91345175	5741	1
Cr	52	2	72	0.067	ppb	83.42403046	273	1
Mn	55	2	72	1.233	ppb	27.29365953	633	0.5
Fe	57	2	72	6.348	ppb	8.979698597	193	25
Co	59	2	72	0.005	ppb	1015.507667	1147	0.5
Ni	60	2	72	0.053	ppb	102.4108278	103	1
Cu	63	2	72	2.165	ppb	24.80444619	4284	1
Zn	66	2	72	0.254	ppb	136.3028979	197	5
As	75	2	72	0.068	ppb	84.33871292	46	1
Se	78	1	72	0.014	ppb	760.4091884	52	1
Nb	93	2	72	5.777	ppb	9.55813476	8570	2
Mo	95	2	115	0.040	ppb	107.5407375	80	0.5
Pd	105	2	115	0.016	ppb	116.3708164	50	1
Ag	107	2	115	0.053	ppb	19.31820358	163	1
Cd	111	2	115	0.000	ppb	165827.1344	7	0.5
Sn	120	2	115	0.238	ppb	21.30406384	413	1
Sb	121	2	115	0.067	ppb	23.35677895	87	0.6
Ba	137	2	115	0.054	ppb	93.05309447	67	0.5
W	182	2	165	0.053	ppb	62.12479327	767	1
Pt	195	2	165	0.020	ppb	35.72110005	60	1
Tl	205	2	165	0.015	ppb	64.24642914	533	0.1
Pb	208	2	165	0.019	ppb	70.20948431	893	0.5
Th	232	2	165	0.265	ppb	15.73479263	4331	1
U	238	2	165	0.006	ppb	139.9434271	340	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	945360	10.13	1027959	91.96	60	120	
Sc (IS)	45	1	HMI H2	18127836	0.87	19016276	95.33	60	120	
Sc (IS)	45	2	HMI He	731706	20.03	790882	92.52	60	120	
Sc (IS)	45	3	No Gas	70804006	0.21	72922524	97.09	60	120	
Ge Internal Standard	72	1	HMI H2	7645208	0.50	8060459	94.85	60	120	
Ge Internal Standard	72	2	HMI He	948155	19.35	1026732	92.35	60	120	
In Internal Standard	115	2	HMI He	3634486	18.64	3879298	93.69	60	120	
Ho-165	165	2	HMI He	16134371	17.40	16868467	95.65	60	120	

Blank Report

Sample Table

Sample Name	rinse-5672981
Data File Name	012WASH.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T10:05:18-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	008CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.026	ppb	-163.4753472	7	0.5
Na	23	2	45	-3.011	ppb	-36.02299096	15813	25
Mg	24	2	45	1.182	ppb	16.7836577	190	25
Al	27	2	45	2.866	ppb	95.505624	93	15
K	39	2	45	-31.161	ppb	-56.63275435	34772	50
Ca	44	2	45	9.783	ppb	132.3992831	110	25
V	51	2	72	3.335	ppb	15.13064477	7119	1
Cr	52	2	72	0.058	ppb	64.14865505	277	1
Mn	55	2	72	1.538	ppb	15.11667625	793	0.5
Fe	57	2	72	6.969	ppb	22.86149728	213	25
Co	59	2	72	0.037	ppb	46.24626792	1227	0.5
Ni	60	2	72	0.082	ppb	35.75196778	120	1
Cu	63	2	72	2.627	ppb	5.757769577	5218	1
Zn	66	2	72	0.288	ppb	76.32786724	220	5
As	75	2	72	0.086	ppb	80.5527899	49	1
Se	78	1	72	-0.042	ppb	-278.9792873	41	1
Nb	93	2	72	3.537	ppb	8.796513622	5451	2
Mo	95	2	115	-0.002	ppb	-692.7736313	50	0.5
Pd	105	2	115	-0.007	ppb	-111.629581	20	1
Ag	107	2	115	0.026	ppb	56.2248683	93	1
Cd	111	2	115	-0.008	ppb	-187.7803731	3	0.5
Sn	120	2	115	0.123	ppb	26.81242597	307	1
Sb	121	2	115	0.058	ppb	91.92116303	80	0.6
Ba	137	2	115	-0.014	ppb	-296.7169521	47	0.5
W	182	2	165	0.042	ppb	78.2675191	753	1
Pt	195	2	165	0.003	ppb	114.8569647	13	1
Tl	205	2	165	-0.010	ppb	-98.19572999	370	0.1
Pb	208	2	165	0.003	ppb	692.0324949	753	0.5
Th	232	2	165	0.073	ppb	23.19991608	1997	1
U	238	2	165	-0.007	ppb	-16.50986077	183	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	898125	9.52	1027959	87.37	60	120	
Sc (IS)	45	1	HMI H2	18253501	0.98	19016276	95.99	60	120	
Sc (IS)	45	2	HMI He	749811	0.69	790882	94.81	60	120	
Sc (IS)	45	3	No Gas	71673897	1.01	72922524	98.29	60	120	
Ge Internal Standard	72	1	HMI H2	7685820	0.76	8060459	95.35	60	120	
Ge Internal Standard	72	2	HMI He	971367	0.51	1026732	94.61	60	120	
In Internal Standard	115	2	HMI He	3751824	0.12	3879298	96.71	60	120	
Ho-165	165	2	HMI He	16504074	0.51	16868467	97.84	60	120	

Blank Report

Sample Table

Sample Name	rinse-5672981
Data File Name	013WASH.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T10:09:12-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	008CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.050	ppb	0	0	0.5
Na	23	2	45	-4.009	ppb	-48.1072159	15499	25
Mg	24	2	45	1.621	ppb	70.14935787	223	25
Al	27	2	45	0.559	ppb	174.181967	43	15
K	39	2	45	-5.662	ppb	-279.0921229	35788	50
Ca	44	2	45	13.981	ppb	43.15102259	123	25
V	51	2	72	3.744	ppb	12.27717661	7416	1
Cr	52	2	72	0.035	ppb	163.6310101	247	1
Mn	55	2	72	1.655	ppb	11.66078739	840	0.5
Fe	57	2	72	6.609	ppb	46.95520501	203	25
Co	59	2	72	0.094	ppb	48.97506583	1330	0.5
Ni	60	2	72	0.067	ppb	52.74464484	110	1
Cu	63	2	72	2.369	ppb	5.444096965	4744	1
Zn	66	2	72	0.128	ppb	32.59161915	180	5
As	75	2	72	0.008	ppb	511.5510111	33	1
Se	78	1	72	-0.081	ppb	-77.1996383	33	1
Nb	93	2	72	2.289	ppb	22.39080685	3544	2
Mo	95	2	115	-0.013	ppb	-176.7356006	40	0.5
Pd	105	2	115	-0.006	ppb	-119.0805058	20	1
Ag	107	2	115	0.017	ppb	22.40191216	67	1
Cd	111	2	115	0.001	ppb	5119.257874	7	0.5
Sn	120	2	115	0.070	ppb	29.73471175	247	1
Sb	121	2	115	0.004	ppb	144.4682893	23	0.6
Ba	137	2	115	-0.022	ppb	-143.047155	43	0.5
W	182	2	165	0.022	ppb	152.5225151	677	1
Pt	195	2	165	-0.001	ppb	-1.86371E-06	0	1
Tl	205	2	165	-0.020	ppb	-32.42108519	293	0.1
Pb	208	2	165	0.019	ppb	54.38879932	913	0.5
Th	232	2	165	0.023	ppb	52.77457052	1387	1
U	238	2	165	-0.007	ppb	-88.53817961	190	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1007154	2.09	1027959	97.98	60	120	
Sc (IS)	45	1	HMI H2	18137833	0.74	19016276	95.38	60	120	
Sc (IS)	45	2	HMI He	743416	0.06	790882	94.00	60	120	
Sc (IS)	45	3	No Gas	70989529	0.53	72922524	97.35	60	120	
Ge Internal Standard	72	1	HMI H2	7641281	0.40	8060459	94.80	60	120	
Ge Internal Standard	72	2	HMI He	961033	0.24	1026732	93.60	60	120	
In Internal Standard	115	2	HMI He	3712398	1.26	3879298	95.70	60	120	
Ho-165	165	2	HMI He	16507142	0.21	16868467	97.86	60	120	

Calibration Blank Report

Sample Table

Sample Name	icis-5688508
Data File Name	014CALB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T10:13:06-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	103591	0.00
Li	7	2	HMI He	5174	0.16
Li	7	3	No Gas	8948225	0.00
Be	9	1	HMI H2	3	5196.15
B	11	1	HMI H2	340	3.12
Na	23	1	HMI H2	206522	0.00
Na	23	2	HMI He	14424	0.01
Mg	24	2	HMI He	60	100.15
Al	27	2	HMI He	37	85.89
K	39	2	HMI He	36085	0.00
Ca	44	2	HMI He	53	107.40
Ti	47	2	HMI He	0	#VALUE!
V	51	2	HMI He	6212	0.13
Cr	52	2	HMI He	267	4.52
Mn	55	2	HMI He	107	49.98
Fe	57	2	HMI He	67	34.37
Co	59	2	HMI He	1260	1.34
Ni	60	2	HMI He	70	35.35
Cu	63	2	HMI He	980	0.89
Zn	66	2	HMI He	133	23.42
As	75	2	HMI He	37	80.61
Se	78	1	HMI H2	25	129.74
Sr	88	2	HMI He	23	382.35
Zr	90	2	HMI He	20	250.00
Nb	93	2	HMI He	2447	0.86
Mo	95	2	HMI He	70	73.59
Pd	105	2	HMI He	13	1299.04
Ag	107	2	HMI He	30	0.00
Cd	111	2	HMI He	3	5196.15
Sn	120	2	HMI He	170	5.99
Sb	121	2	HMI He	7	1299.04
Ba	137	2	HMI He	27	429.62
W	182	2	HMI He	613	0.93
Pt	195	2	HMI He	0	#VALUE!
Tl	205	2	HMI He	363	1.91
Pb	208	2	HMI He	657	0.97
Th	232	2	HMI He	860	2.53
U	238	2	HMI He	57	35.96

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li-6 Internal Standard	6	1	HMI H2	1026889	1.20
Sc (IS)	45	1	HMI H2	18439199	0.35
Sc (IS)	45	2	HMI He	756670	0.47
Sc (IS)	45	3	No Gas	72366817	0.65
Ge Internal Standard	72	1	HMI H2	7757842	1.14
Ge Internal Standard	72	2	HMI He	983503	0.31
In Internal Standard	115	2	HMI He	3766074	0.88
Ho-165	165	2	HMI He	16609289	0.39

Calibration Standard Report

Sample Table

Sample Name	ic-5688509
Data File Name	015CALS.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T10:16:58-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	162049	0.00
Li	7	2	HMI He	7952	0.04
Li	7	3	No Gas	14068233	0.00
Be	9	1	HMI H2	30164	0.01
B	11	1	HMI H2	1503	0.56
Na	23	1	HMI H2	5228610	0.00
Na	23	2	HMI He	378582	0.00
Mg	24	2	HMI He	161561	0.00
Al	27	2	HMI He	42462	0.00
K	39	1	HMI H2	14418144	0.00
K	39	2	HMI He	138041	0.00
Ca	40	1	HMI H2	7719271	0.00
Ca	44	2	HMI He	6995	0.05
Ti	47	2	HMI He	2227	0.17
V	51	2	HMI He	99367	0.00
Cr	52	2	HMI He	121012	0.00
Mn	55	2	HMI He	48124	0.00
Fe	57	2	HMI He	45041	0.00
Co	59	2	HMI He	210509	0.00
Ni	60	2	HMI He	59507	0.00
Cu	63	2	HMI He	165457	0.00
Zn	66	2	HMI He	23928	0.01
As	75	2	HMI He	19660	0.01
Se	78	1	HMI H2	19584	0.00
Sr	88	2	HMI He	118944	0.00
Zr	90	2	HMI He	203	7.77
Nb	93	2	HMI He	308119	0.00
Mo	95	2	HMI He	84053	0.00
Pd	105	2	HMI He	134550	0.00
Ag	107	2	HMI He	283584	0.00
Cd	111	2	HMI He	38387	0.00
Sn	120	2	HMI He	102864	0.00
Sb	121	2	HMI He	102570	0.00
Ba	137	2	HMI He	35634	0.00
Nd	146	2	HMI He	112136	0.00
Sm	147	2	HMI He	96565	0.00
Sm	150	2	HMI He	92187	0.00
Gd	156	1	HMI H2	446313	0.00
Gd	157	1	HMI H2	341542	0.00
W	182	2	HMI He	373580	0.00
Pt	195	2	HMI He	299725	0.00
Tl	205	2	HMI He	734040	0.00
Pb	208	2	HMI He	990901	0.00
Th	232	2	HMI He	1244227	0.00
U	238	2	HMI He	1246460	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	947445	9.03	1026889	92.26	60	120	
Sc (IS)	45	1	HMI H2	18307216	0.65	18439199	99.28	60	120	
Sc (IS)	45	2	HMI He	743570	0.08	756670	98.27	60	120	
Sc (IS)	45	3	No Gas	72307074	0.45	72366817	99.92	60	120	
Ge Internal Standard	72	1	HMI H2	7799011	0.69	7757842	100.53	60	120	
Ge Internal Standard	72	2	HMI He	977300	0.41	983503	99.37	60	120	
In Internal Standard	115	2	HMI He	3703762	0.58	3766074	98.35	60	120	
Ho-165	165	2	HMI He	16676029	0.31	16609289	100.40	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-5688511
Data File Name	016_ICV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T10:20:51-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	83.159	ppb	1.337	125987	400	20.8	90	110	>+\-10%
Li	7	2	45	103.197	ppb	18.230	6458	400	25.8	90	110	>+\-10%
Li	7	3	45	83.675	ppb	3.165	11021913	400	20.9	90	110	>+\-10%
Be	9	1	6	45.686	ppb	9.644	12903	40	114.2	90	110	>+\-10%
B	11	1	6	63.411	ppb	31.553	997	40	158.5	90	110	>+\-10%
Na	23	1	45	817.849	ppb	1.096	2233243	800	102.2	90	110	
Na	23	2	45	801.364	ppb	0.770	157597	800	100.2	90	110	
Mg	24	2	45	785.593	ppb	0.669	62472	800	98.2	90	110	
Al	27	2	45	805.965	ppb	1.036	16857	800	100.7	90	110	
K	39	1	45	1122.464	ppb	5.810	12596215	800	140.3	90	110	>+\-10%
K	39	2	45	773.489	ppb	0.874	73923	800	96.7	90	110	
Ca	40	1	45	819.090	ppb	0.242	3148227	800	102.4	90	110	
Ca	44	2	45	783.432	ppb	5.403	2727	800	97.9	90	110	
Ti	47	2	45	39.876	ppb	14.222	873	40	99.7	90	110	
V	51	2	72	42.414	ppb	1.977	44854	40	106.0	90	110	
Cr	52	2	72	40.255	ppb	0.751	47963	40	100.6	90	110	
Mn	55	2	72	42.258	ppb	0.753	20018	40	105.6	90	110	
Fe	57	2	72	810.832	ppb	3.809	17958	4000	20.3	90	110	>+\-10%
Co	59	2	72	40.600	ppb	1.418	84606	40	101.5	90	110	
Ni	60	2	72	41.566	ppb	3.526	24315	40	103.9	90	110	
Cu	63	2	72	42.668	ppb	1.298	69836	40	106.7	90	110	
Zn	66	2	72	43.023	ppb	8.277	10177	40	107.6	90	110	
As	75	2	72	39.826	ppb	1.846	7706	40	99.6	90	110	
Se	78	1	72	40.668	ppb	3.311	7842	40	101.7	90	110	
Sr	88	2	72	80.414	ppb	1.264	46949	80	100.5	90	110	
Zr	90	2	72	50.205	ppb	61.370	110	40	125.5	90	110	>+\-10%
Nb	93	2	72	86.729	ppb	0.772	132484	80	108.4	90	110	
Mo	95	2	115	40.051	ppb	1.178	33317	40	100.1	90	110	
Pd	105	2	115	39.218	ppb	2.972	52157	40	98.0	90	110	
Ag	107	2	115	40.865	ppb	2.368	114557	40	102.2	90	110	
Cd	111	2	115	40.940	ppb	3.014	15536	40	102.4	90	110	
Sn	120	2	115	41.122	ppb	1.994	41904	40	102.8	90	110	
Sb	121	2	115	42.773	ppb	2.092	43368	40	106.9	90	110	
Ba	137	2	115	40.150	ppb	6.919	14155	40	100.4	90	110	
W	182	2	165	40.400	ppb	0.505	149083	40	101.0	90	110	
Pt	195	2	165	39.882	ppb	1.581	117774	40	99.7	90	110	
Tl	205	2	165	40.511	ppb	1.572	293239	40	101.3	90	110	
Pb	208	2	165	40.665	ppb	1.093	397399	40	101.7	90	110	
Th	232	2	165	39.935	ppb	0.522	490087	40	99.8	90	110	
U	238	2	165	40.308	ppb	0.705	495068	40	100.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	888306	9.87	1026889	86.50	60	120	
Sc (IS)	45	1	HMI H2	18094098	0.53	18439199	98.13	60	120	
Sc (IS)	45	2	HMI He	731570	0.49	756670	96.68	60	120	
Sc (IS)	45	3	No Gas	71890326	0.55	72366817	99.34	60	120	
Ge Internal Standard	72	1	HMI H2	7664018	0.14	7757842	98.79	60	120	
Ge Internal Standard	72	2	HMI He	959143	0.41	983503	97.52	60	120	
In Internal Standard	115	2	HMI He	3660929	0.80	3766074	97.21	60	120	
Ho-165	165	2	HMI He	16431178	0.98	16609289	98.93	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-5688511
Data File Name	017_ICV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T10:25:54-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	82.169	ppb	4.237	125045	400	20.5	90	110	>+\-10%
Li	7	2	45	58.003	ppb	55.371	5755	400	14.5	90	110	>+\-10%
Li	7	3	45	87.239	ppb	4.263	10985538	400	21.8	90	110	>+\-10%
Be	9	1	6	46.399	ppb	5.660	12392	40	116.0	90	110	>+\-10%
B	11	1	6	52.310	ppb	22.820	827	40	130.8	90	110	>+\-10%
Na	23	1	45	814.134	ppb	0.868	2212421	800	101.8	90	110	
Na	23	2	45	790.839	ppb	0.608	153945	800	98.9	90	110	
Mg	24	2	45	791.345	ppb	2.150	62211	800	98.9	90	110	
Al	27	2	45	789.292	ppb	6.046	16320	800	98.7	90	110	
K	39	1	45	1124.702	ppb	2.778	12535389	800	140.6	90	110	>+\-10%
K	39	2	45	793.393	ppb	3.347	74077	800	99.2	90	110	
Ca	40	1	45	807.697	ppb	0.310	3088849	800	101.0	90	110	
Ca	44	2	45	764.734	ppb	10.360	2634	800	95.6	90	110	
Ti	47	2	45	44.770	ppb	19.010	970	40	111.9	90	110	>+\-10%
V	51	2	72	41.891	ppb	2.769	44252	40	104.7	90	110	
Cr	52	2	72	40.144	ppb	2.386	47692	40	100.4	90	110	
Mn	55	2	72	39.204	ppb	1.768	18526	40	98.0	90	110	
Fe	57	2	72	807.009	ppb	2.292	17825	4000	20.2	90	110	>+\-10%
Co	59	2	72	40.472	ppb	1.814	84103	40	101.2	90	110	
Ni	60	2	72	38.609	ppb	1.600	22528	40	96.5	90	110	
Cu	63	2	72	40.503	ppb	0.807	66155	40	101.3	90	110	
Zn	66	2	72	39.916	ppb	2.331	9427	40	99.8	90	110	
As	75	2	72	39.093	ppb	1.919	7545	40	97.7	90	110	
Se	78	1	72	40.730	ppb	1.561	7776	40	101.8	90	110	
Sr	88	2	72	79.443	ppb	1.465	46253	80	99.3	90	110	
Zr	90	2	72	61.555	ppb	8.983	130	40	153.9	90	110	>+\-10%
Nb	93	2	72	83.891	ppb	0.626	127869	80	104.9	90	110	
Mo	95	2	115	40.987	ppb	2.272	34102	40	102.5	90	110	
Pd	105	2	115	40.611	ppb	0.744	54041	40	101.5	90	110	
Ag	107	2	115	40.287	ppb	2.230	112981	40	100.7	90	110	
Cd	111	2	115	39.827	ppb	1.752	15122	40	99.6	90	110	
Sn	120	2	115	40.781	ppb	0.583	41576	40	102.0	90	110	
Sb	121	2	115	42.817	ppb	6.041	43416	40	107.0	90	110	
Ba	137	2	115	40.314	ppb	1.772	14221	40	100.8	90	110	
W	182	2	165	40.121	ppb	1.130	148013	40	100.3	90	110	
Pt	195	2	165	39.253	ppb	1.173	115895	40	98.1	90	110	
Tl	205	2	165	39.959	ppb	1.807	289158	40	99.9	90	110	
Pb	208	2	165	40.397	ppb	0.899	394700	40	101.0	90	110	
Th	232	2	165	39.739	ppb	0.380	487577	40	99.3	90	110	
U	238	2	165	40.120	ppb	0.388	492634	40	100.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	834716	0.43	1026889	81.29	60	120	
Sc (IS)	45	1	HMI H2	18000211	0.19	18439199	97.62	60	120	
Sc (IS)	45	2	HMI He	723255	0.27	756670	95.58	60	120	
Sc (IS)	45	3	No Gas	71069302	1.14	72366817	98.21	60	120	
Ge Internal Standard	72	1	HMI H2	7587631	0.65	7757842	97.81	60	120	
Ge Internal Standard	72	2	HMI He	956465	0.74	983503	97.25	60	120	
In Internal Standard	115	2	HMI He	3662471	0.93	3766074	97.25	60	120	
Ho-165	165	2	HMI He	16426766	0.41	16609289	98.90	60	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	icb-5688508
Data File Name	018_ICB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T10:30:13-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	7.729	ppb	17.0	8505235	10	
Be	9	1	0.036	ppb	72.0	13	0.5	
B	11	1	4.515	ppb	125.2	363	0.5	>RL
Na	23	1	-10.072	ppb	-5.2	176954	25	
Na	23	2	-7.239	ppb	-24.4	12696	25	
Mg	24	2	0.063	ppb	690.8	63	25	
Al	27	2	0.054	ppb	1030.3	37	15	
K	39	1	-144.322	ppb	-30.6	10169839	50	
K	39	2	-30.375	ppb	-36.1	33486	50	
Ca	40	1	-0.562	ppb	-50.1	37660	50	
Ca	44	2	10.176	ppb	119.1	87	25	
Ti	47	2	0.152	ppb	173.2	3	0.5	
V	51	2	1.545	ppb	11.5	7392	1	>RL
Cr	52	2	0.037	ppb	103.7	300	1	
Mn	55	2	-0.042	ppb	-127.5	83	0.5	
Fe	57	2	-0.502	ppb	-106.3	53	25	
Co	59	2	0.015	ppb	422.2	1247	0.5	
Ni	60	2	0.062	ppb	131.3	103	1	
Cu	63	2	0.059	ppb	183.1	1040	1	
Zn	66	2	0.135	ppb	113.0	160	5	
As	75	2	-0.017	ppb	-188.7	32	1	
Se	78	1	0.004	ppb	956.3	25	1	
Sr	88	2	-0.010	ppb	-484.2	17	0.5	
Zr	90	2	9.771	ppb	132.9	37	1	>RL
Nb	93	2	4.225	ppb	15.0	8630	2	>RL
Mo	95	2	-0.042	ppb	-70.6	33	0.5	
Pd	105	2	0.028	ppb	46.4	50	1	
Ag	107	2	0.013	ppb	86.2	67	1	
Cd	111	2	-0.009	ppb	0.0	0	0.5	
Sn	120	2	0.099	ppb	56.9	267	1	
Sb	121	2	0.046	ppb	10.9	53	0.6	
Ba	137	2	0.048	ppb	168.3	43	0.5	
W	182	2	0.021	ppb	82.1	680	1	
Pt	195	2	0.005	ppb	114.6	13	1	
Tl	205	2	-0.002	ppb	-910.2	343	0.1	
Pb	208	2	0.018	ppb	30.3	823	0.5	
Th	232	2	0.145	ppb	10.1	2610	1	
U	238	2	0.005	ppb	98.6	113	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	948476	11.07	1026889	92.36	60	120	
Sc (IS)	45	1	HMI H2	18023348	0.56	18439199	97.74	60	120	
Sc (IS)	45	2	HMI He	734392	0.24	756670	97.06	60	120	
Sc (IS)	45	3	No Gas	67289557	1.61	72366817	92.98	60	120	
Ge Internal Standard	72	1	HMI H2	7569807	0.91	7757842	97.58	60	120	
Ge Internal Standard	72	2	HMI He	949060	0.61	983503	96.50	60	120	
In Internal Standard	115	2	HMI He	3672448	1.27	3766074	97.51	60	120	
Ho-165	165	2	HMI He	16301696	0.53	16609289	98.15	60	120	

Blank Report

Sample Table

Sample Name	rinse-5672981
Data File Name	019WASH.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T10:36:59-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	0.053	ppb	109.5229872	17	0.5
Na	23	2	45	2.861	ppb	66.05865125	14021	25
Mg	24	2	45	2.212	ppb	34.5090507	227	25
Al	27	2	45	1.274	ppb	79.62436532	60	15
K	39	2	45	-25.139	ppb	-37.48101001	32607	50
Ca	44	2	45	12.050	ppb	73.59744614	90	25
V	51	2	72	4.247	ppb	6.261103696	9620	1
Cr	52	2	72	0.309	ppb	35.17541665	607	1
Mn	55	2	72	1.812	ppb	2.855771351	927	0.5
Fe	57	2	72	12.211	ppb	42.7009452	323	25
Co	59	2	72	0.014	ppb	439.9426327	1217	0.5
Ni	60	2	72	2.434	ppb	15.85836179	1440	1
Cu	63	2	72	3.485	ppb	4.903100954	6368	1
Zn	66	2	72	0.416	ppb	36.60010093	220	5
As	75	2	72	0.088	ppb	101.7745324	51	1
Se	78	1	72	0.005	ppb	1851.747397	25	1
Nb	93	2	72	1.445	ppb	9.041413091	4408	2
Mo	95	2	115	0.004	ppb	280.7380828	70	0.5
Pd	105	2	115	0.019	ppb	105.0226426	37	1
Ag	107	2	115	0.016	ppb	73.0692522	73	1
Cd	111	2	115	0.000	ppb	3540.295968	3	0.5
Sn	120	2	115	0.349	ppb	34.18360219	510	1
Sb	121	2	115	0.068	ppb	82.38480954	73	0.6
Ba	137	2	115	0.119	ppb	99.28063279	67	0.5
W	182	2	165	0.016	ppb	273.0771994	660	1
Pt	195	2	165	0.009	ppb	57.12096231	27	1
Tl	205	2	165	0.018	ppb	149.6871256	487	0.1
Pb	208	2	165	0.028	ppb	40.32202879	917	0.5
Th	232	2	165	0.068	ppb	11.14968145	1670	1
U	238	2	165	0.042	ppb	35.60936807	567	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	825343	0.40	1026889	80.37	60	120	
Sc (IS)	45	1	HMI H2	17691430	1.03	18439199	95.94	60	120	
Sc (IS)	45	2	HMI He	709469	0.91	756670	93.76	60	120	
Sc (IS)	45	3	No Gas	72018792	0.69	72366817	99.52	60	120	
Ge Internal Standard	72	1	HMI H2	7500387	0.36	7757842	96.68	60	120	
Ge Internal Standard	72	2	HMI He	928146	0.58	983503	94.37	60	120	
In Internal Standard	115	2	HMI He	3593718	0.89	3766074	95.42	60	120	
Ho-165	165	2	HMI He	16328468	0.37	16609289	98.31	60	120	

Blank Report

Sample Table

Sample Name	rinse-5672981
Data File Name	020WASH.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T10:40:51-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	014CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	0.015	ppb	288.7537852	7	0.5
Na	23	2	45	-3.291	ppb	-69.73798392	12949	25
Mg	24	2	45	1.175	ppb	28.25009738	147	25
Al	27	2	45	0.777	ppb	230.2567211	50	15
K	39	2	45	-20.285	ppb	-23.97518513	32838	50
Ca	44	2	45	4.044	ppb	368.838303	63	25
V	51	2	72	4.660	ppb	7.09759797	9894	1
Cr	52	2	72	0.059	ppb	155.9518304	317	1
Mn	55	2	72	1.514	ppb	43.18826414	783	0.5
Fe	57	2	72	4.932	ppb	57.8816726	167	25
Co	59	2	72	-0.039	ppb	-203.0407665	1100	0.5
Ni	60	2	72	0.127	ppb	55.4882519	137	1
Cu	63	2	72	2.778	ppb	6.983884844	5215	1
Zn	66	2	72	0.322	ppb	77.80953951	197	5
As	75	2	72	0.069	ppb	159.6491711	47	1
Se	78	1	72	0.006	ppb	538.6153106	25	1
Nb	93	2	72	0.491	ppb	14.17234067	2994	2
Mo	95	2	115	0.000	ppb	6949.364992	67	0.5
Pd	105	2	115	-0.005	ppb	-193.6602802	7	1
Ag	107	2	115	0.002	ppb	241.3540606	33	1
Cd	111	2	115	0.009	ppb	165.3211968	7	0.5
Sn	120	2	115	0.243	ppb	26.54508291	403	1
Sb	121	2	115	0.057	ppb	100.8277479	63	0.6
Ba	137	2	115	0.129	ppb	59.78200541	70	0.5
W	182	2	165	0.022	ppb	35.69179543	680	1
Pt	195	2	165	0.005	ppb	86.60254345	13	1
Tl	205	2	165	-0.010	ppb	-86.4510424	283	0.1
Pb	208	2	165	0.007	ppb	246.3976919	713	0.5
Th	232	2	165	0.026	ppb	33.42679387	1153	1
U	238	2	165	0.005	ppb	85.73931158	113	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	819780	0.34	1026889	79.83	60	120	
Sc (IS)	45	1	HMI H2	17570072	0.63	18439199	95.29	60	120	
Sc (IS)	45	2	HMI He	709373	0.29	756670	93.75	60	120	
Sc (IS)	45	3	No Gas	70703986	1.22	72366817	97.70	60	120	
Ge Internal Standard	72	1	HMI H2	7417124	0.99	7757842	95.61	60	120	
Ge Internal Standard	72	2	HMI He	919451	0.66	983503	93.49	60	120	
In Internal Standard	115	2	HMI He	3581578	0.65	3766074	95.10	60	120	
Ho-165	165	2	HMI He	16282146	0.35	16609289	98.03	60	120	

Calibration Blank Report

Sample Table

Sample Name	icis-5688508
Data File Name	021CALB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T10:44:45-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	101262	0.00
Li	7	2	HMI He	5011	0.12
Li	7	3	No Gas	9031000	0.00
Be	9	1	HMI H2	7	2598.08
B	11	1	HMI H2	343	10.81
Na	23	1	HMI H2	166597	0.00
Na	23	2	HMI He	11862	0.02
Mg	24	2	HMI He	110	43.73
Al	27	2	HMI He	20	250.00
K	39	2	HMI He	32393	0.01
Ca	44	2	HMI He	60	83.33
Ti	47	2	HMI He	0	#VALUE!
V	51	2	HMI He	7459	0.03
Cr	52	2	HMI He	310	9.25
Mn	55	2	HMI He	63	122.98
Fe	57	2	HMI He	87	73.33
Co	59	2	HMI He	1260	1.43
Ni	60	2	HMI He	100	34.64
Cu	63	2	HMI He	1003	1.19
Zn	66	2	HMI He	123	10.04
As	75	2	HMI He	33	28.04
Se	78	1	HMI H2	28	334.56
Sr	88	2	HMI He	33	274.95
Zr	90	2	HMI He	53	123.46
Nb	93	2	HMI He	1870	0.57
Mo	95	2	HMI He	50	105.83
Pd	105	2	HMI He	17	749.40
Ag	107	2	HMI He	40	62.50
Cd	111	2	HMI He	0	#VALUE!
Sn	120	2	HMI He	150	29.14
Sb	121	2	HMI He	23	212.09
Ba	137	2	HMI He	73	56.81
W	182	2	HMI He	567	3.07
Pt	195	2	HMI He	7	2598.08
Tl	205	2	HMI He	180	9.26
Pb	208	2	HMI He	693	1.34
Th	232	2	HMI He	677	4.97
U	238	2	HMI He	57	100.11

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li-6 Internal Standard	6	1	HMI H2	885786	11.43
Sc (IS)	45	1	HMI H2	17935452	0.60
Sc (IS)	45	2	HMI He	724932	0.23
Sc (IS)	45	3	No Gas	71931282	0.90
Ge Internal Standard	72	1	HMI H2	7580625	1.11
Ge Internal Standard	72	2	HMI He	939613	0.38
In Internal Standard	115	2	HMI He	3669615	0.85
Ho-165	165	2	HMI He	16373961	0.64

Calibration Standard Report

Sample Table

Sample Name	ic-5688509
Data File Name	022CALS.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T10:48:38-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	021CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	160426	0.00
Li	7	2	HMI He	7352	0.06
Li	7	3	No Gas	14300378	0.00
Be	9	1	HMI H2	29557	0.01
B	11	1	HMI H2	1330	1.30
Na	23	1	HMI H2	5058772	0.00
Na	23	2	HMI He	364362	0.00
Mg	24	2	HMI He	158490	0.00
Al	27	2	HMI He	41299	0.00
K	39	1	HMI H2	14047621	0.00
K	39	2	HMI He	131919	0.00
Ca	40	1	HMI H2	7501690	0.00
Ca	44	2	HMI He	6538	0.04
Ti	47	2	HMI He	2224	0.73
V	51	2	HMI He	97766	0.00
Cr	52	2	HMI He	118146	0.00
Mn	55	2	HMI He	46506	0.00
Fe	57	2	HMI He	43095	0.00
Co	59	2	HMI He	202030	0.00
Ni	60	2	HMI He	57411	0.00
Cu	63	2	HMI He	161146	0.00
Zn	66	2	HMI He	23490	0.01
As	75	2	HMI He	18929	0.01
Se	78	1	HMI H2	18910	0.00
Sr	88	2	HMI He	113083	0.00
Zr	90	2	HMI He	253	0.90
Nb	93	2	HMI He	300657	0.00
Mo	95	2	HMI He	80438	0.00
Pd	105	2	HMI He	132494	0.00
Ag	107	2	HMI He	276093	0.00
Cd	111	2	HMI He	36285	0.00
Sn	120	2	HMI He	101939	0.00
Sb	121	2	HMI He	99155	0.00
Ba	137	2	HMI He	34976	0.00
Nd	146	2	HMI He	109071	0.00
Sm	147	2	HMI He	93646	0.00
Sm	150	2	HMI He	91076	0.00
Gd	156	1	HMI H2	440398	0.00
Gd	157	1	HMI H2	336504	0.00
W	182	2	HMI He	366503	0.00
Pt	195	2	HMI He	293550	0.00
Tl	205	2	HMI He	717298	0.00
Pb	208	2	HMI He	975014	0.00
Th	232	2	HMI He	1210397	0.00
U	238	2	HMI He	1222737	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	829698	0.21	885786	93.67	60	120	
Sc (IS)	45	1	HMI H2	17905042	0.33	17935452	99.83	60	120	
Sc (IS)	45	2	HMI He	722206	0.20	724932	99.62	60	120	
Sc (IS)	45	3	No Gas	72305397	0.78	71931282	100.52	60	120	
Ge Internal Standard	72	1	HMI H2	7644283	0.28	7580625	100.84	60	120	
Ge Internal Standard	72	2	HMI He	946316	0.28	939613	100.71	60	120	
In Internal Standard	115	2	HMI He	3654963	0.44	3669615	99.60	60	120	
Ho-165	165	2	HMI He	16300106	0.44	16373961	99.55	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-5688511
Data File Name	023_ICV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T10:52:32-06:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	79.851	ppb	5.614	123261	400	20.0	90	110	>+\-10%
Li	7	2	45	114.724	ppb	29.480	6282	400	28.7	90	110	>+\-10%
Li	7	3	45	80.333	ppb	2.007	11016599	400	20.1	90	110	>+\-10%
Be	9	1	6	40.024	ppb	4.802	11748	40	100.1	90	110	
B	11	1	6	44.283	ppb	17.190	767	40	110.7	90	110	>+\-10%
Na	23	1	45	811.018	ppb	0.954	2124004	800	101.4	90	110	
Na	23	2	45	783.260	ppb	1.374	148361	800	97.9	90	110	
Mg	24	2	45	781.986	ppb	2.116	61408	800	97.7	90	110	
Al	27	2	45	782.631	ppb	0.963	16009	800	97.8	90	110	
K	39	1	45	1147.783	ppb	3.054	12247250	800	143.5	90	110	>+\-10%
K	39	2	45	819.704	ppb	3.005	72375	800	102.5	90	110	
Ca	40	1	45	813.691	ppb	0.320	3036137	800	101.7	90	110	
Ca	44	2	45	774.159	ppb	11.549	2540	800	96.8	90	110	
Ti	47	2	45	40.284	ppb	6.795	887	40	100.7	90	110	
V	51	2	72	41.080	ppb	0.692	44121	40	102.7	90	110	
Cr	52	2	72	40.282	ppb	2.232	47274	40	100.7	90	110	
Mn	55	2	72	40.409	ppb	2.405	18636	40	101.0	90	110	
Fe	57	2	72	811.609	ppb	0.645	17358	4000	20.3	90	110	>+\-10%
Co	59	2	72	40.679	ppb	3.392	82082	40	101.7	90	110	
Ni	60	2	72	40.511	ppb	1.285	23073	40	101.3	90	110	
Cu	63	2	72	39.580	ppb	1.988	63717	40	98.9	90	110	
Zn	66	2	72	42.505	ppb	0.998	9951	40	106.3	90	110	
As	75	2	72	39.344	ppb	1.699	7389	40	98.4	90	110	
Se	78	1	72	39.728	ppb	2.075	7427	40	99.3	90	110	
Sr	88	2	72	81.782	ppb	0.997	45778	80	102.2	90	110	
Zr	90	2	72	33.965	ppb	60.917	120	40	84.9	90	110	>+\-10%
Nb	93	2	72	87.526	ppb	0.232	131254	80	109.4	90	110	
Mo	95	2	115	41.034	ppb	0.808	32528	40	102.6	90	110	
Pd	105	2	115	39.868	ppb	2.529	52024	40	99.7	90	110	
Ag	107	2	115	40.967	ppb	1.751	111392	40	102.4	90	110	
Cd	111	2	115	40.804	ppb	0.418	14578	40	102.0	90	110	
Sn	120	2	115	39.871	ppb	0.711	40108	40	99.7	90	110	
Sb	121	2	115	43.227	ppb	0.895	42218	40	108.1	90	110	
Ba	137	2	115	39.898	ppb	4.161	13781	40	99.7	90	110	
W	182	2	165	40.179	ppb	0.759	147132	40	100.4	90	110	
Pt	195	2	165	39.695	ppb	1.093	116167	40	99.2	90	110	
Tl	205	2	165	39.677	ppb	0.384	283813	40	99.2	90	110	
Pb	208	2	165	39.819	ppb	0.399	387454	40	99.5	90	110	
Th	232	2	165	39.809	ppb	0.232	480750	40	99.5	90	110	
U	238	2	165	39.638	ppb	0.490	483176	40	99.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	823752	0.28	885786	93.00	60	120	
Sc (IS)	45	1	HMI H2	17686612	0.26	17935452	98.61	60	120	
Sc (IS)	45	2	HMI He	714896	0.63	724932	98.62	60	120	
Sc (IS)	45	3	No Gas	71274162	0.31	71931282	99.09	60	120	
Ge Internal Standard	72	1	HMI H2	7540704	0.42	7580625	99.47	60	120	
Ge Internal Standard	72	2	HMI He	936427	0.76	939613	99.66	60	120	
In Internal Standard	115	2	HMI He	3598751	0.48	3669615	98.07	60	120	
Ho-165	165	2	HMI He	16249094	0.84	16373961	99.24	60	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	icb-5688508
Data File Name	024_ICB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T10:56:25-06:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	-0.834	ppb	-228.9	9088890	10	
Be	9	1	0.067	ppb	58.1	27	0.5	
B	11	1	4.333	ppb	96.5	373	0.5	>RL
Na	23	1	-0.894	ppb	-88.6	163072	25	
Na	23	2	3.045	ppb	91.3	12242	25	
Mg	24	2	-0.238	ppb	-54.5	90	25	
Al	27	2	0.831	ppb	206.8	37	15	
K	39	1	-36.073	ppb	-68.3	10041833	50	
K	39	2	28.168	ppb	12.7	33372	50	
Ca	40	1	0.313	ppb	52.5	37292	50	
Ca	44	2	0.237	ppb	3485.1	60	25	
Ti	47	2	0.304	ppb	173.2	7	0.5	
V	51	2	1.271	ppb	48.2	8513	1	>RL
Cr	52	2	-0.092	ppb	-71.4	200	1	
Mn	55	2	0.045	ppb	73.4	83	0.5	
Fe	57	2	-1.070	ppb	-25.3	63	25	
Co	59	2	-0.005	ppb	-732.7	1237	0.5	
Ni	60	2	-0.028	ppb	-193.8	83	1	
Cu	63	2	0.000	ppb	-8828.3	993	1	
Zn	66	2	0.266	ppb	48.6	183	5	
As	75	2	0.002	ppb	956.6	33	1	
Se	78	1	0.052	ppb	126.2	37	1	
Sr	88	2	0.001	ppb	6738.5	33	0.5	
Zr	90	2	3.666	ppb	237.0	60	1	>RL
Nb	93	2	5.637	ppb	3.9	10131	2	>RL
Mo	95	2	-0.004	ppb	-822.1	47	0.5	
Pd	105	2	0.020	ppb	94.3	43	1	
Ag	107	2	0.010	ppb	23.2	67	1	
Cd	111	2	0.000	ppb	#DIV/0!	0	0.5	
Sn	120	2	0.142	ppb	56.0	293	1	
Sb	121	2	0.027	ppb	73.8	50	0.6	
Ba	137	2	-0.095	ppb	-52.1	40	0.5	
W	182	2	0.084	ppb	52.7	863	1	
Pt	195	2	0.008	ppb	154.0	30	1	
Tl	205	2	0.036	ppb	40.2	437	0.1	
Pb	208	2	0.009	ppb	142.1	773	0.5	
Th	232	2	0.167	ppb	14.3	2680	1	
U	238	2	0.016	ppb	23.6	250	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	831829	0.62	885786	93.91	60	120	
Sc (IS)	45	1	HMI H2	17788933	0.37	17935452	99.18	60	120	
Sc (IS)	45	2	HMI He	715708	0.38	724932	98.73	60	120	
Sc (IS)	45	3	No Gas	72564344	0.22	71931282	100.88	60	120	
Ge Internal Standard	72	1	HMI H2	7503962	0.81	7580625	98.99	60	120	
Ge Internal Standard	72	2	HMI He	930474	0.50	939613	99.03	60	120	
In Internal Standard	115	2	HMI He	3654311	0.73	3669615	99.58	60	120	
Ho-165	165	2	HMI He	16198403	0.67	16373961	98.93	60	120	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	icvl-5688512
Data File Name	025LICV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T11:00:20-06:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	9.693	ppb	13.665	9283997	50	19.4	70	130	>+/-30%
Be	9	1	6	0.997	ppb	45.582	303	1	99.7	70	130	
Na	23	2	45	54.626	ppb	5.635	21446	50	109.3	70	130	>+/-30%
Mg	24	2	45	51.639	ppb	10.804	4197	50	103.3	70	130	
Al	27	2	45	47.013	ppb	5.041	990	30	156.7	70	130	>+/-30%
K	39	2	45	99.027	ppb	17.703	37202	100	99.0	70	130	
Ca	44	2	45	36.100	ppb	18.091	177	50	72.2	70	130	
V	51	2	72	5.691	ppb	13.098	12483	5	113.8	70	130	
Cr	52	2	72	2.060	ppb	4.495	2704	2	103.0	70	130	
Mn	55	2	72	0.946	ppb	22.711	497	1	94.6	70	130	
Fe	57	2	72	61.305	ppb	10.033	1387	50	122.6	70	130	
Co	59	2	72	0.934	ppb	14.296	3104	1	93.4	70	130	
Ni	60	2	72	1.475	ppb	14.412	933	1.5	98.3	70	130	
Cu	63	2	72	2.091	ppb	12.506	4301	2	104.6	70	130	
Zn	66	2	72	9.940	ppb	8.131	2414	10	99.4	70	130	
As	75	2	72	4.922	ppb	4.999	950	5	98.4	70	130	
Se	78	1	72	4.972	ppb	1.477	957	5	99.4	70	130	
Sr	88	2	72	1.035	ppb	17.063	610	1	103.5	70	130	
Zr	90	2	72	-1.513	ppb	-326.944	50	0.5	-302.7	70	130	>+/-30%
Nb	93	2	72	2.408	ppb	14.628	5408	2	120.4	70	130	
Mo	95	2	115	2.192	ppb	10.549	1820	2	109.6	70	130	
Pd	105	2	115	0.018	ppb	72.951	40	1	1.8	70	130	>+/-30%
Ag	107	2	115	5.148	ppb	3.080	14308	5	103.0	70	130	
Cd	111	2	115	0.870	ppb	13.010	317	1	87.0	70	130	
Sn	120	2	115	9.596	ppb	2.886	9957	10	96.0	70	130	
Sb	121	2	115	2.019	ppb	13.835	2034	2	100.9	70	130	
Ba	137	2	115	1.103	ppb	3.970	460	1	110.3	70	130	
W	182	2	165	4.779	ppb	2.821	18203	1	477.9	70	130	>+/-30%
Pt	195	2	165	0.002	ppb	231.615	13	1	0.2	70	130	>+/-30%
Tl	205	2	165	0.980	ppb	0.667	7266	1	98.0	70	130	
Pb	208	2	165	1.106	ppb	1.184	11566	1	110.6	70	130	
Th	232	2	165	1.724	ppb	1.847	21706	2	86.2	70	130	
U	238	2	165	1.046	ppb	1.411	12957	1	104.6	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	834224	0.58	885786	94.18	60	120	
Sc (IS)	45	1	HMI H2	17906620	0.44	17935452	99.84	60	120	
Sc (IS)	45	2	HMI He	722174	0.52	724932	99.62	60	120	
Sc (IS)	45	3	No Gas	71937639	0.59	71931282	100.01	60	120	
Ge Internal Standard	72	1	HMI H2	7568025	0.25	7580625	99.83	60	120	
Ge Internal Standard	72	2	HMI He	933823	0.50	939613	99.38	60	120	
In Internal Standard	115	2	HMI He	3670247	1.00	3669615	100.02	60	120	
Ho-165	165	2	HMI He	16435508	0.23	16373961	100.38	60	120	

CRI Report

Sample Table

Sample Name	cri-5688513
Data File Name	026RLST.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T11:04:13-06:00
Sample Type	CRI
Dilution	1
Comment	
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	-0.630	ppb	-697.148	100897	10	-6.3	80	120	>+\-20%
Li	7	2	45	10.591	ppb	142.489	5121	10	105.9	80	120	
Li	7	3	45	-0.706	ppb	-376.677	9051075	10	-7.1	80	120	>+\-20%
Be	9	1	6	0.794	ppb	28.375	277	1	79.4	80	120	>+\-20%
B	11	1	6	-5.243	ppb	-177.422	307	1	-524.3	80	120	>+\-20%
Na	23	1	45	23.613	ppb	5.207	224055	20	118.1	80	120	
Na	23	2	45	27.622	ppb	14.249	16697	20	138.1	80	120	>+\-20%
Mg	24	2	45	21.626	ppb	11.199	1824	20	108.1	80	120	
Al	27	2	45	21.964	ppb	28.275	473	20	109.8	80	120	
K	39	2	45	20.378	ppb	97.163	33309	20	101.9	80	120	
Ca	40	1	45	21.647	ppb	1.260	117160	20	108.2	80	120	
Ca	44	2	45	9.288	ppb	131.804	90	20	46.4	80	120	>+\-20%
Ti	47	2	45	1.351	ppb	88.180	30	1	135.1	80	120	>+\-20%
V	51	2	72	0.612	ppb	44.059	7979	1	61.2	80	120	>+\-20%
Cr	52	2	72	0.936	ppb	10.631	1400	1	93.6	80	120	
Mn	55	2	72	1.154	ppb	12.836	593	1	115.4	80	120	
Fe	57	2	72	15.684	ppb	27.909	420	100	15.7	80	120	>+\-20%
Co	59	2	72	1.058	ppb	10.190	3357	1	105.8	80	120	
Ni	60	2	72	1.076	ppb	7.266	710	1	107.6	80	120	
Cu	63	2	72	1.098	ppb	13.376	2740	1	109.8	80	120	
Zn	66	2	72	1.052	ppb	40.751	367	1	105.2	80	120	
As	75	2	72	1.038	ppb	9.437	227	1	103.8	80	120	
Se	78	1	72	1.271	ppb	8.111	267	1	127.1	80	120	>+\-20%
Sr	88	2	72	2.362	ppb	9.058	1353	2	118.1	80	120	
Zr	90	2	72	0.069	ppb	15072.544	53	1	6.9	80	120	>+\-20%
Nb	93	2	72	3.375	ppb	6.060	6852	2	168.7	80	120	>+\-20%
Mo	95	2	115	0.981	ppb	16.183	843	1	98.1	80	120	
Pd	105	2	115	0.958	ppb	5.591	1293	1	95.8	80	120	
Ag	107	2	115	1.111	ppb	7.598	3124	1	111.1	80	120	
Cd	111	2	115	1.151	ppb	13.233	420	1	115.1	80	120	
Sn	120	2	115	1.146	ppb	7.209	1323	1	114.6	80	120	
Sb	121	2	115	1.090	ppb	8.806	1110	1	109.0	80	120	
Ba	137	2	115	0.882	ppb	34.844	383	1	88.2	80	120	
W	182	2	165	1.026	ppb	4.547	4331	1	102.6	80	120	
Pt	195	2	165	0.950	ppb	3.372	2804	1	95.0	80	120	
Tl	205	2	165	1.008	ppb	7.705	7426	1	100.8	80	120	
Pb	208	2	165	1.032	ppb	5.369	10772	1	103.2	80	120	
Th	232	2	165	0.900	ppb	1.751	11602	1	90.0	80	120	
U	238	2	165	0.977	ppb	5.515	12039	1	97.7	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	936096	9.56	885786	105.68	60	120	
Sc (IS)	45	1	HMI H2	17902781	0.58	17935452	99.82	60	120	
Sc (IS)	45	2	HMI He	722724	0.38	724932	99.70	60	120	
Sc (IS)	45	3	No Gas	72235876	0.18	71931282	100.42	60	120	
Ge Internal Standard	72	1	HMI H2	7598458	0.48	7580625	100.24	60	120	
Ge Internal Standard	72	2	HMI He	936367	0.79	939613	99.65	60	120	
In Internal Standard	115	2	HMI He	3675942	0.56	3669615	100.17	60	120	
Ho-165	165	2	HMI He	16349860	0.81	16373961	99.85	60	120	

CRI Report

Sample Table

Sample Name	cri-
Data File Name	027RLST.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T11:09:59-06:00
Sample Type	CRI
Dilution	1
Comment	
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	-3.237	ppb	-124.127	99243	10	-32.4	80	120	>+\-20%
Li	7	2	45	-12.491	ppb	-184.945	4751	10	-124.9	80	120	>+\-20%
Li	7	3	45	-4.394	ppb	-31.272	8890001	10	-43.9	80	120	>+\-20%
Be	9	1	6	0.813	ppb	17.090	247	1	81.3	80	120	
B	11	1	6	-1.519	ppb	-269.323	313	1	-151.9	80	120	>+\-20%
Na	23	1	45	2.669	ppb	37.127	171306	20	13.3	80	120	>+\-20%
Na	23	2	45	7.519	ppb	32.125	12886	20	37.6	80	120	>+\-20%
Mg	24	2	45	-0.269	ppb	-118.551	87	20	-1.3	80	120	>+\-20%
Al	27	2	45	0.846	ppb	66.534	37	20	4.2	80	120	>+\-20%
K	39	2	45	15.403	ppb	82.492	32397	20	77.0	80	120	>+\-20%
Ca	40	1	45	2.184	ppb	19.320	44117	20	10.9	80	120	>+\-20%
Ca	44	2	45	0.410	ppb	2285.781	60	20	2.0	80	120	>+\-20%
Ti	47	2	45	0.000	ppb	#DIV/0!	0	1	0.0	80	120	>+\-20%
V	51	2	72	5.206	ppb	12.272	11865	1	520.6	80	120	>+\-20%
Cr	52	2	72	0.035	ppb	253.550	343	1	3.5	80	120	>+\-20%
Mn	55	2	72	0.077	ppb	62.205	97	1	7.7	80	120	>+\-20%
Fe	57	2	72	-0.557	ppb	-128.495	73	100	-0.6	80	120	>+\-20%
Co	59	2	72	-0.023	ppb	-302.985	1187	1	-2.3	80	120	>+\-20%
Ni	60	2	72	0.076	ppb	63.907	140	1	7.6	80	120	>+\-20%
Cu	63	2	72	0.282	ppb	41.065	1420	1	28.2	80	120	>+\-20%
Zn	66	2	72	0.438	ppb	67.127	220	1	43.8	80	120	>+\-20%
As	75	2	72	0.043	ppb	167.142	40	1	4.3	80	120	>+\-20%
Se	78	1	72	4.856	ppb	3.681	925	1	485.6	80	120	>+\-20%
Sr	88	2	72	-0.005	ppb	-8.952	30	2	-0.2	80	120	>+\-20%
Zr	90	2	72	-20.011	ppb	-14.633	13	1	-2001.1	80	120	>+\-20%
Nb	93	2	72	0.560	ppb	11.415	2644	2	28.0	80	120	>+\-20%
Mo	95	2	115	0.022	ppb	63.252	67	1	2.2	80	120	>+\-20%
Pd	105	2	115	0.008	ppb	201.107	27	1	0.8	80	120	>+\-20%
Ag	107	2	115	-0.005	ppb	-118.967	27	1	-0.5	80	120	>+\-20%
Cd	111	2	115	0.009	ppb	173.205	3	1	0.9	80	120	>+\-20%
Sn	120	2	115	0.093	ppb	41.668	240	1	9.3	80	120	>+\-20%
Sb	121	2	115	0.007	ppb	498.001	30	1	0.7	80	120	>+\-20%
Ba	137	2	115	-0.005	ppb	-1999.820	70	1	-0.5	80	120	>+\-20%
W	182	2	165	0.002	ppb	1468.643	567	1	0.2	80	120	>+\-20%
Pt	195	2	165	-0.001	ppb	-174.357	3	1	-0.1	80	120	>+\-20%
Tl	205	2	165	0.004	ppb	106.088	207	1	0.4	80	120	>+\-20%
Pb	208	2	165	0.070	ppb	24.527	1360	1	7.0	80	120	>+\-20%
Th	232	2	165	0.045	ppb	12.541	1207	1	4.5	80	120	>+\-20%
U	238	2	165	0.004	ppb	67.324	103	1	0.4	80	120	>+\-20%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	828478	0.28	885786	93.53	60	120	
Sc (IS)	45	1	HMI H2	17745128	0.50	17935452	98.94	60	120	
Sc (IS)	45	2	HMI He	708119	0.47	724932	97.68	60	120	
Sc (IS)	45	3	No Gas	71711939	0.72	71931282	99.70	60	120	
Ge Internal Standard	72	1	HMI H2	7484318	0.47	7580625	98.73	60	120	
Ge Internal Standard	72	2	HMI He	919612	0.77	939613	97.87	60	120	
In Internal Standard	115	2	HMI He	3609066	1.07	3669615	98.35	60	120	
Ho-165	165	2	HMI He	16194473	0.25	16373961	98.90	60	120	

CRI Report

Sample Table

Sample Name	cri5688514
Data File Name	028_CRI.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T11:13:54-06:00
Sample Type	AFCRI
Dilution	1
Comment	
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	6	0.260	ppb	33.732	90	0.2	129.8	80	120	AFCRI Main CR1 Failed
Na	23	2	45	68.841	ppb	4.457	23509	20	344.2	80	120	AFCRI Main CR1 Failed
Mg	24	2	45	10.581	ppb	4.001	930	20	52.9	80	120	AFCRI Main CR1 Failed
Al	27	2	45	14.996	ppb	13.182	323	4	374.9	80	120	AFCRI Main CR1 Failed
K	39	2	45	9.147	ppb	236.211	32123	4	228.7	80	120	AFCRI Main CR1 Failed
Ca	44	2	45	10.901	ppb	43.662	93	20	54.5	80	120	AFCRI Main CR1 Failed
V	51	2	72	1.109	ppb	22.696	8243	0.2	554.6	80	120	AFCRI Main CR1 Failed
Cr	52	2	72	1.161	ppb	11.112	1627	0.2	580.5	80	120	AFCRI Main CR1 Failed
(Cr)	53	2	72	5.475	ppb	46.412	3467	0.2	2737.5	80	120	AFCRI Main CR1 Failed
Mn	55	2	72	0.796	ppb	15.273	420	0.2	398.2	80	120	AFCRI Main CR1 Failed
Fe	57	2	72	12.105	ppb	16.036	337	20	60.5	80	120	AFCRI Main CR1 Failed
Co	59	2	72	0.284	ppb	36.449	1780	0.2	142.1	80	120	AFCRI Main CR1 Failed
Ni	60	2	72	1.399	ppb	9.956	873	0.2	699.3	80	120	AFCRI Main CR1 Failed
Cu	63	2	72	1.117	ppb	16.527	2710	0.2	558.5	80	120	AFCRI Main CR1 Failed
Zn	66	2	72	71.229	ppb	1.599	16233	0.2	35614.5	80	120	AFCRI Main CR1 Failed
As	75	2	72	0.340	ppb	23.232	94	0.2	170.0	80	120	AFCRI Main CR1 Failed
Se	78	1	72	0.307	ppb	62.661	84	0.2	153.5	80	120	AFCRI Main CR1 Failed
(Se)	82	1	72	0.886	ppb	114.716	557	0.2	442.9	80	120	AFCRI Main CR1 Failed
Nb	93	2	72	0.392	ppb	59.813	2390	0.4	97.9	80	120	
Mo	95	2	115	0.343	ppb	38.741	320	0.2	171.5	80	120	AFCRI Main CR1 Failed
Pd	105	2	115	0.228	ppb	28.461	313	0.2	114.1	80	120	
Ag	107	2	115	0.197	ppb	3.860	573	0.2	98.5	80	120	
Cd	111	2	115	0.271	ppb	36.216	97	0.2	135.6	80	120	AFCRI Main CR1 Failed
(Cd)	114	2	115	0.278	ppb	34.078	263	0.2	139.0	80	120	AFCRI Main CR1 Failed
Sn	120	2	115	0.370	ppb	16.436	517	0.2	185.1	80	120	AFCRI Main CR1 Failed
Sb	121	2	115	0.261	ppb	17.638	277	0.2	130.3	80	120	AFCRI Main CR1 Failed
Ba	137	2	115	0.083	ppb	71.071	100	0.2	41.3	80	120	AFCRI Main CR1 Failed
W	182	2	165	0.231	ppb	8.086	1400	0.2	115.7	80	120	
Pt	195	2	165	0.215	ppb	19.593	633	0.2	107.6	80	120	
Tl	205	2	165	0.353	ppb	1.612	2694	0.2	176.7	80	120	AFCRI Main CR1 Failed
(Pb)	206	2	165	0.454	ppb	12.230	1260	0.2	226.8	80	120	AFCRI Main CR1 Failed
(Pb)	207	2	165	0.466	ppb	7.880	1113	0.2	233.1	80	120	AFCRI Main CR1 Failed
Pb	208	2	165	0.446	ppb	3.760	4994	0.2	222.8	80	120	AFCRI Main CR1 Failed
Th	232	2	165	0.301	ppb	3.823	4284	0.2	150.5	80	120	AFCRI Main CR1 Failed
U	238	2	165	0.346	ppb	2.205	4251	0.2	172.8	80	120	AFCRI Main CR1 Failed

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	880014	8.95	885786	99.35	60	120	
Sc (IS)	45	1	HMI H2	17686718	1.02	17935452	98.61	60	120	
Sc (IS)	45	2	HMI He	708829	0.21	724932	97.78	60	120	
Sc (IS)	45	3	No Gas	70625951	0.24	71931282	98.19	60	120	
Ge Internal Standard	72	1	HMI H2	7468654	0.81	7580625	98.52	60	120	
Ge Internal Standard	72	2	HMI He	916251	0.37	939613	97.51	60	120	
In Internal Standard	115	2	HMI He	3590907	0.14	3669615	97.86	60	120	
Ho-165	165	2	HMI He	16181770	0.74	16373961	98.83	60	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	icsa-5681712
Data File Name	029ICSA.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T11:17:48-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-22.487	ppb	-8.2	7229419	1	
Be	9	1	6	0.031	ppb	198.9	13	1	
B	11	1	6	22.052	ppb	40.1	467	1	>RL or LOD
Na	23	1	45	94663.572	ppb	1.2	200783470	100000	
K	39	1	45	125025.173	ppb	0.6	218469090	100000	>RL or LOD
Ca	40	1	45	96262.382	ppb	1.0	311360902	100000	
Ti	47	2	45	1995.071	ppb	1.3	37907	1	>RL or LOD
V	51	2	72	1.574	ppb	22.5	7639	1	>RL or LOD
Cr	52	2	72	1.336	ppb	4.9	1614	1	>RL or LOD
Mn	55	2	72	0.718	ppb	23.8	340	0.95	
Co	59	2	72	0.186	ppb	36.8	1403	0.2	
Ni	60	2	72	0.307	ppb	44.5	237	1	
Cu	63	2	72	1.034	ppb	11.5	2280	1	>RL or LOD
Zn	66	2	72	0.802	ppb	34.9	267	1	
As	75	2	72	0.081	ppb	83.7	41	1	
Se	78	1	72	0.115	ppb	138.5	43	1	
Sr	88	2	72	1.741	ppb	7.7	870	1	>RL or LOD
Zr	90	2	72	342.128	ppb	10.8	630	1	>RL or LOD
Nb	93	2	72	15.731	ppb	8.4	21711	1	>RL or LOD
Mo	95	2	115	2246.500	ppb	1.7	1523867	2000	>RL or LOD
Pd	105	2	115	0.026	ppb	107.1	43	1	
Ag	107	2	115	0.064	ppb	66.1	183	1	
Cd	111	2	115	0.546	ppb	34.1	167	1	
Sn	120	2	115	0.173	ppb	43.4	273	1	
Sb	121	2	115	0.084	ppb	39.2	90	1	
Ba	137	2	115	0.752	ppb	16.3	283	0.95	
W	182	2	165	0.408	ppb	6.6	1940	1	
Pt	195	2	165	0.030	ppb	98.3	90	1	
Tl	205	2	165	0.044	ppb	22.1	467	1	
Pb	208	2	165	0.297	ppb	3.9	3384	1	
Th	232	2	165	0.690	ppb	10.3	8517	1	
U	238	2	165	0.025	ppb	15.3	337	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	704376	0.49	885786	79.52	60	120	
Sc (IS)	45	1	HMI H2	15514210	0.59	17935452	86.50	60	120	
Sc (IS)	45	2	HMI He	617111	0.37	724932	85.13	60	120	
Sc (IS)	45	3	No Gas	61562367	0.52	71931282	85.58	60	120	
Ge Internal Standard	72	1	HMI H2	6527597	0.24	7580625	86.11	60	120	
Ge Internal Standard	72	2	HMI He	809220	0.46	939613	86.12	60	120	
In Internal Standard	115	2	HMI He	3084282	1.67	3669615	84.05	60	120	
Ho-165	165	2	HMI He	15388551	0.55	16373961	93.98	60	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	icsab-5681713
Data File Name	030ICSB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T11:21:39-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	171.301	ppb	2.321	133564	100	171.3	80	120	>+\-20%
Li	7	2	45	208.668	ppb	8.961	6738	100	208.7	80	120	>+\-20%
Li	7	3	45	167.499	ppb	0.617	11530425	100	167.5	80	120	>+\-20%
Be	9	1	6	98.131	ppb	1.451	24374	100	98.1	80	120	
B	11	1	6	13.118	ppb	67.806	387	100	13.1	80	120	>+\-20%
Na	23	1	45	97502.576	ppb	0.514	209856584	100	97502.6	80	120	>+\-20%
K	39	1	45	129538.201	ppb	0.365	229373563	100	129538.2	80	120	>+\-20%
Ca	40	1	45	99634.450	ppb	0.194	327034222	100	99634.5	80	120	>+\-20%
V	51	2	72	100.452	ppb	0.364	88921	100	100.5	80	120	
Cr	52	2	72	96.397	ppb	0.727	103167	100	96.4	80	120	
Mn	55	2	72	100.594	ppb	0.325	42373	100	100.6	80	120	
Co	59	2	72	96.677	ppb	1.212	176950	100	96.7	80	120	
Ni	60	2	72	96.076	ppb	0.872	49964	100	96.1	80	120	
Cu	63	2	72	95.629	ppb	1.190	139621	100	95.6	80	120	
Zn	66	2	72	98.447	ppb	3.018	20946	100	98.4	80	120	
As	75	2	72	101.103	ppb	0.284	17333	100	101.1	80	120	
Se	78	1	72	102.941	ppb	0.307	16984	100	102.9	80	120	
Sr	88	2	72	206.983	ppb	1.875	106002	100	207.0	80	120	>+\-20%
Zr	90	2	72	231.163	ppb	3.668	467	100	231.2	80	120	>+\-20%
Nb	93	2	72	235.678	ppb	0.949	320606	100	235.7	80	120	
Mo	95	2	115	2342.961	ppb	1.495	1664386	100	2343.0	80	120	
Pd	105	2	115	95.094	ppb	1.670	111338	100	95.1	80	120	
Ag	107	2	115	101.743	ppb	2.154	248213	100	101.7	80	120	
Cd	111	2	115	105.440	ppb	1.788	33812	100	105.4	80	120	
Sn	120	2	115	105.785	ppb	3.038	95275	100	105.8	80	120	
Sb	121	2	115	115.112	ppb	2.530	100874	100	115.1	80	120	
Ba	137	2	115	106.197	ppb	1.340	32817	100	106.2	80	120	
W	182	2	165	99.516	ppb	0.543	353176	100	99.5	80	120	
Pt	195	2	165	92.923	ppb	1.567	264124	100	92.9	80	120	
Tl	205	2	165	96.428	ppb	0.719	669747	100	96.4	80	120	
Pb	208	2	165	96.458	ppb	1.162	910696	100	96.5	80	120	
Th	232	2	165	102.124	ppb	1.135	1196930	100	102.1	80	120	
U	238	2	165	98.184	ppb	0.823	1162487	100	98.2	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	697192	0.39	885786	78.71	60	120	
Sc (IS)	45	1	HMI H2	15743056	0.51	17935452	87.78	60	120	
Sc (IS)	45	2	HMI He	652817	0.73	724932	90.05	60	120	
Sc (IS)	45	3	No Gas	61976026	0.30	71931282	86.16	60	120	
Ge Internal Standard	72	1	HMI H2	6669567	0.33	7580625	87.98	60	120	
Ge Internal Standard	72	2	HMI He	857132	0.14	939613	91.22	60	120	
In Internal Standard	115	2	HMI He	3230019	1.11	3669615	88.02	60	120	
Ho-165	165	2	HMI He	15783410	0.24	16373961	96.39	60	120	

Sample Report

Sample Table

Sample Name	rinse
Data File Name	031SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T11:25:29-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	0.203	ppb	0.203	2781.81	98642	500000	
Li	7	2	45	-18.767	ppb	-18.767	-94.85	4831	500000	
Li	7	3	45	-11.577	ppb	-11.577	-53.89	8523688	50000	
Be	9	1	6	0.036	ppb	0.036	149.35	17	2000	
B	11	1	6	-0.700	ppb	-0.700	-524.67	310	2000	
Na	23	1	45	83.063	ppb	83.063	8.53	360285	2000	
Na	23	2	45	37.459	ppb	37.459	20.46	18649	400000	
Mg	24	2	45	16.206	ppb	16.206	19.04	1410	400000	
Al	27	2	45	19.951	ppb	19.951	31.74	437	400000	
K	39	1	45	123.769	ppb	123.769	7.30	10157666	400000	
K	39	2	45	19.603	ppb	19.603	96.48	33666	400000	
Ca	40	1	45	34.548	ppb	34.548	7.68	161188	400000	
Ca	44	2	45	15.093	ppb	15.093	35.70	110	400000	
Ti	47	2	45	0.297	ppb	0.297	173.21	7	4000	
V	51	2	72	1.343	ppb	1.343	19.44	8786	2000	
Cr	52	2	72	-0.032	ppb	-0.032	-317.20	277	5000	
Mn	55	2	72	0.097	ppb	0.097	57.21	110	10000	
Fe	57	2	72	18.549	ppb	18.549	33.26	490	400000	
Co	59	2	72	-0.033	ppb	-0.033	-289.26	1210	2000	
Ni	60	2	72	-0.026	ppb	-0.026	-196.05	87	5000	
Cu	63	2	72	0.026	ppb	0.026	226.11	1060	5000	
Zn	66	2	72	0.134	ppb	0.134	97.65	157	5000	
As	75	2	72	0.080	ppb	0.080	132.33	48	2000	
Se	78	1	72	0.778	ppb	0.778	4.83	171	2000	
Sr	88	2	72	0.005	ppb	0.005	400.56	37	4000	
Zr	90	2	72	-10.311	ppb	-10.311	-55.25	33	1000	
Nb	93	2	72	-0.860	ppb	-0.860	-4.26	603	200	
Mo	95	2	115	1.013	ppb	1.013	19.32	883	2000	
Pd	105	2	115	0.037	ppb	0.037	41.54	67	100	
Ag	107	2	115	0.000	ppb	0.000	-2821.54	40	100	
Cd	111	2	115	0.009	ppb	0.009	173.21	3	2000	
Sn	120	2	115	0.081	ppb	0.081	33.60	237	2000	
Sb	121	2	115	0.036	ppb	0.036	127.23	60	1000	
Ba	137	2	115	-0.051	ppb	-0.051	-159.25	57	5000	
W	182	2	165	0.021	ppb	0.021	121.87	653	100	
Pt	195	2	165	0.017	ppb	0.017	64.60	57	100	
Tl	205	2	165	0.036	ppb	0.036	42.04	450	2000	
Pb	208	2	165	0.015	ppb	0.015	102.25	857	5000	
Th	232	2	165	0.018	ppb	0.018	63.29	913	2000	
U	238	2	165	0.021	ppb	0.021	45.96	320	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	798563	0.26	885786	90.15	60	120	
Sc (IS)	45	1	HMI H2	17459657	0.38	17935452	97.35	60	120	
Sc (IS)	45	2	HMI He	731308	0.50	724932	100.88	60	120	
Sc (IS)	45	3	No Gas	70228976	0.32	71931282	97.63	60	120	
Ge Internal Standard	72	1	HMI H2	7445432	1.06	7580625	98.22	60	120	
Ge Internal Standard	72	2	HMI He	953128	0.43	939613	101.44	60	120	
In Internal Standard	115	2	HMI He	3738299	0.45	3669615	101.87	60	120	
Ho-165	165	2	HMI He	16655590	0.88	16373961	101.72	60	120	

Linear Range Sample (LRS) Report

Sample Table

Sample Name	lra-5680342
Data File Name	032_LR.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T11:29:21-06:00
Sample Type	LR
Dilution	1
Comment	
ISTD Ref File Name	021CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	6	1987.290	ppb	0.381	544807	2000	99.4	90	110	
V	51	2	72	2125.867	ppb	0.832	1776382	2000	106.3	90	110	
Cr	52	2	72	4906.221	ppb	0.316	5331955	5000	98.1	90	110	
(Cr)	53	2	72	4955.162	ppb	0.448	659707	5000	99.1	90	110	
Mn	55	2	72	10172.339	ppb	0.412	4356917	10000	101.7	90	110	
Co	59	2	72	2117.972	ppb	1.154	3922630	2000	105.9	90	110	
Ni	60	2	72	5173.584	ppb	0.511	2734481	5000	103.5	90	110	
Cu	63	2	72	4994.077	ppb	0.521	7376194	5000	99.9	90	110	
Zn	66	2	72	4894.444	ppb	0.390	1054705	5000	97.9	90	110	
As	75	2	72	1986.294	ppb	0.191	346160	2000	99.3	90	110	
Se	78	1	72	2020.083	ppb	0.666	353299	2000	101.0	90	110	
(Se)	82	1	72	1846.363	ppb	1.014	148100	2000	92.3	90	110	
Mo	95	2	115	2205.817	ppb	0.523	1650512	2000	110.3	90	110	LRS Main CR1 Failed
Cd	111	2	115	2078.335	ppb	0.610	701895	2000	103.9	90	110	
(Cd)	114	2	115	2195.401	ppb	0.891	1922047	2000	109.8	90	110	
Sn	120	2	115	2173.997	ppb	0.887	2059858	2000	108.7	90	110	
Sb	121	2	115	1006.166	ppb	0.252	928435	1000	100.6	90	110	
Ba	137	2	115	5146.725	ppb	0.518	1671993	5000	102.9	90	110	
Tl	205	2	165	1053.443	ppb	1.324	7315680	1000	105.3	90	110	
(Pb)	206	2	165	5218.294	ppb	0.258	12220199	5000	104.4	90	110	
(Pb)	207	2	165	5185.264	ppb	0.279	10688140	5000	103.7	90	110	
Pb	208	2	165	5290.716	ppb	0.750	49922623	5000	105.8	90	110	
Th	232	2	165	1068.804	ppb	1.556	12521568	1000	106.9	90	110	
U	238	2	165	2129.558	ppb	0.608	25216510	2000	106.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	769710	0.76	885786	86.90	60	120	
Sc (IS)	45	1	HMI H2	16570186	1.24	17935452	92.39	60	120	
Sc (IS)	45	2	HMI He	661170	1.58	724932	91.20	60	120	
Sc (IS)	45	3	No Gas	64251129	1.38	71931282	89.32	60	120	
Ge Internal Standard	72	1	HMI H2	7080248	1.20	7580625	93.40	60	120	
Ge Internal Standard	72	2	HMI He	872713	0.71	939613	92.88	60	120	
In Internal Standard	115	2	HMI He	3401977	0.94	3669615	92.71	60	120	
Ho-165	165	2	HMI He	15786274	1.18	16373961	96.41	60	120	

Sample Report

Sample Table

Sample Name	rinse
Data File Name	033SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T11:33:09-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-2.958	ppb	-2.958	-385.98	90596	500000	
Li	7	2	45	-11.996	ppb	-11.996	-214.55	4424	500000	
Li	7	3	45	-12.001	ppb	-12.001	-11.15	7865233	50000	
Be	9	1	6	0.632	ppb	0.632	15.12	173	2000	
B	11	1	6	-3.915	ppb	-3.915	-198.29	260	2000	
Na	23	1	45	-2.694	ppb	-2.694	-35.97	144410	2000	
Na	23	2	45	-0.614	ppb	-0.614	-194.94	10678	400000	
Mg	24	2	45	0.462	ppb	0.462	34.58	133	400000	
Al	27	2	45	0.628	ppb	0.628	223.34	30	400000	
K	39	1	45	-105.739	ppb	-105.739	-43.37	9015463	400000	
K	39	2	45	8.139	ppb	8.139	264.58	29798	400000	
Ca	40	1	45	1.468	ppb	1.468	13.09	37833	400000	
Ca	44	2	45	6.354	ppb	6.354	109.48	73	400000	
Ti	47	2	45	0.164	ppb	0.164	173.21	3	4000	
V	51	2	72	-1.053	ppb	-1.053	-43.80	5985	2000	
Cr	52	2	72	0.402	ppb	0.402	0.74	717	5000	
Mn	55	2	72	0.791	ppb	0.791	1.39	393	10000	
Fe	57	2	72	-0.839	ppb	-0.839	-273.54	63	400000	
Co	59	2	72	0.225	ppb	0.225	49.50	1570	2000	
Ni	60	2	72	0.359	ppb	0.359	77.84	280	5000	
Cu	63	2	72	0.353	ppb	0.353	14.24	1437	5000	
Zn	66	2	72	0.297	ppb	0.297	100.62	177	5000	
As	75	2	72	0.338	ppb	0.338	14.72	88	2000	
Se	78	1	72	1.530	ppb	1.530	14.65	285	2000	
Sr	88	2	72	-0.033	ppb	-0.033	-33.39	13	4000	
Zr	90	2	72	-6.755	ppb	-6.755	-168.10	37	1000	
Nb	93	2	72	-1.158	ppb	-1.158	-2.20	140	200	
Mo	95	2	115	1.207	ppb	1.207	9.68	970	2000	
Pd	105	2	115	0.025	ppb	0.025	93.44	47	100	
Ag	107	2	115	0.001	ppb	0.001	464.26	40	100	
Cd	111	2	115	0.242	ppb	0.242	50.19	83	2000	
Sn	120	2	115	3.236	ppb	3.236	3.89	3274	2000	
Sb	121	2	115	5.505	ppb	5.505	5.61	5211	1000	
Ba	137	2	115	0.323	ppb	0.323	14.61	177	5000	
W	182	2	165	-0.025	ppb	-0.025	-72.08	457	100	
Pt	195	2	165	0.001	ppb	0.001	496.06	10	100	
Tl	205	2	165	0.265	ppb	0.265	4.68	2020	2000	
Pb	208	2	165	0.582	ppb	0.582	17.59	6181	5000	
Th	232	2	165	0.976	ppb	0.976	11.54	12126	2000	
U	238	2	165	0.311	ppb	0.311	8.34	3751	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	744012	0.30	885786	83.99	60	120	
Sc (IS)	45	1	HMI H2	16186850	0.53	17935452	90.25	60	120	
Sc (IS)	45	2	HMI He	658604	0.42	724932	90.85	60	120	
Sc (IS)	45	3	No Gas	64883282	0.46	71931282	90.20	60	120	
Ge Internal Standard	72	1	HMI H2	6878508	0.42	7580625	90.74	60	120	
Ge Internal Standard	72	2	HMI He	863045	0.41	939613	91.85	60	120	
In Internal Standard	115	2	HMI He	3475680	0.24	3669615	94.72	60	120	
Ho-165	165	2	HMI He	15830252	1.05	16373961	96.68	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5688510
Data File Name	034_CCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T11:37:03-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	101.707	ppb	3.353	120041	100	101.7	90	110	
Li	7	2	45	119.246	ppb	21.879	5898	100	119.2	90	110	>+\-10%
Li	7	3	45	93.503	ppb	1.373	10461902	100	93.5	90	110	
Be	9	1	6	50.286	ppb	0.593	13513	50	100.6	90	110	
B	11	1	6	41.504	ppb	18.430	677	50	83.0	90	110	>+\-10%
Na	23	1	45	1021.033	ppb	1.306	2436110	1000	102.1	90	110	
Na	23	2	45	1006.817	ppb	2.492	174480	1000	100.7	90	110	
Mg	24	2	45	981.459	ppb	1.777	71743	1000	98.1	90	110	
Al	27	2	45	995.669	ppb	3.407	18959	1000	99.6	90	110	
K	39	1	45	630.716	ppb	4.159	10422852	1000	63.1	90	110	>+\-10%
K	39	2	45	1001.576	ppb	1.713	75746	1000	100.2	90	110	
Ca	40	1	45	1005.259	ppb	0.324	3464625	1000	100.5	90	110	
Ca	44	2	45	1015.030	ppb	11.476	3085	1000	101.5	90	110	
Ti	47	2	45	51.086	ppb	21.245	1047	50	102.2	90	110	
V	51	2	72	47.447	ppb	1.358	46913	50	94.9	90	110	
Cr	52	2	72	48.934	ppb	0.724	54034	50	97.9	90	110	
Mn	55	2	72	49.778	ppb	0.521	21607	50	99.6	90	110	
Fe	57	2	72	1020.610	ppb	0.859	20539	1000	102.1	90	110	
Co	59	2	72	50.422	ppb	0.586	95536	50	100.8	90	110	
Ni	60	2	72	50.280	ppb	2.388	26949	50	100.6	90	110	
Cu	63	2	72	49.329	ppb	0.818	74569	50	98.7	90	110	
Zn	66	2	72	52.250	ppb	2.609	11495	50	104.5	90	110	
As	75	2	72	49.316	ppb	2.658	8715	50	98.6	90	110	
Se	78	1	72	49.865	ppb	4.462	8676	50	99.7	90	110	
Sr	88	2	72	101.584	ppb	1.288	53549	100	101.6	90	110	
Zr	90	2	72	30.257	ppb	116.710	107	50	60.5	90	110	>+\-10%
Nb	93	2	72	91.443	ppb	1.988	129096	100	91.4	90	110	
Mo	95	2	115	51.364	ppb	1.524	38975	50	102.7	90	110	
Pd	105	2	115	49.725	ppb	0.994	62118	50	99.5	90	110	
Ag	107	2	115	50.351	ppb	0.546	131073	50	100.7	90	110	
Cd	111	2	115	50.395	ppb	0.779	17238	50	100.8	90	110	
Sn	120	2	115	50.039	ppb	1.234	48161	50	100.1	90	110	
Sb	121	2	115	51.214	ppb	1.861	47884	50	102.4	90	110	
Ba	137	2	115	48.126	ppb	2.581	15903	50	96.3	90	110	
W	182	2	165	49.229	ppb	1.407	176714	50	98.5	90	110	
Pt	195	2	165	49.943	ppb	1.256	143356	50	99.9	90	110	
Tl	205	2	165	49.502	ppb	0.875	347277	50	99.0	90	110	
Pb	208	2	165	49.440	ppb	0.859	471701	50	98.9	90	110	
Th	232	2	165	50.312	ppb	0.959	595815	50	100.6	90	110	
U	238	2	165	49.394	ppb	0.883	590603	50	98.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	754143	0.80	885786	85.14	60	120	
Sc (IS)	45	1	HMI H2	16373456	0.34	17935452	91.29	60	120	
Sc (IS)	45	2	HMI He	665721	0.33	724932	91.83	60	120	
Sc (IS)	45	3	No Gas	65665241	0.74	71931282	91.29	60	120	
Ge Internal Standard	72	1	HMI H2	7023061	0.66	7580625	92.64	60	120	
Ge Internal Standard	72	2	HMI He	882052	0.94	939613	93.87	60	120	
In Internal Standard	115	2	HMI He	3445636	0.39	3669615	93.90	60	120	
Ho-165	165	2	HMI He	15939155	1.03	16373961	97.34	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5688508
Data File Name	035_CCB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T11:40:55-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-8.157	ppb	-37.1	7984547	10	
Be	9	1	6	0.089	ppb	72.4	30	0.5	
B	11	1	6	-2.198	ppb	-434.0	280	0.5	
Na	23	1	45	0.047	ppb	1562.5	152603	25	
Na	23	2	45	0.882	ppb	351.9	10995	25	
Mg	24	2	45	0.174	ppb	390.9	113	25	
Al	27	2	45	1.316	ppb	122.2	43	15	
K	39	1	45	-216.245	ppb	-2.2	8947380	50	
K	39	2	45	7.063	ppb	198.8	29961	50	
Ca	40	1	45	2.005	ppb	3.7	40206	50	
Ca	44	2	45	-1.678	ppb	-593.8	50	25	
Ti	47	2	45	0.163	ppb	173.2	3	0.5	
V	51	2	72	-1.417	ppb	-42.2	5795	1	
Cr	52	2	72	0.000	ppb	-16170.0	290	1	
Mn	55	2	72	0.063	ppb	91.7	87	0.5	
Fe	57	2	72	1.114	ppb	224.4	103	25	
Co	59	2	72	-0.032	ppb	-211.8	1120	0.5	
Ni	60	2	72	0.112	ppb	86.9	153	1	
Cu	63	2	72	0.287	ppb	30.3	1367	1	
Zn	66	2	72	0.897	ppb	23.2	310	5	
As	75	2	72	0.072	ppb	32.3	43	1	
Se	78	1	72	0.562	ppb	45.1	123	1	
Sr	88	2	72	-0.021	ppb	-90.4	20	0.5	
Zr	90	2	72	-1.709	ppb	-189.6	47	1	
Nb	93	2	72	2.932	ppb	6.3	5821	2	>RL
Mo	95	2	115	0.197	ppb	14.8	200	0.5	
Pd	105	2	115	0.035	ppb	47.0	60	1	
Ag	107	2	115	0.002	ppb	298.9	43	1	
Cd	111	2	115	0.048	ppb	91.0	17	0.5	
Sn	120	2	115	0.660	ppb	2.1	790	1	
Sb	121	2	115	0.908	ppb	21.0	890	0.6	>RL
Ba	137	2	115	-0.010	ppb	-680.6	67	0.5	
W	182	2	165	0.031	ppb	85.1	667	1	
Pt	195	2	165	-0.002	ppb	0.0	0	1	
Tl	205	2	165	0.068	ppb	12.5	653	0.1	
Pb	208	2	165	0.210	ppb	15.0	2690	0.5	
Th	232	2	165	0.196	ppb	2.4	2997	1	
U	238	2	165	0.040	ppb	16.3	537	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	756481	0.54	885786	85.40	60	120	
Sc (IS)	45	1	HMI H2	16416306	0.20	17935452	91.53	60	120	
Sc (IS)	45	2	HMI He	663314	0.83	724932	91.50	60	120	
Sc (IS)	45	3	No Gas	65125699	1.21	71931282	90.54	60	120	
Ge Internal Standard	72	1	HMI H2	6971836	0.33	7580625	91.97	60	120	
Ge Internal Standard	72	2	HMI He	879330	0.60	939613	93.58	60	120	
In Internal Standard	115	2	HMI He	3515863	1.44	3669615	95.81	60	120	
Ho-165	165	2	HMI He	16016409	0.28	16373961	97.82	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5688512
Data File Name	036LCCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T11:44:50-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-1.236	ppb	-192.372	8302533	50	-2.5	70	130	>+/-30%
Be	9	1	6	1.295	ppb	18.034	360	1	129.5	70	130	
Na	23	2	45	47.294	ppb	4.026	18853	50	94.6	70	130	
Mg	24	2	45	50.778	ppb	4.680	3864	50	101.6	70	130	
Al	27	2	45	54.455	ppb	12.338	1070	30	181.5	70	130	>+/-30%
K	39	2	45	115.811	ppb	3.585	35587	100	115.8	70	130	
Ca	44	2	45	59.571	ppb	29.491	237	50	119.1	70	130	
V	51	2	72	3.284	ppb	14.694	9737	5	65.7	70	130	>+/-30%
Cr	52	2	72	2.058	ppb	8.074	2544	2	102.9	70	130	
Mn	55	2	72	1.213	ppb	20.134	583	1	121.3	70	130	
Fe	57	2	72	62.129	ppb	8.327	1323	50	124.3	70	130	
Co	59	2	72	1.156	ppb	12.405	3337	1	115.6	70	130	
Ni	60	2	72	1.614	ppb	8.133	953	1.5	107.6	70	130	
Cu	63	2	72	2.252	ppb	3.131	4291	2	112.6	70	130	
Zn	66	2	72	10.525	ppb	11.668	2400	10	105.3	70	130	
As	75	2	72	4.938	ppb	2.368	898	5	98.8	70	130	
Se	78	1	72	5.497	ppb	11.221	983	5	109.9	70	130	
Sr	88	2	72	1.019	ppb	9.416	567	1	101.9	70	130	
Zr	90	2	72	-12.514	ppb	-65.834	27	0.5	-2502.9	70	130	>+/-30%
Nb	93	2	72	0.894	ppb	30.845	2990	2	44.7	70	130	>+/-30%
Mo	95	2	115	2.398	ppb	18.381	1904	2	119.9	70	130	
Pd	105	2	115	0.011	ppb	69.581	30	1	1.1	70	130	>+/-30%
Ag	107	2	115	5.332	ppb	1.783	14225	5	106.6	70	130	
Cd	111	2	115	0.972	ppb	15.115	340	1	97.2	70	130	
Sn	120	2	115	9.803	ppb	4.461	9757	10	98.0	70	130	
Sb	121	2	115	2.650	ppb	2.283	2554	2	132.5	70	130	>+/-30%
Ba	137	2	115	0.691	ppb	57.115	303	1	69.1	70	130	>+/-30%
W	182	2	165	4.839	ppb	2.957	18060	1	483.9	70	130	>+/-30%
Pt	195	2	165	0.001	ppb	292.459	10	1	0.1	70	130	>+/-30%
Tl	205	2	165	1.071	ppb	2.745	7769	1	107.1	70	130	
Pb	208	2	165	1.139	ppb	3.241	11656	1	113.9	70	130	
Th	232	2	165	1.773	ppb	2.693	21863	2	88.6	70	130	
U	238	2	165	1.034	ppb	5.789	12550	1	103.4	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	767556	0.54	885786	86.65	60	120	
Sc (IS)	45	1	HMI H2	16542724	0.59	17935452	92.23	60	120	
Sc (IS)	45	2	HMI He	675597	0.70	724932	93.19	60	120	
Sc (IS)	45	3	No Gas	66366219	1.16	71931282	92.26	60	120	
Ge Internal Standard	72	1	HMI H2	7047132	0.21	7580625	92.96	60	120	
Ge Internal Standard	72	2	HMI He	879622	0.79	939613	93.62	60	120	
In Internal Standard	115	2	HMI He	3522218	0.87	3669615	95.98	60	120	
Ho-165	165	2	HMI He	16111217	0.71	16373961	98.40	60	120	

Blank Report

Sample Table

Sample Name	MB 280-456388/1-B
Data File Name	037_BLK.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T11:48:44-06:00
Sample Type	Blank
Dilution	1
Comment	456579 6020a dod4
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-10.710	ppb	-41.92316916	92514	0.5
Li	7	2	45	0.952	ppb	846.1709722	4838	0.5
Li	7	3	45	-9.082	ppb	-19.17780012	8508330	10
Be	9	1	6	0.038	ppb	55.90141407	17	0.5
B	11	1	6	2.422	ppb	340.7991732	330	0.5
Na	23	1	45	12.108	ppb	2.153664254	185108	25
Na	23	2	45	13.997	ppb	31.01100093	13810	25
Mg	24	2	45	1.141	ppb	18.2203405	193	25
Al	27	2	45	1.875	ppb	15.06714957	57	15
K	39	1	45	-2441.079	ppb	-1.139130869	5151206	50
K	39	2	45	19.844	ppb	22.74457863	32156	50
Ca	40	1	45	13.344	ppb	4.127780694	81416	50
Ca	44	2	45	4.997	ppb	289.7282872	73	25
Ti	47	2	45	0.463	ppb	173.2050808	10	0.5
V	51	2	72	-4.448	ppb	-6.593410531	3364	1
Cr	52	2	72	0.182	ppb	33.13916131	507	1
Mn	55	2	72	0.310	ppb	31.83410317	200	0.5
Fe	57	2	72	5.920	ppb	75.46068973	207	25
Co	59	2	72	-0.031	ppb	-247.9118156	1160	0.5
Ni	60	2	72	0.103	ppb	117.9346679	153	1
Cu	63	2	72	0.120	ppb	48.49856844	1157	1
Zn	66	2	72	1.189	ppb	36.11872892	387	5
As	75	2	72	0.020	ppb	144.5827922	35	1
Se	78	1	72	0.150	ppb	52.52339968	53	1
Sr	88	2	72	0.033	ppb	97.55992899	50	0.5
Zr	90	2	72	-12.985	ppb	-23.1288792	27	1
Nb	93	2	72	0.660	ppb	52.65710095	2760	2
Mo	95	2	115	0.094	ppb	83.15174785	123	0.5
Pd	105	2	115	0.003	ppb	526.9466798	20	1
Ag	107	2	115	0.004	ppb	334.4948087	50	1
Cd	111	2	115	0.037	ppb	173.2050808	13	0.5
Sn	120	2	115	0.246	ppb	24.00803788	393	1
Sb	121	2	115	0.523	ppb	26.30668285	533	0.6
Ba	137	2	115	-0.015	ppb	-583.8431782	67	0.5
W	182	2	165	0.032	ppb	52.05549831	677	1
Pt	195	2	165	0.000	ppb	-173735.983	7	1
Tl	205	2	165	0.043	ppb	9.221432636	487	0.1
Pb	208	2	165	0.129	ppb	24.57535438	1933	0.5
Th	232	2	165	0.353	ppb	9.434978352	4908	1
U	238	2	165	0.018	ppb	36.61429314	280	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	774234	1.57	885786	87.41	60	120	
Sc (IS)	45	1	HMI H2	16914982	0.86	17935452	94.31	60	120	
Sc (IS)	45	2	HMI He	698228	0.36	724932	96.32	60	120	
Sc (IS)	45	3	No Gas	69584167	0.33	71931282	96.74	60	120	
Ge Internal Standard	72	1	HMI H2	7205672	1.11	7580625	95.05	60	120	
Ge Internal Standard	72	2	HMI He	910024	0.38	939613	96.85	60	120	
In Internal Standard	115	2	HMI He	3594469	0.59	3669615	97.95	60	120	
Ho-165	165	2	HMI He	16193370	0.43	16373961	98.90	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-456388/2-B
Data File Name	038_LCS.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T11:52:40-06:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	456579 6020a dod4
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	3.075	3.075	ppb	145.366	130235	400	0.8	80	120	>+/-20%
Li	7	2	45	24.544	24.544	ppb	58.172	7089	400	6.1	80	120	>+/-20%
Li	7	3	45	21.774	21.774	ppb	34.655	13042483	400	5.4	80	120	>+/-20%
Be	9	1	6	0.028	0.028	ppb	89.203	23	40	0.1	80	120	>+/-20%
Na	23	2	45	-22.697	-22.697	ppb	-14.013	10491	40	-56.7	80	120	>+/-20%
Mg	24	2	45	0.336	0.336	ppb	277.848	180	40	0.8	80	120	>+/-20%
Al	27	2	45	47.259	47.259	ppb	35.824	1324	40	118.1	80	120	
K	39	2	45	-269.004	-269.004	ppb	-9.634	25296	40	-672.5	80	120	>+/-20%
Ca	44	2	45	4.044	4.044	ppb	258.289	97	40	10.1	80	120	>+/-20%
V	51	2	72	-1.479	-1.479	ppb	-77.967	8410	40	-3.7	80	120	>+/-20%
Cr	52	2	72	4.377	4.377	ppb	25.478	7423	40	10.9	80	120	>+/-20%
Mn	55	2	72	4.682	4.682	ppb	34.536	3024	40	11.7	80	120	>+/-20%
Fe	57	2	72	41.302	41.302	ppb	28.320	1323	40	103.3	80	120	
Co	59	2	72	4.442	4.442	ppb	27.999	13819	40	11.1	80	120	>+/-20%
Ni	60	2	72	4.523	4.523	ppb	29.101	3647	40	11.3	80	120	>+/-20%
Cu	63	2	72	4.185	4.185	ppb	32.018	10445	40	10.5	80	120	>+/-20%
Zn	66	2	72	4.958	4.958	ppb	39.892	1730	40	12.4	80	120	>+/-20%
As	75	2	72	3.671	3.671	ppb	28.842	984	40	9.2	80	120	>+/-20%
Se	78	1	72	0.112	0.112	ppb	50.363	63	40	0.3	80	120	>+/-20%
Nb	93	2	72	-0.500	-0.500	ppb	-5.240	1557	40	-1.3	80	120	>+/-20%
Mo	95	2	115	4.999	4.999	ppb	27.412	5462	40	12.5	80	120	>+/-20%
Pd	105	2	115	0.019	0.019	ppb	71.729	57	40	0.0	80	120	>+/-20%
Ag	107	2	115	4.492	4.492	ppb	24.817	16720	40	11.2	80	120	>+/-20%
Cd	111	2	115	4.472	4.472	ppb	20.613	2184	40	11.2	80	120	>+/-20%
Sn	120	2	115	4.081	4.081	ppb	28.465	5772	40	10.2	80	120	>+/-20%
Sb	121	2	115	3.447	3.447	ppb	20.072	4628	40	8.6	80	120	>+/-20%
Ba	137	2	115	3.771	3.771	ppb	27.331	1867	40	9.4	80	120	>+/-20%
W	182	2	165	3.641	3.641	ppb	27.012	19775	40	9.1	80	120	>+/-20%
Pt	195	2	165	0.000	0.000	ppb	1699.408	10	40	0.0	80	120	>+/-20%
Tl	205	2	165	4.387	4.387	ppb	26.479	45052	40	11.0	80	120	>+/-20%
Pb	208	2	165	4.473	4.473	ppb	28.281	63027	40	11.2	80	120	>+/-20%
Th	232	2	165	3.251	3.251	ppb	15.432	57161	40	8.1	80	120	>+/-20%
U	238	2	165	4.448	4.448	ppb	27.938	77509	40	11.1	80	120	>+/-20%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1298587	3.65	885786	146.60	60	120	IS Failed
Sc (IS)	45	1	HMI H2	22865160	4.33	17935452	127.49	60	120	IS Failed
Sc (IS)	45	2	HMI He	970223	4.74	724932	133.84	60	120	IS Failed
Sc (IS)	45	3	No Gas	97845162	7.94	71931282	136.03	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	9695828	4.44	7580625	127.90	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	1298263	7.33	939613	138.17	60	120	IS Failed
In Internal Standard	115	2	HMI He	4936046	4.23	3669615	134.51	60	120	IS Failed
Ho-165	165	2	HMI He	23364827	4.06	16373961	142.70	60	120	IS Failed

Sample Report

Sample Table

Sample Name	LCSD 280-456388/3-B
Data File Name	039SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T11:56:35-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456579 6020a dod4
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	80.571	ppb	80.571	0.45	120069	500000	
Li	7	2	45	101.257	ppb	101.257	25.03	6098	500000	
Li	7	3	45	76.661	ppb	76.661	4.35	10794983	50000	
Be	9	1	6	41.183	ppb	41.183	0.72	11538	2000	
B	11	1	6	934.637	ppb	934.637	6.55	9173	2000	
Na	23	1	45	75.600	ppb	75.600	2.05	337386	2000	
Na	23	2	45	76.708	ppb	76.708	6.31	24969	400000	
Mg	24	2	45	4.671	ppb	4.671	39.03	473	400000	
Al	27	2	45	396.327	ppb	396.327	3.68	8079	400000	
K	39	1	45	-2494.543	ppb	-2494.543	-0.60	5138351	400000	
K	39	2	45	40.385	ppb	40.385	42.62	33780	400000	
Ca	40	1	45	89.350	ppb	89.350	1.27	355303	400000	
Ca	44	2	45	204.069	ppb	204.069	7.53	710	400000	
Ti	47	2	45	0.304	ppb	0.304	86.61	7	4000	
V	51	2	72	37.359	ppb	37.359	1.77	40206	2000	
Cr	52	2	72	41.924	ppb	41.924	2.41	48478	5000	
Mn	55	2	72	43.086	ppb	43.086	3.07	19574	10000	
Fe	57	2	72	447.406	ppb	447.406	11.97	9467	400000	
Co	59	2	72	43.087	ppb	43.087	3.33	85602	2000	
Ni	60	2	72	42.686	ppb	42.686	6.33	23951	5000	
Cu	63	2	72	42.296	ppb	42.296	0.94	67039	5000	
Zn	66	2	72	50.011	ppb	50.011	2.66	11515	5000	
As	75	2	72	40.255	ppb	40.255	0.49	7450	2000	
Se	78	1	72	40.747	ppb	40.747	1.33	7389	2000	
Sr	88	2	72	42.847	ppb	42.847	3.51	23650	4000	
Zr	90	2	72	836.021	ppb	836.021	9.80	1680	1000	
Nb	93	2	72	-0.058	ppb	-0.058	-294.22	1754	200	
Mo	95	2	115	40.914	ppb	40.914	1.47	32422	2000	
Pd	105	2	115	0.000	ppb	0.000	1222.29	17	100	
Ag	107	2	115	41.479	ppb	41.479	1.67	112750	100	
Cd	111	2	115	41.365	ppb	41.365	2.01	14772	2000	
Sn	120	2	115	41.357	ppb	41.357	4.44	41566	2000	
Sb	121	2	115	40.137	ppb	40.137	1.71	39180	1000	
Ba	137	2	115	41.461	ppb	41.461	2.17	14315	5000	
W	182	2	165	34.097	ppb	34.097	1.45	125059	100	
Pt	195	2	165	-0.002	ppb	-0.002	0.00	0	100	
Tl	205	2	165	40.615	ppb	40.615	1.05	290797	2000	
Pb	208	2	165	41.047	ppb	41.047	0.80	399751	5000	
Th	232	2	165	39.012	ppb	39.012	1.35	471572	2000	
U	238	2	165	40.548	ppb	40.548	1.52	494728	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	786229	0.73	885786	88.76	60	120	
Sc (IS)	45	1	HMI H2	17198777	0.89	17935452	95.89	60	120	
Sc (IS)	45	2	HMI He	711677	0.83	724932	98.17	60	120	
Sc (IS)	45	3	No Gas	70447904	0.94	71931282	97.94	60	120	
Ge Internal Standard	72	1	HMI H2	7313912	0.71	7580625	96.48	60	120	
Ge Internal Standard	72	2	HMI He	922839	0.44	939613	98.21	60	120	
In Internal Standard	115	2	HMI He	3597208	1.14	3669615	98.03	60	120	
Ho-165	165	2	HMI He	16265052	1.13	16373961	99.33	60	120	

Sample Report

Sample Table

Sample Name	280-122911-B-5-B
Data File Name	040SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T12:00:30-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456579 6020a dod4
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-5.344	ppb	-5.344	-106.84	95613	500000	
Li	7	2	45	-34.161	ppb	-34.161	-96.08	4594	500000	
Li	7	3	45	-1.890	ppb	-1.890	-81.94	8746523	50000	
Be	9	1	6	0.002	ppb	0.002	1856.50	7	2000	
B	11	1	6	1451.391	ppb	1451.391	2.95	13373	2000	
Na	23	1	45	83507.703	ppb	83507.703	0.38	196434830	2000	>LDR
Na	23	2	45	84110.370	ppb	84110.370	0.44	14857634	400000	
Mg	24	2	45	28288.603	ppb	28288.603	0.99	2243320	400000	
Al	27	2	45	4.034	ppb	4.034	42.03	103	400000	
K	39	1	45	11080.445	ppb	11080.445	1.23	30382230	400000	
K	39	2	45	10222.006	ppb	10222.006	0.45	542281	400000	
Ca	40	1	45	123450.526	ppb	123450.526	0.62	442788953	400000	
Ca	44	2	45	96560.908	ppb	96560.908	0.32	313258	400000	
Ti	47	2	45	0.149	ppb	0.149	173.21	3	4000	
V	51	2	72	-3.587	ppb	-3.587	-2.04	4221	2000	
Cr	52	2	72	0.351	ppb	0.351	34.03	717	5000	
Mn	55	2	72	0.902	ppb	0.902	7.18	477	10000	
Fe	57	2	72	15.398	ppb	15.398	21.20	413	400000	
Co	59	2	72	0.022	ppb	0.022	123.43	1297	2000	
Ni	60	2	72	0.761	ppb	0.761	6.47	530	5000	
Cu	63	2	72	2.346	ppb	2.346	3.97	4708	5000	
Zn	66	2	72	3.182	ppb	3.182	12.48	857	5000	
As	75	2	72	1.588	ppb	1.588	8.54	329	2000	
Se	78	1	72	0.685	ppb	0.685	29.47	149	2000	
Sr	88	2	72	464.083	ppb	464.083	0.42	259028	4000	
Zr	90	2	72	153.950	ppb	153.950	62.77	357	1000	
Nb	93	2	72	-0.386	ppb	-0.386	-19.64	1290	200	
Mo	95	2	115	0.920	ppb	0.920	17.50	777	2000	
Pd	105	2	115	0.008	ppb	0.008	292.28	27	100	
Ag	107	2	115	0.004	ppb	0.004	279.79	50	100	
Cd	111	2	115	0.084	ppb	0.084	32.65	30	2000	
Sn	120	2	115	0.273	ppb	0.273	23.29	420	2000	
Sb	121	2	115	1.237	ppb	1.237	10.71	1230	1000	
Ba	137	2	115	286.555	ppb	286.555	2.10	98598	5000	
W	182	2	165	0.052	ppb	0.052	76.92	757	100	
Pt	195	2	165	0.004	ppb	0.004	0.24	20	100	
Tl	205	2	165	0.051	ppb	0.051	39.01	547	2000	
Pb	208	2	165	0.094	ppb	0.094	27.47	1613	5000	
Th	232	2	165	0.449	ppb	0.449	7.13	6142	2000	
U	238	2	165	5.631	ppb	5.631	1.49	69282	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	747005	0.46	885786	84.33	60	120	
Sc (IS)	45	1	HMI H2	17203457	0.35	17935452	95.92	60	120	
Sc (IS)	45	2	HMI He	723158	0.44	724932	99.76	60	120	
Sc (IS)	45	3	No Gas	70044692	0.76	71931282	97.38	60	120	
Ge Internal Standard	72	1	HMI H2	7241428	0.87	7580625	95.53	60	120	
Ge Internal Standard	72	2	HMI He	934326	0.32	939613	99.44	60	120	
In Internal Standard	115	2	HMI He	3601426	1.84	3669615	98.14	60	120	
Ho-165	165	2	HMI He	16389276	0.16	16373961	100.09	60	120	

Sample Report

Sample Table

Sample Name	280-122911-B-6-D
Data File Name	041SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T12:04:24-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456579 6020a dod4
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-0.756	ppb	-0.756	-403.42	98215	500000	
Li	7	2	45	-10.690	ppb	-10.690	-62.89	5011	500000	
Li	7	3	45	0.581	ppb	0.581	587.86	9017766	50000	
Be	9	1	6	0.015	ppb	0.015	251.79	10	2000	
B	11	1	6	2131.404	ppb	2131.404	2.95	19607	2000	
Na	23	1	45	70416.769	ppb	70416.769	1.15	167864081	2000	>LDR
Na	23	2	45	70195.305	ppb	70195.305	0.70	12753493	400000	
Mg	24	2	45	33328.555	ppb	33328.555	0.64	2717863	400000	
Al	27	2	45	1.858	ppb	1.858	66.87	60	400000	
K	39	1	45	23795.327	ppb	23795.327	0.98	54744001	400000	
K	39	2	45	19812.918	ppb	19812.918	0.60	1049726	400000	
Ca	40	1	45	137896.638	ppb	137896.638	1.36	501143793	400000	
Ca	44	2	45	106735.425	ppb	106735.425	0.39	356088	400000	
Ti	47	2	45	0.583	ppb	0.583	86.60	13	4000	
V	51	2	72	-4.230	ppb	-4.230	-12.06	3707	2000	
Cr	52	2	72	0.152	ppb	0.152	51.11	493	5000	
Mn	55	2	72	0.478	ppb	0.478	40.35	287	10000	
Fe	57	2	72	16.801	ppb	16.801	24.88	450	400000	
Co	59	2	72	0.088	ppb	0.088	77.59	1450	2000	
Ni	60	2	72	0.903	ppb	0.903	41.16	620	5000	
Cu	63	2	72	3.011	ppb	3.011	3.01	5851	5000	
Zn	66	2	72	1.758	ppb	1.758	9.90	537	5000	
As	75	2	72	2.108	ppb	2.108	5.97	433	2000	
Se	78	1	72	0.732	ppb	0.732	32.95	160	2000	
Sr	88	2	72	543.203	ppb	543.203	0.21	308087	4000	
Zr	90	2	72	84.631	ppb	84.631	13.98	223	1000	
Nb	93	2	72	-0.592	ppb	-0.592	-10.78	1003	200	
Mo	95	2	115	0.963	ppb	0.963	1.79	827	2000	
Pd	105	2	115	0.010	ppb	0.010	195.63	30	100	
Ag	107	2	115	-0.001	ppb	-0.001	-483.83	37	100	
Cd	111	2	115	0.055	ppb	0.055	87.45	20	2000	
Sn	120	2	115	0.170	ppb	0.170	58.14	323	2000	
Sb	121	2	115	0.849	ppb	0.849	20.17	867	1000	
Ba	137	2	115	300.930	ppb	300.930	1.46	105418	5000	
W	182	2	165	0.039	ppb	0.039	114.48	717	100	
Pt	195	2	165	0.001	ppb	0.001	308.17	10	100	
Tl	205	2	165	0.031	ppb	0.031	38.38	407	2000	
Pb	208	2	165	0.039	ppb	0.039	7.51	1083	5000	
Th	232	2	165	0.146	ppb	0.146	0.86	2467	2000	
U	238	2	165	5.029	ppb	5.029	2.58	62234	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	750970	0.46	885786	84.78	60	120	
Sc (IS)	45	1	HMI H2	17433261	1.32	17935452	97.20	60	120	
Sc (IS)	45	2	HMI He	743678	0.31	724932	102.59	60	120	
Sc (IS)	45	3	No Gas	71706911	0.84	71931282	99.69	60	120	
Ge Internal Standard	72	1	HMI H2	7342839	0.60	7580625	96.86	60	120	
Ge Internal Standard	72	2	HMI He	949434	0.27	939613	101.05	60	120	
In Internal Standard	115	2	HMI He	3666155	0.97	3669615	99.91	60	120	
Ho-165	165	2	HMI He	16482837	0.81	16373961	100.66	60	120	

Sample Report

Sample Table

Sample Name	280-122911-B-6-Dsd@5
Data File Name	042SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T12:08:17-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456579 6020a dod4
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-8.594	ppb	-8.594	-11.18	95797	500000	
Li	7	2	45	-22.170	ppb	-22.170	-99.15	4631	500000	
Li	7	3	45	-9.271	ppb	-9.271	-33.76	8024143	50000	
Be	9	1	6	-0.011	ppb	-0.011	-198.54	3	2000	
B	11	1	6	414.310	ppb	414.310	7.19	4184	2000	
Na	23	1	45	13342.801	ppb	13342.801	0.80	31888250	2000	>LDR
Na	23	2	45	13763.052	ppb	13763.052	0.54	2386442	400000	
Mg	24	2	45	6224.524	ppb	6224.524	0.34	482632	400000	
Al	27	2	45	6.295	ppb	6.295	9.01	147	400000	
K	39	1	45	4700.300	ppb	4700.300	1.11	18734890	400000	
K	39	2	45	3720.656	ppb	3720.656	0.89	213056	400000	
Ca	40	1	45	25594.782	ppb	25594.782	0.68	92901639	400000	
Ca	44	2	45	19805.208	ppb	19805.208	2.41	62859	400000	
Ti	47	2	45	0.306	ppb	0.306	173.21	7	4000	
V	51	2	72	-2.751	ppb	-2.751	-5.81	4891	2000	
Cr	52	2	72	-0.014	ppb	-0.014	-832.77	287	5000	
Mn	55	2	72	0.269	ppb	0.269	13.33	183	10000	
Fe	57	2	72	8.795	ppb	8.795	114.24	270	400000	
Co	59	2	72	0.024	ppb	0.024	152.17	1280	2000	
Ni	60	2	72	0.128	ppb	0.128	172.12	170	5000	
Cu	63	2	72	0.685	ppb	0.685	4.60	2050	5000	
Zn	66	2	72	0.921	ppb	0.921	34.69	330	5000	
As	75	2	72	0.488	ppb	0.488	6.59	122	2000	
Se	78	1	72	0.338	ppb	0.338	22.98	89	2000	
Sr	88	2	72	100.392	ppb	100.392	1.41	55205	4000	
Zr	90	2	72	4.062	ppb	4.062	133.21	60	1000	
Nb	93	2	72	-0.910	ppb	-0.910	-2.60	510	200	
Mo	95	2	115	0.250	ppb	0.250	23.43	247	2000	
Pd	105	2	115	0.011	ppb	0.011	125.36	30	100	
Ag	107	2	115	-0.005	ppb	-0.005	-200.92	27	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.157	ppb	0.157	33.70	303	2000	
Sb	121	2	115	0.394	ppb	0.394	24.22	407	1000	
Ba	137	2	115	54.836	ppb	54.836	5.34	18897	5000	
W	182	2	165	0.010	ppb	0.010	164.68	603	100	
Pt	195	2	165	-0.002	ppb	-0.002	0.00	0	100	
Tl	205	2	165	0.021	ppb	0.021	24.75	333	2000	
Pb	208	2	165	0.029	ppb	0.029	16.37	977	5000	
Th	232	2	165	0.012	ppb	0.012	33.32	830	2000	
U	238	2	165	0.940	ppb	0.940	1.58	11632	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	775624	0.15	885786	87.56	60	120	
Sc (IS)	45	1	HMI H2	17404441	0.27	17935452	97.04	60	120	
Sc (IS)	45	2	HMI He	706969	0.06	724932	97.52	60	120	
Sc (IS)	45	3	No Gas	65659589	0.24	71931282	91.28	60	120	
Ge Internal Standard	72	1	HMI H2	7422385	0.46	7580625	97.91	60	120	
Ge Internal Standard	72	2	HMI He	920138	0.89	939613	97.93	60	120	
In Internal Standard	115	2	HMI He	3595512	0.48	3669615	97.98	60	120	
Ho-165	165	2	HMI He	16413324	0.93	16373961	100.24	60	120	

Sample Report

Sample Table

Sample Name	280-122911-B-6-E MS
Data File Name	043SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T12:12:11-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456579 6020a dod4
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	70.187	ppb	70.187	6.66	114984	500000	
Li	7	2	45	68.908	ppb	68.908	38.64	5791	500000	
Li	7	3	45	78.861	ppb	78.861	3.56	10420048	50000	
Be	9	1	6	43.875	ppb	43.875	3.37	11305	2000	
B	11	1	6	3042.748	ppb	3042.748	1.80	26825	2000	
Na	23	1	45	69192.184	ppb	69192.184	0.38	159783964	2000	>LDR
Na	23	2	45	69130.501	ppb	69130.501	0.62	12169603	400000	
Mg	24	2	45	33280.837	ppb	33280.837	0.30	2629519	400000	
Al	27	2	45	394.183	ppb	394.183	3.94	8136	400000	
K	39	1	45	23495.515	ppb	23495.515	0.40	52481754	400000	
K	39	2	45	19390.741	ppb	19390.741	1.15	996052	400000	
Ca	40	1	45	134898.634	ppb	134898.634	0.29	474917580	400000	
Ca	44	2	45	105151.742	ppb	105151.742	0.29	339892	400000	
Ti	47	2	45	0.451	ppb	0.451	100.41	10	4000	
V	51	2	72	37.322	ppb	37.322	1.12	40377	2000	
Cr	52	2	72	40.795	ppb	40.795	1.77	47421	5000	
Mn	55	2	72	41.829	ppb	41.829	2.99	19103	10000	
Fe	57	2	72	446.438	ppb	446.438	7.59	9497	400000	
Co	59	2	72	39.430	ppb	39.430	0.99	78834	2000	
Ni	60	2	72	39.276	ppb	39.276	3.47	22158	5000	
Cu	63	2	72	41.612	ppb	41.612	2.57	66309	5000	
Zn	66	2	72	42.266	ppb	42.266	1.14	9800	5000	
As	75	2	72	42.742	ppb	42.742	0.82	7948	2000	
Se	78	1	72	39.666	ppb	39.666	2.66	7030	2000	
Sr	88	2	72	575.537	ppb	575.537	0.36	318888	4000	
Zr	90	2	72	1344.599	ppb	1344.599	6.78	2684	1000	
Nb	93	2	72	-0.888	ppb	-0.888	-10.17	547	200	
Mo	95	2	115	41.946	ppb	41.946	3.54	33250	2000	
Pd	105	2	115	0.003	ppb	0.003	266.29	20	100	
Ag	107	2	115	38.745	ppb	38.745	0.78	105363	100	
Cd	111	2	115	39.171	ppb	39.171	3.08	13994	2000	
Sn	120	2	115	39.871	ppb	39.871	2.68	40109	2000	
Sb	121	2	115	41.936	ppb	41.936	4.04	40955	1000	
Ba	137	2	115	340.594	ppb	340.594	1.09	117131	5000	
W	182	2	165	33.558	ppb	33.558	1.17	122815	100	
Pt	195	2	165	-0.002	ppb	-0.002	0.00	0	100	
Tl	205	2	165	38.468	ppb	38.468	0.23	274806	2000	
Pb	208	2	165	38.295	ppb	38.295	0.34	372151	5000	
Th	232	2	165	37.514	ppb	37.514	1.53	452449	2000	
U	238	2	165	45.010	ppb	45.010	0.93	547914	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	723040	0.34	885786	81.63	60	120	
Sc (IS)	45	1	HMI H2	16886140	0.31	17935452	94.15	60	120	
Sc (IS)	45	2	HMI He	720537	0.62	724932	99.39	60	120	
Sc (IS)	45	3	No Gas	67647989	0.95	71931282	94.05	60	120	
Ge Internal Standard	72	1	HMI H2	7146870	0.99	7580625	94.28	60	120	
Ge Internal Standard	72	2	HMI He	927518	0.58	939613	98.71	60	120	
In Internal Standard	115	2	HMI He	3599153	0.64	3669615	98.08	60	120	
Ho-165	165	2	HMI He	16227407	0.69	16373961	99.10	60	120	

Sample Report

Sample Table

Sample Name	280-122911-B-6-F MSD
Data File Name	044SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T12:16:04-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456579 6020a dod4
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	71.493	ppb	71.493	5.68	116856	500000	
Li	7	2	45	76.775	ppb	76.775	45.04	5908	500000	
Li	7	3	45	77.168	ppb	77.168	6.07	10427019	50000	
Be	9	1	6	45.339	ppb	45.339	4.34	11712	2000	
B	11	1	6	3142.273	ppb	3142.273	2.68	27767	2000	
Na	23	1	45	70160.391	ppb	70160.391	0.22	164133794	2000	>LDR
Na	23	2	45	70431.436	ppb	70431.436	0.87	12448724	400000	
Mg	24	2	45	34071.922	ppb	34071.922	1.28	2702990	400000	
Al	27	2	45	412.367	ppb	412.367	7.11	8546	400000	
K	39	1	45	24020.742	ppb	24020.742	1.03	54135474	400000	
K	39	2	45	19855.974	ppb	19855.974	0.39	1023364	400000	
Ca	40	1	45	137435.185	ppb	137435.185	0.53	490159606	400000	
Ca	44	2	45	107029.445	ppb	107029.445	1.47	347367	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	38.225	ppb	38.225	1.28	41367	2000	
Cr	52	2	72	40.960	ppb	40.960	1.71	47833	5000	
Mn	55	2	72	42.105	ppb	42.105	1.07	19317	10000	
Fe	57	2	72	421.133	ppb	421.133	2.68	9003	400000	
Co	59	2	72	40.229	ppb	40.229	2.24	80771	2000	
Ni	60	2	72	39.292	ppb	39.292	0.61	22271	5000	
Cu	63	2	72	42.052	ppb	42.052	1.23	67301	5000	
Zn	66	2	72	41.969	ppb	41.969	1.65	9777	5000	
As	75	2	72	42.154	ppb	42.154	2.31	7875	2000	
Se	78	1	72	41.182	ppb	41.182	1.41	7291	2000	
Sr	88	2	72	586.009	ppb	586.009	0.45	326184	4000	
Zr	90	2	72	1120.981	ppb	1120.981	12.65	2257	1000	
Nb	93	2	72	-0.835	ppb	-0.835	-9.70	627	200	
Mo	95	2	115	42.359	ppb	42.359	1.92	33624	2000	
Pd	105	2	115	0.011	ppb	0.011	126.83	30	100	
Ag	107	2	115	39.247	ppb	39.247	2.03	106865	100	
Cd	111	2	115	40.107	ppb	40.107	2.70	14348	2000	
Sn	120	2	115	40.100	ppb	40.100	3.06	40390	2000	
Sb	121	2	115	43.168	ppb	43.168	2.71	42218	1000	
Ba	137	2	115	346.382	ppb	346.382	1.33	119269	5000	
W	182	2	165	33.735	ppb	33.735	1.25	124548	100	
Pt	195	2	165	-0.002	ppb	-0.002	0.00	0	100	
Tl	205	2	165	39.026	ppb	39.026	0.56	281250	2000	
Pb	208	2	165	38.591	ppb	38.591	1.19	378313	5000	
Th	232	2	165	38.269	ppb	38.269	0.61	465642	2000	
U	238	2	165	45.202	ppb	45.202	1.37	555107	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	724951	0.31	885786	81.84	60	120	
Sc (IS)	45	1	HMI H2	17106746	1.11	17935452	95.38	60	120	
Sc (IS)	45	2	HMI He	723478	0.28	724932	99.80	60	120	
Sc (IS)	45	3	No Gas	67964749	0.79	71931282	94.49	60	120	
Ge Internal Standard	72	1	HMI H2	7141809	1.11	7580625	94.21	60	120	
Ge Internal Standard	72	2	HMI He	931775	0.26	939613	99.17	60	120	
In Internal Standard	115	2	HMI He	3603932	0.89	3669615	98.21	60	120	
Ho-165	165	2	HMI He	16370798	0.61	16373961	99.98	60	120	

Sample Report

Sample Table

Sample Name	280-122911-B-6-D pds
Data File Name	045SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T12:19:55-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456579 6020a dod4
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-2.290	ppb	-2.290	-359.20	93238	500000	
Li	7	2	45	-5.304	ppb	-5.304	-367.81	4841	500000	
Li	7	3	45	-0.163	ppb	-0.163	-126.75	8066829	50000	
Be	9	1	6	251.387	ppb	251.387	0.85	62936	2000	
B	11	1	6	2137.604	ppb	2137.604	1.20	18402	2000	
Na	23	1	45	69708.074	ppb	69708.074	0.62	158482491	2000	>LDR
Na	23	2	45	69174.066	ppb	69174.066	0.72	11986562	400000	
Mg	24	2	45	33184.937	ppb	33184.937	0.89	2580912	400000	
Al	27	2	45	2148.645	ppb	2148.645	1.90	43572	400000	
K	39	1	45	23707.086	ppb	23707.086	0.23	52049769	400000	
K	39	2	45	19487.149	ppb	19487.149	0.83	985180	400000	
Ca	40	1	45	136432.743	ppb	136432.743	0.45	472881526	400000	
Ca	44	2	45	106478.155	ppb	106478.155	0.61	338786	400000	
Ti	47	2	45	7.471	ppb	7.471	45.53	163	4000	
V	51	2	72	232.780	ppb	232.780	1.22	209985	2000	
Cr	52	2	72	228.777	ppb	228.777	0.75	260444	5000	
Mn	55	2	72	225.282	ppb	225.282	0.92	101023	10000	
Fe	57	2	72	2161.285	ppb	2161.285	1.46	44934	400000	
Co	59	2	72	226.001	ppb	226.001	0.75	439069	2000	
Ni	60	2	72	219.284	ppb	219.284	1.10	121370	5000	
Cu	63	2	72	219.827	ppb	219.827	1.47	340680	5000	
Zn	66	2	72	232.647	ppb	232.647	1.31	52573	5000	
As	75	2	72	226.435	ppb	226.435	0.37	41320	2000	
Se	78	1	72	225.914	ppb	225.914	0.98	39192	2000	
Sr	88	2	72	538.036	ppb	538.036	0.08	293507	4000	
Zr	90	2	72	155612.837	ppb	155612.837	0.91	299912	1000	>LDR
Nb	93	2	72	2.178	ppb	2.178	4.49	4958	200	
Mo	95	2	115	219.223	ppb	219.223	1.11	170301	2000	
Pd	105	2	115	0.060	ppb	0.060	26.93	93	100	
Ag	107	2	115	37.196	ppb	37.196	1.32	99236	100	
Cd	111	2	115	231.218	ppb	231.218	1.43	81051	2000	
Sn	120	2	115	212.348	ppb	212.348	0.97	208969	2000	
Sb	121	2	115	227.870	ppb	227.870	0.53	218255	1000	
Ba	137	2	115	531.438	ppb	531.438	0.80	179263	5000	
W	182	2	165	210.300	ppb	210.300	0.52	760920	100	
Pt	195	2	165	0.121	ppb	0.121	1.30	357	100	
Tl	205	2	165	243.966	ppb	243.966	1.34	1728673	2000	
Pb	208	2	165	219.774	ppb	219.774	0.78	2116356	5000	
Th	232	2	165	1.288	ppb	1.288	11.34	16061	2000	
U	238	2	165	255.254	ppb	255.254	0.38	3083676	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	702868	0.65	885786	79.35	60	120	
Sc (IS)	45	1	HMI H2	16624740	0.35	17935452	92.69	60	120	
Sc (IS)	45	2	HMI He	709254	0.46	724932	97.84	60	120	
Sc (IS)	45	3	No Gas	64279759	0.19	71931282	89.36	60	120	
Ge Internal Standard	72	1	HMI H2	7019153	1.34	7580625	92.59	60	120	
Ge Internal Standard	72	2	HMI He	913184	0.18	939613	97.19	60	120	
In Internal Standard	115	2	HMI He	3530933	0.50	3669615	96.22	60	120	
Ho-165	165	2	HMI He	16104847	0.38	16373961	98.36	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5688510
Data File Name	046_CCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T12:23:46-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	86.760	ppb	0.373	116642	100	86.8	90	110	>+\-10%
Li	7	2	45	107.085	ppb	33.497	5898	100	107.1	90	110	
Li	7	3	45	87.699	ppb	2.593	9604332	100	87.7	90	110	>+\-10%
Be	9	1	6	51.935	ppb	4.313	13463	50	103.9	90	110	
B	11	1	6	102.124	ppb	20.619	1183	50	204.2	90	110	>+\-10%
Na	23	1	45	1132.987	ppb	0.994	2701806	1000	113.3	90	110	>+\-10%
Na	23	2	45	1038.235	ppb	2.323	183679	1000	103.8	90	110	
Mg	24	2	45	990.999	ppb	1.815	74088	1000	99.1	90	110	
Al	27	2	45	1026.312	ppb	1.489	19988	1000	102.6	90	110	
K	39	1	45	735.081	ppb	4.370	10667629	1000	73.5	90	110	>+\-10%
K	39	2	45	992.671	ppb	2.946	77052	1000	99.3	90	110	
Ca	40	1	45	1079.936	ppb	1.375	3740656	1000	108.0	90	110	
Ca	44	2	45	994.622	ppb	4.022	3094	1000	99.5	90	110	
Ti	47	2	45	44.680	ppb	14.450	937	50	89.4	90	110	>+\-10%
V	51	2	72	47.964	ppb	3.463	47823	50	95.9	90	110	
Cr	52	2	72	49.202	ppb	2.193	54871	50	98.4	90	110	
Mn	55	2	72	49.897	ppb	1.530	21877	50	99.8	90	110	
Fe	57	2	72	1012.288	ppb	4.122	20579	1000	101.2	90	110	
Co	59	2	72	49.417	ppb	1.350	94594	50	98.8	90	110	
Ni	60	2	72	48.897	ppb	2.008	26475	50	97.8	90	110	
Cu	63	2	72	48.455	ppb	0.557	74003	50	96.9	90	110	
Zn	66	2	72	50.948	ppb	5.339	11322	50	101.9	90	110	
As	75	2	72	50.092	ppb	3.338	8941	50	100.2	90	110	
Se	78	1	72	49.969	ppb	3.455	8633	50	99.9	90	110	
Sr	88	2	72	102.363	ppb	2.627	54509	100	102.4	90	110	
Zr	90	2	72	217.533	ppb	33.427	460	50	435.1	90	110	>+\-10%
Nb	93	2	72	91.844	ppb	1.767	130942	100	91.8	90	110	
Mo	95	2	115	48.059	ppb	1.782	37257	50	96.1	90	110	
Pd	105	2	115	48.360	ppb	1.563	61712	50	96.7	90	110	
Ag	107	2	115	49.115	ppb	0.645	130615	50	98.2	90	110	
Cd	111	2	115	48.329	ppb	0.869	16888	50	96.7	90	110	
Sn	120	2	115	50.009	ppb	0.974	49168	50	100.0	90	110	
Sb	121	2	115	50.170	ppb	1.416	47923	50	100.3	90	110	
Ba	137	2	115	48.037	ppb	1.147	16217	50	96.1	90	110	
W	182	2	165	48.600	ppb	0.561	174977	50	97.2	90	110	
Pt	195	2	165	47.960	ppb	0.691	138090	50	95.9	90	110	
Tl	205	2	165	49.076	ppb	0.428	345328	50	98.2	90	110	
Pb	208	2	165	49.297	ppb	0.806	471742	50	98.6	90	110	
Th	232	2	165	48.737	ppb	1.150	578880	50	97.5	90	110	
U	238	2	165	48.859	ppb	0.975	585925	50	97.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	727350	0.85	885786	82.11	60	120	
Sc (IS)	45	1	HMI H2	16466166	0.32	17935452	91.81	60	120	
Sc (IS)	45	2	HMI He	680845	0.29	724932	93.92	60	120	
Sc (IS)	45	3	No Gas	61084944	0.38	71931282	84.92	60	120	
Ge Internal Standard	72	1	HMI H2	6974219	0.22	7580625	92.00	60	120	
Ge Internal Standard	72	2	HMI He	890894	0.63	939613	94.82	60	120	
In Internal Standard	115	2	HMI He	3519908	0.59	3669615	95.92	60	120	
Ho-165	165	2	HMI He	15986714	1.25	16373961	97.63	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5688508
Data File Name	047_CCB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T12:27:58-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-15.921	ppb	-9.9	7099698	10	
Be	9	1	6	0.004	ppb	590.9	7	0.5	
B	11	1	6	33.215	ppb	28.9	563	0.5	>RL
Na	23	1	45	18.432	ppb	3.3	184713	25	
Na	23	2	45	14.708	ppb	7.9	13063	25	
Mg	24	2	45	0.520	ppb	68.0	137	25	
Al	27	2	45	0.104	ppb	1366.0	20	15	
K	39	1	45	-90.156	ppb	-3.9	8739372	50	
K	39	2	45	-10.606	ppb	-259.9	28776	50	
Ca	40	1	45	4.380	ppb	3.4	46060	50	
Ca	44	2	45	-4.835	ppb	-69.9	40	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	-0.978	ppb	-12.4	5975	1	
Cr	52	2	72	-0.058	ppb	-28.3	220	1	
Mn	55	2	72	0.046	ppb	30.2	77	0.5	
Fe	57	2	72	4.189	ppb	61.3	160	25	
Co	59	2	72	-0.026	ppb	-276.7	1097	0.5	
Ni	60	2	72	0.050	ppb	181.8	117	1	
Cu	63	2	72	0.293	ppb	36.6	1333	1	
Zn	66	2	72	0.561	ppb	59.4	230	5	
As	75	2	72	0.056	ppb	53.8	39	1	
Se	78	1	72	0.110	ppb	109.8	43	1	
Sr	88	2	72	0.013	ppb	237.2	37	0.5	
Zr	90	2	72	0.933	ppb	2154.7	50	1	
Nb	93	2	72	2.566	ppb	12.8	5151	2	>RL
Mo	95	2	115	0.057	ppb	85.6	90	0.5	
Pd	105	2	115	0.012	ppb	70.8	30	1	
Ag	107	2	115	0.005	ppb	213.0	50	1	
Cd	111	2	115	0.078	ppb	57.0	27	0.5	
Sn	120	2	115	0.172	ppb	76.0	307	1	
Sb	121	2	115	0.265	ppb	21.6	270	0.6	
Ba	137	2	115	-0.078	ppb	-58.5	43	0.5	
W	182	2	165	0.036	ppb	50.1	673	1	
Pt	195	2	165	0.000	ppb	4715.8	7	1	
Tl	205	2	165	0.025	ppb	20.6	347	0.1	
Pb	208	2	165	0.128	ppb	17.1	1870	0.5	
Th	232	2	165	0.133	ppb	17.4	2210	1	
U	238	2	165	0.019	ppb	35.6	283	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	707098	0.86	885786	79.83	60	120	
Sc (IS)	45	1	HMI H2	15643516	0.38	17935452	87.22	60	120	
Sc (IS)	45	2	HMI He	654665	0.33	724932	90.31	60	120	
Sc (IS)	45	3	No Gas	59262526	1.14	71931282	82.39	60	120	
Ge Internal Standard	72	1	HMI H2	6674981	0.38	7580625	88.05	60	120	
Ge Internal Standard	72	2	HMI He	852832	0.22	939613	90.76	60	120	
In Internal Standard	115	2	HMI He	3451490	0.83	3669615	94.06	60	120	
Ho-165	165	2	HMI He	15744533	0.62	16373961	96.16	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5688512
Data File Name	048LCCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T12:31:50-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-5.350	ppb	-24.227	7328585	50	-10.7	70	130	>+/-30%
Be	9	1	6	0.864	ppb	24.807	220	1	86.4	70	130	
Na	23	2	45	53.843	ppb	11.633	19146	50	107.7	70	130	
Mg	24	2	45	53.804	ppb	5.459	3927	50	107.6	70	130	
Al	27	2	45	49.904	ppb	8.204	943	30	166.3	70	130	>+/-30%
K	39	2	45	84.234	ppb	23.012	32771	100	84.2	70	130	
Ca	44	2	45	33.062	ppb	57.634	150	50	66.1	70	130	>+/-30%
V	51	2	72	3.986	ppb	0.944	9974	5	79.7	70	130	
Cr	52	2	72	1.913	ppb	3.981	2304	2	95.6	70	130	
Mn	55	2	72	0.990	ppb	17.622	470	1	99.0	70	130	
Fe	57	2	72	53.272	ppb	7.210	1107	50	106.5	70	130	
Co	59	2	72	1.020	ppb	15.189	2977	1	102.0	70	130	
Ni	60	2	72	1.767	ppb	14.064	1000	1.5	117.8	70	130	
Cu	63	2	72	2.073	ppb	9.420	3887	2	103.7	70	130	
Zn	66	2	72	11.645	ppb	5.575	2554	10	116.4	70	130	
As	75	2	72	5.082	ppb	3.294	892	5	101.6	70	130	
Se	78	1	72	5.167	ppb	16.309	868	5	103.3	70	130	
Sr	88	2	72	1.123	ppb	11.298	600	1	112.3	70	130	
Zr	90	2	72	2.880	ppb	112.179	53	0.5	576.0	70	130	>+/-30%
Nb	93	2	72	0.688	ppb	5.460	2614	2	34.4	70	130	>+/-30%
Mo	95	2	115	2.173	ppb	7.677	1684	2	108.7	70	130	
Pd	105	2	115	0.006	ppb	146.021	23	1	0.6	70	130	>+/-30%
Ag	107	2	115	5.140	ppb	1.556	13334	5	102.8	70	130	
Cd	111	2	115	1.107	ppb	50.921	377	1	110.7	70	130	
Sn	120	2	115	9.924	ppb	8.408	9607	10	99.2	70	130	
Sb	121	2	115	2.277	ppb	13.200	2137	2	113.8	70	130	
Ba	137	2	115	1.014	ppb	8.748	400	1	101.4	70	130	
W	182	2	165	4.748	ppb	2.941	17242	1	474.8	70	130	>+/-30%
Pt	195	2	165	0.004	ppb	148.733	17	1	0.4	70	130	>+/-30%
Tl	205	2	165	1.007	ppb	0.778	7109	1	100.7	70	130	
Pb	208	2	165	1.071	ppb	4.814	10692	1	107.1	70	130	
Th	232	2	165	1.772	ppb	2.158	21248	2	88.6	70	130	
U	238	2	165	1.056	ppb	1.714	12467	1	105.6	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	696900	0.19	885786	78.68	60	120	
Sc (IS)	45	1	HMI H2	15524170	0.71	17935452	86.56	60	120	
Sc (IS)	45	2	HMI He	648953	0.16	724932	89.52	60	120	
Sc (IS)	45	3	No Gas	59281207	0.73	71931282	82.41	60	120	
Ge Internal Standard	72	1	HMI H2	6611356	0.88	7580625	87.21	60	120	
Ge Internal Standard	72	2	HMI He	849557	0.44	939613	90.42	60	120	
In Internal Standard	115	2	HMI He	3424775	0.69	3669615	93.33	60	120	
Ho-165	165	2	HMI He	15663174	0.65	16373961	95.66	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-456388/2-B
Data File Name	049_LCS.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T12:35:43-06:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	456579 6020a dod4
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	57.371	57.371	ppb	7.030	103984	400	14.3	80	120	>+/-20%
Li	7	2	45	88.402	88.402	ppb	29.833	5578	400	22.1	80	120	>+/-20%
Li	7	3	45	64.862	64.862	ppb	5.010	9286550	400	16.2	80	120	>+/-20%
Be	9	1	6	41.679	41.679	ppb	0.652	10324	40	104.2	80	120	
Na	23	2	45	27.953	27.953	ppb	18.801	15475	40	69.9	80	120	>+/-20%
Mg	24	2	45	0.938	0.938	ppb	52.480	170	40	2.3	80	120	>+/-20%
Al	27	2	45	417.175	417.175	ppb	7.367	7976	40	1042.9	80	120	>+/-20%
K	39	2	45	-5.189	-5.189	ppb	-395.609	29588	40	-13.0	80	120	>+/-20%
Ca	44	2	45	111.823	111.823	ppb	13.774	390	40	279.6	80	120	>+/-20%
V	51	2	72	36.823	36.823	ppb	3.539	37523	40	92.1	80	120	
Cr	52	2	72	39.939	39.939	ppb	2.506	43626	40	99.8	80	120	
Mn	55	2	72	41.909	41.909	ppb	1.747	17982	40	104.8	80	120	
Fe	57	2	72	419.873	419.873	ppb	9.404	8396	40	1049.7	80	120	>+/-20%
Co	59	2	72	41.561	41.561	ppb	0.722	78003	40	103.9	80	120	
Ni	60	2	72	40.812	40.812	ppb	1.433	21630	40	102.0	80	120	
Cu	63	2	72	41.001	41.001	ppb	1.559	61387	40	102.5	80	120	
Zn	66	2	72	42.774	42.774	ppb	2.816	9317	40	106.9	80	120	
As	75	2	72	38.835	38.835	ppb	0.440	6787	40	97.1	80	120	
Se	78	1	72	39.342	39.342	ppb	0.693	6488	40	98.4	80	120	
Nb	93	2	72	0.657	0.657	ppb	49.821	2637	40	1.6	80	120	>+/-20%
Mo	95	2	115	39.869	39.869	ppb	2.625	30751	40	99.7	80	120	
Pd	105	2	115	0.006	0.006	ppb	76.099	23	40	0.0	80	120	>+/-20%
Ag	107	2	115	40.121	40.121	ppb	0.480	106145	40	100.3	80	120	
Cd	111	2	115	41.311	41.311	ppb	3.984	14358	40	103.3	80	120	
Sn	120	2	115	39.649	39.649	ppb	0.202	38809	40	99.1	80	120	
Sb	121	2	115	39.359	39.359	ppb	1.917	37401	40	98.4	80	120	
Ba	137	2	115	40.799	40.799	ppb	6.679	13717	40	102.0	80	120	
W	182	2	165	33.194	33.194	ppb	0.281	119281	40	83.0	80	120	
Pt	195	2	165	0.001	0.001	ppb	289.012	10	40	0.0	80	120	>+/-20%
Tl	205	2	165	39.478	39.478	ppb	0.618	276881	40	98.7	80	120	
Pb	208	2	165	41.121	41.121	ppb	0.817	392282	40	102.8	80	120	
Th	232	2	165	38.394	38.394	ppb	0.289	454650	40	96.0	80	120	
U	238	2	165	40.120	40.120	ppb	0.978	479509	40	100.3	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	695099	0.38	885786	78.47	60	120	
Sc (IS)	45	1	HMI H2	15763744	1.12	17935452	87.89	60	120	
Sc (IS)	45	2	HMI He	667507	0.22	724932	92.08	60	120	
Sc (IS)	45	3	No Gas	62335184	0.63	71931282	86.66	60	120	
Ge Internal Standard	72	1	HMI H2	6651334	0.69	7580625	87.74	60	120	
Ge Internal Standard	72	2	HMI He	871390	0.41	939613	92.74	60	120	
In Internal Standard	115	2	HMI He	3501525	0.93	3669615	95.42	60	120	
Ho-165	165	2	HMI He	15932122	0.69	16373961	97.30	60	120	

Sample Report

Sample Table

Sample Name	280-122911-B-7-B
Data File Name	050SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T12:39:35-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456579 6020a dod4
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-4.850	ppb	-4.850	-102.33	86958	500000	
Li	7	2	45	-17.394	ppb	-17.394	-88.93	4504	500000	
Li	7	3	45	-3.757	ppb	-3.757	-105.69	7810858	50000	
Be	9	1	6	0.048	ppb	0.048	135.10	17	2000	
B	11	1	6	2049.114	ppb	2049.114	2.97	16713	2000	
Na	23	1	45	72034.018	ppb	72034.018	1.04	153901794	2000	>LDR
Na	23	2	45	71303.994	ppb	71303.994	1.04	11839323	400000	
Mg	24	2	45	33211.080	ppb	33211.080	1.56	2475004	400000	
Al	27	2	45	3.998	ppb	3.998	62.84	97	400000	
K	39	1	45	22513.720	ppb	22513.720	0.97	46899124	400000	
K	39	2	45	18593.682	ppb	18593.682	1.74	902176	400000	
Ca	40	1	45	134176.342	ppb	134176.342	0.59	437047007	400000	
Ca	44	2	45	104766.834	ppb	104766.834	0.78	319432	400000	
Ti	47	2	45	0.157	ppb	0.157	173.21	3	4000	
V	51	2	72	-3.592	ppb	-3.592	-2.07	3967	2000	
Cr	52	2	72	0.292	ppb	0.292	29.14	610	5000	
Mn	55	2	72	0.589	ppb	0.589	26.83	313	10000	
Fe	57	2	72	15.967	ppb	15.967	14.28	400	400000	
Co	59	2	72	0.111	ppb	0.111	113.64	1387	2000	
Ni	60	2	72	0.870	ppb	0.870	21.46	557	5000	
Cu	63	2	72	2.847	ppb	2.847	3.56	5175	5000	
Zn	66	2	72	1.773	ppb	1.773	12.48	500	5000	
As	75	2	72	2.261	ppb	2.261	4.10	427	2000	
Se	78	1	72	0.488	ppb	0.488	56.52	104	2000	
Sr	88	2	72	536.705	ppb	536.705	0.75	281854	4000	
Zr	90	2	72	125.995	ppb	125.995	28.04	283	1000	
Nb	93	2	72	0.081	ppb	0.081	300.56	1864	200	
Mo	95	2	115	0.915	ppb	0.915	12.64	743	2000	
Pd	105	2	115	-0.002	ppb	-0.002	-251.74	13	100	
Ag	107	2	115	0.000	ppb	0.000	-557.25	37	100	
Cd	111	2	115	0.068	ppb	0.068	65.35	23	2000	
Sn	120	2	115	0.400	ppb	0.400	21.35	527	2000	
Sb	121	2	115	1.011	ppb	1.011	10.44	970	1000	
Ba	137	2	115	294.895	ppb	294.895	1.16	97483	5000	
W	182	2	165	0.072	ppb	0.072	40.30	803	100	
Pt	195	2	165	-0.002	ppb	-0.002	0.00	0	100	
Tl	205	2	165	0.038	ppb	0.038	22.33	437	2000	
Pb	208	2	165	0.041	ppb	0.041	16.29	1057	5000	
Th	232	2	165	0.428	ppb	0.428	15.18	5692	2000	
U	238	2	165	5.218	ppb	5.218	0.49	62043	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	665488	0.15	885786	75.13	60	120	
Sc (IS)	45	1	HMI H2	15622987	0.43	17935452	87.11	60	120	
Sc (IS)	45	2	HMI He	679695	1.19	724932	93.76	60	120	
Sc (IS)	45	3	No Gas	62893052	0.84	71931282	87.43	60	120	
Ge Internal Standard	72	1	HMI H2	6602459	0.39	7580625	87.10	60	120	
Ge Internal Standard	72	2	HMI He	879121	0.59	939613	93.56	60	120	
In Internal Standard	115	2	HMI He	3459354	0.36	3669615	94.27	60	120	
Ho-165	165	2	HMI He	15836997	0.40	16373961	96.72	60	120	

Sample Report

Sample Table

Sample Name	280-122971-B-6-B
Data File Name	051SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T12:43:28-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456579 6020a dod4
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	28.488	ppb	28.488	22.12	97485	500000	
Li	7	2	45	27.012	ppb	27.012	69.80	5028	500000	
Li	7	3	45	31.192	ppb	31.192	2.19	8680839	50000	
Be	9	1	6	0.005	ppb	0.005	453.82	7	2000	
B	11	1	6	3591.142	ppb	3591.142	2.27	29353	2000	
Na	23	1	45	95154.865	ppb	95154.865	0.31	207277584	2000	>LDR
Na	23	2	45	94698.985	ppb	94698.985	0.58	15812409	400000	
Mg	24	2	45	60213.748	ppb	60213.748	0.38	4513766	400000	
Al	27	2	45	5.519	ppb	5.519	10.66	127	400000	
K	39	1	45	2290.232	ppb	2290.232	1.89	13000391	400000	
K	39	2	45	3444.831	ppb	3444.831	0.52	193014	400000	
Ca	40	1	45	104150.315	ppb	104150.315	0.57	345974515	400000	
Ca	44	2	45	81835.413	ppb	81835.413	0.35	250986	400000	
Ti	47	2	45	0.793	ppb	0.793	125.10	17	4000	
V	51	2	72	-3.938	ppb	-3.938	-9.88	3711	2000	
Cr	52	2	72	0.160	ppb	0.160	37.81	470	5000	
Mn	55	2	72	0.330	ppb	0.330	26.66	203	10000	
Fe	57	2	72	10.986	ppb	10.986	31.88	303	400000	
Co	59	2	72	-0.017	ppb	-0.017	-308.73	1157	2000	
Ni	60	2	72	0.626	ppb	0.626	39.75	430	5000	
Cu	63	2	72	0.730	ppb	0.730	4.82	2044	5000	
Zn	66	2	72	1.690	ppb	1.690	31.18	487	5000	
As	75	2	72	1.472	ppb	1.472	19.47	292	2000	
Se	78	1	72	0.284	ppb	0.284	13.14	72	2000	
Sr	88	2	72	474.946	ppb	474.946	0.87	251621	4000	
Zr	90	2	72	172.685	ppb	172.685	14.62	373	1000	
Nb	93	2	72	-0.366	ppb	-0.366	-66.74	1253	200	
Mo	95	2	115	1.011	ppb	1.011	5.78	813	2000	
Pd	105	2	115	-0.002	ppb	-0.002	-684.72	13	100	
Ag	107	2	115	-0.008	ppb	-0.008	-55.81	17	100	
Cd	111	2	115	0.010	ppb	0.010	173.21	3	2000	
Sn	120	2	115	0.163	ppb	0.163	14.16	297	2000	
Sb	121	2	115	0.429	ppb	0.429	13.79	423	1000	
Ba	137	2	115	110.152	ppb	110.152	2.07	36326	5000	
W	182	2	165	0.043	ppb	0.043	38.24	697	100	
Pt	195	2	165	0.001	ppb	0.001	280.86	10	100	
Tl	205	2	165	0.020	ppb	0.020	32.52	313	2000	
Pb	208	2	165	0.043	ppb	0.043	10.15	1070	5000	
Th	232	2	165	0.148	ppb	0.148	2.21	2384	2000	
U	238	2	165	5.431	ppb	5.431	3.88	64203	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	671512	0.40	885786	75.81	60	120	
Sc (IS)	45	1	HMI H2	15932743	0.13	17935452	88.83	60	120	
Sc (IS)	45	2	HMI He	683630	0.29	724932	94.30	60	120	
Sc (IS)	45	3	No Gas	63446526	1.01	71931282	88.20	60	120	
Ge Internal Standard	72	1	HMI H2	6717914	1.07	7580625	88.62	60	120	
Ge Internal Standard	72	2	HMI He	886873	0.53	939613	94.39	60	120	
In Internal Standard	115	2	HMI He	3446880	0.38	3669615	93.93	60	120	
Ho-165	165	2	HMI He	15748742	0.64	16373961	96.18	60	120	

Sample Report

Sample Table

Sample Name	280-122971-B-7-B
Data File Name	052SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T12:47:21-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456579 6020a dod4
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	12.250	ppb	12.250	36.67	95093	500000	
Li	7	2	45	0.514	ppb	0.514	7156.52	4811	500000	
Li	7	3	45	17.791	ppb	17.791	21.45	8378023	50000	
Be	9	1	6	-0.009	ppb	-0.009	-266.22	3	2000	
B	11	1	6	12258.733	ppb	12258.733	1.76	101254	2000	>LDR
Na	23	1	45	56251.192	ppb	56251.192	0.29	125084871	2000	>LDR
Na	23	2	45	56183.570	ppb	56183.570	0.64	9543520	400000	
Mg	24	2	45	39203.830	ppb	39203.830	0.77	2988301	400000	
Al	27	2	45	16.319	ppb	16.319	15.81	343	400000	
K	39	1	45	17066.431	ppb	17066.431	0.15	39228884	400000	
K	39	2	45	14637.573	ppb	14637.573	0.59	733001	400000	
Ca	40	1	45	86453.493	ppb	86453.493	0.26	293028382	400000	
Ca	44	2	45	68413.182	ppb	68413.182	1.58	213354	400000	
Ti	47	2	45	0.468	ppb	0.468	99.92	10	4000	
V	51	2	72	-4.770	ppb	-4.770	-5.49	3034	2000	
Cr	52	2	72	0.258	ppb	0.258	19.27	583	5000	
Mn	55	2	72	217.783	ppb	217.783	1.73	95707	10000	
Fe	57	2	72	322.406	ppb	322.406	4.32	6638	400000	
Co	59	2	72	0.301	ppb	0.301	24.60	1770	2000	
Ni	60	2	72	1.559	ppb	1.559	5.70	940	5000	
Cu	63	2	72	0.969	ppb	0.969	1.98	2424	5000	
Zn	66	2	72	3.028	ppb	3.028	4.25	787	5000	
As	75	2	72	4.387	ppb	4.387	3.06	815	2000	
Se	78	1	72	0.168	ppb	0.168	96.34	53	2000	
Sr	88	2	72	396.626	ppb	396.626	0.38	212051	4000	
Zr	90	2	72	135.428	ppb	135.428	20.91	307	1000	
Nb	93	2	72	-0.476	ppb	-0.476	-38.90	1110	200	
Mo	95	2	115	3.107	ppb	3.107	11.68	2457	2000	
Pd	105	2	115	-0.002	ppb	-0.002	-224.72	13	100	
Ag	107	2	115	-0.002	ppb	-0.002	-410.60	33	100	
Cd	111	2	115	0.029	ppb	0.029	173.21	10	2000	
Sn	120	2	115	0.122	ppb	0.122	38.17	263	2000	
Sb	121	2	115	0.343	ppb	0.343	18.62	350	1000	
Ba	137	2	115	141.414	ppb	141.414	2.70	47677	5000	
W	182	2	165	0.139	ppb	0.139	5.17	1047	100	
Pt	195	2	165	-0.002	ppb	-0.002	0.00	0	100	
Tl	205	2	165	0.025	ppb	0.025	11.70	347	2000	
Pb	208	2	165	0.172	ppb	0.172	5.69	2310	5000	
Th	232	2	165	0.066	ppb	0.066	6.38	1440	2000	
U	238	2	165	4.808	ppb	4.808	1.80	57381	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	682930	0.34	885786	77.10	60	120	
Sc (IS)	45	1	HMI H2	16256667	0.50	17935452	90.64	60	120	
Sc (IS)	45	2	HMI He	695123	0.36	724932	95.89	60	120	
Sc (IS)	45	3	No Gas	63480279	0.35	71931282	88.25	60	120	
Ge Internal Standard	72	1	HMI H2	6792432	0.08	7580625	89.60	60	120	
Ge Internal Standard	72	2	HMI He	894953	0.53	939613	95.25	60	120	
In Internal Standard	115	2	HMI He	3525515	0.28	3669615	96.07	60	120	
Ho-165	165	2	HMI He	15895059	0.30	16373961	97.08	60	120	

Sample Report

Sample Table

Sample Name	280-122971-B-8-B
Data File Name	053SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T12:51:11-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456579 6020a dod4
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	13.094	ppb	13.094	23.95	92963	500000	
Li	7	2	45	-14.459	ppb	-14.459	-34.67	4614	500000	
Li	7	3	45	20.116	ppb	20.116	24.69	8357656	50000	
Be	9	1	6	0.020	ppb	0.020	211.12	10	2000	
B	11	1	6	4418.646	ppb	4418.646	0.48	35370	2000	
Na	23	1	45	125796.797	ppb	125796.797	0.16	272628783	2000	>LDR
Na	23	2	45	123195.942	ppb	123195.942	0.41	20792756	400000	
Mg	24	2	45	51832.749	ppb	51832.749	0.56	3928080	400000	
Al	27	2	45	6.968	ppb	6.968	11.15	157	400000	
K	39	1	45	5108.968	ppb	5108.968	0.63	17766439	400000	
K	39	2	45	5393.432	ppb	5393.432	0.77	288036	400000	
Ca	40	1	45	133873.587	ppb	133873.587	0.78	442512593	400000	
Ca	44	2	45	103405.719	ppb	103405.719	0.61	320598	400000	
Ti	47	2	45	0.313	ppb	0.313	173.21	7	4000	
V	51	2	72	-4.937	ppb	-4.937	-5.28	2867	2000	
Cr	52	2	72	0.145	ppb	0.145	24.97	453	5000	
Mn	55	2	72	8.021	ppb	8.021	6.92	3554	10000	
Fe	57	2	72	20.894	ppb	20.894	16.94	503	400000	
Co	59	2	72	0.041	ppb	0.041	205.13	1267	2000	
Ni	60	2	72	0.482	ppb	0.482	55.54	353	5000	
Cu	63	2	72	3.940	ppb	3.940	2.23	6865	5000	
Zn	66	2	72	18.213	ppb	18.213	8.25	4107	5000	
As	75	2	72	1.249	ppb	1.249	11.55	252	2000	
Se	78	1	72	5.971	ppb	5.971	10.12	1012	2000	
Sr	88	2	72	482.970	ppb	482.970	0.96	256080	4000	
Zr	90	2	72	63.907	ppb	63.907	16.80	170	1000	
Nb	93	2	72	-0.766	ppb	-0.766	-12.67	693	200	
Mo	95	2	115	1.124	ppb	1.124	11.42	913	2000	
Pd	105	2	115	0.001	ppb	0.001	3004.95	17	100	
Ag	107	2	115	-0.009	ppb	-0.009	-22.33	13	100	
Cd	111	2	115	0.009	ppb	0.009	173.21	3	2000	
Sn	120	2	115	0.089	ppb	0.089	17.81	230	2000	
Sb	121	2	115	0.208	ppb	0.208	14.65	220	1000	
Ba	137	2	115	346.236	ppb	346.236	2.23	115850	5000	
W	182	2	165	0.032	ppb	0.032	67.98	653	100	
Pt	195	2	165	-0.001	ppb	-0.001	-184.33	3	100	
Tl	205	2	165	0.016	ppb	0.016	43.27	283	2000	
Pb	208	2	165	0.045	ppb	0.045	30.36	1090	5000	
Th	232	2	165	0.029	ppb	0.029	15.32	983	2000	
U	238	2	165	5.341	ppb	5.341	2.50	62890	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	658697	1.14	885786	74.36	60	120	
Sc (IS)	45	1	HMI H2	15854304	0.73	17935452	88.40	60	120	
Sc (IS)	45	2	HMI He	691122	0.22	724932	95.34	60	120	
Sc (IS)	45	3	No Gas	62928507	0.65	71931282	87.48	60	120	
Ge Internal Standard	72	1	HMI H2	6696554	0.66	7580625	88.34	60	120	
Ge Internal Standard	72	2	HMI He	887566	0.08	939613	94.46	60	120	
In Internal Standard	115	2	HMI He	3502464	1.39	3669615	95.44	60	120	
Ho-165	165	2	HMI He	15686337	0.79	16373961	95.80	60	120	

Blank Report

Sample Table

Sample Name	MB 280-456919/1-A
Data File Name	054_BLK.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T12:55:05-06:00
Sample Type	Blank
Dilution	1
Comment	456919 6020a dod5
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-13.993	ppb	-35.39665949	88007	0.5
Li	7	2	45	-13.737	ppb	-344.342939	4628	0.5
Li	7	3	45	-19.621	ppb	-26.81428216	7578744	10
Be	9	1	6	-0.009	ppb	-255.3239026	3	0.5
B	11	1	6	110.168	ppb	10.46968812	1207	0.5
Na	23	1	45	96.573	ppb	9.528393257	365402	25
Na	23	2	45	58.879	ppb	10.05103694	21279	25
Mg	24	2	45	5.949	ppb	5.758161635	557	25
Al	27	2	45	1.728	ppb	32.71679535	53	15
K	39	1	45	-2542.401	ppb	-0.793389685	4772021	50
K	39	2	45	-12.652	ppb	-89.24162794	30332	50
Ca	40	1	45	38.946	ppb	17.98133423	164933	50
Ca	44	2	45	3.008	ppb	120.7251051	67	25
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5
V	51	2	72	-4.649	ppb	-7.951890955	3117	1
Cr	52	2	72	-0.006	ppb	-1210.165581	287	1
Mn	55	2	72	0.015	ppb	436.0596174	67	0.5
Fe	57	2	72	6.658	ppb	11.43600261	217	25
Co	59	2	72	-0.019	ppb	-192.4856455	1157	0.5
Ni	60	2	72	0.016	ppb	239.7491298	103	1
Cu	63	2	72	0.007	ppb	829.3642119	960	1
Zn	66	2	72	0.865	ppb	23.60164783	307	5
As	75	2	72	0.017	ppb	436.0568807	34	1
Se	78	1	72	0.065	ppb	112.5983285	36	1
Sr	88	2	72	-0.028	ppb	-38.53264072	17	0.5
Zr	90	2	72	-12.615	ppb	-106.7170924	27	1
Nb	93	2	72	-0.902	ppb	-10.84691562	503	2
Mo	95	2	115	-0.015	ppb	-198.4952894	37	0.5
Pd	105	2	115	-0.007	ppb	-121.4138628	7	1
Ag	107	2	115	-0.001	ppb	-1480.320067	37	1
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5
Sn	120	2	115	0.029	ppb	132.2195355	173	1
Sb	121	2	115	0.142	ppb	7.462994531	160	0.6
Ba	137	2	115	0.016	ppb	813.9750635	77	0.5
W	182	2	165	-0.008	ppb	-121.4359285	523	1
Pt	195	2	165	-0.002	ppb	0	0	1
Tl	205	2	165	0.007	ppb	141.1609681	223	0.1
Pb	208	2	165	0.017	ppb	18.92293863	843	0.5
Th	232	2	165	-0.001	ppb	-448.2016285	647	1
U	238	2	165	0.004	ppb	124.8487425	100	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	699162	0.63	885786	78.93	60	120	
Sc (IS)	45	1	HMI H2	16253366	0.36	17935452	90.62	60	120	
Sc (IS)	45	2	HMI He	692312	0.77	724932	95.50	60	120	
Sc (IS)	45	3	No Gas	63975759	0.65	71931282	88.94	60	120	
Ge Internal Standard	72	1	HMI H2	6799014	1.01	7580625	89.69	60	120	
Ge Internal Standard	72	2	HMI He	889274	0.51	939613	94.64	60	120	
In Internal Standard	115	2	HMI He	3555229	0.77	3669615	96.88	60	120	
Ho-165	165	2	HMI He	15996216	1.31	16373961	97.69	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-456919/2-A
Data File Name	055_LCS.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T12:58:58-06:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	456919 6020a dod5
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	58.542	58.542	ppb	6.031	104646	400	14.6	80	120	>+/-20%
Li	7	2	45	66.206	66.206	ppb	28.777	5425	400	16.6	80	120	>+/-20%
Li	7	3	45	65.306	65.306	ppb	7.190	9185218	400	16.3	80	120	>+/-20%
Be	9	1	6	44.843	44.843	ppb	3.147	10951	40	112.1	80	120	
Na	23	2	45	18.977	18.977	ppb	14.349	14247	40	47.4	80	120	>+/-20%
Mg	24	2	45	1.884	1.884	ppb	26.467	243	40	4.7	80	120	>+/-20%
Al	27	2	45	442.800	442.800	ppb	1.885	8606	40	1107.0	80	120	>+/-20%
K	39	2	45	1.214	1.214	ppb	1126.718	30383	40	3.0	80	120	>+/-20%
Ca	44	2	45	103.041	103.041	ppb	22.496	370	40	257.6	80	120	>+/-20%
V	51	2	72	36.644	36.644	ppb	1.884	37546	40	91.6	80	120	
Cr	52	2	72	42.116	42.116	ppb	4.135	46201	40	105.3	80	120	
Mn	55	2	72	40.841	40.841	ppb	5.271	17608	40	102.1	80	120	
Fe	57	2	72	440.118	440.118	ppb	3.320	8836	40	1100.3	80	120	>+/-20%
Co	59	2	72	42.595	42.595	ppb	1.260	80285	40	106.5	80	120	
Ni	60	2	72	41.527	41.527	ppb	3.960	22111	40	103.8	80	120	
Cu	63	2	72	41.045	41.045	ppb	0.669	61742	40	102.6	80	120	
Zn	66	2	72	41.586	41.586	ppb	4.683	9103	40	104.0	80	120	
As	75	2	72	38.861	38.861	ppb	1.207	6824	40	97.2	80	120	
Se	78	1	72	40.090	40.090	ppb	3.087	6587	40	100.2	80	120	
Nb	93	2	72	-0.967	-0.967	ppb	-2.502	407	40	-2.4	80	120	>+/-20%
Mo	95	2	115	41.363	41.363	ppb	0.266	31933	40	103.4	80	120	
Pd	105	2	115	-0.007	-0.007	ppb	-127.353	7	40	0.0	80	120	>+/-20%
Ag	107	2	115	40.009	40.009	ppb	1.423	105940	40	100.0	80	120	
Cd	111	2	115	41.341	41.341	ppb	2.988	14381	40	103.4	80	120	
Sn	120	2	115	39.699	39.699	ppb	0.877	38892	40	99.2	80	120	
Sb	121	2	115	39.825	39.825	ppb	2.237	37876	40	99.6	80	120	
Ba	137	2	115	40.761	40.761	ppb	2.619	13711	40	101.9	80	120	
W	182	2	165	33.787	33.787	ppb	0.785	120124	40	84.5	80	120	
Pt	195	2	165	0.002	0.002	ppb	168.446	13	40	0.0	80	120	>+/-20%
Tl	205	2	165	40.732	40.732	ppb	0.532	282664	40	101.8	80	120	
Pb	208	2	165	40.982	40.982	ppb	0.596	386842	40	102.5	80	120	
Th	232	2	165	39.241	39.241	ppb	0.409	459764	40	98.1	80	120	
U	238	2	165	41.304	41.304	ppb	0.444	488477	40	103.3	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	685297	0.21	885786	77.37	60	120	
Sc (IS)	45	1	HMI H2	15816497	0.64	17935452	88.19	60	120	
Sc (IS)	45	2	HMI He	678644	0.47	724932	93.61	60	120	
Sc (IS)	45	3	No Gas	61588947	0.43	71931282	85.62	60	120	
Ge Internal Standard	72	1	HMI H2	6627988	0.73	7580625	87.43	60	120	
Ge Internal Standard	72	2	HMI He	875467	0.34	939613	93.17	60	120	
In Internal Standard	115	2	HMI He	3504741	0.88	3669615	95.51	60	120	
Ho-165	165	2	HMI He	15764047	0.43	16373961	96.28	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5688510
Data File Name	056_CCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T13:02:50-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	83.580	ppb	4.582	108774	100	83.6	90	110	>+\-10%
Li	7	2	45	102.907	ppb	24.651	5541	100	102.9	90	110	
Li	7	3	45	82.075	ppb	3.120	9031797	100	82.1	90	110	>+\-10%
Be	9	1	6	50.146	ppb	1.512	12225	50	100.3	90	110	
B	11	1	6	111.242	ppb	9.780	1190	50	222.5	90	110	>+\-10%
Na	23	1	45	1062.368	ppb	2.149	2388863	1000	106.2	90	110	
Na	23	2	45	1006.158	ppb	1.090	168913	1000	100.6	90	110	
Mg	24	2	45	1000.469	ppb	0.484	70839	1000	100.0	90	110	
Al	27	2	45	1023.495	ppb	3.378	18880	1000	102.3	90	110	
K	39	1	45	674.307	ppb	2.289	9920911	1000	67.4	90	110	>+\-10%
K	39	2	45	969.982	ppb	3.831	71966	1000	97.0	90	110	
Ca	40	1	45	1022.551	ppb	0.833	3329148	1000	102.3	90	110	
Ca	44	2	45	877.062	ppb	9.410	2590	1000	87.7	90	110	>+\-10%
Ti	47	2	45	49.027	ppb	6.185	973	50	98.1	90	110	
V	51	2	72	47.680	ppb	1.893	45338	50	95.4	90	110	
Cr	52	2	72	48.236	ppb	3.800	51268	50	96.5	90	110	
Mn	55	2	72	50.659	ppb	1.754	21159	50	101.3	90	110	
Fe	57	2	72	997.712	ppb	8.888	19314	1000	99.8	90	110	
Co	59	2	72	49.661	ppb	1.187	90576	50	99.3	90	110	
Ni	60	2	72	49.739	ppb	3.024	25660	50	99.5	90	110	
Cu	63	2	72	49.392	ppb	1.987	71849	50	98.8	90	110	
Zn	66	2	72	49.056	ppb	4.255	10391	50	98.1	90	110	
As	75	2	72	48.429	ppb	2.215	8238	50	96.9	90	110	
Se	78	1	72	48.571	ppb	1.310	7896	50	97.1	90	110	
Sr	88	2	72	102.625	ppb	2.732	52070	100	102.6	90	110	
Zr	90	2	72	123.586	ppb	42.710	270	50	247.2	90	110	>+\-10%
Nb	93	2	72	93.542	ppb	1.043	127038	100	93.5	90	110	
Mo	95	2	115	48.366	ppb	0.946	36134	50	96.7	90	110	
Pd	105	2	115	48.046	ppb	1.443	59085	50	96.1	90	110	
Ag	107	2	115	48.819	ppb	1.077	125123	50	97.6	90	110	
Cd	111	2	115	49.748	ppb	2.435	16751	50	99.5	90	110	
Sn	120	2	115	48.874	ppb	4.240	46301	50	97.7	90	110	
Sb	121	2	115	50.770	ppb	2.360	46726	50	101.5	90	110	
Ba	137	2	115	47.671	ppb	3.451	15506	50	95.3	90	110	
W	182	2	165	48.338	ppb	1.394	171061	50	96.7	90	110	
Pt	195	2	165	47.719	ppb	1.909	135029	50	95.4	90	110	
Tl	205	2	165	48.494	ppb	1.160	335404	50	97.0	90	110	
Pb	208	2	165	49.048	ppb	0.958	461340	50	98.1	90	110	
Th	232	2	165	49.108	ppb	1.882	573309	50	98.2	90	110	
U	238	2	165	49.258	ppb	0.910	580629	50	98.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	684266	1.42	885786	77.25	60	120	
Sc (IS)	45	1	HMI H2	15470191	0.74	17935452	86.25	60	120	
Sc (IS)	45	2	HMI He	644849	0.18	724932	88.95	60	120	
Sc (IS)	45	3	No Gas	58198287	1.02	71931282	80.91	60	120	
Ge Internal Standard	72	1	HMI H2	6560546	0.62	7580625	86.54	60	120	
Ge Internal Standard	72	2	HMI He	848837	0.88	939613	90.34	60	120	
In Internal Standard	115	2	HMI He	3392153	1.02	3669615	92.44	60	120	
Ho-165	165	2	HMI He	15712938	0.39	16373961	95.96	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5688508
Data File Name	057_CCB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T13:06:41-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-15.844	ppb	-17.1	6904248	10	
Be	9	1	6	0.019	ppb	377.0	10	0.5	
B	11	1	6	42.326	ppb	30.5	607	0.5	>RL
Na	23	1	45	2.858	ppb	39.9	146102	25	
Na	23	2	45	7.225	ppb	23.0	11475	25	
Mg	24	2	45	1.257	ppb	24.4	183	25	
Al	27	2	45	-0.411	ppb	-135.2	10	15	
K	39	1	45	-108.764	ppb	-64.0	8401589	50	
K	39	2	45	-18.267	ppb	-137.1	27493	50	
Ca	40	1	45	3.566	ppb	4.1	41877	50	
Ca	44	2	45	7.397	ppb	111.7	73	25	
Ti	47	2	45	0.170	ppb	173.2	3	0.5	
V	51	2	72	-0.961	ppb	-33.7	5805	1	
Cr	52	2	72	-0.039	ppb	-138.1	233	1	
Mn	55	2	72	0.043	ppb	175.6	73	0.5	
Fe	57	2	72	-1.390	ppb	-169.5	50	25	
Co	59	2	72	-0.061	ppb	-130.3	1000	0.5	
Ni	60	2	72	0.058	ppb	76.5	117	1	
Cu	63	2	72	0.208	ppb	29.8	1173	1	
Zn	66	2	72	0.609	ppb	71.4	233	5	
As	75	2	72	0.027	ppb	219.5	33	1	
Se	78	1	72	0.121	ppb	105.9	43	1	
Sr	88	2	72	-0.032	ppb	-35.0	13	0.5	
Zr	90	2	72	7.506	ppb	72.7	60	1	>RL
Nb	93	2	72	2.951	ppb	19.6	5491	2	>RL
Mo	95	2	115	0.001	ppb	5430.7	47	0.5	
Pd	105	2	115	0.066	ppb	60.7	97	1	
Ag	107	2	115	-0.003	ppb	-291.6	30	1	
Cd	111	2	115	0.010	ppb	173.2	3	0.5	
Sn	120	2	115	0.225	ppb	40.4	350	1	
Sb	121	2	115	0.333	ppb	30.4	327	0.6	
Ba	137	2	115	-0.106	ppb	-33.7	33	0.5	
W	182	2	165	0.077	ppb	48.1	800	1	
Pt	195	2	165	0.001	ppb	273.2	10	1	
Tl	205	2	165	0.044	ppb	12.9	467	0.1	
Pb	208	2	165	0.125	ppb	20.4	1810	0.5	
Th	232	2	165	0.209	ppb	3.5	3031	1	
U	238	2	165	0.017	ppb	26.1	247	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	668735	0.54	885786	75.50	60	120	
Sc (IS)	45	1	HMI H2	15094083	0.66	17935452	84.16	60	120	
Sc (IS)	45	2	HMI He	633077	0.43	724932	87.33	60	120	
Sc (IS)	45	3	No Gas	57615849	0.82	71931282	80.10	60	120	
Ge Internal Standard	72	1	HMI H2	6392913	0.93	7580625	84.33	60	120	
Ge Internal Standard	72	2	HMI He	826495	1.16	939613	87.96	60	120	
In Internal Standard	115	2	HMI He	3381371	0.16	3669615	92.15	60	120	
Ho-165	165	2	HMI He	15447679	0.47	16373961	94.34	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5688512
Data File Name	058LCCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T13:10:36-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-6.928	ppb	-32.250	7140028	50	-13.9	70	130	>+/-30%
Be	9	1	6	1.015	ppb	34.696	247	1	101.5	70	130	
Na	23	2	45	50.350	ppb	1.624	18112	50	100.7	70	130	
Mg	24	2	45	52.918	ppb	3.353	3764	50	105.8	70	130	
Al	27	2	45	61.419	ppb	7.617	1127	30	204.7	70	130	>+/-30%
K	39	2	45	75.709	ppb	18.281	31548	100	75.7	70	130	
Ca	44	2	45	47.447	ppb	35.164	187	50	94.9	70	130	
V	51	2	72	3.649	ppb	6.853	9417	5	73.0	70	130	
Cr	52	2	72	2.118	ppb	7.849	2447	2	105.9	70	130	
Mn	55	2	72	1.049	ppb	17.398	480	1	104.9	70	130	
Fe	57	2	72	47.521	ppb	2.763	967	50	95.0	70	130	
Co	59	2	72	1.016	ppb	12.422	2884	1	101.6	70	130	
Ni	60	2	72	1.420	ppb	26.618	797	1.5	94.7	70	130	
Cu	63	2	72	2.094	ppb	7.879	3804	2	104.7	70	130	
Zn	66	2	72	10.371	ppb	6.504	2220	10	103.7	70	130	
As	75	2	72	4.631	ppb	10.539	792	5	92.6	70	130	
Se	78	1	72	4.735	ppb	12.690	772	5	94.7	70	130	
Sr	88	2	72	1.159	ppb	8.012	600	1	115.9	70	130	
Zr	90	2	72	-2.007	ppb	-714.475	43	0.5	-401.4	70	130	>+/-30%
Nb	93	2	72	0.870	ppb	41.218	2774	2	43.5	70	130	>+/-30%
Mo	95	2	115	1.809	ppb	8.984	1387	2	90.5	70	130	
Pd	105	2	115	0.004	ppb	361.759	20	1	0.4	70	130	>+/-30%
Ag	107	2	115	4.981	ppb	4.412	12720	5	99.6	70	130	
Cd	111	2	115	1.126	ppb	20.572	377	1	112.6	70	130	
Sn	120	2	115	9.876	ppb	3.210	9407	10	98.8	70	130	
Sb	121	2	115	2.059	ppb	7.477	1904	2	102.9	70	130	
Ba	137	2	115	0.910	ppb	58.717	360	1	91.0	70	130	
W	182	2	165	4.913	ppb	3.980	17656	1	491.3	70	130	>+/-30%
Pt	195	2	165	-0.002	ppb	0.000	0	1	-0.2	70	130	>+/-30%
Tl	205	2	165	0.989	ppb	3.978	6925	1	98.9	70	130	
Pb	208	2	165	1.101	ppb	1.198	10876	1	110.1	70	130	
Th	232	2	165	1.769	ppb	4.756	21015	2	88.4	70	130	
U	238	2	165	1.020	ppb	0.356	11926	1	102.0	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	668413	1.21	885786	75.46	60	120	
Sc (IS)	45	1	HMI H2	15053416	0.40	17935452	83.93	60	120	
Sc (IS)	45	2	HMI He	632120	0.55	724932	87.20	60	120	
Sc (IS)	45	3	No Gas	58022209	1.06	71931282	80.66	60	120	
Ge Internal Standard	72	1	HMI H2	6402086	0.56	7580625	84.45	60	120	
Ge Internal Standard	72	2	HMI He	824743	0.46	939613	87.77	60	120	
In Internal Standard	115	2	HMI He	3370357	0.65	3669615	91.84	60	120	
Ho-165	165	2	HMI He	15520212	0.17	16373961	94.79	60	120	

Sample Table

Sample Name	280-122978-A-1-A
Data File Name	059SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T13:14:30-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456919 6020a dod5
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	15.673	ppb	15.673	19.36	88027	500000	
Li	7	2	45	4.988	ppb	4.988	255.90	4531	500000	
Li	7	3	45	26.938	ppb	26.938	0.33	7855746	50000	
Be	9	1	6	-0.007	ppb	-0.007	-349.94	3	2000	
B	11	1	6	24524.019	ppb	24524.019	0.92	182428	2000	>LDR
Na	23	1	45	84044.156	ppb	84044.156	0.11	171278577	2000	>LDR
Na	23	2	45	84190.365	ppb	84190.365	1.14	13324249	400000	
Mg	24	2	45	112023.262	ppb	112023.262	0.48	7959115	400000	
Al	27	2	45	7.324	ppb	7.324	16.28	153	400000	
K	39	1	45	12587.598	ppb	12587.598	0.70	28750462	400000	
K	39	2	45	11058.633	ppb	11058.633	0.79	523266	400000	
Ca	40	1	45	106389.072	ppb	106389.072	0.97	330614962	400000	
Ca	44	2	45	85054.575	ppb	85054.575	0.84	247230	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	-5.716	ppb	-5.716	-4.23	2100	2000	
Cr	52	2	72	0.023	ppb	0.023	538.69	303	5000	
Mn	55	2	72	1296.553	ppb	1296.553	1.10	537462	10000	
Fe	57	2	72	1129.965	ppb	1129.965	2.62	21764	400000	
Co	59	2	72	2.035	ppb	2.035	3.01	4778	2000	
Ni	60	2	72	1.361	ppb	1.361	23.22	787	5000	
Cu	63	2	72	0.136	ppb	0.136	35.69	1097	5000	
Zn	66	2	72	2.347	ppb	2.347	13.97	600	5000	
As	75	2	72	1.198	ppb	1.198	20.87	231	2000	
Se	78	1	72	0.031	ppb	0.031	303.45	28	2000	
Sr	88	2	72	1016.707	ppb	1016.707	0.84	512938	4000	
Zr	90	2	72	143.272	ppb	143.272	15.35	303	1000	
Nb	93	2	72	0.816	ppb	0.816	17.27	2770	200	
Mo	95	2	115	3.472	ppb	3.472	3.68	2620	2000	
Pd	105	2	115	0.026	ppb	0.026	18.38	47	100	
Ag	107	2	115	-0.008	ppb	-0.008	-57.58	17	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.443	ppb	0.443	7.88	553	2000	
Sb	121	2	115	0.254	ppb	0.254	13.82	253	1000	
Ba	137	2	115	1059.266	ppb	1059.266	0.88	341074	5000	
W	182	2	165	0.446	ppb	0.446	7.37	2094	100	
Pt	195	2	165	-0.002	ppb	-0.002	0.00	0	100	
Tl	205	2	165	0.007	ppb	0.007	35.15	217	2000	
Pb	208	2	165	0.025	ppb	0.025	12.91	887	5000	
Th	232	2	165	0.308	ppb	0.308	5.85	4191	2000	
U	238	2	165	1.578	ppb	1.578	1.40	18434	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	615872	0.83	885786	69.53	60	120	
Sc (IS)	45	1	HMI H2	14904712	0.44	17935452	83.10	60	120	
Sc (IS)	45	2	HMI He	647954	1.09	724932	89.38	60	120	
Sc (IS)	45	3	No Gas	58068814	0.69	71931282	80.73	60	120	
Ge Internal Standard	72	1	HMI H2	6301395	0.30	7580625	83.13	60	120	
Ge Internal Standard	72	2	HMI He	844608	0.51	939613	89.89	60	120	
In Internal Standard	115	2	HMI He	3371269	0.12	3669615	91.87	60	120	
Ho-165	165	2	HMI He	15531079	0.40	16373961	94.85	60	120	

Sample Report

Sample Table

Sample Name	280-122978-A-1-Asd@5
Data File Name	060SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T13:18:23-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456919 6020a dod5
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-13.526	ppb	-13.526	-42.87	84447	500000	
Li	7	2	45	-11.140	ppb	-11.140	-356.86	4471	500000	
Li	7	3	45	-10.676	ppb	-10.676	-21.28	6998359	50000	
Be	9	1	6	0.006	ppb	0.006	851.33	7	2000	
B	11	1	6	4847.476	ppb	4847.476	1.03	39086	2000	
Na	23	1	45	16891.727	ppb	16891.727	1.05	36086172	2000	>LDR
Na	23	2	45	17027.190	ppb	17027.190	0.55	2772137	400000	
Mg	24	2	45	23215.207	ppb	23215.207	0.70	1691384	400000	
Al	27	2	45	2.544	ppb	2.544	42.58	67	400000	
K	39	1	45	2845.305	ppb	2845.305	2.62	13642176	400000	
K	39	2	45	2199.737	ppb	2199.737	0.41	130517	400000	
Ca	40	1	45	20905.677	ppb	20905.677	1.37	67906624	400000	
Ca	44	2	45	16753.514	ppb	16753.514	1.78	49979	400000	
Ti	47	2	45	0.164	ppb	0.164	173.21	3	4000	
V	51	2	72	-2.429	ppb	-2.429	-16.45	4874	2000	
Cr	52	2	72	-0.055	ppb	-0.055	-62.84	227	5000	
Mn	55	2	72	255.830	ppb	255.830	1.02	108909	10000	
Fe	57	2	72	221.336	ppb	221.336	6.41	4441	400000	
Co	59	2	72	0.403	ppb	0.403	20.67	1904	2000	
Ni	60	2	72	0.174	ppb	0.174	34.21	183	5000	
Cu	63	2	72	-0.056	ppb	-0.056	-100.55	843	5000	
Zn	66	2	72	0.684	ppb	0.684	48.65	260	5000	
As	75	2	72	0.377	ppb	0.377	9.71	95	2000	
Se	78	1	72	-0.043	ppb	-0.043	-65.67	17	2000	
Sr	88	2	72	197.205	ppb	197.205	0.87	102152	4000	
Zr	90	2	72	20.476	ppb	20.476	81.03	87	1000	
Nb	93	2	72	-0.165	ppb	-0.165	-88.24	1500	200	
Mo	95	2	115	0.670	ppb	0.670	14.59	553	2000	
Pd	105	2	115	0.020	ppb	0.020	80.74	40	100	
Ag	107	2	115	0.004	ppb	0.004	272.91	47	100	
Cd	111	2	115	0.010	ppb	0.010	173.21	3	2000	
Sn	120	2	115	0.132	ppb	0.132	61.08	267	2000	
Sb	121	2	115	0.187	ppb	0.187	22.31	197	1000	
Ba	137	2	115	208.558	ppb	208.558	0.50	68585	5000	
W	182	2	165	0.091	ppb	0.091	18.97	877	100	
Pt	195	2	165	-0.001	ppb	-0.001	-178.34	3	100	
Tl	205	2	165	0.009	ppb	0.009	65.50	237	2000	
Pb	208	2	165	0.481	ppb	0.481	4.06	5251	5000	
Th	232	2	165	0.031	ppb	0.031	47.14	1027	2000	
U	238	2	165	0.307	ppb	0.307	3.22	3714	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	663953	0.62	885786	74.96	60	120	
Sc (IS)	45	1	HMI H2	15574816	0.71	17935452	86.84	60	120	
Sc (IS)	45	2	HMI He	664409	0.46	724932	91.65	60	120	
Sc (IS)	45	3	No Gas	57507316	0.97	71931282	79.95	60	120	
Ge Internal Standard	72	1	HMI H2	6594505	0.14	7580625	86.99	60	120	
Ge Internal Standard	72	2	HMI He	866970	0.40	939613	92.27	60	120	
In Internal Standard	115	2	HMI He	3440413	0.76	3669615	93.75	60	120	
Ho-165	165	2	HMI He	15909439	0.66	16373961	97.16	60	120	

Sample Report

Sample Table

Sample Name	280-122978-A-1-B MS
Data File Name	061SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T13:22:16-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456919 6020a dod5
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	85.209	ppb	85.209	6.49	108116	500000	
Li	7	2	45	98.929	ppb	98.929	6.65	5671	500000	
Li	7	3	45	100.357	ppb	100.357	3.18	9255843	50000	
Be	9	1	6	44.281	ppb	44.281	8.89	9704	2000	
B	11	1	6	25547.894	ppb	25547.894	3.21	189778	2000	>LDR
Na	23	1	45	83701.643	ppb	83701.643	2.18	175295644	2000	>LDR
Na	23	2	45	82790.455	ppb	82790.455	0.85	13448445	400000	
Mg	24	2	45	109942.088	ppb	109942.088	0.38	8016578	400000	
Al	27	2	45	430.574	ppb	430.574	5.79	8199	400000	
K	39	1	45	12745.280	ppb	12745.280	2.51	29807920	400000	
K	39	2	45	11014.200	ppb	11014.200	1.17	534976	400000	
Ca	40	1	45	105389.351	ppb	105389.351	2.65	336542862	400000	
Ca	44	2	45	84473.112	ppb	84473.112	1.45	252004	400000	
Ti	47	2	45	0.164	ppb	0.164	173.21	3	4000	
V	51	2	72	35.457	ppb	35.457	1.56	35862	2000	
Cr	52	2	72	39.269	ppb	39.269	1.01	42279	5000	
Mn	55	2	72	1333.707	ppb	1333.707	0.16	562200	10000	
Fe	57	2	72	1555.142	ppb	1555.142	3.13	30430	400000	
Co	59	2	72	40.857	ppb	40.857	1.70	75597	2000	
Ni	60	2	72	38.084	ppb	38.084	4.25	19898	5000	
Cu	63	2	72	37.236	ppb	37.236	1.51	55036	5000	
Zn	66	2	72	40.853	ppb	40.853	6.61	8776	5000	
As	75	2	72	40.108	ppb	40.108	1.94	6908	2000	
Se	78	1	72	40.270	ppb	40.270	2.06	6414	2000	
Sr	88	2	72	1055.247	ppb	1055.247	0.53	541364	4000	
Zr	90	2	72	1016.145	ppb	1016.145	6.67	1890	1000	
Nb	93	2	72	-0.059	ppb	-0.059	-169.59	1630	200	
Mo	95	2	115	44.415	ppb	44.415	2.82	33063	2000	
Pd	105	2	115	0.015	ppb	0.015	82.58	33	100	
Ag	107	2	115	33.216	ppb	33.216	1.23	84816	100	
Cd	111	2	115	41.217	ppb	41.217	3.74	13824	2000	
Sn	120	2	115	40.346	ppb	40.346	0.89	38107	2000	
Sb	121	2	115	43.868	ppb	43.868	0.80	40226	1000	
Ba	137	2	115	1107.945	ppb	1107.945	1.00	357548	5000	
W	182	2	165	33.818	ppb	33.818	1.41	119898	100	
Pt	195	2	165	-0.001	ppb	-0.001	-184.97	3	100	
Tl	205	2	165	38.472	ppb	38.472	1.01	266259	2000	
Pb	208	2	165	38.389	ppb	38.389	0.39	361407	5000	
Th	232	2	165	38.147	ppb	38.147	1.46	445734	2000	
U	238	2	165	41.913	ppb	41.913	0.04	494313	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	615173	1.09	885786	69.45	60	120	
Sc (IS)	45	1	HMI H2	15319798	1.40	17935452	85.42	60	120	
Sc (IS)	45	2	HMI He	664975	0.49	724932	91.73	60	120	
Sc (IS)	45	3	No Gas	57208232	0.84	71931282	79.53	60	120	
Ge Internal Standard	72	1	HMI H2	6424189	0.47	7580625	84.74	60	120	
Ge Internal Standard	72	2	HMI He	858845	0.37	939613	91.40	60	120	
In Internal Standard	115	2	HMI He	3379083	1.11	3669615	92.08	60	120	
Ho-165	165	2	HMI He	15720722	0.22	16373961	96.01	60	120	

Sample Report

Sample Table

Sample Name	280-122978-A-1-C MSD
Data File Name	062SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T13:26:09-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456919 6020a dod5
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	79.509	ppb	79.509	9.20	107730	500000	
Li	7	2	45	74.636	ppb	74.636	36.38	5578	500000	
Li	7	3	45	104.298	ppb	104.298	7.56	9425505	50000	
Be	9	1	6	46.152	ppb	46.152	1.71	10111	2000	
B	11	1	6	26522.040	ppb	26522.040	1.26	196914	2000	>LDR
Na	23	1	45	85396.913	ppb	85396.913	0.06	180631997	2000	>LDR
Na	23	2	45	82425.292	ppb	82425.292	1.09	13812390	400000	
Mg	24	2	45	109793.777	ppb	109793.777	0.81	8259072	400000	
Al	27	2	45	414.865	ppb	414.865	0.96	8153	400000	
K	39	1	45	12977.049	ppb	12977.049	0.68	30492640	400000	
K	39	2	45	11079.759	ppb	11079.759	0.49	555036	400000	
Ca	40	1	45	107544.096	ppb	107544.096	0.09	346866861	400000	
Ca	44	2	45	85387.295	ppb	85387.295	1.39	262787	400000	
Ti	47	2	45	0.474	ppb	0.474	99.78	10	4000	
V	51	2	72	36.075	ppb	36.075	1.16	37315	2000	
Cr	52	2	72	40.370	ppb	40.370	1.59	44589	5000	
Mn	55	2	72	1350.702	ppb	1350.702	0.96	584201	10000	
Fe	57	2	72	1518.829	ppb	1518.829	0.62	30496	400000	
Co	59	2	72	41.018	ppb	41.018	0.72	77866	2000	
Ni	60	2	72	38.534	ppb	38.534	0.99	20659	5000	
Cu	63	2	72	37.163	ppb	37.163	0.58	56361	5000	
Zn	66	2	72	40.218	ppb	40.218	5.44	8866	5000	
As	75	2	72	41.331	ppb	41.331	1.41	7303	2000	
Se	78	1	72	37.927	ppb	37.927	2.03	6091	2000	
Sr	88	2	72	1072.837	ppb	1072.837	1.05	564727	4000	
Zr	90	2	72	1165.464	ppb	1165.464	9.17	2217	1000	
Nb	93	2	72	-0.432	ppb	-0.432	-11.39	1153	200	
Mo	95	2	115	43.820	ppb	43.820	1.71	33534	2000	
Pd	105	2	115	0.019	ppb	0.019	0.27	40	100	
Ag	107	2	115	31.668	ppb	31.668	1.60	83139	100	
Cd	111	2	115	41.489	ppb	41.489	4.42	14311	2000	
Sn	120	2	115	41.078	ppb	41.078	1.85	39891	2000	
Sb	121	2	115	44.914	ppb	44.914	0.79	42349	1000	
Ba	137	2	115	1122.498	ppb	1122.498	0.40	372495	5000	
W	182	2	165	33.812	ppb	33.812	2.23	122156	100	
Pt	195	2	165	-0.001	ppb	-0.001	-177.51	3	100	
Tl	205	2	165	38.852	ppb	38.852	0.18	273974	2000	
Pb	208	2	165	38.639	ppb	38.639	0.71	370648	5000	
Th	232	2	165	38.633	ppb	38.633	0.72	459952	2000	
U	238	2	165	42.193	ppb	42.193	0.26	507043	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	614748	0.41	885786	69.40	60	120	
Sc (IS)	45	1	HMI H2	15469903	0.35	17935452	86.25	60	120	
Sc (IS)	45	2	HMI He	686040	0.66	724932	94.64	60	120	
Sc (IS)	45	3	No Gas	57751957	0.81	71931282	80.29	60	120	
Ge Internal Standard	72	1	HMI H2	6475762	0.29	7580625	85.43	60	120	
Ge Internal Standard	72	2	HMI He	881226	0.21	939613	93.79	60	120	
In Internal Standard	115	2	HMI He	3474460	0.16	3669615	94.68	60	120	
Ho-165	165	2	HMI He	16018568	0.46	16373961	97.83	60	120	

Sample Report

Sample Table

Sample Name	280-122978-A-1-A pds
Data File Name	063SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T13:30:03-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456919 6020a dod5
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	7.576	ppb	7.576	39.03	89247	500000	
Li	7	2	45	-8.881	ppb	-8.881	-138.45	4631	500000	
Li	7	3	45	22.989	ppb	22.989	25.16	7625828	50000	
Be	9	1	6	256.262	ppb	256.262	1.11	55173	2000	
B	11	1	6	25576.223	ppb	25576.223	0.42	186709	2000	>LDR
Na	23	1	45	82850.248	ppb	82850.248	0.32	175155337	2000	>LDR
Na	23	2	45	79929.506	ppb	79929.506	0.77	13361424	400000	
Mg	24	2	45	107581.979	ppb	107581.979	0.50	8072684	400000	
Al	27	2	45	2310.640	ppb	2310.640	0.22	45207	400000	
K	39	1	45	12679.033	ppb	12679.033	0.69	29977955	400000	
K	39	2	45	10919.489	ppb	10919.489	0.97	546082	400000	
Ca	40	1	45	105282.849	ppb	105282.849	0.57	339393395	400000	
Ca	44	2	45	84074.092	ppb	84074.092	0.76	258108	400000	
Ti	47	2	45	6.014	ppb	6.014	24.32	127	4000	
V	51	2	72	221.783	ppb	221.783	1.87	193966	2000	
Cr	52	2	72	216.924	ppb	216.924	0.28	239038	5000	
Mn	55	2	72	1501.616	ppb	1501.616	0.98	651412	10000	
Fe	57	2	72	3293.859	ppb	3293.859	1.29	66238	400000	
Co	59	2	72	214.803	ppb	214.803	0.67	403972	2000	
Ni	60	2	72	206.240	ppb	206.240	1.76	110488	5000	
Cu	63	2	72	205.013	ppb	205.013	1.28	307583	5000	
Zn	66	2	72	221.927	ppb	221.927	1.37	48546	5000	
As	75	2	72	214.922	ppb	214.922	1.33	37961	2000	
Se	78	1	72	212.590	ppb	212.590	1.19	34075	2000	
Sr	88	2	72	1009.390	ppb	1009.390	1.27	532926	4000	
Zr	90	2	72	156702.576	ppb	156702.576	0.29	292318	1000	>LDR
Nb	93	2	72	3.894	ppb	3.894	8.43	7192	200	
Mo	95	2	115	217.212	ppb	217.212	0.60	166543	2000	
Pd	105	2	115	0.054	ppb	0.054	60.00	83	100	
Ag	107	2	115	40.985	ppb	40.985	1.16	107914	100	
Cd	111	2	115	224.070	ppb	224.070	0.44	77521	2000	
Sn	120	2	115	218.770	ppb	218.770	0.97	212478	2000	
Sb	121	2	115	230.813	ppb	230.813	0.68	218198	1000	
Ba	137	2	115	1276.811	ppb	1276.811	0.44	424985	5000	
W	182	2	165	210.056	ppb	210.056	0.54	757940	100	
Pt	195	2	165	0.097	ppb	0.097	11.17	287	100	
Tl	205	2	165	228.741	ppb	228.741	5.36	1616727	2000	
Pb	208	2	165	211.755	ppb	211.755	0.68	2033531	5000	
Th	232	2	165	1.156	ppb	1.156	2.89	14449	2000	
U	238	2	165	247.119	ppb	247.119	0.83	2977068	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	604418	0.36	885786	68.24	60	120	
Sc (IS)	45	1	HMI H2	15461685	0.36	17935452	86.21	60	120	
Sc (IS)	45	2	HMI He	684324	0.28	724932	94.40	60	120	
Sc (IS)	45	3	No Gas	56972309	0.40	71931282	79.20	60	120	
Ge Internal Standard	72	1	HMI H2	6484836	0.82	7580625	85.54	60	120	
Ge Internal Standard	72	2	HMI He	883877	0.37	939613	94.07	60	120	
In Internal Standard	115	2	HMI He	3485015	0.66	3669615	94.97	60	120	
Ho-165	165	2	HMI He	16060585	0.88	16373961	98.09	60	120	

Sample Report

Sample Table

Sample Name	280-122932-J-12-B
Data File Name	064SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T13:33:56-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456609 6020a dod5
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-36.895	ppb	-36.895	-4.00	77191	500000	
Li	7	2	45	-72.253	ppb	-72.253	-21.94	3921	500000	
Li	7	3	45	-23.993	ppb	-23.993	-7.34	6711094	50000	
Be	9	1	6	0.221	ppb	0.221	11.02	53	2000	
B	11	1	6	857.020	ppb	857.020	2.08	6602	2000	
Na	23	1	45	15366.493	ppb	15366.493	0.55	32325593	2000	>LDR
Na	23	2	45	15337.489	ppb	15337.489	1.05	2571540	400000	
Mg	24	2	45	8094.491	ppb	8094.491	0.33	607162	400000	
Al	27	2	45	35.190	ppb	35.190	3.36	707	400000	
K	39	1	45	-760.537	ppb	-760.537	-2.12	7453207	400000	
K	39	2	45	1219.211	ppb	1219.211	0.90	88090	400000	
Ca	40	1	45	40169.751	ppb	40169.751	0.33	128406048	400000	
Ca	44	2	45	31697.120	ppb	31697.120	2.59	97292	400000	
Ti	47	2	45	0.951	ppb	0.951	86.81	20	4000	
V	51	2	72	1.163	ppb	1.163	6.33	8033	2000	
Cr	52	2	72	1.095	ppb	1.095	4.89	1503	5000	
Mn	55	2	72	6.573	ppb	6.573	6.73	2924	10000	
Fe	57	2	72	63.028	ppb	63.028	8.88	1353	400000	
Co	59	2	72	0.025	ppb	0.025	112.87	1237	2000	
Ni	60	2	72	1.015	ppb	1.015	25.46	640	5000	
Cu	63	2	72	0.469	ppb	0.469	9.72	1654	5000	
Zn	66	2	72	41.672	ppb	41.672	7.30	9250	5000	
As	75	2	72	0.703	ppb	0.703	18.84	156	2000	
Se	78	1	72	0.235	ppb	0.235	69.20	61	2000	
Sr	88	2	72	209.090	ppb	209.090	0.42	110906	4000	
Zr	90	2	72	218.719	ppb	218.719	17.16	460	1000	
Nb	93	2	72	-1.176	ppb	-1.176	-3.21	120	200	
Mo	95	2	115	2.801	ppb	2.801	5.38	2284	2000	
Pd	105	2	115	0.013	ppb	0.013	32.81	33	100	
Ag	107	2	115	0.009	ppb	0.009	127.59	63	100	
Cd	111	2	115	0.037	ppb	0.037	43.05	13	2000	
Sn	120	2	115	0.398	ppb	0.398	27.52	550	2000	
Sb	121	2	115	0.363	ppb	0.363	28.40	380	1000	
Ba	137	2	115	80.203	ppb	80.203	2.02	27849	5000	
W	182	2	165	0.259	ppb	0.259	16.49	1493	100	
Pt	195	2	165	0.000	ppb	0.000	5948.78	7	100	
Tl	205	2	165	0.056	ppb	0.056	27.76	573	2000	
Pb	208	2	165	0.053	ppb	0.053	10.11	1193	5000	
Th	232	2	165	-0.004	ppb	-0.004	-88.24	613	2000	
U	238	2	165	1.920	ppb	1.920	0.41	23238	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	615031	0.95	885786	69.43	60	120	
Sc (IS)	45	1	HMI H2	15329758	0.49	17935452	85.47	60	120	
Sc (IS)	45	2	HMI He	683952	0.33	724932	94.35	60	120	
Sc (IS)	45	3	No Gas	57415824	0.88	71931282	79.82	60	120	
Ge Internal Standard	72	1	HMI H2	6451510	0.46	7580625	85.11	60	120	
Ge Internal Standard	72	2	HMI He	887769	0.12	939613	94.48	60	120	
In Internal Standard	115	2	HMI He	3627017	0.83	3669615	98.84	60	120	
Ho-165	165	2	HMI He	16098643	0.87	16373961	98.32	60	120	

Sample Report

Sample Table

Sample Name	280-122932-J-13-B
Data File Name	065SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T13:37:48-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456609 6020a dod5
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-32.002	ppb	-32.002	-16.33	78327	500000	
Li	7	2	45	-52.917	ppb	-52.917	-38.05	4117	500000	
Li	7	3	45	-27.508	ppb	-27.508	-2.29	6674726	50000	
Be	9	1	6	0.053	ppb	0.053	49.16	17	2000	
B	11	1	6	338.046	ppb	338.046	3.23	2770	2000	
Na	23	1	45	13843.246	ppb	13843.246	0.54	29095566	2000	>LDR
Na	23	2	45	13734.753	ppb	13734.753	1.48	2293843	400000	
Mg	24	2	45	16080.862	ppb	16080.862	2.29	1200717	400000	
Al	27	2	45	13.945	ppb	13.945	13.90	290	400000	
K	39	1	45	-1656.938	ppb	-1656.938	-1.47	5959761	400000	
K	39	2	45	579.016	ppb	579.016	4.56	57630	400000	
Ca	40	1	45	52813.809	ppb	52813.809	0.53	168586081	400000	
Ca	44	2	45	41164.628	ppb	41164.628	0.38	125788	400000	
Ti	47	2	45	0.321	ppb	0.321	173.21	7	4000	
V	51	2	72	3.248	ppb	3.248	6.45	9734	2000	
Cr	52	2	72	0.533	ppb	0.533	4.96	877	5000	
Mn	55	2	72	47.709	ppb	47.709	0.88	20709	10000	
Fe	57	2	72	47.658	ppb	47.658	4.72	1037	400000	
Co	59	2	72	0.072	ppb	0.072	91.49	1317	2000	
Ni	60	2	72	0.255	ppb	0.255	68.02	230	5000	
Cu	63	2	72	0.222	ppb	0.222	75.72	1273	5000	
Zn	66	2	72	2.928	ppb	2.928	5.68	753	5000	
As	75	2	72	0.791	ppb	0.791	21.50	170	2000	
Se	78	1	72	0.108	ppb	0.108	61.11	41	2000	
Sr	88	2	72	281.006	ppb	281.006	1.59	148067	4000	
Zr	90	2	72	60.969	ppb	60.969	75.57	163	1000	
Nb	93	2	72	-1.177	ppb	-1.177	-3.05	117	200	
Mo	95	2	115	0.871	ppb	0.871	11.12	730	2000	
Pd	105	2	115	0.006	ppb	0.006	158.38	23	100	
Ag	107	2	115	0.010	ppb	0.010	115.38	67	100	
Cd	111	2	115	0.009	ppb	0.009	173.21	3	2000	
Sn	120	2	115	0.123	ppb	0.123	62.16	267	2000	
Sb	121	2	115	0.121	ppb	0.121	38.56	140	1000	
Ba	137	2	115	44.885	ppb	44.885	1.24	15313	5000	
W	182	2	165	0.111	ppb	0.111	37.21	953	100	
Pt	195	2	165	-0.001	ppb	-0.001	-176.65	3	100	
Tl	205	2	165	0.020	ppb	0.020	66.65	320	2000	
Pb	208	2	165	0.088	ppb	0.088	29.09	1520	5000	
Th	232	2	165	-0.017	ppb	-0.017	-21.97	467	2000	
U	238	2	165	4.988	ppb	4.988	1.01	60003	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	619104	0.74	885786	69.89	60	120	
Sc (IS)	45	1	HMI H2	15308799	0.35	17935452	85.35	60	120	
Sc (IS)	45	2	HMI He	680990	0.94	724932	93.94	60	120	
Sc (IS)	45	3	No Gas	57729672	0.75	71931282	80.26	60	120	
Ge Internal Standard	72	1	HMI H2	6502711	1.42	7580625	85.78	60	120	
Ge Internal Standard	72	2	HMI He	881908	0.70	939613	93.86	60	120	
In Internal Standard	115	2	HMI He	3556076	0.53	3669615	96.91	60	120	
Ho-165	165	2	HMI He	16021720	0.45	16373961	97.85	60	120	

Sample Report

Sample Table

Sample Name	280-122932-J-14-B
Data File Name	066SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T13:41:41-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456609 6020a dod5
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-27.060	ppb	-27.060	-13.79	78388	500000	
Li	7	2	45	-41.330	ppb	-41.330	-74.51	4147	500000	
Li	7	3	45	-22.755	ppb	-22.755	-23.25	6568652	50000	
Be	9	1	6	0.008	ppb	0.008	338.45	7	2000	
B	11	1	6	293.943	ppb	293.943	12.45	2430	2000	
Na	23	1	45	11627.575	ppb	11627.575	0.26	24094386	2000	>LDR
Na	23	2	45	11501.498	ppb	11501.498	1.14	1877100	400000	
Mg	24	2	45	13468.403	ppb	13468.403	0.97	981884	400000	
Al	27	2	45	10.271	ppb	10.271	13.70	213	400000	
K	39	1	45	-1613.519	ppb	-1613.519	-3.07	5941016	400000	
K	39	2	45	573.508	ppb	573.508	3.81	56014	400000	
Ca	40	1	45	50232.508	ppb	50232.508	0.11	157942374	400000	
Ca	44	2	45	39261.163	ppb	39261.163	1.73	117124	400000	
Ti	47	2	45	0.812	ppb	0.812	68.58	17	4000	
V	51	2	72	-3.835	ppb	-3.835	-3.37	3721	2000	
Cr	52	2	72	0.114	ppb	0.114	42.86	410	5000	
Mn	55	2	72	1453.090	ppb	1453.090	0.96	619803	10000	
Fe	57	2	72	1221.232	ppb	1221.232	0.72	24198	400000	
Co	59	2	72	1.356	ppb	1.356	16.63	3664	2000	
Ni	60	2	72	0.869	ppb	0.869	7.55	550	5000	
Cu	63	2	72	0.101	ppb	0.101	173.20	1077	5000	
Zn	66	2	72	4.595	ppb	4.595	5.26	1100	5000	
As	75	2	72	1.287	ppb	1.287	11.72	254	2000	
Se	78	1	72	0.036	ppb	0.036	103.42	29	2000	
Sr	88	2	72	265.848	ppb	265.848	1.18	138029	4000	
Zr	90	2	72	45.857	ppb	45.857	25.02	133	1000	
Nb	93	2	72	-1.171	ppb	-1.171	-2.02	123	200	
Mo	95	2	115	4.119	ppb	4.119	6.00	3221	2000	
Pd	105	2	115	-0.002	ppb	-0.002	-442.49	13	100	
Ag	107	2	115	0.033	ppb	0.033	79.99	127	100	
Cd	111	2	115	0.010	ppb	0.010	173.21	3	2000	
Sn	120	2	115	0.120	ppb	0.120	71.17	260	2000	
Sb	121	2	115	0.089	ppb	0.089	34.38	107	1000	
Ba	137	2	115	107.015	ppb	107.015	2.82	35841	5000	
W	182	2	165	0.158	ppb	0.158	12.20	1107	100	
Pt	195	2	165	-0.002	ppb	-0.002	0.00	0	100	
Tl	205	2	165	0.027	ppb	0.027	51.80	360	2000	
Pb	208	2	165	0.020	ppb	0.020	6.91	863	5000	
Th	232	2	165	-0.014	ppb	-0.014	-39.23	487	2000	
U	238	2	165	2.444	ppb	2.444	4.08	29060	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	616455	0.60	885786	69.59	60	120	
Sc (IS)	45	1	HMI H2	15079184	0.48	17935452	84.07	60	120	
Sc (IS)	45	2	HMI He	664824	0.74	724932	91.71	60	120	
Sc (IS)	45	3	No Gas	55982366	0.99	71931282	77.83	60	120	
Ge Internal Standard	72	1	HMI H2	6401067	0.79	7580625	84.44	60	120	
Ge Internal Standard	72	2	HMI He	869054	0.24	939613	92.49	60	120	
In Internal Standard	115	2	HMI He	3501390	1.71	3669615	95.42	60	120	
Ho-165	165	2	HMI He	15821949	0.31	16373961	96.63	60	120	

Sample Report

Sample Table

Sample Name	280-122932-J-23-B
Data File Name	067SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T13:45:33-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456609 6020a dod5
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-32.910	ppb	-32.910	-8.20	75496	500000	
Li	7	2	45	-71.583	ppb	-71.583	-60.16	3781	500000	
Li	7	3	45	-24.940	ppb	-24.940	-18.25	6424988	50000	
Be	9	1	6	0.008	ppb	0.008	655.19	7	2000	
B	11	1	6	295.623	ppb	295.623	3.21	2404	2000	
Na	23	1	45	10462.147	ppb	10462.147	0.73	21290436	2000	>LDR
Na	23	2	45	10341.028	ppb	10341.028	0.03	1672090	400000	
Mg	24	2	45	14861.351	ppb	14861.351	0.45	1072698	400000	
Al	27	2	45	85.857	ppb	85.857	13.46	1633	400000	
K	39	1	45	-571.533	ppb	-571.533	-2.28	7497729	400000	
K	39	2	45	1392.284	ppb	1392.284	3.80	92638	400000	
Ca	40	1	45	69010.645	ppb	69010.645	0.82	212935663	400000	
Ca	44	2	45	53890.777	ppb	53890.777	0.35	159153	400000	
Ti	47	2	45	3.125	ppb	3.125	63.72	63	4000	
V	51	2	72	-2.868	ppb	-2.868	-9.22	4478	2000	
Cr	52	2	72	0.385	ppb	0.385	38.03	697	5000	
Mn	55	2	72	4278.526	ppb	4278.526	1.22	1806681	10000	
Fe	57	2	72	935.582	ppb	935.582	2.17	18372	400000	
Co	59	2	72	2.502	ppb	2.502	11.47	5721	2000	
Ni	60	2	72	11.285	ppb	11.285	12.77	5972	5000	
Cu	63	2	72	1.345	ppb	1.345	5.34	2877	5000	
Zn	66	2	72	9.859	ppb	9.859	14.02	2207	5000	
As	75	2	72	2.135	ppb	2.135	11.21	397	2000	
Se	78	1	72	0.022	ppb	0.022	519.16	27	2000	
Sr	88	2	72	306.130	ppb	306.130	1.80	157356	4000	
Zr	90	2	72	175.059	ppb	175.059	50.04	367	1000	
Nb	93	2	72	-1.124	ppb	-1.124	-3.71	187	200	
Mo	95	2	115	3.566	ppb	3.566	4.15	2777	2000	
Pd	105	2	115	-0.010	ppb	-0.010	-46.96	3	100	
Ag	107	2	115	0.008	ppb	0.008	46.57	60	100	
Cd	111	2	115	0.010	ppb	0.010	173.21	3	2000	
Sn	120	2	115	0.177	ppb	0.177	28.38	313	2000	
Sb	121	2	115	0.139	ppb	0.139	42.29	153	1000	
Ba	137	2	115	166.207	ppb	166.207	1.97	55309	5000	
W	182	2	165	0.692	ppb	0.692	4.67	2997	100	
Pt	195	2	165	0.005	ppb	0.005	128.11	20	100	
Tl	205	2	165	0.015	ppb	0.015	14.82	277	2000	
Pb	208	2	165	0.203	ppb	0.203	10.20	2584	5000	
Th	232	2	165	0.019	ppb	0.019	66.23	880	2000	
U	238	2	165	3.385	ppb	3.385	1.27	40120	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	606723	1.37	885786	68.50	60	120	
Sc (IS)	45	1	HMI H2	14799434	1.09	17935452	82.51	60	120	
Sc (IS)	45	2	HMI He	658208	0.30	724932	90.80	60	120	
Sc (IS)	45	3	No Gas	55125383	0.42	71931282	76.64	60	120	
Ge Internal Standard	72	1	HMI H2	6273517	0.66	7580625	82.76	60	120	
Ge Internal Standard	72	2	HMI He	860404	0.18	939613	91.57	60	120	
In Internal Standard	115	2	HMI He	3480461	0.56	3669615	94.85	60	120	
Ho-165	165	2	HMI He	15777843	0.25	16373961	96.36	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5688510
Data File Name	068_CCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T13:49:26-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	71.080	ppb	7.276	100276	100	71.1	90	110	>+\-10%
Li	7	2	45	68.031	ppb	23.345	5134	100	68.0	90	110	>+\-10%
Li	7	3	45	77.202	ppb	5.882	8216190	100	77.2	90	110	>+\-10%
Be	9	1	6	52.922	ppb	3.133	11735	50	105.8	90	110	
B	11	1	6	213.150	ppb	10.821	1847	50	426.3	90	110	>+\-10%
Na	23	1	45	1068.958	ppb	1.635	2282538	1000	106.9	90	110	
Na	23	2	45	977.079	ppb	0.954	163086	1000	97.7	90	110	
Mg	24	2	45	1004.258	ppb	2.239	70561	1000	100.4	90	110	
Al	27	2	45	1048.725	ppb	2.506	19200	1000	104.9	90	110	
K	39	1	45	847.693	ppb	6.752	9698974	1000	84.8	90	110	>+\-10%
K	39	2	45	974.046	ppb	2.373	71598	1000	97.4	90	110	
Ca	40	1	45	1058.484	ppb	0.546	3272583	1000	105.8	90	110	
Ca	44	2	45	982.578	ppb	5.063	2874	1000	98.3	90	110	
Ti	47	2	45	50.946	ppb	11.000	1003	50	101.9	90	110	
V	51	2	72	46.830	ppb	1.934	44415	50	93.7	90	110	
Cr	52	2	72	48.945	ppb	1.653	51743	50	97.9	90	110	
Mn	55	2	72	50.014	ppb	0.539	20782	50	100.0	90	110	
Fe	57	2	72	1013.712	ppb	1.619	19527	1000	101.4	90	110	
Co	59	2	72	48.171	ppb	2.218	87416	50	96.3	90	110	
Ni	60	2	72	46.366	ppb	1.861	23801	50	92.7	90	110	
Cu	63	2	72	47.223	ppb	0.360	68376	50	94.4	90	110	
Zn	66	2	72	49.565	ppb	1.226	10444	50	99.1	90	110	
As	75	2	72	48.744	ppb	0.400	8248	50	97.5	90	110	
Se	78	1	72	48.278	ppb	3.505	7510	50	96.6	90	110	
Sr	88	2	72	106.999	ppb	0.683	53993	100	107.0	90	110	
Zr	90	2	72	143.297	ppb	15.566	303	50	286.6	90	110	>+\-10%
Nb	93	2	72	93.950	ppb	1.976	126916	100	94.0	90	110	
Mo	95	2	115	46.918	ppb	2.864	35459	50	93.8	90	110	
Pd	105	2	115	46.955	ppb	2.807	58415	50	93.9	90	110	
Ag	107	2	115	47.032	ppb	0.944	121951	50	94.1	90	110	
Cd	111	2	115	49.545	ppb	3.793	16878	50	99.1	90	110	
Sn	120	2	115	48.103	ppb	1.707	46121	50	96.2	90	110	
Sb	121	2	115	49.647	ppb	2.204	46231	50	99.3	90	110	
Ba	137	2	115	47.220	ppb	2.657	15543	50	94.4	90	110	
W	182	2	165	48.221	ppb	0.128	169662	50	96.4	90	110	
Pt	195	2	165	46.778	ppb	0.931	131606	50	93.6	90	110	
Tl	205	2	165	48.760	ppb	0.876	335266	50	97.5	90	110	
Pb	208	2	165	48.937	ppb	0.476	457623	50	97.9	90	110	
Th	232	2	165	49.104	ppb	0.838	569949	50	98.2	90	110	
U	238	2	165	49.630	ppb	0.613	581620	50	99.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	622265	0.44	885786	70.25	60	120	
Sc (IS)	45	1	HMI H2	14695122	0.61	17935452	81.93	60	120	
Sc (IS)	45	2	HMI He	639965	0.74	724932	88.28	60	120	
Sc (IS)	45	3	No Gas	53551649	1.06	71931282	74.45	60	120	
Ge Internal Standard	72	1	HMI H2	6277968	0.45	7580625	82.82	60	120	
Ge Internal Standard	72	2	HMI He	844362	0.87	939613	89.86	60	120	
In Internal Standard	115	2	HMI He	3431929	0.97	3669615	93.52	60	120	
Ho-165	165	2	HMI He	15621824	0.80	16373961	95.41	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5688508
Data File Name	069_CCB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T13:53:19-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-21.844	ppb	-19.7	6171018	10	
Be	9	1	6	-0.023	ppb	0.0	0	0.5	
B	11	1	6	123.168	ppb	8.3	1157	0.5	>RL
Na	23	1	45	-2.217	ppb	-50.0	129489	25	
Na	23	2	45	-3.886	ppb	-71.4	9630	25	
Mg	24	2	45	1.775	ppb	73.5	217	25	
Al	27	2	45	0.715	ppb	135.4	30	15	
K	39	1	45	-1.802	ppb	-3381.3	8187556	50	
K	39	2	45	-24.928	ppb	-195.0	26842	50	
Ca	40	1	45	4.085	ppb	6.6	41540	50	
Ca	44	2	45	-11.331	ppb	-83.0	20	25	
Ti	47	2	45	0.174	ppb	173.2	3	0.5	
V	51	2	72	-0.685	ppb	-95.4	5932	1	
Cr	52	2	72	-0.068	ppb	-80.2	200	1	
Mn	55	2	72	0.188	ppb	35.4	130	0.5	
Fe	57	2	72	0.623	ppb	105.9	87	25	
Co	59	2	72	-0.041	ppb	-170.1	1020	0.5	
Ni	60	2	72	0.095	ppb	64.2	133	1	
Cu	63	2	72	0.262	ppb	12.1	1230	1	
Zn	66	2	72	0.960	ppb	12.5	300	5	
As	75	2	72	-0.001	ppb	-2596.9	28	1	
Se	78	1	72	0.169	ppb	47.5	48	1	
Sr	88	2	72	0.030	ppb	199.5	43	0.5	
Zr	90	2	72	10.005	ppb	121.8	63	1	>RL
Nb	93	2	72	2.618	ppb	7.7	4985	2	>RL
Mo	95	2	115	-0.004	ppb	-1361.7	43	0.5	
Pd	105	2	115	0.015	ppb	137.9	33	1	
Ag	107	2	115	0.020	ppb	29.7	87	1	
Cd	111	2	115	0.030	ppb	100.4	10	0.5	
Sn	120	2	115	0.258	ppb	38.2	380	1	
Sb	121	2	115	0.199	ppb	13.8	203	0.6	
Ba	137	2	115	-0.055	ppb	-167.1	50	0.5	
W	182	2	165	0.036	ppb	24.7	663	1	
Pt	195	2	165	0.001	ppb	274.1	10	1	
Tl	205	2	165	0.027	ppb	70.4	353	0.1	
Pb	208	2	165	0.106	ppb	18.6	1643	0.5	
Th	232	2	165	0.169	ppb	18.5	2594	1	
U	238	2	165	0.016	ppb	32.9	240	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	614503	0.53	885786	69.37	60	120	
Sc (IS)	45	1	HMI H2	14409733	0.51	17935452	80.34	60	120	
Sc (IS)	45	2	HMI He	624687	0.42	724932	86.17	60	120	
Sc (IS)	45	3	No Gas	52447793	0.69	71931282	72.91	60	120	
Ge Internal Standard	72	1	HMI H2	6104107	0.26	7580625	80.52	60	120	
Ge Internal Standard	72	2	HMI He	814073	0.91	939613	86.64	60	120	
In Internal Standard	115	2	HMI He	3376793	1.04	3669615	92.02	60	120	
Ho-165	165	2	HMI He	15550999	0.72	16373961	94.97	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5688512
Data File Name	070LCCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T13:57:11-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-13.891	ppb	-27.436	6351904	50	-27.8	70	130	>+/-30%
Be	9	1	6	1.040	ppb	31.733	230	1	104.0	70	130	
Na	23	2	45	40.140	ppb	8.020	16139	50	80.3	70	130	
Mg	24	2	45	56.294	ppb	2.236	3902	50	112.6	70	130	
Al	27	2	45	57.252	ppb	9.644	1027	30	190.8	70	130	>+/-30%
K	39	2	45	72.494	ppb	17.923	30660	100	72.5	70	130	
Ca	44	2	45	42.794	ppb	86.298	170	50	85.6	70	130	
V	51	2	72	3.535	ppb	9.160	9197	5	70.7	70	130	
Cr	52	2	72	1.869	ppb	12.917	2160	2	93.5	70	130	
Mn	55	2	72	1.065	ppb	25.252	480	1	106.5	70	130	
Fe	57	2	72	52.030	ppb	5.840	1037	50	104.1	70	130	
Co	59	2	72	1.001	ppb	16.569	2817	1	100.1	70	130	
Ni	60	2	72	1.361	ppb	8.646	757	1.5	90.7	70	130	
Cu	63	2	72	1.883	ppb	11.681	3461	2	94.2	70	130	
Zn	66	2	72	10.726	ppb	3.235	2260	10	107.3	70	130	
As	75	2	72	4.902	ppb	0.886	824	5	98.0	70	130	
Se	78	1	72	4.991	ppb	8.381	777	5	99.8	70	130	
Sr	88	2	72	1.176	ppb	7.133	600	1	117.6	70	130	
Zr	90	2	72	-1.589	ppb	-929.918	43	0.5	-317.9	70	130	>+/-30%
Nb	93	2	72	0.841	ppb	34.194	2697	2	42.0	70	130	>+/-30%
Mo	95	2	115	1.871	ppb	18.025	1430	2	93.6	70	130	
Pd	105	2	115	0.007	ppb	282.944	23	1	0.7	70	130	>+/-30%
Ag	107	2	115	4.819	ppb	1.434	12286	5	96.4	70	130	
Cd	111	2	115	1.016	ppb	19.054	340	1	101.6	70	130	
Sn	120	2	115	9.963	ppb	2.109	9477	10	99.6	70	130	
Sb	121	2	115	2.195	ppb	6.587	2024	2	109.7	70	130	
Ba	137	2	115	0.745	ppb	8.330	307	1	74.5	70	130	
W	182	2	165	4.813	ppb	4.836	17225	1	481.3	70	130	>+/-30%
Pt	195	2	165	-0.002	ppb	0.000	0	1	-0.2	70	130	>+/-30%
Tl	205	2	165	0.950	ppb	3.101	6625	1	95.0	70	130	
Pb	208	2	165	1.054	ppb	0.565	10385	1	105.4	70	130	
Th	232	2	165	1.724	ppb	2.555	20404	2	86.2	70	130	
U	238	2	165	1.012	ppb	2.870	11779	1	101.2	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	607478	0.44	885786	68.58	60	120	
Sc (IS)	45	1	HMI H2	14241686	0.11	17935452	79.41	60	120	
Sc (IS)	45	2	HMI He	617010	0.82	724932	85.11	60	120	
Sc (IS)	45	3	No Gas	52701094	1.33	71931282	73.27	60	120	
Ge Internal Standard	72	1	HMI H2	6122559	0.96	7580625	80.77	60	120	
Ge Internal Standard	72	2	HMI He	813184	0.50	939613	86.54	60	120	
In Internal Standard	115	2	HMI He	3365458	1.48	3669615	91.71	60	120	
Ho-165	165	2	HMI He	15446389	0.25	16373961	94.34	60	120	

Blank Report

Sample Table

Sample Name	MB 280-456592/1-A
Data File Name	071_BLK.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T14:01:04-06:00
Sample Type	Blank
Dilution	1
Comment	456592 6020a dod5
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-29.420	ppb	-18.88671736	72702	0.5
Li	7	2	45	-68.093	ppb	-6.412423599	3684	0.5
Li	7	3	45	-26.417	ppb	-22.4198193	6253402	10
Be	9	1	6	-0.023	ppb	0	0	0.5
B	11	1	6	130.122	ppb	9.509134075	1140	0.5
Na	23	1	45	-1.962	ppb	-78.42546832	127141	25
Na	23	2	45	-0.266	ppb	-1454.112102	10351	25
Mg	24	2	45	4.838	ppb	17.18967888	433	25
Al	27	2	45	6.379	ppb	38.85319134	133	15
K	39	1	45	-2281.910	ppb	-0.760043262	4534253	50
K	39	2	45	-35.129	ppb	-34.98641643	26842	50
Ca	40	1	45	22.983	ppb	4.614215331	96137	50
Ca	44	2	45	21.315	ppb	49.98630012	113	25
Ti	47	2	45	0.171	ppb	173.2050808	3	0.5
V	51	2	72	-3.556	ppb	-4.812789715	3751	1
Cr	52	2	72	0.111	ppb	59.29727507	387	1
Mn	55	2	72	0.447	ppb	40.71995589	237	0.5
Fe	57	2	72	16.382	ppb	27.33288058	383	25
Co	59	2	72	-0.054	ppb	-137.8158123	1010	0.5
Ni	60	2	72	-0.022	ppb	-182.0034157	77	1
Cu	63	2	72	0.255	ppb	20.36780104	1237	1
Zn	66	2	72	2.760	ppb	8.516077393	670	5
As	75	2	72	0.020	ppb	193.0109353	32	1
Se	78	1	72	0.012	ppb	387.0134909	24	1
Sr	88	2	72	0.063	ppb	86.30360249	60	0.5
Zr	90	2	72	3.798	ppb	317.3381526	53	1
Nb	93	2	72	0.700	ppb	10.91129678	2554	2
Mo	95	2	115	0.045	ppb	181.128898	80	0.5
Pd	105	2	115	-0.007	ppb	-133.5655041	7	1
Ag	107	2	115	0.118	ppb	30.30734984	340	1
Cd	111	2	115	0.020	ppb	173.2050808	7	0.5
Sn	120	2	115	0.220	ppb	37.28023636	347	1
Sb	121	2	115	0.085	ppb	43.86068086	100	0.6
Ba	137	2	115	0.232	ppb	65.82828453	143	0.5
W	182	2	165	0.140	ppb	11.59619501	1020	1
Pt	195	2	165	-0.002	ppb	0	0	1
Tl	205	2	165	0.028	ppb	30.87564263	360	0.1
Pb	208	2	165	0.137	ppb	15.05504997	1927	0.5
Th	232	2	165	0.254	ppb	7.327681526	3554	1
U	238	2	165	0.007	ppb	42.42111871	140	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	579861	0.63	885786	65.46	60	120	
Sc (IS)	45	1	HMI H2	14092446	0.44	17935452	78.57	60	120	
Sc (IS)	45	2	HMI He	635129	0.42	724932	87.61	60	120	
Sc (IS)	45	3	No Gas	53912251	1.90	71931282	74.95	60	120	
Ge Internal Standard	72	1	HMI H2	6019108	0.73	7580625	79.40	60	120	
Ge Internal Standard	72	2	HMI He	824633	0.64	939613	87.76	60	120	
In Internal Standard	115	2	HMI He	3401588	0.62	3669615	92.70	60	120	
Ho-165	165	2	HMI He	15468669	0.60	16373961	94.47	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-456592/2-A
Data File Name	072_LCS.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T14:04:58-06:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	456592 6020a dod5
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	51.239	51.239	ppb	6.637	93623	400	12.8	80	120	>+/-20%
Li	7	2	45	58.000	58.000	ppb	18.115	5038	400	14.5	80	120	>+/-20%
Li	7	3	45	52.971	52.971	ppb	5.370	7939911	400	13.2	80	120	>+/-20%
Be	9	1	6	44.129	44.129	ppb	4.779	9407	40	110.3	80	120	
Na	23	2	45	-5.911	-5.911	ppb	-17.056	9564	40	-14.8	80	120	>+/-20%
Mg	24	2	45	3.594	3.594	ppb	25.477	350	40	9.0	80	120	>+/-20%
Al	27	2	45	429.930	429.930	ppb	2.011	7892	40	1074.8	80	120	>+/-20%
K	39	2	45	-28.393	-28.393	ppb	-78.625	27386	40	-71.0	80	120	>+/-20%
Ca	44	2	45	107.946	107.946	ppb	4.099	363	40	269.9	80	120	>+/-20%
V	51	2	72	37.156	37.156	ppb	1.007	36296	40	92.9	80	120	
Cr	52	2	72	40.081	40.081	ppb	3.329	42038	40	100.2	80	120	
Mn	55	2	72	41.731	41.731	ppb	3.609	17194	40	104.3	80	120	
Fe	57	2	72	470.131	470.131	ppb	5.281	9017	40	1175.3	80	120	>+/-20%
Co	59	2	72	40.885	40.885	ppb	0.752	73704	40	102.2	80	120	
Ni	60	2	72	39.839	39.839	ppb	1.539	20278	40	99.6	80	120	
Cu	63	2	72	39.693	39.693	ppb	1.984	57100	40	99.2	80	120	
Zn	66	2	72	41.817	41.817	ppb	3.361	8750	40	104.5	80	120	
As	75	2	72	38.922	38.922	ppb	2.159	6532	40	97.3	80	120	
Se	78	1	72	37.471	37.471	ppb	2.150	5691	40	93.7	80	120	
Nb	93	2	72	0.157	0.157	ppb	120.254	1874	40	0.4	80	120	>+/-20%
Mo	95	2	115	38.977	38.977	ppb	1.477	29244	40	97.4	80	120	
Pd	105	2	115	-0.010	-0.010	ppb	-47.934	3	40	0.0	80	120	>+/-20%
Ag	107	2	115	39.040	39.040	ppb	2.453	100462	40	97.6	80	120	
Cd	111	2	115	39.561	39.561	ppb	1.604	13377	40	98.9	80	120	
Sn	120	2	115	39.625	39.625	ppb	1.716	37725	40	99.1	80	120	
Sb	121	2	115	40.258	40.258	ppb	5.397	37208	40	100.6	80	120	
Ba	137	2	115	41.256	41.256	ppb	4.810	13484	40	103.1	80	120	
W	182	2	165	32.238	32.238	ppb	1.024	114012	40	80.6	80	120	
Pt	195	2	165	0.001	0.001	ppb	280.906	10	40	0.0	80	120	>+/-20%
Tl	205	2	165	39.632	39.632	ppb	0.409	273529	40	99.1	80	120	
Pb	208	2	165	40.103	40.103	ppb	0.988	376489	40	100.3	80	120	
Th	232	2	165	37.973	37.973	ppb	0.663	442496	40	94.9	80	120	
U	238	2	165	40.446	40.446	ppb	0.853	475711	40	101.1	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	598185	0.46	885786	67.53	60	120	
Sc (IS)	45	1	HMI H2	14414088	0.43	17935452	80.37	60	120	
Sc (IS)	45	2	HMI He	640961	0.34	724932	88.42	60	120	
Sc (IS)	45	3	No Gas	54877571	0.23	71931282	76.29	60	120	
Ge Internal Standard	72	1	HMI H2	6123536	0.50	7580625	80.78	60	120	
Ge Internal Standard	72	2	HMI He	836784	0.22	939613	89.06	60	120	
In Internal Standard	115	2	HMI He	3405990	0.56	3669615	92.82	60	120	
Ho-165	165	2	HMI He	15677788	0.27	16373961	95.75	60	120	

Sample Report

Sample Table

Sample Name	LCSD 280-456592/3-A
Data File Name	073SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T14:08:51-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456592 6020a dod5
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	49.576	ppb	49.576	14.50	93204	500000	
Li	7	2	45	55.348	ppb	55.348	11.37	4984	500000	
Li	7	3	45	50.754	ppb	50.754	4.27	7893151	50000	
Be	9	1	6	41.253	ppb	41.253	2.28	8850	2000	
B	11	1	6	1087.200	ppb	1087.200	4.61	8136	2000	
Na	23	1	45	-8.104	ppb	-8.104	-6.27	117920	2000	
Na	23	2	45	-5.797	ppb	-5.797	-46.71	9530	400000	
Mg	24	2	45	2.479	ppb	2.479	47.50	270	400000	
Al	27	2	45	426.414	ppb	426.414	3.34	7789	400000	
K	39	1	45	-2465.554	ppb	-2465.554	-1.75	4350571	400000	
K	39	2	45	-17.808	ppb	-17.808	-161.21	27707	400000	
Ca	40	1	45	14.197	ppb	14.197	2.66	71920	400000	
Ca	44	2	45	123.596	ppb	123.596	35.11	407	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	35.489	ppb	35.489	1.69	34796	2000	
Cr	52	2	72	39.619	ppb	39.619	1.81	41356	5000	
Mn	55	2	72	40.352	ppb	40.352	2.76	16547	10000	
Fe	57	2	72	430.632	ppb	430.632	3.72	8226	400000	
Co	59	2	72	40.488	ppb	40.488	1.89	72646	2000	
Ni	60	2	72	38.041	ppb	38.041	3.19	19274	5000	
Cu	63	2	72	38.181	ppb	38.181	1.10	54694	5000	
Zn	66	2	72	41.766	ppb	41.766	6.57	8696	5000	
As	75	2	72	37.577	ppb	37.577	2.41	6277	2000	
Se	78	1	72	38.192	ppb	38.192	2.54	5805	2000	
Sr	88	2	72	43.857	ppb	43.857	1.21	21844	4000	
Zr	90	2	72	843.908	ppb	843.908	9.48	1530	1000	
Nb	93	2	72	-0.401	ppb	-0.401	-47.84	1130	200	
Mo	95	2	115	38.410	ppb	38.410	2.14	28616	2000	
Pd	105	2	115	-0.004	ppb	-0.004	-192.97	10	100	
Ag	107	2	115	38.247	ppb	38.247	0.48	97722	100	
Cd	111	2	115	38.222	ppb	38.222	3.27	12833	2000	
Sn	120	2	115	39.841	ppb	39.841	1.66	37662	2000	
Sb	121	2	115	39.760	ppb	39.760	3.78	36485	1000	
Ba	137	2	115	41.249	ppb	41.249	3.37	13387	5000	
W	182	2	165	32.028	ppb	32.028	0.88	113093	100	
Pt	195	2	165	-0.001	ppb	-0.001	-185.97	3	100	
Tl	205	2	165	39.170	ppb	39.170	0.86	269910	2000	
Pb	208	2	165	38.905	ppb	38.905	0.14	364676	5000	
Th	232	2	165	37.399	ppb	37.399	1.59	435102	2000	
U	238	2	165	39.206	ppb	39.206	0.78	460380	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	602037	0.85	885786	67.97	60	120	
Sc (IS)	45	1	HMI H2	14411393	0.73	17935452	80.35	60	120	
Sc (IS)	45	2	HMI He	637663	0.64	724932	87.96	60	120	
Sc (IS)	45	3	No Gas	54860328	1.42	71931282	76.27	60	120	
Ge Internal Standard	72	1	HMI H2	6129902	0.23	7580625	80.86	60	120	
Ge Internal Standard	72	2	HMI He	832739	0.07	939613	88.63	60	120	
In Internal Standard	115	2	HMI He	3381634	0.58	3669615	92.15	60	120	
Ho-165	165	2	HMI He	15652649	0.28	16373961	95.59	60	120	

Sample Report

Sample Table

Sample Name	280-122692-A-3-G
Data File Name	074SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T14:12:44-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456592 6020a dod5
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-11.680	ppb	-11.680	-48.48	77035	500000	
Li	7	2	45	-25.311	ppb	-25.311	-140.56	4101	500000	
Li	7	3	45	-11.056	ppb	-11.056	-25.93	6411568	50000	
Be	9	1	6	0.042	ppb	0.042	174.84	13	2000	
B	11	1	6	1235.774	ppb	1235.774	0.97	8813	2000	
Na	23	1	45	22902.701	ppb	22902.701	1.06	44335956	2000	>LDR
Na	23	2	45	22398.442	ppb	22398.442	0.82	3459942	400000	
Mg	24	2	45	12850.217	ppb	12850.217	0.63	889200	400000	
Al	27	2	45	9.379	ppb	9.379	35.79	187	400000	
K	39	1	45	16.324	ppb	16.324	123.67	8055167	400000	
K	39	2	45	1766.217	ppb	1766.217	0.96	105083	400000	
Ca	40	1	45	31170.583	ppb	31170.583	0.80	91833422	400000	
Ca	44	2	45	24190.895	ppb	24190.895	0.70	68517	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	-3.942	ppb	-3.942	-4.19	3444	2000	
Cr	52	2	72	0.138	ppb	0.138	91.26	413	5000	
Mn	55	2	72	119.841	ppb	119.841	1.90	48526	10000	
Fe	57	2	72	515.856	ppb	515.856	4.27	9737	400000	
Co	59	2	72	0.375	ppb	0.375	18.04	1760	2000	
Ni	60	2	72	0.232	ppb	0.232	66.13	203	5000	
Cu	63	2	72	0.064	ppb	0.064	39.20	970	5000	
Zn	66	2	72	5.514	ppb	5.514	6.53	1230	5000	
As	75	2	72	0.708	ppb	0.708	15.24	145	2000	
Se	78	1	72	0.350	ppb	0.350	36.74	75	2000	
Sr	88	2	72	187.487	ppb	187.487	1.58	92326	4000	
Zr	90	2	72	61.257	ppb	61.257	38.62	153	1000	
Nb	93	2	72	-0.618	ppb	-0.618	-3.53	837	200	
Mo	95	2	115	0.668	ppb	0.668	6.73	540	2000	
Pd	105	2	115	-0.004	ppb	-0.004	-332.90	10	100	
Ag	107	2	115	0.001	ppb	0.001	1047.25	40	100	
Cd	111	2	115	0.020	ppb	0.020	173.21	7	2000	
Sn	120	2	115	0.349	ppb	0.349	10.60	463	2000	
Sb	121	2	115	0.488	ppb	0.488	6.86	467	1000	
Ba	137	2	115	29.248	ppb	29.248	2.62	9454	5000	
W	182	2	165	0.326	ppb	0.326	7.23	1664	100	
Pt	195	2	165	0.000	ppb	0.000	1809.65	7	100	
Tl	205	2	165	0.056	ppb	0.056	22.27	550	2000	
Pb	208	2	165	0.049	ppb	0.049	41.75	1110	5000	
Th	232	2	165	0.452	ppb	0.452	2.51	5818	2000	
U	238	2	165	0.020	ppb	0.020	45.57	283	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	575913	0.92	885786	65.02	60	120	
Sc (IS)	45	1	HMI H2	14127906	0.62	17935452	78.77	60	120	
Sc (IS)	45	2	HMI He	631009	0.37	724932	87.04	60	120	
Sc (IS)	45	3	No Gas	52745241	0.68	71931282	73.33	60	120	
Ge Internal Standard	72	1	HMI H2	6060778	0.40	7580625	79.95	60	120	
Ge Internal Standard	72	2	HMI He	824148	0.29	939613	87.71	60	120	
In Internal Standard	115	2	HMI He	3361024	0.39	3669615	91.59	60	120	
Ho-165	165	2	HMI He	15449226	0.74	16373961	94.35	60	120	

Sample Report

Sample Table

Sample Name	280-122692-A-3-H MS
Data File Name	075SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T14:16:37-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456592 6020a dod5
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	57.609	ppb	57.609	14.03	93436	500000	
Li	7	2	45	44.384	ppb	44.384	96.57	4778	500000	
Li	7	3	45	65.104	ppb	65.104	7.56	7900175	50000	
Be	9	1	6	42.843	ppb	42.843	4.79	8763	2000	
B	11	1	6	2242.030	ppb	2242.030	1.13	15756	2000	
Na	23	1	45	23378.596	ppb	23378.596	0.95	45345124	2000	>LDR
Na	23	2	45	23051.929	ppb	23051.929	0.69	3529209	400000	
Mg	24	2	45	13242.451	ppb	13242.451	0.45	908267	400000	
Al	27	2	45	433.500	ppb	433.500	1.36	7766	400000	
K	39	1	45	59.357	ppb	59.357	27.59	8137293	400000	
K	39	2	45	1808.957	ppb	1808.957	3.42	105997	400000	
Ca	40	1	45	31998.970	ppb	31998.970	0.53	94463839	400000	
Ca	44	2	45	24747.673	ppb	24747.673	2.27	69478	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	36.312	ppb	36.312	2.10	35217	2000	
Cr	52	2	72	38.641	ppb	38.641	1.35	40083	5000	
Mn	55	2	72	162.737	ppb	162.737	1.30	66127	10000	
Fe	57	2	72	980.600	ppb	980.600	3.88	18509	400000	
Co	59	2	72	39.439	ppb	39.439	1.71	70331	2000	
Ni	60	2	72	38.053	ppb	38.053	3.49	19157	5000	
Cu	63	2	72	37.789	ppb	37.789	1.05	53788	5000	
Zn	66	2	72	41.558	ppb	41.558	6.45	8600	5000	
As	75	2	72	38.651	ppb	38.651	2.77	6414	2000	
Se	78	1	72	37.298	ppb	37.298	0.70	5615	2000	
Sr	88	2	72	236.170	ppb	236.170	0.91	116739	4000	
Zr	90	2	72	1046.839	ppb	1046.839	17.37	1874	1000	
Nb	93	2	72	-0.712	ppb	-0.712	-7.90	717	200	
Mo	95	2	115	38.287	ppb	38.287	1.79	28456	2000	
Pd	105	2	115	-0.012	ppb	-0.012	0.00	0	100	
Ag	107	2	115	37.648	ppb	37.648	1.03	95976	100	
Cd	111	2	115	39.460	ppb	39.460	0.93	13217	2000	
Sn	120	2	115	38.567	ppb	38.567	1.01	36379	2000	
Sb	121	2	115	41.339	ppb	41.339	1.75	37849	1000	
Ba	137	2	115	70.945	ppb	70.945	2.32	22930	5000	
W	182	2	165	33.520	ppb	33.520	0.98	116429	100	
Pt	195	2	165	-0.002	ppb	-0.002	0.00	0	100	
Tl	205	2	165	39.171	ppb	39.171	0.90	265559	2000	
Pb	208	2	165	39.003	ppb	39.003	0.61	359704	5000	
Th	232	2	165	38.206	ppb	38.206	0.71	437327	2000	
U	238	2	165	40.188	ppb	40.188	0.31	464329	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	574137	0.95	885786	64.82	60	120	
Sc (IS)	45	1	HMI H2	14156241	0.68	17935452	78.93	60	120	
Sc (IS)	45	2	HMI He	625442	0.26	724932	86.28	60	120	
Sc (IS)	45	3	No Gas	52999311	0.52	71931282	73.68	60	120	
Ge Internal Standard	72	1	HMI H2	6069790	0.37	7580625	80.07	60	120	
Ge Internal Standard	72	2	HMI He	827330	0.64	939613	88.05	60	120	
In Internal Standard	115	2	HMI He	3374120	1.18	3669615	91.95	60	120	
Ho-165	165	2	HMI He	15401105	1.18	16373961	94.06	60	120	

Sample Report

Sample Table

Sample Name	280-122692-A-3-I MSD
Data File Name	076SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T14:20:30-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456592 6020a dod5
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	63.028	ppb	63.028	9.27	93849	500000	
Li	7	2	45	65.614	ppb	65.614	57.45	4971	500000	
Li	7	3	45	67.848	ppb	67.848	5.19	7892034	50000	
Be	9	1	6	43.728	ppb	43.728	2.25	8863	2000	
B	11	1	6	2363.446	ppb	2363.446	4.13	16440	2000	
Na	23	1	45	24847.792	ppb	24847.792	0.28	47747298	2000	>LDR
Na	23	2	45	24267.409	ppb	24267.409	1.84	3698039	400000	
Mg	24	2	45	13959.112	ppb	13959.112	0.43	953147	400000	
Al	27	2	45	432.821	ppb	432.821	3.76	7719	400000	
K	39	1	45	201.540	ppb	201.540	20.98	8278291	400000	
K	39	2	45	1940.109	ppb	1940.109	1.64	111161	400000	
Ca	40	1	45	33774.186	ppb	33774.186	0.02	98790709	400000	
Ca	44	2	45	26384.753	ppb	26384.753	0.76	73739	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	36.255	ppb	36.255	1.34	34879	2000	
Cr	52	2	72	39.832	ppb	39.832	3.08	40959	5000	
Mn	55	2	72	168.465	ppb	168.465	0.34	67883	10000	
Fe	57	2	72	1014.188	ppb	1014.188	0.52	18983	400000	
Co	59	2	72	38.826	ppb	38.826	1.05	68676	2000	
Ni	60	2	72	38.091	ppb	38.091	3.22	19013	5000	
Cu	63	2	72	38.246	ppb	38.246	2.14	53972	5000	
Zn	66	2	72	41.860	ppb	41.860	1.76	8586	5000	
As	75	2	72	38.235	ppb	38.235	2.16	6292	2000	
Se	78	1	72	38.115	ppb	38.115	5.02	5676	2000	
Sr	88	2	72	248.266	ppb	248.266	1.83	121690	4000	
Zr	90	2	72	1026.634	ppb	1026.634	7.79	1824	1000	
Nb	93	2	72	-0.754	ppb	-0.754	-13.17	657	200	
Mo	95	2	115	40.804	ppb	40.804	2.81	29999	2000	
Pd	105	2	115	0.001	ppb	0.001	357.69	17	100	
Ag	107	2	115	38.519	ppb	38.519	0.82	97134	100	
Cd	111	2	115	37.995	ppb	37.995	3.44	12589	2000	
Sn	120	2	115	40.421	ppb	40.421	2.16	37709	2000	
Sb	121	2	115	41.357	ppb	41.357	2.06	37461	1000	
Ba	137	2	115	72.906	ppb	72.906	2.51	23304	5000	
W	182	2	165	33.034	ppb	33.034	0.92	115728	100	
Pt	195	2	165	0.000	ppb	0.000	1875.47	7	100	
Tl	205	2	165	38.856	ppb	38.856	0.22	265678	2000	
Pb	208	2	165	38.625	ppb	38.625	0.56	359263	5000	
Th	232	2	165	38.152	ppb	38.152	0.68	440432	2000	
U	238	2	165	39.665	ppb	39.665	0.88	462175	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	568818	0.49	885786	64.22	60	120	
Sc (IS)	45	1	HMI H2	14026708	0.29	17935452	78.21	60	120	
Sc (IS)	45	2	HMI He	622663	0.59	724932	85.89	60	120	
Sc (IS)	45	3	No Gas	52594948	0.56	71931282	73.12	60	120	
Ge Internal Standard	72	1	HMI H2	6004559	0.56	7580625	79.21	60	120	
Ge Internal Standard	72	2	HMI He	820389	0.26	939613	87.31	60	120	
In Internal Standard	115	2	HMI He	3337579	0.30	3669615	90.95	60	120	
Ho-165	165	2	HMI He	15531850	0.36	16373961	94.86	60	120	

Sample Report

Sample Table

Sample Name	280-123011-E-2-A
Data File Name	077SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T14:24:22-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456592 6020a dod5
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-16.842	ppb	-16.842	-34.90	74619	500000	
Li	7	2	45	-36.283	ppb	-36.283	-74.97	3891	500000	
Li	7	3	45	-9.769	ppb	-9.769	-23.93	6343797	50000	
Be	9	1	6	0.044	ppb	0.044	130.96	13	2000	
B	11	1	6	4093.884	ppb	4093.884	2.52	27877	2000	
Na	23	1	45	38066.998	ppb	38066.998	0.33	72436527	2000	>LDR
Na	23	2	45	37196.628	ppb	37196.628	1.55	5598134	400000	
Mg	24	2	45	20620.445	ppb	20620.445	1.36	1391797	400000	
Al	27	2	45	3.579	ppb	3.579	41.55	80	400000	
K	39	1	45	18765.857	ppb	18765.857	0.97	36101842	400000	
K	39	2	45	15511.532	ppb	15511.532	0.37	686192	400000	
Ca	40	1	45	134102.727	ppb	134102.727	0.47	388712221	400000	
Ca	44	2	45	105572.039	ppb	105572.039	0.21	291518	400000	
Ti	47	2	45	0.704	ppb	0.704	86.60	13	4000	
V	51	2	72	-1.396	ppb	-1.396	-9.90	5358	2000	
Cr	52	2	72	0.191	ppb	0.191	7.92	460	5000	
Mn	55	2	72	97.494	ppb	97.494	1.54	38853	10000	
Fe	57	2	72	25.801	ppb	25.801	20.66	550	400000	
Co	59	2	72	0.446	ppb	0.446	4.90	1854	2000	
Ni	60	2	72	4.251	ppb	4.251	6.37	2174	5000	
Cu	63	2	72	1.407	ppb	1.407	8.74	2797	5000	
Zn	66	2	72	3.133	ppb	3.133	33.04	733	5000	
As	75	2	72	3.212	ppb	3.212	11.74	548	2000	
Se	78	1	72	1.175	ppb	1.175	20.13	195	2000	
Sr	88	2	72	634.630	ppb	634.630	0.79	307437	4000	
Zr	90	2	72	138.584	ppb	138.584	37.92	283	1000	
Nb	93	2	72	-0.920	ppb	-0.920	-11.77	437	200	
Mo	95	2	115	2.375	ppb	2.375	15.53	1797	2000	
Pd	105	2	115	0.001	ppb	0.001	1330.95	17	100	
Ag	107	2	115	0.009	ppb	0.009	127.77	60	100	
Cd	111	2	115	0.080	ppb	0.080	78.12	27	2000	
Sn	120	2	115	0.257	ppb	0.257	4.93	377	2000	
Sb	121	2	115	0.981	ppb	0.981	24.29	913	1000	
Ba	137	2	115	349.678	ppb	349.678	0.91	111985	5000	
W	182	2	165	0.092	ppb	0.092	21.49	847	100	
Pt	195	2	165	-0.002	ppb	-0.002	0.00	0	100	
Tl	205	2	165	0.028	ppb	0.028	25.35	357	2000	
Pb	208	2	165	0.035	ppb	0.035	36.76	963	5000	
Th	232	2	165	0.416	ppb	0.416	13.69	5365	2000	
U	238	2	165	42.348	ppb	42.348	0.72	486209	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	560024	0.37	885786	63.22	60	120	
Sc (IS)	45	1	HMI H2	13903012	0.64	17935452	77.52	60	120	
Sc (IS)	45	2	HMI He	615532	0.44	724932	84.91	60	120	
Sc (IS)	45	3	No Gas	51986478	0.37	71931282	72.27	60	120	
Ge Internal Standard	72	1	HMI H2	5946396	0.77	7580625	78.44	60	120	
Ge Internal Standard	72	2	HMI He	810930	0.51	939613	86.30	60	120	
In Internal Standard	115	2	HMI He	3351689	0.18	3669615	91.34	60	120	
Ho-165	165	2	HMI He	15304551	0.79	16373961	93.47	60	120	

Sample Report

Sample Table

Sample Name	280-123011-A-3-A
Data File Name	078SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T14:28:16-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456592 6020a dod5
ISTD Ref FileName	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-16.860	ppb	-16.860	-38.10	74032	500000	
Li	7	2	45	-44.442	ppb	-44.442	-72.86	3797	500000	
Li	7	3	45	-12.303	ppb	-12.303	-15.59	6161022	50000	
Be	9	1	6	0.012	ppb	0.012	254.87	7	2000	
B	11	1	6	4080.545	ppb	4080.545	1.18	27102	2000	
Na	23	1	45	37589.370	ppb	37589.370	0.58	70964356	2000	>LDR
Na	23	2	45	36316.601	ppb	36316.601	0.38	5452213	400000	
Mg	24	2	45	19970.982	ppb	19970.982	1.66	1344471	400000	
Al	27	2	45	3.223	ppb	3.223	45.62	73	400000	
K	39	1	45	18491.850	ppb	18491.850	0.45	35409984	400000	
K	39	2	45	15240.819	ppb	15240.819	0.86	672952	400000	
Ca	40	1	45	133388.314	ppb	133388.314	0.47	383595061	400000	
Ca	44	2	45	103642.019	ppb	103642.019	0.34	285455	400000	
Ti	47	2	45	0.176	ppb	0.176	173.21	3	4000	
V	51	2	72	-2.140	ppb	-2.140	-14.56	4751	2000	
Cr	52	2	72	0.164	ppb	0.164	24.46	430	5000	
Mn	55	2	72	96.057	ppb	96.057	1.61	38024	10000	
Fe	57	2	72	35.458	ppb	35.458	13.13	723	400000	
Co	59	2	72	0.554	ppb	0.554	16.79	2027	2000	
Ni	60	2	72	4.283	ppb	4.283	13.91	2174	5000	
Cu	63	2	72	2.071	ppb	2.071	3.23	3684	5000	
Zn	66	2	72	3.193	ppb	3.193	16.32	740	5000	
As	75	2	72	3.198	ppb	3.198	3.78	543	2000	
Se	78	1	72	1.064	ppb	1.064	8.32	177	2000	
Sr	88	2	72	627.549	ppb	627.549	0.52	301961	4000	
Zr	90	2	72	63.425	ppb	63.425	44.54	153	1000	
Nb	93	2	72	-0.954	ppb	-0.954	-9.07	390	200	
Mo	95	2	115	2.558	ppb	2.558	4.14	1897	2000	
Pd	105	2	115	0.007	ppb	0.007	68.77	23	100	
Ag	107	2	115	0.002	ppb	0.002	475.74	40	100	
Cd	111	2	115	0.061	ppb	0.061	86.84	20	2000	
Sn	120	2	115	0.195	ppb	0.195	44.88	313	2000	
Sb	121	2	115	0.690	ppb	0.690	3.64	637	1000	
Ba	137	2	115	348.971	ppb	348.971	0.55	109801	5000	
W	182	2	165	0.132	ppb	0.132	47.10	973	100	
Pt	195	2	165	-0.002	ppb	-0.002	0.00	0	100	
Tl	205	2	165	0.023	ppb	0.023	35.14	323	2000	
Pb	208	2	165	0.022	ppb	0.022	44.67	843	5000	
Th	232	2	165	0.119	ppb	0.119	17.66	1977	2000	
U	238	2	165	41.007	ppb	41.007	0.30	467538	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	546211	0.20	885786	61.66	60	120	
Sc (IS)	45	1	HMI H2	13793414	0.14	17935452	76.91	60	120	
Sc (IS)	45	2	HMI He	613965	0.80	724932	84.69	60	120	
Sc (IS)	45	3	No Gas	50871756	1.06	71931282	70.72	60	120	
Ge Internal Standard	72	1	HMI H2	5919084	0.65	7580625	78.08	60	120	
Ge Internal Standard	72	2	HMI He	805523	1.11	939613	85.73	60	120	
In Internal Standard	115	2	HMI He	3292948	1.14	3669615	89.74	60	120	
Ho-165	165	2	HMI He	15198180	1.13	16373961	92.82	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5688510
Data File Name	079_CCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T14:32:39-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	61.188	ppb	3.137	93772	100	61.2	90	110	>+\-10%
Li	7	2	45	33.775	ppb	80.419	4568	100	33.8	90	110	>+\-10%
Li	7	3	45	75.178	ppb	0.692	7450730	100	75.2	90	110	>+\-10%
Be	9	1	6	52.808	ppb	4.525	11015	50	105.6	90	110	
B	11	1	6	202.243	ppb	1.373	1660	50	404.5	90	110	>+\-10%
Na	23	1	45	1099.291	ppb	1.445	2245464	1000	109.9	90	110	
Na	23	2	45	984.816	ppb	1.277	157075	1000	98.5	90	110	
Mg	24	2	45	992.194	ppb	0.932	66656	1000	99.2	90	110	
Al	27	2	45	1077.276	ppb	4.974	18849	1000	107.7	90	110	
K	39	1	45	807.372	ppb	8.350	9231502	1000	80.7	90	110	>+\-10%
K	39	2	45	936.827	ppb	4.144	66876	1000	93.7	90	110	
Ca	40	1	45	1083.053	ppb	1.266	3207730	1000	108.3	90	110	
Ca	44	2	45	1056.526	ppb	3.723	2950	1000	105.7	90	110	
Ti	47	2	45	44.051	ppb	5.547	830	50	88.1	90	110	>+\-10%
V	51	2	72	44.448	ppb	0.943	41149	50	88.9	90	110	>+\-10%
Cr	52	2	72	47.369	ppb	1.001	48495	50	94.7	90	110	
Mn	55	2	72	47.973	ppb	2.905	19304	50	95.9	90	110	
Fe	57	2	72	962.710	ppb	0.918	17962	1000	96.3	90	110	
Co	59	2	72	48.548	ppb	0.650	85304	50	97.1	90	110	
Ni	60	2	72	46.592	ppb	2.454	23156	50	93.2	90	110	
Cu	63	2	72	47.523	ppb	0.099	66624	50	95.0	90	110	
Zn	66	2	72	49.158	ppb	4.428	10031	50	98.3	90	110	
As	75	2	72	47.225	ppb	1.285	7738	50	94.5	90	110	
Se	78	1	72	46.377	ppb	0.434	6947	50	92.8	90	110	
Sr	88	2	72	104.398	ppb	1.033	51013	100	104.4	90	110	
Zr	90	2	72	147.060	ppb	22.125	300	50	294.1	90	110	>+\-10%
Nb	93	2	72	93.007	ppb	1.288	121670	100	93.0	90	110	
Mo	95	2	115	46.016	ppb	2.537	34386	50	92.0	90	110	
Pd	105	2	115	45.919	ppb	2.025	56488	50	91.8	90	110	
Ag	107	2	115	46.613	ppb	1.166	119491	50	93.2	90	110	
Cd	111	2	115	49.094	ppb	3.349	16531	50	98.2	90	110	
Sn	120	2	115	49.379	ppb	2.434	46790	50	98.8	90	110	
Sb	121	2	115	48.504	ppb	0.960	44663	50	97.0	90	110	
Ba	137	2	115	47.576	ppb	2.361	15483	50	95.2	90	110	
W	182	2	165	47.296	ppb	1.466	164424	50	94.6	90	110	
Pt	195	2	165	46.668	ppb	2.345	129710	50	93.3	90	110	
Tl	205	2	165	49.043	ppb	1.152	333204	50	98.1	90	110	
Pb	208	2	165	48.690	ppb	1.640	449870	50	97.4	90	110	
Th	232	2	165	49.558	ppb	0.677	568383	50	99.1	90	110	
U	238	2	165	49.709	ppb	0.971	575605	50	99.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	585362	0.02	885786	66.08	60	120	
Sc (IS)	45	1	HMI H2	14079788	0.35	17935452	78.50	60	120	
Sc (IS)	45	2	HMI He	611850	0.79	724932	84.40	60	120	
Sc (IS)	45	3	No Gas	48791858	1.00	71931282	67.83	60	120	
Ge Internal Standard	72	1	HMI H2	6045023	0.52	7580625	79.74	60	120	
Ge Internal Standard	72	2	HMI He	817586	0.20	939613	87.01	60	120	
In Internal Standard	115	2	HMI He	3392851	1.56	3669615	92.46	60	120	
Ho-165	165	2	HMI He	15436731	1.53	16373961	94.28	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5688508
Data File Name	080_CCB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T14:36:33-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-23.137	ppb	-11.8	5675170	10	
Be	9	1	6	0.043	ppb	132.6	13	0.5	
B	11	1	6	90.396	ppb	15.7	857	0.5	>RL
Na	23	1	45	1.685	ppb	37.8	129801	25	
Na	23	2	45	-2.883	ppb	-171.3	9437	25	
Mg	24	2	45	1.036	ppb	36.6	160	25	
Al	27	2	45	1.369	ppb	147.6	40	15	
K	39	1	45	20.083	ppb	187.8	7779556	50	
K	39	2	45	-53.321	ppb	-0.7	24702	50	
Ca	40	1	45	9.294	ppb	2.7	54110	50	
Ca	44	2	45	2.536	ppb	305.8	57	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	-3.173	ppb	-11.5	3894	1	
Cr	52	2	72	-0.079	ppb	-84.9	183	1	
Mn	55	2	72	0.128	ppb	42.1	103	0.5	
Fe	57	2	72	1.488	ppb	65.7	100	25	
Co	59	2	72	0.036	ppb	210.7	1123	0.5	
Ni	60	2	72	0.102	ppb	48.3	133	1	
Cu	63	2	72	0.188	ppb	41.1	1100	1	
Zn	66	2	72	1.053	ppb	46.8	310	5	
As	75	2	72	0.024	ppb	362.2	31	1	
Se	78	1	72	0.015	ppb	176.3	24	1	
Sr	88	2	72	0.039	ppb	111.4	47	0.5	
Zr	90	2	72	30.805	ppb	128.4	97	1	>RL
Nb	93	2	72	2.907	ppb	13.1	5218	2	>RL
Mo	95	2	115	0.015	ppb	192.2	57	0.5	
Pd	105	2	115	0.015	ppb	85.5	33	1	
Ag	107	2	115	0.000	ppb	6862.7	37	1	
Cd	111	2	115	0.041	ppb	114.5	13	0.5	
Sn	120	2	115	0.197	ppb	11.2	320	1	
Sb	121	2	115	0.149	ppb	13.1	157	0.6	
Ba	137	2	115	0.019	ppb	475.0	73	0.5	
W	182	2	165	-0.005	ppb	-258.4	510	1	
Pt	195	2	165	0.009	ppb	42.4	30	1	
Tl	205	2	165	0.021	ppb	37.5	310	0.1	
Pb	208	2	165	0.118	ppb	4.8	1717	0.5	
Th	232	2	165	0.205	ppb	8.5	2947	1	
U	238	2	165	0.015	ppb	24.6	227	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	575938	0.53	885786	65.02	60	120	
Sc (IS)	45	1	HMI H2	13634918	0.46	17935452	76.02	60	120	
Sc (IS)	45	2	HMI He	602380	0.85	724932	83.09	60	120	
Sc (IS)	45	3	No Gas	48422543	0.81	71931282	67.32	60	120	
Ge Internal Standard	72	1	HMI H2	5895466	0.33	7580625	77.77	60	120	
Ge Internal Standard	72	2	HMI He	792891	0.41	939613	84.38	60	120	
In Internal Standard	115	2	HMI He	3347865	1.74	3669615	91.23	60	120	
Ho-165	165	2	HMI He	15219139	0.56	16373961	92.95	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5688512
Data File Name	081LCCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T14:40:27-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-12.046	ppb	-37.750	5929481	50	-24.1	70	130	>+/-30%
Be	9	1	6	1.138	ppb	6.679	237	1	113.8	70	130	
Na	23	2	45	38.570	ppb	11.860	15365	50	77.1	70	130	
Mg	24	2	45	53.343	ppb	5.322	3577	50	106.7	70	130	
Al	27	2	45	58.121	ppb	9.578	1007	30	193.7	70	130	>+/-30%
K	39	2	45	66.410	ppb	22.725	29371	100	66.4	70	130	>+/-30%
Ca	44	2	45	41.404	ppb	18.449	160	50	82.8	70	130	
V	51	2	72	2.227	ppb	8.035	7936	5	44.5	70	130	>+/-30%
Cr	52	2	72	1.694	ppb	11.456	1924	2	84.7	70	130	
Mn	55	2	72	0.940	ppb	11.101	417	1	94.0	70	130	
Fe	57	2	72	47.644	ppb	4.383	927	50	95.3	70	130	
Co	59	2	72	0.992	ppb	16.302	2717	1	99.2	70	130	
Ni	60	2	72	1.381	ppb	7.754	743	1.5	92.1	70	130	
Cu	63	2	72	1.894	ppb	0.649	3371	2	94.7	70	130	
Zn	66	2	72	10.010	ppb	14.839	2054	10	100.1	70	130	
As	75	2	72	4.883	ppb	7.239	796	5	97.7	70	130	
Se	78	1	72	4.620	ppb	7.872	689	5	92.4	70	130	
Sr	88	2	72	1.123	ppb	19.297	557	1	112.3	70	130	
Zr	90	2	72	-4.848	ppb	-69.296	37	0.5	-969.7	70	130	>+/-30%
Nb	93	2	72	0.762	ppb	29.283	2517	2	38.1	70	130	>+/-30%
Mo	95	2	115	1.803	ppb	8.816	1350	2	90.1	70	130	
Pd	105	2	115	0.013	ppb	65.487	30	1	1.3	70	130	>+/-30%
Ag	107	2	115	4.938	ppb	3.703	12313	5	98.8	70	130	
Cd	111	2	115	0.877	ppb	15.502	287	1	87.7	70	130	
Sn	120	2	115	9.743	ppb	3.130	9067	10	97.4	70	130	
Sb	121	2	115	1.903	ppb	15.101	1720	2	95.1	70	130	
Ba	137	2	115	0.862	ppb	16.932	337	1	86.2	70	130	
W	182	2	165	4.660	ppb	4.300	16407	1	466.0	70	130	>+/-30%
Pt	195	2	165	0.000	ppb	2826.979	7	1	0.0	70	130	>+/-30%
Tl	205	2	165	0.990	ppb	1.762	6779	1	99.0	70	130	
Pb	208	2	165	1.085	ppb	7.176	10486	1	108.5	70	130	
Th	232	2	165	1.798	ppb	2.825	20878	2	89.9	70	130	
U	238	2	165	1.020	ppb	2.342	11666	1	102.0	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	572411	0.71	885786	64.62	60	120	
Sc (IS)	45	1	HMI H2	13595142	0.35	17935452	75.80	60	120	
Sc (IS)	45	2	HMI He	596139	0.35	724932	82.23	60	120	
Sc (IS)	45	3	No Gas	48922164	0.38	71931282	68.01	60	120	
Ge Internal Standard	72	1	HMI H2	5849712	0.79	7580625	77.17	60	120	
Ge Internal Standard	72	2	HMI He	788581	0.59	939613	83.93	60	120	
In Internal Standard	115	2	HMI He	3291981	0.34	3669615	89.71	60	120	
Ho-165	165	2	HMI He	15178587	0.48	16373961	92.70	60	120	

Blank Report

Sample Table

Sample Name	rinse-5672981
Data File Name	082WASH.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T14:44:21-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	0.010	ppb	283.2559084	7	0.5
Na	23	2	45	-11.763	ppb	-24.75135613	7759	25
Mg	24	2	45	2.000	ppb	36.02524679	213	25
Al	27	2	45	0.455	ppb	76.88120216	23	15
K	39	2	45	-37.469	ppb	-33.83603668	24211	50
Ca	44	2	45	9.979	ppb	59.34276119	73	25
V	51	2	72	-1.087	ppb	-45.19490718	5261	1
Cr	52	2	72	-0.065	ppb	-75.91010886	190	1
Mn	55	2	72	1.502	ppb	15.68457564	613	0.5
Fe	57	2	72	5.556	ppb	29.56183092	167	25
Co	59	2	72	-0.011	ppb	-708.6802033	1003	0.5
Ni	60	2	72	0.084	ppb	102.1134047	120	1
Cu	63	2	72	2.236	ppb	3.797419374	3697	1
Zn	66	2	72	0.301	ppb	41.16233236	157	5
As	75	2	72	0.006	ppb	550.4350478	27	1
Se	78	1	72	0.011	ppb	590.9332341	23	1
Nb	93	2	72	0.351	ppb	15.74175577	1940	2
Mo	95	2	115	-0.010	ppb	-91.17127744	37	0.5
Pd	105	2	115	-0.007	ppb	-144.1502969	7	1
Ag	107	2	115	0.002	ppb	331.1711568	40	1
Cd	111	2	115	0.010	ppb	173.2050808	3	0.5
Sn	120	2	115	0.202	ppb	23.72913047	310	1
Sb	121	2	115	0.092	ppb	21.130161	100	0.6
Ba	137	2	115	-0.111	ppb	-30.76445329	30	0.5
W	182	2	165	-0.009	ppb	-489.6996247	490	1
Pt	195	2	165	0.003	ppb	323.2157093	13	1
Tl	205	2	165	0.011	ppb	33.93675321	237	0.1
Pb	208	2	165	0.007	ppb	144.7502783	700	0.5
Th	232	2	165	0.155	ppb	16.33244171	2347	1
U	238	2	165	0.005	ppb	42.85364451	107	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	574254	0.78	885786	64.83	60	120	
Sc (IS)	45	1	HMI H2	13319273	0.61	17935452	74.26	60	120	
Sc (IS)	45	2	HMI He	575069	0.15	724932	79.33	60	120	
Sc (IS)	45	3	No Gas	47669363	1.40	71931282	66.27	60	120	
Ge Internal Standard	72	1	HMI H2	5718340	0.04	7580625	75.43	60	120	
Ge Internal Standard	72	2	HMI He	762154	0.38	939613	81.11	60	120	
In Internal Standard	115	2	HMI He	3197175	1.55	3669615	87.13	60	120	
Ho-165	165	2	HMI He	15006819	0.60	16373961	91.65	60	120	

Blank Report

Sample Table

Sample Name	rinse-5672981
Data File Name	083WASH.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T14:48:16-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.023	ppb	0	0	0.5
Na	23	2	45	-16.835	ppb	-6.070432154	7062	25
Mg	24	2	45	1.991	ppb	31.80627819	213	25
Al	27	2	45	2.485	ppb	75.6674619	57	15
K	39	2	45	-46.265	ppb	-20.42915914	23910	50
Ca	44	2	45	-0.411	ppb	-1431.450615	47	25
V	51	2	72	-1.164	ppb	-13.32645436	5191	1
Cr	52	2	72	-0.033	ppb	-33.2181783	220	1
Mn	55	2	72	1.426	ppb	11.15944557	583	0.5
Fe	57	2	72	10.024	ppb	35.47227583	243	25
Co	59	2	72	-0.035	ppb	-91.11851269	963	0.5
Ni	60	2	72	0.013	ppb	722.2488169	87	1
Cu	63	2	72	1.924	ppb	1.461397497	3287	1
Zn	66	2	72	0.214	ppb	124.794952	140	5
As	75	2	72	0.002	ppb	2482.634636	27	1
Se	78	1	72	0.003	ppb	626.6573047	21	1
Nb	93	2	72	-0.267	ppb	-34.04314071	1193	2
Mo	95	2	115	-0.005	ppb	-489.4510232	40	0.5
Pd	105	2	115	0.008	ppb	129.4069405	23	1
Ag	107	2	115	-0.002	ppb	-622.9000238	30	1
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5
Sn	120	2	115	0.142	ppb	52.64916792	257	1
Sb	121	2	115	0.138	ppb	68.5390525	140	0.6
Ba	137	2	115	-0.100	ppb	-75.54944486	33	0.5
W	182	2	165	-0.023	ppb	-66.49723304	440	1
Pt	195	2	165	0.000	ppb	2264.935807	7	1
Tl	205	2	165	0.000	ppb	-2039.11802	163	0.1
Pb	208	2	165	0.013	ppb	11.19059624	747	0.5
Th	232	2	165	0.054	ppb	21.20088611	1220	1
U	238	2	165	0.000	ppb	307.3414566	57	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	568090	0.55	885786	64.13	60	120	
Sc (IS)	45	1	HMI H2	13264294	0.45	17935452	73.96	60	120	
Sc (IS)	45	2	HMI He	576260	0.80	724932	79.49	60	120	
Sc (IS)	45	3	No Gas	48047641	1.13	71931282	66.80	60	120	
Ge Internal Standard	72	1	HMI H2	5679825	0.61	7580625	74.93	60	120	
Ge Internal Standard	72	2	HMI He	760224	0.13	939613	80.91	60	120	
In Internal Standard	115	2	HMI He	3193089	0.19	3669615	87.01	60	120	
Ho-165	165	2	HMI He	14973376	0.22	16373961	91.45	60	120	

Blank Report

Sample Table

Sample Name	rinse-5672981
Data File Name	084WASH.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T14:52:09-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	021CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.006	ppb	-466.4987355	3	0.5
Na	23	2	45	-10.803	ppb	-23.03983655	7872	25
Mg	24	2	45	0.896	ppb	80.80600028	143	25
Al	27	2	45	0.663	ppb	53.45416422	27	15
K	39	2	45	-45.922	ppb	-32.18525155	23810	50
Ca	44	2	45	-0.303	ppb	-1501.964363	47	25
V	51	2	72	-1.717	ppb	-28.76048577	4831	1
Cr	52	2	72	-0.031	ppb	-138.4689696	223	1
Mn	55	2	72	1.182	ppb	16.65002606	497	0.5
Fe	57	2	72	5.309	ppb	34.33211926	163	25
Co	59	2	72	-0.017	ppb	-385.5881776	1000	0.5
Ni	60	2	72	-0.025	ppb	-171.0121071	70	1
Cu	63	2	72	1.414	ppb	7.183557706	2654	1
Zn	66	2	72	0.419	ppb	21.30884058	180	5
As	75	2	72	0.035	ppb	214.6827788	32	1
Se	78	1	72	0.028	ppb	396.9216877	25	1
Nb	93	2	72	-0.617	ppb	-8.135899362	780	2
Mo	95	2	115	-0.005	ppb	-606.6777049	40	0.5
Pd	105	2	115	-0.007	ppb	-151.0651079	7	1
Ag	107	2	115	-0.007	ppb	-64.57672119	17	1
Cd	111	2	115	0.021	ppb	173.2050808	7	0.5
Sn	120	2	115	0.110	ppb	21.65368456	227	1
Sb	121	2	115	0.093	ppb	12.60599715	100	0.6
Ba	137	2	115	-0.033	ppb	-416.4310313	53	0.5
W	182	2	165	-0.028	ppb	-35.33610863	423	1
Pt	195	2	165	-0.001	ppb	-206.690397	3	1
Tl	205	2	165	0.013	ppb	83.14774756	250	0.1
Pb	208	2	165	0.019	ppb	28.15378158	800	0.5
Th	232	2	165	0.015	ppb	45.23907525	780	1
U	238	2	165	0.002	ppb	161.7183817	77	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	569834	0.74	885786	64.33	60	120	
Sc (IS)	45	1	HMI H2	13378942	0.53	17935452	74.59	60	120	
Sc (IS)	45	2	HMI He	573520	0.30	724932	79.11	60	120	
Sc (IS)	45	3	No Gas	49017036	0.54	71931282	68.14	60	120	
Ge Internal Standard	72	1	HMI H2	5757670	0.62	7580625	75.95	60	120	
Ge Internal Standard	72	2	HMI He	766597	0.22	939613	81.59	60	120	
In Internal Standard	115	2	HMI He	3174807	0.18	3669615	86.52	60	120	
Ho-165	165	2	HMI He	14955978	0.44	16373961	91.34	60	120	

Calibration Blank Report

Sample Table

Sample Name	icis-5688508
Data File Name	085CALB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T14:56:04-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	70298	0.00
Li	7	2	HMI He	3644	0.20
Li	7	3	No Gas	5755749	0.00
Be	9	1	HMI H2	3	5196.15
B	11	1	HMI H2	690	2.07
Na	23	1	HMI H2	91534	0.00
Na	23	2	HMI He	7215	0.06
Mg	24	2	HMI He	100	43.59
Al	27	2	HMI He	37	187.19
K	39	2	HMI He	24491	0.02
Ca	44	2	HMI He	27	214.81
Ti	47	2	HMI He	0	#VALUE!
V	51	2	HMI He	5018	0.10
Cr	52	2	HMI He	220	16.14
Mn	55	2	HMI He	53	107.40
Fe	57	2	HMI He	63	76.17
Co	59	2	HMI He	967	2.33
Ni	60	2	HMI He	67	68.74
Cu	63	2	HMI He	553	2.54
Zn	66	2	HMI He	80	93.75
As	75	2	HMI He	31	177.05
Se	78	1	HMI H2	29	96.77
Sr	88	2	HMI He	13	859.23
Zr	90	2	HMI He	33	289.31
Nb	93	2	HMI He	670	3.68
Mo	95	2	HMI He	33	274.95
Pd	105	2	HMI He	17	207.85
Ag	107	2	HMI He	7	1299.04
Cd	111	2	HMI He	0	#VALUE!
Sn	120	2	HMI He	197	2.99
Sb	121	2	HMI He	53	81.19
Ba	137	2	HMI He	7	2598.08
W	182	2	HMI He	530	2.49
Pt	195	2	HMI He	0	#VALUE!
Tl	205	2	HMI He	150	16.02
Pb	208	2	HMI He	647	0.55
Th	232	2	HMI He	813	3.78
U	238	2	HMI He	33	103.92

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li-6 Internal Standard	6	1	HMI H2	570952	0.70
Sc (IS)	45	1	HMI H2	13408403	0.18
Sc (IS)	45	2	HMI He	577322	0.25
Sc (IS)	45	3	No Gas	48917664	0.97
Ge Internal Standard	72	1	HMI H2	5773454	0.92
Ge Internal Standard	72	2	HMI He	765657	0.87
In Internal Standard	115	2	HMI He	3240364	0.83
Ho-165	165	2	HMI He	14997825	0.47

Calibration Standard Report

Sample Table

Sample Name	ic-5688509
Data File Name	086CALS.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T14:59:59-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	085CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	113834	0.00
Li	7	2	HMI He	6308	0.11
Li	7	3	No Gas	9313920	0.00
Be	9	1	HMI H2	20999	0.02
B	11	1	HMI H2	1340	0.63
Na	23	1	HMI H2	3923408	0.00
Na	23	2	HMI He	289247	0.00
Mg	24	2	HMI He	128170	0.00
Al	27	2	HMI He	35467	0.00
K	39	1	HMI H2	11000771	0.00
K	39	2	HMI He	104297	0.00
Ca	40	1	HMI H2	5775117	0.00
Ca	44	2	HMI He	5458	0.08
Ti	47	2	HMI He	1560	0.47
V	51	2	HMI He	77543	0.00
Cr	52	2	HMI He	93854	0.00
Mn	55	2	HMI He	38646	0.00
Fe	57	2	HMI He	35779	0.00
Co	59	2	HMI He	162944	0.00
Ni	60	2	HMI He	45057	0.00
Cu	63	2	HMI He	126982	0.00
Zn	66	2	HMI He	19674	0.01
As	75	2	HMI He	15417	0.01
Se	78	1	HMI H2	13823	0.03
Sr	88	2	HMI He	99365	0.00
Zr	90	2	HMI He	177	18.22
Nb	93	2	HMI He	252554	0.00
Mo	95	2	HMI He	66165	0.00
Pd	105	2	HMI He	111456	0.00
Ag	107	2	HMI He	231618	0.00
Cd	111	2	HMI He	31443	0.01
Sn	120	2	HMI He	88101	0.00
Sb	121	2	HMI He	88342	0.00
Ba	137	2	HMI He	31380	0.01
Nd	146	2	HMI He	98083	0.00
Sm	147	2	HMI He	84883	0.00
Sm	150	2	HMI He	81795	0.00
Gd	156	1	HMI H2	322649	0.00
Gd	157	1	HMI H2	249111	0.00
W	182	2	HMI He	327692	0.00
Pt	195	2	HMI He	257342	0.00
Tl	205	2	HMI He	651854	0.00
Pb	208	2	HMI He	887119	0.00
Th	232	2	HMI He	1133628	0.00
U	238	2	HMI He	1148174	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	573702	0.34	570952	100.48	60	120	
Sc (IS)	45	1	HMI H2	13488703	0.44	13408403	100.60	60	120	
Sc (IS)	45	2	HMI He	587102	0.28	577322	101.69	60	120	
Sc (IS)	45	3	No Gas	50070244	1.39	48917664	102.36	60	120	
Ge Internal Standard	72	1	HMI H2	5826723	0.78	5773454	100.92	60	120	
Ge Internal Standard	72	2	HMI He	787435	0.74	765657	102.84	60	120	
In Internal Standard	115	2	HMI He	3231550	0.15	3240364	99.73	60	120	
Ho-165	165	2	HMI He	15035550	0.66	14997825	100.25	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5688510
Data File Name	087_CCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T15:03:52-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	105.291	ppb	3.691	94503	100	105.3	90	110	
Li	7	2	45	90.196	ppb	14.474	4914	100	90.2	90	110	
Li	7	3	45	101.526	ppb	4.670	7567178	100	101.5	90	110	
Be	9	1	6	51.075	ppb	1.421	10794	50	102.2	90	110	
B	11	1	6	54.571	ppb	40.491	1053	50	109.1	90	110	
Na	23	1	45	1021.757	ppb	0.745	2073162	1000	102.2	90	110	
Na	23	2	45	998.007	ppb	0.689	149054	1000	99.8	90	110	
Mg	24	2	45	993.187	ppb	1.967	64149	1000	99.3	90	110	
Al	27	2	45	978.910	ppb	1.448	17501	1000	97.9	90	110	
K	39	1	45	33.963	ppb	171.594	9124586	1000	3.4	90	110	>+\-10%
K	39	2	45	1014.843	ppb	3.040	65657	1000	101.5	90	110	
Ca	40	1	45	1007.855	ppb	0.543	2959687	1000	100.8	90	110	
Ca	44	2	45	988.350	ppb	3.596	2730	1000	98.8	90	110	
Ti	47	2	45	60.444	ppb	11.410	950	50	120.9	90	110	>+\-10%
V	51	2	72	49.759	ppb	0.789	41243	50	99.5	90	110	
Cr	52	2	72	50.946	ppb	1.261	48000	50	101.9	90	110	
Mn	55	2	72	48.349	ppb	1.993	18743	50	96.7	90	110	
Fe	57	2	72	1015.955	ppb	5.898	18235	1000	101.6	90	110	
Co	59	2	72	50.030	ppb	1.512	82142	50	100.1	90	110	
Ni	60	2	72	50.645	ppb	0.536	22889	50	101.3	90	110	
Cu	63	2	72	50.360	ppb	1.730	64327	50	100.7	90	110	
Zn	66	2	72	49.993	ppb	4.254	9891	50	100.0	90	110	
As	75	2	72	49.052	ppb	2.713	7590	50	98.1	90	110	
Se	78	1	72	49.696	ppb	1.296	6938	50	99.4	90	110	
Sr	88	2	72	98.724	ppb	1.878	49129	100	98.7	90	110	
Zr	90	2	72	109.086	ppb	54.388	190	50	218.2	90	110	>+\-10%
Nb	93	2	72	108.736	ppb	0.972	137829	100	108.7	90	110	
Mo	95	2	115	50.441	ppb	2.127	33494	50	100.9	90	110	
Pd	105	2	115	50.132	ppb	1.430	56046	50	100.3	90	110	
Ag	107	2	115	50.491	ppb	1.185	117292	50	101.0	90	110	
Cd	111	2	115	49.479	ppb	5.176	15599	50	99.0	90	110	
Sn	120	2	115	50.730	ppb	0.143	44923	50	101.5	90	110	
Sb	121	2	115	48.792	ppb	1.907	43261	50	97.6	90	110	
Ba	137	2	115	47.307	ppb	5.507	14889	50	94.6	90	110	
W	182	2	165	50.050	ppb	1.577	163910	50	100.1	90	110	
Pt	195	2	165	50.073	ppb	1.004	128570	50	100.1	90	110	
Tl	205	2	165	49.794	ppb	0.759	323938	50	99.6	90	110	
Pb	208	2	165	50.338	ppb	0.138	445886	50	100.7	90	110	
Th	232	2	165	49.439	ppb	0.921	559595	50	98.9	90	110	
U	238	2	165	49.585	ppb	1.302	568065	50	99.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	577300	0.20	570952	101.11	60	120	
Sc (IS)	45	1	HMI H2	13645261	0.22	13408403	101.77	60	120	
Sc (IS)	45	2	HMI He	591249	0.68	577322	102.41	60	120	
Sc (IS)	45	3	No Gas	49670141	1.58	48917664	101.54	60	120	
Ge Internal Standard	72	1	HMI H2	5871605	0.60	5773454	101.70	60	120	
Ge Internal Standard	72	2	HMI He	788622	0.49	765657	103.00	60	120	
In Internal Standard	115	2	HMI He	3241217	0.79	3240364	100.03	60	120	
Ho-165	165	2	HMI He	15002017	0.64	14997825	100.03	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5688508
Data File Name	088_CCB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T15:07:46-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	0.507	ppb	735.6	5831959	10	
Be	9	1	6	0.015	ppb	356.1	7	0.5	
B	11	1	6	-8.998	ppb	-99.1	647	0.5	
Na	23	1	45	1.706	ppb	24.8	96632	25	
Na	23	2	45	0.020	ppb	15296.5	7309	25	
Mg	24	2	45	0.086	ppb	589.2	107	25	
Al	27	2	45	-0.971	ppb	-59.1	20	15	
K	39	1	45	-556.095	ppb	-11.6	8538279	50	
K	39	2	45	-10.761	ppb	-88.2	24378	50	
Ca	40	1	45	1.152	ppb	7.7	34973	50	
Ca	44	2	45	3.586	ppb	159.5	37	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	0.235	ppb	204.7	5231	1	
Cr	52	2	72	-0.046	ppb	-134.0	180	1	
Mn	55	2	72	0.052	ppb	154.7	73	0.5	
Fe	57	2	72	1.682	ppb	69.1	93	25	
Co	59	2	72	-0.003	ppb	-998.3	970	0.5	
Ni	60	2	72	0.127	ppb	56.2	123	1	
Cu	63	2	72	0.445	ppb	20.6	1110	1	
Zn	66	2	72	0.516	ppb	49.5	180	5	
As	75	2	72	-0.036	ppb	-39.6	26	1	
Se	78	1	72	0.017	ppb	295.7	32	1	
Sr	88	2	72	0.020	ppb	155.5	23	0.5	
Zr	90	2	72	9.259	ppb	293.1	47	1	>RL
Nb	93	2	72	5.500	ppb	11.6	7469	2	>RL
Mo	95	2	115	0.036	ppb	93.5	57	0.5	
Pd	105	2	115	0.057	ppb	34.6	80	1	
Ag	107	2	115	0.024	ppb	26.7	63	1	
Cd	111	2	115	0.043	ppb	115.4	13	0.5	
Sn	120	2	115	0.096	ppb	151.6	283	1	
Sb	121	2	115	0.147	ppb	14.3	183	0.6	
Ba	137	2	115	0.147	ppb	65.2	53	0.5	
W	182	2	165	0.061	ppb	41.7	730	1	
Pt	195	2	165	0.013	ppb	16.6	33	1	
Tl	205	2	165	0.030	ppb	5.7	347	0.1	
Pb	208	2	165	0.077	ppb	8.2	1330	0.5	
Th	232	2	165	0.219	ppb	11.7	3291	1	
U	238	2	165	0.022	ppb	9.7	290	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	583667	0.21	570952	102.23	60	120	
Sc (IS)	45	1	HMI H2	13669864	0.57	13408403	101.95	60	120	
Sc (IS)	45	2	HMI He	584669	0.63	577322	101.27	60	120	
Sc (IS)	45	3	No Gas	49496588	0.67	48917664	101.18	60	120	
Ge Internal Standard	72	1	HMI H2	5840853	0.43	5773454	101.17	60	120	
Ge Internal Standard	72	2	HMI He	772529	0.54	765657	100.90	60	120	
In Internal Standard	115	2	HMI He	3242029	2.56	3240364	100.05	60	120	
Ho-165	165	2	HMI He	15025609	0.93	14997825	100.19	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5688512
Data File Name	089LCCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T15:11:39-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	10.095	ppb	10.212	6084675	50	20.2	70	130	>+/-30%
Be	9	1	6	1.225	ppb	18.017	263	1	122.5	70	130	
Na	23	2	45	46.967	ppb	7.135	14081	50	93.9	70	130	
Mg	24	2	45	52.910	ppb	2.383	3521	50	105.8	70	130	
Al	27	2	45	55.162	ppb	6.035	1023	30	183.9	70	130	>+/-30%
K	39	2	45	90.570	ppb	26.747	28752	100	90.6	70	130	
Ca	44	2	45	47.218	ppb	36.785	157	50	94.4	70	130	
V	51	2	72	4.707	ppb	3.230	8473	5	94.1	70	130	
Cr	52	2	72	2.203	ppb	14.044	2264	2	110.1	70	130	
Mn	55	2	72	1.167	ppb	33.172	500	1	116.7	70	130	
Fe	57	2	72	57.116	ppb	13.494	1073	50	114.2	70	130	
Co	59	2	72	1.005	ppb	11.715	2590	1	100.5	70	130	
Ni	60	2	72	1.496	ppb	12.425	733	1.5	99.7	70	130	
Cu	63	2	72	2.261	ppb	12.011	3391	2	113.1	70	130	
Zn	66	2	72	10.354	ppb	3.265	2087	10	103.5	70	130	
As	75	2	72	4.883	ppb	5.345	775	5	97.7	70	130	
Se	78	1	72	5.215	ppb	10.658	751	5	104.3	70	130	
Sr	88	2	72	1.133	ppb	9.931	570	1	113.3	70	130	
Zr	90	2	72	-5.194	ppb	-287.063	27	0.5	-1038.8	70	130	>+/-30%
Nb	93	2	72	2.690	ppb	8.628	4031	2	134.5	70	130	>+/-30%
Mo	95	2	115	2.156	ppb	3.215	1457	2	107.8	70	130	
Pd	105	2	115	0.006	ppb	86.191	23	1	0.6	70	130	>+/-30%
Ag	107	2	115	5.246	ppb	1.880	12146	5	104.9	70	130	
Cd	111	2	115	1.000	ppb	36.293	313	1	100.0	70	130	
Sn	120	2	115	10.298	ppb	6.519	9240	10	103.0	70	130	
Sb	121	2	115	1.931	ppb	18.357	1757	2	96.6	70	130	
Ba	137	2	115	1.258	ppb	41.937	400	1	125.8	70	130	
W	182	2	165	5.055	ppb	1.066	17112	1	505.5	70	130	>+/-30%
Pt	195	2	165	0.005	ppb	173.205	13	1	0.5	70	130	>+/-30%
Tl	205	2	165	1.011	ppb	7.391	6755	1	101.1	70	130	
Pb	208	2	165	1.113	ppb	1.302	10542	1	111.3	70	130	
Th	232	2	165	1.776	ppb	3.612	20978	2	88.8	70	130	
U	238	2	165	1.034	ppb	0.880	11936	1	103.4	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	580265	0.93	570952	101.63	60	120	
Sc (IS)	45	1	HMI H2	13606842	0.51	13408403	101.48	60	120	
Sc (IS)	45	2	HMI He	592288	0.38	577322	102.59	60	120	
Sc (IS)	45	3	No Gas	50242306	0.92	48917664	102.71	60	120	
Ge Internal Standard	72	1	HMI H2	5842354	0.38	5773454	101.19	60	120	
Ge Internal Standard	72	2	HMI He	778622	0.62	765657	101.69	60	120	
In Internal Standard	115	2	HMI He	3228088	1.31	3240364	99.62	60	120	
Ho-165	165	2	HMI He	15072981	1.01	14997825	100.50	60	120	

Blank Report

Sample Table

Sample Name	MB 280-456592/1-A
Data File Name	090_BLK.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T15:15:32-06:00
Sample Type	Blank
Dilution	1
Comment	456592 6020a dod5
ISTD Ref File Name	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-3.052	ppb	-222.218437	69883	0.5
Li	7	2	45	-3.985	ppb	-76.51103243	3741	0.5
Li	7	3	45	-4.537	ppb	-124.1288481	5848287	10
Be	9	1	6	0.000	ppb	7439.985171	3	0.5
B	11	1	6	7.298	ppb	132.5118427	720	0.5
Na	23	1	45	12.355	ppb	4.342825557	115454	25
Na	23	2	45	11.301	ppb	10.8318948	9143	25
Mg	24	2	45	6.448	ppb	9.353753181	527	25
Al	27	2	45	6.718	ppb	29.81294864	160	15
K	39	1	45	-4588.511	ppb	-0.762570324	4351180	50
K	39	2	45	2.803	ppb	605.2156203	25610	50
Ca	40	1	45	21.842	ppb	0.191268933	93687	50
Ca	44	2	45	21.230	ppb	94.00509176	87	25
Ti	47	2	45	0.419	ppb	173.2050808	7	0.5
V	51	2	72	-2.674	ppb	-1.538908315	3227	1
Cr	52	2	72	0.114	ppb	79.29409366	333	1
Mn	55	2	72	0.351	ppb	34.29071771	190	0.5
Fe	57	2	72	20.795	ppb	12.33685971	437	25
Co	59	2	72	-0.013	ppb	-468.1559555	973	0.5
Ni	60	2	72	0.018	ppb	143.0937744	77	1
Cu	63	2	72	0.485	ppb	24.44492789	1183	1
Zn	66	2	72	3.254	ppb	21.32440497	720	5
As	75	2	72	-0.094	ppb	-13.07466491	18	1
Se	78	1	72	-0.057	ppb	-106.6539977	21	1
Sr	88	2	72	0.147	ppb	56.82450797	87	0.5
Zr	90	2	72	22.639	ppb	108.6388627	67	1
Nb	93	2	72	3.047	ppb	11.5940354	4531	2
Mo	95	2	115	0.015	ppb	121.1714004	43	0.5
Pd	105	2	115	0.009	ppb	382.9472802	27	1
Ag	107	2	115	0.009	ppb	30.20474707	27	1
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5
Sn	120	2	115	0.160	ppb	45.26226144	340	1
Sb	121	2	115	0.070	ppb	64.11831852	117	0.6
Ba	137	2	115	0.492	ppb	42.09698205	163	0.5
W	182	2	165	0.076	ppb	69.74627213	790	1
Pt	195	2	165	0.012	ppb	67.30979724	30	1
Tl	205	2	165	0.026	ppb	39.15335429	323	0.1
Pb	208	2	165	0.132	ppb	19.78092348	1843	0.5
Th	232	2	165	0.359	ppb	8.686472852	4951	1
U	238	2	165	0.008	ppb	42.5409646	130	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	557256	0.73	570952	97.60	60	120	
Sc (IS)	45	1	HMI H2	13454098	0.11	13408403	100.34	60	120	
Sc (IS)	45	2	HMI He	601080	0.43	577322	104.12	60	120	
Sc (IS)	45	3	No Gas	50373224	0.63	48917664	102.98	60	120	
Ge Internal Standard	72	1	HMI H2	5734210	0.23	5773454	99.32	60	120	
Ge Internal Standard	72	2	HMI He	787845	0.34	765657	102.90	60	120	
In Internal Standard	115	2	HMI He	3268677	1.29	3240364	100.87	60	120	
Ho-165	165	2	HMI He	15231317	0.80	14997825	101.56	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-456592/2-A
Data File Name	091_LCS.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T15:19:23-06:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	456592 6020a dod5
ISTD Ref File Name	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	74.960	74.960	ppb	9.057	87239	400	18.7	80	120	>+/-20%
Li	7	2	45	65.975	65.975	ppb	34.428	4688	400	16.5	80	120	>+/-20%
Li	7	3	45	80.308	80.308	ppb	8.205	7422594	400	20.1	80	120	>+/-20%
Be	9	1	6	42.978	42.978	ppb	5.306	8880	40	107.4	80	120	
Na	23	2	45	9.962	9.962	ppb	24.166	8976	40	24.9	80	120	>+/-20%
Mg	24	2	45	0.645	0.645	ppb	171.831	147	40	1.6	80	120	>+/-20%
Al	27	2	45	413.004	413.004	ppb	3.888	7552	40	1032.5	80	120	>+/-20%
K	39	2	45	-2.830	-2.830	ppb	-790.817	25460	40	-7.1	80	120	>+/-20%
Ca	44	2	45	94.023	94.023	ppb	11.669	290	40	235.1	80	120	>+/-20%
V	51	2	72	38.439	38.439	ppb	1.475	33022	40	96.1	80	120	
Cr	52	2	72	41.483	41.483	ppb	1.112	39110	40	103.7	80	120	
Mn	55	2	72	40.916	40.916	ppb	2.533	15863	40	102.3	80	120	
Fe	57	2	72	448.849	448.849	ppb	1.052	8089	40	1122.1	80	120	>+/-20%
Co	59	2	72	42.002	42.002	ppb	1.222	69095	40	105.0	80	120	
Ni	60	2	72	41.727	41.727	ppb	3.833	18867	40	104.3	80	120	
Cu	63	2	72	42.003	42.003	ppb	3.539	53721	40	105.0	80	120	
Zn	66	2	72	42.814	42.814	ppb	5.875	8480	40	107.0	80	120	
As	75	2	72	37.721	37.721	ppb	1.889	5842	40	94.3	80	120	
Se	78	1	72	39.092	39.092	ppb	4.354	5397	40	97.7	80	120	
Nb	93	2	72	2.222	2.222	ppb	16.867	3491	40	5.6	80	120	>+/-20%
Mo	95	2	115	42.447	42.447	ppb	0.584	27938	40	106.1	80	120	
Pd	105	2	115	0.000	0.000	ppb	6070.675	17	40	0.0	80	120	>+/-20%
Ag	107	2	115	41.988	41.988	ppb	0.829	96678	40	105.0	80	120	
Cd	111	2	115	40.445	40.445	ppb	2.947	12640	40	101.1	80	120	
Sn	120	2	115	41.207	41.207	ppb	2.352	36202	40	103.0	80	120	
Sb	121	2	115	40.611	40.611	ppb	3.715	35690	40	101.5	80	120	
Ba	137	2	115	40.639	40.639	ppb	1.832	12680	40	101.6	80	120	
W	182	2	165	33.809	33.809	ppb	1.340	111171	40	84.5	80	120	
Pt	195	2	165	0.000	0.000	ppb	#DIV/0!	0	40	0.0	80	120	>+/-20%
Tl	205	2	165	40.478	40.478	ppb	1.049	264025	40	101.2	80	120	
Pb	208	2	165	40.801	40.801	ppb	0.074	362461	40	102.0	80	120	
Th	232	2	165	38.075	38.075	ppb	1.049	432225	40	95.2	80	120	
U	238	2	165	40.000	40.000	ppb	0.633	459436	40	100.0	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	564322	0.26	570952	98.84	60	120	
Sc (IS)	45	1	HMI H2	13545093	0.31	13408403	101.02	60	120	
Sc (IS)	45	2	HMI He	602929	0.31	577322	104.44	60	120	
Sc (IS)	45	3	No Gas	51153711	0.58	48917664	104.57	60	120	
Ge Internal Standard	72	1	HMI H2	5799116	0.68	5773454	100.44	60	120	
Ge Internal Standard	72	2	HMI He	788310	0.64	765657	102.96	60	120	
In Internal Standard	115	2	HMI He	3212472	0.74	3240364	99.14	60	120	
Ho-165	165	2	HMI He	15040566	1.22	14997825	100.28	60	120	

Sample Report

Sample Table

Sample Name	LCSD 280-456592/3-A
Data File Name	092SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T15:23:18-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456592 6020a dod5
ISTD Ref FileName	085CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	66.675	ppb	66.675	5.01	85814	500000	
Li	7	2	45	56.816	ppb	56.816	50.91	4524	500000	
Li	7	3	45	79.326	ppb	79.326	2.19	7323323	50000	
Be	9	1	6	39.998	ppb	39.998	2.01	8223	2000	
B	11	1	6	1004.432	ppb	1004.432	8.50	7035	2000	
Na	23	1	45	9.185	ppb	9.185	3.81	110609	2000	
Na	23	2	45	9.245	ppb	9.245	21.94	8796	400000	
Mg	24	2	45	1.020	ppb	1.020	29.70	170	400000	
Al	27	2	45	397.250	ppb	397.250	2.54	7202	400000	
K	39	1	45	-4800.952	ppb	-4800.952	-0.82	4183432	400000	
K	39	2	45	2.218	ppb	2.218	618.51	25443	400000	
Ca	40	1	45	13.262	ppb	13.262	2.09	69873	400000	
Ca	44	2	45	92.523	ppb	92.523	13.83	283	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	36.757	ppb	36.757	3.93	31803	2000	
Cr	52	2	72	40.852	ppb	40.852	1.44	38516	5000	
Mn	55	2	72	39.350	ppb	39.350	4.38	15259	10000	
Fe	57	2	72	407.298	ppb	407.298	4.58	7346	400000	
Co	59	2	72	40.529	ppb	40.529	0.43	66701	2000	
Ni	60	2	72	40.513	ppb	40.513	3.29	18316	5000	
Cu	63	2	72	40.535	ppb	40.535	1.19	51864	5000	
Zn	66	2	72	39.129	ppb	39.129	3.70	7756	5000	
As	75	2	72	36.726	ppb	36.726	2.27	5688	2000	
Se	78	1	72	37.878	ppb	37.878	2.60	5278	2000	
Sr	88	2	72	39.854	ppb	39.854	4.36	19831	4000	
Zr	90	2	72	1123.671	ppb	1123.671	7.18	1634	1000	
Nb	93	2	72	1.330	ppb	1.330	11.59	2367	200	
Mo	95	2	115	40.788	ppb	40.788	2.37	27110	2000	
Pd	105	2	115	-0.009	ppb	-0.009	-56.94	7	100	
Ag	107	2	115	39.864	ppb	39.864	0.73	92695	100	
Cd	111	2	115	39.197	ppb	39.197	1.37	12373	2000	
Sn	120	2	115	39.466	ppb	39.466	1.91	35018	2000	
Sb	121	2	115	39.218	ppb	39.218	2.37	34811	1000	
Ba	137	2	115	39.225	ppb	39.225	3.58	12359	5000	
W	182	2	165	32.757	ppb	32.757	0.73	107458	100	
Pt	195	2	165	0.003	ppb	0.003	173.21	7	100	
Tl	205	2	165	38.901	ppb	38.901	1.18	253109	2000	
Pb	208	2	165	39.166	ppb	39.166	0.78	347065	5000	
Th	232	2	165	36.794	ppb	36.794	0.29	416671	2000	
U	238	2	165	38.282	ppb	38.282	0.75	438591	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	561475	0.64	570952	98.34	60	120	
Sc (IS)	45	1	HMI H2	13603821	1.25	13408403	101.46	60	120	
Sc (IS)	45	2	HMI He	597655	0.31	577322	103.52	60	120	
Sc (IS)	45	3	No Gas	50583804	0.24	48917664	103.41	60	120	
Ge Internal Standard	72	1	HMI H2	5854211	1.37	5773454	101.40	60	120	
Ge Internal Standard	72	2	HMI He	788232	0.26	765657	102.95	60	120	
In Internal Standard	115	2	HMI He	3243954	0.93	3240364	100.11	60	120	
Ho-165	165	2	HMI He	15001636	0.36	14997825	100.03	60	120	

Sample Report

Sample Table

Sample Name	280-123062-A-8-A
Data File Name	093SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T15:27:12-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456592 6020a dod5
ISTD Ref FileName	085CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	4.260	ppb	4.260	127.20	72073	500000	
Li	7	2	45	5.277	ppb	5.277	485.86	3847	500000	
Li	7	3	45	1.293	ppb	1.293	344.36	5984179	50000	
Be	9	1	6	0.439	ppb	0.439	31.32	93	2000	
B	11	1	6	620.149	ppb	620.149	12.06	4588	2000	
Na	23	1	45	7188.660	ppb	7188.660	0.33	13946513	2000	
Na	23	2	45	7325.065	ppb	7325.065	1.19	1059949	400000	
Mg	24	2	45	8585.414	ppb	8585.414	0.32	560498	400000	
Al	27	2	45	234.935	ppb	234.935	4.90	4281	400000	
K	39	1	45	-4094.205	ppb	-4094.205	-1.31	4889443	400000	
K	39	2	45	421.575	ppb	421.575	2.27	42446	400000	
Ca	40	1	45	7598.134	ppb	7598.134	0.51	21984062	400000	
Ca	44	2	45	5815.067	ppb	5815.067	2.21	16123	400000	
Ti	47	2	45	2.935	ppb	2.935	81.20	47	4000	
V	51	2	72	-2.558	ppb	-2.558	-3.67	3337	2000	
Cr	52	2	72	1.036	ppb	1.036	15.34	1207	5000	
Mn	55	2	72	52.193	ppb	52.193	2.16	20362	10000	
Fe	57	2	72	261.812	ppb	261.812	5.83	4778	400000	
Co	59	2	72	7.007	ppb	7.007	0.94	12443	2000	
Ni	60	2	72	15.189	ppb	15.189	1.50	6959	5000	
Cu	63	2	72	0.551	ppb	0.551	32.04	1277	5000	
Zn	66	2	72	14.195	ppb	14.195	7.71	2887	5000	
As	75	2	72	0.128	ppb	0.128	35.79	52	2000	
Se	78	1	72	0.086	ppb	0.086	145.14	41	2000	
Sr	88	2	72	46.878	ppb	46.878	2.21	23490	4000	
Zr	90	2	72	331.308	ppb	331.308	109.07	511	1000	
Nb	93	2	72	0.740	ppb	0.740	29.21	1634	200	
Mo	95	2	115	0.190	ppb	0.190	64.41	160	2000	
Pd	105	2	115	-0.003	ppb	-0.003	-437.72	13	100	
Ag	107	2	115	0.004	ppb	0.004	208.13	17	100	
Cd	111	2	115	0.063	ppb	0.063	87.06	20	2000	
Sn	120	2	115	0.194	ppb	0.194	35.48	370	2000	
Sb	121	2	115	0.487	ppb	0.487	15.40	487	1000	
Ba	137	2	115	73.079	ppb	73.079	0.65	23117	5000	
W	182	2	165	0.083	ppb	0.083	77.12	807	100	
Pt	195	2	165	0.006	ppb	0.006	124.73	17	100	
Tl	205	2	165	0.050	ppb	0.050	32.59	480	2000	
Pb	208	2	165	0.318	ppb	0.318	2.27	3487	5000	
Th	232	2	165	0.512	ppb	0.512	4.53	6642	2000	
U	238	2	165	0.153	ppb	0.153	9.34	1797	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	559900	0.99	570952	98.06	60	120	
Sc (IS)	45	1	HMI H2	13569916	0.63	13408403	101.20	60	120	
Sc (IS)	45	2	HMI He	598462	0.33	577322	103.66	60	120	
Sc (IS)	45	3	No Gas	50672868	0.76	48917664	103.59	60	120	
Ge Internal Standard	72	1	HMI H2	5834877	1.30	5773454	101.06	60	120	
Ge Internal Standard	72	2	HMI He	793878	0.92	765657	103.69	60	120	
In Internal Standard	115	2	HMI He	3257413	0.46	3240364	100.53	60	120	
Ho-165	165	2	HMI He	15104625	0.62	14997825	100.71	60	120	

Sample Table

Sample Name	280-123062-A-8-Asd@5
Data File Name	094SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T15:31:07-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456592 6020a dod5
ISTD Ref FileName	085CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	9.386	ppb	9.386	96.53	74174	500000	
Li	7	2	45	1.420	ppb	1.420	990.34	3727	500000	
Li	7	3	45	2.999	ppb	2.999	78.08	5932199	50000	
Be	9	1	6	0.000	ppb	0.000	-5765.71	3	2000	
B	11	1	6	90.315	ppb	90.315	20.09	1313	2000	
Na	23	1	45	1445.964	ppb	1445.964	1.46	2918143	2000	
Na	23	2	45	1451.360	ppb	1451.360	1.02	212073	400000	
Mg	24	2	45	1697.876	ppb	1697.876	1.18	108910	400000	
Al	27	2	45	59.559	ppb	59.559	5.97	1093	400000	
K	39	1	45	-2020.546	ppb	-2020.546	-2.49	7086200	400000	
K	39	2	45	67.333	ppb	67.333	28.49	27600	400000	
Ca	40	1	45	1505.416	ppb	1505.416	0.42	4440185	400000	
Ca	44	2	45	1110.664	ppb	1110.664	0.47	3045	400000	
Ti	47	2	45	0.637	ppb	0.637	173.21	10	4000	
V	51	2	72	-1.288	ppb	-1.288	-21.40	4224	2000	
Cr	52	2	72	0.218	ppb	0.218	14.55	430	5000	
Mn	55	2	72	10.262	ppb	10.262	4.16	4011	10000	
Fe	57	2	72	55.394	ppb	55.394	8.88	1053	400000	
Co	59	2	72	1.359	ppb	1.359	15.93	3191	2000	
Ni	60	2	72	2.754	ppb	2.754	7.34	1307	5000	
Cu	63	2	72	0.275	ppb	0.275	17.91	917	5000	
Zn	66	2	72	4.653	ppb	4.653	11.45	993	5000	
As	75	2	72	0.024	ppb	0.024	438.12	36	2000	
Se	78	1	72	-0.025	ppb	-0.025	-461.49	27	2000	
Sr	88	2	72	9.616	ppb	9.616	8.55	4784	4000	
Zr	90	2	72	8.693	ppb	8.693	329.60	47	1000	
Nb	93	2	72	0.134	ppb	0.134	101.99	857	200	
Mo	95	2	115	0.060	ppb	0.060	80.06	73	2000	
Pd	105	2	115	0.000	ppb	0.000	13640.29	17	100	
Ag	107	2	115	0.013	ppb	0.013	85.28	37	100	
Cd	111	2	115	0.032	ppb	0.032	173.21	10	2000	
Sn	120	2	115	0.058	ppb	0.058	99.46	250	2000	
Sb	121	2	115	0.059	ppb	0.059	83.91	107	1000	
Ba	137	2	115	13.880	ppb	13.880	11.05	4394	5000	
W	182	2	165	-0.020	ppb	-0.020	-37.14	463	100	
Pt	195	2	165	0.005	ppb	0.005	114.54	13	100	
Tl	205	2	165	0.000	ppb	0.000	17374.48	150	2000	
Pb	208	2	165	0.151	ppb	0.151	15.27	1987	5000	
Th	232	2	165	0.044	ppb	0.044	14.70	1313	2000	
U	238	2	165	0.033	ppb	0.033	10.82	407	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	589699	0.66	570952	103.28	60	120	
Sc (IS)	45	1	HMI H2	13753638	0.33	13408403	102.57	60	120	
Sc (IS)	45	2	HMI He	587563	0.61	577322	101.77	60	120	
Sc (IS)	45	3	No Gas	49983544	0.32	48917664	102.18	60	120	
Ge Internal Standard	72	1	HMI H2	5929797	0.50	5773454	102.71	60	120	
Ge Internal Standard	72	2	HMI He	786695	0.69	765657	102.75	60	120	
In Internal Standard	115	2	HMI He	3259233	1.85	3240364	100.58	60	120	
Ho-165	165	2	HMI He	15002697	0.10	14997825	100.03	60	120	

Sample Report

Sample Table

Sample Name	280-123062-A-8-B MS
Data File Name	095SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T15:35:01-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456592 6020a dod5
ISTD Ref FileName	085CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	76.331	ppb	76.331	2.66	84966	500000	
Li	7	2	45	87.065	ppb	87.065	4.42	4814	500000	
Li	7	3	45	85.243	ppb	85.243	4.89	7384301	50000	
Be	9	1	6	42.180	ppb	42.180	9.26	8339	2000	
B	11	1	6	1686.843	ppb	1686.843	3.03	10924	2000	
Na	23	1	45	7518.181	ppb	7518.181	0.45	14126462	2000	
Na	23	2	45	7603.563	ppb	7603.563	0.75	1073657	400000	
Mg	24	2	45	8911.134	ppb	8911.134	0.28	567850	400000	
Al	27	2	45	652.310	ppb	652.310	1.90	11535	400000	
K	39	1	45	-3903.839	ppb	-3903.839	-5.96	4922576	400000	
K	39	2	45	431.314	ppb	431.314	12.83	41807	400000	
Ca	40	1	45	7890.849	ppb	7890.849	1.01	22116346	400000	
Ca	44	2	45	6365.110	ppb	6365.110	4.64	17221	400000	
Ti	47	2	45	4.720	ppb	4.720	61.10	73	4000	
V	51	2	72	38.099	ppb	38.099	4.33	32484	2000	
Cr	52	2	72	40.817	ppb	40.817	1.29	38148	5000	
Mn	55	2	72	92.786	ppb	92.786	1.24	35588	10000	
Fe	57	2	72	691.434	ppb	691.434	1.75	12316	400000	
Co	59	2	72	48.474	ppb	48.474	1.20	78888	2000	
Ni	60	2	72	56.035	ppb	56.035	3.12	25086	5000	
Cu	63	2	72	40.498	ppb	40.498	1.31	51365	5000	
Zn	66	2	72	51.369	ppb	51.369	0.17	10067	5000	
As	75	2	72	38.254	ppb	38.254	0.50	5872	2000	
Se	78	1	72	39.282	ppb	39.282	5.26	5333	2000	
Sr	88	2	72	89.555	ppb	89.555	1.59	44156	4000	
Zr	90	2	72	1261.490	ppb	1261.490	4.29	1814	1000	
Nb	93	2	72	0.362	ppb	0.362	12.09	1137	200	
Mo	95	2	115	41.335	ppb	41.335	3.05	27478	2000	
Pd	105	2	115	0.003	ppb	0.003	3.27	20	100	
Ag	107	2	115	40.312	ppb	40.312	0.89	93738	100	
Cd	111	2	115	41.046	ppb	41.046	1.75	12957	2000	
Sn	120	2	115	38.901	ppb	38.901	1.75	34524	2000	
Sb	121	2	115	39.944	ppb	39.944	1.57	35457	1000	
Ba	137	2	115	118.813	ppb	118.813	0.79	37428	5000	
W	182	2	165	33.855	ppb	33.855	1.92	110204	100	
Pt	195	2	165	0.000	ppb	0.000	#DIV/0!	0	100	
Tl	205	2	165	40.411	ppb	40.411	0.55	260946	2000	
Pb	208	2	165	40.428	ppb	40.428	1.53	355524	5000	
Th	232	2	165	38.138	ppb	38.138	0.33	428619	2000	
U	238	2	165	40.108	ppb	40.108	0.24	456046	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	540329	0.95	570952	94.64	60	120	
Sc (IS)	45	1	HMI H2	13146791	1.23	13408403	98.05	60	120	
Sc (IS)	45	2	HMI He	584156	0.62	577322	101.18	60	120	
Sc (IS)	45	3	No Gas	50301148	0.28	48917664	102.83	60	120	
Ge Internal Standard	72	1	HMI H2	5702457	0.70	5773454	98.77	60	120	
Ge Internal Standard	72	2	HMI He	781337	0.33	765657	102.05	60	120	
In Internal Standard	115	2	HMI He	3244239	0.54	3240364	100.12	60	120	
Ho-165	165	2	HMI He	14888970	0.26	14997825	99.27	60	120	

Sample Report

Sample Table

Sample Name	280-123062-A-8-C MSD
Data File Name	096SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T15:38:52-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456592 6020a dod5
ISTD Ref FileName	085CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	78.417	ppb	78.417	12.86	86633	500000	
Li	7	2	45	72.141	ppb	72.141	19.77	4654	500000	
Li	7	3	45	84.775	ppb	84.775	3.14	7352523	50000	
Be	9	1	6	43.954	ppb	43.954	4.97	8920	2000	
B	11	1	6	1629.265	ppb	1629.265	3.58	10851	2000	
Na	23	1	45	7385.445	ppb	7385.445	1.40	14079309	2000	
Na	23	2	45	7505.301	ppb	7505.301	1.59	1067650	400000	
Mg	24	2	45	8824.189	ppb	8824.189	1.20	566437	400000	
Al	27	2	45	674.641	ppb	674.641	2.74	12019	400000	
K	39	1	45	-4086.040	ppb	-4086.040	-0.81	4814023	400000	
K	39	2	45	413.089	ppb	413.089	6.07	41399	400000	
Ca	40	1	45	7802.743	ppb	7802.743	1.53	22187233	400000	
Ca	44	2	45	6235.016	ppb	6235.016	5.41	16994	400000	
Ti	47	2	45	4.046	ppb	4.046	65.73	63	4000	
V	51	2	72	38.680	ppb	38.680	3.02	32838	2000	
Cr	52	2	72	41.721	ppb	41.721	0.96	38909	5000	
Mn	55	2	72	92.987	ppb	92.987	0.81	35595	10000	
Fe	57	2	72	734.599	ppb	734.599	5.74	13056	400000	
Co	59	2	72	47.720	ppb	47.720	0.92	77520	2000	
Ni	60	2	72	56.564	ppb	56.564	0.90	25270	5000	
Cu	63	2	72	41.168	ppb	41.168	1.23	52101	5000	
Zn	66	2	72	50.940	ppb	50.940	1.92	9964	5000	
As	75	2	72	38.735	ppb	38.735	4.40	5933	2000	
Se	78	1	72	38.956	ppb	38.956	3.08	5308	2000	
Sr	88	2	72	89.178	ppb	89.178	1.98	43886	4000	
Zr	90	2	72	1514.888	ppb	1514.888	38.78	2169	1000	
Nb	93	2	72	0.324	ppb	0.324	29.84	1087	200	
Mo	95	2	115	41.826	ppb	41.826	1.23	27504	2000	
Pd	105	2	115	0.000	ppb	0.000	9098.40	17	100	
Ag	107	2	115	41.353	ppb	41.353	1.16	95124	100	
Cd	111	2	115	40.273	ppb	40.273	4.00	12576	2000	
Sn	120	2	115	39.279	ppb	39.279	2.46	34487	2000	
Sb	121	2	115	40.433	ppb	40.433	2.55	35503	1000	
Ba	137	2	115	115.364	ppb	115.364	2.61	35951	5000	
W	182	2	165	34.004	ppb	34.004	0.82	110937	100	
Pt	195	2	165	0.004	ppb	0.004	173.21	10	100	
Tl	205	2	165	40.358	ppb	40.358	0.45	261194	2000	
Pb	208	2	165	40.231	ppb	40.231	0.98	354601	5000	
Th	232	2	165	38.440	ppb	38.440	1.00	432963	2000	
U	238	2	165	40.105	ppb	40.105	0.64	457034	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	554402	0.59	570952	97.10	60	120	
Sc (IS)	45	1	HMI H2	13337648	0.81	13408403	99.47	60	120	
Sc (IS)	45	2	HMI He	588482	0.97	577322	101.93	60	120	
Sc (IS)	45	3	No Gas	50140964	0.38	48917664	102.50	60	120	
Ge Internal Standard	72	1	HMI H2	5723711	0.22	5773454	99.14	60	120	
Ge Internal Standard	72	2	HMI He	779785	0.41	765657	101.85	60	120	
In Internal Standard	115	2	HMI He	3209334	0.46	3240364	99.04	60	120	
Ho-165	165	2	HMI He	14922482	0.71	14997825	99.50	60	120	

Sample Report

Sample Table

Sample Name	280-123062-A-8-A pds
Data File Name	097SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T15:42:45-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456592 6020a dod5
ISTD Ref FileName	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	5.877	ppb	5.877	111.20	71229	500000	
Li	7	2	45	15.234	ppb	15.234	225.99	3921	500000	
Li	7	3	45	2.258	ppb	2.258	127.31	5943976	50000	
Be	9	1	6	211.640	ppb	211.640	1.62	42869	2000	
B	11	1	6	594.556	ppb	594.556	8.24	4378	2000	
Na	23	1	45	7089.951	ppb	7089.951	0.38	13530103	2000	
Na	23	2	45	7176.471	ppb	7176.471	0.50	1023608	400000	
Mg	24	2	45	8375.543	ppb	8375.543	0.62	538901	400000	
Al	27	2	45	2333.884	ppb	2333.884	4.10	41573	400000	
K	39	1	45	-4162.289	ppb	-4162.289	-1.30	4741214	400000	
K	39	2	45	411.667	ppb	411.667	6.89	41440	400000	
Ca	40	1	45	7500.908	ppb	7500.908	0.53	21347765	400000	
Ca	44	2	45	5662.753	ppb	5662.753	0.93	15475	400000	
Ti	47	2	45	7.646	ppb	7.646	74.68	120	4000	
V	51	2	72	209.037	ppb	209.037	0.84	155985	2000	
Cr	52	2	72	213.453	ppb	213.453	0.84	199453	5000	
Mn	55	2	72	257.775	ppb	257.775	0.96	99228	10000	
Fe	57	2	72	2297.264	ppb	2297.264	2.64	40966	400000	
Co	59	2	72	216.494	ppb	216.494	0.26	350521	2000	
Ni	60	2	72	222.410	ppb	222.410	1.02	99828	5000	
Cu	63	2	72	208.759	ppb	208.759	0.42	263647	5000	
Zn	66	2	72	218.524	ppb	218.524	1.21	42758	5000	
As	75	2	72	197.568	ppb	197.568	1.36	30331	2000	
Se	78	1	72	203.307	ppb	203.307	2.16	27500	2000	
Sr	88	2	72	46.408	ppb	46.408	3.53	22996	4000	
Zr	90	2	72	180359.923	ppb	180359.923	0.17	255619	1000	>LDR
Nb	93	2	72	6.334	ppb	6.334	8.06	8640	200	
Mo	95	2	115	214.338	ppb	214.338	1.16	142408	2000	
Pd	105	2	115	0.057	ppb	0.057	55.77	80	100	
Ag	107	2	115	42.307	ppb	42.307	0.63	98430	100	
Cd	111	2	115	208.170	ppb	208.170	1.25	65741	2000	
Sn	120	2	115	212.214	ppb	212.214	1.35	187560	2000	
Sb	121	2	115	218.481	ppb	218.481	0.77	193804	1000	
Ba	137	2	115	275.661	ppb	275.661	1.87	86870	5000	
W	182	2	165	210.891	ppb	210.891	0.74	688995	100	
Pt	195	2	165	0.103	ppb	0.103	8.54	263	100	
Tl	205	2	165	211.907	ppb	211.907	0.86	1378180	2000	
Pb	208	2	165	208.498	ppb	208.498	0.99	1844904	5000	
Th	232	2	165	1.237	ppb	1.237	7.03	14806	2000	
U	238	2	165	232.192	ppb	232.192	1.34	2660069	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	553466	0.67	570952	96.94	60	120	
Sc (IS)	45	1	HMI H2	13347199	0.92	13408403	99.54	60	120	
Sc (IS)	45	2	HMI He	589821	0.44	577322	102.17	60	120	
Sc (IS)	45	3	No Gas	50192138	0.77	48917664	102.61	60	120	
Ge Internal Standard	72	1	HMI H2	5708181	0.51	5773454	98.87	60	120	
Ge Internal Standard	72	2	HMI He	784970	0.80	765657	102.52	60	120	
In Internal Standard	115	2	HMI He	3246081	1.24	3240364	100.18	60	120	
Ho-165	165	2	HMI He	15003816	1.30	14997825	100.04	60	120	

Sample Report

Sample Table

Sample Name	280-123062-A-20-A
Data File Name	098SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T15:46:36-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456592 6020a dod5
ISTD Ref FileName	085CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	2.665	ppb	2.665	105.11	70566	500000	
Li	7	2	45	-3.408	ppb	-3.408	-222.86	3677	500000	
Li	7	3	45	-1.244	ppb	-1.244	-394.22	5964012	50000	
Be	9	1	6	0.148	ppb	0.148	69.43	33	2000	
B	11	1	6	820.288	ppb	820.288	7.09	5801	2000	
Na	23	1	45	9641.149	ppb	9641.149	0.52	18371573	2000	
Na	23	2	45	10316.026	ppb	10316.026	0.41	1467953	400000	
Mg	24	2	45	5409.358	ppb	5409.358	0.44	348020	400000	
Al	27	2	45	1035.664	ppb	1035.664	2.66	18465	400000	
K	39	1	45	-4004.979	ppb	-4004.979	-2.32	4899556	400000	
K	39	2	45	515.096	ppb	515.096	3.34	45554	400000	
Ca	40	1	45	8727.628	ppb	8727.628	0.24	24840322	400000	
Ca	44	2	45	6835.800	ppb	6835.800	2.01	18673	400000	
Ti	47	2	45	63.322	ppb	63.322	114.67	990	4000	
V	51	2	72	0.419	ppb	0.419	144.04	5488	2000	
Cr	52	2	72	9.832	ppb	9.832	3.25	9470	5000	
Mn	55	2	72	21.362	ppb	21.362	2.65	8333	10000	
Fe	57	2	72	1521.514	ppb	1521.514	1.71	27347	400000	
Co	59	2	72	0.793	ppb	0.793	7.21	2287	2000	
Ni	60	2	72	4.386	ppb	4.386	8.90	2050	5000	
Cu	63	2	72	1.964	ppb	1.964	14.61	3064	5000	
Zn	66	2	72	7.208	ppb	7.208	11.77	1500	5000	
As	75	2	72	0.984	ppb	0.984	16.06	184	2000	
Se	78	1	72	0.580	ppb	0.580	36.73	108	2000	
Sr	88	2	72	29.488	ppb	29.488	2.71	14722	4000	
Zr	90	2	72	935.992	ppb	935.992	9.97	1370	1000	
Nb	93	2	72	-0.302	ppb	-0.302	-21.60	310	200	
Mo	95	2	115	1.717	ppb	1.717	12.52	1183	2000	
Pd	105	2	115	-0.009	ppb	-0.009	-115.20	7	100	
Ag	107	2	115	0.030	ppb	0.030	94.97	77	100	
Cd	111	2	115	0.063	ppb	0.063	100.51	20	2000	
Sn	120	2	115	0.413	ppb	0.413	24.53	567	2000	
Sb	121	2	115	0.313	ppb	0.313	32.49	333	1000	
Ba	137	2	115	26.898	ppb	26.898	3.63	8546	5000	
W	182	2	165	0.151	ppb	0.151	25.22	1030	100	
Pt	195	2	165	0.000	ppb	0.000	#DIV/0!	0	100	
Tl	205	2	165	0.134	ppb	0.134	22.32	1027	2000	
Pb	208	2	165	0.725	ppb	0.725	4.60	7105	5000	
Th	232	2	165	0.168	ppb	0.168	7.53	2727	2000	
U	238	2	165	0.247	ppb	0.247	18.98	2877	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	554832	0.62	570952	97.18	60	120	
Sc (IS)	45	1	HMI H2	13351042	0.48	13408403	99.57	60	120	
Sc (IS)	45	2	HMI He	589711	0.49	577322	102.15	60	120	
Sc (IS)	45	3	No Gas	50878581	1.13	48917664	104.01	60	120	
Ge Internal Standard	72	1	HMI H2	5746953	0.84	5773454	99.54	60	120	
Ge Internal Standard	72	2	HMI He	790624	0.38	765657	103.26	60	120	
In Internal Standard	115	2	HMI He	3270495	0.84	3240364	100.93	60	120	
Ho-165	165	2	HMI He	15103806	0.26	14997825	100.71	60	120	

Sample Report

Sample Table

Sample Name	280-123062-A-28-A
Data File Name	099SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T15:50:26-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456592 6020a dod5
ISTD Ref FileName	085CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	2.533	ppb	2.533	135.88	70851	500000	
Li	7	2	45	12.819	ppb	12.819	119.47	3944	500000	
Li	7	3	45	1.585	ppb	1.585	89.66	5973667	50000	
Be	9	1	6	0.017	ppb	0.017	169.32	7	2000	
B	11	1	6	762.926	ppb	762.926	8.37	5458	2000	
Na	23	1	45	9864.621	ppb	9864.621	0.19	18878893	2000	
Na	23	2	45	10305.662	ppb	10305.662	0.16	1487227	400000	
Mg	24	2	45	5398.854	ppb	5398.854	0.44	352267	400000	
Al	27	2	45	694.367	ppb	694.367	3.64	12567	400000	
K	39	1	45	-4221.387	ppb	-4221.387	-1.02	4704726	400000	
K	39	2	45	366.325	ppb	366.325	0.77	40183	400000	
Ca	40	1	45	8832.734	ppb	8832.734	0.70	25250748	400000	
Ca	44	2	45	6749.059	ppb	6749.059	1.56	18696	400000	
Ti	47	2	45	27.328	ppb	27.328	92.69	434	4000	
V	51	2	72	-0.884	ppb	-0.884	-21.23	4551	2000	
Cr	52	2	72	7.226	ppb	7.226	3.10	7039	5000	
Mn	55	2	72	17.684	ppb	17.684	2.61	6925	10000	
Fe	57	2	72	1236.120	ppb	1236.120	1.56	22286	400000	
Co	59	2	72	0.555	ppb	0.555	21.93	1904	2000	
Ni	60	2	72	3.830	ppb	3.830	10.58	1804	5000	
Cu	63	2	72	1.192	ppb	1.192	13.96	2090	5000	
Zn	66	2	72	7.644	ppb	7.644	12.35	1590	5000	
As	75	2	72	0.555	ppb	0.555	25.41	118	2000	
Se	78	1	72	0.009	ppb	0.009	1025.64	31	2000	
Sr	88	2	72	29.507	ppb	29.507	1.64	14768	4000	
Zr	90	2	72	502.288	ppb	502.288	15.25	753	1000	
Nb	93	2	72	-0.329	ppb	-0.329	-6.05	277	200	
Mo	95	2	115	0.988	ppb	0.988	13.18	703	2000	
Pd	105	2	115	-0.003	ppb	-0.003	-309.35	13	100	
Ag	107	2	115	0.008	ppb	0.008	153.64	27	100	
Cd	111	2	115	0.062	ppb	0.062	0.46	20	2000	
Sn	120	2	115	0.162	ppb	0.162	45.41	347	2000	
Sb	121	2	115	0.150	ppb	0.150	38.61	190	1000	
Ba	137	2	115	24.809	ppb	24.809	3.82	7979	5000	
W	182	2	165	0.049	ppb	0.049	105.45	693	100	
Pt	195	2	165	0.004	ppb	0.004	99.99	10	100	
Tl	205	2	165	0.064	ppb	0.064	8.80	567	2000	
Pb	208	2	165	0.562	ppb	0.562	6.15	5654	5000	
Th	232	2	165	0.114	ppb	0.114	30.52	2114	2000	
U	238	2	165	0.160	ppb	0.160	6.44	1880	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	556434	0.43	570952	97.46	60	120	
Sc (IS)	45	1	HMI H2	13410548	0.74	13408403	100.02	60	120	
Sc (IS)	45	2	HMI He	598056	0.42	577322	103.59	60	120	
Sc (IS)	45	3	No Gas	50540373	1.07	48917664	103.32	60	120	
Ge Internal Standard	72	1	HMI H2	5785344	1.01	5773454	100.21	60	120	
Ge Internal Standard	72	2	HMI He	792627	0.09	765657	103.52	60	120	
In Internal Standard	115	2	HMI He	3309921	0.46	3240364	102.15	60	120	
Ho-165	165	2	HMI He	15095171	0.32	14997825	100.65	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5688510
Data File Name	100_CCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T15:54:19-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	105.410	ppb	9.403	95116	100	105.4	90	110	
Li	7	2	45	90.359	ppb	33.783	4934	100	90.4	90	110	
Li	7	3	45	103.271	ppb	1.196	7693668	100	103.3	90	110	
Be	9	1	6	47.963	ppb	0.199	10387	50	95.9	90	110	
B	11	1	6	35.156	ppb	27.673	950	50	70.3	90	110	>+\-10%
Na	23	1	45	1041.009	ppb	0.499	2123589	1000	104.1	90	110	
Na	23	2	45	1005.515	ppb	0.921	150722	1000	100.6	90	110	
Mg	24	2	45	1006.148	ppb	1.430	65247	1000	100.6	90	110	
Al	27	2	45	976.568	ppb	3.293	17531	1000	97.7	90	110	
K	39	1	45	-350.087	ppb	-12.520	8787369	1000	-35.0	90	110	>+\-10%
K	39	2	45	974.981	ppb	3.940	64318	1000	97.5	90	110	
Ca	40	1	45	1015.744	ppb	0.821	3001090	1000	101.6	90	110	
Ca	44	2	45	1037.934	ppb	6.658	2877	1000	103.8	90	110	
Ti	47	2	45	53.073	ppb	20.719	837	50	106.1	90	110	
V	51	2	72	48.945	ppb	0.766	40751	50	97.9	90	110	
Cr	52	2	72	49.678	ppb	2.779	46920	50	99.4	90	110	
Mn	55	2	72	48.919	ppb	1.065	19010	50	97.8	90	110	
Fe	57	2	72	1038.420	ppb	4.029	18683	1000	103.8	90	110	
Co	59	2	72	49.935	ppb	0.381	82192	50	99.9	90	110	
Ni	60	2	72	50.296	ppb	5.008	22782	50	100.6	90	110	
Cu	63	2	72	50.212	ppb	0.899	64303	50	100.4	90	110	
Zn	66	2	72	48.909	ppb	4.220	9700	50	97.8	90	110	
As	75	2	72	48.206	ppb	1.175	7478	50	96.4	90	110	
Se	78	1	72	48.814	ppb	1.727	6884	50	97.6	90	110	
Sr	88	2	72	99.774	ppb	1.227	49771	100	99.8	90	110	
Zr	90	2	72	234.812	ppb	23.597	370	50	469.6	90	110	>+\-10%
Nb	93	2	72	96.479	ppb	0.767	122680	100	96.5	90	110	
Mo	95	2	115	52.011	ppb	1.950	34380	50	104.0	90	110	
Pd	105	2	115	50.032	ppb	1.914	55691	50	100.1	90	110	
Ag	107	2	115	50.296	ppb	0.588	116322	50	100.6	90	110	
Cd	111	2	115	49.630	ppb	3.055	15583	50	99.3	90	110	
Sn	120	2	115	50.955	ppb	2.630	44924	50	101.9	90	110	
Sb	121	2	115	49.406	ppb	2.582	43609	50	98.8	90	110	
Ba	137	2	115	48.274	ppb	0.196	15129	50	96.5	90	110	
W	182	2	165	49.655	ppb	0.940	163587	50	99.3	90	110	
Pt	195	2	165	49.485	ppb	0.523	127819	50	99.0	90	110	
Tl	205	2	165	49.496	ppb	0.575	323929	50	99.0	90	110	
Pb	208	2	165	49.518	ppb	1.032	441231	50	99.0	90	110	
Th	232	2	165	48.628	ppb	1.153	553687	50	97.3	90	110	
U	238	2	165	49.144	ppb	1.313	566336	50	98.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	591572	0.58	570952	103.61	60	120	
Sc (IS)	45	1	HMI H2	13729971	0.15	13408403	102.40	60	120	
Sc (IS)	45	2	HMI He	593610	0.57	577322	102.82	60	120	
Sc (IS)	45	3	No Gas	50297318	0.68	48917664	102.82	60	120	
Ge Internal Standard	72	1	HMI H2	5931980	0.66	5773454	102.75	60	120	
Ge Internal Standard	72	2	HMI He	790571	0.84	765657	103.25	60	120	
In Internal Standard	115	2	HMI He	3226700	0.50	3240364	99.58	60	120	
Ho-165	165	2	HMI He	15092216	1.47	14997825	100.63	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5688508
Data File Name	101_CCB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T15:58:14-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	1.242	ppb	214.8	5816306	10	
Be	9	1	6	0.094	ppb	161.1	23	0.5	
B	11	1	6	-18.551	ppb	-63.9	577	0.5	
Na	23	1	45	8.070	ppb	1.5	107606	25	
Na	23	2	45	4.990	ppb	28.1	7913	25	
Mg	24	2	45	-0.109	ppb	-880.0	93	25	
Al	27	2	45	-0.769	ppb	-114.2	23	15	
K	39	1	45	-810.416	ppb	-11.5	8173759	50	
K	39	2	45	-37.141	ppb	-70.0	23056	50	
Ca	40	1	45	1.572	ppb	28.3	35735	50	
Ca	44	2	45	11.187	ppb	68.5	57	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	-0.488	ppb	-42.5	4714	1	
Cr	52	2	72	0.001	ppb	2098.2	223	1	
Mn	55	2	72	0.061	ppb	180.9	77	0.5	
Fe	57	2	72	0.926	ppb	162.7	80	25	
Co	59	2	72	0.059	ppb	42.0	1067	0.5	
Ni	60	2	72	0.075	ppb	90.5	100	1	
Cu	63	2	72	0.338	ppb	28.5	977	1	
Zn	66	2	72	0.361	ppb	52.4	150	5	
As	75	2	72	-0.027	ppb	-84.2	27	1	
Se	78	1	72	0.009	ppb	762.8	31	1	
Sr	88	2	72	0.027	ppb	174.5	27	0.5	
Zr	90	2	72	11.670	ppb	163.2	50	1	>RL
Nb	93	2	72	3.359	ppb	7.6	4824	2	>RL
Mo	95	2	115	0.060	ppb	40.6	73	0.5	
Pd	105	2	115	0.047	ppb	48.5	70	1	
Ag	107	2	115	0.013	ppb	19.6	37	1	
Cd	111	2	115	0.021	ppb	173.2	7	0.5	
Sn	120	2	115	0.182	ppb	55.9	357	1	
Sb	121	2	115	0.131	ppb	22.6	170	0.6	
Ba	137	2	115	0.063	ppb	189.0	27	0.5	
W	182	2	165	0.035	ppb	200.5	640	1	
Pt	195	2	165	0.012	ppb	57.8	30	1	
Tl	205	2	165	0.037	ppb	40.2	387	0.1	
Pb	208	2	165	0.072	ppb	39.3	1273	0.5	
Th	232	2	165	0.245	ppb	6.0	3566	1	
U	238	2	165	0.016	ppb	59.8	210	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	576886	0.81	570952	101.04	60	120	
Sc (IS)	45	1	HMI H2	13496638	0.87	13408403	100.66	60	120	
Sc (IS)	45	2	HMI He	577779	0.52	577322	100.08	60	120	
Sc (IS)	45	3	No Gas	49257141	0.68	48917664	100.69	60	120	
Ge Internal Standard	72	1	HMI H2	5803867	0.36	5773454	100.53	60	120	
Ge Internal Standard	72	2	HMI He	772168	0.24	765657	100.85	60	120	
In Internal Standard	115	2	HMI He	3246313	1.29	3240364	100.18	60	120	
Ho-165	165	2	HMI He	14923852	0.17	14997825	99.51	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5688512
Data File Name	102LCCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T16:02:06-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	8.296	ppb	20.925	6091924	50	16.6	70	130	>+/-30%
Be	9	1	6	1.154	ppb	2.909	247	1	115.4	70	130	
Na	23	2	45	51.403	ppb	7.115	14377	50	102.8	70	130	
Mg	24	2	45	49.741	ppb	1.636	3241	50	99.5	70	130	
Al	27	2	45	52.481	ppb	5.564	953	30	174.9	70	130	>+/-30%
K	39	2	45	84.232	ppb	30.723	27851	100	84.2	70	130	
Ca	44	2	45	44.792	ppb	29.270	147	50	89.6	70	130	
V	51	2	72	3.549	ppb	5.268	7616	5	71.0	70	130	
Cr	52	2	72	1.973	ppb	8.571	2044	2	98.6	70	130	
Mn	55	2	72	0.901	ppb	30.941	397	1	90.1	70	130	
Fe	57	2	72	57.763	ppb	9.792	1080	50	115.5	70	130	
Co	59	2	72	0.925	ppb	6.950	2454	1	92.5	70	130	
Ni	60	2	72	1.720	ppb	16.878	830	1.5	114.7	70	130	
Cu	63	2	72	2.569	ppb	3.398	3761	2	128.5	70	130	
Zn	66	2	72	9.945	ppb	9.830	2000	10	99.5	70	130	
As	75	2	72	4.862	ppb	3.794	769	5	97.2	70	130	
Se	78	1	72	5.068	ppb	7.113	721	5	101.4	70	130	
Sr	88	2	72	1.110	ppb	16.998	557	1	111.0	70	130	
Zr	90	2	72	16.248	ppb	25.435	57	0.5	3249.6	70	130	>+/-30%
Nb	93	2	72	1.348	ppb	13.217	2352	2	67.4	70	130	>+/-30%
Mo	95	2	115	2.503	ppb	12.918	1700	2	125.2	70	130	
Pd	105	2	115	-0.006	ppb	-144.699	10	1	-0.6	70	130	>+/-30%
Ag	107	2	115	5.243	ppb	1.650	12246	5	104.9	70	130	
Cd	111	2	115	0.896	ppb	26.852	283	1	89.6	70	130	
Sn	120	2	115	9.653	ppb	1.692	8750	10	96.5	70	130	
Sb	121	2	115	2.038	ppb	5.927	1867	2	101.9	70	130	
Ba	137	2	115	0.948	ppb	20.892	307	1	94.8	70	130	
W	182	2	165	4.988	ppb	2.356	16801	1	498.8	70	130	>+/-30%
Pt	195	2	165	0.003	ppb	173.205	7	1	0.3	70	130	>+/-30%
Tl	205	2	165	1.011	ppb	3.561	6719	1	101.1	70	130	
Pb	208	2	165	1.148	ppb	5.322	10792	1	114.8	70	130	
Th	232	2	165	1.786	ppb	2.518	20984	2	89.3	70	130	
U	238	2	165	1.027	ppb	3.179	11789	1	102.7	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	576396	0.56	570952	100.95	60	120	
Sc (IS)	45	1	HMI H2	13458039	0.33	13408403	100.37	60	120	
Sc (IS)	45	2	HMI He	578843	0.07	577322	100.26	60	120	
Sc (IS)	45	3	No Gas	50559441	0.89	48917664	103.36	60	120	
Ge Internal Standard	72	1	HMI H2	5769427	0.55	5773454	99.93	60	120	
Ge Internal Standard	72	2	HMI He	775795	0.45	765657	101.32	60	120	
In Internal Standard	115	2	HMI He	3257305	1.32	3240364	100.52	60	120	
Ho-165	165	2	HMI He	14992853	0.18	14997825	99.97	60	120	

Sample Report

Sample Table

Sample Name	280-122692-A-3-G
Data File Name	103SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T16:06:01-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456592 6020a dod5
ISTD Ref FileName	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	10.785	ppb	10.785	14.94	70301	500000	
Li	7	2	45	-0.713	ppb	-0.713	-1901.18	3664	500000	
Li	7	3	45	7.082	ppb	7.082	37.64	5959060	50000	
Be	9	1	6	0.001	ppb	0.001	2447.81	3	2000	
B	11	1	6	1097.445	ppb	1097.445	2.26	7185	2000	
Na	23	1	45	21962.605	ppb	21962.605	0.24	40582574	2000	>LDR
Na	23	2	45	22828.911	ppb	22828.911	0.16	3198319	400000	
Mg	24	2	45	12929.327	ppb	12929.327	1.07	821022	400000	
Al	27	2	45	7.964	ppb	7.964	16.86	177	400000	
K	39	1	45	-1168.890	ppb	-1168.890	-10.73	7514229	400000	
K	39	2	45	1791.297	ppb	1791.297	1.14	95207	400000	
Ca	40	1	45	30686.867	ppb	30686.867	0.50	84851912	400000	
Ca	44	2	45	23662.760	ppb	23662.760	2.00	63733	400000	
Ti	47	2	45	0.644	ppb	0.644	99.02	10	4000	
V	51	2	72	-2.537	ppb	-2.537	-12.91	3261	2000	
Cr	52	2	72	0.172	ppb	0.172	34.55	380	5000	
Mn	55	2	72	119.592	ppb	119.592	0.56	45322	10000	
Fe	57	2	72	557.775	ppb	557.775	4.60	9834	400000	
Co	59	2	72	0.508	ppb	0.508	26.87	1780	2000	
Ni	60	2	72	0.203	ppb	0.203	34.71	157	5000	
Cu	63	2	72	0.181	ppb	0.181	55.47	783	5000	
Zn	66	2	72	6.450	ppb	6.450	7.66	1320	5000	
As	75	2	72	0.614	ppb	0.614	20.71	124	2000	
Se	78	1	72	0.145	ppb	0.145	71.81	48	2000	
Sr	88	2	72	178.507	ppb	178.507	0.28	86982	4000	
Zr	90	2	72	145.529	ppb	145.529	7.15	237	1000	
Nb	93	2	72	1.571	ppb	1.571	2.74	2617	200	
Mo	95	2	115	0.744	ppb	0.744	18.44	523	2000	
Pd	105	2	115	-0.009	ppb	-0.009	-114.84	7	100	
Ag	107	2	115	0.007	ppb	0.007	33.40	23	100	
Cd	111	2	115	0.053	ppb	0.053	91.49	17	2000	
Sn	120	2	115	0.192	ppb	0.192	40.69	363	2000	
Sb	121	2	115	0.076	ppb	0.076	82.58	120	1000	
Ba	137	2	115	30.655	ppb	30.655	4.51	9580	5000	
W	182	2	165	0.275	ppb	0.275	6.14	1417	100	
Pt	195	2	165	0.003	ppb	0.003	86.60	7	100	
Tl	205	2	165	0.029	ppb	0.029	24.98	337	2000	
Pb	208	2	165	0.053	ppb	0.053	28.82	1110	5000	
Th	232	2	165	0.249	ppb	0.249	16.07	3591	2000	
U	238	2	165	0.011	ppb	0.011	19.25	153	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	529299	1.06	570952	92.70	60	120	
Sc (IS)	45	1	HMI H2	12982558	0.90	13408403	96.82	60	120	
Sc (IS)	45	2	HMI He	582202	1.50	577322	100.85	60	120	
Sc (IS)	45	3	No Gas	49627001	0.76	48917664	101.45	60	120	
Ge Internal Standard	72	1	HMI H2	5637236	0.83	5773454	97.64	60	120	
Ge Internal Standard	72	2	HMI He	772273	0.46	765657	100.86	60	120	
In Internal Standard	115	2	HMI He	3217862	0.93	3240364	99.31	60	120	
Ho-165	165	2	HMI He	14873140	0.28	14997825	99.17	60	120	

Sample Report

Sample Table

Sample Name	280-122692-A-3-H MS
Data File Name	104SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T16:09:53-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456592 6020a dod5
ISTD Ref FileName	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	80.485	ppb	80.485	1.31	86378	500000	
Li	7	2	45	84.308	ppb	84.308	24.58	4854	500000	
Li	7	3	45	85.334	ppb	85.334	3.58	7274101	50000	
Be	9	1	6	44.047	ppb	44.047	3.07	8663	2000	
B	11	1	6	2218.323	ppb	2218.323	5.27	14084	2000	
Na	23	1	45	22624.884	ppb	22624.884	0.58	42597328	2000	>LDR
Na	23	2	45	23211.402	ppb	23211.402	1.07	3314848	400000	
Mg	24	2	45	13250.794	ppb	13250.794	0.08	857861	400000	
Al	27	2	45	374.029	ppb	374.029	3.61	6735	400000	
K	39	1	45	-1197.998	ppb	-1197.998	-2.36	7629028	400000	
K	39	2	45	1834.409	ppb	1834.409	1.61	98790	400000	
Ca	40	1	45	31404.080	ppb	31404.080	0.91	88486365	400000	
Ca	44	2	45	24207.076	ppb	24207.076	2.15	66479	400000	
Ti	47	2	45	0.421	ppb	0.421	173.21	7	4000	
V	51	2	72	38.729	ppb	38.729	0.67	33185	2000	
Cr	52	2	72	41.292	ppb	41.292	0.95	38876	5000	
Mn	55	2	72	162.726	ppb	162.726	0.61	62840	10000	
Fe	57	2	72	930.686	ppb	930.686	1.87	16680	400000	
Co	59	2	72	40.334	ppb	40.334	1.19	66296	2000	
Ni	60	2	72	40.093	ppb	40.093	0.66	18102	5000	
Cu	63	2	72	40.056	ppb	40.056	1.86	51188	5000	
Zn	66	2	72	39.644	ppb	39.644	6.12	7846	5000	
As	75	2	72	38.865	ppb	38.865	1.93	6010	2000	
Se	78	1	72	40.117	ppb	40.117	1.40	5488	2000	
Sr	88	2	72	226.433	ppb	226.433	0.89	112465	4000	
Zr	90	2	72	1059.655	ppb	1059.655	11.68	1540	1000	
Nb	93	2	72	0.832	ppb	0.832	24.70	1737	200	
Mo	95	2	115	42.172	ppb	42.172	0.61	28192	2000	
Pd	105	2	115	-0.012	ppb	-0.012	-43.05	3	100	
Ag	107	2	115	39.194	ppb	39.194	0.94	91661	100	
Cd	111	2	115	39.382	ppb	39.382	1.52	12503	2000	
Sn	120	2	115	40.470	ppb	40.470	0.47	36118	2000	
Sb	121	2	115	39.354	ppb	39.354	4.36	35139	1000	
Ba	137	2	115	69.888	ppb	69.888	3.91	22145	5000	
W	182	2	165	33.636	ppb	33.636	1.60	110735	100	
Pt	195	2	165	0.000	ppb	0.000	#DIV/0!	0	100	
Tl	205	2	165	39.373	ppb	39.373	0.91	257078	2000	
Pb	208	2	165	39.079	ppb	39.079	1.90	347492	5000	
Th	232	2	165	37.321	ppb	37.321	1.37	424107	2000	
U	238	2	165	39.129	ppb	39.129	1.33	449863	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	537263	1.35	570952	94.10	60	120	
Sc (IS)	45	1	HMI H2	13229481	0.55	13408403	98.67	60	120	
Sc (IS)	45	2	HMI He	593507	0.52	577322	102.80	60	120	
Sc (IS)	45	3	No Gas	49541734	0.52	48917664	101.28	60	120	
Ge Internal Standard	72	1	HMI H2	5747996	0.70	5773454	99.56	60	120	
Ge Internal Standard	72	2	HMI He	787195	0.53	765657	102.81	60	120	
In Internal Standard	115	2	HMI He	3262856	0.53	3240364	100.69	60	120	
Ho-165	165	2	HMI He	15055595	1.09	14997825	100.39	60	120	

Sample Report

Sample Table

Sample Name	280-122692-A-3-I MSD
Data File Name	105SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T16:13:46-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456592 6020a dod5
ISTD Ref FileName	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	76.840	ppb	76.840	7.45	86595	500000	
Li	7	2	45	51.494	ppb	51.494	43.70	4464	500000	
Li	7	3	45	90.350	ppb	90.350	1.44	7357423	50000	
Be	9	1	6	41.827	ppb	41.827	2.82	8223	2000	
B	11	1	6	2312.718	ppb	2312.718	2.70	14644	2000	
Na	23	1	45	23763.277	ppb	23763.277	1.30	45253229	2000	>LDR
Na	23	2	45	24613.931	ppb	24613.931	0.28	3547067	400000	
Mg	24	2	45	13917.340	ppb	13917.340	1.45	909245	400000	
Al	27	2	45	441.158	ppb	441.158	5.26	8009	400000	
K	39	1	45	-1110.183	ppb	-1110.183	-6.71	7805075	400000	
K	39	2	45	1926.592	ppb	1926.592	2.25	103432	400000	
Ca	40	1	45	32964.401	ppb	32964.401	1.07	93955859	400000	
Ca	44	2	45	25820.320	ppb	25820.320	3.34	71552	400000	
Ti	47	2	45	0.208	ppb	0.208	173.21	3	4000	
V	51	2	72	37.701	ppb	37.701	5.68	32644	2000	
Cr	52	2	72	40.778	ppb	40.778	2.49	38636	5000	
Mn	55	2	72	168.280	ppb	168.280	2.11	65388	10000	
Fe	57	2	72	994.200	ppb	994.200	2.92	17925	400000	
Co	59	2	72	40.127	ppb	40.127	0.77	66373	2000	
Ni	60	2	72	39.778	ppb	39.778	2.51	18072	5000	
Cu	63	2	72	40.218	ppb	40.218	1.93	51716	5000	
Zn	66	2	72	41.085	ppb	41.085	2.47	8179	5000	
As	75	2	72	38.882	ppb	38.882	1.61	6050	2000	
Se	78	1	72	38.702	ppb	38.702	3.97	5262	2000	
Sr	88	2	72	232.456	ppb	232.456	0.53	116172	4000	
Zr	90	2	72	1157.763	ppb	1157.763	4.16	1690	1000	
Nb	93	2	72	0.476	ppb	0.476	22.69	1297	200	
Mo	95	2	115	41.963	ppb	41.963	3.45	27965	2000	
Pd	105	2	115	-0.009	ppb	-0.009	-57.10	7	100	
Ag	107	2	115	39.248	ppb	39.248	1.92	91508	100	
Cd	111	2	115	38.785	ppb	38.785	1.34	12276	2000	
Sn	120	2	115	41.601	ppb	41.601	0.74	37010	2000	
Sb	121	2	115	39.807	ppb	39.807	2.05	35430	1000	
Ba	137	2	115	73.438	ppb	73.438	0.86	23200	5000	
W	182	2	165	34.109	ppb	34.109	1.31	112388	100	
Pt	195	2	165	0.000	ppb	0.000	#DIV/0!	0	100	
Tl	205	2	165	39.273	ppb	39.273	1.36	256690	2000	
Pb	208	2	165	39.450	ppb	39.450	1.66	351151	5000	
Th	232	2	165	37.810	ppb	37.810	2.12	430091	2000	
U	238	2	165	39.404	ppb	39.404	1.66	453464	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	536909	0.71	570952	94.04	60	120	
Sc (IS)	45	1	HMI H2	13382479	0.32	13408403	99.81	60	120	
Sc (IS)	45	2	HMI He	598972	0.73	577322	103.75	60	120	
Sc (IS)	45	3	No Gas	49530329	0.58	48917664	101.25	60	120	
Ge Internal Standard	72	1	HMI H2	5712536	0.41	5773454	98.94	60	120	
Ge Internal Standard	72	2	HMI He	792095	0.03	765657	103.45	60	120	
In Internal Standard	115	2	HMI He	3253247	0.95	3240364	100.40	60	120	
Ho-165	165	2	HMI He	15071637	1.42	14997825	100.49	60	120	

Sample Report

Sample Table

Sample Name	280-123051-A-1-A
Data File Name	106SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T16:17:38-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456592 6020a dod5
ISTD Ref FileName	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	90.877	ppb	90.877	5.62	85436	500000	
Li	7	2	45	66.431	ppb	66.431	9.79	4551	500000	
Li	7	3	45	96.764	ppb	96.764	1.64	7490431	50000	
Be	9	1	6	0.020	ppb	0.020	157.52	7	2000	
B	11	1	6	2142.508	ppb	2142.508	2.32	12973	2000	
Na	23	1	45	25064.162	ppb	25064.162	0.83	45508834	2000	>LDR
Na	23	2	45	25883.345	ppb	25883.345	0.53	3640299	400000	
Mg	24	2	45	138800.306	ppb	138800.306	0.25	8850118	400000	
Al	27	2	45	6.403	ppb	6.403	10.63	150	400000	
K	39	1	45	4275.461	ppb	4275.461	1.28	12575981	400000	
K	39	2	45	4709.528	ppb	4709.528	0.94	210974	400000	
Ca	40	1	45	365028.818	ppb	365028.818	0.47	991785319	400000	
Ca	44	2	45	286694.958	ppb	286694.958	0.26	775219	400000	
Ti	47	2	45	0.429	ppb	0.429	86.63	7	4000	
V	51	2	72	-4.429	ppb	-4.429	-1.34	1937	2000	
Cr	52	2	72	0.229	ppb	0.229	16.70	437	5000	
Mn	55	2	72	724.446	ppb	724.446	0.57	276937	10000	
Fe	57	2	72	1273.708	ppb	1273.708	1.34	22588	400000	
Co	59	2	72	3.061	ppb	3.061	11.34	5891	2000	
Ni	60	2	72	7.013	ppb	7.013	5.48	3194	5000	
Cu	63	2	72	0.353	ppb	0.353	37.16	1007	5000	
Zn	66	2	72	9.389	ppb	9.389	6.12	1904	5000	
As	75	2	72	1.057	ppb	1.057	9.11	193	2000	
Se	78	1	72	0.235	ppb	0.235	94.38	59	2000	
Sr	88	2	72	3185.716	ppb	3185.716	1.52	1567090	4000	
Zr	90	2	72	278.978	ppb	278.978	12.83	427	1000	
Nb	93	2	72	0.097	ppb	0.097	95.20	803	200	
Mo	95	2	115	5.824	ppb	5.824	2.00	3904	2000	
Pd	105	2	115	0.045	ppb	0.045	114.41	67	100	
Ag	107	2	115	0.011	ppb	0.011	120.96	33	100	
Cd	111	2	115	0.074	ppb	0.074	66.64	23	2000	
Sn	120	2	115	0.333	ppb	0.333	36.52	490	2000	
Sb	121	2	115	0.548	ppb	0.548	15.83	540	1000	
Ba	137	2	115	14.374	ppb	14.374	0.44	4538	5000	
W	182	2	165	0.051	ppb	0.051	32.19	703	100	
Pt	195	2	165	0.001	ppb	0.001	173.21	3	100	
Tl	205	2	165	0.075	ppb	0.075	7.97	647	2000	
Pb	208	2	165	0.163	ppb	0.163	15.30	2124	5000	
Th	232	2	165	0.434	ppb	0.434	14.22	5802	2000	
U	238	2	165	27.260	ppb	27.260	1.20	316408	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	511700	0.47	570952	89.62	60	120	
Sc (IS)	45	1	HMI H2	12760658	0.29	13408403	95.17	60	120	
Sc (IS)	45	2	HMI He	584608	1.37	577322	101.26	60	120	
Sc (IS)	45	3	No Gas	49691774	0.19	48917664	101.58	60	120	
Ge Internal Standard	72	1	HMI H2	5518965	0.04	5773454	95.59	60	120	
Ge Internal Standard	72	2	HMI He	779768	1.76	765657	101.84	60	120	
In Internal Standard	115	2	HMI He	3246951	1.55	3240364	100.20	60	120	
Ho-165	165	2	HMI He	15200664	2.47	14997825	101.35	60	120	

Sample Report

Sample Table

Sample Name	280-123051-A-2-A
Data File Name	107SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T16:21:28-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456592 6020a dod5
ISTD Ref FileName	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	43.372	ppb	43.372	5.88	78784	500000	
Li	7	2	45	45.247	ppb	45.247	35.24	4304	500000	
Li	7	3	45	39.552	ppb	39.552	1.23	6696539	50000	
Be	9	1	6	0.001	ppb	0.001	2381.51	3	2000	
B	11	1	6	7470.480	ppb	7470.480	3.23	44835	2000	
Na	23	1	45	29491.472	ppb	29491.472	0.88	55675878	2000	>LDR
Na	23	2	45	30447.895	ppb	30447.895	0.48	4308888	400000	
Mg	24	2	45	66415.273	ppb	66415.273	0.99	4262508	400000	
Al	27	2	45	35.837	ppb	35.837	32.87	673	400000	
K	39	1	45	5031.123	ppb	5031.123	2.25	13828746	400000	
K	39	2	45	5105.520	ppb	5105.520	2.04	228106	400000	
Ca	40	1	45	144129.293	ppb	144129.293	1.11	407302861	400000	
Ca	44	2	45	131408.113	ppb	131408.113	0.80	357661	400000	
Ti	47	2	45	1.271	ppb	1.271	132.02	20	4000	
V	51	2	72	-4.679	ppb	-4.679	-4.25	1777	2000	
Cr	52	2	72	0.444	ppb	0.444	18.44	643	5000	
Mn	55	2	72	128.056	ppb	128.056	1.35	49572	10000	
Fe	57	2	72	495.611	ppb	495.611	5.16	8933	400000	
Co	59	2	72	0.237	ppb	0.237	19.94	1380	2000	
Ni	60	2	72	2.022	ppb	2.022	5.08	980	5000	
Cu	63	2	72	2.825	ppb	2.825	7.39	4147	5000	
Zn	66	2	72	11.369	ppb	11.369	3.61	2314	5000	
As	75	2	72	4.138	ppb	4.138	11.63	670	2000	
Se	78	1	72	-0.086	ppb	-0.086	-139.46	17	2000	
Sr	88	2	72	9742.153	ppb	9742.153	0.64	4848658	4000	
Zr	90	2	72	78.720	ppb	78.720	30.88	147	1000	
Nb	93	2	72	-0.024	ppb	-0.024	-287.42	660	200	
Mo	95	2	115	28.022	ppb	28.022	3.30	18793	2000	
Pd	105	2	115	0.109	ppb	0.109	53.61	140	100	
Ag	107	2	115	0.021	ppb	0.021	76.33	57	100	
Cd	111	2	115	0.042	ppb	0.042	86.60	13	2000	
Sn	120	2	115	1.380	ppb	1.380	9.89	1427	2000	
Sb	121	2	115	0.335	ppb	0.335	11.31	353	1000	
Ba	137	2	115	23.618	ppb	23.618	5.98	7506	5000	
W	182	2	165	0.036	ppb	0.036	63.95	657	100	
Pt	195	2	165	0.004	ppb	0.004	98.84	10	100	
Tl	205	2	165	0.042	ppb	0.042	13.88	427	2000	
Pb	208	2	165	0.275	ppb	0.275	2.84	3114	5000	
Th	232	2	165	0.152	ppb	0.152	11.42	2554	2000	
U	238	2	165	4.068	ppb	4.068	0.48	47110	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	525002	0.46	570952	91.95	60	120	
Sc (IS)	45	1	HMI H2	13271872	0.66	13408403	98.98	60	120	
Sc (IS)	45	2	HMI He	588419	0.72	577322	101.92	60	120	
Sc (IS)	45	3	No Gas	51049049	0.39	48917664	104.36	60	120	
Ge Internal Standard	72	1	HMI H2	5727891	0.64	5773454	99.21	60	120	
Ge Internal Standard	72	2	HMI He	788911	0.35	765657	103.04	60	120	
In Internal Standard	115	2	HMI He	3271357	1.08	3240364	100.96	60	120	
Ho-165	165	2	HMI He	15154903	1.85	14997825	101.05	60	120	

Sample Report

Sample Table

Sample Name	280-123051-A-2-B MS
Data File Name	108SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T16:25:20-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456592 6020a dod5
ISTD Ref FileName	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	113.366	ppb	113.366	0.19	94596	500000	
Li	7	2	45	104.563	ppb	104.563	8.98	5101	500000	
Li	7	3	45	127.668	ppb	127.668	2.37	8218975	50000	
Be	9	1	6	43.460	ppb	43.460	4.13	8393	2000	
B	11	1	6	9071.278	ppb	9071.278	2.08	54560	2000	
Na	23	1	45	31240.786	ppb	31240.786	0.72	59582311	2000	>LDR
Na	23	2	45	32261.395	ppb	32261.395	1.22	4585382	400000	
Mg	24	2	45	69870.134	ppb	69870.134	2.05	4504390	400000	
Al	27	2	45	457.637	ppb	457.637	1.31	8199	400000	
K	39	1	45	5532.275	ppb	5532.275	2.29	14473440	400000	
K	39	2	45	5408.308	ppb	5408.308	1.05	241181	400000	
Ca	40	1	45	151624.122	ppb	151624.122	0.30	432908660	400000	
Ca	44	2	45	140660.622	ppb	140660.622	0.88	384540	400000	
Ti	47	2	45	0.211	ppb	0.211	173.21	3	4000	
V	51	2	72	37.754	ppb	37.754	0.59	32614	2000	
Cr	52	2	72	40.811	ppb	40.811	1.49	38592	5000	
Mn	55	2	72	175.334	ppb	175.334	0.68	67986	10000	
Fe	57	2	72	1021.514	ppb	1021.514	2.35	18372	400000	
Co	59	2	72	39.812	ppb	39.812	0.65	65720	2000	
Ni	60	2	72	42.024	ppb	42.024	0.42	19050	5000	
Cu	63	2	72	41.425	ppb	41.425	0.54	53142	5000	
Zn	66	2	72	50.162	ppb	50.162	1.20	9947	5000	
As	75	2	72	43.173	ppb	43.173	1.41	6700	2000	
Se	78	1	72	40.146	ppb	40.146	3.56	5517	2000	
Sr	88	2	72	10353.784	ppb	10353.784	0.88	5162579	4000	
Zr	90	2	72	1157.076	ppb	1157.076	16.02	1684	1000	
Nb	93	2	72	-0.132	ppb	-0.132	-39.87	527	200	
Mo	95	2	115	71.761	ppb	71.761	2.79	47798	2000	
Pd	105	2	115	0.095	ppb	0.095	4.79	123	100	
Ag	107	2	115	40.323	ppb	40.323	1.92	93996	100	
Cd	111	2	115	40.248	ppb	40.248	2.65	12736	2000	
Sn	120	2	115	42.725	ppb	42.725	2.48	37993	2000	
Sb	121	2	115	39.155	ppb	39.155	1.28	34845	1000	
Ba	137	2	115	65.699	ppb	65.699	3.27	20750	5000	
W	182	2	165	34.736	ppb	34.736	1.82	114722	100	
Pt	195	2	165	0.005	ppb	0.005	113.64	13	100	
Tl	205	2	165	39.850	ppb	39.850	0.59	261093	2000	
Pb	208	2	165	39.470	ppb	39.470	0.53	352214	5000	
Th	232	2	165	38.030	ppb	38.030	1.51	433632	2000	
U	238	2	165	44.110	ppb	44.110	0.78	508884	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	527475	0.06	570952	92.39	60	120	
Sc (IS)	45	1	HMI H2	13408914	0.56	13408403	100.00	60	120	
Sc (IS)	45	2	HMI He	591014	1.03	577322	102.37	60	120	
Sc (IS)	45	3	No Gas	50955136	0.69	48917664	104.17	60	120	
Ge Internal Standard	72	1	HMI H2	5774783	0.68	5773454	100.02	60	120	
Ge Internal Standard	72	2	HMI He	790457	1.92	765657	103.24	60	120	
In Internal Standard	115	2	HMI He	3252082	0.79	3240364	100.36	60	120	
Ho-165	165	2	HMI He	15107885	1.68	14997825	100.73	60	120	

Sample Report

Sample Table

Sample Name	280-123051-A-2-C MSD
Data File Name	109SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T16:29:12-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456592 6020a dod5
ISTD Ref FileName	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	108.246	ppb	108.246	4.81	96132	500000	
Li	7	2	45	80.224	ppb	80.224	8.40	4974	500000	
Li	7	3	45	124.648	ppb	124.648	1.20	8103198	50000	
Be	9	1	6	44.043	ppb	44.043	1.50	8673	2000	
B	11	1	6	8934.627	ppb	8934.627	1.47	54808	2000	
Na	23	1	45	30007.504	ppb	30007.504	0.43	58848397	2000	>LDR
Na	23	2	45	30982.257	ppb	30982.257	0.65	4581933	400000	
Mg	24	2	45	67623.675	ppb	67623.675	0.13	4535535	400000	
Al	27	2	45	447.009	ppb	447.009	6.85	8333	400000	
K	39	1	45	5195.589	ppb	5195.589	1.79	14535148	400000	
K	39	2	45	5192.558	ppb	5192.558	0.52	241987	400000	
Ca	40	1	45	146909.911	ppb	146909.911	0.40	431294100	400000	
Ca	44	2	45	135055.757	ppb	135055.757	1.14	384120	400000	
Ti	47	2	45	1.847	ppb	1.847	145.41	30	4000	
V	51	2	72	36.666	ppb	36.666	3.36	33018	2000	
Cr	52	2	72	40.957	ppb	40.957	1.19	40173	5000	
Mn	55	2	72	170.694	ppb	170.694	2.62	68670	10000	
Fe	57	2	72	891.252	ppb	891.252	1.31	16644	400000	
Co	59	2	72	39.462	ppb	39.462	0.52	67594	2000	
Ni	60	2	72	40.056	ppb	40.056	0.94	18840	5000	
Cu	63	2	72	40.834	ppb	40.834	1.44	54350	5000	
Zn	66	2	72	49.055	ppb	49.055	0.68	10094	5000	
As	75	2	72	43.140	ppb	43.140	1.13	6946	2000	
Se	78	1	72	40.020	ppb	40.020	3.66	5669	2000	
Sr	88	2	72	10044.005	ppb	10044.005	0.48	5196148	4000	
Zr	90	2	72	1221.414	ppb	1221.414	10.44	1844	1000	
Nb	93	2	72	-0.243	ppb	-0.243	-33.49	400	200	
Mo	95	2	115	69.583	ppb	69.583	2.97	47959	2000	
Pd	105	2	115	0.091	ppb	0.091	50.48	123	100	
Ag	107	2	115	39.968	ppb	39.968	0.85	96443	100	
Cd	111	2	115	39.878	ppb	39.878	2.26	13060	2000	
Sn	120	2	115	43.277	ppb	43.277	1.74	39828	2000	
Sb	121	2	115	40.171	ppb	40.171	2.29	37000	1000	
Ba	137	2	115	61.386	ppb	61.386	3.78	20062	5000	
W	182	2	165	34.203	ppb	34.203	1.98	116648	100	
Pt	195	2	165	0.002	ppb	0.002	173.21	7	100	
Tl	205	2	165	39.618	ppb	39.618	0.64	268042	2000	
Pb	208	2	165	39.153	ppb	39.153	1.44	360776	5000	
Th	232	2	165	37.926	ppb	37.926	0.22	446585	2000	
U	238	2	165	43.906	ppb	43.906	0.03	523050	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	537847	0.62	570952	94.20	60	120	
Sc (IS)	45	1	HMI H2	13787186	0.57	13408403	102.82	60	120	
Sc (IS)	45	2	HMI He	614927	0.74	577322	106.51	60	120	
Sc (IS)	45	3	No Gas	50559241	0.33	48917664	103.36	60	120	
Ge Internal Standard	72	1	HMI H2	5953558	0.99	5773454	103.12	60	120	
Ge Internal Standard	72	2	HMI He	820042	0.41	765657	107.10	60	120	
In Internal Standard	115	2	HMI He	3366318	1.41	3240364	103.89	60	120	
Ho-165	165	2	HMI He	15599598	0.17	14997825	104.01	60	120	

Sample Report

Sample Table

Sample Name	280-123051-A-3-A
Data File Name	110SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T16:33:02-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456592 6020a dod5
ISTD Ref FileName	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	39.767	ppb	39.767	24.06	80297	500000	
Li	7	2	45	16.648	ppb	16.648	125.32	4147	500000	
Li	7	3	45	42.378	ppb	42.378	5.24	6860817	50000	
Be	9	1	6	0.018	ppb	0.018	164.43	7	2000	
B	11	1	6	7803.931	ppb	7803.931	1.83	47794	2000	
Na	23	1	45	30332.146	ppb	30332.146	0.46	58939062	2000	>LDR
Na	23	2	45	31154.265	ppb	31154.265	0.96	4651708	400000	
Mg	24	2	45	67130.349	ppb	67130.349	0.58	4546024	400000	
Al	27	2	45	34.021	ppb	34.021	9.35	677	400000	
K	39	1	45	5274.863	ppb	5274.863	1.36	14482846	400000	
K	39	2	45	5164.793	ppb	5164.793	0.12	243164	400000	
Ca	40	1	45	148029.466	ppb	148029.466	0.26	430591767	400000	
Ca	44	2	45	134509.748	ppb	134509.748	0.39	386286	400000	
Ti	47	2	45	2.221	ppb	2.221	128.51	37	4000	
V	51	2	72	-4.690	ppb	-4.690	-2.56	1854	2000	
Cr	52	2	72	0.386	ppb	0.386	13.77	617	5000	
Mn	55	2	72	131.599	ppb	131.599	1.30	53359	10000	
Fe	57	2	72	473.480	ppb	473.480	3.86	8943	400000	
Co	59	2	72	0.216	ppb	0.216	50.23	1410	2000	
Ni	60	2	72	2.023	ppb	2.023	18.08	1027	5000	
Cu	63	2	72	2.154	ppb	2.154	6.76	3454	5000	
Zn	66	2	72	14.593	ppb	14.593	3.91	3087	5000	
As	75	2	72	4.029	ppb	4.029	2.56	684	2000	
Se	78	1	72	0.031	ppb	0.031	226.88	35	2000	
Sr	88	2	72	9968.668	ppb	9968.668	0.99	5196830	4000	
Zr	90	2	72	132.224	ppb	132.224	35.58	233	1000	
Nb	93	2	72	-0.260	ppb	-0.260	-22.47	380	200	
Mo	95	2	115	28.801	ppb	28.801	3.55	20182	2000	
Pd	105	2	115	0.121	ppb	0.121	12.77	160	100	
Ag	107	2	115	0.019	ppb	0.019	32.63	53	100	
Cd	111	2	115	0.080	ppb	0.080	77.74	27	2000	
Sn	120	2	115	1.397	ppb	1.397	14.33	1507	2000	
Sb	121	2	115	0.671	ppb	0.671	4.06	683	1000	
Ba	137	2	115	24.429	ppb	24.429	2.78	8113	5000	
W	182	2	165	0.046	ppb	0.046	71.56	710	100	
Pt	195	2	165	0.000	ppb	0.000	#DIV/0!	0	100	
Tl	205	2	165	0.049	ppb	0.049	7.98	487	2000	
Pb	208	2	165	0.529	ppb	0.529	8.83	5567	5000	
Th	232	2	165	0.422	ppb	0.422	6.01	5842	2000	
U	238	2	165	4.077	ppb	4.077	1.38	48874	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	536112	0.73	570952	93.90	60	120	
Sc (IS)	45	1	HMI H2	13660880	0.55	13408403	101.88	60	120	
Sc (IS)	45	2	HMI He	620887	0.74	577322	107.55	60	120	
Sc (IS)	45	3	No Gas	51919206	0.71	48917664	106.14	60	120	
Ge Internal Standard	72	1	HMI H2	5958619	0.04	5773454	103.21	60	120	
Ge Internal Standard	72	2	HMI He	826384	0.54	765657	107.93	60	120	
In Internal Standard	115	2	HMI He	3417839	0.51	3240364	105.48	60	120	
Ho-165	165	2	HMI He	15689084	0.39	14997825	104.61	60	120	

Sample Report

Sample Table

Sample Name	280-123051-A-4-A
Data File Name	111SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T16:36:55-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456592 6020a dod5
ISTD Ref FileName	085CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-14.435	ppb	-14.435	-21.70	71634	500000	
Li	7	2	45	-27.328	ppb	-27.328	-21.70	3664	500000	
Li	7	3	45	-10.798	ppb	-10.798	-29.55	6043805	50000	
Be	9	1	6	0.031	ppb	0.031	150.05	10	2000	
B	11	1	6	159.521	ppb	159.521	23.91	1724	2000	
Na	23	1	45	37.648	ppb	37.648	5.41	173980	2000	
Na	23	2	45	25.715	ppb	25.715	5.78	11992	400000	
Mg	24	2	45	16.437	ppb	16.437	16.84	1263	400000	
Al	27	2	45	1.340	ppb	1.340	125.12	67	400000	
K	39	1	45	-5112.180	ppb	-5112.180	-0.82	4063107	400000	
K	39	2	45	-17.040	ppb	-17.040	-102.91	26508	400000	
Ca	40	1	45	60.620	ppb	60.620	10.77	217496	400000	
Ca	44	2	45	31.475	ppb	31.475	61.04	123	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	-4.443	ppb	-4.443	-3.13	2107	2000	
Cr	52	2	72	0.178	ppb	0.178	56.47	427	5000	
Mn	55	2	72	0.703	ppb	0.703	22.59	353	10000	
Fe	57	2	72	48.573	ppb	48.573	7.37	1010	400000	
Co	59	2	72	-0.045	ppb	-0.045	-193.62	997	2000	
Ni	60	2	72	-0.002	ppb	-0.002	-2013.79	73	5000	
Cu	63	2	72	0.068	ppb	0.068	75.65	710	5000	
Zn	66	2	72	1.984	ppb	1.984	15.65	510	5000	
As	75	2	72	0.015	ppb	0.015	705.71	37	2000	
Se	78	1	72	-0.132	ppb	-0.132	-36.18	12	2000	
Sr	88	2	72	1.695	ppb	1.695	28.92	927	4000	
Zr	90	2	72	3.917	ppb	3.917	381.96	43	1000	
Nb	93	2	72	-0.350	ppb	-0.350	-0.07	270	200	
Mo	95	2	115	0.065	ppb	0.065	70.05	83	2000	
Pd	105	2	115	-0.012	ppb	-0.012	-38.46	3	100	
Ag	107	2	115	0.008	ppb	0.008	148.42	27	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.227	ppb	0.227	59.69	433	2000	
Sb	121	2	115	0.150	ppb	0.150	53.15	203	1000	
Ba	137	2	115	0.241	ppb	0.241	42.98	90	5000	
W	182	2	165	0.008	ppb	0.008	243.53	597	100	
Pt	195	2	165	0.001	ppb	0.001	173.21	3	100	
Tl	205	2	165	0.009	ppb	0.009	22.98	227	2000	
Pb	208	2	165	0.012	ppb	0.012	154.32	807	5000	
Th	232	2	165	0.068	ppb	0.068	9.10	1700	2000	
U	238	2	165	0.001	ppb	0.001	118.02	53	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	573602	0.84	570952	100.46	60	120	
Sc (IS)	45	1	HMI H2	14292403	0.28	13408403	106.59	60	120	
Sc (IS)	45	2	HMI He	642245	0.85	577322	111.25	60	120	
Sc (IS)	45	3	No Gas	53032776	0.38	48917664	108.41	60	120	
Ge Internal Standard	72	1	HMI H2	6175504	0.68	5773454	106.96	60	120	
Ge Internal Standard	72	2	HMI He	852995	0.12	765657	111.41	60	120	
In Internal Standard	115	2	HMI He	3542775	0.89	3240364	109.33	60	120	
Ho-165	165	2	HMI He	16127101	0.66	14997825	107.53	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5688510
Data File Name	112_CCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T16:40:49-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	83.739	ppb	3.837	93463	100	83.7	90	110	>+\-10%
Li	7	2	45	76.758	ppb	23.512	4934	100	76.8	90	110	>+\-10%
Li	7	3	45	98.901	ppb	2.246	7648175	100	98.9	90	110	
Be	9	1	6	49.624	ppb	5.043	10628	50	99.2	90	110	
B	11	1	6	102.049	ppb	32.667	1380	50	204.1	90	110	>+\-10%
Na	23	1	45	1017.627	ppb	0.673	2149370	1000	101.8	90	110	
Na	23	2	45	994.659	ppb	0.397	154763	1000	99.5	90	110	
Mg	24	2	45	974.220	ppb	3.210	65548	1000	97.4	90	110	
Al	27	2	45	963.347	ppb	2.989	17942	1000	96.3	90	110	
K	39	1	45	-491.826	ppb	-12.001	8938775	1000	-49.2	90	110	>+\-10%
K	39	2	45	969.699	ppb	3.171	66504	1000	97.0	90	110	
Ca	40	1	45	1016.324	ppb	0.332	3105942	1000	101.6	90	110	
Ca	44	2	45	941.492	ppb	4.543	2710	1000	94.1	90	110	
Ti	47	2	45	54.795	ppb	15.912	897	50	109.6	90	110	
V	51	2	72	47.363	ppb	4.130	41406	50	94.7	90	110	
Cr	52	2	72	49.269	ppb	0.990	48665	50	98.5	90	110	
Mn	55	2	72	48.786	ppb	0.282	19824	50	97.6	90	110	
Fe	57	2	72	975.993	ppb	2.765	18362	1000	97.6	90	110	
Co	59	2	72	50.604	ppb	0.921	87078	50	101.2	90	110	
Ni	60	2	72	49.031	ppb	0.978	23230	50	98.1	90	110	
Cu	63	2	72	49.554	ppb	0.651	66360	50	99.1	90	110	
Zn	66	2	72	47.863	ppb	4.414	9927	50	95.7	90	110	
As	75	2	72	48.454	ppb	2.043	7859	50	96.9	90	110	
Se	78	1	72	49.510	ppb	2.388	7223	50	99.0	90	110	
Sr	88	2	72	98.682	ppb	1.974	51471	100	98.7	90	110	
Zr	90	2	72	123.137	ppb	18.272	220	50	246.3	90	110	>+\-10%
Nb	93	2	72	93.403	ppb	1.599	124207	100	93.4	90	110	
Mo	95	2	115	50.079	ppb	1.416	34974	50	100.2	90	110	
Pd	105	2	115	49.280	ppb	2.208	57960	50	98.6	90	110	
Ag	107	2	115	49.090	ppb	0.500	119962	50	98.2	90	110	
Cd	111	2	115	48.491	ppb	4.986	16083	50	97.0	90	110	
Sn	120	2	115	49.636	ppb	0.881	46241	50	99.3	90	110	
Sb	121	2	115	49.275	ppb	1.073	45957	50	98.5	90	110	
Ba	137	2	115	49.349	ppb	0.932	16340	50	98.7	90	110	
W	182	2	165	48.684	ppb	1.546	166417	50	97.4	90	110	
Pt	195	2	165	49.514	ppb	1.040	132691	50	99.0	90	110	
Tl	205	2	165	49.482	ppb	1.493	335979	50	99.0	90	110	
Pb	208	2	165	49.638	ppb	1.257	458905	50	99.3	90	110	
Th	232	2	165	48.249	ppb	1.390	570012	50	96.5	90	110	
U	238	2	165	48.141	ppb	2.366	575610	50	96.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	585105	0.56	570952	102.48	60	120	
Sc (IS)	45	1	HMI H2	14201563	0.10	13408403	105.92	60	120	
Sc (IS)	45	2	HMI He	615842	0.43	577322	106.67	60	120	
Sc (IS)	45	3	No Gas	50493238	0.40	48917664	103.22	60	120	
Ge Internal Standard	72	1	HMI H2	6135883	0.57	5773454	106.28	60	120	
Ge Internal Standard	72	2	HMI He	826656	1.06	765657	107.97	60	120	
In Internal Standard	115	2	HMI He	3409391	0.67	3240364	105.22	60	120	
Ho-165	165	2	HMI He	15657911	0.38	14997825	104.40	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5688508
Data File Name	113_CCB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T16:44:41-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-6.595	ppb	-14.4	5618456	10	
Be	9	1	6	-0.016	ppb	0.0	0	0.5	
B	11	1	6	16.610	ppb	41.1	790	0.5	>RL
Na	23	1	45	9.760	ppb	10.0	111212	25	
Na	23	2	45	6.839	ppb	54.3	8369	25	
Mg	24	2	45	3.373	ppb	26.7	320	25	
Al	27	2	45	0.126	ppb	2021.1	40	15	
K	39	1	45	-859.525	ppb	-11.7	8151038	50	
K	39	2	45	-29.559	ppb	-82.9	23934	50	
Ca	40	1	45	8.050	ppb	0.6	54536	50	
Ca	44	2	45	13.072	ppb	96.8	63	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	-2.081	ppb	-26.0	3688	1	
Cr	52	2	72	-0.084	ppb	-111.0	150	1	
Mn	55	2	72	0.081	ppb	38.2	87	0.5	
Fe	57	2	72	3.015	ppb	53.7	120	25	
Co	59	2	72	0.064	ppb	127.9	1107	0.5	
Ni	60	2	72	0.105	ppb	98.1	117	1	
Cu	63	2	72	0.431	ppb	9.2	1123	1	
Zn	66	2	72	0.777	ppb	42.7	237	5	
As	75	2	72	0.006	ppb	397.2	33	1	
Se	78	1	72	-0.051	ppb	-216.4	23	1	
Sr	88	2	72	0.172	ppb	31.0	100	0.5	
Zr	90	2	72	12.972	ppb	135.4	53	1	>RL
Nb	93	2	72	3.540	ppb	6.1	5191	2	>RL
Mo	95	2	115	0.023	ppb	188.0	50	0.5	
Pd	105	2	115	0.043	ppb	12.2	67	1	
Ag	107	2	115	0.014	ppb	53.4	40	1	
Cd	111	2	115	0.020	ppb	173.2	7	0.5	
Sn	120	2	115	0.105	ppb	77.0	297	1	
Sb	121	2	115	0.175	ppb	47.2	213	0.6	
Ba	137	2	115	0.206	ppb	8.1	73	0.5	
W	182	2	165	0.057	ppb	49.9	733	1	
Pt	195	2	165	0.004	ppb	0.9	10	1	
Tl	205	2	165	0.021	ppb	28.4	297	0.1	
Pb	208	2	165	0.081	ppb	24.2	1393	0.5	
Th	232	2	165	0.254	ppb	8.4	3777	1	
U	238	2	165	0.015	ppb	14.6	213	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	565694	0.21	570952	99.08	60	120	
Sc (IS)	45	1	HMI H2	13542024	1.10	13408403	101.00	60	120	
Sc (IS)	45	2	HMI He	592030	0.82	577322	102.55	60	120	
Sc (IS)	45	3	No Gas	48684646	0.95	48917664	99.52	60	120	
Ge Internal Standard	72	1	HMI H2	5844813	0.48	5773454	101.24	60	120	
Ge Internal Standard	72	2	HMI He	794177	0.68	765657	103.72	60	120	
In Internal Standard	115	2	HMI He	3324720	0.92	3240364	102.60	60	120	
Ho-165	165	2	HMI He	15377732	0.89	14997825	102.53	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5688512
Data File Name	114LCCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T16:48:33-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	3.480	ppb	26.827	5910723	50	7.0	70	130	>+/-30%
Be	9	1	6	0.788	ppb	60.781	167	1	78.8	70	130	
Na	23	2	45	48.257	ppb	1.645	14214	50	96.5	70	130	
Mg	24	2	45	57.724	ppb	11.229	3817	50	115.4	70	130	
Al	27	2	45	53.496	ppb	13.556	990	30	178.3	70	130	>+/-30%
K	39	2	45	81.675	ppb	41.157	28295	100	81.7	70	130	
Ca	44	2	45	27.825	ppb	32.139	103	50	55.7	70	130	>+/-30%
V	51	2	72	1.835	ppb	21.859	6505	5	36.7	70	130	>+/-30%
Cr	52	2	72	2.085	ppb	10.141	2184	2	104.2	70	130	
Mn	55	2	72	0.883	ppb	11.369	397	1	88.3	70	130	
Fe	57	2	72	58.360	ppb	9.825	1110	50	116.7	70	130	
Co	59	2	72	1.091	ppb	12.322	2767	1	109.1	70	130	
Ni	60	2	72	1.319	ppb	14.545	663	1.5	87.9	70	130	
Cu	63	2	72	2.215	ppb	3.534	3377	2	110.8	70	130	
Zn	66	2	72	10.782	ppb	5.977	2200	10	107.8	70	130	
As	75	2	72	4.469	ppb	5.337	722	5	89.4	70	130	
Se	78	1	72	5.407	ppb	15.164	779	5	108.1	70	130	
Sr	88	2	72	1.131	ppb	4.069	577	1	113.1	70	130	
Zr	90	2	72	10.883	ppb	65.207	50	0.5	2176.5	70	130	>+/-30%
Nb	93	2	72	1.367	ppb	13.364	2417	2	68.3	70	130	>+/-30%
Mo	95	2	115	2.183	ppb	6.597	1533	2	109.1	70	130	
Pd	105	2	115	0.011	ppb	77.639	30	1	1.1	70	130	>+/-30%
Ag	107	2	115	5.090	ppb	1.388	12249	5	101.8	70	130	
Cd	111	2	115	1.041	ppb	3.413	340	1	104.1	70	130	
Sn	120	2	115	9.837	ppb	6.103	9180	10	98.4	70	130	
Sb	121	2	115	2.142	ppb	8.038	2020	2	107.1	70	130	
Ba	137	2	115	1.256	ppb	19.536	417	1	125.6	70	130	
W	182	2	165	5.126	ppb	5.099	17683	1	512.6	70	130	>+/-30%
Pt	195	2	165	0.000	ppb	#DIV/0!	0	1	0.0	70	130	>+/-30%
Tl	205	2	165	1.025	ppb	5.686	6982	1	102.5	70	130	
Pb	208	2	165	1.047	ppb	7.611	10149	1	104.7	70	130	
Th	232	2	165	1.718	ppb	1.709	20714	2	85.9	70	130	
U	238	2	165	1.019	ppb	2.876	11983	1	101.9	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	564115	1.20	570952	98.80	60	120	
Sc (IS)	45	1	HMI H2	13535718	0.71	13408403	100.95	60	120	
Sc (IS)	45	2	HMI He	590191	0.76	577322	102.23	60	120	
Sc (IS)	45	3	No Gas	49733883	0.22	48917664	101.67	60	120	
Ge Internal Standard	72	1	HMI H2	5855578	0.78	5773454	101.42	60	120	
Ge Internal Standard	72	2	HMI He	789325	0.64	765657	103.09	60	120	
In Internal Standard	115	2	HMI He	3356124	1.14	3240364	103.57	60	120	
Ho-165	165	2	HMI He	15363016	0.70	14997825	102.43	60	120	

Blank Report

Sample Table

Sample Name	MB 280-457009/1-A
Data File Name	115_BLK.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T16:52:25-06:00
Sample Type	Blank
Dilution	1
Comment	457009 200.8
ISTD Ref File Name	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-5.108	ppb	-82.11618493	69120	0.5
Li	7	2	45	4.991	ppb	405.9911193	3747	0.5
Li	7	3	45	-7.784	ppb	-39.14826261	5639624	10
Be	9	1	6	0.000	ppb	12662.41126	3	0.5
B	11	1	6	4.657	ppb	518.2255653	707	0.5
Na	23	1	45	6.604	ppb	5.332526212	103984	25
Na	23	2	45	5.492	ppb	51.22995667	8063	25
Mg	24	2	45	3.336	ppb	21.29540323	313	25
Al	27	2	45	2.824	ppb	103.7774767	87	15
K	39	1	45	-263.078	ppb	-29.78462744	8658204	50
K	39	2	45	-25.152	ppb	-110.7050368	23767	50
Ca	40	1	45	12.638	ppb	0.97696159	67013	50
Ca	44	2	45	6.094	ppb	176.2531303	43	25
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5
V	51	2	72	-2.461	ppb	-4.918816503	3317	1
Cr	52	2	72	-0.046	ppb	-186.588776	180	1
Mn	55	2	72	0.755	ppb	35.97607071	340	0.5
Fe	57	2	72	4.344	ppb	51.98858633	140	25
Co	59	2	72	0.016	ppb	324.9953574	1000	0.5
Ni	60	2	72	0.037	ppb	127.6365793	83	1
Cu	63	2	72	0.074	ppb	140.4802274	650	1
Zn	66	2	72	1.088	ppb	18.51101127	290	5
As	75	2	72	0.025	ppb	379.4800616	35	1
Se	78	1	72	-0.069	ppb	-84.88428306	20	1
Sr	88	2	72	0.232	ppb	36.40138652	127	0.5
Zr	90	2	72	-21.814	ppb	-19.05126728	3	1
Nb	93	2	72	0.677	ppb	22.45764847	1513	2
Mo	95	2	115	0.015	ppb	332.0316941	43	0.5
Pd	105	2	115	-0.006	ppb	-252.7617904	10	1
Ag	107	2	115	0.007	ppb	70.01966044	23	1
Cd	111	2	115	0.010	ppb	173.2050808	3	0.5
Sn	120	2	115	0.139	ppb	10.30169568	323	1
Sb	121	2	115	0.070	ppb	51.31736886	117	0.6
Ba	137	2	115	0.188	ppb	19.56343826	67	0.5
W	182	2	165	-0.006	ppb	-83.26433035	517	1
Pt	195	2	165	0.000	ppb	#DIV/0!	0	1
Tl	205	2	165	0.012	ppb	119.0460271	233	0.1
Pb	208	2	165	0.042	ppb	38.70141063	1030	0.5
Th	232	2	165	0.102	ppb	17.99944832	2000	1
U	238	2	165	0.003	ppb	140.2535009	63	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	560394	0.97	570952	98.15	60	120	
Sc (IS)	45	1	HMI H2	13392176	0.06	13408403	99.88	60	120	
Sc (IS)	45	2	HMI He	583589	0.47	577322	101.09	60	120	
Sc (IS)	45	3	No Gas	49044106	0.86	48917664	100.26	60	120	
Ge Internal Standard	72	1	HMI H2	5800679	0.35	5773454	100.47	60	120	
Ge Internal Standard	72	2	HMI He	772768	0.44	765657	100.93	60	120	
In Internal Standard	115	2	HMI He	3279133	0.76	3240364	101.20	60	120	
Ho-165	165	2	HMI He	15221927	0.80	14997825	101.49	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-457009/2-A
Data File Name	116_LCS.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T16:56:17-06:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	457009 200.8
ISTD Ref File Name	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	57.401	57.401	ppb	12.546	81391	400	14.4	80	120	>+/-20%
Li	7	2	45	64.413	64.413	ppb	8.276	4434	400	16.1	80	120	>+/-20%
Li	7	3	45	56.360	56.360	ppb	9.492	6701752	400	14.1	80	120	>+/-20%
Be	9	1	6	32.816	32.816	ppb	4.574	6648	40	82.0	80	120	
Na	23	2	45	7.504	7.504	ppb	64.402	8189	40	18.8	80	120	>+/-20%
Mg	24	2	45	2.359	2.359	ppb	9.108	247	40	5.9	80	120	>+/-20%
Al	27	2	45	336.723	336.723	ppb	7.736	5858	40	841.8	80	120	>+/-20%
K	39	2	45	-3.195	-3.195	ppb	-289.711	24177	40	-8.0	80	120	>+/-20%
Ca	44	2	45	108.247	108.247	ppb	4.724	313	40	270.6	80	120	>+/-20%
V	51	2	72	31.715	31.715	ppb	1.976	27550	40	79.3	80	120	>+/-20%
Cr	52	2	72	34.063	34.063	ppb	3.312	31468	40	85.2	80	120	
Mn	55	2	72	33.880	33.880	ppb	2.481	12863	40	84.7	80	120	
Fe	57	2	72	314.440	314.440	ppb	2.103	5565	40	786.1	80	120	>+/-20%
Co	59	2	72	34.107	34.107	ppb	2.571	55086	40	85.3	80	120	
Ni	60	2	72	34.451	34.451	ppb	1.592	15252	40	86.1	80	120	
Cu	63	2	72	34.538	34.538	ppb	2.512	43336	40	86.3	80	120	
Zn	66	2	72	34.040	34.040	ppb	3.049	6615	40	85.1	80	120	
As	75	2	72	31.302	31.302	ppb	4.264	4749	40	78.3	80	120	>+/-20%
Se	78	1	72	33.734	33.734	ppb	5.224	4567	40	84.3	80	120	
Nb	93	2	72	0.491	0.491	ppb	48.278	1280	40	1.2	80	120	>+/-20%
Mo	95	2	115	33.360	33.360	ppb	3.777	22075	40	83.4	80	120	
Pd	105	2	115	0.000	0.000	ppb	-38256.189	17	40	0.0	80	120	>+/-20%
Ag	107	2	115	33.670	33.670	ppb	2.261	77923	40	84.2	80	120	
Cd	111	2	115	34.388	34.388	ppb	1.019	10805	40	86.0	80	120	
Sn	120	2	115	33.755	33.755	ppb	0.121	29846	40	84.4	80	120	
Sb	121	2	115	33.581	33.581	ppb	2.572	29683	40	84.0	80	120	
Ba	137	2	115	31.733	31.733	ppb	5.843	9954	40	79.3	80	120	>+/-20%
W	182	2	165	27.666	27.666	ppb	1.304	91236	40	69.2	80	120	>+/-20%
Pt	195	2	165	0.000	0.000	ppb	#DIV/0!	0	40	0.0	80	120	>+/-20%
Tl	205	2	165	33.019	33.019	ppb	0.633	215798	40	82.5	80	120	
Pb	208	2	165	33.144	33.144	ppb	0.655	295084	40	82.9	80	120	
Th	232	2	165	30.799	30.799	ppb	1.508	350420	40	77.0	80	120	>+/-20%
U	238	2	165	32.509	32.509	ppb	0.249	374090	40	81.3	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	553345	0.31	570952	96.92	60	120	
Sc (IS)	45	1	HMI H2	13212495	0.88	13408403	98.54	60	120	
Sc (IS)	45	2	HMI He	572908	0.86	577322	99.24	60	120	
Sc (IS)	45	3	No Gas	48950776	1.66	48917664	100.07	60	120	
Ge Internal Standard	72	1	HMI H2	5682051	0.79	5773454	98.42	60	120	
Ge Internal Standard	72	2	HMI He	771468	0.83	765657	100.76	60	120	
In Internal Standard	115	2	HMI He	3229247	0.96	3240364	99.66	60	120	
Ho-165	165	2	HMI He	15067976	1.21	14997825	100.47	60	120	

Sample Table

Sample Name	280-123257-F-2-D
Data File Name	117SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T17:00:11-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457009 200.8
ISTD Ref FileName	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-3.337	ppb	-3.337	-99.76	67769	500000	
Li	7	2	45	-4.083	ppb	-4.083	-561.00	3577	500000	
Li	7	3	45	4.005	ppb	4.005	147.52	5549804	50000	
Be	9	1	6	0.071	ppb	0.071	212.02	17	2000	
B	11	1	6	13081.124	ppb	13081.124	2.35	76951	2000	>LDR
Na	23	1	45	152595.308	ppb	152595.308	0.28	283080389	2000	>LDR
Na	23	2	45	158560.028	ppb	158560.028	0.55	21890760	400000	
Mg	24	2	45	50902.667	ppb	50902.667	0.15	3191616	400000	
Al	27	2	45	173.365	ppb	173.365	12.03	3044	400000	
K	39	1	45	39866.921	ppb	39866.921	0.85	47587286	400000	
K	39	2	45	20608.260	ppb	20608.260	0.54	825407	400000	
Ca	40	1	45	57115.377	ppb	57115.377	0.45	158832188	400000	
Ca	44	2	45	44814.236	ppb	44814.236	1.69	119170	400000	
Ti	47	2	45	4.590	ppb	4.590	43.39	70	4000	
V	51	2	72	4.193	ppb	4.193	5.94	8006	2000	
Cr	52	2	72	5.605	ppb	5.605	3.21	5348	5000	
Mn	55	2	72	415.839	ppb	415.839	0.91	156815	10000	
Fe	57	2	72	406.219	ppb	406.219	6.55	7149	400000	
Co	59	2	72	1.442	ppb	1.442	12.50	3251	2000	
Ni	60	2	72	9.180	ppb	9.180	7.99	4101	5000	
Cu	63	2	72	11.562	ppb	11.562	4.77	14832	5000	
Zn	66	2	72	29.428	ppb	29.428	0.43	5711	5000	
As	75	2	72	5.371	ppb	5.371	7.67	839	2000	
Se	78	1	72	0.266	ppb	0.266	73.29	64	2000	
Sr	88	2	72	565.702	ppb	565.702	0.40	274492	4000	
Zr	90	2	72	223.000	ppb	223.000	32.46	343	1000	
Nb	93	2	72	0.919	ppb	0.919	5.68	1804	200	
Mo	95	2	115	12.055	ppb	12.055	2.72	7903	2000	
Pd	105	2	115	0.009	ppb	0.009	371.49	27	100	
Ag	107	2	115	0.022	ppb	0.022	60.78	57	100	
Cd	111	2	115	0.301	ppb	0.301	15.86	93	2000	
Sn	120	2	115	0.176	ppb	0.176	61.06	347	2000	
Sb	121	2	115	0.919	ppb	0.919	15.41	853	1000	
Ba	137	2	115	95.046	ppb	95.046	2.38	29446	5000	
W	182	2	165	0.326	ppb	0.326	24.20	1600	100	
Pt	195	2	165	0.004	ppb	0.004	173.21	10	100	
Tl	205	2	165	0.043	ppb	0.043	21.86	430	2000	
Pb	208	2	165	2.633	ppb	2.633	1.79	24017	5000	
Th	232	2	165	0.507	ppb	0.507	10.07	6569	2000	
U	238	2	165	3.107	ppb	3.107	1.30	35757	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	517812	0.88	570952	90.69	60	120	
Sc (IS)	45	1	HMI H2	13058496	0.45	13408403	97.39	60	120	
Sc (IS)	45	2	HMI He	574858	0.58	577322	99.57	60	120	
Sc (IS)	45	3	No Gas	46627471	0.19	48917664	95.32	60	120	
Ge Internal Standard	72	1	HMI H2	5617387	0.36	5773454	97.30	60	120	
Ge Internal Standard	72	2	HMI He	769115	0.23	765657	100.45	60	120	
In Internal Standard	115	2	HMI He	3190370	0.56	3240364	98.46	60	120	
Ho-165	165	2	HMI He	15054453	0.08	14997825	100.38	60	120	

Sample Report

Sample Table

Sample Name	280-123238-B-1-A
Data File Name	118SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T17:04:02-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457009 200.8
ISTD Ref FileName	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	2.240	ppb	2.240	269.26	70599	500000	
Li	7	2	45	8.922	ppb	8.922	404.13	3844	500000	
Li	7	3	45	11.249	ppb	11.249	32.52	5794488	50000	
Be	9	1	6	0.087	ppb	0.087	102.48	20	2000	
B	11	1	6	2213.224	ppb	2213.224	3.40	13837	2000	
Na	23	1	45	56208.227	ppb	56208.227	0.92	106856122	2000	>LDR
Na	23	2	45	57360.594	ppb	57360.594	0.92	8140507	400000	
Mg	24	2	45	12358.718	ppb	12358.718	0.57	796175	400000	
Al	27	2	45	532.640	ppb	532.640	6.79	9527	400000	
K	39	1	45	8688.955	ppb	8688.955	2.68	17590677	400000	
K	39	2	45	4301.114	ppb	4301.114	1.89	196797	400000	
Ca	40	1	45	53484.183	ppb	53484.183	1.34	152338801	400000	
Ca	44	2	45	41873.525	ppb	41873.525	0.72	114406	400000	
Ti	47	2	45	15.531	ppb	15.531	35.27	243	4000	
V	51	2	72	-0.553	ppb	-0.553	-50.11	4774	2000	
Cr	52	2	72	0.702	ppb	0.702	15.30	887	5000	
Mn	55	2	72	108.865	ppb	108.865	1.93	42189	10000	
Fe	57	2	72	672.149	ppb	672.149	1.76	12102	400000	
Co	59	2	72	0.493	ppb	0.493	6.24	1797	2000	
Ni	60	2	72	1.591	ppb	1.591	11.59	787	5000	
Cu	63	2	72	4.736	ppb	4.736	1.44	6575	5000	
Zn	66	2	72	17.059	ppb	17.059	8.10	3434	5000	
As	75	2	72	0.549	ppb	0.549	7.57	117	2000	
Se	78	1	72	0.974	ppb	0.974	23.69	163	2000	
Sr	88	2	72	441.692	ppb	441.692	0.65	220048	4000	
Zr	90	2	72	380.437	ppb	380.437	15.94	577	1000	
Nb	93	2	72	0.176	ppb	0.176	45.91	913	200	
Mo	95	2	115	5.401	ppb	5.401	1.71	3667	2000	
Pd	105	2	115	0.009	ppb	0.009	236.74	27	100	
Ag	107	2	115	0.016	ppb	0.016	41.26	43	100	
Cd	111	2	115	0.010	ppb	0.010	173.21	3	2000	
Sn	120	2	115	0.217	ppb	0.217	63.70	393	2000	
Sb	121	2	115	0.433	ppb	0.433	17.23	443	1000	
Ba	137	2	115	56.616	ppb	56.616	1.80	18076	5000	
W	182	2	165	0.215	ppb	0.215	20.57	1260	100	
Pt	195	2	165	0.009	ppb	0.009	49.33	23	100	
Tl	205	2	165	0.022	ppb	0.022	28.55	300	2000	
Pb	208	2	165	1.418	ppb	1.418	1.67	13503	5000	
Th	232	2	165	0.158	ppb	0.158	8.61	2654	2000	
U	238	2	165	6.313	ppb	6.313	0.90	74065	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	529098	0.45	570952	92.67	60	120	
Sc (IS)	45	1	HMI H2	13374966	0.28	13408403	99.75	60	120	
Sc (IS)	45	2	HMI He	590599	0.72	577322	102.30	60	120	
Sc (IS)	45	3	No Gas	47693481	1.16	48917664	97.50	60	120	
Ge Internal Standard	72	1	HMI H2	5777652	0.76	5773454	100.07	60	120	
Ge Internal Standard	72	2	HMI He	789646	0.27	765657	103.13	60	120	
In Internal Standard	115	2	HMI He	3287516	0.62	3240364	101.46	60	120	
Ho-165	165	2	HMI He	15356538	0.86	14997825	102.39	60	120	

Sample Report

Sample Table

Sample Name	280-123238-B-1-B MS
Data File Name	119SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T17:07:55-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457009 200.8
ISTD Ref FileName	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	66.237	ppb	66.237	7.45	84061	500000	
Li	7	2	45	28.823	ppb	28.823	69.45	4124	500000	
Li	7	3	45	76.338	ppb	76.338	2.22	6845233	50000	
Be	9	1	6	34.249	ppb	34.249	3.00	6648	2000	
B	11	1	6	3013.350	ppb	3013.350	1.83	18642	2000	
Na	23	1	45	58775.718	ppb	58775.718	0.61	111438738	2000	>LDR
Na	23	2	45	59642.920	ppb	59642.920	0.64	8503731	400000	
Mg	24	2	45	12922.862	ppb	12922.862	0.07	836396	400000	
Al	27	2	45	973.782	ppb	973.782	1.92	17471	400000	
K	39	1	45	9126.719	ppb	9126.719	0.53	17980924	400000	
K	39	2	45	4507.419	ppb	4507.419	0.38	206002	400000	
Ca	40	1	45	55799.801	ppb	55799.801	0.60	158514494	400000	
Ca	44	2	45	43718.289	ppb	43718.289	1.10	120000	400000	
Ti	47	2	45	19.028	ppb	19.028	20.05	300	4000	
V	51	2	72	33.881	ppb	33.881	2.72	29735	2000	
Cr	52	2	72	33.966	ppb	33.966	1.98	32079	5000	
Mn	55	2	72	147.050	ppb	147.050	0.55	56899	10000	
Fe	57	2	72	1027.812	ppb	1027.812	1.87	18449	400000	
Co	59	2	72	33.809	ppb	33.809	3.38	55835	2000	
Ni	60	2	72	34.389	ppb	34.389	2.39	15566	5000	
Cu	63	2	72	37.455	ppb	37.455	1.18	47994	5000	
Zn	66	2	72	50.362	ppb	50.362	4.12	9964	5000	
As	75	2	72	32.907	ppb	32.907	1.75	5103	2000	
Se	78	1	72	33.903	ppb	33.903	4.56	4637	2000	
Sr	88	2	72	505.084	ppb	505.084	0.20	251315	4000	
Zr	90	2	72	1308.110	ppb	1308.110	1.34	1897	1000	
Nb	93	2	72	0.129	ppb	0.129	99.16	853	200	
Mo	95	2	115	39.012	ppb	39.012	1.69	26145	2000	
Pd	105	2	115	0.000	ppb	0.000	-4827.88	17	100	
Ag	107	2	115	32.606	ppb	32.606	0.65	76441	100	
Cd	111	2	115	32.469	ppb	32.469	1.24	10334	2000	
Sn	120	2	115	31.991	ppb	31.991	3.39	28654	2000	
Sb	121	2	115	34.113	ppb	34.113	1.85	30534	1000	
Ba	137	2	115	88.448	ppb	88.448	4.63	28083	5000	
W	182	2	165	27.295	ppb	27.295	1.63	91290	100	
Pt	195	2	165	0.000	ppb	0.000	#DIV/0!	0	100	
Tl	205	2	165	31.938	ppb	31.938	0.17	211669	2000	
Pb	208	2	165	33.141	ppb	33.141	1.62	299186	5000	
Th	232	2	165	27.079	ppb	27.079	0.75	312538	2000	
U	238	2	165	39.249	ppb	39.249	0.68	457973	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	530115	0.69	570952	92.85	60	120	
Sc (IS)	45	1	HMI H2	13339776	0.34	13408403	99.49	60	120	
Sc (IS)	45	2	HMI He	593337	0.05	577322	102.77	60	120	
Sc (IS)	45	3	No Gas	47616558	0.88	48917664	97.34	60	120	
Ge Internal Standard	72	1	HMI H2	5741020	0.27	5773454	99.44	60	120	
Ge Internal Standard	72	2	HMI He	788675	0.22	765657	103.01	60	120	
In Internal Standard	115	2	HMI He	3270939	1.34	3240364	100.94	60	120	
Ho-165	165	2	HMI He	15279278	0.84	14997825	101.88	60	120	

Sample Report

Sample Table

Sample Name	280-123238-B-1-C MSD
Data File Name	120SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T17:11:49-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457009 200.8
ISTD Ref FileName	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	59.122	ppb	59.122	6.89	82563	500000	
Li	7	2	45	64.147	ppb	64.147	36.50	4511	500000	
Li	7	3	45	78.810	ppb	78.810	6.66	6938811	50000	
Be	9	1	6	36.739	ppb	36.739	2.79	7135	2000	
B	11	1	6	2942.156	ppb	2942.156	1.90	18228	2000	
Na	23	1	45	60496.723	ppb	60496.723	0.46	114728022	2000	>LDR
Na	23	2	45	62502.770	ppb	62502.770	0.16	8760536	400000	
Mg	24	2	45	13439.176	ppb	13439.176	0.07	855111	400000	
Al	27	2	45	954.106	ppb	954.106	2.19	16830	400000	
K	39	1	45	9474.571	ppb	9474.571	1.53	18331962	400000	
K	39	2	45	4666.347	ppb	4666.347	0.09	208790	400000	
Ca	40	1	45	57985.733	ppb	57985.733	0.23	164767768	400000	
Ca	44	2	45	45206.235	ppb	45206.235	0.52	121987	400000	
Ti	47	2	45	23.225	ppb	23.225	24.69	360	4000	
V	51	2	72	34.406	ppb	34.406	1.89	29711	2000	
Cr	52	2	72	33.436	ppb	33.436	1.02	31161	5000	
Mn	55	2	72	150.151	ppb	150.151	1.21	57320	10000	
Fe	57	2	72	1087.507	ppb	1087.507	4.92	19257	400000	
Co	59	2	72	33.141	ppb	33.141	2.46	54021	2000	
Ni	60	2	72	33.806	ppb	33.806	1.43	15098	5000	
Cu	63	2	72	38.402	ppb	38.402	2.13	48536	5000	
Zn	66	2	72	51.526	ppb	51.526	6.04	10057	5000	
As	75	2	72	31.314	ppb	31.314	3.17	4792	2000	
Se	78	1	72	33.534	ppb	33.534	4.65	4590	2000	
Sr	88	2	72	521.103	ppb	521.103	0.91	255821	4000	
Zr	90	2	72	1143.267	ppb	1143.267	7.98	1640	1000	
Nb	93	2	72	0.109	ppb	0.109	102.05	817	200	
Mo	95	2	115	40.520	ppb	40.520	1.16	26736	2000	
Pd	105	2	115	-0.006	ppb	-0.006	-261.38	10	100	
Ag	107	2	115	32.534	ppb	32.534	2.03	75087	100	
Cd	111	2	115	33.153	ppb	33.153	1.61	10388	2000	
Sn	120	2	115	33.055	ppb	33.055	2.86	29148	2000	
Sb	121	2	115	34.021	ppb	34.021	3.35	29980	1000	
Ba	137	2	115	90.709	ppb	90.709	3.12	28367	5000	
W	182	2	165	26.725	ppb	26.725	0.95	88371	100	
Pt	195	2	165	0.004	ppb	0.004	100.27	10	100	
Tl	205	2	165	32.065	ppb	32.065	1.17	210076	2000	
Pb	208	2	165	33.187	ppb	33.187	1.04	296188	5000	
Th	232	2	165	26.628	ppb	26.628	0.17	303838	2000	
U	238	2	165	39.206	ppb	39.206	0.78	452245	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	530446	0.63	570952	92.91	60	120	
Sc (IS)	45	1	HMI H2	13343219	0.64	13408403	99.51	60	120	
Sc (IS)	45	2	HMI He	583311	0.13	577322	101.04	60	120	
Sc (IS)	45	3	No Gas	47986883	0.22	48917664	98.10	60	120	
Ge Internal Standard	72	1	HMI H2	5745495	0.07	5773454	99.52	60	120	
Ge Internal Standard	72	2	HMI He	778132	0.19	765657	101.63	60	120	
In Internal Standard	115	2	HMI He	3220102	0.52	3240364	99.37	60	120	
Ho-165	165	2	HMI He	15104593	0.40	14997825	100.71	60	120	

Sample Report

Sample Table

Sample Name	280-123238-B-2-A
Data File Name	121SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T17:15:42-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457009 200.8
ISTD Ref FileName	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-1.586	ppb	-1.586	-181.50	70449	500000	
Li	7	2	45	16.643	ppb	16.643	14.98	3974	500000	
Li	7	3	45	13.341	ppb	13.341	7.54	5902448	50000	
Be	9	1	6	0.052	ppb	0.052	56.97	13	2000	
B	11	1	6	2261.103	ppb	2261.103	3.01	14261	2000	
Na	23	1	45	62269.965	ppb	62269.965	0.75	119500728	2000	>LDR
Na	23	2	45	64122.524	ppb	64122.524	0.31	9165597	400000	
Mg	24	2	45	13980.983	ppb	13980.983	0.32	907226	400000	
Al	27	2	45	750.633	ppb	750.633	5.06	13510	400000	
K	39	1	45	9388.598	ppb	9388.598	1.04	18464525	400000	
K	39	2	45	4665.738	ppb	4665.738	0.20	212905	400000	
Ca	40	1	45	60457.144	ppb	60457.144	0.52	173840437	400000	
Ca	44	2	45	47540.165	ppb	47540.165	1.85	130829	400000	
Ti	47	2	45	27.003	ppb	27.003	17.65	427	4000	
V	51	2	72	0.939	ppb	0.939	44.94	5928	2000	
Cr	52	2	72	1.147	ppb	1.147	2.91	1320	5000	
Mn	55	2	72	150.298	ppb	150.298	0.92	58937	10000	
Fe	57	2	72	1281.500	ppb	1281.500	2.83	23296	400000	
Co	59	2	72	0.920	ppb	0.920	9.01	2520	2000	
Ni	60	2	72	1.906	ppb	1.906	9.73	940	5000	
Cu	63	2	72	6.329	ppb	6.329	4.38	8700	5000	
Zn	66	2	72	22.920	ppb	22.920	5.23	4641	5000	
As	75	2	72	0.908	ppb	0.908	9.58	175	2000	
Se	78	1	72	11.168	ppb	11.168	7.86	1555	2000	
Sr	88	2	72	503.493	ppb	503.493	0.43	253892	4000	
Zr	90	2	72	513.933	ppb	513.933	15.97	777	1000	
Nb	93	2	72	0.130	ppb	0.130	63.75	867	200	
Mo	95	2	115	6.689	ppb	6.689	1.14	4521	2000	
Pd	105	2	115	-0.003	ppb	-0.003	-618.22	13	100	
Ag	107	2	115	0.026	ppb	0.026	10.60	67	100	
Cd	111	2	115	0.104	ppb	0.104	16.35	33	2000	
Sn	120	2	115	0.334	ppb	0.334	41.71	497	2000	
Sb	121	2	115	0.464	ppb	0.464	15.68	470	1000	
Ba	137	2	115	61.802	ppb	61.802	3.53	19672	5000	
W	182	2	165	1.155	ppb	1.155	5.39	4411	100	
Pt	195	2	165	0.003	ppb	0.003	86.61	7	100	
Tl	205	2	165	0.032	ppb	0.032	10.74	367	2000	
Pb	208	2	165	2.166	ppb	2.166	2.05	20307	5000	
Th	232	2	165	0.486	ppb	0.486	4.11	6469	2000	
U	238	2	165	7.949	ppb	7.949	1.52	93416	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	534268	0.26	570952	93.57	60	120	
Sc (IS)	45	1	HMI H2	13502695	0.34	13408403	100.70	60	120	
Sc (IS)	45	2	HMI He	594878	0.38	577322	103.04	60	120	
Sc (IS)	45	3	No Gas	48293681	0.91	48917664	98.72	60	120	
Ge Internal Standard	72	1	HMI H2	5771929	0.60	5773454	99.97	60	120	
Ge Internal Standard	72	2	HMI He	799281	0.29	765657	104.39	60	120	
In Internal Standard	115	2	HMI He	3278135	1.07	3240364	101.17	60	120	
Ho-165	165	2	HMI He	15383915	0.56	14997825	102.57	60	120	

Sample Report

Sample Table

Sample Name	280-123238-B-3-A
Data File Name	122SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T17:19:37-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457009 200.8
ISTD Ref FileName	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	2.296	ppb	2.296	162.48	71892	500000	
Li	7	2	45	5.562	ppb	5.562	598.47	3901	500000	
Li	7	3	45	14.375	ppb	14.375	16.23	5900734	50000	
Be	9	1	6	0.052	ppb	0.052	56.22	13	2000	
B	11	1	6	1870.682	ppb	1870.682	7.17	11995	2000	
Na	23	1	45	55516.706	ppb	55516.706	0.79	107451345	2000	>LDR
Na	23	2	45	57265.398	ppb	57265.398	0.86	8342974	400000	
Mg	24	2	45	13501.051	ppb	13501.051	0.56	892826	400000	
Al	27	2	45	619.170	ppb	619.170	5.24	11365	400000	
K	39	1	45	7885.017	ppb	7885.017	1.34	17091486	400000	
K	39	2	45	3896.217	ppb	3896.217	0.91	185432	400000	
Ca	40	1	45	57144.719	ppb	57144.719	0.83	165705838	400000	
Ca	44	2	45	45117.871	ppb	45117.871	1.20	126535	400000	
Ti	47	2	45	18.204	ppb	18.204	10.10	293	4000	
V	51	2	72	-0.296	ppb	-0.296	-110.89	5121	2000	
Cr	52	2	72	0.611	ppb	0.611	15.37	827	5000	
Mn	55	2	72	121.499	ppb	121.499	0.80	48599	10000	
Fe	57	2	72	709.544	ppb	709.544	5.09	13183	400000	
Co	59	2	72	0.490	ppb	0.490	16.08	1850	2000	
Ni	60	2	72	1.537	ppb	1.537	8.39	787	5000	
Cu	63	2	72	4.309	ppb	4.309	9.39	6228	5000	
Zn	66	2	72	16.035	ppb	16.035	6.55	3337	5000	
As	75	2	72	0.554	ppb	0.554	10.25	122	2000	
Se	78	1	72	1.655	ppb	1.655	5.43	259	2000	
Sr	88	2	72	504.891	ppb	504.891	0.57	259636	4000	
Zr	90	2	72	405.713	ppb	405.713	48.70	633	1000	
Nb	93	2	72	-0.205	ppb	-0.205	-35.78	447	200	
Mo	95	2	115	5.637	ppb	5.637	2.72	3931	2000	
Pd	105	2	115	-0.001	ppb	-0.001	-2619.14	17	100	
Ag	107	2	115	0.014	ppb	0.014	108.62	40	100	
Cd	111	2	115	0.112	ppb	0.112	41.98	37	2000	
Sn	120	2	115	0.169	ppb	0.169	35.23	360	2000	
Sb	121	2	115	0.308	ppb	0.308	31.95	340	1000	
Ba	137	2	115	59.008	ppb	59.008	3.01	19354	5000	
W	182	2	165	0.169	ppb	0.169	7.10	1130	100	
Pt	195	2	165	0.001	ppb	0.001	173.21	3	100	
Tl	205	2	165	0.007	ppb	0.007	101.42	207	2000	
Pb	208	2	165	1.162	ppb	1.162	2.68	11429	5000	
Th	232	2	165	0.202	ppb	0.202	11.51	3237	2000	
U	238	2	165	9.558	ppb	9.558	1.44	114560	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	538224	0.41	570952	94.27	60	120	
Sc (IS)	45	1	HMI H2	13616827	0.32	13408403	101.55	60	120	
Sc (IS)	45	2	HMI He	606254	0.37	577322	105.01	60	120	
Sc (IS)	45	3	No Gas	48141008	0.12	48917664	98.41	60	120	
Ge Internal Standard	72	1	HMI H2	5845752	0.93	5773454	101.25	60	120	
Ge Internal Standard	72	2	HMI He	815111	0.40	765657	106.46	60	120	
In Internal Standard	115	2	HMI He	3377127	0.50	3240364	104.22	60	120	
Ho-165	165	2	HMI He	15690261	0.61	14997825	104.62	60	120	

Sample Report

Sample Table

Sample Name	280-123238-B-4-A
Data File Name	123SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T17:23:31-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457009 200.8
ISTD Ref FileName	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	1.562	ppb	1.562	435.44	73821	500000	
Li	7	2	45	-6.282	ppb	-6.282	-370.61	3837	500000	
Li	7	3	45	10.241	ppb	10.241	30.08	5977492	50000	
Be	9	1	6	0.050	ppb	0.050	114.41	13	2000	
B	11	1	6	1935.126	ppb	1935.126	6.50	12753	2000	
Na	23	1	45	51193.751	ppb	51193.751	0.78	101969242	2000	>LDR
Na	23	2	45	52458.940	ppb	52458.940	1.61	7834420	400000	
Mg	24	2	45	12499.896	ppb	12499.896	0.92	847359	400000	
Al	27	2	45	546.816	ppb	546.816	3.84	10294	400000	
K	39	1	45	9139.166	ppb	9139.166	0.66	18900751	400000	
K	39	2	45	4520.119	ppb	4520.119	2.19	216292	400000	
Ca	40	1	45	52119.493	ppb	52119.493	0.86	155525198	400000	
Ca	44	2	45	40598.111	ppb	40598.111	1.71	116715	400000	
Ti	47	2	45	20.364	ppb	20.364	23.89	337	4000	
V	51	2	72	-0.225	ppb	-0.225	-196.41	5291	2000	
Cr	52	2	72	0.599	ppb	0.599	14.52	833	5000	
Mn	55	2	72	112.101	ppb	112.101	2.10	45860	10000	
Fe	57	2	72	657.857	ppb	657.857	1.39	12506	400000	
Co	59	2	72	0.392	ppb	0.392	1.18	1724	2000	
Ni	60	2	72	1.199	ppb	1.199	18.39	643	5000	
Cu	63	2	72	3.964	ppb	3.964	7.92	5908	5000	
Zn	66	2	72	12.922	ppb	12.922	3.03	2767	5000	
As	75	2	72	0.429	ppb	0.429	20.23	104	2000	
Se	78	1	72	1.138	ppb	1.138	38.46	193	2000	
Sr	88	2	72	453.885	ppb	453.885	1.37	238714	4000	
Zr	90	2	72	436.484	ppb	436.484	16.52	693	1000	
Nb	93	2	72	-0.238	ppb	-0.238	-17.29	413	200	
Mo	95	2	115	5.601	ppb	5.601	2.21	3961	2000	
Pd	105	2	115	0.011	ppb	0.011	140.40	30	100	
Ag	107	2	115	0.012	ppb	0.012	50.70	37	100	
Cd	111	2	115	0.040	ppb	0.040	44.46	13	2000	
Sn	120	2	115	0.178	ppb	0.178	7.51	373	2000	
Sb	121	2	115	0.228	ppb	0.228	20.81	270	1000	
Ba	137	2	115	54.466	ppb	54.466	1.27	18116	5000	
W	182	2	165	0.130	ppb	0.130	38.03	1010	100	
Pt	195	2	165	0.002	ppb	0.002	86.60	7	100	
Tl	205	2	165	0.010	ppb	0.010	59.65	230	2000	
Pb	208	2	165	0.956	ppb	0.956	4.05	9635	5000	
Th	232	2	165	0.129	ppb	0.129	9.07	2404	2000	
U	238	2	165	6.973	ppb	6.973	0.23	84579	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	553965	0.41	570952	97.02	60	120	
Sc (IS)	45	1	HMI H2	14012632	0.71	13408403	104.51	60	120	
Sc (IS)	45	2	HMI He	621478	0.88	577322	107.65	60	120	
Sc (IS)	45	3	No Gas	49337808	0.62	48917664	100.86	60	120	
Ge Internal Standard	72	1	HMI H2	6042178	0.36	5773454	104.65	60	120	
Ge Internal Standard	72	2	HMI He	833616	0.17	765657	108.88	60	120	
In Internal Standard	115	2	HMI He	3425025	1.02	3240364	105.70	60	120	
Ho-165	165	2	HMI He	15876965	0.66	14997825	105.86	60	120	

Sample Report

Sample Table

Sample Name	280-123238-B-5-A
Data File Name	124SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T17:27:22-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457009 200.8
ISTD Ref FileName	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	2.638	ppb	2.638	79.68	73339	500000	
Li	7	2	45	-3.044	ppb	-3.044	-803.85	3837	500000	
Li	7	3	45	11.726	ppb	11.726	13.04	6044117	50000	
Be	9	1	6	0.017	ppb	0.017	169.06	7	2000	
B	11	1	6	1496.476	ppb	1496.476	2.68	10017	2000	
Na	23	1	45	51243.607	ppb	51243.607	0.58	101076852	2000	>LDR
Na	23	2	45	52403.787	ppb	52403.787	0.90	7739947	400000	
Mg	24	2	45	13389.830	ppb	13389.830	0.93	897634	400000	
Al	27	2	45	615.087	ppb	615.087	2.55	11445	400000	
K	39	1	45	6980.313	ppb	6980.313	1.89	16478643	400000	
K	39	2	45	3353.998	ppb	3353.998	0.37	165449	400000	
Ca	40	1	45	56136.296	ppb	56136.296	0.88	165879104	400000	
Ca	44	2	45	44302.334	ppb	44302.334	0.90	125957	400000	
Ti	47	2	45	21.842	ppb	21.842	21.53	357	4000	
V	51	2	72	-0.322	ppb	-0.322	-25.55	5151	2000	
Cr	52	2	72	0.637	ppb	0.637	18.75	860	5000	
Mn	55	2	72	118.672	ppb	118.672	1.17	47933	10000	
Fe	57	2	72	717.565	ppb	717.565	1.81	13463	400000	
Co	59	2	72	0.332	ppb	0.332	38.16	1600	2000	
Ni	60	2	72	1.393	ppb	1.393	9.92	727	5000	
Cu	63	2	72	3.224	ppb	3.224	4.16	4854	5000	
Zn	66	2	72	8.684	ppb	8.684	11.92	1864	5000	
As	75	2	72	0.401	ppb	0.401	9.72	98	2000	
Se	78	1	72	1.170	ppb	1.170	24.21	197	2000	
Sr	88	2	72	504.296	ppb	504.296	0.80	261869	4000	
Zr	90	2	72	352.687	ppb	352.687	23.20	560	1000	
Nb	93	2	72	-0.221	ppb	-0.221	-33.61	430	200	
Mo	95	2	115	5.677	ppb	5.677	6.54	3977	2000	
Pd	105	2	115	-0.006	ppb	-0.006	-226.36	10	100	
Ag	107	2	115	0.011	ppb	0.011	115.52	33	100	
Cd	111	2	115	0.030	ppb	0.030	173.21	10	2000	
Sn	120	2	115	0.138	ppb	0.138	55.30	333	2000	
Sb	121	2	115	0.166	ppb	0.166	7.31	210	1000	
Ba	137	2	115	64.834	ppb	64.834	0.65	21361	5000	
W	182	2	165	0.134	ppb	0.134	34.18	1017	100	
Pt	195	2	165	0.000	ppb	0.000	#DIV/0!	0	100	
Tl	205	2	165	0.012	ppb	0.012	150.82	237	2000	
Pb	208	2	165	0.829	ppb	0.829	1.22	8398	5000	
Th	232	2	165	0.126	ppb	0.126	9.08	2350	2000	
U	238	2	165	8.052	ppb	8.052	1.42	97156	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	554241	0.29	570952	97.07	60	120	
Sc (IS)	45	1	HMI H2	13876414	0.86	13408403	103.49	60	120	
Sc (IS)	45	2	HMI He	614584	0.28	577322	106.45	60	120	
Sc (IS)	45	3	No Gas	49678191	0.56	48917664	101.55	60	120	
Ge Internal Standard	72	1	HMI H2	6028129	0.99	5773454	104.41	60	120	
Ge Internal Standard	72	2	HMI He	823101	0.50	765657	107.50	60	120	
In Internal Standard	115	2	HMI He	3392619	0.88	3240364	104.70	60	120	
Ho-165	165	2	HMI He	15795948	0.84	14997825	105.32	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5688510
Data File Name	125_CCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T17:31:15-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	75.636	ppb	5.321	91936	100	75.6	90	110	>+\-10%
Li	7	2	45	72.032	ppb	30.506	5041	100	72.0	90	110	>+\-10%
Li	7	3	45	94.016	ppb	3.340	7577490	100	94.0	90	110	
Be	9	1	6	50.779	ppb	3.960	10634	50	101.6	90	110	
B	11	1	6	90.595	ppb	20.698	1277	50	181.2	90	110	>+\-10%
Na	23	1	45	1075.916	ppb	0.602	2274554	1000	107.6	90	110	
Na	23	2	45	1004.131	ppb	1.593	161658	1000	100.4	90	110	
Mg	24	2	45	973.243	ppb	1.870	67779	1000	97.3	90	110	
Al	27	2	45	1033.990	ppb	2.507	19931	1000	103.4	90	110	
K	39	1	45	49.820	ppb	66.651	9545503	1000	5.0	90	110	>+\-10%
K	39	2	45	961.536	ppb	4.787	68487	1000	96.2	90	110	
Ca	40	1	45	1045.305	ppb	1.348	3204287	1000	104.5	90	110	
Ca	44	2	45	1000.913	ppb	5.858	2980	1000	100.1	90	110	
Ti	47	2	45	49.594	ppb	15.086	840	50	99.2	90	110	
V	51	2	72	47.297	ppb	1.823	42587	50	94.6	90	110	
Cr	52	2	72	48.574	ppb	0.960	49411	50	97.1	90	110	
Mn	55	2	72	48.660	ppb	3.761	20365	50	97.3	90	110	
Fe	57	2	72	982.086	ppb	2.931	19027	1000	98.2	90	110	
Co	59	2	72	49.284	ppb	0.229	87362	50	98.6	90	110	
Ni	60	2	72	49.681	ppb	2.317	24235	50	99.4	90	110	
Cu	63	2	72	48.657	ppb	0.445	67113	50	97.3	90	110	
Zn	66	2	72	46.533	ppb	5.335	9944	50	93.1	90	110	
As	75	2	72	48.095	ppb	2.558	8032	50	96.2	90	110	
Se	78	1	72	49.716	ppb	1.636	7286	50	99.4	90	110	
Sr	88	2	72	99.627	ppb	1.761	53512	100	99.6	90	110	
Zr	90	2	72	64.700	ppb	10.742	137	50	129.4	90	110	>+\-10%
Nb	93	2	72	93.283	ppb	1.491	127737	100	93.3	90	110	
Mo	95	2	115	49.336	ppb	1.232	35779	50	98.7	90	110	
Pd	105	2	115	47.910	ppb	2.666	58512	50	95.8	90	110	
Ag	107	2	115	48.652	ppb	2.113	123451	50	97.3	90	110	
Cd	111	2	115	48.178	ppb	1.775	16594	50	96.4	90	110	
Sn	120	2	115	49.070	ppb	2.552	47465	50	98.1	90	110	
Sb	121	2	115	49.491	ppb	5.188	47913	50	99.0	90	110	
Ba	137	2	115	47.645	ppb	2.360	16384	50	95.3	90	110	
W	182	2	165	48.759	ppb	1.282	170750	50	97.5	90	110	
Pt	195	2	165	47.748	ppb	0.375	131094	50	95.5	90	110	
Tl	205	2	165	48.524	ppb	1.480	337541	50	97.0	90	110	
Pb	208	2	165	48.896	ppb	0.599	463120	50	97.8	90	110	
Th	232	2	165	47.998	ppb	1.331	580919	50	96.0	90	110	
U	238	2	165	47.861	ppb	0.757	586304	50	95.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	572094	1.19	570952	100.20	60	120	
Sc (IS)	45	1	HMI H2	14249575	0.41	13408403	106.27	60	120	
Sc (IS)	45	2	HMI He	637506	0.32	577322	110.42	60	120	
Sc (IS)	45	3	No Gas	50585044	0.53	48917664	103.41	60	120	
Ge Internal Standard	72	1	HMI H2	6164181	0.16	5773454	106.77	60	120	
Ge Internal Standard	72	2	HMI He	851251	1.07	765657	111.18	60	120	
In Internal Standard	115	2	HMI He	3540554	1.34	3240364	109.26	60	120	
Ho-165	165	2	HMI He	16040992	0.54	14997825	106.96	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5688508
Data File Name	126_CCB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T17:35:06-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-5.889	ppb	-50.2	5783200	10	
Be	9	1	6	0.032	ppb	149.5	10	0.5	
B	11	1	6	13.958	ppb	9.9	777	0.5	>RL
Na	23	1	45	33.560	ppb	4.3	163434	25	>RL
Na	23	2	45	29.303	ppb	16.2	12249	25	>RL
Mg	24	2	45	0.458	ppb	26.8	140	25	
Al	27	2	45	-0.336	ppb	-403.3	33	15	
K	39	1	45	-571.133	ppb	-15.5	8790167	50	
K	39	2	45	-39.848	ppb	-59.5	24909	50	
Ca	40	1	45	3.360	ppb	8.2	42693	50	
Ca	44	2	45	7.157	ppb	207.1	50	25	
Ti	47	2	45	0.199	ppb	173.2	3	0.5	
V	51	2	72	-1.502	ppb	-12.9	4294	1	
Cr	52	2	72	-0.063	ppb	-26.0	177	1	
Mn	55	2	72	0.063	ppb	214.7	83	0.5	
Fe	57	2	72	0.432	ppb	283.2	77	25	
Co	59	2	72	0.008	ppb	910.0	1060	0.5	
Ni	60	2	72	0.038	ppb	56.9	90	1	
Cu	63	2	72	0.353	ppb	18.9	1070	1	
Zn	66	2	72	0.548	ppb	30.8	200	5	
As	75	2	72	-0.008	ppb	-393.8	33	1	
Se	78	1	72	-0.028	ppb	-51.9	27	1	
Sr	88	2	72	0.074	ppb	82.8	53	0.5	
Zr	90	2	72	11.387	ppb	89.6	53	1	>RL
Nb	93	2	72	3.658	ppb	8.4	5581	2	>RL
Mo	95	2	115	0.016	ppb	135.5	47	0.5	
Pd	105	2	115	0.022	ppb	59.5	43	1	
Ag	107	2	115	0.020	ppb	50.9	57	1	
Cd	111	2	115	0.010	ppb	173.2	3	0.5	
Sn	120	2	115	0.168	ppb	37.4	367	1	
Sb	121	2	115	0.110	ppb	17.0	160	0.6	
Ba	137	2	115	0.128	ppb	23.2	50	0.5	
W	182	2	165	0.038	ppb	51.5	690	1	
Pt	195	2	165	0.005	ppb	43.5	13	1	
Tl	205	2	165	0.022	ppb	44.0	307	0.1	
Pb	208	2	165	0.044	ppb	22.3	1093	0.5	
Th	232	2	165	0.215	ppb	15.6	3434	1	
U	238	2	165	0.013	ppb	28.4	193	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	568328	0.59	570952	99.54	60	120	
Sc (IS)	45	1	HMI H2	14098442	0.39	13408403	105.15	60	120	
Sc (IS)	45	2	HMI He	627113	1.22	577322	108.62	60	120	
Sc (IS)	45	3	No Gas	50008699	0.18	48917664	102.23	60	120	
Ge Internal Standard	72	1	HMI H2	6052200	1.15	5773454	104.83	60	120	
Ge Internal Standard	72	2	HMI He	829852	0.54	765657	108.38	60	120	
In Internal Standard	115	2	HMI He	3445089	0.17	3240364	106.32	60	120	
Ho-165	165	2	HMI He	15860381	0.18	14997825	105.75	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5688512
Data File Name	127LCCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T17:39:00-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	2.936	ppb	86.900	5965210	50	5.9	70	130	>+/-30%
Be	9	1	6	0.988	ppb	32.001	210	1	98.8	70	130	
Na	23	2	45	63.772	ppb	3.323	17408	50	127.5	70	130	
Mg	24	2	45	54.078	ppb	2.437	3801	50	108.2	70	130	
Al	27	2	45	45.012	ppb	4.916	890	30	150.0	70	130	>+/-30%
K	39	2	45	54.269	ppb	27.688	28853	100	54.3	70	130	>+/-30%
Ca	44	2	45	40.684	ppb	38.473	147	50	81.4	70	130	
V	51	2	72	2.377	ppb	15.500	7232	5	47.5	70	130	>+/-30%
Cr	52	2	72	1.940	ppb	8.501	2147	2	97.0	70	130	
Mn	55	2	72	1.182	ppb	13.932	537	1	118.2	70	130	
Fe	57	2	72	50.727	ppb	9.811	1020	50	101.5	70	130	
Co	59	2	72	1.005	ppb	12.325	2754	1	100.5	70	130	
Ni	60	2	72	1.455	ppb	20.858	760	1.5	97.0	70	130	
Cu	63	2	72	2.263	ppb	8.514	3604	2	113.1	70	130	
Zn	66	2	72	10.899	ppb	6.936	2330	10	109.0	70	130	
As	75	2	72	5.120	ppb	0.923	861	5	102.4	70	130	
Se	78	1	72	4.732	ppb	8.292	707	5	94.6	70	130	
Sr	88	2	72	1.173	ppb	21.162	627	1	117.3	70	130	
Zr	90	2	72	-6.368	ppb	-159.986	27	0.5	-1273.7	70	130	>+/-30%
Nb	93	2	72	1.358	ppb	21.951	2520	2	67.9	70	130	>+/-30%
Mo	95	2	115	2.120	ppb	28.666	1533	2	106.0	70	130	
Pd	105	2	115	-0.001	ppb	-481.209	17	1	-0.1	70	130	>+/-30%
Ag	107	2	115	5.093	ppb	1.193	12623	5	101.9	70	130	
Cd	111	2	115	1.179	ppb	15.923	397	1	117.9	70	130	
Sn	120	2	115	10.124	ppb	4.413	9730	10	101.2	70	130	
Sb	121	2	115	2.034	ppb	2.926	1977	2	101.7	70	130	
Ba	137	2	115	1.041	ppb	8.203	357	1	104.1	70	130	
W	182	2	165	4.951	ppb	2.039	17659	1	495.1	70	130	>+/-30%
Pt	195	2	165	0.002	ppb	173.205	7	1	0.2	70	130	>+/-30%
Tl	205	2	165	1.049	ppb	3.687	7376	1	104.9	70	130	
Pb	208	2	165	1.040	ppb	6.655	10426	1	104.0	70	130	
Th	232	2	165	1.658	ppb	5.502	20687	2	82.9	70	130	
U	238	2	165	0.985	ppb	0.370	11969	1	98.5	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	572202	0.38	570952	100.22	60	120	
Sc (IS)	45	1	HMI H2	14038894	0.28	13408403	104.70	60	120	
Sc (IS)	45	2	HMI He	626001	0.20	577322	108.43	60	120	
Sc (IS)	45	3	No Gas	50270544	0.57	48917664	102.77	60	120	
Ge Internal Standard	72	1	HMI H2	6036536	0.87	5773454	104.56	60	120	
Ge Internal Standard	72	2	HMI He	827464	0.49	765657	108.07	60	120	
In Internal Standard	115	2	HMI He	3455983	1.40	3240364	106.65	60	120	
Ho-165	165	2	HMI He	15874037	0.75	14997825	105.84	60	120	

Sample Report

Sample Table

Sample Name	280-122932-J-12-B
Data File Name	128SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T17:42:53-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456609 6020a dod5
ISTD Ref FileName	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-25.226	ppb	-25.226	-32.20	66786	500000	
Li	7	2	45	-19.689	ppb	-19.689	-11.13	3714	500000	
Li	7	3	45	-14.525	ppb	-14.525	-26.25	5611383	50000	
Be	9	1	6	0.069	ppb	0.069	42.16	17	2000	
B	11	1	6	341.064	ppb	341.064	13.01	2717	2000	
Na	23	1	45	14597.486	ppb	14597.486	1.50	28703917	2000	>LDR
Na	23	2	45	15014.473	ppb	15014.473	0.26	2286681	400000	
Mg	24	2	45	7924.045	ppb	7924.045	0.96	546440	400000	
Al	27	2	45	28.664	ppb	28.664	17.87	587	400000	
K	39	1	45	-2350.452	ppb	-2350.452	-3.01	6770466	400000	
K	39	2	45	1179.295	ppb	1179.295	1.07	77223	400000	
Ca	40	1	45	39108.833	ppb	39108.833	0.29	114954182	400000	
Ca	44	2	45	30115.003	ppb	30115.003	2.27	88074	400000	
Ti	47	2	45	0.792	ppb	0.792	42.35	13	4000	
V	51	2	72	2.506	ppb	2.506	1.79	7402	2000	
Cr	52	2	72	1.063	ppb	1.063	18.45	1297	5000	
Mn	55	2	72	6.256	ppb	6.256	4.03	2620	10000	
Fe	57	2	72	57.906	ppb	57.906	22.47	1167	400000	
Co	59	2	72	0.041	ppb	0.041	149.72	1123	2000	
Ni	60	2	72	1.014	ppb	1.014	6.46	557	5000	
Cu	63	2	72	0.732	ppb	0.732	20.22	1587	5000	
Zn	66	2	72	40.005	ppb	40.005	7.15	8403	5000	
As	75	2	72	0.712	ppb	0.712	14.64	150	2000	
Se	78	1	72	-0.015	ppb	-0.015	-508.94	28	2000	
Sr	88	2	72	195.411	ppb	195.411	1.63	103024	4000	
Zr	90	2	72	48.732	ppb	48.732	40.95	110	1000	
Nb	93	2	72	1.233	ppb	1.233	19.48	2380	200	
Mo	95	2	115	2.758	ppb	2.758	6.27	1997	2000	
Pd	105	2	115	-0.001	ppb	-0.001	-1186.86	17	100	
Ag	107	2	115	0.007	ppb	0.007	93.90	23	100	
Cd	111	2	115	0.039	ppb	0.039	86.60	13	2000	
Sn	120	2	115	0.087	ppb	0.087	69.42	293	2000	
Sb	121	2	115	0.224	ppb	0.224	20.25	270	1000	
Ba	137	2	115	78.754	ppb	78.754	1.00	26577	5000	
W	182	2	165	0.029	ppb	0.029	150.12	660	100	
Pt	195	2	165	0.004	ppb	0.004	0.40	10	100	
Tl	205	2	165	0.012	ppb	0.012	63.93	240	2000	
Pb	208	2	165	0.026	ppb	0.026	41.81	927	5000	
Th	232	2	165	0.210	ppb	0.210	9.39	3381	2000	
U	238	2	165	1.867	ppb	1.867	2.43	22691	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	537597	0.65	570952	94.16	60	120	
Sc (IS)	45	1	HMI H2	13801443	0.76	13408403	102.93	60	120	
Sc (IS)	45	2	HMI He	632164	1.01	577322	109.50	60	120	
Sc (IS)	45	3	No Gas	49801019	1.99	48917664	101.81	60	120	
Ge Internal Standard	72	1	HMI H2	5935973	0.47	5773454	102.81	60	120	
Ge Internal Standard	72	2	HMI He	835638	0.44	765657	109.14	60	120	
In Internal Standard	115	2	HMI He	3475112	0.42	3240364	107.24	60	120	
Ho-165	165	2	HMI He	15886815	0.40	14997825	105.93	60	120	

Sample Report

Sample Table

Sample Name	280-122932-J-13-B
Data File Name	129SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T17:46:46-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456609 6020a dod5
ISTD Ref FileName	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-22.392	ppb	-22.392	-18.40	67938	500000	
Li	7	2	45	-37.617	ppb	-37.617	-57.74	3511	500000	
Li	7	3	45	-14.248	ppb	-14.248	-3.07	5683101	50000	
Be	9	1	6	0.001	ppb	0.001	2842.22	3	2000	
B	11	1	6	55.649	ppb	55.649	34.79	987	2000	
Na	23	1	45	13581.167	ppb	13581.167	0.19	26918933	2000	>LDR
Na	23	2	45	13939.588	ppb	13939.588	1.19	2152722	400000	
Mg	24	2	45	15776.308	ppb	15776.308	0.33	1102845	400000	
Al	27	2	45	11.500	ppb	11.500	25.56	263	400000	
K	39	1	45	-3696.623	ppb	-3696.623	-0.86	5424193	400000	
K	39	2	45	584.480	ppb	584.480	4.87	52508	400000	
Ca	40	1	45	53778.042	ppb	53778.042	0.36	159272088	400000	
Ca	44	2	45	41404.160	ppb	41404.160	0.47	122752	400000	
Ti	47	2	45	0.787	ppb	0.787	173.21	13	4000	
V	51	2	72	5.523	ppb	5.523	3.50	9817	2000	
Cr	52	2	72	0.548	ppb	0.548	6.25	793	5000	
Mn	55	2	72	48.507	ppb	48.507	1.42	20121	10000	
Fe	57	2	72	49.280	ppb	49.280	11.08	1013	400000	
Co	59	2	72	0.063	ppb	0.063	77.84	1173	2000	
Ni	60	2	72	0.434	ppb	0.434	54.09	283	5000	
Cu	63	2	72	0.333	ppb	0.333	29.04	1060	5000	
Zn	66	2	72	2.503	ppb	2.503	13.33	613	5000	
As	75	2	72	0.822	ppb	0.822	3.83	170	2000	
Se	78	1	72	0.182	ppb	0.182	80.38	56	2000	
Sr	88	2	72	273.601	ppb	273.601	0.17	145677	4000	
Zr	90	2	72	36.906	ppb	36.906	66.17	93	1000	
Nb	93	2	72	0.628	ppb	0.628	5.51	1587	200	
Mo	95	2	115	1.126	ppb	1.126	19.08	847	2000	
Pd	105	2	115	-0.009	ppb	-0.009	-50.66	7	100	
Ag	107	2	115	-0.002	ppb	-0.002	-147.68	3	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	-0.015	ppb	-0.015	-597.74	200	2000	
Sb	121	2	115	-0.001	ppb	-0.001	-1838.17	57	1000	
Ba	137	2	115	43.416	ppb	43.416	4.00	14845	5000	
W	182	2	165	0.040	ppb	0.040	41.26	707	100	
Pt	195	2	165	0.000	ppb	0.000	#DIV/0!	0	100	
Tl	205	2	165	0.007	ppb	0.007	108.62	207	2000	
Pb	208	2	165	0.028	ppb	0.028	57.65	950	5000	
Th	232	2	165	0.048	ppb	0.048	36.11	1454	2000	
U	238	2	165	5.002	ppb	5.002	1.81	61195	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	537148	0.58	570952	94.08	60	120	
Sc (IS)	45	1	HMI H2	13907344	0.58	13408403	103.72	60	120	
Sc (IS)	45	2	HMI He	640869	0.62	577322	111.01	60	120	
Sc (IS)	45	3	No Gas	50388111	0.61	48917664	103.01	60	120	
Ge Internal Standard	72	1	HMI H2	5960621	0.25	5773454	103.24	60	120	
Ge Internal Standard	72	2	HMI He	843913	0.90	765657	110.22	60	120	
In Internal Standard	115	2	HMI He	3521314	1.07	3240364	108.67	60	120	
Ho-165	165	2	HMI He	16012127	0.73	14997825	106.76	60	120	

Sample Report

Sample Table

Sample Name	280-122932-J-14-B
Data File Name	130SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T17:50:37-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456609 6020a dod5
ISTD Ref FileName	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-21.374	ppb	-21.374	-21.47	68962	500000	
Li	7	2	45	-27.679	ppb	-27.679	-38.24	3641	500000	
Li	7	3	45	-12.504	ppb	-12.504	-24.79	5684467	50000	
Be	9	1	6	-0.016	ppb	-0.016	0.00	0	2000	
B	11	1	6	97.326	ppb	97.326	21.66	1267	2000	
Na	23	1	45	11171.168	ppb	11171.168	0.65	22420311	2000	>LDR
Na	23	2	45	11615.355	ppb	11615.355	1.30	1789791	400000	
Mg	24	2	45	13322.387	ppb	13322.387	0.49	928522	400000	
Al	27	2	45	15.183	ppb	15.183	13.70	333	400000	
K	39	1	45	-3679.310	ppb	-3679.310	-1.86	5506081	400000	
K	39	2	45	582.837	ppb	582.837	0.71	52284	400000	
Ca	40	1	45	49499.704	ppb	49499.704	0.70	148327838	400000	
Ca	44	2	45	38231.371	ppb	38231.371	0.82	113009	400000	
Ti	47	2	45	0.982	ppb	0.982	91.70	17	4000	
V	51	2	72	-3.183	ppb	-3.183	-7.98	3070	2000	
Cr	52	2	72	0.089	ppb	0.089	70.38	333	5000	
Mn	55	2	72	1452.251	ppb	1452.251	0.99	602393	10000	
Fe	57	2	72	1227.955	ppb	1227.955	2.01	23637	400000	
Co	59	2	72	1.350	ppb	1.350	1.61	3417	2000	
Ni	60	2	72	1.110	ppb	1.110	10.60	610	5000	
Cu	63	2	72	0.107	ppb	0.107	74.67	757	5000	
Zn	66	2	72	3.698	ppb	3.698	16.69	867	5000	
As	75	2	72	1.119	ppb	1.119	7.47	220	2000	
Se	78	1	72	-0.046	ppb	-0.046	-104.75	24	2000	
Sr	88	2	72	253.816	ppb	253.816	1.60	135508	4000	
Zr	90	2	72	23.820	ppb	23.820	57.72	73	1000	
Nb	93	2	72	0.297	ppb	0.297	14.82	1143	200	
Mo	95	2	115	4.124	ppb	4.124	4.86	3010	2000	
Pd	105	2	115	-0.001	ppb	-0.001	-1036.03	17	100	
Ag	107	2	115	0.012	ppb	0.012	137.26	37	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.013	ppb	0.013	198.83	227	2000	
Sb	121	2	115	0.009	ppb	0.009	592.18	67	1000	
Ba	137	2	115	104.580	ppb	104.580	0.46	35787	5000	
W	182	2	165	0.101	ppb	0.101	31.66	913	100	
Pt	195	2	165	0.000	ppb	0.000	#DIV/0!	0	100	
Tl	205	2	165	0.017	ppb	0.017	78.45	277	2000	
Pb	208	2	165	0.018	ppb	0.018	59.56	860	5000	
Th	232	2	165	0.037	ppb	0.037	10.61	1310	2000	
U	238	2	165	2.355	ppb	2.355	1.54	28666	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	549452	0.47	570952	96.23	60	120	
Sc (IS)	45	1	HMI H2	14071079	0.55	13408403	104.94	60	120	
Sc (IS)	45	2	HMI He	638942	0.10	577322	110.67	60	120	
Sc (IS)	45	3	No Gas	50136004	0.32	48917664	102.49	60	120	
Ge Internal Standard	72	1	HMI H2	6031746	0.85	5773454	104.47	60	120	
Ge Internal Standard	72	2	HMI He	846226	0.46	765657	110.52	60	120	
In Internal Standard	115	2	HMI He	3524153	0.29	3240364	108.76	60	120	
Ho-165	165	2	HMI He	15918422	0.68	14997825	106.14	60	120	

Sample Table

Sample Name	280-122932-J-23-B
Data File Name	131SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T17:54:30-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456609 6020a dod5
ISTD Ref FileName	085CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-5.913	ppb	-5.913	-81.71	108809	500000	
Li	7	2	45	7.504	ppb	7.504	232.55	5735	500000	
Li	7	3	45	12.641	ppb	12.641	30.24	9385571	50000	
Be	9	1	6	0.010	ppb	0.010	251.21	10	2000	
B	11	1	6	-57.349	ppb	-57.349	-11.18	583	2000	
Na	23	1	45	299.620	ppb	299.620	78.83	1037392	2000	
Na	23	2	45	709.832	ppb	709.832	26.51	162231	400000	
Mg	24	2	45	1046.035	ppb	1046.035	26.61	101355	400000	
Al	27	2	45	7.119	ppb	7.119	21.97	247	400000	
K	39	1	45	-5325.893	ppb	-5325.893	-12.43	5701941	400000	
K	39	2	45	-212.787	ppb	-212.787	-13.79	24822	400000	
Ca	40	1	45	1997.469	ppb	1997.469	80.34	8969055	400000	
Ca	44	2	45	3600.331	ppb	3600.331	28.03	14812	400000	
Ti	47	2	45	0.712	ppb	0.712	70.32	17	4000	
V	51	2	72	-4.833	ppb	-4.833	-0.45	2494	2000	
Cr	52	2	72	-0.076	ppb	-0.076	-35.00	233	5000	
Mn	55	2	72	272.621	ppb	272.621	27.56	158397	10000	
Fe	57	2	72	64.022	ppb	64.022	24.66	1817	400000	
Co	59	2	72	0.206	ppb	0.206	14.94	1990	2000	
Ni	60	2	72	1.015	ppb	1.015	29.56	790	5000	
Cu	63	2	72	-0.008	ppb	-0.008	-1122.40	840	5000	
Zn	66	2	72	0.473	ppb	0.473	76.52	263	5000	
As	75	2	72	0.017	ppb	0.017	590.08	52	2000	
Se	78	1	72	-0.117	ppb	-0.117	-44.81	21	2000	
Sr	88	2	72	19.510	ppb	19.510	26.97	14602	4000	
Zr	90	2	72	13.207	ppb	13.207	66.31	80	1000	
Nb	93	2	72	-0.162	ppb	-0.162	-53.18	730	200	
Mo	95	2	115	0.295	ppb	0.295	22.27	343	2000	
Pd	105	2	115	-0.009	ppb	-0.009	-66.85	10	100	
Ag	107	2	115	0.010	ppb	0.010	149.11	47	100	
Cd	111	2	115	0.007	ppb	0.007	173.21	3	2000	
Sn	120	2	115	-0.122	ppb	-0.122	-2.27	133	2000	
Sb	121	2	115	0.007	ppb	0.007	654.01	90	1000	
Ba	137	2	115	11.577	ppb	11.577	28.13	5485	5000	
W	182	2	165	0.027	ppb	0.027	115.92	947	100	
Pt	195	2	165	0.001	ppb	0.001	173.21	3	100	
Tl	205	2	165	0.001	ppb	0.001	275.39	240	2000	
Pb	208	2	165	0.003	ppb	0.003	429.78	1037	5000	
Th	232	2	165	0.030	ppb	0.030	16.67	1770	2000	
U	238	2	165	0.236	ppb	0.236	21.24	4208	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1038323	4.62	570952	181.86	60	120	IS Failed
Sc (IS)	45	1	HMI H2	21142040	5.69	13408403	157.68	60	120	IS Failed
Sc (IS)	45	2	HMI He	884877	1.70	577322	153.27	60	120	IS Failed
Sc (IS)	45	3	No Gas	76877369	13.22	48917664	157.16	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	9059331	5.81	5773454	156.91	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	1181229	1.66	765657	154.28	60	120	IS Failed
In Internal Standard	115	2	HMI He	4857388	1.60	3240364	149.90	60	120	IS Failed
Ho-165	165	2	HMI He	22989375	1.34	14997825	153.28	60	120	IS Failed

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5688510
Data File Name	132_CCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T17:58:22-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	87.006	ppb	1.998	94794	100	87.0	90	110	>+\-10%
Li	7	2	45	67.870	ppb	26.250	4921	100	67.9	90	110	>+\-10%
Li	7	3	45	94.277	ppb	1.780	7551391	100	94.3	90	110	
Be	9	1	6	50.952	ppb	4.618	10871	50	101.9	90	110	
B	11	1	6	34.336	ppb	70.232	930	50	68.7	90	110	>+\-10%
Na	23	1	45	1016.076	ppb	0.655	2159658	1000	101.6	90	110	
Na	23	2	45	982.280	ppb	0.884	156342	1000	98.2	90	110	
Mg	24	2	45	988.084	ppb	1.030	67956	1000	98.8	90	110	
Al	27	2	45	991.933	ppb	1.279	18883	1000	99.2	90	110	
K	39	1	45	-328.159	ppb	-30.065	9169437	1000	-32.8	90	110	>+\-10%
K	39	2	45	950.574	ppb	3.709	67167	1000	95.1	90	110	
Ca	40	1	45	1020.971	ppb	0.853	3139501	1000	102.1	90	110	
Ca	44	2	45	1019.866	ppb	11.059	3000	1000	102.0	90	110	
Ti	47	2	45	53.621	ppb	10.143	897	50	107.2	90	110	
V	51	2	72	48.811	ppb	2.437	43235	50	97.6	90	110	
Cr	52	2	72	49.277	ppb	0.914	49502	50	98.6	90	110	
Mn	55	2	72	48.927	ppb	2.434	20221	50	97.9	90	110	
Fe	57	2	72	1014.142	ppb	4.446	19407	1000	101.4	90	110	
Co	59	2	72	49.323	ppb	1.372	86356	50	98.6	90	110	
Ni	60	2	72	49.521	ppb	2.914	23864	50	99.0	90	110	
Cu	63	2	72	49.448	ppb	0.534	67350	50	98.9	90	110	
Zn	66	2	72	45.946	ppb	2.882	9697	50	91.9	90	110	
As	75	2	72	48.007	ppb	1.940	7920	50	96.0	90	110	
Se	78	1	72	47.674	ppb	1.848	6998	50	95.3	90	110	
Sr	88	2	72	100.000	ppb	4.031	53050	100	100.0	90	110	
Zr	90	2	72	57.124	ppb	30.001	123	50	114.2	90	110	>+\-10%
Nb	93	2	72	94.755	ppb	0.331	128144	100	94.8	90	110	
Mo	95	2	115	48.698	ppb	2.852	34991	50	97.4	90	110	
Pd	105	2	115	47.190	ppb	0.949	57097	50	94.4	90	110	
Ag	107	2	115	48.730	ppb	0.281	122509	50	97.5	90	110	
Cd	111	2	115	47.822	ppb	0.911	16320	50	95.6	90	110	
Sn	120	2	115	49.469	ppb	1.442	47411	50	98.9	90	110	
Sb	121	2	115	48.379	ppb	1.332	46419	50	96.8	90	110	
Ba	137	2	115	45.986	ppb	2.279	15666	50	92.0	90	110	
W	182	2	165	47.920	ppb	0.906	167184	50	95.8	90	110	
Pt	195	2	165	47.356	ppb	0.865	129515	50	94.7	90	110	
Tl	205	2	165	48.533	ppb	0.386	336312	50	97.1	90	110	
Pb	208	2	165	48.907	ppb	1.045	461438	50	97.8	90	110	
Th	232	2	165	47.413	ppb	0.399	571675	50	94.8	90	110	
U	238	2	165	47.334	ppb	0.983	577610	50	94.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	582900	0.59	570952	102.09	60	120	
Sc (IS)	45	1	HMI H2	14290348	0.07	13408403	106.58	60	120	
Sc (IS)	45	2	HMI He	629599	0.98	577322	109.06	60	120	
Sc (IS)	45	3	No Gas	50380788	0.34	48917664	102.99	60	120	
Ge Internal Standard	72	1	HMI H2	6172773	0.21	5773454	106.92	60	120	
Ge Internal Standard	72	2	HMI He	840726	0.73	765657	109.80	60	120	
In Internal Standard	115	2	HMI He	3507513	0.05	3240364	108.24	60	120	
Ho-165	165	2	HMI He	15979418	0.47	14997825	106.54	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5688508
Data File Name	133_CCB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T18:02:16-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-6.125	ppb	-55.5	5733531	10	
Be	9	1	6	0.000	ppb	-19266.9	3	0.5	
B	11	1	6	-30.985	ppb	-28.7	493	0.5	
Na	23	1	45	8.559	ppb	9.3	112690	25	
Na	23	2	45	3.349	ppb	116.3	8139	25	
Mg	24	2	45	-0.038	ppb	-1881.9	103	25	
Al	27	2	45	-0.302	ppb	-100.9	33	15	
K	39	1	45	-883.697	ppb	-4.9	8410012	50	
K	39	2	45	-22.942	ppb	-64.1	25005	50	
Ca	40	1	45	2.591	ppb	7.3	40146	50	
Ca	44	2	45	14.706	ppb	62.7	70	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	-1.133	ppb	-51.9	4494	1	
Cr	52	2	72	0.009	ppb	250.5	243	1	
Mn	55	2	72	0.067	ppb	156.5	83	0.5	
Fe	57	2	72	2.855	ppb	98.9	120	25	
Co	59	2	72	-0.011	ppb	-511.4	1010	0.5	
Ni	60	2	72	0.178	ppb	60.4	153	1	
Cu	63	2	72	0.260	ppb	19.8	930	1	
Zn	66	2	72	0.534	ppb	38.6	193	5	
As	75	2	72	-0.037	ppb	-206.1	27	1	
Se	78	1	72	-0.047	ppb	-207.6	24	1	
Sr	88	2	72	0.037	ppb	211.2	33	0.5	
Zr	90	2	72	16.622	ppb	142.7	60	1	>RL
Nb	93	2	72	3.746	ppb	7.9	5595	2	>RL
Mo	95	2	115	0.011	ppb	255.6	43	0.5	
Pd	105	2	115	0.033	ppb	79.5	57	1	
Ag	107	2	115	0.016	ppb	143.8	47	1	
Cd	111	2	115	0.020	ppb	173.2	7	0.5	
Sn	120	2	115	0.153	ppb	79.0	350	1	
Sb	121	2	115	0.061	ppb	124.6	113	0.6	
Ba	137	2	115	0.080	ppb	159.1	33	0.5	
W	182	2	165	0.072	ppb	38.5	807	1	
Pt	195	2	165	0.010	ppb	57.0	27	1	
Tl	205	2	165	0.015	ppb	38.0	263	0.1	
Pb	208	2	165	0.058	ppb	31.2	1217	0.5	
Th	232	2	165	0.189	ppb	10.8	3104	1	
U	238	2	165	0.013	ppb	20.4	187	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	573754	0.62	570952	100.49	60	120	
Sc (IS)	45	1	HMI H2	14013332	0.77	13408403	104.51	60	120	
Sc (IS)	45	2	HMI He	611894	0.61	577322	105.99	60	120	
Sc (IS)	45	3	No Gas	49615431	0.74	48917664	101.43	60	120	
Ge Internal Standard	72	1	HMI H2	6037370	0.21	5773454	104.57	60	120	
Ge Internal Standard	72	2	HMI He	814946	0.48	765657	106.44	60	120	
In Internal Standard	115	2	HMI He	3426932	0.98	3240364	105.76	60	120	
Ho-165	165	2	HMI He	15789432	1.05	14997825	105.28	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5688512
Data File Name	134LCCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T18:06:08-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	3.773	ppb	38.882	5967889	50	7.5	70	130	>+/-30%
Be	9	1	6	0.980	ppb	43.686	207	1	98.0	70	130	
Na	23	2	45	50.786	ppb	4.217	15102	50	101.6	70	130	
Mg	24	2	45	52.076	ppb	8.535	3581	50	104.2	70	130	
Al	27	2	45	49.204	ppb	7.594	947	30	164.0	70	130	>+/-30%
K	39	2	45	75.138	ppb	11.207	29053	100	75.1	70	130	
Ca	44	2	45	41.789	ppb	53.743	147	50	83.6	70	130	
V	51	2	72	3.440	ppb	19.616	7899	5	68.8	70	130	>+/-30%
Cr	52	2	72	1.756	ppb	15.054	1930	2	87.8	70	130	
Mn	55	2	72	1.095	ppb	24.616	493	1	109.5	70	130	
Fe	57	2	72	54.968	ppb	7.240	1080	50	109.9	70	130	
Co	59	2	72	0.984	ppb	9.810	2670	1	98.4	70	130	
Ni	60	2	72	1.829	ppb	11.321	920	1.5	121.9	70	130	
Cu	63	2	72	2.239	ppb	7.067	3511	2	112.0	70	130	
Zn	66	2	72	10.110	ppb	7.336	2130	10	101.1	70	130	
As	75	2	72	4.832	ppb	2.075	801	5	96.6	70	130	
Se	78	1	72	4.142	ppb	4.180	617	5	82.8	70	130	
Sr	88	2	72	1.117	ppb	1.787	587	1	111.7	70	130	
Zr	90	2	72	12.144	ppb	33.873	53	0.5	2428.7	70	130	>+/-30%
Nb	93	2	72	1.574	ppb	10.599	2757	2	78.7	70	130	
Mo	95	2	115	1.989	ppb	15.192	1420	2	99.5	70	130	
Pd	105	2	115	0.011	ppb	288.958	30	1	1.1	70	130	>+/-30%
Ag	107	2	115	5.145	ppb	2.883	12556	5	102.9	70	130	
Cd	111	2	115	1.399	ppb	9.656	463	1	139.9	70	130	>+/-30%
Sn	120	2	115	10.294	ppb	3.061	9737	10	102.9	70	130	
Sb	121	2	115	1.811	ppb	8.246	1740	2	90.5	70	130	
Ba	137	2	115	1.139	ppb	12.908	383	1	113.9	70	130	
W	182	2	165	4.905	ppb	2.947	17315	1	490.5	70	130	>+/-30%
Pt	195	2	165	0.002	ppb	173.205	7	1	0.2	70	130	>+/-30%
Tl	205	2	165	0.993	ppb	2.129	6919	1	99.3	70	130	
Pb	208	2	165	1.091	ppb	4.099	10776	1	109.1	70	130	
Th	232	2	165	1.686	ppb	5.112	20797	2	84.3	70	130	
U	238	2	165	0.962	ppb	2.081	11572	1	96.2	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	566522	0.54	570952	99.22	60	120	
Sc (IS)	45	1	HMI H2	13943880	0.35	13408403	103.99	60	120	
Sc (IS)	45	2	HMI He	611623	0.57	577322	105.94	60	120	
Sc (IS)	45	3	No Gas	50173219	0.95	48917664	102.57	60	120	
Ge Internal Standard	72	1	HMI H2	5986393	0.08	5773454	103.69	60	120	
Ge Internal Standard	72	2	HMI He	812867	0.77	765657	106.17	60	120	
In Internal Standard	115	2	HMI He	3403260	0.35	3240364	105.03	60	120	
Ho-165	165	2	HMI He	15705261	0.25	14997825	104.72	60	120	

Blank Report

Sample Table

Sample Name	MB 280-456681/1-B
Data File Name	135_BLK.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T18:10:00-06:00
Sample Type	Blank
Dilution	1
Comment	457011 200.8
ISTD Ref File Name	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-7.853	ppb	-48.64256814	69505	0.5
Li	7	2	45	-9.692	ppb	-208.5878811	3621	0.5
Li	7	3	45	-8.817	ppb	-20.61115835	5625491	10
Be	9	1	6	0.000	ppb	7329.864506	3	0.5
B	11	1	6	-8.896	ppb	-62.61192732	617	0.5
Na	23	1	45	14.702	ppb	3.450635077	121081	25
Na	23	2	45	11.610	ppb	8.358618031	9080	25
Mg	24	2	45	1.295	ppb	31.52783183	187	25
Al	27	2	45	11.075	ppb	26.38937705	237	15
K	39	1	45	-148.641	ppb	-8.377321553	8897118	50
K	39	2	45	-42.191	ppb	-23.64469303	23506	50
Ca	40	1	45	11.286	ppb	4.050600826	64050	50
Ca	44	2	45	9.356	ppb	117.8496	53	25
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5
V	51	2	72	-1.107	ppb	-49.06267401	4391	1
Cr	52	2	72	0.108	ppb	63.55010243	330	1
Mn	55	2	72	0.725	ppb	23.38065243	337	0.5
Fe	57	2	72	11.921	ppb	19.98557643	280	25
Co	59	2	72	0.055	ppb	103.554736	1090	0.5
Ni	60	2	72	0.054	ppb	46.97546226	93	1
Cu	63	2	72	0.155	ppb	44.85085543	770	1
Zn	66	2	72	1.051	ppb	38.71914811	290	5
As	75	2	72	-0.028	ppb	-259.3167727	28	1
Se	78	1	72	-0.043	ppb	-241.0397436	24	1
Sr	88	2	72	0.019	ppb	121.6378858	23	0.5
Zr	90	2	72	13.062	ppb	124.4167218	53	1
Nb	93	2	72	1.268	ppb	14.03547602	2304	2
Mo	95	2	115	0.042	ppb	99.32650205	63	0.5
Pd	105	2	115	0.008	ppb	324.8151976	27	1
Ag	107	2	115	0.012	ppb	38.18951666	37	1
Cd	111	2	115	0.010	ppb	173.2050808	3	0.5
Sn	120	2	115	0.183	ppb	82.42653269	370	1
Sb	121	2	115	0.060	ppb	96.94334026	110	0.6
Ba	137	2	115	0.255	ppb	0.667355605	90	0.5
W	182	2	165	0.018	ppb	155.9249608	607	1
Pt	195	2	165	0.000	ppb	#DIV/0!	0	1
Tl	205	2	165	0.021	ppb	27.14650509	293	0.1
Pb	208	2	165	0.034	ppb	7.540549708	980	0.5
Th	232	2	165	0.216	ppb	10.94662064	3367	1
U	238	2	165	0.003	ppb	65.30493888	67	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	555994	0.25	570952	97.38	60	120	
Sc (IS)	45	1	HMI H2	13582144	0.33	13408403	101.30	60	120	
Sc (IS)	45	2	HMI He	594032	1.18	577322	102.89	60	120	
Sc (IS)	45	3	No Gas	49070091	0.37	48917664	100.31	60	120	
Ge Internal Standard	72	1	HMI H2	5895824	0.42	5773454	102.12	60	120	
Ge Internal Standard	72	2	HMI He	793202	0.36	765657	103.60	60	120	
In Internal Standard	115	2	HMI He	3355712	0.62	3240364	103.56	60	120	
Ho-165	165	2	HMI He	15486117	1.68	14997825	103.26	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-456681/2-B
Data File Name	136_LCS.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T18:13:52-06:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	457011 200.8
ISTD Ref File Name	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	57.545	57.545	ppb	6.263	83344	400	14.4	80	120	>+/-20%
Li	7	2	45	30.517	30.517	ppb	14.552	4117	400	7.6	80	120	>+/-20%
Li	7	3	45	55.918	55.918	ppb	9.469	6727903	400	14.0	80	120	>+/-20%
Be	9	1	6	33.255	33.255	ppb	1.913	6738	40	83.1	80	120	
Na	23	2	45	1.946	1.946	ppb	107.272	7639	40	4.9	80	120	>+/-20%
Mg	24	2	45	1.472	1.472	ppb	23.319	197	40	3.7	80	120	>+/-20%
Al	27	2	45	339.050	339.050	ppb	4.485	6065	40	847.6	80	120	>+/-20%
K	39	2	45	-28.981	-28.981	ppb	-80.603	23837	40	-72.5	80	120	>+/-20%
Ca	44	2	45	82.919	82.919	ppb	20.388	253	40	207.3	80	120	>+/-20%
V	51	2	72	32.428	32.428	ppb	3.416	28783	40	81.1	80	120	
Cr	52	2	72	33.452	33.452	ppb	0.916	31706	40	83.6	80	120	
Mn	55	2	72	32.765	32.765	ppb	1.671	12763	40	81.9	80	120	
Fe	57	2	72	329.446	329.446	ppb	7.570	5975	40	823.6	80	120	>+/-20%
Co	59	2	72	33.329	33.329	ppb	0.803	55243	40	83.3	80	120	
Ni	60	2	72	33.720	33.720	ppb	2.776	15315	40	84.3	80	120	
Cu	63	2	72	33.112	33.112	ppb	1.800	42634	40	82.8	80	120	
Zn	66	2	72	31.638	31.638	ppb	2.350	6312	40	79.1	80	120	>+/-20%
As	75	2	72	32.029	32.029	ppb	3.525	4983	40	80.1	80	120	
Se	78	1	72	32.203	32.203	ppb	5.695	4505	40	80.5	80	120	
Nb	93	2	72	0.795	0.795	ppb	33.095	1697	40	2.0	80	120	>+/-20%
Mo	95	2	115	33.909	33.909	ppb	2.458	23053	40	84.8	80	120	
Pd	105	2	115	0.000	0.000	ppb	-6379.782	17	40	0.0	80	120	>+/-20%
Ag	107	2	115	33.254	33.254	ppb	0.572	79076	40	83.1	80	120	
Cd	111	2	115	31.895	31.895	ppb	3.239	10294	40	79.7	80	120	>+/-20%
Sn	120	2	115	32.884	32.884	ppb	0.768	29876	40	82.2	80	120	
Sb	121	2	115	34.565	34.565	ppb	0.536	31383	40	86.4	80	120	
Ba	137	2	115	32.183	32.183	ppb	2.249	10371	40	80.5	80	120	
W	182	2	165	27.309	27.309	ppb	1.329	92787	40	68.3	80	120	>+/-20%
Pt	195	2	165	0.005	0.005	ppb	86.616	13	40	0.0	80	120	>+/-20%
Tl	205	2	165	32.100	32.100	ppb	0.153	216151	40	80.2	80	120	
Pb	208	2	165	32.458	32.458	ppb	0.705	297734	40	81.1	80	120	
Th	232	2	165	29.974	29.974	ppb	1.009	351386	40	74.9	80	120	>+/-20%
U	238	2	165	31.857	31.857	ppb	0.363	377680	40	79.6	80	120	>+/-20%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	553429	0.70	570952	96.93	60	120	
Sc (IS)	45	1	HMI H2	13524297	0.18	13408403	100.86	60	120	
Sc (IS)	45	2	HMI He	589179	0.57	577322	102.05	60	120	
Sc (IS)	45	3	No Gas	49191131	0.31	48917664	100.56	60	120	
Ge Internal Standard	72	1	HMI H2	5869976	0.13	5773454	101.67	60	120	
Ge Internal Standard	72	2	HMI He	791344	1.05	765657	103.35	60	120	
In Internal Standard	115	2	HMI He	3317530	0.75	3240364	102.38	60	120	
Ho-165	165	2	HMI He	15523959	1.04	14997825	103.51	60	120	

Sample Report

Sample Table

Sample Name	280-123188-B-1-B
Data File Name	137SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T18:17:44-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457011 200.8
ISTD Ref FileName	085CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	0.547	ppb	0.547	972.28	66826	500000	
Li	7	2	45	12.159	ppb	12.159	226.63	3591	500000	
Li	7	3	45	2.855	ppb	2.855	81.56	5232521	50000	
Be	9	1	6	0.001	ppb	0.001	2425.59	3	2000	
B	11	1	6	85.680	ppb	85.680	10.65	1140	2000	
Na	23	1	45	9727.092	ppb	9727.092	0.37	17666131	2000	
Na	23	2	45	10480.677	ppb	10480.677	0.89	1379977	400000	
Mg	24	2	45	11128.479	ppb	11128.479	1.34	662461	400000	
Al	27	2	45	44.304	ppb	44.304	20.81	763	400000	
K	39	1	45	4567.783	ppb	4567.783	1.87	12819915	400000	
K	39	2	45	2334.591	ppb	2334.591	2.28	109297	400000	
Ca	40	1	45	186733.969	ppb	186733.969	0.33	505988099	400000	
Ca	44	2	45	143720.750	ppb	143720.750	1.13	362795	400000	
Ti	47	2	45	0.229	ppb	0.229	173.21	3	4000	
V	51	2	72	-2.686	ppb	-2.686	-20.08	3034	2000	
Cr	52	2	72	0.128	ppb	0.128	42.56	327	5000	
Mn	55	2	72	920.491	ppb	920.491	0.73	335190	10000	
Fe	57	2	72	14.769	ppb	14.769	31.71	310	400000	
Co	59	2	72	3.633	ppb	3.633	9.85	6485	2000	
Ni	60	2	72	5.779	ppb	5.779	7.76	2517	5000	
Cu	63	2	72	34.328	ppb	34.328	2.22	41477	5000	
Zn	66	2	72	109.811	ppb	109.811	0.17	20372	5000	
As	75	2	72	0.092	ppb	0.092	73.34	44	2000	
Se	78	1	72	0.201	ppb	0.201	68.60	55	2000	
Sr	88	2	72	446.528	ppb	446.528	0.54	209263	4000	
Zr	90	2	72	137.513	ppb	137.513	54.66	217	1000	
Nb	93	2	72	0.539	ppb	0.539	33.37	1290	200	
Mo	95	2	115	0.120	ppb	0.120	55.59	110	2000	
Pd	105	2	115	-0.009	ppb	-0.009	-60.48	7	100	
Ag	107	2	115	0.009	ppb	0.009	124.30	27	100	
Cd	111	2	115	0.935	ppb	0.935	10.53	287	2000	
Sn	120	2	115	0.138	ppb	0.138	34.35	310	2000	
Sb	121	2	115	0.122	ppb	0.122	58.14	157	1000	
Ba	137	2	115	21.299	ppb	21.299	3.01	6525	5000	
W	182	2	165	-0.003	ppb	-0.003	-815.58	517	100	
Pt	195	2	165	0.000	ppb	0.000	#DIV/0!	0	100	
Tl	205	2	165	0.539	ppb	0.539	2.88	3634	2000	
Pb	208	2	165	0.038	ppb	0.038	34.62	977	5000	
Th	232	2	165	0.370	ppb	0.370	21.79	4971	2000	
U	238	2	165	0.083	ppb	0.083	17.96	980	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	524064	0.90	570952	91.79	60	120	
Sc (IS)	45	1	HMI H2	12725769	0.90	13408403	94.91	60	120	
Sc (IS)	45	2	HMI He	545734	0.84	577322	94.53	60	120	
Sc (IS)	45	3	No Gas	44105069	0.73	48917664	90.16	60	120	
Ge Internal Standard	72	1	HMI H2	5566939	0.50	5773454	96.42	60	120	
Ge Internal Standard	72	2	HMI He	742807	0.49	765657	97.02	60	120	
In Internal Standard	115	2	HMI He	3152784	0.42	3240364	97.30	60	120	
Ho-165	165	2	HMI He	14926464	0.84	14997825	99.52	60	120	

Sample Report

Sample Table

Sample Name	280-123188-B-2-B
Data File Name	138SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T18:21:35-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457011 200.8
ISTD Ref FileName	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	2.039	ppb	2.039	177.23	64117	500000	
Li	7	2	45	-0.092	ppb	-0.092	-8952.08	3364	500000	
Li	7	3	45	11.289	ppb	11.289	22.44	5405564	50000	
Be	9	1	6	0.003	ppb	0.003	1160.75	3	2000	
B	11	1	6	119.176	ppb	119.176	30.87	1243	2000	
Na	23	1	45	24211.894	ppb	24211.894	0.67	41874374	2000	>LDR
Na	23	2	45	25509.141	ppb	25509.141	0.62	3271174	400000	
Mg	24	2	45	28381.124	ppb	28381.124	0.28	1650269	400000	
Al	27	2	45	1324.221	ppb	1324.221	1.62	21333	400000	
K	39	1	45	5570.544	ppb	5570.544	1.41	13154031	400000	
K	39	2	45	3071.862	ppb	3071.862	2.12	133321	400000	
Ca	40	1	45	483542.976	ppb	483542.976	0.48	1251331235	400000	
Ca	44	2	45	374022.701	ppb	374022.701	0.78	922205	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	-4.062	ppb	-4.062	-1.52	1994	2000	
Cr	52	2	72	0.246	ppb	0.246	30.85	410	5000	
Mn	55	2	72	1994.762	ppb	1994.762	0.16	691341	10000	
Fe	57	2	72	32.354	ppb	32.354	14.92	577	400000	
Co	59	2	72	1.267	ppb	1.267	19.01	2734	2000	
Ni	60	2	72	1.734	ppb	1.734	18.27	763	5000	
Cu	63	2	72	23.608	ppb	23.608	3.59	27300	5000	
Zn	66	2	72	2.197	ppb	2.197	10.64	460	5000	
As	75	2	72	0.103	ppb	0.103	26.62	43	2000	
Se	78	1	72	0.301	ppb	0.301	40.15	64	2000	
Sr	88	2	72	1039.411	ppb	1039.411	0.39	463624	4000	
Zr	90	2	72	56.583	ppb	56.583	40.71	103	1000	
Nb	93	2	72	0.530	ppb	0.530	30.14	1220	200	
Mo	95	2	115	0.035	ppb	0.035	160.35	53	2000	
Pd	105	2	115	0.001	ppb	0.001	571.05	17	100	
Ag	107	2	115	0.023	ppb	0.023	32.19	57	100	
Cd	111	2	115	0.469	ppb	0.469	64.29	140	2000	
Sn	120	2	115	0.316	ppb	0.316	24.66	447	2000	
Sb	121	2	115	0.128	ppb	0.128	26.33	157	1000	
Ba	137	2	115	6.937	ppb	6.937	2.50	2057	5000	
W	182	2	165	0.035	ppb	0.035	52.85	633	100	
Pt	195	2	165	0.003	ppb	0.003	173.21	7	100	
Tl	205	2	165	1.330	ppb	1.330	4.15	8627	2000	
Pb	208	2	165	0.042	ppb	0.042	7.34	997	5000	
Th	232	2	165	0.151	ppb	0.151	5.67	2470	2000	
U	238	2	165	0.900	ppb	0.900	3.49	10141	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	486950	0.95	570952	85.29	60	120	
Sc (IS)	45	1	HMI H2	12154186	0.48	13408403	90.65	60	120	
Sc (IS)	45	2	HMI He	533074	1.94	577322	92.34	60	120	
Sc (IS)	45	3	No Gas	44484066	0.47	48917664	90.94	60	120	
Ge Internal Standard	72	1	HMI H2	5257212	0.96	5773454	91.06	60	120	
Ge Internal Standard	72	2	HMI He	707051	1.54	765657	92.35	60	120	
In Internal Standard	115	2	HMI He	3044481	2.00	3240364	93.95	60	120	
Ho-165	165	2	HMI He	14707314	1.42	14997825	98.06	60	120	

Sample Report

Sample Table

Sample Name	280-123188-B-2-C MS
Data File Name	139SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T18:25:30-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457011 200.8
ISTD Ref FileName	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	56.342	ppb	56.342	7.23	80180	500000	
Li	7	2	45	67.615	ppb	67.615	20.30	4474	500000	
Li	7	3	45	68.366	ppb	68.366	1.18	6711315	50000	
Be	9	1	6	30.540	ppb	30.540	0.29	5761	2000	
B	11	1	6	921.860	ppb	921.860	2.97	5975	2000	
Na	23	1	45	22462.686	ppb	22462.686	0.76	41726299	2000	>LDR
Na	23	2	45	23808.799	ppb	23808.799	0.93	3281428	400000	
Mg	24	2	45	26422.692	ppb	26422.692	1.37	1650844	400000	
Al	27	2	45	1574.283	ppb	1574.283	1.28	27246	400000	
K	39	1	45	5177.221	ppb	5177.221	1.42	13742787	400000	
K	39	2	45	2853.800	ppb	2853.800	1.77	134822	400000	
Ca	40	1	45	446587.548	ppb	446587.548	0.63	1241089395	400000	
Ca	44	2	45	348521.814	ppb	348521.814	0.75	923335	400000	
Ti	47	2	45	0.221	ppb	0.221	173.21	3	4000	
V	51	2	72	28.044	ppb	28.044	2.18	24745	2000	
Cr	52	2	72	31.389	ppb	31.389	3.96	28779	5000	
Mn	55	2	72	1872.465	ppb	1872.465	0.67	702269	10000	
Fe	57	2	72	332.145	ppb	332.145	2.59	5828	400000	
Co	59	2	72	33.072	ppb	33.072	0.98	53018	2000	
Ni	60	2	72	33.659	ppb	33.659	2.07	14785	5000	
Cu	63	2	72	52.018	ppb	52.018	1.23	64451	5000	
Zn	66	2	72	30.766	ppb	30.766	5.84	5938	5000	
As	75	2	72	29.153	ppb	29.153	1.17	4390	2000	
Se	78	1	72	30.682	ppb	30.682	6.01	4093	2000	
Sr	88	2	72	991.331	ppb	991.331	1.06	478514	4000	
Zr	90	2	72	1058.980	ppb	1058.980	4.89	1497	1000	
Nb	93	2	72	0.386	ppb	0.386	31.18	1143	200	
Mo	95	2	115	32.379	ppb	32.379	2.42	21397	2000	
Pd	105	2	115	0.006	ppb	0.006	171.99	23	100	
Ag	107	2	115	30.573	ppb	30.573	1.07	70655	100	
Cd	111	2	115	31.063	ppb	31.063	2.02	9744	2000	
Sn	120	2	115	31.257	ppb	31.257	1.23	27612	2000	
Sb	121	2	115	33.011	ppb	33.011	2.12	29131	1000	
Ba	137	2	115	37.592	ppb	37.592	8.49	11769	5000	
W	182	2	165	26.733	ppb	26.733	1.19	90633	100	
Pt	195	2	165	0.001	ppb	0.001	173.21	3	100	
Tl	205	2	165	31.842	ppb	31.842	0.83	213890	2000	
Pb	208	2	165	30.074	ppb	30.074	0.99	275264	5000	
Th	232	2	165	29.309	ppb	29.309	0.81	342812	2000	
U	238	2	165	31.556	ppb	31.556	0.50	373206	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	515212	0.71	570952	90.24	60	120	
Sc (IS)	45	1	HMI H2	13052594	1.09	13408403	97.35	60	120	
Sc (IS)	45	2	HMI He	572780	0.80	577322	99.21	60	120	
Sc (IS)	45	3	No Gas	47587906	0.39	48917664	97.28	60	120	
Ge Internal Standard	72	1	HMI H2	5592196	1.49	5773454	96.86	60	120	
Ge Internal Standard	72	2	HMI He	765164	1.20	765657	99.94	60	120	
In Internal Standard	115	2	HMI He	3224353	0.80	3240364	99.51	60	120	
Ho-165	165	2	HMI He	15486212	0.83	14997825	103.26	60	120	

Sample Report

Sample Table

Sample Name	280-123188-B-2-D MSD
Data File Name	140SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T18:29:25-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457011 200.8
ISTD Ref FileName	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	58.127	ppb	58.127	12.32	79031	500000	
Li	7	2	45	45.366	ppb	45.366	63.21	3874	500000	
Li	7	3	45	88.183	ppb	88.183	2.92	6441793	50000	
Be	9	1	6	31.998	ppb	31.998	3.60	6035	2000	
B	11	1	6	925.396	ppb	925.396	2.72	5995	2000	
Na	23	1	45	23302.281	ppb	23302.281	0.64	42463881	2000	>LDR
Na	23	2	45	24913.558	ppb	24913.558	0.14	3180259	400000	
Mg	24	2	45	27212.944	ppb	27212.944	2.49	1574500	400000	
Al	27	2	45	1590.180	ppb	1590.180	1.11	25500	400000	
K	39	1	45	5308.245	ppb	5308.245	3.30	13608051	400000	
K	39	2	45	3018.629	ppb	3018.629	0.82	130821	400000	
Ca	40	1	45	464799.509	ppb	464799.509	0.44	1267297688	400000	
Ca	44	2	45	360406.649	ppb	360406.649	0.20	884448	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	28.252	ppb	28.252	6.30	23013	2000	
Cr	52	2	72	32.364	ppb	32.364	1.51	27420	5000	
Mn	55	2	72	1950.067	ppb	1950.067	0.72	676149	10000	
Fe	57	2	72	346.292	ppb	346.292	1.15	5615	400000	
Co	59	2	72	33.742	ppb	33.742	2.81	49973	2000	
Ni	60	2	72	34.956	ppb	34.956	3.75	14194	5000	
Cu	63	2	72	54.502	ppb	54.502	3.15	62365	5000	
Zn	66	2	72	32.291	ppb	32.291	5.95	5751	5000	
As	75	2	72	29.901	ppb	29.901	4.17	4165	2000	
Se	78	1	72	31.245	ppb	31.245	2.11	4111	2000	
Sr	88	2	72	1029.710	ppb	1029.710	0.94	459645	4000	
Zr	90	2	72	1097.746	ppb	1097.746	16.40	1427	1000	
Nb	93	2	72	0.095	ppb	0.095	27.92	727	200	
Mo	95	2	115	33.639	ppb	33.639	0.36	20849	2000	
Pd	105	2	115	-0.002	ppb	-0.002	-255.87	13	100	
Ag	107	2	115	31.223	ppb	31.223	0.45	67693	100	
Cd	111	2	115	33.680	ppb	33.680	5.57	9907	2000	
Sn	120	2	115	32.739	ppb	32.739	3.66	27124	2000	
Sb	121	2	115	32.977	ppb	32.977	2.63	27294	1000	
Ba	137	2	115	37.570	ppb	37.570	3.78	11025	5000	
W	182	2	165	27.765	ppb	27.765	0.70	86727	100	
Pt	195	2	165	0.008	ppb	0.008	100.67	20	100	
Tl	205	2	165	32.839	ppb	32.839	1.02	203309	2000	
Pb	208	2	165	31.538	ppb	31.538	0.89	266008	5000	
Th	232	2	165	30.541	ppb	30.541	1.47	329241	2000	
U	238	2	165	32.448	ppb	32.448	0.93	353679	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	515063	0.51	570952	90.21	60	120	
Sc (IS)	45	1	HMI H2	12805399	0.52	13408403	95.50	60	120	
Sc (IS)	45	2	HMI He	530590	3.84	577322	91.91	60	120	
Sc (IS)	45	3	No Gas	43585313	1.23	48917664	89.10	60	120	
Ge Internal Standard	72	1	HMI H2	5521180	0.88	5773454	95.63	60	120	
Ge Internal Standard	72	2	HMI He	707499	4.17	765657	92.40	60	120	
In Internal Standard	115	2	HMI He	3024414	4.54	3240364	93.34	60	120	
Ho-165	165	2	HMI He	14270641	3.26	14997825	95.15	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5688510
Data File Name	141_CCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T18:33:20-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	85.249	ppb	7.043	90569	100	85.2	90	110	>+\-10%
Li	7	2	45	79.858	ppb	36.903	4851	100	79.9	90	110	>+\-10%
Li	7	3	45	102.736	ppb	1.934	7676371	100	102.7	90	110	
Be	9	1	6	47.807	ppb	2.059	9967	50	95.6	90	110	
B	11	1	6	42.797	ppb	56.283	963	50	85.6	90	110	>+\-10%
Na	23	1	45	1043.501	ppb	1.416	2125607	1000	104.4	90	110	
Na	23	2	45	1002.253	ppb	1.226	152001	1000	100.2	90	110	
Mg	24	2	45	988.595	ppb	1.116	64855	1000	98.9	90	110	
Al	27	2	45	951.969	ppb	0.917	17287	1000	95.2	90	110	
K	39	1	45	-779.491	ppb	-6.622	8336117	1000	-77.9	90	110	>+\-10%
K	39	2	45	945.734	ppb	0.631	63876	1000	94.6	90	110	
Ca	40	1	45	1282.351	ppb	2.391	3776192	1000	128.2	90	110	>+\-10%
Ca	44	2	45	1017.806	ppb	6.287	2854	1000	101.8	90	110	
Ti	47	2	45	61.851	ppb	5.216	987	50	123.7	90	110	>+\-10%
V	51	2	72	45.011	ppb	2.600	39000	50	90.0	90	110	
Cr	52	2	72	49.679	ppb	1.474	48297	50	99.4	90	110	
Mn	55	2	72	49.024	ppb	4.340	19607	50	98.0	90	110	
Fe	57	2	72	977.011	ppb	0.907	18095	1000	97.7	90	110	
Co	59	2	72	50.235	ppb	2.138	85093	50	100.5	90	110	
Ni	60	2	72	49.528	ppb	2.359	23096	50	99.1	90	110	
Cu	63	2	72	51.044	ppb	2.528	67264	50	102.1	90	110	
Zn	66	2	72	45.440	ppb	4.014	9283	50	90.9	90	110	
As	75	2	72	46.234	ppb	1.126	7383	50	92.5	90	110	
Se	78	1	72	48.272	ppb	2.537	6870	50	96.5	90	110	
Sr	88	2	72	99.201	ppb	0.838	50932	100	99.2	90	110	
Zr	90	2	72	55.204	ppb	43.190	117	50	110.4	90	110	>+\-10%
Nb	93	2	72	96.495	ppb	1.758	126278	100	96.5	90	110	
Mo	95	2	115	50.539	ppb	0.966	34898	50	101.1	90	110	
Pd	105	2	115	49.977	ppb	1.816	58104	50	100.0	90	110	
Ag	107	2	115	49.816	ppb	1.802	120344	50	99.6	90	110	
Cd	111	2	115	50.264	ppb	1.541	16487	50	100.5	90	110	
Sn	120	2	115	50.085	ppb	2.178	46127	50	100.2	90	110	
Sb	121	2	115	48.258	ppb	2.368	44495	50	96.5	90	110	
Ba	137	2	115	46.201	ppb	1.268	15126	50	92.4	90	110	
W	182	2	165	49.205	ppb	0.718	167441	50	98.4	90	110	
Pt	195	2	165	49.032	ppb	0.865	130804	50	98.1	90	110	
Tl	205	2	165	49.145	ppb	0.830	332187	50	98.3	90	110	
Pb	208	2	165	49.406	ppb	0.530	454714	50	98.8	90	110	
Th	232	2	165	48.014	ppb	0.274	564685	50	96.0	90	110	
U	238	2	165	48.377	ppb	0.697	575849	50	96.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	569472	0.21	570952	99.74	60	120	
Sc (IS)	45	1	HMI H2	13712429	0.98	13408403	102.27	60	120	
Sc (IS)	45	2	HMI He	600538	1.02	577322	104.02	60	120	
Sc (IS)	45	3	No Gas	50245808	0.63	48917664	102.72	60	120	
Ge Internal Standard	72	1	HMI H2	5985254	0.18	5773454	103.67	60	120	
Ge Internal Standard	72	2	HMI He	813630	0.10	765657	106.27	60	120	
In Internal Standard	115	2	HMI He	3370824	1.12	3240364	104.03	60	120	
Ho-165	165	2	HMI He	15586909	0.50	14997825	103.93	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5688508
Data File Name	142_CCB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T18:37:10-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	0.238	ppb	1502.4	5876328	10	
Be	9	1	6	0.000	ppb	-18489.4	3	0.5	
B	11	1	6	-11.700	ppb	-51.7	617	0.5	
Na	23	1	45	13.272	ppb	3.2	119796	25	
Na	23	2	45	11.855	ppb	15.6	9207	25	
Mg	24	2	45	1.115	ppb	125.2	177	25	
Al	27	2	45	1.390	ppb	60.2	63	15	
K	39	1	45	-1712.799	ppb	-2.3	7401326	50	
K	39	2	45	-35.456	ppb	-57.8	24014	50	
Ca	40	1	45	19.726	ppb	0.5	89565	50	
Ca	44	2	45	26.026	ppb	27.3	100	25	>RL
Ti	47	2	45	0.210	ppb	173.2	3	0.5	
V	51	2	72	-4.229	ppb	-6.1	2134	1	
Cr	52	2	72	-0.021	ppb	-222.6	210	1	
Mn	55	2	72	0.131	ppb	31.2	107	0.5	
Fe	57	2	72	1.683	ppb	74.1	97	25	
Co	59	2	72	0.023	ppb	438.8	1047	0.5	
Ni	60	2	72	0.184	ppb	78.6	153	1	
Cu	63	2	72	0.609	ppb	13.0	1360	1	
Zn	66	2	72	0.935	ppb	36.6	270	5	
As	75	2	72	-0.075	ppb	-70.2	21	1	
Se	78	1	72	-0.072	ppb	-105.4	20	1	
Sr	88	2	72	0.052	ppb	37.4	40	0.5	
Zr	90	2	72	3.313	ppb	1262.2	40	1	>RL
Nb	93	2	72	3.542	ppb	6.6	5231	2	>RL
Mo	95	2	115	0.057	ppb	63.7	73	0.5	
Pd	105	2	115	0.023	ppb	22.1	43	1	
Ag	107	2	115	0.018	ppb	80.3	50	1	
Cd	111	2	115	0.010	ppb	173.2	3	0.5	
Sn	120	2	115	0.146	ppb	38.7	337	1	
Sb	121	2	115	0.111	ppb	30.4	157	0.6	
Ba	137	2	115	0.112	ppb	97.1	43	0.5	
W	182	2	165	0.039	ppb	36.7	680	1	
Pt	195	2	165	0.005	ppb	86.6	13	1	
Tl	205	2	165	0.023	ppb	50.0	310	0.1	
Pb	208	2	165	0.192	ppb	3.8	2420	0.5	
Th	232	2	165	0.246	ppb	11.9	3714	1	
U	238	2	165	0.018	ppb	31.0	243	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	572253	0.23	570952	100.23	60	120	
Sc (IS)	45	1	HMI H2	13751506	0.14	13408403	102.56	60	120	
Sc (IS)	45	2	HMI He	600067	0.40	577322	103.94	60	120	
Sc (IS)	45	3	No Gas	49911784	0.95	48917664	102.03	60	120	
Ge Internal Standard	72	1	HMI H2	5978501	1.42	5773454	103.55	60	120	
Ge Internal Standard	72	2	HMI He	799942	0.68	765657	104.48	60	120	
In Internal Standard	115	2	HMI He	3354502	0.81	3240364	103.52	60	120	
Ho-165	165	2	HMI He	15484606	0.74	14997825	103.25	60	120	

Blank Report

Sample Table

Sample Name	rinse-5672981
Data File Name	143WASH.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T18:41:01-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.016	ppb	-1.45315E-06	0	0.5
Na	23	2	45	1.469	ppb	152.5552627	7659	25
Mg	24	2	45	1.029	ppb	52.13626035	170	25
Al	27	2	45	-0.253	ppb	-255.107838	33	15
K	39	2	45	-46.452	ppb	-29.43067704	23409	50
Ca	44	2	45	6.965	ppb	121.1508007	47	25
V	51	2	72	-4.134	ppb	-4.149260341	2180	1
Cr	52	2	72	-0.072	ppb	-126.0646238	160	1
Mn	55	2	72	1.224	ppb	9.519945501	530	0.5
Fe	57	2	72	5.461	ppb	43.14370144	163	25
Co	59	2	72	0.003	ppb	3150.319807	1003	0.5
Ni	60	2	72	0.135	ppb	57.27457112	130	1
Cu	63	2	72	2.067	ppb	6.641111268	3201	1
Zn	66	2	72	0.392	ppb	51.84333986	160	5
As	75	2	72	-0.032	ppb	-249.7877629	27	1
Se	78	1	72	-0.043	ppb	-196.544253	24	1
Nb	93	2	72	1.714	ppb	11.14689846	2864	2
Mo	95	2	115	0.018	ppb	169.4024668	47	0.5
Pd	105	2	115	0.002	ppb	738.3972836	20	1
Ag	107	2	115	0.008	ppb	28.23894973	27	1
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5
Sn	120	2	115	0.134	ppb	52.18339785	323	1
Sb	121	2	115	0.017	ppb	135.1729847	70	0.6
Ba	137	2	115	0.133	ppb	101.2969607	50	0.5
W	182	2	165	-0.003	ppb	-103.9901027	537	1
Pt	195	2	165	0.008	ppb	50.73982359	20	1
Tl	205	2	165	0.008	ppb	86.57582911	207	0.1
Pb	208	2	165	0.000	ppb	-3094.8414	667	0.5
Th	232	2	165	0.096	ppb	12.93028737	1957	1
U	238	2	165	0.004	ppb	78.99307435	87	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	567636	0.33	570952	99.42	60	120	
Sc (IS)	45	1	HMI H2	13628351	0.44	13408403	101.64	60	120	
Sc (IS)	45	2	HMI He	595944	0.64	577322	103.23	60	120	
Sc (IS)	45	3	No Gas	49357421	0.98	48917664	100.90	60	120	
Ge Internal Standard	72	1	HMI H2	5901886	0.79	5773454	102.22	60	120	
Ge Internal Standard	72	2	HMI He	791905	0.55	765657	103.43	60	120	
In Internal Standard	115	2	HMI He	3334638	1.09	3240364	102.91	60	120	
Ho-165	165	2	HMI He	15500849	0.84	14997825	103.35	60	120	

Blank Report

Sample Table

Sample Name	rinse-5672981
Data File Name	144WASH.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T18:44:54-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	0.000	ppb	59259.98408	3	0.5
Na	23	2	45	0.974	ppb	166.3401875	7516	25
Mg	24	2	45	1.056	ppb	153.8092597	170	25
Al	27	2	45	0.139	ppb	4.952482565	40	15
K	39	2	45	-60.183	ppb	-6.083965397	22638	50
Ca	44	2	45	-5.118	ppb	-82.51062769	13	25
V	51	2	72	-3.952	ppb	-5.7866154	2307	1
Cr	52	2	72	-0.011	ppb	-989.96005	217	1
Mn	55	2	72	0.952	ppb	15.01254463	423	0.5
Fe	57	2	72	7.155	ppb	17.77079664	193	25
Co	59	2	72	-0.032	ppb	-122.5947501	943	0.5
Ni	60	2	72	0.099	ppb	55.96039459	113	1
Cu	63	2	72	1.738	ppb	12.50485371	2774	1
Zn	66	2	72	0.667	ppb	31.19512886	213	5
As	75	2	72	-0.006	ppb	-1263.819448	31	1
Se	78	1	72	-0.081	ppb	-108.0240411	19	1
Nb	93	2	72	0.862	ppb	15.99833036	1780	2
Mo	95	2	115	0.004	ppb	605.4743463	37	0.5
Pd	105	2	115	0.008	ppb	262.8249123	27	1
Ag	107	2	115	0.005	ppb	74.89100911	20	1
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5
Sn	120	2	115	-0.013	ppb	-506.6806109	190	1
Sb	121	2	115	0.016	ppb	371.7703909	70	0.6
Ba	137	2	115	0.123	ppb	53.14125271	47	0.5
W	182	2	165	0.012	ppb	165.3262654	587	1
Pt	195	2	165	0.001	ppb	173.2050808	3	1
Tl	205	2	165	0.005	ppb	125.7695715	190	0.1
Pb	208	2	165	0.005	ppb	130.9842434	717	0.5
Th	232	2	165	0.021	ppb	48.38297261	1083	1
U	238	2	165	0.006	ppb	54.14572563	100	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	562585	0.67	570952	98.53	60	120	
Sc (IS)	45	1	HMI H2	13687646	0.34	13408403	102.08	60	120	
Sc (IS)	45	2	HMI He	590298	0.31	577322	102.25	60	120	
Sc (IS)	45	3	No Gas	49292186	0.40	48917664	100.77	60	120	
Ge Internal Standard	72	1	HMI H2	5943279	0.86	5773454	102.94	60	120	
Ge Internal Standard	72	2	HMI He	789575	0.20	765657	103.12	60	120	
In Internal Standard	115	2	HMI He	3331249	0.88	3240364	102.80	60	120	
Ho-165	165	2	HMI He	15498568	0.79	14997825	103.34	60	120	

Blank Report

Sample Table

Sample Name	rinse-5672981
Data File Name	145WASH.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T18:48:45-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	085CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	0.017	ppb	339.6784599	7	0.5
Na	23	2	45	0.024	ppb	10004.69215	7326	25
Mg	24	2	45	1.075	ppb	96.12944486	170	25
Al	27	2	45	0.342	ppb	746.2869247	43	15
K	39	2	45	-53.467	ppb	-50.7021452	22735	50
Ca	44	2	45	14.622	ppb	95.81955083	67	25
V	51	2	72	-3.576	ppb	-4.728009267	2560	1
Cr	52	2	72	0.030	ppb	228.5026162	253	1
Mn	55	2	72	1.013	ppb	20.29486923	443	0.5
Fe	57	2	72	5.539	ppb	88.06100644	163	25
Co	59	2	72	0.018	ppb	181.6208709	1017	0.5
Ni	60	2	72	0.034	ppb	199.5205958	83	1
Cu	63	2	72	1.796	ppb	6.222320167	2827	1
Zn	66	2	72	0.657	ppb	8.335634517	210	5
As	75	2	72	-0.043	ppb	-77.91081558	25	1
Se	78	1	72	-0.138	ppb	-23.90881028	11	1
Nb	93	2	72	0.434	ppb	21.96776418	1230	2
Mo	95	2	115	0.009	ppb	292.6686812	40	0.5
Pd	105	2	115	-0.009	ppb	-111.0299932	7	1
Ag	107	2	115	0.010	ppb	43.47224087	30	1
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5
Sn	120	2	115	0.094	ppb	36.69186281	287	1
Sb	121	2	115	-0.012	ppb	-314.118925	43	0.6
Ba	137	2	115	0.103	ppb	29.34447697	40	0.5
W	182	2	165	-0.007	ppb	-494.4365856	523	1
Pt	195	2	165	0.005	ppb	86.60453136	13	1
Tl	205	2	165	0.000	ppb	-4197.581997	153	0.1
Pb	208	2	165	0.006	ppb	347.4996647	727	0.5
Th	232	2	165	0.006	ppb	189.5572067	910	1
U	238	2	165	0.001	ppb	231.1657118	50	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	562662	0.92	570952	98.55	60	120	
Sc (IS)	45	1	HMI H2	13593118	0.17	13408403	101.38	60	120	
Sc (IS)	45	2	HMI He	585966	0.49	577322	101.50	60	120	
Sc (IS)	45	3	No Gas	49278978	1.18	48917664	100.74	60	120	
Ge Internal Standard	72	1	HMI H2	5900088	0.09	5773454	102.19	60	120	
Ge Internal Standard	72	2	HMI He	783709	0.35	765657	102.36	60	120	
In Internal Standard	115	2	HMI He	3320656	0.72	3240364	102.48	60	120	
Ho-165	165	2	HMI He	15497005	0.60	14997825	103.33	60	120	

Calibration Blank Report

Sample Table

Sample Name	icis-5688508
Data File Name	146CALB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T18:52:38-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	69823	0.00
Li	7	2	HMI He	3697	0.15
Li	7	3	No Gas	5736783	0.00
Be	9	1	HMI H2	10	1000.00
B	11	1	HMI H2	490	2.73
Na	23	1	HMI H2	79610	0.00
Na	23	2	HMI He	6322	0.02
Mg	24	2	HMI He	90	21.39
Al	27	2	HMI He	30	293.97
K	39	2	HMI He	22835	0.02
Ca	44	2	HMI He	37	214.72
Ti	47	2	HMI He	3	5196.15
V	51	2	HMI He	2174	0.45
Cr	52	2	HMI He	173	21.14
Mn	55	2	HMI He	120	13.89
Fe	57	2	HMI He	70	40.82
Co	59	2	HMI He	980	1.64
Ni	60	2	HMI He	67	13.00
Cu	63	2	HMI He	787	3.24
Zn	66	2	HMI He	87	46.76
As	75	2	HMI He	22	145.93
Se	78	1	HMI H2	16	270.63
Sr	88	2	HMI He	23	280.57
Zr	90	2	HMI He	23	106.04
Nb	93	2	HMI He	833	2.48
Mo	95	2	HMI He	53	20.30
Pd	105	2	HMI He	3	5196.15
Ag	107	2	HMI He	7	2598.08
Cd	111	2	HMI He	7	1299.04
Sn	120	2	HMI He	153	27.67
Sb	121	2	HMI He	47	115.56
Ba	137	2	HMI He	67	90.94
W	182	2	HMI He	413	5.11
Pt	195	2	HMI He	0	#VALUE!
Tl	205	2	HMI He	193	10.13
Pb	208	2	HMI He	567	4.54
Th	232	2	HMI He	623	1.07
U	238	2	HMI He	43	110.86

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li-6 Internal Standard	6	1	HMI H2	563298	0.54
Sc (IS)	45	1	HMI H2	13713757	0.61
Sc (IS)	45	2	HMI He	592502	0.26
Sc (IS)	45	3	No Gas	49282939	0.58
Ge Internal Standard	72	1	HMI H2	5896972	0.17
Ge Internal Standard	72	2	HMI He	792400	0.52
In Internal Standard	115	2	HMI He	3330695	0.59
Ho-165	165	2	HMI He	15553691	0.25

Calibration Standard Report

Sample Table

Sample Name	ic-5688509
Data File Name	147CALS.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T18:56:32-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	146CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	108401	0.00
Li	7	2	HMI He	5992	0.07
Li	7	3	No Gas	9146514	0.00
Be	9	1	HMI H2	20325	0.02
B	11	1	HMI H2	1217	2.06
Na	23	1	HMI H2	3940121	0.00
Na	23	2	HMI He	291089	0.00
Mg	24	2	HMI He	130053	0.00
Al	27	2	HMI He	34692	0.01
K	39	1	HMI H2	10556063	0.00
K	39	2	HMI He	103589	0.00
Ca	40	1	HMI H2	5890688	0.00
Ca	44	2	HMI He	5538	0.07
Ti	47	2	HMI He	1810	0.37
V	51	2	HMI He	76290	0.00
Cr	52	2	HMI He	95512	0.00
Mn	55	2	HMI He	39328	0.00
Fe	57	2	HMI He	35568	0.00
Co	59	2	HMI He	166989	0.00
Ni	60	2	HMI He	46422	0.00
Cu	63	2	HMI He	131003	0.00
Zn	66	2	HMI He	19798	0.02
As	75	2	HMI He	14939	0.01
Se	78	1	HMI H2	13787	0.01
Sr	88	2	HMI He	101759	0.00
Zr	90	2	HMI He	193	13.73
Nb	93	2	HMI He	261678	0.00
Mo	95	2	HMI He	68396	0.00
Pd	105	2	HMI He	113558	0.00
Ag	107	2	HMI He	241324	0.00
Cd	111	2	HMI He	32422	0.01
Sn	120	2	HMI He	91983	0.00
Sb	121	2	HMI He	87950	0.00
Ba	137	2	HMI He	31360	0.01
Nd	146	2	HMI He	100711	0.00
Sm	147	2	HMI He	86369	0.00
Sm	150	2	HMI He	82824	0.00
Gd	156	1	HMI H2	336006	0.00
Gd	157	1	HMI H2	254697	0.00
W	182	2	HMI He	339696	0.00
Pt	195	2	HMI He	264310	0.00
Tl	205	2	HMI He	673287	0.00
Pb	208	2	HMI He	908644	0.00
Th	232	2	HMI He	1156371	0.00
U	238	2	HMI He	1167699	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	555568	0.47	563298	98.63	60	120	
Sc (IS)	45	1	HMI H2	13655159	0.71	13713757	99.57	60	120	
Sc (IS)	45	2	HMI He	591128	0.24	592502	99.77	60	120	
Sc (IS)	45	3	No Gas	49136821	0.59	49282939	99.70	60	120	
Ge Internal Standard	72	1	HMI H2	5964367	0.71	5896972	101.14	60	120	
Ge Internal Standard	72	2	HMI He	803670	0.29	792400	101.42	60	120	
In Internal Standard	115	2	HMI He	3324593	0.41	3330695	99.82	60	120	
Ho-165	165	2	HMI He	15673313	0.85	15553691	100.77	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5688510
Data File Name	148_CCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T19:00:22-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	105.103	ppb	3.733	90769	100	105.1	90	110	
Li	7	2	45	69.432	ppb	42.795	4534	100	69.4	90	110	>+\-10%
Li	7	3	45	102.974	ppb	4.696	7509098	100	103.0	90	110	
Be	9	1	6	48.879	ppb	1.928	10131	50	97.8	90	110	
B	11	1	6	55.852	ppb	35.195	910	50	111.7	90	110	>+\-10%
Na	23	1	45	1006.997	ppb	1.886	2041647	1000	100.7	90	110	
Na	23	2	45	985.515	ppb	1.175	148156	1000	98.6	90	110	
Mg	24	2	45	986.130	ppb	2.880	64842	1000	98.6	90	110	
Al	27	2	45	995.407	ppb	1.229	17461	1000	99.5	90	110	
K	39	1	45	695.408	ppb	1.141	8514267	1000	69.5	90	110	>+\-10%
K	39	2	45	980.997	ppb	1.281	63069	1000	98.1	90	110	
Ca	40	1	45	996.923	ppb	0.585	2982272	1000	99.7	90	110	
Ca	44	2	45	947.476	ppb	8.618	2670	1000	94.7	90	110	
Ti	47	2	45	51.850	ppb	2.564	950	50	103.7	90	110	
V	51	2	72	50.443	ppb	1.153	39732	50	100.9	90	110	
Cr	52	2	72	50.193	ppb	1.056	48218	50	100.4	90	110	
Mn	55	2	72	48.347	ppb	1.231	19153	50	96.7	90	110	
Fe	57	2	72	988.192	ppb	2.275	17681	1000	98.8	90	110	
Co	59	2	72	49.463	ppb	3.471	83423	50	98.9	90	110	
Ni	60	2	72	50.677	ppb	1.895	23654	50	101.4	90	110	
Cu	63	2	72	50.098	ppb	2.283	66289	50	100.2	90	110	
Zn	66	2	72	50.236	ppb	5.201	10031	50	100.5	90	110	
As	75	2	72	49.204	ppb	0.228	7391	50	98.4	90	110	
Se	78	1	72	49.887	ppb	5.651	6939	50	99.8	90	110	
Sr	88	2	72	98.052	ppb	0.349	50099	100	98.1	90	110	
Zr	90	2	72	58.474	ppb	23.914	123	50	116.9	90	110	>+\-10%
Nb	93	2	72	108.049	ppb	0.801	142330	100	108.0	90	110	
Mo	95	2	115	49.680	ppb	2.452	34266	50	99.4	90	110	
Pd	105	2	115	50.300	ppb	3.122	57558	50	100.6	90	110	
Ag	107	2	115	49.686	ppb	1.205	120834	50	99.4	90	110	
Cd	111	2	115	48.351	ppb	2.374	15800	50	96.7	90	110	
Sn	120	2	115	49.033	ppb	3.705	45522	50	98.1	90	110	
Sb	121	2	115	50.000	ppb	0.999	44342	50	100.0	90	110	
Ba	137	2	115	47.493	ppb	6.025	15042	50	95.0	90	110	
W	182	2	165	49.689	ppb	1.523	168858	50	99.4	90	110	
Pt	195	2	165	50.066	ppb	1.181	132221	50	100.1	90	110	
Tl	205	2	165	49.390	ppb	1.311	332402	50	98.8	90	110	
Pb	208	2	165	50.152	ppb	0.596	455650	50	100.3	90	110	
Th	232	2	165	49.644	ppb	0.298	573970	50	99.3	90	110	
U	238	2	165	49.247	ppb	0.407	574646	50	98.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	566208	0.64	563298	100.52	60	120	
Sc (IS)	45	1	HMI H2	13778374	0.54	13713757	100.47	60	120	
Sc (IS)	45	2	HMI He	597270	0.40	592502	100.80	60	120	
Sc (IS)	45	3	No Gas	49301303	0.79	49282939	100.04	60	120	
Ge Internal Standard	72	1	HMI H2	6010835	0.58	5896972	101.93	60	120	
Ge Internal Standard	72	2	HMI He	806884	0.58	792400	101.83	60	120	
In Internal Standard	115	2	HMI He	3350520	0.83	3330695	100.60	60	120	
Ho-165	165	2	HMI He	15661915	0.75	15553691	100.70	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5688508
Data File Name	149_CCB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T19:04:13-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	3.499	ppb	49.9	5698814	10	
Be	9	1	6	-0.032	ppb	-86.8	3	0.5	
B	11	1	6	3.470	ppb	214.1	513	0.5	>RL
Na	23	1	45	5.784	ppb	9.3	89898	25	
Na	23	2	45	3.531	ppb	48.2	6752	25	
Mg	24	2	45	-0.244	ppb	-160.2	73	25	
Al	27	2	45	0.600	ppb	257.2	40	15	
K	39	1	45	299.599	ppb	7.5	7748855	50	>RL
K	39	2	45	-9.160	ppb	-183.6	22224	50	
Ca	40	1	45	0.727	ppb	64.2	40226	50	
Ca	44	2	45	1.359	ppb	270.4	40	25	
Ti	47	2	45	0.001	ppb	22419.3	3	0.5	
V	51	2	72	0.818	ppb	4.0	2754	1	
Cr	52	2	72	0.044	ppb	84.6	213	1	
Mn	55	2	72	-0.172	ppb	-46.3	53	0.5	
Fe	57	2	72	4.618	ppb	64.3	150	25	
Co	59	2	72	0.064	ppb	144.9	1077	0.5	
Ni	60	2	72	0.038	ppb	187.3	83	1	
Cu	63	2	72	0.090	ppb	103.4	897	1	
Zn	66	2	72	0.331	ppb	69.1	150	5	
As	75	2	72	0.068	ppb	123.1	31	1	
Se	78	1	72	0.040	ppb	86.2	21	1	
Sr	88	2	72	0.034	ppb	215.1	40	0.5	
Zr	90	2	72	16.102	ppb	74.3	50	1	>RL
Nb	93	2	72	5.439	ppb	6.2	7776	2	>RL
Mo	95	2	115	0.059	ppb	144.0	93	0.5	
Pd	105	2	115	0.062	ppb	29.0	73	1	
Ag	107	2	115	0.018	ppb	68.3	50	1	
Cd	111	2	115	0.000	ppb	12831.1	7	0.5	
Sn	120	2	115	0.248	ppb	26.0	380	1	
Sb	121	2	115	0.152	ppb	12.7	180	0.6	
Ba	137	2	115	-0.127	ppb	-38.1	27	0.5	
W	182	2	165	0.132	ppb	35.5	853	1	
Pt	195	2	165	0.001	ppb	173.2	3	1	
Tl	205	2	165	0.028	ppb	79.9	377	0.1	
Pb	208	2	165	0.070	ppb	5.3	1197	0.5	
Th	232	2	165	0.274	ppb	6.6	3751	1	
U	238	2	165	0.013	ppb	33.1	193	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	560632	0.21	563298	99.53	60	120	
Sc (IS)	45	1	HMI H2	13573732	0.51	13713757	98.98	60	120	
Sc (IS)	45	2	HMI He	586124	0.15	592502	98.92	60	120	
Sc (IS)	45	3	No Gas	48447451	0.54	49282939	98.30	60	120	
Ge Internal Standard	72	1	HMI H2	5884143	0.28	5896972	99.78	60	120	
Ge Internal Standard	72	2	HMI He	787288	0.31	792400	99.35	60	120	
In Internal Standard	115	2	HMI He	3315395	0.97	3330695	99.54	60	120	
Ho-165	165	2	HMI He	15488670	0.90	15553691	99.58	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5688512
Data File Name	150LCCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T19:08:08-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	14.463	ppb	23.293	5977808	50	28.9	70	130	>+/-30%
Be	9	1	6	0.934	ppb	39.808	200	1	93.4	70	130	
Na	23	2	45	51.500	ppb	5.942	13513	50	103.0	70	130	
Mg	24	2	45	49.208	ppb	8.504	3257	50	98.4	70	130	
Al	27	2	45	56.712	ppb	8.671	1003	30	189.0	70	130	>+/-30%
K	39	2	45	101.985	ppb	9.147	26655	100	102.0	70	130	
Ca	44	2	45	52.705	ppb	45.353	180	50	105.4	70	130	
V	51	2	72	6.090	ppb	5.743	6588	5	121.8	70	130	
Cr	52	2	72	2.285	ppb	8.528	2310	2	114.3	70	130	
Mn	55	2	72	0.877	ppb	19.350	457	1	87.7	70	130	
Fe	57	2	72	52.487	ppb	6.516	983	50	105.0	70	130	
Co	59	2	72	0.906	ppb	5.780	2450	1	90.6	70	130	
Ni	60	2	72	1.445	ppb	5.103	723	1.5	96.3	70	130	
Cu	63	2	72	2.110	ppb	2.875	3477	2	105.5	70	130	
Zn	66	2	72	10.332	ppb	4.936	2084	10	103.3	70	130	
As	75	2	72	5.176	ppb	8.649	779	5	103.5	70	130	
Se	78	1	72	5.223	ppb	8.506	724	5	104.5	70	130	
Sr	88	2	72	1.217	ppb	16.144	630	1	121.7	70	130	
Zr	90	2	72	12.136	ppb	201.193	43	0.5	2427.2	70	130	>+/-30%
Nb	93	2	72	2.657	ppb	6.703	4228	2	132.8	70	130	>+/-30%
Mo	95	2	115	2.257	ppb	15.802	1593	2	112.9	70	130	
Pd	105	2	115	0.027	ppb	117.088	33	1	2.7	70	130	>+/-30%
Ag	107	2	115	5.205	ppb	1.655	12553	5	104.1	70	130	
Cd	111	2	115	1.205	ppb	19.890	397	1	120.5	70	130	
Sn	120	2	115	10.181	ppb	3.286	9490	10	101.8	70	130	
Sb	121	2	115	2.134	ppb	7.373	1920	2	106.7	70	130	
Ba	137	2	115	0.812	ppb	14.052	320	1	81.2	70	130	
W	182	2	165	5.127	ppb	5.059	17523	1	512.7	70	130	>+/-30%
Pt	195	2	165	0.004	ppb	0.372	10	1	0.4	70	130	>+/-30%
Tl	205	2	165	1.022	ppb	3.180	6962	1	102.2	70	130	
Pb	208	2	165	1.144	ppb	4.030	10779	1	114.4	70	130	
Th	232	2	165	1.772	ppb	2.666	20767	2	88.6	70	130	
U	238	2	165	1.016	ppb	5.036	11712	1	101.6	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	556713	0.27	563298	98.83	60	120	
Sc (IS)	45	1	HMI H2	13558938	0.30	13713757	98.87	60	120	
Sc (IS)	45	2	HMI He	585633	0.26	592502	98.84	60	120	
Sc (IS)	45	3	No Gas	49221839	0.86	49282939	99.88	60	120	
Ge Internal Standard	72	1	HMI H2	5873997	0.68	5896972	99.61	60	120	
Ge Internal Standard	72	2	HMI He	788357	0.41	792400	99.49	60	120	
In Internal Standard	115	2	HMI He	3320439	0.51	3330695	99.69	60	120	
Ho-165	165	2	HMI He	15418589	0.37	15553691	99.13	60	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	icsa-5681712
Data File Name	151ICSA.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T19:12:01-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-5.721	ppb	-27.9	5154927	1	
Be	9	1	6	-0.049	ppb	0.0	0	1	
B	11	1	6	17.365	ppb	41.6	543	1	>RL or LOD
Na	23	1	45	92483.323	ppb	0.6	163250101	100000	
K	39	1	45	117699.786	ppb	0.6	181360197	100000	>RL or LOD
Ca	40	1	45	95397.104	ppb	0.6	255166923	100000	
Ti	47	2	45	1970.793	ppb	2.0	33092	1	>RL or LOD
V	51	2	72	0.087	ppb	198.2	2067	1	
Cr	52	2	72	1.410	ppb	9.8	1383	1	>RL or LOD
Mn	55	2	72	0.474	ppb	13.0	280	0.95	
Co	59	2	72	0.306	ppb	9.1	1367	0.2	>RL or LOD
Ni	60	2	72	0.154	ppb	18.8	127	1	
Cu	63	2	72	0.918	ppb	15.0	1814	1	
Zn	66	2	72	1.227	ppb	20.7	300	1	>RL or LOD
As	75	2	72	0.123	ppb	69.1	37	1	
Se	78	1	72	0.514	ppb	13.8	79	1	
Sr	88	2	72	1.841	ppb	22.5	873	1	>RL or LOD
Zr	90	2	72	389.250	ppb	11.7	623	1	>RL or LOD
Nb	93	2	72	12.563	ppb	1.7	15683	1	>RL or LOD
Mo	95	2	115	2156.845	ppb	4.5	1330692	2000	>RL or LOD
Pd	105	2	115	0.026	ppb	98.6	30	1	
Ag	107	2	115	0.057	ppb	14.6	130	1	
Cd	111	2	115	0.344	ppb	54.8	107	1	
Sn	120	2	115	0.271	ppb	20.4	363	1	
Sb	121	2	115	0.224	ppb	33.1	220	1	
Ba	137	2	115	0.673	ppb	29.8	250	0.95	
W	182	2	165	0.485	ppb	12.0	1974	1	
Pt	195	2	165	0.033	ppb	30.2	83	1	
Tl	205	2	165	0.018	ppb	72.8	303	1	
Pb	208	2	165	0.290	ppb	10.3	3067	1	
Th	232	2	165	0.612	ppb	9.1	7373	1	
U	238	2	165	0.025	ppb	17.0	317	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	494323	0.44	563298	87.76	60	120	
Sc (IS)	45	1	HMI H2	12480293	0.47	13713757	91.01	60	120	
Sc (IS)	45	2	HMI He	549226	0.71	592502	92.70	60	120	
Sc (IS)	45	3	No Gas	45054424	0.10	49282939	91.42	60	120	
Ge Internal Standard	72	1	HMI H2	5392744	0.86	5896972	91.45	60	120	
Ge Internal Standard	72	2	HMI He	731602	0.71	792400	92.33	60	120	
In Internal Standard	115	2	HMI He	3001849	0.68	3330695	90.13	60	120	
Ho-165	165	2	HMI He	14993853	0.64	15553691	96.40	60	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	icsab-5681713
Data File Name	152ICSB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T19:15:54-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	174.678	ppb	3.344	100776	100	174.7	80	120	>+\-20%
Li	7	2	45	149.389	ppb	25.614	5515	100	149.4	80	120	>+\-20%
Li	7	3	45	176.044	ppb	2.364	8091151	100	176.0	80	120	>+\-20%
Be	9	1	6	101.738	ppb	3.351	18869	100	101.7	80	120	
B	11	1	6	48.218	ppb	50.562	763	100	48.2	80	120	>+\-20%
Na	23	1	45	95861.476	ppb	0.417	180298144	100	95861.5	80	120	>+\-20%
K	39	1	45	123612.377	ppb	0.496	202594137	100	123612.4	80	120	>+\-20%
Ca	40	1	45	99434.012	ppb	0.222	283391236	100	99434.0	80	120	>+\-20%
V	51	2	72	103.888	ppb	0.098	78437	100	103.9	80	120	
Cr	52	2	72	97.763	ppb	1.604	92512	100	97.8	80	120	
Mn	55	2	72	100.597	ppb	2.570	39194	100	100.6	80	120	
Co	59	2	72	95.586	ppb	0.616	158181	100	95.6	80	120	
Ni	60	2	72	93.720	ppb	2.169	43108	100	93.7	80	120	
Cu	63	2	72	92.463	ppb	1.325	120067	100	92.5	80	120	
Zn	66	2	72	91.997	ppb	4.461	18049	100	92.0	80	120	
As	75	2	72	101.926	ppb	1.075	15086	100	101.9	80	120	
Se	78	1	72	99.561	ppb	1.762	12953	100	99.6	80	120	
Sr	88	2	72	206.499	ppb	1.796	104088	100	206.5	80	120	>+\-20%
Zr	90	2	72	233.822	ppb	16.935	417	100	233.8	80	120	>+\-20%
Nb	93	2	72	232.256	ppb	0.299	300936	100	232.3	80	120	
Mo	95	2	115	2409.322	ppb	1.916	1589835	100	2409.3	80	120	>+\-20%
Pd	105	2	115	92.997	ppb	1.768	101961	100	93.0	80	120	
Ag	107	2	115	98.296	ppb	0.332	229034	100	98.3	80	120	
Cd	111	2	115	100.559	ppb	2.942	31476	100	100.6	80	120	
Sn	120	2	115	104.767	ppb	1.957	93033	100	104.8	80	120	
Sb	121	2	115	114.396	ppb	1.880	97134	100	114.4	80	120	
Ba	137	2	115	107.620	ppb	0.687	32583	100	107.6	80	120	
W	182	2	165	97.383	ppb	0.423	332559	100	97.4	80	120	
Pt	195	2	165	90.095	ppb	0.231	239394	100	90.1	80	120	
Tl	205	2	165	95.401	ppb	0.268	645797	100	95.4	80	120	
Pb	208	2	165	96.651	ppb	0.808	882921	100	96.7	80	120	
Th	232	2	165	101.140	ppb	0.910	1175813	100	101.1	80	120	
U	238	2	165	97.159	ppb	0.803	1140558	100	97.2	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	506921	0.51	563298	89.99	60	120	
Sc (IS)	45	1	HMI H2	13297876	0.10	13713757	96.97	60	120	
Sc (IS)	45	2	HMI He	602659	0.23	592502	101.71	60	120	
Sc (IS)	45	3	No Gas	45512761	1.05	49282939	92.35	60	120	
Ge Internal Standard	72	1	HMI H2	5627686	0.59	5896972	95.43	60	120	
Ge Internal Standard	72	2	HMI He	796231	0.43	792400	100.48	60	120	
In Internal Standard	115	2	HMI He	3209984	0.38	3330695	96.38	60	120	
Ho-165	165	2	HMI He	15756969	0.31	15553691	101.31	60	120	

Sample Report

Sample Table

Sample Name	rinse
Data File Name	153SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T19:19:44-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-8.380	ppb	-8.380	-118.99	71772	500000	
Li	7	2	45	-19.195	ppb	-19.195	-22.88	3847	500000	
Li	7	3	45	-0.742	ppb	-0.742	-230.15	5691586	50000	
Be	9	1	6	-0.001	ppb	-0.001	-3668.42	10	2000	
B	11	1	6	4.177	ppb	4.177	145.55	533	2000	
Na	23	1	45	83.027	ppb	83.027	7.55	253183	2000	
Na	23	2	45	44.201	ppb	44.201	13.70	13977	400000	
Mg	24	2	45	17.851	ppb	17.851	18.37	1387	400000	
Al	27	2	45	16.321	ppb	16.321	38.97	347	400000	
K	39	1	45	361.853	ppb	361.853	7.27	8346153	400000	
K	39	2	45	9.442	ppb	9.442	213.34	25697	400000	
Ca	40	1	45	38.757	ppb	38.757	8.28	160384	400000	
Ca	44	2	45	18.418	ppb	18.418	73.02	97	400000	
Ti	47	2	45	0.313	ppb	0.313	158.86	10	4000	
V	51	2	72	1.365	ppb	1.365	10.26	3521	2000	
Cr	52	2	72	0.039	ppb	0.039	15.35	233	5000	
Mn	55	2	72	0.016	ppb	0.016	390.41	140	10000	
Fe	57	2	72	26.353	ppb	26.353	20.02	590	400000	
Co	59	2	72	0.089	ppb	0.089	64.35	1250	2000	
Ni	60	2	72	0.019	ppb	0.019	500.24	83	5000	
Cu	63	2	72	-0.157	ppb	-0.157	-10.17	650	5000	
Zn	66	2	72	0.419	ppb	0.419	13.67	187	5000	
As	75	2	72	-0.003	ppb	-0.003	-2297.57	24	2000	
Se	78	1	72	0.485	ppb	0.485	23.59	87	2000	
Sr	88	2	72	0.055	ppb	0.055	18.11	57	4000	
Zr	90	2	72	11.168	ppb	11.168	27.56	47	1000	
Nb	93	2	72	-0.269	ppb	-0.269	-10.55	540	200	
Mo	95	2	115	1.159	ppb	1.159	14.59	933	2000	
Pd	105	2	115	0.053	ppb	0.053	14.34	70	100	
Ag	107	2	115	0.039	ppb	0.039	10.06	110	100	
Cd	111	2	115	0.091	ppb	0.091	105.52	40	2000	
Sn	120	2	115	0.099	ppb	0.099	74.06	270	2000	
Sb	121	2	115	0.022	ppb	0.022	53.14	73	1000	
Ba	137	2	115	-0.048	ppb	-0.048	-147.99	57	5000	
W	182	2	165	0.042	ppb	0.042	69.64	590	100	
Pt	195	2	165	0.017	ppb	0.017	85.97	47	100	
Tl	205	2	165	0.033	ppb	0.033	22.38	437	2000	
Pb	208	2	165	0.023	ppb	0.023	60.91	823	5000	
Th	232	2	165	0.008	ppb	0.008	101.77	760	2000	
U	238	2	165	0.025	ppb	0.025	20.59	353	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	576533	0.33	563298	102.35	60	120	
Sc (IS)	45	1	HMI H2	14432721	0.23	13713757	105.24	60	120	
Sc (IS)	45	2	HMI He	655771	0.61	592502	110.68	60	120	
Sc (IS)	45	3	No Gas	49001554	0.60	49282939	99.43	60	120	
Ge Internal Standard	72	1	HMI H2	6224198	0.27	5896972	105.55	60	120	
Ge Internal Standard	72	2	HMI He	879594	0.57	792400	111.00	60	120	
In Internal Standard	115	2	HMI He	3670499	0.72	3330695	110.20	60	120	
Ho-165	165	2	HMI He	16535686	0.79	15553691	106.31	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5688510
Data File Name	154_CCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T19:23:37-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	95.158	ppb	1.478	93617	100	95.2	90	110	
Li	7	2	45	63.569	ppb	24.255	4948	100	63.6	90	110	>+\-10%
Li	7	3	45	97.139	ppb	2.885	7446048	100	97.1	90	110	
Be	9	1	6	50.295	ppb	5.390	10564	50	100.6	90	110	
B	11	1	6	31.763	ppb	53.986	740	50	63.5	90	110	>+\-10%
Na	23	1	45	1044.270	ppb	0.512	2228297	1000	104.4	90	110	
Na	23	2	45	970.402	ppb	0.463	161709	1000	97.0	90	110	
Mg	24	2	45	976.172	ppb	0.924	71097	1000	97.6	90	110	
Al	27	2	45	996.654	ppb	0.658	19367	1000	99.7	90	110	
K	39	1	45	999.959	ppb	4.349	9499831	1000	100.0	90	110	
K	39	2	45	1005.144	ppb	2.750	70951	1000	100.5	90	110	
Ca	40	1	45	1018.135	ppb	2.141	3209197	1000	101.8	90	110	
Ca	44	2	45	1049.145	ppb	9.467	3271	1000	104.9	90	110	
Ti	47	2	45	51.723	ppb	15.143	1050	50	103.4	90	110	
V	51	2	72	50.573	ppb	2.130	43690	50	101.1	90	110	
Cr	52	2	72	48.946	ppb	0.460	51579	50	97.9	90	110	
Mn	55	2	72	48.730	ppb	2.175	21173	50	97.5	90	110	
Fe	57	2	72	1004.403	ppb	2.164	19711	1000	100.4	90	110	
Co	59	2	72	49.067	ppb	0.806	90787	50	98.1	90	110	
Ni	60	2	72	48.185	ppb	2.466	24669	50	96.4	90	110	
Cu	63	2	72	47.849	ppb	1.425	69491	50	95.7	90	110	
Zn	66	2	72	47.164	ppb	2.557	10334	50	94.3	90	110	
As	75	2	72	50.019	ppb	0.797	8241	50	100.0	90	110	
Se	78	1	72	48.747	ppb	1.439	7110	50	97.5	90	110	
Sr	88	2	72	101.094	ppb	1.384	56654	100	101.1	90	110	
Zr	90	2	72	52.065	ppb	33.463	123	50	104.1	90	110	
Nb	93	2	72	92.591	ppb	1.266	133907	100	92.6	90	110	
Mo	95	2	115	48.759	ppb	1.596	37016	50	97.5	90	110	
Pd	105	2	115	48.293	ppb	2.899	60805	50	96.6	90	110	
Ag	107	2	115	47.576	ppb	0.794	127325	50	95.2	90	110	
Cd	111	2	115	49.016	ppb	0.430	17628	50	98.0	90	110	
Sn	120	2	115	48.306	ppb	2.953	49359	50	96.6	90	110	
Sb	121	2	115	49.824	ppb	0.876	48626	50	99.6	90	110	
Ba	137	2	115	49.174	ppb	1.737	17141	50	98.3	90	110	
W	182	2	165	48.363	ppb	0.487	172799	50	96.7	90	110	
Pt	195	2	165	47.104	ppb	0.240	130785	50	94.2	90	110	
Tl	205	2	165	48.752	ppb	0.859	344963	50	97.5	90	110	
Pb	208	2	165	49.015	ppb	0.487	468199	50	98.0	90	110	
Th	232	2	165	48.621	ppb	0.838	590970	50	97.2	90	110	
U	238	2	165	48.199	ppb	0.443	591273	50	96.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	573891	0.64	563298	101.88	60	120	
Sc (IS)	45	1	HMI H2	14522155	0.10	13713757	105.89	60	120	
Sc (IS)	45	2	HMI He	661605	0.28	592502	111.66	60	120	
Sc (IS)	45	3	No Gas	49549501	0.73	49282939	100.54	60	120	
Ge Internal Standard	72	1	HMI H2	6301972	0.46	5896972	106.87	60	120	
Ge Internal Standard	72	2	HMI He	885008	0.57	792400	111.69	60	120	
In Internal Standard	115	2	HMI He	3687028	1.41	3330695	110.70	60	120	
Ho-165	165	2	HMI He	16465219	0.85	15553691	105.86	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5688508
Data File Name	155_CCB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T19:27:31-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	2.311	ppb	30.6	5639778	10	
Be	9	1	6	-0.001	ppb	-5895.4	10	0.5	
B	11	1	6	8.721	ppb	232.4	563	0.5	>RL
Na	23	1	45	15.881	ppb	8.4	115371	25	
Na	23	2	45	11.360	ppb	4.0	8580	25	
Mg	24	2	45	3.069	ppb	39.3	313	25	
Al	27	2	45	0.221	ppb	362.7	37	15	
K	39	1	45	540.421	ppb	1.6	8591739	50	>RL
K	39	2	45	12.692	ppb	42.3	25223	50	
Ca	40	1	45	0.595	ppb	73.1	42068	50	
Ca	44	2	45	5.775	ppb	243.1	57	25	
Ti	47	2	45	-0.184	ppb	0.0	0	0.5	
V	51	2	72	1.804	ppb	10.4	3764	1	>RL
Cr	52	2	72	0.052	ppb	67.7	240	1	
Mn	55	2	72	-0.095	ppb	-25.6	90	0.5	
Fe	57	2	72	6.600	ppb	48.2	200	25	
Co	59	2	72	0.012	ppb	1217.5	1077	0.5	
Ni	60	2	72	0.111	ppb	10.6	127	1	
Cu	63	2	72	0.187	ppb	6.1	1107	1	
Zn	66	2	72	0.779	ppb	17.6	257	5	
As	75	2	72	0.002	ppb	777.8	24	1	
Se	78	1	72	-0.033	ppb	-84.5	12	1	
Sr	88	2	72	0.003	ppb	786.0	27	0.5	
Zr	90	2	72	8.220	ppb	67.1	40	1	>RL
Nb	93	2	72	2.900	ppb	5.8	4918	2	>RL
Mo	95	2	115	0.138	ppb	25.9	160	0.5	
Pd	105	2	115	0.038	ppb	21.5	50	1	
Ag	107	2	115	0.016	ppb	101.8	50	1	
Cd	111	2	115	0.008	ppb	362.4	10	0.5	
Sn	120	2	115	0.138	ppb	23.4	303	1	
Sb	121	2	115	0.076	ppb	31.9	123	0.6	
Ba	137	2	115	-0.094	ppb	-165.7	40	0.5	
W	182	2	165	0.090	ppb	45.7	747	1	
Pt	195	2	165	0.012	ppb	45.1	33	1	
Tl	205	2	165	0.024	ppb	60.8	367	0.1	
Pb	208	2	165	0.076	ppb	10.9	1303	0.5	
Th	232	2	165	0.157	ppb	15.7	2530	1	
U	238	2	165	0.013	ppb	34.8	207	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	572164	0.31	563298	101.57	60	120	
Sc (IS)	45	1	HMI H2	14331161	0.49	13713757	104.50	60	120	
Sc (IS)	45	2	HMI He	640004	0.67	592502	108.02	60	120	
Sc (IS)	45	3	No Gas	48114496	0.83	49282939	97.63	60	120	
Ge Internal Standard	72	1	HMI H2	6143832	0.42	5896972	104.19	60	120	
Ge Internal Standard	72	2	HMI He	854139	0.13	792400	107.79	60	120	
In Internal Standard	115	2	HMI He	3605812	0.08	3330695	108.26	60	120	
Ho-165	165	2	HMI He	16236824	0.94	15553691	104.39	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5688512
Data File Name	156LCCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T19:31:27-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	7.509	ppb	26.873	5918362	50	15.0	70	130	>+/-30%
Be	9	1	6	1.049	ppb	40.207	230	1	104.9	70	130	
Na	23	2	45	55.433	ppb	5.294	15399	50	110.9	70	130	
Mg	24	2	45	51.981	ppb	4.021	3761	50	104.0	70	130	
Al	27	2	45	54.500	ppb	6.166	1057	30	181.7	70	130	>+/-30%
K	39	2	45	79.556	ppb	16.081	28195	100	79.6	70	130	
Ca	44	2	45	37.033	ppb	40.151	150	50	74.1	70	130	
V	51	2	72	6.544	ppb	7.527	7446	5	130.9	70	130	>+/-30%
Cr	52	2	72	2.138	ppb	6.460	2337	2	106.9	70	130	
Mn	55	2	72	1.115	ppb	22.412	590	1	111.5	70	130	
Fe	57	2	72	57.903	ppb	6.678	1160	50	115.8	70	130	
Co	59	2	72	1.120	ppb	11.041	3010	1	112.0	70	130	
Ni	60	2	72	1.701	ppb	9.570	903	1.5	113.4	70	130	
Cu	63	2	72	1.897	ppb	16.733	3447	2	94.9	70	130	
Zn	66	2	72	11.223	ppb	8.475	2427	10	112.2	70	130	
As	75	2	72	4.888	ppb	2.326	793	5	97.8	70	130	
Se	78	1	72	5.000	ppb	2.491	724	5	100.0	70	130	
Sr	88	2	72	1.083	ppb	14.516	607	1	108.3	70	130	
Zr	90	2	72	12.109	ppb	96.567	47	0.5	2421.8	70	130	>+/-30%
Nb	93	2	72	1.172	ppb	11.508	2504	2	58.6	70	130	>+/-30%
Mo	95	2	115	2.069	ppb	7.281	1577	2	103.5	70	130	
Pd	105	2	115	0.016	ppb	58.362	23	1	1.6	70	130	>+/-30%
Ag	107	2	115	4.926	ppb	0.723	12783	5	98.5	70	130	
Cd	111	2	115	1.079	ppb	23.713	383	1	107.9	70	130	
Sn	120	2	115	9.872	ppb	4.060	9907	10	98.7	70	130	
Sb	121	2	115	1.988	ppb	14.724	1927	2	99.4	70	130	
Ba	137	2	115	1.005	ppb	19.426	410	1	100.5	70	130	
W	182	2	165	4.732	ppb	4.244	17051	1	473.2	70	130	>+/-30%
Pt	195	2	165	0.000	ppb	#DIV/0!	0	1	0.0	70	130	>+/-30%
Tl	205	2	165	0.986	ppb	2.818	7072	1	98.6	70	130	
Pb	208	2	165	1.109	ppb	3.004	11016	1	110.9	70	130	
Th	232	2	165	1.717	ppb	1.626	21192	2	85.8	70	130	
U	238	2	165	1.007	ppb	2.469	12223	1	100.7	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	572670	0.34	563298	101.66	60	120	
Sc (IS)	45	1	HMI H2	14258472	0.35	13713757	103.97	60	120	
Sc (IS)	45	2	HMI He	641074	0.64	592502	108.20	60	120	
Sc (IS)	45	3	No Gas	49724378	1.15	49282939	100.90	60	120	
Ge Internal Standard	72	1	HMI H2	6126976	0.46	5896972	103.90	60	120	
Ge Internal Standard	72	2	HMI He	848264	0.81	792400	107.05	60	120	
In Internal Standard	115	2	HMI He	3573585	1.07	3330695	107.29	60	120	
Ho-165	165	2	HMI He	16227123	0.16	15553691	104.33	60	120	

Sample Report

Sample Table

Sample Name	280-122932-D-15-B
Data File Name	157SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T19:35:23-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456609 6020a dod5
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-15.584	ppb	-15.584	-43.80	66266	500000	
Li	7	2	45	-19.522	ppb	-19.522	-101.08	3557	500000	
Li	7	3	45	-5.455	ppb	-5.455	-5.92	5239848	50000	
Be	9	1	6	0.022	ppb	0.022	275.33	13	2000	
B	11	1	6	281.879	ppb	281.879	7.82	2367	2000	
Na	23	1	45	45631.613	ppb	45631.613	0.88	87864322	2000	>LDR
Na	23	2	45	45904.883	ppb	45904.883	0.43	6720063	400000	
Mg	24	2	45	60252.421	ppb	60252.421	0.88	4021416	400000	
Al	27	2	45	17.388	ppb	17.388	30.18	340	400000	
K	39	1	45	76.703	ppb	76.703	70.74	7407492	400000	
K	39	2	45	1737.215	ppb	1737.215	0.93	95496	400000	
Ca	40	1	45	164645.898	ppb	164645.898	0.23	480167966	400000	
Ca	44	2	45	127819.631	ppb	127819.631	1.34	361166	400000	
Ti	47	2	45	-0.006	ppb	-0.006	-5238.63	3	4000	
V	51	2	72	-1.874	ppb	-1.874	-9.83	813	2000	
Cr	52	2	72	144.764	ppb	144.764	0.63	137595	5000	
Mn	55	2	72	40361.537	ppb	40361.537	0.66	15756837	10000	
Fe	57	2	72	11.841	ppb	11.841	8.18	280	400000	
Co	59	2	72	0.013	ppb	0.013	585.21	1010	2000	
Ni	60	2	72	0.042	ppb	0.042	293.69	87	5000	
Cu	63	2	72	0.079	ppb	0.079	86.72	897	5000	
Zn	66	2	72	2.798	ppb	2.798	9.93	637	5000	
As	75	2	72	-0.006	ppb	-0.006	-1036.27	21	2000	
Se	78	1	72	14.910	ppb	14.910	3.16	2019	2000	
Sr	88	2	72	850.752	ppb	850.752	0.55	430908	4000	
Zr	90	2	72	15.613	ppb	15.613	136.44	50	1000	
Nb	93	2	72	0.677	ppb	0.677	21.96	1720	200	
Mo	95	2	115	0.024	ppb	0.024	62.27	70	2000	
Pd	105	2	115	0.009	ppb	0.009	115.67	13	100	
Ag	107	2	115	0.006	ppb	0.006	75.62	20	100	
Cd	111	2	115	-0.021	ppb	-0.021	0.00	0	2000	
Sn	120	2	115	0.036	ppb	0.036	73.25	187	2000	
Sb	121	2	115	-0.008	ppb	-0.008	-255.48	40	1000	
Ba	137	2	115	7.429	ppb	7.429	3.94	2397	5000	
W	182	2	165	0.031	ppb	0.031	120.82	523	100	
Pt	195	2	165	0.004	ppb	0.004	100.38	10	100	
Tl	205	2	165	-0.002	ppb	-0.002	-329.90	183	2000	
Pb	208	2	165	0.011	ppb	0.011	24.60	673	5000	
Th	232	2	165	0.095	ppb	0.095	11.33	1734	2000	
U	238	2	165	1.138	ppb	1.138	1.25	13371	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	515486	0.79	563298	91.51	60	120	
Sc (IS)	45	1	HMI H2	13608196	0.96	13713757	99.23	60	120	
Sc (IS)	45	2	HMI He	607150	0.80	592502	102.47	60	120	
Sc (IS)	45	3	No Gas	45759359	0.92	49282939	92.85	60	120	
Ge Internal Standard	72	1	HMI H2	5817902	0.65	5896972	98.66	60	120	
Ge Internal Standard	72	2	HMI He	800223	0.16	792400	100.99	60	120	
In Internal Standard	115	2	HMI He	3332003	0.54	3330695	100.04	60	120	
Ho-165	165	2	HMI He	15722200	0.89	15553691	101.08	60	120	

Sample Report

Sample Table

Sample Name	280-122932-D-16-B
Data File Name	158SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T19:39:15-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456609 6020a dod5
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-20.640	ppb	-20.640	-11.69	63260	500000	
Li	7	2	45	-24.931	ppb	-24.931	-106.63	3437	500000	
Li	7	3	45	-9.279	ppb	-9.279	-23.73	5196223	50000	
Be	9	1	6	-0.049	ppb	-0.049	0.00	0	2000	
B	11	1	6	273.601	ppb	273.601	8.90	2237	2000	
Na	23	1	45	16117.950	ppb	16117.950	0.52	30118599	2000	>LDR
Na	23	2	45	16623.052	ppb	16623.052	0.59	2398174	400000	
Mg	24	2	45	12632.198	ppb	12632.198	0.50	829571	400000	
Al	27	2	45	40.141	ppb	40.141	7.85	733	400000	
K	39	1	45	-730.096	ppb	-730.096	-7.46	5911733	400000	
K	39	2	45	1104.446	ppb	1104.446	2.82	68115	400000	
Ca	40	1	45	40714.757	ppb	40714.757	0.50	115065642	400000	
Ca	44	2	45	31735.373	ppb	31735.373	0.31	88252	400000	
Ti	47	2	45	0.729	ppb	0.729	43.54	17	4000	
V	51	2	72	-1.488	ppb	-1.488	-10.55	1093	2000	
Cr	52	2	72	308.302	ppb	308.302	1.00	291627	5000	
Mn	55	2	72	41232.974	ppb	41232.974	0.11	16030826	10000	
Fe	57	2	72	74.414	ppb	74.414	13.01	1380	400000	
Co	59	2	72	-0.001	ppb	-0.001	-5264.94	983	2000	
Ni	60	2	72	0.210	ppb	0.210	47.02	163	5000	
Cu	63	2	72	0.373	ppb	0.373	25.25	1273	5000	
Zn	66	2	72	3.527	ppb	3.527	3.98	777	5000	
As	75	2	72	-0.001	ppb	-0.001	-4629.21	22	2000	
Se	78	1	72	6.191	ppb	6.191	6.24	824	2000	
Sr	88	2	72	200.253	ppb	200.253	1.06	101033	4000	
Zr	90	2	72	25.698	ppb	25.698	71.09	67	1000	
Nb	93	2	72	0.704	ppb	0.704	26.35	1747	200	
Mo	95	2	115	0.009	ppb	0.009	580.90	60	2000	
Pd	105	2	115	0.009	ppb	0.009	57.98	13	100	
Ag	107	2	115	0.004	ppb	0.004	208.85	17	100	
Cd	111	2	115	-0.010	ppb	-0.010	-169.63	3	2000	
Sn	120	2	115	0.013	ppb	0.013	131.72	167	2000	
Sb	121	2	115	-0.016	ppb	-0.016	-217.42	33	1000	
Ba	137	2	115	9.277	ppb	9.277	8.31	2997	5000	
W	182	2	165	0.049	ppb	0.049	108.19	580	100	
Pt	195	2	165	0.006	ppb	0.006	125.40	17	100	
Tl	205	2	165	0.003	ppb	0.003	308.77	217	2000	
Pb	208	2	165	0.018	ppb	0.018	48.48	730	5000	
Th	232	2	165	0.105	ppb	0.105	6.65	1830	2000	
U	238	2	165	0.266	ppb	0.266	4.42	3134	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	498916	0.52	563298	88.57	60	120	
Sc (IS)	45	1	HMI H2	13184096	0.69	13713757	96.14	60	120	
Sc (IS)	45	2	HMI He	597329	0.26	592502	100.81	60	120	
Sc (IS)	45	3	No Gas	45914694	0.85	49282939	93.17	60	120	
Ge Internal Standard	72	1	HMI H2	5655588	0.74	5896972	95.91	60	120	
Ge Internal Standard	72	2	HMI He	796934	0.43	792400	100.57	60	120	
In Internal Standard	115	2	HMI He	3355075	0.95	3330695	100.73	60	120	
Ho-165	165	2	HMI He	15595657	0.73	15553691	100.27	60	120	

Sample Report

Sample Table

Sample Name	280-122932-D-17-B
Data File Name	159SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T19:43:08-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456609 6020a dod5
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-14.755	ppb	-14.755	-20.97	64014	500000	
Li	7	2	45	-17.249	ppb	-17.249	-120.60	3577	500000	
Li	7	3	45	-7.646	ppb	-7.646	-19.69	5257376	50000	
Be	9	1	6	0.006	ppb	0.006	873.78	10	2000	
B	11	1	6	367.606	ppb	367.606	14.96	2847	2000	
Na	23	1	45	71744.992	ppb	71744.992	0.61	133076028	2000	>LDR
Na	23	2	45	71605.808	ppb	71605.808	0.67	10454843	400000	
Mg	24	2	45	6609.818	ppb	6609.818	0.54	440252	400000	
Al	27	2	45	31.680	ppb	31.680	6.19	593	400000	
K	39	1	45	-440.238	ppb	-440.238	-10.74	6331876	400000	
K	39	2	45	1309.441	ppb	1309.441	1.41	77564	400000	
Ca	40	1	45	19982.411	ppb	19982.411	0.43	56186381	400000	
Ca	44	2	45	15284.270	ppb	15284.270	0.94	43124	400000	
Ti	47	2	45	2.156	ppb	2.156	29.07	43	4000	
V	51	2	72	0.124	ppb	0.124	153.38	2304	2000	
Cr	52	2	72	192.228	ppb	192.228	0.95	183947	5000	
Mn	55	2	72	16231.464	ppb	16231.464	0.69	6381714	10000	
Fe	57	2	72	69.609	ppb	69.609	8.12	1310	400000	
Co	59	2	72	0.106	ppb	0.106	66.03	1173	2000	
Ni	60	2	72	0.607	ppb	0.607	9.24	350	5000	
Cu	63	2	72	0.692	ppb	0.692	17.47	1704	5000	
Zn	66	2	72	5.356	ppb	5.356	6.32	1147	5000	
As	75	2	72	0.286	ppb	0.286	16.35	65	2000	
Se	78	1	72	2.349	ppb	2.349	9.12	324	2000	
Sr	88	2	72	81.853	ppb	81.853	3.27	41776	4000	
Zr	90	2	72	60.471	ppb	60.471	5.66	127	1000	
Nb	93	2	72	0.420	ppb	0.420	20.14	1397	200	
Mo	95	2	115	0.032	ppb	0.032	126.19	77	2000	
Pd	105	2	115	0.006	ppb	0.006	152.13	10	100	
Ag	107	2	115	0.007	ppb	0.007	69.54	23	100	
Cd	111	2	115	0.000	ppb	0.000	-12229.75	7	2000	
Sn	120	2	115	0.026	ppb	0.026	145.40	180	2000	
Sb	121	2	115	0.052	ppb	0.052	145.51	93	1000	
Ba	137	2	115	12.753	ppb	12.753	10.97	4124	5000	
W	182	2	165	0.033	ppb	0.033	86.59	527	100	
Pt	195	2	165	0.001	ppb	0.001	173.21	3	100	
Tl	205	2	165	0.006	ppb	0.006	97.37	237	2000	
Pb	208	2	165	0.047	ppb	0.047	52.14	990	5000	
Th	232	2	165	0.055	ppb	0.055	17.31	1263	2000	
U	238	2	165	0.728	ppb	0.728	4.78	8523	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	497235	0.14	563298	88.27	60	120	
Sc (IS)	45	1	HMI H2	13112594	0.50	13713757	95.62	60	120	
Sc (IS)	45	2	HMI He	605767	0.36	592502	102.24	60	120	
Sc (IS)	45	3	No Gas	46222166	0.94	49282939	93.79	60	120	
Ge Internal Standard	72	1	HMI H2	5692978	1.02	5896972	96.54	60	120	
Ge Internal Standard	72	2	HMI He	805904	0.17	792400	101.70	60	120	
In Internal Standard	115	2	HMI He	3381043	0.68	3330695	101.51	60	120	
Ho-165	165	2	HMI He	15626342	0.49	15553691	100.47	60	120	

Sample Report

Sample Table

Sample Name	280-122932-D-18-B
Data File Name	160SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T19:47:02-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456609 6020a dod5
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-14.152	ppb	-14.152	-73.97	65627	500000	
Li	7	2	45	-19.568	ppb	-19.568	-74.77	3527	500000	
Li	7	3	45	-8.931	ppb	-8.931	-24.48	5139147	50000	
Be	9	1	6	0.006	ppb	0.006	968.38	10	2000	
B	11	1	6	236.319	ppb	236.319	7.11	2004	2000	
Na	23	1	45	31557.952	ppb	31557.952	0.65	59952144	2000	>LDR
Na	23	2	45	31735.465	ppb	31735.465	0.70	4608733	400000	
Mg	24	2	45	25201.611	ppb	25201.611	0.40	1667991	400000	
Al	27	2	45	72.841	ppb	72.841	13.97	1317	400000	
K	39	1	45	-154.775	ppb	-154.775	-22.65	6935782	400000	
K	39	2	45	1567.874	ppb	1567.874	0.33	87721	400000	
Ca	40	1	45	66903.834	ppb	66903.834	0.56	192435410	400000	
Ca	44	2	45	51810.460	ppb	51810.460	0.96	145188	400000	
Ti	47	2	45	2.169	ppb	2.169	28.61	43	4000	
V	51	2	72	-1.208	ppb	-1.208	-4.44	1303	2000	
Cr	52	2	72	320.299	ppb	320.299	1.54	303973	5000	
Mn	55	2	72	49031.606	ppb	49031.606	1.16	19124902	10000	
Fe	57	2	72	90.585	ppb	90.585	11.12	1670	400000	
Co	59	2	72	0.064	ppb	0.064	86.52	1093	2000	
Ni	60	2	72	1.957	ppb	1.957	4.45	970	5000	
Cu	63	2	72	0.358	ppb	0.358	19.42	1257	5000	
Zn	66	2	72	7.357	ppb	7.357	7.84	1530	5000	
As	75	2	72	-0.028	ppb	-0.028	-316.47	18	2000	
Se	78	1	72	11.683	ppb	11.683	3.30	1573	2000	
Sr	88	2	72	339.467	ppb	339.467	0.69	171818	4000	
Zr	90	2	72	9.678	ppb	9.678	210.33	40	1000	
Nb	93	2	72	-0.097	ppb	-0.097	-133.86	713	200	
Mo	95	2	115	0.029	ppb	0.029	127.68	73	2000	
Pd	105	2	115	0.015	ppb	0.015	120.77	20	100	
Ag	107	2	115	0.001	ppb	0.001	300.38	10	100	
Cd	111	2	115	0.000	ppb	0.000	-11731.98	7	2000	
Sn	120	2	115	-0.008	ppb	-0.008	-1069.52	147	2000	
Sb	121	2	115	-0.027	ppb	-0.027	-107.98	23	1000	
Ba	137	2	115	13.014	ppb	13.014	4.18	4161	5000	
W	182	2	165	0.046	ppb	0.046	33.10	570	100	
Pt	195	2	165	0.002	ppb	0.002	173.21	7	100	
Tl	205	2	165	0.005	ppb	0.005	68.97	227	2000	
Pb	208	2	165	0.017	ppb	0.017	65.26	727	5000	
Th	232	2	165	-0.001	ppb	-0.001	-1104.30	620	2000	
U	238	2	165	0.558	ppb	0.558	2.28	6542	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	502087	0.64	563298	89.13	60	120	
Sc (IS)	45	1	HMI H2	13419741	0.48	13713757	97.86	60	120	
Sc (IS)	45	2	HMI He	602037	0.44	592502	101.61	60	120	
Sc (IS)	45	3	No Gas	45360876	0.47	49282939	92.04	60	120	
Ge Internal Standard	72	1	HMI H2	5775627	1.05	5896972	97.94	60	120	
Ge Internal Standard	72	2	HMI He	799558	0.59	792400	100.90	60	120	
In Internal Standard	115	2	HMI He	3341905	0.77	3330695	100.34	60	120	
Ho-165	165	2	HMI He	15621572	1.48	15553691	100.44	60	120	

Sample Report

Sample Table

Sample Name	280-122932-D-19-D
Data File Name	161SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T19:50:53-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456609 6020a dod5
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-20.705	ppb	-20.705	-25.31	62979	500000	
Li	7	2	45	-4.739	ppb	-4.739	-140.24	3631	500000	
Li	7	3	45	-8.043	ppb	-8.043	-45.94	5114327	50000	
Be	9	1	6	-0.030	ppb	-0.030	-103.78	3	2000	
B	11	1	6	336.886	ppb	336.886	8.00	2654	2000	
Na	23	1	45	18953.752	ppb	18953.752	0.73	35256820	2000	>LDR
Na	23	2	45	19428.114	ppb	19428.114	0.81	2769619	400000	
Mg	24	2	45	31046.770	ppb	31046.770	2.24	2015355	400000	
Al	27	2	45	26.761	ppb	26.761	18.57	493	400000	
K	39	1	45	392.226	ppb	392.226	16.26	7639384	400000	
K	39	2	45	2062.890	ppb	2062.890	0.90	106013	400000	
Ca	40	1	45	89025.641	ppb	89025.641	0.57	250510910	400000	
Ca	44	2	45	69279.290	ppb	69279.290	1.09	190405	400000	
Ti	47	2	45	0.555	ppb	0.555	230.76	13	4000	
V	51	2	72	-1.713	ppb	-1.713	-6.14	917	2000	
Cr	52	2	72	223.917	ppb	223.917	0.37	209207	5000	
Mn	55	2	72	40599.931	ppb	40599.931	0.18	15587199	10000	
Fe	57	2	72	15.177	ppb	15.177	17.09	333	400000	
Co	59	2	72	0.035	ppb	0.035	74.99	1030	2000	
Ni	60	2	72	0.052	ppb	0.052	145.32	90	5000	
Cu	63	2	72	0.206	ppb	0.206	37.73	1043	5000	
Zn	66	2	72	9.901	ppb	9.901	4.04	1997	5000	
As	75	2	72	-0.075	ppb	-0.075	-41.18	10	2000	
Se	78	1	72	9.684	ppb	9.684	5.82	1280	2000	
Sr	88	2	72	463.070	ppb	463.070	0.85	230674	4000	
Zr	90	2	72	-11.944	ppb	-11.944	-29.05	3	1000	
Nb	93	2	72	-0.308	ppb	-0.308	-26.17	433	200	
Mo	95	2	115	-0.004	ppb	-0.004	-1532.25	50	2000	
Pd	105	2	115	0.009	ppb	0.009	56.90	13	100	
Ag	107	2	115	0.000	ppb	0.000	19112.98	7	100	
Cd	111	2	115	0.021	ppb	0.021	226.43	13	2000	
Sn	120	2	115	0.269	ppb	0.269	205.89	398	2000	
Sb	121	2	115	-0.038	ppb	-0.038	-35.01	13	1000	
Ba	137	2	115	12.174	ppb	12.174	6.57	3831	5000	
W	182	2	165	0.005	ppb	0.005	458.23	433	100	
Pt	195	2	165	0.000	ppb	0.000	#DIV/0!	0	100	
Tl	205	2	165	-0.004	ppb	-0.004	-299.90	170	2000	
Pb	208	2	165	0.005	ppb	0.005	245.11	617	5000	
Th	232	2	165	-0.016	ppb	-0.016	-54.29	440	2000	
U	238	2	165	2.208	ppb	2.208	1.03	25750	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	498967	0.48	563298	88.58	60	120	
Sc (IS)	45	1	HMI H2	13129409	0.83	13713757	95.74	60	120	
Sc (IS)	45	2	HMI He	590469	0.30	592502	99.66	60	120	
Sc (IS)	45	3	No Gas	45019719	0.79	49282939	91.35	60	120	
Ge Internal Standard	72	1	HMI H2	5657642	0.76	5896972	95.94	60	120	
Ge Internal Standard	72	2	HMI He	786965	0.13	792400	99.31	60	120	
In Internal Standard	115	2	HMI He	3286344	0.73	3330695	98.67	60	120	
Ho-165	165	2	HMI He	15625117	0.54	15553691	100.46	60	120	

Sample Report

Sample Table

Sample Name	280-122932-D-19-Dsd@5
Data File Name	162SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T19:54:44-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456609 6020a dod5
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-10.804	ppb	-10.804	-73.34	64863	500000	
Li	7	2	45	-10.453	ppb	-10.453	-99.48	3504	500000	
Li	7	3	45	-1.885	ppb	-1.885	-154.32	5205463	50000	
Be	9	1	6	-0.031	ppb	-0.031	-99.47	3	2000	
B	11	1	6	66.993	ppb	66.993	18.99	907	2000	
Na	23	1	45	4157.115	ppb	4157.115	0.63	7796384	2000	
Na	23	2	45	4113.580	ppb	4113.580	0.29	581244	400000	
Mg	24	2	45	6367.578	ppb	6367.578	1.34	406298	400000	
Al	27	2	45	5.339	ppb	5.339	51.67	120	400000	
K	39	1	45	196.810	ppb	196.810	12.32	7338246	400000	
K	39	2	45	442.056	ppb	442.056	1.62	39905	400000	
Ca	40	1	45	19111.021	ppb	19111.021	0.27	53832581	400000	
Ca	44	2	45	14900.042	ppb	14900.042	1.52	40273	400000	
Ti	47	2	45	-0.184	ppb	-0.184	0.00	0	4000	
V	51	2	72	-1.208	ppb	-1.208	-21.17	1280	2000	
Cr	52	2	72	47.627	ppb	47.627	0.97	44549	5000	
Mn	55	2	72	8712.237	ppb	8712.237	1.18	3338416	10000	
Fe	57	2	72	4.066	ppb	4.066	27.74	140	400000	
Co	59	2	72	-0.064	ppb	-0.064	-40.99	867	2000	
Ni	60	2	72	-0.013	ppb	-0.013	-168.01	60	5000	
Cu	63	2	72	0.029	ppb	0.029	261.71	817	5000	
Zn	66	2	72	2.460	ppb	2.460	15.55	560	5000	
As	75	2	72	-0.008	ppb	-0.008	-773.24	20	2000	
Se	78	1	72	2.083	ppb	2.083	7.42	291	2000	
Sr	88	2	72	98.265	ppb	98.265	1.62	48875	4000	
Zr	90	2	72	18.240	ppb	18.240	163.63	53	1000	
Nb	93	2	72	-0.373	ppb	-0.373	-26.51	350	200	
Mo	95	2	115	-0.029	ppb	-0.029	-116.83	33	2000	
Pd	105	2	115	0.009	ppb	0.009	152.18	13	100	
Ag	107	2	115	0.003	ppb	0.003	85.28	13	100	
Cd	111	2	115	-0.010	ppb	-0.010	-173.17	3	2000	
Sn	120	2	115	0.022	ppb	0.022	326.94	170	2000	
Sb	121	2	115	-0.011	ppb	-0.011	-214.47	37	1000	
Ba	137	2	115	2.423	ppb	2.423	10.92	810	5000	
W	182	2	165	0.006	ppb	0.006	360.82	433	100	
Pt	195	2	165	0.001	ppb	0.001	173.21	3	100	
Tl	205	2	165	-0.001	ppb	-0.001	-379.31	183	2000	
Pb	208	2	165	0.017	ppb	0.017	41.79	720	5000	
Th	232	2	165	-0.026	ppb	-0.026	-33.21	327	2000	
U	238	2	165	0.483	ppb	0.483	4.93	5638	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	516952	0.65	563298	91.77	60	120	
Sc (IS)	45	1	HMI H2	13135676	0.26	13713757	95.78	60	120	
Sc (IS)	45	2	HMI He	580350	0.90	592502	97.95	60	120	
Sc (IS)	45	3	No Gas	44972469	0.87	49282939	91.25	60	120	
Ge Internal Standard	72	1	HMI H2	5719908	0.92	5896972	97.00	60	120	
Ge Internal Standard	72	2	HMI He	785445	0.37	792400	99.12	60	120	
In Internal Standard	115	2	HMI He	3268663	1.53	3330695	98.14	60	120	
Ho-165	165	2	HMI He	15545244	0.64	15553691	99.95	60	120	

Sample Report

Sample Table

Sample Name	280-122932-D-19-E MS
Data File Name	163SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T19:58:36-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456609 6020a dod5
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	46.916	ppb	46.916	20.61	73574	500000	
Li	7	2	45	46.912	ppb	46.912	17.12	4151	500000	
Li	7	3	45	63.564	ppb	63.564	1.73	6040535	50000	
Be	9	1	6	39.837	ppb	39.837	4.13	7005	2000	
B	11	1	6	950.025	ppb	950.025	6.96	6445	2000	
Na	23	1	45	18453.217	ppb	18453.217	0.40	33402794	2000	>LDR
Na	23	2	45	18832.994	ppb	18832.994	1.41	2638405	400000	
Mg	24	2	45	29292.793	ppb	29292.793	2.16	1868326	400000	
Al	27	2	45	403.575	ppb	403.575	4.80	6899	400000	
K	39	1	45	392.570	ppb	392.570	8.93	7434151	400000	
K	39	2	45	2035.109	ppb	2035.109	0.89	103086	400000	
Ca	40	1	45	84076.676	ppb	84076.676	1.40	230195697	400000	
Ca	44	2	45	65846.680	ppb	65846.680	2.10	177816	400000	
Ti	47	2	45	-0.184	ppb	-0.184	0.00	0	4000	
V	51	2	72	-0.130	ppb	-0.130	-95.31	2037	2000	
Cr	52	2	72	239.240	ppb	239.240	1.15	220461	5000	
Mn	55	2	72	35966.239	ppb	35966.239	0.53	13620032	10000	
Fe	57	2	72	114.233	ppb	114.233	5.76	2027	400000	
Co	59	2	72	21.911	ppb	21.911	0.64	36089	2000	
Ni	60	2	72	35.545	ppb	35.545	0.36	15979	5000	
Cu	63	2	72	32.717	ppb	32.717	3.79	41922	5000	
Zn	66	2	72	42.613	ppb	42.613	6.71	8196	5000	
As	75	2	72	0.198	ppb	0.198	47.32	50	2000	
Se	78	1	72	41.801	ppb	41.801	6.22	5376	2000	
Sr	88	2	72	471.601	ppb	471.601	0.61	231720	4000	
Zr	90	2	72	128.377	ppb	128.377	2.94	233	1000	
Nb	93	2	72	-0.386	ppb	-0.386	-14.07	330	200	
Mo	95	2	115	1.397	ppb	1.397	13.98	987	2000	
Pd	105	2	115	0.009	ppb	0.009	57.53	13	100	
Ag	107	2	115	11.024	ppb	11.024	1.69	26065	100	
Cd	111	2	115	35.052	ppb	35.052	3.22	11135	2000	
Sn	120	2	115	0.144	ppb	0.144	39.88	280	2000	
Sb	121	2	115	0.636	ppb	0.636	17.52	593	1000	
Ba	137	2	115	47.198	ppb	47.198	3.10	14535	5000	
W	182	2	165	0.022	ppb	0.022	54.22	483	100	
Pt	195	2	165	0.000	ppb	0.000	#DIV/0!	0	100	
Tl	205	2	165	1.633	ppb	1.633	1.35	11008	2000	
Pb	208	2	165	0.846	ppb	0.846	1.86	8121	5000	
Th	232	2	165	26.055	ppb	26.055	0.69	296903	2000	
U	238	2	165	39.434	ppb	39.434	1.39	453091	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	480258	0.35	563298	85.26	60	120	
Sc (IS)	45	1	HMI H2	12775397	0.84	13713757	93.16	60	120	
Sc (IS)	45	2	HMI He	580291	1.50	592502	97.94	60	120	
Sc (IS)	45	3	No Gas	43591439	0.76	49282939	88.45	60	120	
Ge Internal Standard	72	1	HMI H2	5555154	0.96	5896972	94.20	60	120	
Ge Internal Standard	72	2	HMI He	776235	0.49	792400	97.96	60	120	
In Internal Standard	115	2	HMI He	3256797	0.74	3330695	97.78	60	120	
Ho-165	165	2	HMI He	15420719	0.38	15553691	99.15	60	120	

Sample Report

Sample Table

Sample Name	280-122932-D-19-F MSD
Data File Name	164SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T20:02:28-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456609 6020a dod5
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	52.550	ppb	52.550	18.88	74652	500000	
Li	7	2	45	40.703	ppb	40.703	120.67	4091	500000	
Li	7	3	45	65.099	ppb	65.099	7.56	6065471	50000	
Be	9	1	6	42.891	ppb	42.891	9.09	7469	2000	
B	11	1	6	1037.536	ppb	1037.536	1.58	6935	2000	
Na	23	1	45	18689.165	ppb	18689.165	0.61	33852118	2000	>LDR
Na	23	2	45	19238.188	ppb	19238.188	0.55	2701263	400000	
Mg	24	2	45	30728.273	ppb	30728.273	0.17	1964626	400000	
Al	27	2	45	403.623	ppb	403.623	2.87	6912	400000	
K	39	1	45	402.133	ppb	402.133	5.21	7454003	400000	
K	39	2	45	2077.172	ppb	2077.172	1.49	104983	400000	
Ca	40	1	45	88390.325	ppb	88390.325	0.62	242185130	400000	
Ca	44	2	45	69106.917	ppb	69106.917	0.63	187067	400000	
Ti	47	2	45	0.192	ppb	0.192	339.64	7	4000	
V	51	2	72	-0.153	ppb	-0.153	-235.88	2034	2000	
Cr	52	2	72	256.608	ppb	256.608	0.04	237891	5000	
Mn	55	2	72	33098.525	ppb	33098.525	0.78	12609681	10000	
Fe	57	2	72	113.115	ppb	113.115	4.81	2020	400000	
Co	59	2	72	22.284	ppb	22.284	1.39	36908	2000	
Ni	60	2	72	37.015	ppb	37.015	2.57	16737	5000	
Cu	63	2	72	34.076	ppb	34.076	1.01	43891	5000	
Zn	66	2	72	46.129	ppb	46.129	1.71	8920	5000	
As	75	2	72	0.633	ppb	0.633	27.84	113	2000	
Se	78	1	72	45.397	ppb	45.397	2.93	5803	2000	
Sr	88	2	72	496.810	ppb	496.810	0.48	245580	4000	
Zr	90	2	72	127.386	ppb	127.386	28.12	233	1000	
Nb	93	2	72	-0.411	ppb	-0.411	-21.16	300	200	
Mo	95	2	115	0.084	ppb	0.084	18.82	110	2000	
Pd	105	2	115	0.012	ppb	0.012	114.63	17	100	
Ag	107	2	115	5.556	ppb	5.556	3.99	13330	100	
Cd	111	2	115	36.577	ppb	36.577	0.34	11789	2000	
Sn	120	2	115	0.188	ppb	0.188	9.19	323	2000	
Sb	121	2	115	0.733	ppb	0.733	6.90	687	1000	
Ba	137	2	115	51.861	ppb	51.861	2.80	16194	5000	
W	182	2	165	0.011	ppb	0.011	192.79	447	100	
Pt	195	2	165	0.003	ppb	0.003	173.21	7	100	
Tl	205	2	165	0.435	ppb	0.435	7.69	3081	2000	
Pb	208	2	165	0.225	ppb	0.225	4.62	2584	5000	
Th	232	2	165	24.282	ppb	24.282	0.66	277441	2000	
U	238	2	165	41.462	ppb	41.462	0.12	477594	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	475853	0.98	563298	84.48	60	120	
Sc (IS)	45	1	HMI H2	12784265	0.75	13713757	93.22	60	120	
Sc (IS)	45	2	HMI He	581572	0.29	592502	98.16	60	120	
Sc (IS)	45	3	No Gas	43603208	1.24	49282939	88.48	60	120	
Ge Internal Standard	72	1	HMI H2	5521590	0.22	5896972	93.63	60	120	
Ge Internal Standard	72	2	HMI He	780939	0.55	792400	98.55	60	120	
In Internal Standard	115	2	HMI He	3303818	0.68	3330695	99.19	60	120	
Ho-165	165	2	HMI He	15460296	0.67	15553691	99.40	60	120	

Sample Report

Sample Table

Sample Name	280-122932-D-19-D pds
Data File Name	165SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T20:06:20-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456609 6020a dod5
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-22.575	ppb	-22.575	-7.24	60646	500000	
Li	7	2	45	-25.168	ppb	-25.168	-41.08	3341	500000	
Li	7	3	45	-10.582	ppb	-10.582	-9.26	4903648	50000	
Be	9	1	6	232.148	ppb	232.148	1.03	40055	2000	
B	11	1	6	333.903	ppb	333.903	11.67	2490	2000	
Na	23	1	45	18530.203	ppb	18530.203	0.25	33377205	2000	>LDR
Na	23	2	45	19116.935	ppb	19116.935	0.65	2681326	400000	
Mg	24	2	45	30228.405	ppb	30228.405	0.90	1930530	400000	
Al	27	2	45	2239.491	ppb	2239.491	0.66	38174	400000	
K	39	1	45	417.073	ppb	417.073	11.41	7435042	400000	
K	39	2	45	2024.023	ppb	2024.023	2.14	102757	400000	
Ca	40	1	45	87433.605	ppb	87433.605	0.45	238222170	400000	
Ca	44	2	45	68528.019	ppb	68528.019	1.78	185295	400000	
Ti	47	2	45	4.882	ppb	4.882	39.83	90	4000	
V	51	2	72	204.288	ppb	204.288	0.11	149087	2000	
Cr	52	2	72	447.025	ppb	447.025	0.45	413954	5000	
Mn	55	2	72	38820.878	ppb	38820.878	0.85	14777861	10000	
Fe	57	2	72	2131.068	ppb	2131.068	2.63	36791	400000	
Co	59	2	72	206.298	ppb	206.298	0.84	333447	2000	
Ni	60	2	72	203.468	ppb	203.468	2.00	91636	5000	
Cu	63	2	72	202.413	ppb	202.413	1.10	256666	5000	
Zn	66	2	72	222.864	ppb	222.864	2.20	42731	5000	
As	75	2	72	185.125	ppb	185.125	0.53	26835	2000	
Se	78	1	72	116.995	ppb	116.995	2.21	14901	2000	
Sr	88	2	72	455.563	ppb	455.563	0.59	225012	4000	
Zr	90	2	72	161379.883	ppb	161379.883	0.71	266007	1000	>LDR
Nb	93	2	72	2.502	ppb	2.502	13.13	3987	200	
Mo	95	2	115	115.087	ppb	115.087	0.87	77525	2000	
Pd	105	2	115	0.080	ppb	0.080	49.99	93	100	
Ag	107	2	115	21.133	ppb	21.133	2.01	50244	100	
Cd	111	2	115	213.358	ppb	213.358	1.41	68133	2000	
Sn	120	2	115	214.762	ppb	214.762	0.69	194417	2000	
Sb	121	2	115	230.670	ppb	230.670	0.84	199786	1000	
Ba	137	2	115	228.545	ppb	228.545	0.76	70521	5000	
W	182	2	165	160.630	ppb	160.630	1.10	540157	100	
Pt	195	2	165	0.129	ppb	0.129	9.84	337	100	
Tl	205	2	165	30.274	ppb	30.274	1.25	202028	2000	
Pb	208	2	165	146.964	ppb	146.964	1.34	1322375	5000	
Th	232	2	165	0.986	ppb	0.986	5.56	11916	2000	
U	238	2	165	247.929	ppb	247.929	1.01	2867443	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	471709	0.22	563298	83.74	60	120	
Sc (IS)	45	1	HMI H2	12712505	0.37	13713757	92.70	60	120	
Sc (IS)	45	2	HMI He	580928	0.11	592502	98.05	60	120	
Sc (IS)	45	3	No Gas	43502604	0.21	49282939	88.27	60	120	
Ge Internal Standard	72	1	HMI H2	5511611	1.18	5896972	93.47	60	120	
Ge Internal Standard	72	2	HMI He	780311	0.40	792400	98.47	60	120	
In Internal Standard	115	2	HMI He	3274951	0.22	3330695	98.33	60	120	
Ho-165	165	2	HMI He	15524698	0.80	15553691	99.81	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5688510
Data File Name	166_CCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T20:10:10-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	84.782	ppb	7.430	81367	100	84.8	90	110	>+\-10%
Li	7	2	45	86.269	ppb	38.227	4614	100	86.3	90	110	>+\-10%
Li	7	3	45	91.158	ppb	3.223	6646643	100	91.2	90	110	
Be	9	1	6	49.607	ppb	9.626	9100	50	99.2	90	110	
B	11	1	6	64.035	ppb	18.620	860	50	128.1	90	110	>+\-10%
Na	23	1	45	1047.115	ppb	0.404	1987278	1000	104.7	90	110	
Na	23	2	45	972.101	ppb	0.628	142576	1000	97.2	90	110	
Mg	24	2	45	965.201	ppb	1.325	61873	1000	96.5	90	110	
Al	27	2	45	998.613	ppb	2.621	17077	1000	99.9	90	110	
K	39	1	45	743.756	ppb	1.223	8056529	1000	74.4	90	110	>+\-10%
K	39	2	45	937.397	ppb	5.773	59769	1000	93.7	90	110	
Ca	40	1	45	1054.997	ppb	0.247	2956636	1000	105.5	90	110	
Ca	44	2	45	997.520	ppb	14.474	2740	1000	99.8	90	110	
Ti	47	2	45	46.080	ppb	4.496	823	50	92.2	90	110	
V	51	2	72	47.567	ppb	1.230	36821	50	95.1	90	110	
Cr	52	2	72	48.340	ppb	2.958	45488	50	96.7	90	110	
Mn	55	2	72	53.282	ppb	1.217	20662	50	106.6	90	110	
Fe	57	2	72	998.057	ppb	4.498	17488	1000	99.8	90	110	
Co	59	2	72	48.711	ppb	0.954	80486	50	97.4	90	110	
Ni	60	2	72	48.353	ppb	4.486	22108	50	96.7	90	110	
Cu	63	2	72	48.816	ppb	3.293	63286	50	97.6	90	110	
Zn	66	2	72	48.177	ppb	0.497	9423	50	96.4	90	110	
As	75	2	72	48.305	ppb	5.075	7107	50	96.6	90	110	
Se	78	1	72	49.241	ppb	4.308	6430	50	98.5	90	110	
Sr	88	2	72	98.013	ppb	1.510	49049	100	98.0	90	110	
Zr	90	2	72	187.764	ppb	24.018	337	50	375.5	90	110	>+\-10%
Nb	93	2	72	92.847	ppb	1.652	119902	100	92.8	90	110	
Mo	95	2	115	47.997	ppb	0.881	33030	50	96.0	90	110	
Pd	105	2	115	48.733	ppb	1.662	55637	50	97.5	90	110	
Ag	107	2	115	48.191	ppb	0.887	116923	50	96.4	90	110	
Cd	111	2	115	51.620	ppb	2.808	16828	50	103.2	90	110	
Sn	120	2	115	48.457	ppb	0.449	44890	50	96.9	90	110	
Sb	121	2	115	49.738	ppb	0.505	44004	50	99.5	90	110	
Ba	137	2	115	48.637	ppb	6.163	15369	50	97.3	90	110	
W	182	2	165	48.219	ppb	0.503	164464	50	96.4	90	110	
Pt	195	2	165	47.760	ppb	0.896	126587	50	95.5	90	110	
Tl	205	2	165	48.584	ppb	0.578	328148	50	97.2	90	110	
Pb	208	2	165	49.363	ppb	1.602	450077	50	98.7	90	110	
Th	232	2	165	48.583	ppb	0.667	563719	50	97.2	90	110	
U	238	2	165	48.982	ppb	0.354	573594	50	98.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	501347	0.70	563298	89.00	60	120	
Sc (IS)	45	1	HMI H2	12917417	0.44	13713757	94.19	60	120	
Sc (IS)	45	2	HMI He	582342	0.92	592502	98.29	60	120	
Sc (IS)	45	3	No Gas	44852916	0.87	49282939	91.01	60	120	
Ge Internal Standard	72	1	HMI H2	5641472	0.25	5896972	95.67	60	120	
Ge Internal Standard	72	2	HMI He	790280	0.23	792400	99.73	60	120	
In Internal Standard	115	2	HMI He	3342465	0.41	3330695	100.35	60	120	
Ho-165	165	2	HMI He	15717366	0.57	15553691	101.05	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5688508
Data File Name	167_CCB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T20:14:02-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-6.400	ppb	-52.1	5036986	10	
Be	9	1	6	0.150	ppb	41.2	37	0.5	
B	11	1	6	-2.350	ppb	-461.7	423	0.5	
Na	23	1	45	13.096	ppb	5.9	98176	25	
Na	23	2	45	10.591	ppb	40.7	7526	25	
Mg	24	2	45	3.414	ppb	29.5	300	25	
Al	27	2	45	0.264	ppb	519.9	33	15	
K	39	1	45	403.324	ppb	3.8	7477533	50	>RL
K	39	2	45	-20.785	ppb	-69.7	21133	50	
Ca	40	1	45	2.314	ppb	4.3	42359	50	
Ca	44	2	45	0.513	ppb	1112.9	37	25	
Ti	47	2	45	-0.184	ppb	0.0	0	0.5	
V	51	2	72	-0.737	ppb	-37.3	1594	1	
Cr	52	2	72	0.092	ppb	58.5	253	1	
Mn	55	2	72	1.283	ppb	31.5	600	0.5	>RL
Fe	57	2	72	1.477	ppb	141.2	93	25	
Co	59	2	72	-0.021	ppb	-548.8	920	0.5	
Ni	60	2	72	0.064	ppb	133.8	93	1	
Cu	63	2	72	0.152	ppb	30.3	957	1	
Zn	66	2	72	0.311	ppb	102.8	143	5	
As	75	2	72	0.122	ppb	47.5	39	1	
Se	78	1	72	-0.024	ppb	-263.3	12	1	
Sr	88	2	72	0.001	ppb	2066.9	23	0.5	
Zr	90	2	72	20.790	ppb	90.1	57	1	>RL
Nb	93	2	72	3.003	ppb	3.0	4574	2	>RL
Mo	95	2	115	0.010	ppb	380.8	60	0.5	
Pd	105	2	115	0.053	ppb	34.5	63	1	
Ag	107	2	115	0.028	ppb	38.2	73	1	
Cd	111	2	115	0.062	ppb	153.0	27	0.5	
Sn	120	2	115	0.176	ppb	2.7	313	1	
Sb	121	2	115	0.111	ppb	36.0	143	0.6	
Ba	137	2	115	0.023	ppb	423.8	73	0.5	
W	182	2	165	0.082	ppb	56.1	687	1	
Pt	195	2	165	0.010	ppb	21.3	27	1	
Tl	205	2	165	0.028	ppb	25.8	377	0.1	
Pb	208	2	165	0.068	ppb	12.9	1173	0.5	
Th	232	2	165	0.206	ppb	8.7	2974	1	
U	238	2	165	0.023	ppb	6.2	303	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	505001	0.53	563298	89.65	60	120	
Sc (IS)	45	1	HMI H2	12821346	0.64	13713757	93.49	60	120	
Sc (IS)	45	2	HMI He	569317	0.56	592502	96.09	60	120	
Sc (IS)	45	3	No Gas	44117096	0.82	49282939	89.52	60	120	
Ge Internal Standard	72	1	HMI H2	5565171	0.73	5896972	94.37	60	120	
Ge Internal Standard	72	2	HMI He	772036	0.47	792400	97.43	60	120	
In Internal Standard	115	2	HMI He	3311168	0.54	3330695	99.41	60	120	
Ho-165	165	2	HMI He	15461427	0.59	15553691	99.41	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5688512
Data File Name	168LCCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T20:17:55-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	5.479	ppb	4.721	5313514	50	11.0	70	130	>+/-30%
Be	9	1	6	0.989	ppb	30.025	190	1	98.9	70	130	
Na	23	2	45	53.228	ppb	3.982	13527	50	106.5	70	130	
Mg	24	2	45	52.864	ppb	6.453	3434	50	105.7	70	130	
Al	27	2	45	56.569	ppb	7.293	983	30	188.6	70	130	>+/-30%
K	39	2	45	93.703	ppb	11.003	25877	100	93.7	70	130	
Ca	44	2	45	34.938	ppb	93.951	130	50	69.9	70	130	>+/-30%
V	51	2	72	4.804	ppb	7.083	5588	5	96.1	70	130	
Cr	52	2	72	2.117	ppb	5.849	2127	2	105.9	70	130	
Mn	55	2	72	1.997	ppb	15.534	877	1	199.7	70	130	>+/-30%
Fe	57	2	72	55.098	ppb	9.752	1017	50	110.2	70	130	
Co	59	2	72	1.022	ppb	3.828	2607	1	102.2	70	130	
Ni	60	2	72	1.419	ppb	8.498	703	1.5	94.6	70	130	
Cu	63	2	72	1.929	ppb	5.609	3207	2	96.4	70	130	
Zn	66	2	72	10.915	ppb	9.092	2170	10	109.2	70	130	
As	75	2	72	4.920	ppb	6.555	733	5	98.4	70	130	
Se	78	1	72	5.123	ppb	2.398	679	5	102.5	70	130	
Sr	88	2	72	1.082	ppb	30.225	557	1	108.2	70	130	
Zr	90	2	72	20.533	ppb	91.020	57	0.5	4106.7	70	130	>+/-30%
Nb	93	2	72	1.149	ppb	22.083	2270	2	57.4	70	130	>+/-30%
Mo	95	2	115	1.736	ppb	7.982	1250	2	86.8	70	130	
Pd	105	2	115	0.032	ppb	47.983	40	1	3.2	70	130	>+/-30%
Ag	107	2	115	5.161	ppb	2.690	12566	5	103.2	70	130	
Cd	111	2	115	0.948	ppb	6.365	317	1	94.8	70	130	
Sn	120	2	115	9.747	ppb	2.019	9180	10	97.5	70	130	
Sb	121	2	115	1.933	ppb	9.618	1760	2	96.6	70	130	
Ba	137	2	115	1.002	ppb	20.493	383	1	100.2	70	130	
W	182	2	165	4.904	ppb	5.302	16828	1	490.4	70	130	>+/-30%
Pt	195	2	165	0.005	ppb	44.306	13	1	0.5	70	130	>+/-30%
Tl	205	2	165	0.995	ppb	4.074	6799	1	99.5	70	130	
Pb	208	2	165	1.089	ppb	0.864	10322	1	108.9	70	130	
Th	232	2	165	1.730	ppb	1.281	20353	2	86.5	70	130	
U	238	2	165	1.048	ppb	1.771	12116	1	104.8	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	499917	0.78	563298	88.75	60	120	
Sc (IS)	45	1	HMI H2	12858750	0.33	13713757	93.77	60	120	
Sc (IS)	45	2	HMI He	575763	1.54	592502	97.17	60	120	
Sc (IS)	45	3	No Gas	44907786	0.47	49282939	91.12	60	120	
Ge Internal Standard	72	1	HMI H2	5608709	0.49	5896972	95.11	60	120	
Ge Internal Standard	72	2	HMI He	779061	0.38	792400	98.32	60	120	
In Internal Standard	115	2	HMI He	3352571	0.60	3330695	100.66	60	120	
Ho-165	165	2	HMI He	15466019	0.93	15553691	99.44	60	120	

Sample Report

Sample Table

Sample Name	280-122932-D-20-B
Data File Name	169SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T20:21:47-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456609 6020a dod5
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-36.117	ppb	-36.117	-12.20	57032	500000	
Li	7	2	45	-28.306	ppb	-28.306	-54.54	3277	500000	
Li	7	3	45	-19.815	ppb	-19.815	-3.79	4714800	50000	
Be	9	1	6	-0.008	ppb	-0.008	-425.08	7	2000	
B	11	1	6	320.849	ppb	320.849	0.86	2310	2000	
Na	23	1	45	141019.942	ppb	141019.942	0.34	248452636	2000	>LDR
Na	23	2	45	142283.375	ppb	142283.375	0.19	19744371	400000	
Mg	24	2	45	21624.075	ppb	21624.075	0.96	1369053	400000	
Al	27	2	45	13.269	ppb	13.269	16.48	253	400000	
K	39	1	45	2690.401	ppb	2690.401	2.08	10654050	400000	
K	39	2	45	3706.323	ppb	3706.323	1.10	168084	400000	
Ca	40	1	45	46720.675	ppb	46720.675	0.54	124768091	400000	
Ca	44	2	45	36122.405	ppb	36122.405	2.52	96842	400000	
Ti	47	2	45	0.196	ppb	0.196	335.77	7	4000	
V	51	2	72	-1.810	ppb	-1.810	-8.26	827	2000	
Cr	52	2	72	20.966	ppb	20.966	3.67	19277	5000	
Mn	55	2	72	34442.112	ppb	34442.112	1.28	12910114	10000	
Fe	57	2	72	3.659	ppb	3.659	58.27	130	400000	
Co	59	2	72	-0.006	ppb	-0.006	-1157.52	940	2000	
Ni	60	2	72	0.268	ppb	0.268	39.54	183	5000	
Cu	63	2	72	0.266	ppb	0.266	37.94	1093	5000	
Zn	66	2	72	2.844	ppb	2.844	4.76	620	5000	
As	75	2	72	-0.009	ppb	-0.009	-1047.96	20	2000	
Se	78	1	72	1.994	ppb	1.994	24.19	263	2000	
Sr	88	2	72	231.174	ppb	231.174	0.57	112444	4000	
Zr	90	2	72	14.834	ppb	14.834	127.38	47	1000	
Nb	93	2	72	1.243	ppb	1.243	10.15	2357	200	
Mo	95	2	115	-0.003	ppb	-0.003	-1552.42	50	2000	
Pd	105	2	115	0.024	ppb	0.024	37.06	30	100	
Ag	107	2	115	0.003	ppb	0.003	169.67	13	100	
Cd	111	2	115	0.021	ppb	0.021	85.11	13	2000	
Sn	120	2	115	0.000	ppb	0.000	172832.30	150	2000	
Sb	121	2	115	-0.007	ppb	-0.007	-539.03	40	1000	
Ba	137	2	115	12.367	ppb	12.367	7.95	3854	5000	
W	182	2	165	0.065	ppb	0.065	43.70	617	100	
Pt	195	2	165	0.004	ppb	0.004	173.21	10	100	
Tl	205	2	165	0.012	ppb	0.012	33.11	270	2000	
Pb	208	2	165	0.017	ppb	0.017	47.22	703	5000	
Th	232	2	165	0.189	ppb	0.189	15.36	2724	2000	
U	238	2	165	0.790	ppb	0.790	6.11	8990	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	452320	0.67	563298	80.30	60	120	
Sc (IS)	45	1	HMI H2	12458273	0.25	13713757	90.85	60	120	
Sc (IS)	45	2	HMI He	575907	0.56	592502	97.20	60	120	
Sc (IS)	45	3	No Gas	43056986	0.67	49282939	87.37	60	120	
Ge Internal Standard	72	1	HMI H2	5397376	1.20	5896972	91.53	60	120	
Ge Internal Standard	72	2	HMI He	768349	0.22	792400	96.96	60	120	
In Internal Standard	115	2	HMI He	3255446	0.45	3330695	97.74	60	120	
Ho-165	165	2	HMI He	15208062	0.45	15553691	97.78	60	120	

Sample Report

Sample Table

Sample Name	280-122932-D-21-D
Data File Name	170SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T20:25:37-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456609 6020a dod5
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-32.352	ppb	-32.352	-4.84	60037	500000	
Li	7	2	45	-44.252	ppb	-44.252	-25.58	3200	500000	
Li	7	3	45	-18.288	ppb	-18.288	-23.60	4930375	50000	
Be	9	1	6	-0.049	ppb	-0.049	0.00	0	2000	
B	11	1	6	815.736	ppb	815.736	1.92	5441	2000	
Na	23	1	45	67389.877	ppb	67389.877	1.06	123574918	2000	>LDR
Na	23	2	45	67850.133	ppb	67850.133	1.58	9728660	400000	
Mg	24	2	45	16803.960	ppb	16803.960	0.99	1098989	400000	
Al	27	2	45	12.762	ppb	12.762	55.93	253	400000	
K	39	1	45	1398.229	ppb	1398.229	4.19	9093531	400000	
K	39	2	45	2802.943	ppb	2802.943	0.61	136898	400000	
Ca	40	1	45	40084.337	ppb	40084.337	0.60	111384855	400000	
Ca	44	2	45	31394.893	ppb	31394.893	0.96	86951	400000	
Ti	47	2	45	0.550	ppb	0.550	153.61	13	4000	
V	51	2	72	-1.811	ppb	-1.811	-7.47	857	2000	
Cr	52	2	72	332.113	ppb	332.113	0.19	314132	5000	
Mn	55	2	72	27180.951	ppb	27180.951	0.22	10567185	10000	
Fe	57	2	72	39.751	ppb	39.751	2.23	770	400000	
Co	59	2	72	-0.027	ppb	-0.027	-89.72	940	2000	
Ni	60	2	72	0.174	ppb	0.174	134.72	147	5000	
Cu	63	2	72	0.203	ppb	0.203	57.31	1053	5000	
Zn	66	2	72	2.897	ppb	2.897	6.12	653	5000	
As	75	2	72	0.048	ppb	0.048	179.82	29	2000	
Se	78	1	72	6.797	ppb	6.797	6.98	897	2000	
Sr	88	2	72	192.794	ppb	192.794	1.85	97257	4000	
Zr	90	2	72	29.610	ppb	29.610	41.68	73	1000	
Nb	93	2	72	0.476	ppb	0.476	15.73	1453	200	
Mo	95	2	115	0.018	ppb	0.018	92.95	67	2000	
Pd	105	2	115	0.011	ppb	0.011	43.66	17	100	
Ag	107	2	115	0.024	ppb	0.024	9.80	67	100	
Cd	111	2	115	-0.011	ppb	-0.011	-166.42	3	2000	
Sn	120	2	115	-0.006	ppb	-0.006	-345.80	150	2000	
Sb	121	2	115	0.022	ppb	0.022	167.41	67	1000	
Ba	137	2	115	14.493	ppb	14.493	4.15	4681	5000	
W	182	2	165	0.051	ppb	0.051	47.63	587	100	
Pt	195	2	165	0.004	ppb	0.004	99.97	10	100	
Tl	205	2	165	-0.002	ppb	-0.002	-196.35	183	2000	
Pb	208	2	165	0.020	ppb	0.020	49.93	750	5000	
Th	232	2	165	0.074	ppb	0.074	18.08	1477	2000	
U	238	2	165	2.962	ppb	2.962	3.54	34477	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	467286	0.62	563298	82.96	60	120	
Sc (IS)	45	1	HMI H2	12963138	0.75	13713757	94.53	60	120	
Sc (IS)	45	2	HMI He	594908	0.73	592502	100.41	60	120	
Sc (IS)	45	3	No Gas	44808221	0.60	49282939	90.92	60	120	
Ge Internal Standard	72	1	HMI H2	5621915	0.28	5896972	95.34	60	120	
Ge Internal Standard	72	2	HMI He	796904	0.57	792400	100.57	60	120	
In Internal Standard	115	2	HMI He	3381729	0.15	3330695	101.53	60	120	
Ho-165	165	2	HMI He	15603221	0.27	15553691	100.32	60	120	

Sample Report

Sample Table

Sample Name	280-122932-D-22-B
Data File Name	171SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T20:29:28-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456609 6020a dod5
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-28.359	ppb	-28.359	-9.53	62146	500000	
Li	7	2	45	-33.032	ppb	-33.032	-50.25	3461	500000	
Li	7	3	45	-13.362	ppb	-13.362	-10.20	5189792	50000	
Be	9	1	6	-0.049	ppb	-0.049	0.00	0	2000	
B	11	1	6	259.247	ppb	259.247	10.96	2110	2000	
Na	23	1	45	20477.454	ppb	20477.454	0.57	38451169	2000	>LDR
Na	23	2	45	20719.685	ppb	20719.685	0.90	3092797	400000	
Mg	24	2	45	8356.161	ppb	8356.161	0.73	568122	400000	
Al	27	2	45	12.427	ppb	12.427	34.38	257	400000	
K	39	1	45	-326.998	ppb	-326.998	-11.15	6579319	400000	
K	39	2	45	1396.496	ppb	1396.496	3.26	82856	400000	
Ca	40	1	45	23317.812	ppb	23317.812	0.41	66272257	400000	
Ca	44	2	45	18007.520	ppb	18007.520	3.06	51853	400000	
Ti	47	2	45	1.048	ppb	1.048	57.87	23	4000	
V	51	2	72	0.260	ppb	0.260	102.45	2454	2000	
Cr	52	2	72	21.362	ppb	21.362	2.25	21019	5000	
Mn	55	2	72	542.375	ppb	542.375	0.52	217709	10000	
Fe	57	2	72	32.155	ppb	32.155	6.14	657	400000	
Co	59	2	72	0.124	ppb	0.124	61.08	1227	2000	
Ni	60	2	72	0.839	ppb	0.839	40.74	467	5000	
Cu	63	2	72	1.920	ppb	1.920	1.64	3374	5000	
Zn	66	2	72	4.462	ppb	4.462	11.98	990	5000	
As	75	2	72	0.431	ppb	0.431	12.53	88	2000	
Se	78	1	72	0.075	ppb	0.075	248.60	25	2000	
Sr	88	2	72	105.366	ppb	105.366	2.92	54866	4000	
Zr	90	2	72	55.108	ppb	55.108	41.55	120	1000	
Nb	93	2	72	0.212	ppb	0.212	67.78	1147	200	
Mo	95	2	115	-0.036	ppb	-0.036	-38.44	30	2000	
Pd	105	2	115	0.011	ppb	0.011	44.13	17	100	
Ag	107	2	115	0.004	ppb	0.004	119.91	17	100	
Cd	111	2	115	-0.021	ppb	-0.021	0.00	0	2000	
Sn	120	2	115	0.055	ppb	0.055	49.46	213	2000	
Sb	121	2	115	0.026	ppb	0.026	86.19	73	1000	
Ba	137	2	115	27.684	ppb	27.684	1.23	9160	5000	
W	182	2	165	0.038	ppb	0.038	54.45	557	100	
Pt	195	2	165	0.000	ppb	0.000	#DIV/0!	0	100	
Tl	205	2	165	-0.002	ppb	-0.002	-268.15	187	2000	
Pb	208	2	165	0.050	ppb	0.050	34.72	1047	5000	
Th	232	2	165	0.032	ppb	0.032	33.86	1023	2000	
U	238	2	165	0.462	ppb	0.462	6.60	5551	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	491403	0.55	563298	87.24	60	120	
Sc (IS)	45	1	HMI H2	13255439	0.64	13713757	96.66	60	120	
Sc (IS)	45	2	HMI He	618375	0.52	592502	104.37	60	120	
Sc (IS)	45	3	No Gas	46440738	0.78	49282939	94.23	60	120	
Ge Internal Standard	72	1	HMI H2	5730521	0.93	5896972	97.18	60	120	
Ge Internal Standard	72	2	HMI He	822315	0.37	792400	103.78	60	120	
In Internal Standard	115	2	HMI He	3488435	0.40	3330695	104.74	60	120	
Ho-165	165	2	HMI He	15983877	0.74	15553691	102.77	60	120	

Sample Report

Sample Table

Sample Name	280-122932-D-24-B
Data File Name	172SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T20:33:21-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456609 6020a dod5
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-33.128	ppb	-33.128	-6.71	63036	500000	
Li	7	2	45	-39.154	ppb	-39.154	-28.27	3384	500000	
Li	7	3	45	-14.512	ppb	-14.512	-40.19	5083501	50000	
Be	9	1	6	0.006	ppb	0.006	863.02	10	2000	
B	11	1	6	236.152	ppb	236.152	12.20	1977	2000	
Na	23	1	45	30455.537	ppb	30455.537	0.45	58821289	2000	>LDR
Na	23	2	45	30777.500	ppb	30777.500	0.61	4586767	400000	
Mg	24	2	45	23574.821	ppb	23574.821	1.69	1601082	400000	
Al	27	2	45	64.679	ppb	64.679	22.28	1203	400000	
K	39	1	45	-170.199	ppb	-170.199	-22.71	7026451	400000	
K	39	2	45	1563.829	ppb	1563.829	1.28	89853	400000	
Ca	40	1	45	62536.678	ppb	62536.678	0.45	182869404	400000	
Ca	44	2	45	48596.503	ppb	48596.503	1.37	139747	400000	
Ti	47	2	45	1.225	ppb	1.225	99.64	27	4000	
V	51	2	72	-1.340	ppb	-1.340	-5.45	1233	2000	
Cr	52	2	72	325.001	ppb	325.001	0.82	315393	5000	
Mn	55	2	72	30843.603	ppb	30843.603	0.89	12302457	10000	
Fe	57	2	72	48.966	ppb	48.966	11.97	957	400000	
Co	59	2	72	0.039	ppb	0.039	132.84	1077	2000	
Ni	60	2	72	0.215	ppb	0.215	50.02	170	5000	
Cu	63	2	72	0.200	ppb	0.200	35.63	1077	5000	
Zn	66	2	72	3.992	ppb	3.992	7.39	890	5000	
As	75	2	72	0.017	ppb	0.017	292.71	25	2000	
Se	78	1	72	12.339	ppb	12.339	5.52	1675	2000	
Sr	88	2	72	322.467	ppb	322.467	1.19	166892	4000	
Zr	90	2	72	5.335	ppb	5.335	164.65	33	1000	
Nb	93	2	72	-0.148	ppb	-0.148	-34.55	663	200	
Mo	95	2	115	-0.050	ppb	-0.050	-50.30	20	2000	
Pd	105	2	115	0.000	ppb	0.000	-6329.31	3	100	
Ag	107	2	115	0.001	ppb	0.001	317.20	10	100	
Cd	111	2	115	-0.011	ppb	-0.011	-162.51	3	2000	
Sn	120	2	115	-0.065	ppb	-0.065	-57.33	97	2000	
Sb	121	2	115	-0.020	ppb	-0.020	-240.75	30	1000	
Ba	137	2	115	11.208	ppb	11.208	13.19	3707	5000	
W	182	2	165	0.032	ppb	0.032	97.73	533	100	
Pt	195	2	165	0.000	ppb	0.000	#DIV/0!	0	100	
Tl	205	2	165	-0.007	ppb	-0.007	-34.71	150	2000	
Pb	208	2	165	0.013	ppb	0.013	66.37	703	5000	
Th	232	2	165	0.002	ppb	0.002	117.94	667	2000	
U	238	2	165	0.534	ppb	0.534	3.28	6369	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	495445	0.64	563298	87.95	60	120	
Sc (IS)	45	1	HMI H2	13642944	0.46	13713757	99.48	60	120	
Sc (IS)	45	2	HMI He	617818	0.86	592502	104.27	60	120	
Sc (IS)	45	3	No Gas	45656468	1.14	49282939	92.64	60	120	
Ge Internal Standard	72	1	HMI H2	5823664	0.65	5896972	98.76	60	120	
Ge Internal Standard	72	2	HMI He	817608	0.43	792400	103.18	60	120	
In Internal Standard	115	2	HMI He	3451252	1.77	3330695	103.62	60	120	
Ho-165	165	2	HMI He	15903336	0.70	15553691	102.25	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5688510
Data File Name	173_CCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T20:37:11-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	77.607	ppb	3.552	85633	100	77.6	90	110	>+\-10%
Li	7	2	45	78.931	ppb	12.785	4824	100	78.9	90	110	>+\-10%
Li	7	3	45	88.239	ppb	2.657	6969261	100	88.2	90	110	>+\-10%
Be	9	1	6	50.082	ppb	3.900	9804	50	100.2	90	110	
B	11	1	6	45.049	ppb	28.484	783	50	90.1	90	110	
Na	23	1	45	1063.730	ppb	0.385	2158506	1000	106.4	90	110	
Na	23	2	45	982.087	ppb	1.518	153338	1000	98.2	90	110	
Mg	24	2	45	976.129	ppb	3.338	66650	1000	97.6	90	110	
Al	27	2	45	1027.314	ppb	5.736	18709	1000	102.7	90	110	
K	39	1	45	797.412	ppb	4.546	8707440	1000	79.7	90	110	>+\-10%
K	39	2	45	984.896	ppb	2.373	65657	1000	98.5	90	110	
Ca	40	1	45	1031.933	ppb	1.188	3094721	1000	103.2	90	110	
Ca	44	2	45	960.312	ppb	4.764	2810	1000	96.0	90	110	
Ti	47	2	45	47.120	ppb	11.384	897	50	94.2	90	110	
V	51	2	72	49.181	ppb	3.561	40290	50	98.4	90	110	
Cr	52	2	72	48.635	ppb	3.106	48525	50	97.3	90	110	
Mn	55	2	72	52.453	ppb	0.235	21567	50	104.9	90	110	
Fe	57	2	72	1004.707	ppb	1.678	18666	1000	100.5	90	110	
Co	59	2	72	49.188	ppb	1.590	86162	50	98.4	90	110	
Ni	60	2	72	49.204	ppb	1.982	23847	50	98.4	90	110	
Cu	63	2	72	48.602	ppb	0.443	66808	50	97.2	90	110	
Zn	66	2	72	47.554	ppb	3.451	9864	50	95.1	90	110	
As	75	2	72	50.186	ppb	2.976	7827	50	100.4	90	110	
Se	78	1	72	50.904	ppb	2.918	7070	50	101.8	90	110	
Sr	88	2	72	100.676	ppb	1.830	53414	100	100.7	90	110	
Zr	90	2	72	89.610	ppb	12.442	183	50	179.2	90	110	>+\-10%
Nb	93	2	72	95.018	ppb	0.741	130074	100	95.0	90	110	
Mo	95	2	115	49.033	ppb	1.691	35479	50	98.1	90	110	
Pd	105	2	115	48.499	ppb	0.640	58218	50	97.0	90	110	
Ag	107	2	115	47.583	ppb	1.228	121398	50	95.2	90	110	
Cd	111	2	115	48.005	ppb	2.990	16457	50	96.0	90	110	
Sn	120	2	115	47.767	ppb	3.169	46536	50	95.5	90	110	
Sb	121	2	115	49.529	ppb	0.661	46071	50	99.1	90	110	
Ba	137	2	115	46.839	ppb	4.364	15570	50	93.7	90	110	
W	182	2	165	48.318	ppb	0.586	168960	50	96.6	90	110	
Pt	195	2	165	47.980	ppb	1.426	130383	50	96.0	90	110	
Tl	205	2	165	48.640	ppb	1.090	336807	50	97.3	90	110	
Pb	208	2	165	49.275	ppb	0.226	460634	50	98.6	90	110	
Th	232	2	165	48.527	ppb	0.726	577293	50	97.1	90	110	
U	238	2	165	48.702	ppb	0.536	584702	50	97.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	534777	0.27	563298	94.94	60	120	
Sc (IS)	45	1	HMI H2	13819650	0.62	13713757	100.77	60	120	
Sc (IS)	45	2	HMI He	620194	0.50	592502	104.67	60	120	
Sc (IS)	45	3	No Gas	47353266	0.72	49282939	96.08	60	120	
Ge Internal Standard	72	1	HMI H2	6001404	0.12	5896972	101.77	60	120	
Ge Internal Standard	72	2	HMI He	837847	0.67	792400	105.74	60	120	
In Internal Standard	115	2	HMI He	3514415	1.00	3330695	105.52	60	120	
Ho-165	165	2	HMI He	16114323	0.65	15553691	103.60	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5688508
Data File Name	174_CCB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T20:41:02-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-6.606	ppb	-40.8	5309036	10	
Be	9	1	6	0.003	ppb	1717.3	10	0.5	
B	11	1	6	-8.273	ppb	-46.3	403	0.5	
Na	23	1	45	26.715	ppb	4.2	129679	25	>RL
Na	23	2	45	18.343	ppb	19.4	9220	25	
Mg	24	2	45	1.147	ppb	42.8	170	25	
Al	27	2	45	-1.175	ppb	-47.0	10	15	
K	39	1	45	507.383	ppb	2.7	8060596	50	>RL
K	39	2	45	-20.603	ppb	-15.1	22685	50	
Ca	40	1	45	1.392	ppb	7.9	42041	50	
Ca	44	2	45	1.909	ppb	695.2	43	25	
Ti	47	2	45	-0.184	ppb	0.0	0	0.5	
V	51	2	72	1.104	ppb	23.7	3064	1	>RL
Cr	52	2	72	0.057	ppb	57.0	233	1	
Mn	55	2	72	1.175	ppb	17.5	590	0.5	>RL
Fe	57	2	72	-0.106	ppb	-2300.7	70	25	
Co	59	2	72	0.006	ppb	997.0	1017	0.5	
Ni	60	2	72	0.025	ppb	231.5	80	1	
Cu	63	2	72	0.156	ppb	75.1	1013	1	
Zn	66	2	72	0.688	ppb	76.0	227	5	
As	75	2	72	-0.021	ppb	-182.5	19	1	
Se	78	1	72	0.148	ppb	53.0	36	1	
Sr	88	2	72	0.050	ppb	115.0	50	0.5	
Zr	90	2	72	22.836	ppb	96.1	63	1	>RL
Nb	93	2	72	3.446	ppb	9.0	5408	2	>RL
Mo	95	2	115	0.012	ppb	602.7	63	0.5	
Pd	105	2	115	0.056	ppb	64.4	70	1	
Ag	107	2	115	0.015	ppb	42.1	43	1	
Cd	111	2	115	-0.021	ppb	0.0	0	0.5	
Sn	120	2	115	0.130	ppb	22.7	283	1	
Sb	121	2	115	0.111	ppb	60.8	150	0.6	
Ba	137	2	115	-0.038	ppb	-96.0	57	0.5	
W	182	2	165	0.075	ppb	45.1	680	1	
Pt	195	2	165	0.007	ppb	86.6	20	1	
Tl	205	2	165	0.018	ppb	51.6	320	0.1	
Pb	208	2	165	0.071	ppb	9.2	1230	0.5	
Th	232	2	165	0.232	ppb	9.7	3351	1	
U	238	2	165	0.016	ppb	27.8	237	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	530419	0.45	563298	94.16	60	120	
Sc (IS)	45	1	HMI H2	13533934	0.52	13713757	98.69	60	120	
Sc (IS)	45	2	HMI He	610889	0.94	592502	103.10	60	120	
Sc (IS)	45	3	No Gas	46527004	0.53	49282939	94.41	60	120	
Ge Internal Standard	72	1	HMI H2	5878072	0.13	5896972	99.68	60	120	
Ge Internal Standard	72	2	HMI He	814281	0.39	792400	102.76	60	120	
In Internal Standard	115	2	HMI He	3452177	1.01	3330695	103.65	60	120	
Ho-165	165	2	HMI He	15859144	0.73	15553691	101.96	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5688512
Data File Name	175LCCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T20:44:54-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	3.226	ppb	84.343	5479498	50	6.5	70	130	>+/-30%
Be	9	1	6	0.837	ppb	31.043	170	1	83.7	70	130	
Na	23	2	45	61.687	ppb	0.771	15522	50	123.4	70	130	
Mg	24	2	45	52.629	ppb	3.517	3611	50	105.3	70	130	
Al	27	2	45	50.973	ppb	13.133	940	30	169.9	70	130	>+/-30%
K	39	2	45	66.287	ppb	22.073	26191	100	66.3	70	130	>+/-30%
Ca	44	2	45	49.109	ppb	26.809	177	50	98.2	70	130	
V	51	2	72	5.767	ppb	5.180	6522	5	115.3	70	130	
Cr	52	2	72	2.143	ppb	15.291	2234	2	107.2	70	130	
Mn	55	2	72	1.868	ppb	17.923	860	1	186.8	70	130	>+/-30%
Fe	57	2	72	56.837	ppb	15.268	1087	50	113.7	70	130	
Co	59	2	72	0.970	ppb	29.436	2620	1	97.0	70	130	
Ni	60	2	72	1.568	ppb	5.833	800	1.5	104.5	70	130	
Cu	63	2	72	2.055	ppb	4.976	3497	2	102.8	70	130	
Zn	66	2	72	10.521	ppb	9.327	2177	10	105.2	70	130	
As	75	2	72	4.857	ppb	5.004	752	5	97.1	70	130	
Se	78	1	72	5.060	ppb	7.311	705	5	101.2	70	130	
Sr	88	2	72	0.956	ppb	7.406	513	1	95.6	70	130	
Zr	90	2	72	15.326	ppb	101.596	50	0.5	3065.1	70	130	>+/-30%
Nb	93	2	72	1.310	ppb	13.316	2570	2	65.5	70	130	>+/-30%
Mo	95	2	115	2.253	ppb	5.959	1667	2	112.7	70	130	
Pd	105	2	115	0.020	ppb	125.576	27	1	2.0	70	130	>+/-30%
Ag	107	2	115	4.904	ppb	1.667	12386	5	98.1	70	130	
Cd	111	2	115	0.943	ppb	10.400	327	1	94.3	70	130	
Sn	120	2	115	9.424	ppb	1.856	9213	10	94.2	70	130	
Sb	121	2	115	1.825	ppb	3.627	1727	2	91.3	70	130	
Ba	137	2	115	0.880	ppb	38.815	357	1	88.0	70	130	
W	182	2	165	4.824	ppb	3.565	17125	1	482.4	70	130	>+/-30%
Pt	195	2	165	0.001	ppb	173.205	3	1	0.1	70	130	>+/-30%
Tl	205	2	165	0.991	ppb	3.807	7009	1	99.1	70	130	
Pb	208	2	165	1.118	ppb	0.810	10944	1	111.8	70	130	
Th	232	2	165	1.732	ppb	4.646	21068	2	86.6	70	130	
U	238	2	165	1.017	ppb	6.593	12153	1	101.7	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	524772	0.89	563298	93.16	60	120	
Sc (IS)	45	1	HMI H2	13434132	0.23	13713757	97.96	60	120	
Sc (IS)	45	2	HMI He	608034	0.75	592502	102.62	60	120	
Sc (IS)	45	3	No Gas	46620634	0.70	49282939	94.60	60	120	
Ge Internal Standard	72	1	HMI H2	5900174	0.26	5896972	100.05	60	120	
Ge Internal Standard	72	2	HMI He	809215	0.54	792400	102.12	60	120	
In Internal Standard	115	2	HMI He	3478204	1.58	3330695	104.43	60	120	
Ho-165	165	2	HMI He	15991837	0.84	15553691	102.82	60	120	

Sample Report

Sample Table

Sample Name	280-123045-A-2-B
Data File Name	176SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T20:48:49-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456747 6020a
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-22.455	ppb	-22.455	-28.93	62002	500000	
Li	7	2	45	-22.765	ppb	-22.765	-102.39	3507	500000	
Li	7	3	45	-16.382	ppb	-16.382	-17.73	5081485	50000	
Be	9	1	6	0.009	ppb	0.009	1157.38	10	2000	
B	11	1	6	140.094	ppb	140.094	5.09	1297	2000	
Na	23	1	45	35982.171	ppb	35982.171	1.20	66163191	2000	>LDR
Na	23	2	45	36148.227	ppb	36148.227	0.28	5274002	400000	
Mg	24	2	45	24181.956	ppb	24181.956	0.12	1608249	400000	
Al	27	2	45	12.740	ppb	12.740	13.27	257	400000	
K	39	1	45	333.201	ppb	333.201	9.87	7468723	400000	
K	39	2	45	1842.289	ppb	1842.289	1.21	99492	400000	
Ca	40	1	45	95352.297	ppb	95352.297	0.68	265501089	400000	
Ca	44	2	45	73505.643	ppb	73505.643	1.17	206968	400000	
Ti	47	2	45	-0.005	ppb	-0.005	-6913.85	3	4000	
V	51	2	72	1.559	ppb	1.559	6.11	3364	2000	
Cr	52	2	72	9.165	ppb	9.165	4.18	8923	5000	
Mn	55	2	72	11.175	ppb	11.175	2.14	4508	10000	
Fe	57	2	72	25.839	ppb	25.839	15.60	530	400000	
Co	59	2	72	0.024	ppb	0.024	454.82	1033	2000	
Ni	60	2	72	0.659	ppb	0.659	13.56	373	5000	
Cu	63	2	72	1.319	ppb	1.319	15.00	2517	5000	
Zn	66	2	72	4.083	ppb	4.083	10.58	893	5000	
As	75	2	72	0.365	ppb	0.365	12.76	76	2000	
Se	78	1	72	0.275	ppb	0.275	35.47	51	2000	
Sr	88	2	72	545.669	ppb	545.669	0.37	277845	4000	
Zr	90	2	72	68.452	ppb	68.452	8.52	140	1000	
Nb	93	2	72	1.296	ppb	1.296	27.89	2537	200	
Mo	95	2	115	0.112	ppb	0.112	51.70	133	2000	
Pd	105	2	115	0.031	ppb	0.031	94.84	40	100	
Ag	107	2	115	0.003	ppb	0.003	235.50	13	100	
Cd	111	2	115	-0.001	ppb	-0.001	-6816.07	7	2000	
Sn	120	2	115	1.036	ppb	1.036	6.55	1133	2000	
Sb	121	2	115	0.065	ppb	0.065	43.32	107	1000	
Ba	137	2	115	2.985	ppb	2.985	23.78	1027	5000	
W	182	2	165	0.182	ppb	0.182	19.43	1037	100	
Pt	195	2	165	0.003	ppb	0.003	86.61	7	100	
Tl	205	2	165	0.000	ppb	0.000	-2147.38	193	2000	
Pb	208	2	165	0.111	ppb	0.111	16.59	1580	5000	
Th	232	2	165	0.221	ppb	0.221	3.16	3191	2000	
U	238	2	165	5.750	ppb	5.750	1.27	67242	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	476752	0.49	563298	84.64	60	120	
Sc (IS)	45	1	HMI H2	12991807	0.46	13713757	94.74	60	120	
Sc (IS)	45	2	HMI He	604950	0.21	592502	102.10	60	120	
Sc (IS)	45	3	No Gas	45904889	0.64	49282939	93.15	60	120	
Ge Internal Standard	72	1	HMI H2	5603215	0.91	5896972	95.02	60	120	
Ge Internal Standard	72	2	HMI He	804433	0.37	792400	101.52	60	120	
In Internal Standard	115	2	HMI He	3412831	0.32	3330695	102.47	60	120	
Ho-165	165	2	HMI He	15686444	0.70	15553691	100.85	60	120	

Sample Report

Sample Table

Sample Name	280-123045-A-3-B
Data File Name	177SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T20:52:42-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456747 6020a
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-27.493	ppb	-27.493	-13.64	62022	500000	
Li	7	2	45	-39.658	ppb	-39.658	-24.56	3307	500000	
Li	7	3	45	-14.622	ppb	-14.622	-27.76	5007719	50000	
Be	9	1	6	0.027	ppb	0.027	486.61	13	2000	
B	11	1	6	493.064	ppb	493.064	5.56	3554	2000	
Na	23	1	45	26661.463	ppb	26661.463	0.32	49809458	2000	>LDR
Na	23	2	45	26686.882	ppb	26686.882	0.63	3894512	400000	
Mg	24	2	45	28609.835	ppb	28609.835	1.25	1902328	400000	
Al	27	2	45	10.119	ppb	10.119	29.79	210	400000	
K	39	1	45	1029.807	ppb	1029.807	2.74	8677923	400000	
K	39	2	45	2459.133	ppb	2459.133	1.71	124970	400000	
Ca	40	1	45	100373.538	ppb	100373.538	0.13	283835696	400000	
Ca	44	2	45	77912.090	ppb	77912.090	0.78	219331	400000	
Ti	47	2	45	-0.184	ppb	-0.184	0.00	0	4000	
V	51	2	72	-1.534	ppb	-1.534	-4.20	1070	2000	
Cr	52	2	72	159.047	ppb	159.047	1.19	151979	5000	
Mn	55	2	72	24702.774	ppb	24702.774	0.29	9696207	10000	
Fe	57	2	72	44.584	ppb	44.584	18.03	863	400000	
Co	59	2	72	-0.001	ppb	-0.001	-7390.03	993	2000	
Ni	60	2	72	0.443	ppb	0.443	23.41	273	5000	
Cu	63	2	72	0.370	ppb	0.370	24.17	1280	5000	
Zn	66	2	72	4.742	ppb	4.742	8.05	1023	5000	
As	75	2	72	0.295	ppb	0.295	21.89	66	2000	
Se	78	1	72	5.963	ppb	5.963	7.01	795	2000	
Sr	88	2	72	522.226	ppb	522.226	0.43	265959	4000	
Zr	90	2	72	88.025	ppb	88.025	23.29	173	1000	
Nb	93	2	72	0.522	ppb	0.522	10.59	1527	200	
Mo	95	2	115	-0.025	ppb	-0.025	-66.43	37	2000	
Pd	105	2	115	0.011	ppb	0.011	157.31	17	100	
Ag	107	2	115	0.004	ppb	0.004	59.19	17	100	
Cd	111	2	115	-0.021	ppb	-0.021	0.00	0	2000	
Sn	120	2	115	-0.011	ppb	-0.011	-303.62	147	2000	
Sb	121	2	115	0.080	ppb	0.080	47.76	120	1000	
Ba	137	2	115	21.515	ppb	21.515	3.21	6959	5000	
W	182	2	165	0.059	ppb	0.059	23.90	620	100	
Pt	195	2	165	0.000	ppb	0.000	#DIV/0!	0	100	
Tl	205	2	165	0.000	ppb	0.000	-1391.07	193	2000	
Pb	208	2	165	0.019	ppb	0.019	60.01	747	5000	
Th	232	2	165	0.058	ppb	0.058	19.42	1300	2000	
U	238	2	165	3.694	ppb	3.694	2.94	43280	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	481460	0.83	563298	85.47	60	120	
Sc (IS)	45	1	HMI H2	13194124	0.49	13713757	96.21	60	120	
Sc (IS)	45	2	HMI He	604837	0.32	592502	102.08	60	120	
Sc (IS)	45	3	No Gas	44988474	0.18	49282939	91.29	60	120	
Ge Internal Standard	72	1	HMI H2	5659171	0.45	5896972	95.97	60	120	
Ge Internal Standard	72	2	HMI He	804580	0.50	792400	101.54	60	120	
In Internal Standard	115	2	HMI He	3402087	0.65	3330695	102.14	60	120	
Ho-165	165	2	HMI He	15713629	0.83	15553691	101.03	60	120	

Sample Report

Sample Table

Sample Name	280-123045-A-4-B
Data File Name	178SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T20:56:33-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456747 6020a
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-31.066	ppb	-31.066	-8.24	61536	500000	
Li	7	2	45	-40.954	ppb	-40.954	-30.63	3341	500000	
Li	7	3	45	-16.909	ppb	-16.909	-32.19	4993787	50000	
Be	9	1	6	-0.030	ppb	-0.030	-110.89	3	2000	
B	11	1	6	587.123	ppb	587.123	7.16	4161	2000	
Na	23	1	45	20902.837	ppb	20902.837	1.08	39186370	2000	>LDR
Na	23	2	45	20852.481	ppb	20852.481	0.43	3089534	400000	
Mg	24	2	45	30046.893	ppb	30046.893	0.99	2027392	400000	
Al	27	2	45	81.820	ppb	81.820	4.48	1503	400000	
K	39	1	45	4491.830	ppb	4491.830	0.15	14153103	400000	
K	39	2	45	5211.445	ppb	5211.445	0.90	242280	400000	
Ca	40	1	45	102970.986	ppb	102970.986	1.00	292066342	400000	
Ca	44	2	45	79580.804	ppb	79580.804	0.71	227340	400000	
Ti	47	2	45	1.949	ppb	1.949	27.93	40	4000	
V	51	2	72	-1.821	ppb	-1.821	-9.66	870	2000	
Cr	52	2	72	165.054	ppb	165.054	1.16	160071	5000	
Mn	55	2	72	31540.618	ppb	31540.618	0.59	12565505	10000	
Fe	57	2	72	51.653	ppb	51.653	12.71	1003	400000	
Co	59	2	72	0.091	ppb	0.091	63.82	1163	2000	
Ni	60	2	72	0.853	ppb	0.853	35.16	470	5000	
Cu	63	2	72	0.388	ppb	0.388	18.24	1323	5000	
Zn	66	2	72	3.397	ppb	3.397	14.86	770	5000	
As	75	2	72	0.017	ppb	0.017	581.49	25	2000	
Se	78	1	72	17.941	ppb	17.941	7.78	2388	2000	
Sr	88	2	72	591.669	ppb	591.669	0.86	305835	4000	
Zr	90	2	72	30.571	ppb	30.571	105.14	77	1000	
Nb	93	2	72	0.102	ppb	0.102	139.35	993	200	
Mo	95	2	115	-0.007	ppb	-0.007	-389.18	50	2000	
Pd	105	2	115	0.020	ppb	0.020	99.44	27	100	
Ag	107	2	115	0.004	ppb	0.004	156.89	17	100	
Cd	111	2	115	-0.011	ppb	-0.011	-162.15	3	2000	
Sn	120	2	115	0.026	ppb	0.026	219.04	183	2000	
Sb	121	2	115	-0.020	ppb	-0.020	-53.08	30	1000	
Ba	137	2	115	2.700	ppb	2.700	16.20	943	5000	
W	182	2	165	0.031	ppb	0.031	118.05	530	100	
Pt	195	2	165	0.000	ppb	0.000	#DIV/0!	0	100	
Tl	205	2	165	0.004	ppb	0.004	318.08	223	2000	
Pb	208	2	165	-0.001	ppb	-0.001	-687.85	573	5000	
Th	232	2	165	0.030	ppb	0.030	35.43	997	2000	
U	238	2	165	2.113	ppb	2.113	3.88	25129	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	482305	0.61	563298	85.62	60	120	
Sc (IS)	45	1	HMI H2	13234433	0.26	13713757	96.50	60	120	
Sc (IS)	45	2	HMI He	613785	0.54	592502	103.59	60	120	
Sc (IS)	45	3	No Gas	45188733	0.48	49282939	91.69	60	120	
Ge Internal Standard	72	1	HMI H2	5729292	0.54	5896972	97.16	60	120	
Ge Internal Standard	72	2	HMI He	816628	0.51	792400	103.06	60	120	
In Internal Standard	115	2	HMI He	3438590	0.92	3330695	103.24	60	120	
Ho-165	165	2	HMI He	15940526	0.70	15553691	102.49	60	120	

Sample Report

Sample Table

Sample Name	280-123045-A-5-B
Data File Name	179SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T21:00:24-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456747 6020a
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-23.867	ppb	-23.867	-20.23	64345	500000	
Li	7	2	45	-56.244	ppb	-56.244	-24.08	3251	500000	
Li	7	3	45	-17.958	ppb	-17.958	-13.35	5214943	50000	
Be	9	1	6	-0.012	ppb	-0.012	-529.73	7	2000	
B	11	1	6	61.769	ppb	61.769	28.70	840	2000	
Na	23	1	45	14667.445	ppb	14667.445	0.75	28153779	2000	>LDR
Na	23	2	45	14901.167	ppb	14901.167	0.63	2274635	400000	
Mg	24	2	45	7856.127	ppb	7856.127	0.34	545776	400000	
Al	27	2	45	10.148	ppb	10.148	18.52	220	400000	
K	39	1	45	-755.644	ppb	-755.644	-6.41	6029917	400000	
K	39	2	45	1064.595	ppb	1064.595	2.36	70325	400000	
Ca	40	1	45	32625.865	ppb	32625.865	0.60	94699779	400000	
Ca	44	2	45	24885.136	ppb	24885.136	1.73	73206	400000	
Ti	47	2	45	0.162	ppb	0.162	185.24	7	4000	
V	51	2	72	1.328	ppb	1.328	5.46	3364	2000	
Cr	52	2	72	1.860	ppb	1.860	23.01	2057	5000	
Mn	55	2	72	5.503	ppb	5.503	14.63	2404	10000	
Fe	57	2	72	19.136	ppb	19.136	11.16	433	400000	
Co	59	2	72	-0.018	ppb	-0.018	-200.29	1017	2000	
Ni	60	2	72	1.075	ppb	1.075	14.33	597	5000	
Cu	63	2	72	0.948	ppb	0.948	6.92	2144	5000	
Zn	66	2	72	3.514	ppb	3.514	9.90	823	5000	
As	75	2	72	0.156	ppb	0.156	28.28	48	2000	
Se	78	1	72	0.000	ppb	0.000	-30355.98	16	2000	
Sr	88	2	72	197.325	ppb	197.325	2.16	105918	4000	
Zr	90	2	72	17.685	ppb	17.685	17.43	57	1000	
Nb	93	2	72	-0.042	ppb	-0.042	-83.41	833	200	
Mo	95	2	115	0.104	ppb	0.104	67.04	133	2000	
Pd	105	2	115	0.011	ppb	0.011	44.53	17	100	
Ag	107	2	115	0.054	ppb	0.054	7.44	147	100	
Cd	111	2	115	0.028	ppb	0.028	219.55	17	2000	
Sn	120	2	115	0.032	ppb	0.032	66.60	197	2000	
Sb	121	2	115	0.042	ppb	0.042	48.74	90	1000	
Ba	137	2	115	99.229	ppb	99.229	0.66	33512	5000	
W	182	2	165	0.066	ppb	0.066	31.98	663	100	
Pt	195	2	165	0.001	ppb	0.001	173.21	3	100	
Tl	205	2	165	-0.002	ppb	-0.002	-66.80	187	2000	
Pb	208	2	165	0.018	ppb	0.018	55.96	760	5000	
Th	232	2	165	0.018	ppb	0.018	59.93	870	2000	
U	238	2	165	0.304	ppb	0.304	0.94	3724	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	498583	0.52	563298	88.51	60	120	
Sc (IS)	45	1	HMI H2	13539811	1.14	13713757	98.73	60	120	
Sc (IS)	45	2	HMI He	631842	0.55	592502	106.64	60	120	
Sc (IS)	45	3	No Gas	47346321	0.91	49282939	96.07	60	120	
Ge Internal Standard	72	1	HMI H2	5916601	0.74	5896972	100.33	60	120	
Ge Internal Standard	72	2	HMI He	847852	0.53	792400	107.00	60	120	
In Internal Standard	115	2	HMI He	3580243	1.18	3330695	107.49	60	120	
Ho-165	165	2	HMI He	16246074	0.95	15553691	104.45	60	120	

Sample Report

Sample Table

Sample Name	280-123045-A-6-B
Data File Name	180SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T21:04:15-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456747 6020a
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-33.834	ppb	-33.834	-8.07	63418	500000	
Li	7	2	45	-41.163	ppb	-41.163	-59.96	3494	500000	
Li	7	3	45	-20.581	ppb	-20.581	-8.88	5153568	50000	
Be	9	1	6	-0.049	ppb	-0.049	0.00	0	2000	
B	11	1	6	71.566	ppb	71.566	24.75	903	2000	
Na	23	1	45	42335.147	ppb	42335.147	0.28	82410292	2000	>LDR
Na	23	2	45	41715.117	ppb	41715.117	0.39	6460543	400000	
Mg	24	2	45	21810.865	ppb	21810.865	1.10	1540033	400000	
Al	27	2	45	19.674	ppb	19.674	39.81	403	400000	
K	39	1	45	-618.017	ppb	-618.017	-5.40	6351592	400000	
K	39	2	45	1159.400	ppb	1159.400	1.19	75651	400000	
Ca	40	1	45	90827.784	ppb	90827.784	0.48	267773563	400000	
Ca	44	2	45	70225.136	ppb	70225.136	1.04	209926	400000	
Ti	47	2	45	0.155	ppb	0.155	379.42	7	4000	
V	51	2	72	2.514	ppb	2.514	8.37	4308	2000	
Cr	52	2	72	0.377	ppb	0.377	10.77	567	5000	
Mn	55	2	72	2.179	ppb	2.179	23.23	1033	10000	
Fe	57	2	72	56.311	ppb	56.311	5.79	1133	400000	
Co	59	2	72	0.132	ppb	0.132	65.25	1283	2000	
Ni	60	2	72	0.567	ppb	0.567	16.38	350	5000	
Cu	63	2	72	0.761	ppb	0.761	25.99	1894	5000	
Zn	66	2	72	4.777	ppb	4.777	17.64	1090	5000	
As	75	2	72	0.209	ppb	0.209	29.66	56	2000	
Se	78	1	72	-0.088	ppb	-0.088	-57.45	4	2000	
Sr	88	2	72	465.197	ppb	465.197	1.57	250572	4000	
Zr	90	2	72	39.817	ppb	39.817	62.84	97	1000	
Nb	93	2	72	-0.080	ppb	-0.080	-123.97	783	200	
Mo	95	2	115	0.067	ppb	0.067	76.91	107	2000	
Pd	105	2	115	0.000	ppb	0.000	-2176.28	3	100	
Ag	107	2	115	0.002	ppb	0.002	248.49	13	100	
Cd	111	2	115	0.008	ppb	0.008	360.21	10	2000	
Sn	120	2	115	0.062	ppb	0.062	138.58	227	2000	
Sb	121	2	115	0.000	ppb	0.000	-2671.09	50	1000	
Ba	137	2	115	39.367	ppb	39.367	5.12	13380	5000	
W	182	2	165	0.027	ppb	0.027	45.08	527	100	
Pt	195	2	165	0.001	ppb	0.001	173.21	3	100	
Tl	205	2	165	0.002	ppb	0.002	282.24	217	2000	
Pb	208	2	165	0.088	ppb	0.088	23.53	1420	5000	
Th	232	2	165	0.002	ppb	0.002	106.03	670	2000	
U	238	2	165	9.776	ppb	9.776	0.68	118309	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	497763	0.21	563298	88.37	60	120	
Sc (IS)	45	1	HMI H2	13755632	0.50	13713757	100.31	60	120	
Sc (IS)	45	2	HMI He	642267	0.36	592502	108.40	60	120	
Sc (IS)	45	3	No Gas	47179026	0.21	49282939	95.73	60	120	
Ge Internal Standard	72	1	HMI H2	5923149	0.29	5896972	100.44	60	120	
Ge Internal Standard	72	2	HMI He	850940	0.13	792400	107.39	60	120	
In Internal Standard	115	2	HMI He	3590997	0.36	3330695	107.82	60	120	
Ho-165	165	2	HMI He	16238751	0.26	15553691	104.40	60	120	

Sample Report

Sample Table

Sample Name	280-123045-A-7-B
Data File Name	181SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T21:08:06-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456747 6020a
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-33.978	ppb	-33.978	-7.55	62815	500000	
Li	7	2	45	-29.664	ppb	-29.664	-104.76	3537	500000	
Li	7	3	45	-17.573	ppb	-17.573	-8.95	5145363	50000	
Be	9	1	6	-0.049	ppb	-0.049	0.00	0	2000	
B	11	1	6	123.151	ppb	123.151	15.05	1233	2000	
Na	23	1	45	34507.262	ppb	34507.262	0.33	66579501	2000	>LDR
Na	23	2	45	34684.692	ppb	34684.692	0.87	5226651	400000	
Mg	24	2	45	8198.399	ppb	8198.399	0.22	563186	400000	
Al	27	2	45	8.459	ppb	8.459	26.69	187	400000	
K	39	1	45	190.438	ppb	190.438	20.03	7604748	400000	
K	39	2	45	1819.079	ppb	1819.079	4.02	101757	400000	
Ca	40	1	45	30688.341	ppb	30688.341	0.51	89681582	400000	
Ca	44	2	45	23650.410	ppb	23650.410	1.99	68799	400000	
Ti	47	2	45	-0.009	ppb	-0.009	-3265.21	3	4000	
V	51	2	72	1.369	ppb	1.369	20.57	3367	2000	
Cr	52	2	72	39.135	ppb	39.135	1.07	39200	5000	
Mn	55	2	72	26553.877	ppb	26553.877	0.29	10887284	10000	
Fe	57	2	72	11.264	ppb	11.264	24.64	283	400000	
Co	59	2	72	-0.030	ppb	-0.030	-419.68	987	2000	
Ni	60	2	72	0.315	ppb	0.315	15.49	223	5000	
Cu	63	2	72	-0.008	ppb	-0.008	-769.96	823	5000	
Zn	66	2	72	3.856	ppb	3.856	7.24	887	5000	
As	75	2	72	0.188	ppb	0.188	72.77	52	2000	
Se	78	1	72	0.634	ppb	0.634	14.13	103	2000	
Sr	88	2	72	165.541	ppb	165.541	1.54	88082	4000	
Zr	90	2	72	25.462	ppb	25.462	79.37	70	1000	
Nb	93	2	72	-0.215	ppb	-0.215	-7.10	590	200	
Mo	95	2	115	-0.037	ppb	-0.037	-98.90	30	2000	
Pd	105	2	115	0.008	ppb	0.008	60.48	13	100	
Ag	107	2	115	0.006	ppb	0.006	128.06	23	100	
Cd	111	2	115	-0.001	ppb	-0.001	-2439.48	7	2000	
Sn	120	2	115	0.009	ppb	0.009	702.65	173	2000	
Sb	121	2	115	0.014	ppb	0.014	82.86	63	1000	
Ba	137	2	115	12.232	ppb	12.232	1.79	4167	5000	
W	182	2	165	0.014	ppb	0.014	214.48	477	100	
Pt	195	2	165	0.002	ppb	0.002	86.60	7	100	
Tl	205	2	165	-0.007	ppb	-0.007	-70.97	150	2000	
Pb	208	2	165	-0.001	ppb	-0.001	-667.48	577	5000	
Th	232	2	165	0.001	ppb	0.001	176.01	653	2000	
U	238	2	165	0.571	ppb	0.571	2.74	6919	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	493974	0.38	563298	87.69	60	120	
Sc (IS)	45	1	HMI H2	13631144	0.16	13713757	99.40	60	120	
Sc (IS)	45	2	HMI He	624785	0.34	592502	105.45	60	120	
Sc (IS)	45	3	No Gas	46656603	0.68	49282939	94.67	60	120	
Ge Internal Standard	72	1	HMI H2	5916153	0.65	5896972	100.33	60	120	
Ge Internal Standard	72	2	HMI He	840435	0.27	792400	106.06	60	120	
In Internal Standard	115	2	HMI He	3557675	1.04	3330695	106.81	60	120	
Ho-165	165	2	HMI He	16146459	0.14	15553691	103.81	60	120	

Sample Report

Sample Table

Sample Name	280-123045-A-8-B
Data File Name	182SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T21:11:58-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456747 6020a
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-27.928	ppb	-27.928	-24.70	64459	500000	
Li	7	2	45	-52.872	ppb	-52.872	-34.10	3337	500000	
Li	7	3	45	-19.735	ppb	-19.735	-18.21	5269757	50000	
Be	9	1	6	-0.049	ppb	-0.049	0.00	0	2000	
B	11	1	6	47.843	ppb	47.843	10.51	757	2000	
Na	23	1	45	18135.510	ppb	18135.510	0.81	35285035	2000	>LDR
Na	23	2	45	18192.894	ppb	18192.894	1.48	2813850	400000	
Mg	24	2	45	9761.869	ppb	9761.869	0.77	687504	400000	
Al	27	2	45	66.785	ppb	66.785	3.74	1287	400000	
K	39	1	45	-613.750	ppb	-613.750	-4.96	6347227	400000	
K	39	2	45	1167.594	ppb	1167.594	1.87	75809	400000	
Ca	40	1	45	35978.544	ppb	35978.544	0.77	105904032	400000	
Ca	44	2	45	27567.836	ppb	27567.836	1.96	82211	400000	
Ti	47	2	45	9.358	ppb	9.358	115.18	187	4000	
V	51	2	72	4.635	ppb	4.635	2.04	6045	2000	
Cr	52	2	72	47.206	ppb	47.206	2.43	48438	5000	
Mn	55	2	72	10060.103	ppb	10060.103	0.79	4228480	10000	
Fe	57	2	72	110.399	ppb	110.399	5.34	2177	400000	
Co	59	2	72	-0.007	ppb	-0.007	-192.95	1053	2000	
Ni	60	2	72	0.290	ppb	0.290	42.30	217	5000	
Cu	63	2	72	0.713	ppb	0.713	9.91	1850	5000	
Zn	66	2	72	4.553	ppb	4.553	13.72	1057	5000	
As	75	2	72	0.421	ppb	0.421	19.78	91	2000	
Se	78	1	72	0.484	ppb	0.484	39.41	83	2000	
Sr	88	2	72	184.110	ppb	184.110	1.15	100423	4000	
Zr	90	2	72	149.153	ppb	149.153	28.12	297	1000	
Nb	93	2	72	-0.259	ppb	-0.259	-38.79	543	200	
Mo	95	2	115	0.078	ppb	0.078	53.81	117	2000	
Pd	105	2	115	0.005	ppb	0.005	157.43	10	100	
Ag	107	2	115	0.004	ppb	0.004	122.92	17	100	
Cd	111	2	115	-0.002	ppb	-0.002	-1667.64	7	2000	
Sn	120	2	115	0.203	ppb	0.203	95.34	370	2000	
Sb	121	2	115	-0.018	ppb	-0.018	-65.77	33	1000	
Ba	137	2	115	9.439	ppb	9.439	1.09	3294	5000	
W	182	2	165	0.025	ppb	0.025	53.65	523	100	
Pt	195	2	165	0.000	ppb	0.000	#DIV/0!	0	100	
Tl	205	2	165	0.001	ppb	0.001	750.02	213	2000	
Pb	208	2	165	0.029	ppb	0.029	32.54	873	5000	
Th	232	2	165	-0.002	ppb	-0.002	-341.10	627	2000	
U	238	2	165	0.290	ppb	0.290	5.27	3581	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	503853	0.36	563298	89.45	60	120	
Sc (IS)	45	1	HMI H2	13730753	0.19	13713757	100.12	60	120	
Sc (IS)	45	2	HMI He	640604	1.15	592502	108.12	60	120	
Sc (IS)	45	3	No Gas	48114689	0.70	49282939	97.63	60	120	
Ge Internal Standard	72	1	HMI H2	5948473	1.41	5896972	100.87	60	120	
Ge Internal Standard	72	2	HMI He	861568	0.39	792400	108.73	60	120	
In Internal Standard	115	2	HMI He	3625420	1.05	3330695	108.85	60	120	
Ho-165	165	2	HMI He	16342081	0.54	15553691	105.07	60	120	

Sample Report

Sample Table

Sample Name	280-123045-A-9-B
Data File Name	183SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T21:15:49-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456747 6020a
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-24.613	ppb	-24.613	-16.30	65745	500000	
Li	7	2	45	-36.558	ppb	-36.558	-48.60	3524	500000	
Li	7	3	45	-14.023	ppb	-14.023	-7.62	5376758	50000	
Be	9	1	6	-0.049	ppb	-0.049	0.00	0	2000	
B	11	1	6	64.219	ppb	64.219	13.79	880	2000	
Na	23	1	45	12860.956	ppb	12860.956	0.46	25291049	2000	>LDR
Na	23	2	45	13394.465	ppb	13394.465	1.12	2062931	400000	
Mg	24	2	45	8026.975	ppb	8026.975	0.29	562450	400000	
Al	27	2	45	13.631	ppb	13.631	33.46	287	400000	
K	39	1	45	232.237	ppb	232.237	5.89	7804356	400000	
K	39	2	45	1839.327	ppb	1839.327	0.76	104680	400000	
Ca	40	1	45	30553.723	ppb	30553.723	0.55	90822889	400000	
Ca	44	2	45	23774.725	ppb	23774.725	2.46	70540	400000	
Ti	47	2	45	-0.014	ppb	-0.014	-2190.80	3	4000	
V	51	2	72	3.742	ppb	3.742	10.43	5341	2000	
Cr	52	2	72	114.721	ppb	114.721	1.72	117550	5000	
Mn	55	2	72	7749.891	ppb	7749.891	0.40	3260597	10000	
Fe	57	2	72	33.103	ppb	33.103	2.29	707	400000	
Co	59	2	72	0.021	ppb	0.021	377.24	1103	2000	
Ni	60	2	72	0.477	ppb	0.477	22.25	310	5000	
Cu	63	2	72	0.036	ppb	0.036	240.20	907	5000	
Zn	66	2	72	5.181	ppb	5.181	7.35	1190	5000	
As	75	2	72	0.698	ppb	0.698	21.30	135	2000	
Se	78	1	72	0.796	ppb	0.796	14.86	127	2000	
Sr	88	2	72	164.057	ppb	164.057	0.95	89572	4000	
Zr	90	2	72	51.925	ppb	51.925	38.00	120	1000	
Nb	93	2	72	-0.348	ppb	-0.348	-15.48	420	200	
Mo	95	2	115	0.124	ppb	0.124	37.00	150	2000	
Pd	105	2	115	0.005	ppb	0.005	2.08	10	100	
Ag	107	2	115	0.002	ppb	0.002	250.68	13	100	
Cd	111	2	115	-0.011	ppb	-0.011	-151.08	3	2000	
Sn	120	2	115	0.456	ppb	0.456	19.16	620	2000	
Sb	121	2	115	0.045	ppb	0.045	29.38	93	1000	
Ba	137	2	115	13.687	ppb	13.687	3.45	4724	5000	
W	182	2	165	0.048	ppb	0.048	36.09	600	100	
Pt	195	2	165	0.001	ppb	0.001	173.21	3	100	
Tl	205	2	165	-0.002	ppb	-0.002	-239.87	187	2000	
Pb	208	2	165	0.038	ppb	0.038	31.66	947	5000	
Th	232	2	165	-0.011	ppb	-0.011	-98.27	520	2000	
U	238	2	165	0.201	ppb	0.201	2.14	2470	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	512240	0.08	563298	90.94	60	120	
Sc (IS)	45	1	HMI H2	13865432	0.37	13713757	101.11	60	120	
Sc (IS)	45	2	HMI He	637305	0.79	592502	107.56	60	120	
Sc (IS)	45	3	No Gas	48212939	0.28	49282939	97.83	60	120	
Ge Internal Standard	72	1	HMI H2	6007928	0.93	5896972	101.88	60	120	
Ge Internal Standard	72	2	HMI He	862383	0.12	792400	108.83	60	120	
In Internal Standard	115	2	HMI He	3610229	1.32	3330695	108.39	60	120	
Ho-165	165	2	HMI He	16221770	0.50	15553691	104.30	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5688510
Data File Name	184_CCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T21:19:43-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	76.139	ppb	4.272	87899	100	76.1	90	110	>+\-10%
Li	7	2	45	57.296	ppb	35.738	4731	100	57.3	90	110	>+\-10%
Li	7	3	45	84.414	ppb	2.073	7070161	100	84.4	90	110	>+\-10%
Be	9	1	6	48.087	ppb	4.921	9610	50	96.2	90	110	
B	11	1	6	29.822	ppb	42.028	690	50	59.6	90	110	>+\-10%
Na	23	1	45	1013.948	ppb	0.440	2122872	1000	101.4	90	110	
Na	23	2	45	963.335	ppb	0.535	156079	1000	96.3	90	110	
Mg	24	2	45	951.044	ppb	2.303	67323	1000	95.1	90	110	
Al	27	2	45	988.257	ppb	3.318	18666	1000	98.8	90	110	
K	39	1	45	805.531	ppb	5.347	8981309	1000	80.6	90	110	>+\-10%
K	39	2	45	964.215	ppb	1.496	67167	1000	96.4	90	110	
Ca	40	1	45	1016.478	ppb	0.464	3140195	1000	101.6	90	110	
Ca	44	2	45	1020.498	ppb	11.566	3094	1000	102.0	90	110	
Ti	47	2	45	49.988	ppb	10.730	987	50	100.0	90	110	
V	51	2	72	49.766	ppb	2.010	42212	50	99.5	90	110	
Cr	52	2	72	48.752	ppb	0.932	50398	50	97.5	90	110	
Mn	55	2	72	49.398	ppb	1.783	21053	50	98.8	90	110	
Fe	57	2	72	983.142	ppb	1.649	18926	1000	98.3	90	110	
Co	59	2	72	47.723	ppb	0.915	86649	50	95.4	90	110	
Ni	60	2	72	48.424	ppb	1.070	24321	50	96.8	90	110	
Cu	63	2	72	47.196	ppb	1.527	67246	50	94.4	90	110	
Zn	66	2	72	47.494	ppb	0.344	10207	50	95.0	90	110	
As	75	2	72	48.512	ppb	1.294	7841	50	97.0	90	110	
Se	78	1	72	49.760	ppb	2.994	7085	50	99.5	90	110	
Sr	88	2	72	99.109	ppb	2.520	54482	100	99.1	90	110	
Zr	90	2	72	85.931	ppb	27.798	183	50	171.9	90	110	>+\-10%
Nb	93	2	72	94.178	ppb	1.486	133606	100	94.2	90	110	
Mo	95	2	115	48.564	ppb	2.215	36351	50	97.1	90	110	
Pd	105	2	115	48.935	ppb	1.475	60786	50	97.9	90	110	
Ag	107	2	115	47.501	ppb	1.068	125380	50	95.0	90	110	
Cd	111	2	115	47.874	ppb	1.202	16981	50	95.7	90	110	
Sn	120	2	115	48.279	ppb	2.480	48649	50	96.6	90	110	
Sb	121	2	115	48.683	ppb	1.420	46853	50	97.4	90	110	
Ba	137	2	115	48.461	ppb	2.570	16661	50	96.9	90	110	
W	182	2	165	47.762	ppb	0.126	169559	50	95.5	90	110	
Pt	195	2	165	47.329	ppb	0.473	130566	50	94.7	90	110	
Tl	205	2	165	48.267	ppb	0.226	339312	50	96.5	90	110	
Pb	208	2	165	48.841	ppb	0.428	463513	50	97.7	90	110	
Th	232	2	165	47.854	ppb	0.683	577924	50	95.7	90	110	
U	238	2	165	48.109	ppb	1.160	586342	50	96.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	545941	0.27	563298	96.92	60	120	
Sc (IS)	45	1	HMI H2	14232768	0.46	13713757	103.78	60	120	
Sc (IS)	45	2	HMI He	643047	0.71	592502	108.53	60	120	
Sc (IS)	45	3	No Gas	48477704	0.63	49282939	98.37	60	120	
Ge Internal Standard	72	1	HMI H2	6151776	0.14	5896972	104.32	60	120	
Ge Internal Standard	72	2	HMI He	868212	0.76	792400	109.57	60	120	
In Internal Standard	115	2	HMI He	3636186	0.99	3330695	109.17	60	120	
Ho-165	165	2	HMI He	16359074	1.15	15553691	105.18	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5688508
Data File Name	185_CCB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T21:23:34-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-12.256	ppb	-18.7	5360524	10	
Be	9	1	6	0.002	ppb	4876.7	10	0.5	
B	11	1	6	-20.753	ppb	-45.2	320	0.5	
Na	23	1	45	15.048	ppb	9.0	109625	25	
Na	23	2	45	8.452	ppb	40.3	7882	25	
Mg	24	2	45	0.769	ppb	30.6	147	25	
Al	27	2	45	-0.084	ppb	-1133.1	30	15	
K	39	1	45	490.497	ppb	7.7	8203319	50	>RL
K	39	2	45	-13.136	ppb	-66.9	23363	50	
Ca	40	1	45	0.710	ppb	33.2	40914	50	
Ca	44	2	45	8.650	ppb	93.9	63	25	
Ti	47	2	45	0.168	ppb	181.5	7	0.5	
V	51	2	72	0.746	ppb	25.6	2867	1	
Cr	52	2	72	0.021	ppb	348.9	203	1	
Mn	55	2	72	0.580	ppb	20.5	363	0.5	>RL
Fe	57	2	72	4.677	ppb	88.5	160	25	
Co	59	2	72	0.010	ppb	434.7	1050	0.5	
Ni	60	2	72	0.034	ppb	36.0	87	1	
Cu	63	2	72	0.121	ppb	103.0	993	1	
Zn	66	2	72	0.237	ppb	128.7	140	5	
As	75	2	72	0.034	ppb	184.2	28	1	
Se	78	1	72	0.046	ppb	178.2	23	1	
Sr	88	2	72	0.105	ppb	1.3	80	0.5	
Zr	90	2	72	1.175	ppb	286.4	27	1	>RL
Nb	93	2	72	3.072	ppb	2.7	5044	2	>RL
Mo	95	2	115	0.009	ppb	493.7	63	0.5	
Pd	105	2	115	0.049	ppb	47.9	63	1	
Ag	107	2	115	0.017	ppb	61.6	50	1	
Cd	111	2	115	-0.011	ppb	-154.3	3	0.5	
Sn	120	2	115	0.177	ppb	45.9	337	1	
Sb	121	2	115	0.075	ppb	27.6	120	0.6	
Ba	137	2	115	-0.062	ppb	-47.6	50	0.5	
W	182	2	165	0.075	ppb	18.8	687	1	
Pt	195	2	165	0.004	ppb	100.6	10	1	
Tl	205	2	165	0.020	ppb	35.4	337	0.1	
Pb	208	2	165	0.070	ppb	10.2	1237	0.5	
Th	232	2	165	0.242	ppb	6.0	3514	1	
U	238	2	165	0.017	ppb	24.8	243	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	537455	0.73	563298	95.41	60	120	
Sc (IS)	45	1	HMI H2	13820471	0.71	13713757	100.78	60	120	
Sc (IS)	45	2	HMI He	620554	0.56	592502	104.73	60	120	
Sc (IS)	45	3	No Gas	47805109	0.93	49282939	97.00	60	120	
Ge Internal Standard	72	1	HMI H2	5988475	0.73	5896972	101.55	60	120	
Ge Internal Standard	72	2	HMI He	835772	0.86	792400	105.47	60	120	
In Internal Standard	115	2	HMI He	3547768	0.60	3330695	106.52	60	120	
Ho-165	165	2	HMI He	16070066	0.82	15553691	103.32	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5688512
Data File Name	186LCCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T21:27:28-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	0.406	ppb	207.464	5485174	50	0.8	70	130	>+/-30%
Be	9	1	6	1.150	ppb	28.312	230	1	115.0	70	130	
Na	23	2	45	54.249	ppb	3.569	14648	50	108.5	70	130	
Mg	24	2	45	47.714	ppb	10.196	3331	50	95.4	70	130	
Al	27	2	45	58.180	ppb	17.338	1083	30	193.9	70	130	>+/-30%
K	39	2	45	95.336	ppb	5.143	27807	100	95.3	70	130	
Ca	44	2	45	54.088	ppb	65.335	193	50	108.2	70	130	
V	51	2	72	5.605	ppb	5.979	6545	5	112.1	70	130	
Cr	52	2	72	2.050	ppb	10.183	2194	2	102.5	70	130	
Mn	55	2	72	1.688	ppb	7.772	807	1	168.8	70	130	>+/-30%
Fe	57	2	72	49.807	ppb	5.107	983	50	99.6	70	130	
Co	59	2	72	0.970	ppb	1.922	2680	1	97.0	70	130	
Ni	60	2	72	1.538	ppb	8.685	803	1.5	102.5	70	130	
Cu	63	2	72	2.175	ppb	2.769	3737	2	108.8	70	130	
Zn	66	2	72	9.987	ppb	6.190	2117	10	99.9	70	130	
As	75	2	72	4.975	ppb	18.121	786	5	99.5	70	130	
Se	78	1	72	4.998	ppb	11.344	699	5	100.0	70	130	
Sr	88	2	72	1.003	ppb	26.301	550	1	100.3	70	130	
Zr	90	2	72	8.926	ppb	110.633	40	0.5	1785.3	70	130	>+/-30%
Nb	93	2	72	1.307	ppb	18.985	2624	2	65.3	70	130	>+/-30%
Mo	95	2	115	2.076	ppb	2.638	1573	2	103.8	70	130	
Pd	105	2	115	0.013	ppb	105.526	20	1	1.3	70	130	>+/-30%
Ag	107	2	115	4.878	ppb	3.851	12586	5	97.6	70	130	
Cd	111	2	115	0.971	ppb	11.243	343	1	97.1	70	130	
Sn	120	2	115	9.926	ppb	3.050	9904	10	99.3	70	130	
Sb	121	2	115	2.098	ppb	12.028	2020	2	104.9	70	130	
Ba	137	2	115	0.706	ppb	26.938	307	1	70.6	70	130	
W	182	2	165	4.825	ppb	4.600	17098	1	482.5	70	130	>+/-30%
Pt	195	2	165	0.000	ppb	#DIV/0!	0	1	0.0	70	130	>+/-30%
Tl	205	2	165	1.020	ppb	6.148	7196	1	102.0	70	130	
Pb	208	2	165	1.115	ppb	3.809	10892	1	111.5	70	130	
Th	232	2	165	1.663	ppb	1.195	20216	2	83.2	70	130	
U	238	2	165	1.015	ppb	4.302	12113	1	101.5	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	524684	0.30	563298	93.15	60	120	
Sc (IS)	45	1	HMI H2	13652335	0.78	13713757	99.55	60	120	
Sc (IS)	45	2	HMI He	617109	0.45	592502	104.15	60	120	
Sc (IS)	45	3	No Gas	47061553	0.57	49282939	95.49	60	120	
Ge Internal Standard	72	1	HMI H2	5920047	1.09	5896972	100.39	60	120	
Ge Internal Standard	72	2	HMI He	827435	0.47	792400	104.42	60	120	
In Internal Standard	115	2	HMI He	3553413	0.92	3330695	106.69	60	120	
Ho-165	165	2	HMI He	15960370	0.86	15553691	102.61	60	120	

Sample Report

Sample Table

Sample Name	280-123045-A-10-B
Data File Name	187SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T21:31:23-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456747 6020a
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-31.694	ppb	-31.694	-31.57	60282	500000	
Li	7	2	45	-43.113	ppb	-43.113	-11.56	3224	500000	
Li	7	3	45	-20.570	ppb	-20.570	-13.40	4940019	50000	
Be	9	1	6	-0.049	ppb	-0.049	0.00	0	2000	
B	11	1	6	72.824	ppb	72.824	38.66	870	2000	
Na	23	1	45	24588.704	ppb	24588.704	0.29	45227708	2000	>LDR
Na	23	2	45	25131.909	ppb	25131.909	0.37	3619729	400000	
Mg	24	2	45	15362.519	ppb	15362.519	0.69	1008089	400000	
Al	27	2	45	102.686	ppb	102.686	8.51	1827	400000	
K	39	1	45	-401.289	ppb	-401.289	-11.74	6332545	400000	
K	39	2	45	1271.263	ppb	1271.263	1.14	74867	400000	
Ca	40	1	45	59661.400	ppb	59661.400	0.44	166097338	400000	
Ca	44	2	45	46201.712	ppb	46201.712	0.58	128366	400000	
Ti	47	2	45	5.842	ppb	5.842	40.79	110	4000	
V	51	2	72	0.140	ppb	0.140	152.65	2310	2000	
Cr	52	2	72	255.797	ppb	255.797	0.15	244160	5000	
Mn	55	2	72	27370.676	ppb	27370.676	0.19	10736452	10000	
Fe	57	2	72	82.888	ppb	82.888	17.29	1543	400000	
Co	59	2	72	0.108	ppb	0.108	49.85	1173	2000	
Ni	60	2	72	0.379	ppb	0.379	13.95	243	5000	
Cu	63	2	72	0.109	ppb	0.109	42.22	940	5000	
Zn	66	2	72	3.695	ppb	3.695	11.69	817	5000	
As	75	2	72	0.041	ppb	0.041	100.80	28	2000	
Se	78	1	72	0.609	ppb	0.609	45.83	95	2000	
Sr	88	2	72	317.898	ppb	317.898	1.68	161798	4000	
Zr	90	2	72	60.692	ppb	60.692	50.11	127	1000	
Nb	93	2	72	0.924	ppb	0.924	28.68	2050	200	
Mo	95	2	115	-0.045	ppb	-0.045	-80.58	23	2000	
Pd	105	2	115	0.009	ppb	0.009	154.30	13	100	
Ag	107	2	115	0.001	ppb	0.001	316.08	10	100	
Cd	111	2	115	-0.021	ppb	-0.021	0.00	0	2000	
Sn	120	2	115	0.021	ppb	0.021	105.55	177	2000	
Sb	121	2	115	-0.009	ppb	-0.009	-472.50	40	1000	
Ba	137	2	115	98.765	ppb	98.765	0.52	31768	5000	
W	182	2	165	0.032	ppb	0.032	63.60	523	100	
Pt	195	2	165	0.003	ppb	0.003	173.21	7	100	
Tl	205	2	165	-0.002	ppb	-0.002	-445.81	180	2000	
Pb	208	2	165	0.024	ppb	0.024	61.81	787	5000	
Th	232	2	165	0.246	ppb	0.246	10.99	3467	2000	
U	238	2	165	1.146	ppb	1.146	2.26	13381	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	475100	0.18	563298	84.34	60	120	
Sc (IS)	45	1	HMI H2	12988761	0.49	13713757	94.71	60	120	
Sc (IS)	45	2	HMI He	596881	0.41	592502	100.74	60	120	
Sc (IS)	45	3	No Gas	45223213	0.44	49282939	91.76	60	120	
Ge Internal Standard	72	1	HMI H2	5644250	0.76	5896972	95.71	60	120	
Ge Internal Standard	72	2	HMI He	804058	0.32	792400	101.47	60	120	
In Internal Standard	115	2	HMI He	3409799	0.83	3330695	102.37	60	120	
Ho-165	165	2	HMI He	15626840	0.58	15553691	100.47	60	120	

Sample Report

Sample Table

Sample Name	280-123045-A-11-B
Data File Name	188SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T21:35:14-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456747 6020a
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-34.090	ppb	-34.090	-7.12	61553	500000	
Li	7	2	45	-33.850	ppb	-33.850	-66.78	3431	500000	
Li	7	3	45	-19.831	ppb	-19.831	-14.86	5062691	50000	
Be	9	1	6	-0.049	ppb	-0.049	0.00	0	2000	
B	11	1	6	78.677	ppb	78.677	15.77	927	2000	
Na	23	1	45	60178.416	ppb	60178.416	0.74	113752792	2000	>LDR
Na	23	2	45	60311.307	ppb	60311.307	1.42	8937897	400000	
Mg	24	2	45	3899.647	ppb	3899.647	0.57	263655	400000	
Al	27	2	45	25.294	ppb	25.294	16.44	487	400000	
K	39	1	45	-53.153	ppb	-53.153	-52.11	7067239	400000	
K	39	2	45	1630.187	ppb	1630.187	2.91	92202	400000	
Ca	40	1	45	14592.543	ppb	14592.543	0.43	41820571	400000	
Ca	44	2	45	11324.852	ppb	11324.852	3.57	32434	400000	
Ti	47	2	45	1.412	ppb	1.412	38.01	30	4000	
V	51	2	72	1.766	ppb	1.766	15.95	3597	2000	
Cr	52	2	72	103.798	ppb	103.798	0.90	101488	5000	
Mn	55	2	72	32006.017	ppb	32006.017	0.56	12846546	10000	
Fe	57	2	72	56.364	ppb	56.364	11.26	1097	400000	
Co	59	2	72	0.002	ppb	0.002	5209.88	1020	2000	
Ni	60	2	72	0.430	ppb	0.430	15.06	273	5000	
Cu	63	2	72	0.503	ppb	0.503	22.31	1487	5000	
Zn	66	2	72	4.080	ppb	4.080	1.63	913	5000	
As	75	2	72	0.148	ppb	0.148	30.77	45	2000	
Se	78	1	72	0.641	ppb	0.641	42.08	101	2000	
Sr	88	2	72	78.546	ppb	78.546	0.87	40927	4000	
Zr	90	2	72	252.671	ppb	252.671	7.20	463	1000	
Nb	93	2	72	0.756	ppb	0.756	17.94	1874	200	
Mo	95	2	115	-0.027	ppb	-0.027	-120.05	37	2000	
Pd	105	2	115	0.014	ppb	0.014	0.81	20	100	
Ag	107	2	115	0.008	ppb	0.008	106.65	27	100	
Cd	111	2	115	-0.011	ppb	-0.011	-156.01	3	2000	
Sn	120	2	115	0.756	ppb	0.756	17.33	893	2000	
Sb	121	2	115	0.037	ppb	0.037	73.95	83	1000	
Ba	137	2	115	27.759	ppb	27.759	4.99	9223	5000	
W	182	2	165	0.056	ppb	0.056	7.25	617	100	
Pt	195	2	165	0.002	ppb	0.002	173.21	7	100	
Tl	205	2	165	-0.006	ppb	-0.006	-52.83	160	2000	
Pb	208	2	165	0.002	ppb	0.002	356.78	597	5000	
Th	232	2	165	0.089	ppb	0.089	16.85	1684	2000	
U	238	2	165	0.372	ppb	0.372	2.68	4471	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	485418	0.26	563298	86.17	60	120	
Sc (IS)	45	1	HMI H2	13361723	0.82	13713757	97.43	60	120	
Sc (IS)	45	2	HMI He	614825	0.90	592502	103.77	60	120	
Sc (IS)	45	3	No Gas	46236663	0.75	49282939	93.82	60	120	
Ge Internal Standard	72	1	HMI H2	5785521	1.02	5896972	98.11	60	120	
Ge Internal Standard	72	2	HMI He	822752	0.25	792400	103.83	60	120	
In Internal Standard	115	2	HMI He	3502566	0.66	3330695	105.16	60	120	
Ho-165	165	2	HMI He	15965627	0.50	15553691	102.65	60	120	

Sample Report

Sample Table

Sample Name	280-123045-A-12-B
Data File Name	189SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T21:39:07-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456747 6020a
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-29.985	ppb	-29.985	-12.63	63592	500000	
Li	7	2	45	-59.424	ppb	-59.424	-27.52	3240	500000	
Li	7	3	45	-20.623	ppb	-20.623	-11.08	5260025	50000	
Be	9	1	6	-0.012	ppb	-0.012	-509.73	7	2000	
B	11	1	6	41.790	ppb	41.790	24.14	710	2000	
Na	23	1	45	22957.421	ppb	22957.421	0.71	44323296	2000	>LDR
Na	23	2	45	23037.176	ppb	23037.176	1.45	3543839	400000	
Mg	24	2	45	8554.377	ppb	8554.377	1.32	599482	400000	
Al	27	2	45	15.575	ppb	15.575	8.18	323	400000	
K	39	1	45	-103.258	ppb	-103.258	-38.93	7128892	400000	
K	39	2	45	1541.303	ppb	1541.303	1.95	91715	400000	
Ca	40	1	45	30876.828	ppb	30876.828	0.30	90235575	400000	
Ca	44	2	45	23683.207	ppb	23683.207	2.43	70286	400000	
Ti	47	2	45	0.673	ppb	0.673	116.77	17	4000	
V	51	2	72	2.214	ppb	2.214	7.83	4047	2000	
Cr	52	2	72	5.530	ppb	5.530	4.63	5735	5000	
Mn	55	2	72	1270.173	ppb	1270.173	1.05	524326	10000	
Fe	57	2	72	27.048	ppb	27.048	14.49	580	400000	
Co	59	2	72	-0.053	ppb	-0.053	-131.78	953	2000	
Ni	60	2	72	0.394	ppb	0.394	48.29	263	5000	
Cu	63	2	72	0.898	ppb	0.898	2.78	2070	5000	
Zn	66	2	72	4.118	ppb	4.118	11.95	947	5000	
As	75	2	72	0.432	ppb	0.432	36.55	91	2000	
Se	78	1	72	0.000	ppb	0.000	27866.02	16	2000	
Sr	88	2	72	153.152	ppb	153.152	0.95	82026	4000	
Zr	90	2	72	53.231	ppb	53.231	58.72	120	1000	
Nb	93	2	72	0.253	ppb	0.253	11.02	1237	200	
Mo	95	2	115	0.016	ppb	0.016	356.13	70	2000	
Pd	105	2	115	-0.003	ppb	-0.003	0.00	0	100	
Ag	107	2	115	0.002	ppb	0.002	250.99	13	100	
Cd	111	2	115	-0.002	ppb	-0.002	-992.43	7	2000	
Sn	120	2	115	0.085	ppb	0.085	65.76	250	2000	
Sb	121	2	115	0.010	ppb	0.010	365.20	60	1000	
Ba	137	2	115	13.097	ppb	13.097	8.46	4508	5000	
W	182	2	165	0.024	ppb	0.024	118.13	517	100	
Pt	195	2	165	0.000	ppb	0.000	#DIV/0!	0	100	
Tl	205	2	165	-0.002	ppb	-0.002	-236.70	187	2000	
Pb	208	2	165	0.031	ppb	0.031	43.45	887	5000	
Th	232	2	165	0.019	ppb	0.019	22.54	880	2000	
U	238	2	165	0.325	ppb	0.325	5.25	3984	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	499430	0.42	563298	88.66	60	120	
Sc (IS)	45	1	HMI H2	13631716	0.29	13713757	99.40	60	120	
Sc (IS)	45	2	HMI He	637404	0.38	592502	107.58	60	120	
Sc (IS)	45	3	No Gas	48160234	0.25	49282939	97.72	60	120	
Ge Internal Standard	72	1	HMI H2	5889614	0.13	5896972	99.88	60	120	
Ge Internal Standard	72	2	HMI He	845966	0.21	792400	106.76	60	120	
In Internal Standard	115	2	HMI He	3599044	1.30	3330695	108.06	60	120	
Ho-165	165	2	HMI He	16243237	0.71	15553691	104.43	60	120	

Sample Report

Sample Table

Sample Name	280-123045-A-13-B
Data File Name	190SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T21:42:59-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456747 6020a
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-29.505	ppb	-29.505	-33.38	65004	500000	
Li	7	2	45	-52.282	ppb	-52.282	-27.09	3341	500000	
Li	7	3	45	-18.798	ppb	-18.798	-20.71	5324658	50000	
Be	9	1	6	-0.049	ppb	-0.049	0.00	0	2000	
B	11	1	6	203.397	ppb	203.397	8.76	1817	2000	
Na	23	1	45	24439.269	ppb	24439.269	0.45	48156198	2000	>LDR
Na	23	2	45	24640.706	ppb	24640.706	0.10	3803298	400000	
Mg	24	2	45	2902.500	ppb	2902.500	0.53	204182	400000	
Al	27	2	45	20.102	ppb	20.102	36.63	410	400000	
K	39	1	45	58.621	ppb	58.621	52.35	7544598	400000	
K	39	2	45	1710.662	ppb	1710.662	2.43	99431	400000	
Ca	40	1	45	11287.193	ppb	11287.193	0.48	33694600	400000	
Ca	44	2	45	8396.468	ppb	8396.468	0.92	25032	400000	
Ti	47	2	45	0.497	ppb	0.497	157.51	13	4000	
V	51	2	72	5.809	ppb	5.809	4.28	6942	2000	
Cr	52	2	72	13.696	ppb	13.696	1.57	14114	5000	
Mn	55	2	72	10094.521	ppb	10094.521	0.33	4221107	10000	
Fe	57	2	72	42.864	ppb	42.864	15.29	887	400000	
Co	59	2	72	-0.009	ppb	-0.009	-1017.55	1043	2000	
Ni	60	2	72	0.340	ppb	0.340	46.63	240	5000	
Cu	63	2	72	0.554	ppb	0.554	15.89	1620	5000	
Zn	66	2	72	7.750	ppb	7.750	12.66	1724	5000	
As	75	2	72	0.609	ppb	0.609	11.14	120	2000	
Se	78	1	72	0.084	ppb	0.084	117.87	28	2000	
Sr	88	2	72	49.116	ppb	49.116	2.22	26669	4000	
Zr	90	2	72	30.208	ppb	30.208	83.63	80	1000	
Nb	93	2	72	0.009	ppb	0.009	1380.89	913	200	
Mo	95	2	115	0.168	ppb	0.168	39.64	183	2000	
Pd	105	2	115	0.000	ppb	0.000	-1722.89	3	100	
Ag	107	2	115	0.007	ppb	0.007	78.06	27	100	
Cd	111	2	115	-0.002	ppb	-0.002	-1925.68	7	2000	
Sn	120	2	115	0.126	ppb	0.126	52.29	293	2000	
Sb	121	2	115	0.020	ppb	0.020	53.17	70	1000	
Ba	137	2	115	26.815	ppb	26.815	2.06	9204	5000	
W	182	2	165	0.009	ppb	0.009	288.75	463	100	
Pt	195	2	165	0.000	ppb	0.000	#DIV/0!	0	100	
Tl	205	2	165	0.004	ppb	0.004	95.94	227	2000	
Pb	208	2	165	0.035	ppb	0.035	42.28	923	5000	
Th	232	2	165	0.013	ppb	0.013	54.80	810	2000	
U	238	2	165	0.112	ppb	0.112	7.19	1397	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	510823	0.36	563298	90.68	60	120	
Sc (IS)	45	1	HMI H2	13914148	0.15	13713757	101.46	60	120	
Sc (IS)	45	2	HMI He	639625	0.68	592502	107.95	60	120	
Sc (IS)	45	3	No Gas	48470686	0.66	49282939	98.35	60	120	
Ge Internal Standard	72	1	HMI H2	6003553	0.61	5896972	101.81	60	120	
Ge Internal Standard	72	2	HMI He	857119	0.52	792400	108.17	60	120	
In Internal Standard	115	2	HMI He	3617734	0.81	3330695	108.62	60	120	
Ho-165	165	2	HMI He	16247553	0.75	15553691	104.46	60	120	

Sample Report

Sample Table

Sample Name	280-123045-A-14-B
Data File Name	191SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T21:46:51-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456747 6020a
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-27.512	ppb	-27.512	-27.85	65292	500000	
Li	7	2	45	-28.536	ppb	-28.536	-69.99	3614	500000	
Li	7	3	45	-20.848	ppb	-20.848	-16.89	5296677	50000	
Be	9	1	6	-0.031	ppb	-0.031	-101.05	3	2000	
B	11	1	6	93.075	ppb	93.075	23.11	1067	2000	
Na	23	1	45	9907.258	ppb	9907.258	0.43	19537833	2000	
Na	23	2	45	10310.732	ppb	10310.732	0.59	1585902	400000	
Mg	24	2	45	5824.176	ppb	5824.176	0.33	407168	400000	
Al	27	2	45	396.080	ppb	396.080	4.00	7416	400000	
K	39	1	45	-939.419	ppb	-939.419	-1.68	5883558	400000	
K	39	2	45	944.417	ppb	944.417	1.46	65547	400000	
Ca	40	1	45	21901.681	ppb	21901.681	0.24	65237502	400000	
Ca	44	2	45	16947.889	ppb	16947.889	0.24	50183	400000	
Ti	47	2	45	26.405	ppb	26.405	9.53	517	4000	
V	51	2	72	9.813	ppb	9.813	4.01	10091	2000	
Cr	52	2	72	94.248	ppb	94.248	1.63	95874	5000	
Mn	55	2	72	4528.236	ppb	4528.236	1.31	1890797	10000	
Fe	57	2	72	787.749	ppb	787.749	1.76	14965	400000	
Co	59	2	72	0.429	ppb	0.429	14.25	1817	2000	
Ni	60	2	72	0.577	ppb	0.577	25.32	357	5000	
Cu	63	2	72	0.445	ppb	0.445	24.70	1467	5000	
Zn	66	2	72	5.525	ppb	5.525	5.47	1253	5000	
As	75	2	72	1.030	ppb	1.030	5.61	187	2000	
Se	78	1	72	0.404	ppb	0.404	33.35	72	2000	
Sr	88	2	72	115.458	ppb	115.458	0.78	62568	4000	
Zr	90	2	72	618.566	ppb	618.566	11.17	1143	1000	
Nb	93	2	72	-0.055	ppb	-0.055	-234.86	823	200	
Mo	95	2	115	0.436	ppb	0.436	20.73	383	2000	
Pd	105	2	115	0.010	ppb	0.010	88.24	17	100	
Ag	107	2	115	0.012	ppb	0.012	60.63	40	100	
Cd	111	2	115	-0.002	ppb	-0.002	-1771.81	7	2000	
Sn	120	2	115	0.098	ppb	0.098	113.06	267	2000	
Sb	121	2	115	-0.001	ppb	-0.001	-5704.45	50	1000	
Ba	137	2	115	21.473	ppb	21.473	2.92	7409	5000	
W	182	2	165	0.056	ppb	0.056	45.84	630	100	
Pt	195	2	165	0.001	ppb	0.001	173.21	3	100	
Tl	205	2	165	0.002	ppb	0.002	649.05	217	2000	
Pb	208	2	165	0.217	ppb	0.217	8.06	2634	5000	
Th	232	2	165	0.092	ppb	0.092	13.93	1757	2000	
U	238	2	165	0.072	ppb	0.072	15.98	920	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	508125	0.19	563298	90.21	60	120	
Sc (IS)	45	1	HMI H2	13891410	0.27	13713757	101.30	60	120	
Sc (IS)	45	2	HMI He	635798	0.30	592502	107.31	60	120	
Sc (IS)	45	3	No Gas	48529839	0.39	49282939	98.47	60	120	
Ge Internal Standard	72	1	HMI H2	5983948	0.37	5896972	101.47	60	120	
Ge Internal Standard	72	2	HMI He	855860	0.07	792400	108.01	60	120	
In Internal Standard	115	2	HMI He	3628941	1.01	3330695	108.95	60	120	
Ho-165	165	2	HMI He	16252107	0.19	15553691	104.49	60	120	

Sample Report

Sample Table

Sample Name	280-123045-A-15-B
Data File Name	192SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T21:50:44-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456747 6020a
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-31.473	ppb	-31.473	-10.84	64720	500000	
Li	7	2	45	-44.810	ppb	-44.810	-28.21	3464	500000	
Li	7	3	45	-18.496	ppb	-18.496	-20.22	5361033	50000	
Be	9	1	6	-0.031	ppb	-0.031	-98.09	3	2000	
B	11	1	6	173.494	ppb	173.494	2.14	1637	2000	
Na	23	1	45	4025.391	ppb	4025.391	0.80	8012068	2000	
Na	23	2	45	3867.283	ppb	3867.283	0.75	608078	400000	
Mg	24	2	45	1912.288	ppb	1912.288	1.04	135764	400000	
Al	27	2	45	8.280	ppb	8.280	66.14	190	400000	
K	39	1	45	-83.846	ppb	-83.846	-20.84	7320532	400000	
K	39	2	45	1559.689	ppb	1559.689	4.45	93657	400000	
Ca	40	1	45	10340.954	ppb	10340.954	0.14	30922491	400000	
Ca	44	2	45	8065.968	ppb	8065.968	0.82	24264	400000	
Ti	47	2	45	-0.184	ppb	-0.184	0.00	0	4000	
V	51	2	72	1.111	ppb	1.111	26.48	3247	2000	
Cr	52	2	72	25.952	ppb	25.952	2.39	26709	5000	
Mn	55	2	72	2.696	ppb	2.696	4.71	1263	10000	
Fe	57	2	72	23.870	ppb	23.870	14.21	530	400000	
Co	59	2	72	-0.029	ppb	-0.029	-190.33	1013	2000	
Ni	60	2	72	1.135	ppb	1.135	21.86	637	5000	
Cu	63	2	72	1.285	ppb	1.285	8.49	2649	5000	
Zn	66	2	72	61.876	ppb	61.876	1.78	13167	5000	
As	75	2	72	0.217	ppb	0.217	18.99	58	2000	
Se	78	1	72	0.168	ppb	0.168	117.37	40	2000	
Sr	88	2	72	50.513	ppb	50.513	1.97	27568	4000	
Zr	90	2	72	117.821	ppb	117.821	25.30	240	1000	
Nb	93	2	72	-0.214	ppb	-0.214	-29.23	607	200	
Mo	95	2	115	0.363	ppb	0.363	22.33	330	2000	
Pd	105	2	115	-0.003	ppb	-0.003	0.00	0	100	
Ag	107	2	115	0.010	ppb	0.010	21.89	33	100	
Cd	111	2	115	0.355	ppb	0.355	24.35	133	2000	
Sn	120	2	115	0.052	ppb	0.052	221.40	220	2000	
Sb	121	2	115	0.044	ppb	0.044	35.86	93	1000	
Ba	137	2	115	19.934	ppb	19.934	6.04	6912	5000	
W	182	2	165	0.038	ppb	0.038	124.95	570	100	
Pt	195	2	165	0.000	ppb	0.000	#DIV/0!	0	100	
Tl	205	2	165	-0.001	ppb	-0.001	-254.25	193	2000	
Pb	208	2	165	0.028	ppb	0.028	31.53	860	5000	
Th	232	2	165	-0.010	ppb	-0.010	-60.42	537	2000	
U	238	2	165	0.010	ppb	0.010	47.92	163	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	517763	0.02	563298	91.92	60	120	
Sc (IS)	45	1	HMI H2	13936418	0.13	13713757	101.62	60	120	
Sc (IS)	45	2	HMI He	645395	0.96	592502	108.93	60	120	
Sc (IS)	45	3	No Gas	48756781	0.98	49282939	98.93	60	120	
Ge Internal Standard	72	1	HMI H2	6064510	0.63	5896972	102.84	60	120	
Ge Internal Standard	72	2	HMI He	861507	0.67	792400	108.72	60	120	
In Internal Standard	115	2	HMI He	3644579	0.28	3330695	109.42	60	120	
Ho-165	165	2	HMI He	16319464	0.45	15553691	104.92	60	120	

Sample Report

Sample Table

Sample Name	280-123045-A-16-B
Data File Name	193SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T21:54:39-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456747 6020a
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-34.574	ppb	-34.574	-5.31	63448	500000	
Li	7	2	45	-58.769	ppb	-58.769	-29.61	3247	500000	
Li	7	3	45	-19.927	ppb	-19.927	-18.97	5227088	50000	
Be	9	1	6	-0.031	ppb	-0.031	-103.26	3	2000	
B	11	1	6	340.227	ppb	340.227	5.70	2687	2000	
Na	23	1	45	12368.590	ppb	12368.590	0.71	24199325	2000	>LDR
Na	23	2	45	12546.549	ppb	12546.549	1.68	1932502	400000	
Mg	24	2	45	12729.181	ppb	12729.181	0.47	891745	400000	
Al	27	2	45	26.647	ppb	26.647	10.96	530	400000	
K	39	1	45	797.394	ppb	797.394	3.50	8690791	400000	
K	39	2	45	2292.323	ppb	2292.323	1.94	124395	400000	
Ca	40	1	45	64838.392	ppb	64838.392	0.89	191687390	400000	
Ca	44	2	45	50084.015	ppb	50084.015	0.91	148552	400000	
Ti	47	2	45	1.356	ppb	1.356	37.93	30	4000	
V	51	2	72	1.626	ppb	1.626	18.22	3627	2000	
Cr	52	2	72	0.802	ppb	0.802	2.30	1000	5000	
Mn	55	2	72	219.449	ppb	219.449	0.27	91648	10000	
Fe	57	2	72	63.092	ppb	63.092	12.96	1267	400000	
Co	59	2	72	0.066	ppb	0.066	93.13	1173	2000	
Ni	60	2	72	1.206	ppb	1.206	10.20	667	5000	
Cu	63	2	72	1.152	ppb	1.152	4.20	2444	5000	
Zn	66	2	72	4.595	ppb	4.595	13.88	1057	5000	
As	75	2	72	4.459	ppb	4.459	10.16	731	2000	
Se	78	1	72	0.036	ppb	0.036	323.86	21	2000	
Sr	88	2	72	230.643	ppb	230.643	0.67	124816	4000	
Zr	90	2	72	124.563	ppb	124.563	43.89	250	1000	
Nb	93	2	72	-0.227	ppb	-0.227	-41.12	583	200	
Mo	95	2	115	0.637	ppb	0.637	27.59	530	2000	
Pd	105	2	115	0.003	ppb	0.003	376.13	7	100	
Ag	107	2	115	0.015	ppb	0.015	52.89	47	100	
Cd	111	2	115	0.027	ppb	0.027	162.86	17	2000	
Sn	120	2	115	0.268	ppb	0.268	13.87	433	2000	
Sb	121	2	115	0.517	ppb	0.517	14.75	543	1000	
Ba	137	2	115	110.884	ppb	110.884	1.17	37709	5000	
W	182	2	165	0.100	ppb	0.100	39.61	783	100	
Pt	195	2	165	0.005	ppb	0.005	43.16	13	100	
Tl	205	2	165	0.000	ppb	0.000	2031.51	203	2000	
Pb	208	2	165	0.084	ppb	0.084	10.12	1383	5000	
Th	232	2	165	-0.003	ppb	-0.003	-102.53	613	2000	
U	238	2	165	1.563	ppb	1.563	0.38	18958	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	500988	0.10	563298	88.94	60	120	
Sc (IS)	45	1	HMI H2	13793474	0.49	13713757	100.58	60	120	
Sc (IS)	45	2	HMI He	637206	0.34	592502	107.54	60	120	
Sc (IS)	45	3	No Gas	47753539	0.40	49282939	96.90	60	120	
Ge Internal Standard	72	1	HMI H2	6023440	0.29	5896972	102.14	60	120	
Ge Internal Standard	72	2	HMI He	854846	0.16	792400	107.88	60	120	
In Internal Standard	115	2	HMI He	3606178	0.86	3330695	108.27	60	120	
Ho-165	165	2	HMI He	16240651	0.17	15553691	104.42	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5688510
Data File Name	194_CCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T21:58:30-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	79.722	ppb	4.935	88369	100	79.7	90	110	>+\-10%
Li	7	2	45	51.203	ppb	43.418	4581	100	51.2	90	110	>+\-10%
Li	7	3	45	82.274	ppb	6.556	7031844	100	82.3	90	110	>+\-10%
Be	9	1	6	53.119	ppb	2.978	10501	50	106.2	90	110	
B	11	1	6	34.137	ppb	20.089	713	50	68.3	90	110	>+\-10%
Na	23	1	45	1064.290	ppb	0.896	2217768	1000	106.4	90	110	
Na	23	2	45	1001.552	ppb	1.447	159455	1000	100.2	90	110	
Mg	24	2	45	992.483	ppb	2.724	69151	1000	99.2	90	110	
Al	27	2	45	1036.308	ppb	1.950	19263	1000	103.6	90	110	
K	39	1	45	1159.036	ppb	3.371	9552538	1000	115.9	90	110	>+\-10%
K	39	2	45	1013.771	ppb	2.406	68253	1000	101.4	90	110	
Ca	40	1	45	1074.469	ppb	0.812	3307726	1000	107.4	90	110	
Ca	44	2	45	1047.375	ppb	13.706	3124	1000	104.7	90	110	
Ti	47	2	45	49.774	ppb	7.061	967	50	99.5	90	110	
V	51	2	72	52.613	ppb	1.769	43894	50	105.2	90	110	
Cr	52	2	72	51.414	ppb	1.164	52432	50	102.8	90	110	
Mn	55	2	72	53.090	ppb	1.185	22315	50	106.2	90	110	
Fe	57	2	72	1032.150	ppb	1.267	19601	1000	103.2	90	110	
Co	59	2	72	51.233	ppb	1.884	91699	50	102.5	90	110	
Ni	60	2	72	50.911	ppb	2.873	25226	50	101.8	90	110	
Cu	63	2	72	50.284	ppb	1.483	70633	50	100.6	90	110	
Zn	66	2	72	49.209	ppb	1.858	10431	50	98.4	90	110	
As	75	2	72	52.956	ppb	2.001	8444	50	105.9	90	110	
Se	78	1	72	53.222	ppb	1.398	7546	50	106.4	90	110	
Sr	88	2	72	106.442	ppb	1.046	57732	100	106.4	90	110	
Zr	90	2	72	63.496	ppb	31.927	140	50	127.0	90	110	>+\-10%
Nb	93	2	72	100.487	ppb	1.227	140577	100	100.5	90	110	
Mo	95	2	115	51.225	ppb	1.634	37715	50	102.4	90	110	
Pd	105	2	115	51.270	ppb	2.966	62620	50	102.5	90	110	
Ag	107	2	115	50.305	ppb	1.636	130584	50	100.6	90	110	
Cd	111	2	115	51.623	ppb	4.099	18002	50	103.2	90	110	
Sn	120	2	115	50.404	ppb	2.021	49947	50	100.8	90	110	
Sb	121	2	115	52.429	ppb	0.275	49626	50	104.9	90	110	
Ba	137	2	115	51.283	ppb	0.584	17335	50	102.6	90	110	
W	182	2	165	49.981	ppb	1.323	177563	50	100.0	90	110	
Pt	195	2	165	48.566	ppb	0.556	134093	50	97.1	90	110	
Tl	205	2	165	50.273	ppb	0.229	353717	50	100.5	90	110	
Pb	208	2	165	51.299	ppb	0.574	487231	50	102.6	90	110	
Th	232	2	165	50.372	ppb	0.991	608823	50	100.7	90	110	
U	238	2	165	50.446	ppb	1.641	615366	50	100.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	540091	0.21	563298	95.88	60	120	
Sc (IS)	45	1	HMI H2	14192115	0.53	13713757	103.49	60	120	
Sc (IS)	45	2	HMI He	632958	0.26	592502	106.83	60	120	
Sc (IS)	45	3	No Gas	48465833	0.57	49282939	98.34	60	120	
Ge Internal Standard	72	1	HMI H2	6127048	0.41	5896972	103.90	60	120	
Ge Internal Standard	72	2	HMI He	856572	0.50	792400	108.10	60	120	
In Internal Standard	115	2	HMI He	3576356	1.10	3330695	107.38	60	120	
Ho-165	165	2	HMI He	16373286	0.40	15553691	105.27	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5688508
Data File Name	195_CCB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T22:02:21-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-15.658	ppb	-10.7	5372044	10	
Be	9	1	6	0.104	ppb	97.8	30	0.5	
B	11	1	6	-31.927	ppb	-30.8	240	0.5	
Na	23	1	45	6.242	ppb	3.2	92500	25	
Na	23	2	45	1.137	ppb	115.4	6865	25	
Mg	24	2	45	0.457	ppb	254.5	127	25	
Al	27	2	45	-0.095	ppb	-1000.9	30	15	
K	39	1	45	-368.584	ppb	-6.4	6796802	50	
K	39	2	45	-30.188	ppb	-19.6	22885	50	
Ca	40	1	45	-0.170	ppb	-105.0	38331	50	
Ca	44	2	45	-1.887	ppb	-210.0	33	25	
Ti	47	2	45	-0.184	ppb	0.0	0	0.5	
V	51	2	72	0.599	ppb	51.0	2777	1	
Cr	52	2	72	0.002	ppb	2799.6	187	1	
Mn	55	2	72	0.273	ppb	23.1	240	0.5	
Fe	57	2	72	-0.424	ppb	-477.2	67	25	
Co	59	2	72	-0.014	ppb	-600.8	1017	0.5	
Ni	60	2	72	-0.070	ppb	-73.9	37	1	
Cu	63	2	72	-0.195	ppb	-45.1	570	1	
Zn	66	2	72	0.118	ppb	193.0	117	5	
As	75	2	72	-0.047	ppb	-71.1	16	1	
Se	78	1	72	0.007	ppb	911.7	17	1	
Sr	88	2	72	-0.015	ppb	-254.3	17	0.5	
Zr	90	2	72	8.540	ppb	114.6	40	1	>RL
Nb	93	2	72	2.927	ppb	2.6	4888	2	>RL
Mo	95	2	115	-0.037	ppb	-62.9	30	0.5	
Pd	105	2	115	0.019	ppb	25.2	27	1	
Ag	107	2	115	0.007	ppb	59.3	27	1	
Cd	111	2	115	-0.002	ppb	-2059.6	7	0.5	
Sn	120	2	115	0.058	ppb	70.7	223	1	
Sb	121	2	115	0.056	ppb	39.5	103	0.6	
Ba	137	2	115	-0.133	ppb	-34.0	27	0.5	
W	182	2	165	0.060	ppb	32.5	647	1	
Pt	195	2	165	0.006	ppb	91.8	17	1	
Tl	205	2	165	0.014	ppb	92.1	303	0.1	
Pb	208	2	165	0.000	ppb	4995.0	597	0.5	
Th	232	2	165	0.095	ppb	11.2	1794	1	
U	238	2	165	0.009	ppb	32.3	153	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	535281	0.34	563298	95.03	60	120	
Sc (IS)	45	1	HMI H2	13831126	0.58	13713757	100.86	60	120	
Sc (IS)	45	2	HMI He	627298	0.70	592502	105.87	60	120	
Sc (IS)	45	3	No Gas	48418373	0.38	49282939	98.25	60	120	
Ge Internal Standard	72	1	HMI H2	6055455	0.76	5896972	102.69	60	120	
Ge Internal Standard	72	2	HMI He	842605	0.24	792400	106.34	60	120	
In Internal Standard	115	2	HMI He	3591956	0.21	3330695	107.84	60	120	
Ho-165	165	2	HMI He	16306514	0.53	15553691	104.84	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5688512
Data File Name	196LCCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T22:06:14-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-6.311	ppb	-40.955	5477682	50	-12.6	70	130	>+/-30%
Be	9	1	6	0.659	ppb	11.982	137	1	65.9	70	130	>+/-30%
Na	23	2	45	51.875	ppb	7.316	14401	50	103.7	70	130	
Mg	24	2	45	46.331	ppb	4.612	3260	50	92.7	70	130	
Al	27	2	45	50.406	ppb	20.171	950	30	168.0	70	130	>+/-30%
K	39	2	45	98.250	ppb	30.408	28142	100	98.2	70	130	
Ca	44	2	45	45.474	ppb	13.642	170	50	90.9	70	130	
V	51	2	72	5.154	ppb	16.924	6198	5	103.1	70	130	
Cr	52	2	72	1.816	ppb	0.853	1964	2	90.8	70	130	
Mn	55	2	72	0.993	ppb	16.808	527	1	99.3	70	130	
Fe	57	2	72	52.579	ppb	14.243	1033	50	105.2	70	130	
Co	59	2	72	1.068	ppb	9.720	2849	1	106.8	70	130	
Ni	60	2	72	1.474	ppb	16.166	773	1.5	98.3	70	130	
Cu	63	2	72	2.069	ppb	14.090	3597	2	103.5	70	130	
Zn	66	2	72	11.154	ppb	6.842	2354	10	111.5	70	130	
As	75	2	72	4.834	ppb	7.805	765	5	96.7	70	130	
Se	78	1	72	5.375	ppb	7.770	757	5	107.5	70	130	
Sr	88	2	72	0.971	ppb	22.020	533	1	97.1	70	130	
Zr	90	2	72	14.723	ppb	104.085	50	0.5	2944.5	70	130	>+/-30%
Nb	93	2	72	1.061	ppb	9.610	2294	2	53.1	70	130	>+/-30%
Mo	95	2	115	1.975	ppb	10.568	1497	2	98.7	70	130	
Pd	105	2	115	0.019	ppb	24.453	27	1	1.9	70	130	>+/-30%
Ag	107	2	115	4.898	ppb	2.733	12613	5	98.0	70	130	
Cd	111	2	115	0.858	ppb	20.410	303	1	85.8	70	130	
Sn	120	2	115	9.743	ppb	4.013	9704	10	97.4	70	130	
Sb	121	2	115	1.891	ppb	6.325	1824	2	94.6	70	130	
Ba	137	2	115	1.136	ppb	10.659	450	1	113.6	70	130	
W	182	2	165	4.651	ppb	1.696	16684	1	465.1	70	130	>+/-30%
Pt	195	2	165	0.000	ppb	#DIV/0!	0	1	0.0	70	130	>+/-30%
Tl	205	2	165	0.982	ppb	5.068	7012	1	98.2	70	130	
Pb	208	2	165	1.057	ppb	7.096	10479	1	105.7	70	130	
Th	232	2	165	1.736	ppb	6.976	21312	2	86.8	70	130	
U	238	2	165	0.989	ppb	2.794	11939	1	98.9	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	528272	0.07	563298	93.78	60	120	
Sc (IS)	45	1	HMI H2	13764955	0.75	13713757	100.37	60	120	
Sc (IS)	45	2	HMI He	621665	0.66	592502	104.92	60	120	
Sc (IS)	45	3	No Gas	47963754	1.10	49282939	97.32	60	120	
Ge Internal Standard	72	1	HMI H2	5973459	0.60	5896972	101.30	60	120	
Ge Internal Standard	72	2	HMI He	827464	0.90	792400	104.42	60	120	
In Internal Standard	115	2	HMI He	3546559	1.38	3330695	106.48	60	120	
Ho-165	165	2	HMI He	16147647	0.44	15553691	103.82	60	120	

Sample Report

Sample Table

Sample Name	280-123045-A-17-B
Data File Name	197SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T22:10:10-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456747 6020a
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-29.553	ppb	-29.553	-14.45	62133	500000	
Li	7	2	45	-71.765	ppb	-71.765	-13.29	2980	500000	
Li	7	3	45	-17.329	ppb	-17.329	-20.68	5178606	50000	
Be	9	1	6	-0.030	ppb	-0.030	-109.20	3	2000	
B	11	1	6	52.728	ppb	52.728	27.82	767	2000	
Na	23	1	45	12895.165	ppb	12895.165	0.20	24327206	2000	>LDR
Na	23	2	45	13195.394	ppb	13195.394	0.67	1962728	400000	
Mg	24	2	45	8010.397	ppb	8010.397	0.56	542031	400000	
Al	27	2	45	15.274	ppb	15.274	42.26	307	400000	
K	39	1	45	302.400	ppb	302.400	3.48	7598033	400000	
K	39	2	45	1848.592	ppb	1848.592	1.47	101479	400000	
Ca	40	1	45	30682.852	ppb	30682.852	0.14	87497502	400000	
Ca	44	2	45	23645.460	ppb	23645.460	0.79	67757	400000	
Ti	47	2	45	-0.007	ppb	-0.007	-4510.80	3	4000	
V	51	2	72	3.819	ppb	3.819	14.11	5181	2000	
Cr	52	2	72	116.103	ppb	116.103	0.93	114080	5000	
Mn	55	2	72	8020.014	ppb	8020.014	0.20	3235799	10000	
Fe	57	2	72	24.097	ppb	24.097	10.64	513	400000	
Co	59	2	72	0.009	ppb	0.009	513.47	1037	2000	
Ni	60	2	72	0.063	ppb	0.063	261.77	100	5000	
Cu	63	2	72	0.039	ppb	0.039	214.44	873	5000	
Zn	66	2	72	1.198	ppb	1.198	48.03	333	5000	
As	75	2	72	0.692	ppb	0.692	36.98	129	2000	
Se	78	1	72	0.896	ppb	0.896	24.06	136	2000	
Sr	88	2	72	167.006	ppb	167.006	2.19	87438	4000	
Zr	90	2	72	5.151	ppb	5.151	357.51	33	1000	
Nb	93	2	72	1.308	ppb	1.308	16.65	2624	200	
Mo	95	2	115	0.112	ppb	0.112	38.01	137	2000	
Pd	105	2	115	0.000	ppb	0.000	-2881.07	3	100	
Ag	107	2	115	0.009	ppb	0.009	75.99	30	100	
Cd	111	2	115	0.018	ppb	0.018	242.97	13	2000	
Sn	120	2	115	0.043	ppb	0.043	152.88	203	2000	
Sb	121	2	115	0.112	ppb	0.112	24.27	153	1000	
Ba	137	2	115	14.220	ppb	14.220	1.47	4768	5000	
W	182	2	165	0.066	ppb	0.066	21.59	657	100	
Pt	195	2	165	0.005	ppb	0.005	86.60	13	100	
Tl	205	2	165	0.009	ppb	0.009	145.29	260	2000	
Pb	208	2	165	0.024	ppb	0.024	53.95	807	5000	
Th	232	2	165	0.262	ppb	0.262	14.86	3751	2000	
U	238	2	165	0.197	ppb	0.197	8.48	2407	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	489156	0.98	563298	86.84	60	120	
Sc (IS)	45	1	HMI H2	13301564	0.34	13713757	96.99	60	120	
Sc (IS)	45	2	HMI He	615431	0.17	592502	103.87	60	120	
Sc (IS)	45	3	No Gas	46922864	0.59	49282939	95.21	60	120	
Ge Internal Standard	72	1	HMI H2	5812408	0.24	5896972	98.57	60	120	
Ge Internal Standard	72	2	HMI He	827003	0.50	792400	104.37	60	120	
In Internal Standard	115	2	HMI He	3509588	0.44	3330695	105.37	60	120	
Ho-165	165	2	HMI He	16102332	0.21	15553691	103.53	60	120	

Sample Report

Sample Table

Sample Name	280-123045-A-19-B
Data File Name	198SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T22:14:03-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456747 6020a
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-27.407	ppb	-27.407	-23.86	64147	500000	
Li	7	2	45	-47.056	ppb	-47.056	-49.91	3364	500000	
Li	7	3	45	-23.057	ppb	-23.057	-12.24	5215044	50000	
Be	9	1	6	-0.049	ppb	-0.049	0.00	0	2000	
B	11	1	6	79.514	ppb	79.514	27.09	953	2000	
Na	23	1	45	19269.685	ppb	19269.685	0.47	37248439	2000	>LDR
Na	23	2	45	19462.922	ppb	19462.922	0.10	2969746	400000	
Mg	24	2	45	15132.729	ppb	15132.729	0.69	1051438	400000	
Al	27	2	45	49.891	ppb	49.891	7.10	957	400000	
K	39	1	45	-4.712	ppb	-4.712	-366.94	7295265	400000	
K	39	2	45	1625.180	ppb	1625.180	2.28	94557	400000	
Ca	40	1	45	50644.335	ppb	50644.335	0.56	148110881	400000	
Ca	44	2	45	39502.161	ppb	39502.161	0.31	116217	400000	
Ti	47	2	45	0.507	ppb	0.507	59.89	13	4000	
V	51	2	72	6.468	ppb	6.468	9.26	7416	2000	
Cr	52	2	72	1.142	ppb	1.142	21.15	1340	5000	
Mn	55	2	72	2.064	ppb	2.064	1.70	987	10000	
Fe	57	2	72	26.479	ppb	26.479	26.25	573	400000	
Co	59	2	72	0.046	ppb	0.046	247.31	1133	2000	
Ni	60	2	72	0.682	ppb	0.682	27.81	407	5000	
Cu	63	2	72	2.096	ppb	2.096	10.03	3737	5000	
Zn	66	2	72	9.321	ppb	9.321	9.91	2040	5000	
As	75	2	72	0.424	ppb	0.424	20.42	90	2000	
Se	78	1	72	0.039	ppb	0.039	156.30	21	2000	
Sr	88	2	72	260.900	ppb	260.900	0.64	140673	4000	
Zr	90	2	72	52.764	ppb	52.764	65.86	120	1000	
Nb	93	2	72	0.611	ppb	0.611	12.65	1740	200	
Mo	95	2	115	0.423	ppb	0.423	33.12	370	2000	
Pd	105	2	115	0.000	ppb	0.000	-1943.93	3	100	
Ag	107	2	115	0.005	ppb	0.005	135.87	20	100	
Cd	111	2	115	0.055	ppb	0.055	157.33	27	2000	
Sn	120	2	115	0.478	ppb	0.478	17.22	640	2000	
Sb	121	2	115	-0.007	ppb	-0.007	-535.83	43	1000	
Ba	137	2	115	3.639	ppb	3.639	8.70	1303	5000	
W	182	2	165	0.220	ppb	0.220	20.24	1210	100	
Pt	195	2	165	0.001	ppb	0.001	173.21	3	100	
Tl	205	2	165	-0.009	ppb	-0.009	-15.55	140	2000	
Pb	208	2	165	0.109	ppb	0.109	18.06	1623	5000	
Th	232	2	165	0.070	ppb	0.070	13.82	1500	2000	
U	238	2	165	2.891	ppb	2.891	1.87	35219	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	496530	0.08	563298	88.15	60	120	
Sc (IS)	45	1	HMI H2	13643761	0.44	13713757	99.49	60	120	
Sc (IS)	45	2	HMI He	632005	0.55	592502	106.67	60	120	
Sc (IS)	45	3	No Gas	48123956	0.82	49282939	97.65	60	120	
Ge Internal Standard	72	1	HMI H2	5907056	0.43	5896972	100.17	60	120	
Ge Internal Standard	72	2	HMI He	851747	0.09	792400	107.49	60	120	
In Internal Standard	115	2	HMI He	3595529	0.45	3330695	107.95	60	120	
Ho-165	165	2	HMI He	16328960	0.17	15553691	104.98	60	120	

Sample Report

Sample Table

Sample Name	280-123045-A-20-B
Data File Name	199SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T22:17:56-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456747 6020a
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-37.262	ppb	-37.262	-8.53	63358	500000	
Li	7	2	45	-41.130	ppb	-41.130	-35.04	3467	500000	
Li	7	3	45	-23.650	ppb	-23.650	-4.14	5222371	50000	
Be	9	1	6	-0.031	ppb	-0.031	-102.44	3	2000	
B	11	1	6	36.061	ppb	36.061	29.58	680	2000	
Na	23	1	45	23590.711	ppb	23590.711	0.37	46405044	2000	>LDR
Na	23	2	45	23719.809	ppb	23719.809	1.10	3648713	400000	
Mg	24	2	45	7779.548	ppb	7779.548	1.17	545208	400000	
Al	27	2	45	157.005	ppb	157.005	4.30	2967	400000	
K	39	1	45	-1219.428	ppb	-1219.428	-0.90	5420275	400000	
K	39	2	45	668.301	ppb	668.301	2.41	53689	400000	
Ca	40	1	45	29378.922	ppb	29378.922	0.28	87484719	400000	
Ca	44	2	45	22967.059	ppb	22967.059	2.01	68166	400000	
Ti	47	2	45	5.121	ppb	5.121	15.79	103	4000	
V	51	2	72	5.674	ppb	5.674	11.66	6815	2000	
Cr	52	2	72	0.367	ppb	0.367	44.87	560	5000	
Mn	55	2	72	12.899	ppb	12.899	2.12	5508	10000	
Fe	57	2	72	559.702	ppb	559.702	4.72	10641	400000	
Co	59	2	72	0.231	ppb	0.231	61.28	1463	2000	
Ni	60	2	72	0.449	ppb	0.449	25.88	293	5000	
Cu	63	2	72	1.569	ppb	1.569	6.97	3020	5000	
Zn	66	2	72	2.767	ppb	2.767	16.66	673	5000	
As	75	2	72	0.467	ppb	0.467	51.55	97	2000	
Se	78	1	72	-0.021	ppb	-0.021	-204.03	13	2000	
Sr	88	2	72	162.736	ppb	162.736	1.49	88056	4000	
Zr	90	2	72	172.566	ppb	172.566	15.91	337	1000	
Nb	93	2	72	0.309	ppb	0.309	1.88	1327	200	
Mo	95	2	115	0.210	ppb	0.210	25.43	213	2000	
Pd	105	2	115	0.005	ppb	0.005	156.67	10	100	
Ag	107	2	115	0.004	ppb	0.004	219.91	17	100	
Cd	111	2	115	-0.002	ppb	-0.002	-1926.78	7	2000	
Sn	120	2	115	0.095	ppb	0.095	60.22	260	2000	
Sb	121	2	115	0.049	ppb	0.049	55.07	97	1000	
Ba	137	2	115	9.626	ppb	9.626	6.37	3334	5000	
W	182	2	165	0.294	ppb	0.294	3.61	1470	100	
Pt	195	2	165	0.000	ppb	0.000	#DIV/0!	0	100	
Tl	205	2	165	0.007	ppb	0.007	227.07	253	2000	
Pb	208	2	165	0.076	ppb	0.076	20.50	1313	5000	
Th	232	2	165	0.068	ppb	0.068	37.12	1467	2000	
U	238	2	165	1.193	ppb	1.193	5.97	14509	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	505271	0.27	563298	89.70	60	120	
Sc (IS)	45	1	HMI H2	13889644	0.21	13713757	101.28	60	120	
Sc (IS)	45	2	HMI He	637438	0.71	592502	107.58	60	120	
Sc (IS)	45	3	No Gas	48282119	0.91	49282939	97.97	60	120	
Ge Internal Standard	72	1	HMI H2	5999384	0.45	5896972	101.74	60	120	
Ge Internal Standard	72	2	HMI He	854696	0.24	792400	107.86	60	120	
In Internal Standard	115	2	HMI He	3600852	0.44	3330695	108.11	60	120	
Ho-165	165	2	HMI He	16276695	0.17	15553691	104.65	60	120	

Sample Report

Sample Table

Sample Name	280-123045-A-21-B
Data File Name	200SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T22:21:47-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456747 6020a
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-8.059	ppb	-8.059	-81.13	89880	500000	
Li	7	2	45	-25.614	ppb	-25.614	-122.09	3651	500000	
Li	7	3	45	-23.241	ppb	-23.241	-9.58	5142129	50000	
Be	9	1	6	-0.049	ppb	-0.049	0.00	0	2000	
B	11	1	6	56.399	ppb	56.399	96.16	1137	2000	
Na	23	1	45	3219.576	ppb	3219.576	76.93	7910655	2000	
Na	23	2	45	22767.780	ppb	22767.780	0.82	3495328	400000	
Mg	24	2	45	26063.544	ppb	26063.544	0.82	1822649	400000	
Al	27	2	45	17.043	ppb	17.043	19.23	350	400000	
K	39	1	45	-2201.963	ppb	-2201.963	-19.55	4872206	400000	
K	39	2	45	2473.263	ppb	2473.263	1.29	132051	400000	
Ca	40	1	45	12993.847	ppb	12993.847	77.34	47790098	400000	
Ca	44	2	45	72883.545	ppb	72883.545	1.18	215778	400000	
Ti	47	2	45	0.158	ppb	0.158	187.58	7	4000	
V	51	2	72	-0.620	ppb	-0.620	-41.44	1850	2000	
Cr	52	2	72	285.220	ppb	285.220	1.10	288298	5000	
Mn	55	2	72	23546.560	ppb	23546.560	1.11	9781732	10000	
Fe	57	2	72	13.549	ppb	13.549	8.45	330	400000	
Co	59	2	72	0.047	ppb	0.047	247.09	1137	2000	
Ni	60	2	72	0.438	ppb	0.438	28.10	287	5000	
Cu	63	2	72	0.728	ppb	0.728	18.50	1850	5000	
Zn	66	2	72	1.550	ppb	1.550	10.63	417	5000	
As	75	2	72	0.011	ppb	0.011	897.91	25	2000	
Se	78	1	72	1.696	ppb	1.696	91.81	309	2000	
Sr	88	2	72	545.594	ppb	545.594	0.33	294072	4000	
Zr	90	2	72	11.992	ppb	11.992	26.06	47	1000	
Nb	93	2	72	0.023	ppb	0.023	290.11	927	200	
Mo	95	2	115	-0.032	ppb	-0.032	-98.35	33	2000	
Pd	105	2	115	0.008	ppb	0.008	156.94	13	100	
Ag	107	2	115	0.005	ppb	0.005	155.79	20	100	
Cd	111	2	115	-0.002	ppb	-0.002	-1099.82	7	2000	
Sn	120	2	115	0.039	ppb	0.039	126.17	203	2000	
Sb	121	2	115	-0.025	ppb	-0.025	-50.21	27	1000	
Ba	137	2	115	3.975	ppb	3.975	1.38	1407	5000	
W	182	2	165	0.076	ppb	0.076	40.81	703	100	
Pt	195	2	165	0.000	ppb	0.000	#DIV/0!	0	100	
Tl	205	2	165	-0.001	ppb	-0.001	-649.40	193	2000	
Pb	208	2	165	0.011	ppb	0.011	66.38	700	5000	
Th	232	2	165	0.003	ppb	0.003	580.86	687	2000	
U	238	2	165	2.864	ppb	2.864	3.37	34938	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	726307	10.56	563298	128.94	60	120	IS Failed
Sc (IS)	45	1	HMI H2	18036828	9.60	13713757	131.52	60	120	IS Failed
Sc (IS)	45	2	HMI He	636119	0.83	592502	107.36	60	120	
Sc (IS)	45	3	No Gas	47478013	0.47	49282939	96.34	60	120	
Ge Internal Standard	72	1	HMI H2	7810291	9.48	5896972	132.45	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	851516	0.59	792400	107.46	60	120	
In Internal Standard	115	2	HMI He	3569546	0.60	3330695	107.17	60	120	
Ho-165	165	2	HMI He	16354217	0.39	15553691	105.15	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5688510
Data File Name	201_CCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T22:25:40-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	74.339	ppb	3.409	86703	100	74.3	90	110	>+\-10%
Li	7	2	45	52.569	ppb	11.740	4628	100	52.6	90	110	>+\-10%
Li	7	3	45	77.492	ppb	6.060	7038924	100	77.5	90	110	>+\-10%
Be	9	1	6	52.321	ppb	2.556	10287	50	104.6	90	110	
B	11	1	6	21.086	ppb	32.635	617	50	42.2	90	110	>+\-10%
Na	23	1	45	1064.878	ppb	1.839	2204227	1000	106.5	90	110	
Na	23	2	45	995.493	ppb	0.454	159555	1000	99.5	90	110	
Mg	24	2	45	999.128	ppb	2.883	70059	1000	99.9	90	110	
Al	27	2	45	1057.783	ppb	1.066	19791	1000	105.8	90	110	
K	39	1	45	1198.833	ppb	1.099	9555762	1000	119.9	90	110	>+\-10%
K	39	2	45	1026.957	ppb	0.283	69271	1000	102.7	90	110	
Ca	40	1	45	1092.013	ppb	0.742	3338618	1000	109.2	90	110	
Ca	44	2	45	1045.319	ppb	8.428	3137	1000	104.5	90	110	
Ti	47	2	45	44.794	ppb	17.795	877	50	89.6	90	110	>+\-10%
V	51	2	72	50.879	ppb	0.406	42998	50	101.8	90	110	
Cr	52	2	72	52.101	ppb	0.813	53717	50	104.2	90	110	
Mn	55	2	72	55.114	ppb	3.420	23420	50	110.2	90	110	>+\-10%
Fe	57	2	72	1048.011	ppb	1.133	20121	1000	104.8	90	110	
Co	59	2	72	50.105	ppb	2.106	90702	50	100.2	90	110	
Ni	60	2	72	50.224	ppb	3.532	25159	50	100.4	90	110	
Cu	63	2	72	49.009	ppb	0.342	69628	50	98.0	90	110	
Zn	66	2	72	49.233	ppb	6.603	10551	50	98.5	90	110	
As	75	2	72	52.782	ppb	1.921	8508	50	105.6	90	110	
Se	78	1	72	53.679	ppb	1.959	7613	50	107.4	90	110	
Sr	88	2	72	105.354	ppb	1.391	57778	100	105.4	90	110	
Zr	90	2	72	42.517	ppb	19.008	103	50	85.0	90	110	>+\-10%
Nb	93	2	72	99.179	ppb	1.287	140297	100	99.2	90	110	
Mo	95	2	115	50.023	ppb	2.918	37407	50	100.0	90	110	
Pd	105	2	115	49.286	ppb	1.509	61157	50	98.6	90	110	
Ag	107	2	115	49.896	ppb	0.791	131576	50	99.8	90	110	
Cd	111	2	115	49.210	ppb	3.068	17435	50	98.4	90	110	
Sn	120	2	115	50.879	ppb	1.029	51219	50	101.8	90	110	
Sb	121	2	115	51.862	ppb	1.205	49864	50	103.7	90	110	
Ba	137	2	115	51.262	ppb	0.762	17602	50	102.5	90	110	
W	182	2	165	49.766	ppb	2.182	177017	50	99.5	90	110	
Pt	195	2	165	49.252	ppb	0.927	136148	50	98.5	90	110	
Tl	205	2	165	50.770	ppb	1.423	357622	50	101.5	90	110	
Pb	208	2	165	51.339	ppb	0.498	488207	50	102.7	90	110	
Th	232	2	165	50.416	ppb	0.551	610104	50	100.8	90	110	
U	238	2	165	50.771	ppb	0.312	620120	50	101.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	537152	0.48	563298	95.36	60	120	
Sc (IS)	45	1	HMI H2	14097896	0.48	13713757	102.80	60	120	
Sc (IS)	45	2	HMI He	637054	0.80	592502	107.52	60	120	
Sc (IS)	45	3	No Gas	49077153	0.25	49282939	99.58	60	120	
Ge Internal Standard	72	1	HMI H2	6129254	0.43	5896972	103.94	60	120	
Ge Internal Standard	72	2	HMI He	866079	0.47	792400	109.30	60	120	
In Internal Standard	115	2	HMI He	3632910	0.95	3330695	109.07	60	120	
Ho-165	165	2	HMI He	16393329	0.76	15553691	105.40	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5688508
Data File Name	202_CCB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T22:29:32-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-17.123	ppb	-15.9	5395586	10	
Be	9	1	6	-0.032	ppb	-92.0	3	0.5	
B	11	1	6	-22.017	ppb	-41.7	313	0.5	
Na	23	1	45	4.565	ppb	15.3	91185	25	
Na	23	2	45	0.695	ppb	135.4	6982	25	
Mg	24	2	45	0.879	ppb	44.1	160	25	
Al	27	2	45	0.742	ppb	110.0	47	15	
K	39	1	45	-359.341	ppb	-6.3	6961910	50	
K	39	2	45	-25.061	ppb	-27.0	23730	50	
Ca	40	1	45	-0.432	ppb	-57.4	38381	50	
Ca	44	2	45	-7.765	ppb	-65.6	17	25	
Ti	47	2	45	-0.184	ppb	0.0	0	0.5	
V	51	2	72	-0.021	ppb	-1178.9	2350	1	
Cr	52	2	72	-0.015	ppb	-265.3	173	1	
Mn	55	2	72	0.458	ppb	33.8	323	0.5	
Fe	57	2	72	-0.325	ppb	-431.4	70	25	
Co	59	2	72	-0.078	ppb	-21.2	927	0.5	
Ni	60	2	72	0.001	ppb	3024.5	73	1	
Cu	63	2	72	-0.172	ppb	-61.7	617	1	
Zn	66	2	72	0.295	ppb	145.0	157	5	
As	75	2	72	0.004	ppb	930.7	24	1	
Se	78	1	72	-0.014	ppb	-117.6	15	1	
Sr	88	2	72	0.027	ppb	1.7	40	0.5	
Zr	90	2	72	8.038	ppb	119.4	40	1	>RL
Nb	93	2	72	2.846	ppb	15.0	4891	2	>RL
Mo	95	2	115	-0.016	ppb	-168.4	47	0.5	
Pd	105	2	115	0.040	ppb	65.1	53	1	
Ag	107	2	115	0.004	ppb	124.6	17	1	
Cd	111	2	115	0.008	ppb	371.2	10	0.5	
Sn	120	2	115	0.001	ppb	1250.1	170	1	
Sb	121	2	115	0.026	ppb	100.8	77	0.6	
Ba	137	2	115	-0.115	ppb	-39.0	33	0.5	
W	182	2	165	0.043	ppb	37.6	590	1	
Pt	195	2	165	0.005	ppb	43.0	13	1	
Tl	205	2	165	0.010	ppb	45.1	277	0.1	
Pb	208	2	165	0.017	ppb	86.5	760	0.5	
Th	232	2	165	0.103	ppb	21.4	1917	1	
U	238	2	165	0.009	ppb	5.1	153	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	540890	0.45	563298	96.02	60	120	
Sc (IS)	45	1	HMI H2	14135425	0.17	13713757	103.07	60	120	
Sc (IS)	45	2	HMI He	644315	0.85	592502	108.74	60	120	
Sc (IS)	45	3	No Gas	48855064	0.19	49282939	99.13	60	120	
Ge Internal Standard	72	1	HMI H2	6134497	0.54	5896972	104.03	60	120	
Ge Internal Standard	72	2	HMI He	862782	0.63	792400	108.88	60	120	
In Internal Standard	115	2	HMI He	3658718	0.95	3330695	109.85	60	120	
Ho-165	165	2	HMI He	16488614	0.72	15553691	106.01	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5688512
Data File Name	203LCCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T22:33:24-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-9.819	ppb	-23.959	5491517	50	-19.6	70	130	>+/-30%
Be	9	1	6	1.067	ppb	17.988	217	1	106.7	70	130	
Na	23	2	45	50.910	ppb	6.769	14471	50	101.8	70	130	
Mg	24	2	45	50.512	ppb	5.346	3601	50	101.0	70	130	
Al	27	2	45	54.852	ppb	6.948	1047	30	182.8	70	130	>+/-30%
K	39	2	45	93.939	ppb	29.155	28378	100	93.9	70	130	
Ca	44	2	45	43.439	ppb	40.224	167	50	86.9	70	130	
V	51	2	72	5.368	ppb	2.407	6525	5	107.4	70	130	
Cr	52	2	72	1.975	ppb	5.940	2174	2	98.7	70	130	
Mn	55	2	72	1.260	ppb	15.494	650	1	126.0	70	130	
Fe	57	2	72	55.609	ppb	3.545	1117	50	111.2	70	130	
Co	59	2	72	1.016	ppb	16.428	2830	1	101.6	70	130	
Ni	60	2	72	1.392	ppb	23.017	753	1.5	92.8	70	130	
Cu	63	2	72	2.078	ppb	5.633	3697	2	103.9	70	130	
Zn	66	2	72	10.449	ppb	5.351	2267	10	104.5	70	130	
As	75	2	72	4.876	ppb	5.719	791	5	97.5	70	130	
Se	78	1	72	5.067	ppb	7.689	729	5	101.3	70	130	
Sr	88	2	72	1.016	ppb	11.018	570	1	101.6	70	130	
Zr	90	2	72	2.821	ppb	202.296	30	0.5	564.2	70	130	>+/-30%
Nb	93	2	72	1.271	ppb	10.206	2640	2	63.5	70	130	>+/-30%
Mo	95	2	115	1.751	ppb	8.975	1363	2	87.5	70	130	
Pd	105	2	115	0.008	ppb	158.070	13	1	0.8	70	130	>+/-30%
Ag	107	2	115	4.778	ppb	2.816	12586	5	95.6	70	130	
Cd	111	2	115	1.016	ppb	17.337	367	1	101.6	70	130	
Sn	120	2	115	9.388	ppb	1.591	9574	10	93.9	70	130	
Sb	121	2	115	1.724	ppb	15.353	1704	2	86.2	70	130	
Ba	137	2	115	0.910	ppb	30.552	383	1	91.0	70	130	
W	182	2	165	4.726	ppb	1.313	17149	1	472.6	70	130	>+/-30%
Pt	195	2	165	0.005	ppb	43.647	13	1	0.5	70	130	>+/-30%
Tl	205	2	165	0.992	ppb	6.460	7162	1	99.2	70	130	
Pb	208	2	165	1.077	ppb	7.559	10786	1	107.7	70	130	
Th	232	2	165	1.716	ppb	3.675	21325	2	85.8	70	130	
U	238	2	165	1.003	ppb	3.207	12260	1	100.3	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	531059	0.44	563298	94.28	60	120	
Sc (IS)	45	1	HMI H2	14003975	0.87	13713757	102.12	60	120	
Sc (IS)	45	2	HMI He	631090	0.39	592502	106.51	60	120	
Sc (IS)	45	3	No Gas	48604428	0.93	49282939	98.62	60	120	
Ge Internal Standard	72	1	HMI H2	6092807	0.65	5896972	103.32	60	120	
Ge Internal Standard	72	2	HMI He	848320	0.78	792400	107.06	60	120	
In Internal Standard	115	2	HMI He	3627319	0.62	3330695	108.91	60	120	
Ho-165	165	2	HMI He	16341515	0.70	15553691	105.07	60	120	

Blank Report

Sample Table

Sample Name	MB 280-457039/1-A
Data File Name	204_BLK.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T22:37:17-06:00
Sample Type	Blank
Dilution	1
Comment	457039 200.8
ISTD Ref File Name	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-27.395	ppb	-14.03317736	65249	0.5
Li	7	2	45	-9.448	ppb	-329.3814334	3731	0.5
Li	7	3	45	-20.252	ppb	-10.05556692	5289070	10
Be	9	1	6	-0.049	ppb	0	0	0.5
B	11	1	6	-28.506	ppb	-18.1872707	260	0.5
Na	23	1	45	11.686	ppb	0.803083658	103491	25
Na	23	2	45	7.534	ppb	17.18420062	7689	25
Mg	24	2	45	1.279	ppb	81.39345149	180	25
Al	27	2	45	5.655	ppb	39.48058938	133	15
K	39	1	45	936.241	ppb	0.874763007	8972848	50
K	39	2	45	-30.292	ppb	-117.0244378	22465	50
Ca	40	1	45	8.181	ppb	2.910467882	63297	50
Ca	44	2	45	9.980	ppb	141.7187793	67	25
Ti	47	2	45	-0.006	ppb	-4782.716365	3	0.5
V	51	2	72	0.615	ppb	57.70186639	2757	1
Cr	52	2	72	0.028	ppb	345.7823654	210	1
Mn	55	2	72	0.658	ppb	20.68420645	393	0.5
Fe	57	2	72	7.963	ppb	47.97673155	220	25
Co	59	2	72	-0.098	ppb	-89.19199318	860	0.5
Ni	60	2	72	0.048	ppb	98.41785793	93	1
Cu	63	2	72	0.650	ppb	24.73102169	1704	1
Zn	66	2	72	1.774	ppb	22.48998325	453	5
As	75	2	72	0.048	ppb	15.84898206	30	1
Se	78	1	72	0.017	ppb	99.1854104	19	1
Sr	88	2	72	0.017	ppb	173.6604742	33	0.5
Zr	90	2	72	6.905	ppb	95.49522131	37	1
Nb	93	2	72	0.877	ppb	4.804142532	2060	2
Mo	95	2	115	-0.032	ppb	-130.7384549	33	0.5
Pd	105	2	115	0.003	ppb	372.4984654	7	1
Ag	107	2	115	0.006	ppb	71.09052779	23	1
Cd	111	2	115	-0.021	ppb	0	0	0.5
Sn	120	2	115	0.130	ppb	79.42186779	290	1
Sb	121	2	115	0.029	ppb	42.70050542	77	0.6
Ba	137	2	115	-0.072	ppb	-120.4217322	47	0.5
W	182	2	165	0.036	ppb	50.30036836	560	1
Pt	195	2	165	0.002	ppb	173.2050808	7	1
Tl	205	2	165	0.000	ppb	5937.675036	203	0.1
Pb	208	2	165	0.029	ppb	20.65695935	867	0.5
Th	232	2	165	0.131	ppb	11.57004829	2227	1
U	238	2	165	0.002	ppb	178.4393748	67	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	527302	0.92	563298	93.61	60	120	
Sc (IS)	45	1	HMI H2	13877227	0.17	13713757	101.19	60	120	
Sc (IS)	45	2	HMI He	615895	0.42	592502	103.95	60	120	
Sc (IS)	45	3	No Gas	48369459	0.67	49282939	98.15	60	120	
Ge Internal Standard	72	1	HMI H2	6008633	0.78	5896972	101.89	60	120	
Ge Internal Standard	72	2	HMI He	832704	0.20	792400	105.09	60	120	
In Internal Standard	115	2	HMI He	3537024	0.25	3330695	106.19	60	120	
Ho-165	165	2	HMI He	16328254	0.18	15553691	104.98	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-457039/2-A
Data File Name	205_LCS.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T22:41:09-06:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	457039 200.8
ISTD Ref File Name	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	44.402	44.402	ppb	17.999	78280	400	11.1	80	120	>+/-20%
Li	7	2	45	34.360	34.360	ppb	79.944	4211	400	8.6	80	120	>+/-20%
Li	7	3	45	37.370	37.370	ppb	0.120	6229906	400	9.3	80	120	>+/-20%
Be	9	1	6	32.566	32.566	ppb	4.113	6235	40	81.4	80	120	
Na	23	2	45	7.922	7.922	ppb	51.473	7666	40	19.8	80	120	>+/-20%
Mg	24	2	45	1.353	1.353	ppb	62.214	183	40	3.4	80	120	>+/-20%
Al	27	2	45	315.466	315.466	ppb	2.040	5668	40	788.7	80	120	>+/-20%
K	39	2	45	7.129	7.129	ppb	402.256	23790	40	17.8	80	120	>+/-20%
Ca	44	2	45	74.829	74.829	ppb	16.737	250	40	187.1	80	120	>+/-20%
V	51	2	72	32.196	32.196	ppb	1.212	26752	40	80.5	80	120	
Cr	52	2	72	31.747	31.747	ppb	0.735	31254	40	79.4	80	120	>+/-20%
Mn	55	2	72	32.520	32.520	ppb	2.922	13217	40	81.3	80	120	
Fe	57	2	72	331.438	331.438	ppb	7.033	6112	40	828.6	80	120	>+/-20%
Co	59	2	72	32.018	32.018	ppb	0.399	55587	40	80.0	80	120	
Ni	60	2	72	31.649	31.649	ppb	1.331	15132	40	79.1	80	120	>+/-20%
Cu	63	2	72	31.001	31.001	ppb	2.830	42259	40	77.5	80	120	>+/-20%
Zn	66	2	72	32.756	32.756	ppb	6.482	6719	40	81.9	80	120	
As	75	2	72	31.083	31.083	ppb	0.798	4783	40	77.7	80	120	>+/-20%
Se	78	1	72	29.726	29.726	ppb	5.985	4103	40	74.3	80	120	>+/-20%
Nb	93	2	72	0.533	0.533	ppb	42.180	1580	40	1.3	80	120	>+/-20%
Mo	95	2	115	30.334	30.334	ppb	2.505	21965	40	75.8	80	120	>+/-20%
Pd	105	2	115	0.016	0.016	ppb	28.965	23	40	0.0	80	120	>+/-20%
Ag	107	2	115	30.506	30.506	ppb	1.720	77806	40	76.3	80	120	>+/-20%
Cd	111	2	115	30.449	30.449	ppb	3.265	10438	40	76.1	80	120	>+/-20%
Sn	120	2	115	30.576	30.576	ppb	1.625	29836	40	76.4	80	120	>+/-20%
Sb	121	2	115	32.358	32.358	ppb	1.761	30110	40	80.9	80	120	
Ba	137	2	115	30.502	30.502	ppb	4.529	10158	40	76.3	80	120	>+/-20%
W	182	2	165	25.540	25.540	ppb	1.509	89901	40	63.8	80	120	>+/-20%
Pt	195	2	165	0.002	0.002	ppb	173.205	7	40	0.0	80	120	>+/-20%
Tl	205	2	165	30.552	30.552	ppb	1.260	212583	40	76.4	80	120	>+/-20%
Pb	208	2	165	31.118	31.118	ppb	0.178	292390	40	77.8	80	120	>+/-20%
Th	232	2	165	29.003	29.003	ppb	2.126	346726	40	72.5	80	120	>+/-20%
U	238	2	165	30.677	30.677	ppb	0.370	369940	40	76.7	80	120	>+/-20%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	522683	0.50	563298	92.79	60	120	
Sc (IS)	45	1	HMI H2	13676242	0.34	13713757	99.73	60	120	
Sc (IS)	45	2	HMI He	609454	0.57	592502	102.86	60	120	
Sc (IS)	45	3	No Gas	48129834	0.54	49282939	97.66	60	120	
Ge Internal Standard	72	1	HMI H2	5954530	0.22	5896972	100.98	60	120	
Ge Internal Standard	72	2	HMI He	825117	0.43	792400	104.13	60	120	
In Internal Standard	115	2	HMI He	3513788	0.55	3330695	105.50	60	120	
Ho-165	165	2	HMI He	16184784	1.27	15553691	104.06	60	120	

Sample Report

Sample Table

Sample Name	280-123313-A-1-A
Data File Name	206SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T22:45:04-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457039 200.8
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-27.616	ppb	-27.616	-6.63	61798	500000	
Li	7	2	45	-22.396	ppb	-22.396	-61.93	3467	500000	
Li	7	3	45	-15.914	ppb	-15.914	-7.04	5156620	50000	
Be	9	1	6	-0.011	ppb	-0.011	-301.91	7	2000	
B	11	1	6	1667.480	ppb	1667.480	6.78	11061	2000	
Na	23	1	45	85285.235	ppb	85285.235	0.63	158657261	2000	>LDR
Na	23	2	45	86440.549	ppb	86440.549	0.83	12441969	400000	
Mg	24	2	45	8567.245	ppb	8567.245	1.26	562554	400000	
Al	27	2	45	51.195	ppb	51.195	5.67	927	400000	
K	39	1	45	18716.262	ppb	18716.262	0.43	36311439	400000	
K	39	2	45	13892.583	ppb	13892.583	0.73	590118	400000	
Ca	40	1	45	21890.922	ppb	21890.922	0.38	61733036	400000	
Ca	44	2	45	17712.192	ppb	17712.192	2.48	49271	400000	
Ti	47	2	45	0.909	ppb	0.909	59.60	20	4000	
V	51	2	72	0.986	ppb	0.986	14.26	2960	2000	
Cr	52	2	72	4.522	ppb	4.522	4.54	4524	5000	
Mn	55	2	72	90.692	ppb	90.692	0.42	35972	10000	
Fe	57	2	72	170.389	ppb	170.389	6.96	3120	400000	
Co	59	2	72	8.415	ppb	8.415	4.47	15082	2000	
Ni	60	2	72	16.991	ppb	16.991	1.24	8009	5000	
Cu	63	2	72	548.423	ppb	548.423	1.30	720732	5000	
Zn	66	2	72	10.675	ppb	10.675	9.49	2210	5000	
As	75	2	72	0.297	ppb	0.297	40.80	67	2000	
Se	78	1	72	0.384	ppb	0.384	4.40	67	2000	
Sr	88	2	72	237.425	ppb	237.425	0.80	121783	4000	
Zr	90	2	72	231.562	ppb	231.562	15.51	420	1000	
Nb	93	2	72	1.535	ppb	1.535	9.87	2870	200	
Mo	95	2	115	2.560	ppb	2.560	4.41	1824	2000	
Pd	105	2	115	0.525	ppb	0.525	11.46	607	100	
Ag	107	2	115	0.316	ppb	0.316	6.73	777	100	
Cd	111	2	115	1.748	ppb	1.748	28.37	580	2000	
Sn	120	2	115	418.284	ppb	418.284	0.91	388587	2000	
Sb	121	2	115	0.273	ppb	0.273	15.16	290	1000	
Ba	137	2	115	1205.488	ppb	1205.488	1.31	381574	5000	
W	182	2	165	0.194	ppb	0.194	37.08	1090	100	
Pt	195	2	165	0.006	ppb	0.006	125.35	17	100	
Tl	205	2	165	0.034	ppb	0.034	17.06	430	2000	
Pb	208	2	165	4.015	ppb	4.015	2.16	37493	5000	
Th	232	2	165	0.510	ppb	0.510	16.98	6599	2000	
U	238	2	165	0.758	ppb	0.758	1.23	9010	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	482948	1.12	563298	85.74	60	120	
Sc (IS)	45	1	HMI H2	13151867	0.56	13713757	95.90	60	120	
Sc (IS)	45	2	HMI He	597254	0.65	592502	100.80	60	120	
Sc (IS)	45	3	No Gas	46513833	0.26	49282939	94.38	60	120	
Ge Internal Standard	72	1	HMI H2	5751794	0.79	5896972	97.54	60	120	
Ge Internal Standard	72	2	HMI He	810276	0.57	792400	102.26	60	120	
In Internal Standard	115	2	HMI He	3362191	0.71	3330695	100.95	60	120	
Ho-165	165	2	HMI He	15869053	0.79	15553691	102.03	60	120	

Sample Report

Sample Table

Sample Name	280-123122-F-3-A
Data File Name	207SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T22:48:56-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457039 200.8
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-23.350	ppb	-23.350	-23.12	66789	500000	
Li	7	2	45	-53.050	ppb	-53.050	-55.75	3324	500000	
Li	7	3	45	-17.575	ppb	-17.575	-21.39	5457523	50000	
Be	9	1	6	-0.049	ppb	-0.049	0.00	0	2000	
B	11	1	6	15313.560	ppb	15313.560	0.46	106076	2000	>LDR
Na	23	1	45	123054.716	ppb	123054.716	0.66	244221703	2000	>LDR
Na	23	2	45	122051.159	ppb	122051.159	0.29	18780489	400000	
Mg	24	2	45	1192.273	ppb	1192.273	1.18	83789	400000	
Al	27	2	45	940.325	ppb	940.325	1.78	17638	400000	
K	39	1	45	7097.738	ppb	7097.738	1.53	19355947	400000	
K	39	2	45	4699.943	ppb	4699.943	1.40	229752	400000	
Ca	40	1	45	10103.274	ppb	10103.274	1.06	30422362	400000	
Ca	44	2	45	7918.193	ppb	7918.193	1.73	23570	400000	
Ti	47	2	45	15.713	ppb	15.713	25.97	310	4000	
V	51	2	72	20.080	ppb	20.080	2.55	18265	2000	
Cr	52	2	72	4.329	ppb	4.329	5.67	4601	5000	
Mn	55	2	72	83.941	ppb	83.941	2.03	35322	10000	
Fe	57	2	72	1939.820	ppb	1939.820	1.86	36891	400000	
Co	59	2	72	1.881	ppb	1.881	11.86	4401	2000	
Ni	60	2	72	15.636	ppb	15.636	5.05	7822	5000	
Cu	63	2	72	16.431	ppb	16.431	1.28	23730	5000	
Zn	66	2	72	152.980	ppb	152.980	1.76	32334	5000	
As	75	2	72	5.954	ppb	5.954	5.62	973	2000	
Se	78	1	72	331.223	ppb	331.223	0.57	47434	2000	
Sr	88	2	72	113.317	ppb	113.317	1.66	61661	4000	
Zr	90	2	72	421.313	ppb	421.313	10.24	790	1000	
Nb	93	2	72	1.349	ppb	1.349	11.89	2784	200	
Mo	95	2	115	6.078	ppb	6.078	5.59	4474	2000	
Pd	105	2	115	0.008	ppb	0.008	58.50	13	100	
Ag	107	2	115	0.030	ppb	0.030	8.18	83	100	
Cd	111	2	115	0.125	ppb	0.125	61.77	50	2000	
Sn	120	2	115	0.642	ppb	0.642	27.07	790	2000	
Sb	121	2	115	0.710	ppb	0.710	15.55	713	1000	
Ba	137	2	115	186.710	ppb	186.710	1.56	62204	5000	
W	182	2	165	0.261	ppb	0.261	18.71	1360	100	
Pt	195	2	165	0.007	ppb	0.007	131.82	20	100	
Tl	205	2	165	0.254	ppb	0.254	12.25	1990	2000	
Pb	208	2	165	14.602	ppb	14.602	1.32	139180	5000	
Th	232	2	165	0.086	ppb	0.086	12.79	1694	2000	
U	238	2	165	0.360	ppb	0.360	2.54	4441	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	522211	0.73	563298	92.71	60	120	
Sc (IS)	45	1	HMI H2	14033740	0.73	13713757	102.33	60	120	
Sc (IS)	45	2	HMI He	638567	0.60	592502	107.77	60	120	
Sc (IS)	45	3	No Gas	49488084	0.61	49282939	100.42	60	120	
Ge Internal Standard	72	1	HMI H2	6200351	0.40	5896972	105.14	60	120	
Ge Internal Standard	72	2	HMI He	859370	0.10	792400	108.45	60	120	
In Internal Standard	115	2	HMI He	3535327	0.54	3330695	106.14	60	120	
Ho-165	165	2	HMI He	16379705	0.81	15553691	105.31	60	120	

Sample Report

Sample Table

Sample Name	280-123122-F-5-A
Data File Name	208SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T22:52:49-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457039 200.8
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-3.991	ppb	-3.991	-75.34	69769	500000	
Li	7	2	45	-25.392	ppb	-25.392	-44.42	3711	500000	
Li	7	3	45	11.594	ppb	11.594	10.72	5712156	50000	
Be	9	1	6	-0.049	ppb	-0.049	0.00	0	2000	
B	11	1	6	10736.465	ppb	10736.465	1.63	71099	2000	>LDR
Na	23	1	45	429940.334	ppb	429940.334	0.76	842319934	2000	>LDR
Na	23	2	45	425757.956	ppb	425757.956	1.08	66228374	400000	
Mg	24	2	45	9869.990	ppb	9869.990	0.38	700703	400000	
Al	27	2	45	437.178	ppb	437.178	0.69	8309	400000	
K	39	1	45	144839.377	ppb	144839.377	0.25	246081223	400000	
K	39	2	45	119213.301	ppb	119213.301	1.09	5286115	400000	
Ca	40	1	45	65490.418	ppb	65490.418	0.42	194502984	400000	
Ca	44	2	45	52476.461	ppb	52476.461	1.62	157722	400000	
Ti	47	2	45	2.180	ppb	2.180	87.97	47	4000	
V	51	2	72	10.161	ppb	10.161	5.03	10458	2000	
Cr	52	2	72	0.681	ppb	0.681	6.09	887	5000	
Mn	55	2	72	185.803	ppb	185.803	1.46	78401	10000	
Fe	57	2	72	54.033	ppb	54.033	6.75	1107	400000	
Co	59	2	72	0.332	ppb	0.332	35.12	1660	2000	
Ni	60	2	72	2.652	ppb	2.652	8.76	1393	5000	
Cu	63	2	72	4.223	ppb	4.223	4.29	6765	5000	
Zn	66	2	72	4.544	ppb	4.544	3.86	1057	5000	
As	75	2	72	6.092	ppb	6.092	4.82	1000	2000	
Se	78	1	72	41.417	ppb	41.417	1.94	5757	2000	
Sr	88	2	72	905.011	ppb	905.011	0.23	494632	4000	
Zr	90	2	72	112.150	ppb	112.150	22.29	230	1000	
Nb	93	2	72	1.208	ppb	1.208	16.29	2600	200	
Mo	95	2	115	1.493	ppb	1.493	8.86	1153	2000	
Pd	105	2	115	0.022	ppb	0.022	1.10	30	100	
Ag	107	2	115	0.008	ppb	0.008	28.52	27	100	
Cd	111	2	115	-0.011	ppb	-0.011	-149.62	3	2000	
Sn	120	2	115	0.425	ppb	0.425	25.25	583	2000	
Sb	121	2	115	0.554	ppb	0.554	5.47	573	1000	
Ba	137	2	115	248.186	ppb	248.186	1.75	83486	5000	
W	182	2	165	0.224	ppb	0.224	13.03	1230	100	
Pt	195	2	165	0.004	ppb	0.004	99.84	10	100	
Tl	205	2	165	0.004	ppb	0.004	138.00	230	2000	
Pb	208	2	165	0.245	ppb	0.245	3.15	2920	5000	
Th	232	2	165	0.073	ppb	0.073	8.87	1540	2000	
U	238	2	165	0.535	ppb	0.535	1.42	6572	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	498328	0.59	563298	88.47	60	120	
Sc (IS)	45	1	HMI H2	13856388	0.17	13713757	101.04	60	120	
Sc (IS)	45	2	HMI He	645717	0.27	592502	108.98	60	120	
Sc (IS)	45	3	No Gas	47421874	0.38	49282939	96.22	60	120	
Ge Internal Standard	72	1	HMI H2	6003377	0.27	5896972	101.80	60	120	
Ge Internal Standard	72	2	HMI He	863488	0.11	792400	108.97	60	120	
In Internal Standard	115	2	HMI He	3570395	0.96	3330695	107.20	60	120	
Ho-165	165	2	HMI He	16389154	0.77	15553691	105.37	60	120	

Sample Report

Sample Table

Sample Name	280-123122-E-6-A
Data File Name	209SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T22:56:41-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457039 200.8
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-5.653	ppb	-5.653	-63.31	68486	500000	
Li	7	2	45	-28.650	ppb	-28.650	-71.54	3674	500000	
Li	7	3	45	8.104	ppb	8.104	2.29	5681801	50000	
Be	9	1	6	-0.011	ppb	-0.011	-602.90	7	2000	
B	11	1	6	10348.401	ppb	10348.401	1.26	65648	2000	>LDR
Na	23	1	45	579325.189	ppb	579325.189	0.48	1119404010	2000	>LDR
Na	23	2	45	561417.265	ppb	561417.265	0.77	87410082	400000	
Mg	24	2	45	10340.928	ppb	10340.928	0.70	734812	400000	
Al	27	2	45	250.623	ppb	250.623	5.51	4783	400000	
K	39	1	45	73841.930	ppb	73841.930	0.41	127321348	400000	
K	39	2	45	60296.874	ppb	60296.874	1.54	2688390	400000	
Ca	40	1	45	69367.041	ppb	69367.041	0.06	203190437	400000	
Ca	44	2	45	55323.330	ppb	55323.330	0.78	166433	400000	
Ti	47	2	45	0.663	ppb	0.663	160.21	17	4000	
V	51	2	72	13.508	ppb	13.508	4.38	13056	2000	
Cr	52	2	72	1.391	ppb	1.391	13.47	1607	5000	
Mn	55	2	72	378.755	ppb	378.755	1.20	158897	10000	
Fe	57	2	72	255.823	ppb	255.823	5.28	4931	400000	
Co	59	2	72	0.444	ppb	0.444	15.51	1850	2000	
Ni	60	2	72	2.598	ppb	2.598	18.83	1360	5000	
Cu	63	2	72	0.484	ppb	0.484	8.70	1527	5000	
Zn	66	2	72	14.914	ppb	14.914	10.77	3237	5000	
As	75	2	72	6.114	ppb	6.114	5.04	999	2000	
Se	78	1	72	115.617	ppb	115.617	2.43	15635	2000	
Sr	88	2	72	913.105	ppb	913.105	0.18	496580	4000	
Zr	90	2	72	33.734	ppb	33.734	80.21	87	1000	
Nb	93	2	72	0.067	ppb	0.067	106.41	997	200	
Mo	95	2	115	2.197	ppb	2.197	10.42	1674	2000	
Pd	105	2	115	0.035	ppb	0.035	58.21	47	100	
Ag	107	2	115	0.016	ppb	0.016	60.81	50	100	
Cd	111	2	115	0.008	ppb	0.008	355.40	10	2000	
Sn	120	2	115	0.130	ppb	0.130	22.72	293	2000	
Sb	121	2	115	0.532	ppb	0.532	3.12	553	1000	
Ba	137	2	115	247.787	ppb	247.787	1.49	83509	5000	
W	182	2	165	0.142	ppb	0.142	41.75	920	100	
Pt	195	2	165	0.001	ppb	0.001	173.21	3	100	
Tl	205	2	165	0.026	ppb	0.026	29.55	380	2000	
Pb	208	2	165	1.451	ppb	1.451	1.82	14074	5000	
Th	232	2	165	0.017	ppb	0.017	48.59	840	2000	
U	238	2	165	0.434	ppb	0.434	6.35	5235	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	477286	0.86	563298	84.73	60	120	
Sc (IS)	45	1	HMI H2	13666472	0.50	13713757	99.66	60	120	
Sc (IS)	45	2	HMI He	646329	0.67	592502	109.08	60	120	
Sc (IS)	45	3	No Gas	47651679	0.38	49282939	96.69	60	120	
Ge Internal Standard	72	1	HMI H2	5851513	0.40	5896972	99.23	60	120	
Ge Internal Standard	72	2	HMI He	859210	0.51	792400	108.43	60	120	
In Internal Standard	115	2	HMI He	3577607	0.97	3330695	107.41	60	120	
Ho-165	165	2	HMI He	16047529	0.48	15553691	103.18	60	120	

Sample Report

Sample Table

Sample Name	280-123122-B-7-A
Data File Name	210SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T23:00:38-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457039 200.8
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-9.750	ppb	-9.750	-49.28	69440	500000	
Li	7	2	45	-38.933	ppb	-38.933	-8.35	3661	500000	
Li	7	3	45	8.763	ppb	8.763	30.73	5735691	50000	
Be	9	1	6	-0.049	ppb	-0.049	0.00	0	2000	
B	11	1	6	10154.517	ppb	10154.517	1.36	66026	2000	>LDR
Na	23	1	45	583278.748	ppb	583278.748	0.25	1156151983	2000	>LDR
Na	23	2	45	558412.430	ppb	558412.430	0.17	89828109	400000	
Mg	24	2	45	10088.541	ppb	10088.541	0.19	740665	400000	
Al	27	2	45	203.498	ppb	203.498	2.25	4017	400000	
K	39	1	45	67567.403	ppb	67567.403	0.52	120150765	400000	
K	39	2	45	55279.842	ppb	55279.842	0.87	2548651	400000	
Ca	40	1	45	68964.129	ppb	68964.129	0.48	207228544	400000	
Ca	44	2	45	54651.786	ppb	54651.786	0.79	169871	400000	
Ti	47	2	45	0.968	ppb	0.968	164.78	23	4000	
V	51	2	72	8.190	ppb	8.190	8.57	9047	2000	
Cr	52	2	72	0.762	ppb	0.762	15.20	987	5000	
Mn	55	2	72	371.489	ppb	371.489	1.15	159462	10000	
Fe	57	2	72	767.264	ppb	767.264	1.74	14975	400000	
Co	59	2	72	0.399	ppb	0.399	9.45	1810	2000	
Ni	60	2	72	2.668	ppb	2.668	4.72	1427	5000	
Cu	63	2	72	0.336	ppb	0.336	50.10	1350	5000	
Zn	66	2	72	7.056	ppb	7.056	13.20	1617	5000	
As	75	2	72	5.756	ppb	5.756	4.10	963	2000	
Se	78	1	72	25.571	ppb	25.571	3.00	3574	2000	
Sr	88	2	72	904.327	ppb	904.327	1.12	503153	4000	
Zr	90	2	72	41.720	ppb	41.720	91.23	103	1000	
Nb	93	2	72	-0.079	ppb	-0.079	-135.66	810	200	
Mo	95	2	115	2.194	ppb	2.194	11.43	1700	2000	
Pd	105	2	115	0.008	ppb	0.008	238.98	13	100	
Ag	107	2	115	0.014	ppb	0.014	15.83	43	100	
Cd	111	2	115	0.036	ppb	0.036	157.80	20	2000	
Sn	120	2	115	0.181	ppb	0.181	73.87	350	2000	
Sb	121	2	115	0.425	ppb	0.425	10.33	460	1000	
Ba	137	2	115	239.380	ppb	239.380	0.62	82115	5000	
W	182	2	165	0.111	ppb	0.111	39.46	817	100	
Pt	195	2	165	0.007	ppb	0.007	49.46	20	100	
Tl	205	2	165	0.018	ppb	0.018	77.67	323	2000	
Pb	208	2	165	1.006	ppb	1.006	7.28	10009	5000	
Th	232	2	165	0.018	ppb	0.018	52.42	857	2000	
U	238	2	165	0.363	ppb	0.363	4.99	4411	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	489122	0.75	563298	86.83	60	120	
Sc (IS)	45	1	HMI H2	14019315	0.38	13713757	102.23	60	120	
Sc (IS)	45	2	HMI He	667762	1.16	592502	112.70	60	120	
Sc (IS)	45	3	No Gas	48012264	0.53	49282939	97.42	60	120	
Ge Internal Standard	72	1	HMI H2	6025132	0.74	5896972	102.17	60	120	
Ge Internal Standard	72	2	HMI He	879086	0.97	792400	110.94	60	120	
In Internal Standard	115	2	HMI He	3640994	0.32	3330695	109.32	60	120	
Ho-165	165	2	HMI He	16162589	0.65	15553691	103.91	60	120	

Sample Report

Sample Table

Sample Name	280-123122-C-8-A
Data File Name	211SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T23:04:33-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457039 200.8
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-3.798	ppb	-3.798	-192.24	70897	500000	
Li	7	2	45	-48.845	ppb	-48.845	-48.38	3527	500000	
Li	7	3	45	12.827	ppb	12.827	6.70	5814866	50000	
Be	9	1	6	-0.030	ppb	-0.030	-105.74	3	2000	
B	11	1	6	10081.325	ppb	10081.325	2.80	66287	2000	>LDR
Na	23	1	45	584998.209	ppb	584998.209	1.56	1163986089	2000	>LDR
Na	23	2	45	567137.794	ppb	567137.794	0.66	91126709	400000	
Mg	24	2	45	10249.684	ppb	10249.684	0.91	751644	400000	
Al	27	2	45	148.643	ppb	148.643	6.87	2940	400000	
K	39	1	45	67432.487	ppb	67432.487	0.33	120389065	400000	
K	39	2	45	55587.671	ppb	55587.671	0.84	2559854	400000	
Ca	40	1	45	69208.622	ppb	69208.622	0.55	208765024	400000	
Ca	44	2	45	55109.149	ppb	55109.149	1.50	171092	400000	
Ti	47	2	45	0.795	ppb	0.795	106.68	20	4000	
V	51	2	72	6.975	ppb	6.975	9.36	8089	2000	
Cr	52	2	72	0.606	ppb	0.606	24.50	827	5000	
Mn	55	2	72	373.678	ppb	373.678	1.26	160885	10000	
Fe	57	2	72	186.901	ppb	186.901	10.88	3717	400000	
Co	59	2	72	0.503	ppb	0.503	12.57	2007	2000	
Ni	60	2	72	2.194	ppb	2.194	11.26	1190	5000	
Cu	63	2	72	0.209	ppb	0.209	26.80	1173	5000	
Zn	66	2	72	5.874	ppb	5.874	10.44	1367	5000	
As	75	2	72	5.631	ppb	5.631	9.66	946	2000	
Se	78	1	72	21.204	ppb	21.204	6.60	2976	2000	
Sr	88	2	72	910.150	ppb	910.150	0.91	507990	4000	
Zr	90	2	72	57.623	ppb	57.623	43.93	133	1000	
Nb	93	2	72	-0.280	ppb	-0.280	-13.83	527	200	
Mo	95	2	115	1.883	ppb	1.883	13.21	1457	2000	
Pd	105	2	115	0.013	ppb	0.013	60.01	20	100	
Ag	107	2	115	0.011	ppb	0.011	18.45	37	100	
Cd	111	2	115	-0.011	ppb	-0.011	-143.87	3	2000	
Sn	120	2	115	0.090	ppb	0.090	55.14	257	2000	
Sb	121	2	115	0.362	ppb	0.362	29.59	397	1000	
Ba	137	2	115	242.881	ppb	242.881	1.35	82782	5000	
W	182	2	165	0.099	ppb	0.099	26.10	773	100	
Pt	195	2	165	0.005	ppb	0.005	86.60	13	100	
Tl	205	2	165	0.009	ppb	0.009	46.40	263	2000	
Pb	208	2	165	0.752	ppb	0.752	6.87	7601	5000	
Th	232	2	165	0.000	ppb	0.000	-1673.65	640	2000	
U	238	2	165	0.347	ppb	0.347	4.59	4211	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	494572	0.23	563298	87.80	60	120	
Sc (IS)	45	1	HMI H2	14073765	0.61	13713757	102.63	60	120	
Sc (IS)	45	2	HMI He	667001	0.35	592502	112.57	60	120	
Sc (IS)	45	3	No Gas	48103719	0.48	49282939	97.61	60	120	
Ge Internal Standard	72	1	HMI H2	6046486	0.67	5896972	102.54	60	120	
Ge Internal Standard	72	2	HMI He	881799	0.14	792400	111.28	60	120	
In Internal Standard	115	2	HMI He	3618012	1.18	3330695	108.63	60	120	
Ho-165	165	2	HMI He	16102551	0.40	15553691	103.53	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5688510
Data File Name	212_CCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T23:08:28-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	67.053	ppb	5.150	92396	100	67.1	90	110	>+\-10%
Li	7	2	45	44.291	ppb	64.443	5044	100	44.3	90	110	>+\-10%
Li	7	3	45	72.385	ppb	4.334	7574772	100	72.4	90	110	>+\-10%
Be	9	1	6	52.178	ppb	5.833	10748	50	104.4	90	110	
B	11	1	6	235.144	ppb	8.846	2237	50	470.3	90	110	>+\-10%
Na	23	1	45	1464.017	ppb	2.421	3251532	1000	146.4	90	110	>+\-10%
Na	23	2	45	1175.138	ppb	2.279	208686	1000	117.5	90	110	>+\-10%
Mg	24	2	45	939.643	ppb	1.949	73481	1000	94.0	90	110	
Al	27	2	45	1012.087	ppb	1.324	21116	1000	101.2	90	110	
K	39	1	45	1128.332	ppb	3.735	10229211	1000	112.8	90	110	>+\-10%
K	39	2	45	1046.656	ppb	1.947	78198	1000	104.7	90	110	
Ca	40	1	45	1043.868	ppb	0.465	3461144	1000	104.4	90	110	
Ca	44	2	45	970.136	ppb	4.037	3250	1000	97.0	90	110	
Ti	47	2	45	45.580	ppb	13.232	993	50	91.2	90	110	
V	51	2	72	48.525	ppb	2.717	45358	50	97.0	90	110	
Cr	52	2	72	47.823	ppb	2.084	54412	50	95.6	90	110	
Mn	55	2	72	50.240	ppb	1.300	23567	50	100.5	90	110	
Fe	57	2	72	988.586	ppb	1.191	20946	1000	98.9	90	110	
Co	59	2	72	48.361	ppb	2.049	96630	50	96.7	90	110	
Ni	60	2	72	47.904	ppb	3.062	26479	50	95.8	90	110	
Cu	63	2	72	46.669	ppb	1.236	73199	50	93.3	90	110	
Zn	66	2	72	48.247	ppb	3.473	11408	50	96.5	90	110	
As	75	2	72	49.208	ppb	1.074	8754	50	98.4	90	110	
Se	78	1	72	49.005	ppb	5.120	7531	50	98.0	90	110	
Sr	88	2	72	102.570	ppb	2.583	62069	100	102.6	90	110	
Zr	90	2	72	38.867	ppb	18.465	107	50	77.7	90	110	>+\-10%
Nb	93	2	72	93.411	ppb	1.481	145856	100	93.4	90	110	
Mo	95	2	115	48.074	ppb	2.512	39019	50	96.1	90	110	
Pd	105	2	115	47.541	ppb	2.289	64006	50	95.1	90	110	
Ag	107	2	115	47.290	ppb	1.313	135297	50	94.6	90	110	
Cd	111	2	115	47.444	ppb	1.844	18239	50	94.9	90	110	
Sn	120	2	115	48.926	ppb	1.539	53447	50	97.9	90	110	
Sb	121	2	115	49.973	ppb	1.689	52138	50	99.9	90	110	
Ba	137	2	115	48.098	ppb	1.739	17926	50	96.2	90	110	
W	182	2	165	46.583	ppb	0.439	173047	50	93.2	90	110	
Pt	195	2	165	45.087	ppb	2.531	130122	50	90.2	90	110	
Tl	205	2	165	47.231	ppb	1.855	347368	50	94.5	90	110	
Pb	208	2	165	48.180	ppb	1.191	478391	50	96.4	90	110	
Th	232	2	165	46.794	ppb	0.909	591283	50	93.6	90	110	
U	238	2	165	46.551	ppb	0.285	593660	50	93.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	562723	0.45	563298	99.90	60	120	
Sc (IS)	45	1	HMI H2	15280877	0.55	13713757	111.43	60	120	
Sc (IS)	45	2	HMI He	710405	0.93	592502	119.90	60	120	
Sc (IS)	45	3	No Gas	53477059	0.79	49282939	108.51	60	120	
Ge Internal Standard	72	1	HMI H2	6640221	0.29	5896972	112.60	60	120	
Ge Internal Standard	72	2	HMI He	955551	0.85	792400	120.59	60	120	IS Failed
In Internal Standard	115	2	HMI He	3941659	0.79	3330695	118.34	60	120	
Ho-165	165	2	HMI He	17116595	1.04	15553691	110.05	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5688508
Data File Name	213_CCB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T23:12:21-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-18.760	ppb	-28.6	5892596	10	
Be	9	1	6	-0.049	ppb	0.0	0	0.5	
B	11	1	6	78.507	ppb	21.3	1083	0.5	>RL
Na	23	1	45	134.416	ppb	1.0	376760	25	>RL
Na	23	2	45	95.887	ppb	4.7	24017	25	>RL
Mg	24	2	45	0.963	ppb	50.0	183	25	
Al	27	2	45	0.829	ppb	120.7	53	15	
K	39	1	45	424.151	ppb	4.2	8894818	50	>RL
K	39	2	45	13.491	ppb	246.8	28071	50	
Ca	40	1	45	2.840	ppb	10.5	51889	50	
Ca	44	2	45	-0.223	ppb	-3397.1	43	25	
Ti	47	2	45	-0.184	ppb	0.0	0	0.5	
V	51	2	72	-0.683	ppb	-26.3	1997	1	
Cr	52	2	72	0.015	ppb	426.7	223	1	
Mn	55	2	72	0.138	ppb	137.6	207	0.5	
Fe	57	2	72	3.349	ppb	29.4	153	25	
Co	59	2	72	-0.003	ppb	-2525.5	1160	0.5	
Ni	60	2	72	0.246	ppb	18.0	213	1	
Cu	63	2	72	0.480	ppb	34.8	1670	1	
Zn	66	2	72	1.353	ppb	15.4	417	5	
As	75	2	72	-0.001	ppb	-2672.0	25	1	
Se	78	1	72	0.105	ppb	15.8	33	1	
Sr	88	2	72	0.037	ppb	89.2	50	0.5	
Zr	90	2	72	31.143	ppb	47.6	90	1	>RL
Nb	93	2	72	2.879	ppb	16.0	5401	2	>RL
Mo	95	2	115	0.012	ppb	148.2	73	0.5	
Pd	105	2	115	0.009	ppb	91.1	17	1	
Ag	107	2	115	0.011	ppb	31.5	40	1	
Cd	111	2	115	-0.003	ppb	-896.0	7	0.5	
Sn	120	2	115	0.213	ppb	28.6	413	1	
Sb	121	2	115	0.040	ppb	85.1	97	0.6	
Ba	137	2	115	-0.069	ppb	-184.8	53	0.5	
W	182	2	165	0.074	ppb	67.1	723	1	
Pt	195	2	165	0.007	ppb	86.9	20	1	
Tl	205	2	165	0.009	ppb	41.2	280	0.1	
Pb	208	2	165	0.173	ppb	8.7	2327	0.5	
Th	232	2	165	0.184	ppb	3.5	2990	1	
U	238	2	165	0.018	ppb	28.0	270	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	568254	0.87	563298	100.88	60	120	
Sc (IS)	45	1	HMI H2	15186969	0.84	13713757	110.74	60	120	
Sc (IS)	45	2	HMI He	711237	0.16	592502	120.04	60	120	IS Failed
Sc (IS)	45	3	No Gas	53638953	1.55	49282939	108.84	60	120	
Ge Internal Standard	72	1	HMI H2	6496959	0.96	5896972	110.17	60	120	
Ge Internal Standard	72	2	HMI He	944114	0.58	792400	119.15	60	120	
In Internal Standard	115	2	HMI He	3944486	0.38	3330695	118.43	60	120	
Ho-165	165	2	HMI He	17005743	0.86	15553691	109.34	60	120	

Sample Report

Sample Table

Sample Name	280-123148-E-1-A
Data File Name	214SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T23:16:15-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457039 200.8
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-26.924	ppb	-26.924	-27.13	71135	500000	
Li	7	2	45	-50.460	ppb	-50.460	-19.38	3684	500000	
Li	7	3	45	-20.276	ppb	-20.276	-10.33	5836560	50000	
Be	9	1	6	-0.016	ppb	-0.016	-349.35	7	2000	
B	11	1	6	1574.407	ppb	1574.407	1.96	12219	2000	
Na	23	1	45	9523.263	ppb	9523.263	0.54	20428699	2000	
Na	23	2	45	9668.642	ppb	9668.642	0.31	1639219	400000	
Mg	24	2	45	2732.560	ppb	2732.560	0.14	210568	400000	
Al	27	2	45	343.992	ppb	343.992	2.16	7102	400000	
K	39	1	45	6583.555	ppb	6583.555	0.95	19914729	400000	
K	39	2	45	4240.859	ppb	4240.859	2.15	230082	400000	
Ca	40	1	45	7720.601	ppb	7720.601	0.11	25038655	400000	
Ca	44	2	45	6085.631	ppb	6085.631	4.05	19884	400000	
Ti	47	2	45	10.091	ppb	10.091	40.47	220	4000	
V	51	2	72	3.386	ppb	3.386	4.51	5471	2000	
Cr	52	2	72	0.894	ppb	0.894	11.99	1193	5000	
Mn	55	2	72	293.414	ppb	293.414	1.33	133672	10000	
Fe	57	2	72	2628.435	ppb	2628.435	1.63	54233	400000	
Co	59	2	72	1.110	ppb	1.110	10.73	3291	2000	
Ni	60	2	72	1.285	ppb	1.285	15.02	770	5000	
Cu	63	2	72	10.243	ppb	10.243	3.41	16407	5000	
Zn	66	2	72	16.648	ppb	16.648	5.28	3911	5000	
As	75	2	72	43.842	ppb	43.842	1.36	7617	2000	
Se	78	1	72	0.147	ppb	0.147	64.84	40	2000	
Sr	88	2	72	69.057	ppb	69.057	1.43	40799	4000	
Zr	90	2	72	234.705	ppb	234.705	24.23	490	1000	
Nb	93	2	72	1.487	ppb	1.487	10.57	3231	200	
Mo	95	2	115	0.713	ppb	0.713	20.51	630	2000	
Pd	105	2	115	0.005	ppb	0.005	163.60	10	100	
Ag	107	2	115	0.019	ppb	0.019	116.70	60	100	
Cd	111	2	115	-0.012	ppb	-0.012	-127.95	3	2000	
Sn	120	2	115	0.167	ppb	0.167	60.43	357	2000	
Sb	121	2	115	0.695	ppb	0.695	18.21	767	1000	
Ba	137	2	115	40.775	ppb	40.775	6.97	14949	5000	
W	182	2	165	0.122	ppb	0.122	9.29	890	100	
Pt	195	2	165	0.004	ppb	0.004	99.36	10	100	
Tl	205	2	165	0.010	ppb	0.010	54.25	283	2000	
Pb	208	2	165	1.644	ppb	1.644	4.81	16622	5000	
Th	232	2	165	0.095	ppb	0.095	15.15	1847	2000	
U	238	2	165	0.016	ppb	0.016	15.78	243	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	564019	0.90	563298	100.13	60	120	
Sc (IS)	45	1	HMI H2	15108176	0.36	13713757	110.17	60	120	
Sc (IS)	45	2	HMI He	700626	0.22	592502	118.25	60	120	
Sc (IS)	45	3	No Gas	53381631	1.06	49282939	108.32	60	120	
Ge Internal Standard	72	1	HMI H2	6542851	1.03	5896972	110.95	60	120	
Ge Internal Standard	72	2	HMI He	932840	0.28	792400	117.72	60	120	
In Internal Standard	115	2	HMI He	3873215	0.76	3330695	116.29	60	120	
Ho-165	165	2	HMI He	16814087	1.00	15553691	108.10	60	120	

Sample Report

Sample Table

Sample Name	280-123188-C-1-A
Data File Name	215SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T23:20:08-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457039 200.8
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-15.763	ppb	-15.763	-17.49	70740	500000	
Li	7	2	45	-54.300	ppb	-54.300	-37.64	3544	500000	
Li	7	3	45	-11.674	ppb	-11.674	-20.65	5700967	50000	
Be	9	1	6	0.068	ppb	0.068	153.43	23	2000	
B	11	1	6	116.776	ppb	116.776	13.45	1323	2000	
Na	23	1	45	9058.879	ppb	9058.879	1.26	18696158	2000	
Na	23	2	45	9246.210	ppb	9246.210	0.66	1529921	400000	
Mg	24	2	45	9763.301	ppb	9763.301	0.29	733823	400000	
Al	27	2	45	1134.567	ppb	1134.567	0.26	22775	400000	
K	39	1	45	3839.606	ppb	3839.606	2.50	14414265	400000	
K	39	2	45	2239.520	ppb	2239.520	1.40	130981	400000	
Ca	40	1	45	172593.521	ppb	172593.521	0.26	537571752	400000	
Ca	44	2	45	133507.546	ppb	133507.546	0.51	424772	400000	
Ti	47	2	45	0.613	ppb	0.613	90.15	17	4000	
V	51	2	72	-0.093	ppb	-0.093	-319.23	2427	2000	
Cr	52	2	72	0.135	ppb	0.135	14.62	347	5000	
Mn	55	2	72	870.815	ppb	870.815	0.80	388130	10000	
Fe	57	2	72	531.661	ppb	531.661	1.71	10804	400000	
Co	59	2	72	3.402	ppb	3.402	9.30	7549	2000	
Ni	60	2	72	5.247	ppb	5.247	5.25	2840	5000	
Cu	63	2	72	74.616	ppb	74.616	0.38	111318	5000	
Zn	66	2	72	113.105	ppb	113.105	2.76	25437	5000	
As	75	2	72	0.177	ppb	0.177	34.97	55	2000	
Se	78	1	72	0.203	ppb	0.203	7.94	47	2000	
Sr	88	2	72	425.586	ppb	425.586	0.82	246039	4000	
Zr	90	2	72	85.895	ppb	85.895	86.63	193	1000	
Nb	93	2	72	0.787	ppb	0.787	25.36	2127	200	
Mo	95	2	115	0.036	ppb	0.036	32.77	90	2000	
Pd	105	2	115	0.025	ppb	0.025	123.93	37	100	
Ag	107	2	115	0.027	ppb	0.027	20.47	83	100	
Cd	111	2	115	0.734	ppb	0.734	29.36	283	2000	
Sn	120	2	115	0.075	ppb	0.075	82.86	257	2000	
Sb	121	2	115	0.049	ppb	0.049	96.76	103	1000	
Ba	137	2	115	21.243	ppb	21.243	1.43	7779	5000	
W	182	2	165	0.031	ppb	0.031	46.79	563	100	
Pt	195	2	165	0.004	ppb	0.004	173.21	10	100	
Tl	205	2	165	0.434	ppb	0.434	8.54	3357	2000	
Pb	208	2	165	0.240	ppb	0.240	11.83	2967	5000	
Th	232	2	165	0.069	ppb	0.069	22.86	1537	2000	
U	238	2	165	0.288	ppb	0.288	9.00	3667	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	548588	0.18	563298	97.39	60	120	
Sc (IS)	45	1	HMI H2	14533628	1.33	13713757	105.98	60	120	
Sc (IS)	45	2	HMI He	683618	0.88	592502	115.38	60	120	
Sc (IS)	45	3	No Gas	50749231	1.00	49282939	102.98	60	120	
Ge Internal Standard	72	1	HMI H2	6302301	0.09	5896972	106.87	60	120	
Ge Internal Standard	72	2	HMI He	913337	0.83	792400	115.26	60	120	
In Internal Standard	115	2	HMI He	3851553	0.97	3330695	115.64	60	120	
Ho-165	165	2	HMI He	16886251	0.55	15553691	108.57	60	120	

Sample Report

Sample Table

Sample Name	280-123188-C-1-B MS
Data File Name	216SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T23:24:02-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457039 200.8
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	47.790	ppb	47.790	12.58	83562	500000	
Li	7	2	45	14.459	ppb	14.459	269.95	4307	500000	
Li	7	3	45	56.121	ppb	56.121	9.48	6750005	50000	
Be	9	1	6	34.867	ppb	34.867	0.84	6932	2000	
B	11	1	6	883.279	ppb	883.279	4.26	6809	2000	
Na	23	1	45	9815.116	ppb	9815.116	0.21	20173201	2000	
Na	23	2	45	10077.674	ppb	10077.674	0.42	1611313	400000	
Mg	24	2	45	10740.063	ppb	10740.063	0.41	780383	400000	
Al	27	2	45	1577.444	ppb	1577.444	4.60	30589	400000	
K	39	1	45	4044.124	ppb	4044.124	0.31	14711251	400000	
K	39	2	45	2416.809	ppb	2416.809	2.17	134622	400000	
Ca	40	1	45	186891.447	ppb	186891.447	0.61	579828111	400000	
Ca	44	2	45	146684.095	ppb	146684.095	1.01	451161	400000	
Ti	47	2	45	1.792	ppb	1.792	26.39	40	4000	
V	51	2	72	32.283	ppb	32.283	3.86	29013	2000	
Cr	52	2	72	33.498	ppb	33.498	2.51	35671	5000	
Mn	55	2	72	976.605	ppb	976.605	0.69	425498	10000	
Fe	57	2	72	932.122	ppb	932.122	1.85	18459	400000	
Co	59	2	72	36.507	ppb	36.507	2.11	68415	2000	
Ni	60	2	72	37.541	ppb	37.541	0.69	19407	5000	
Cu	63	2	72	114.181	ppb	114.181	0.31	166053	5000	
Zn	66	2	72	153.291	ppb	153.291	2.20	33664	5000	
As	75	2	72	35.328	ppb	35.328	1.88	5879	2000	
Se	78	1	72	31.956	ppb	31.956	3.42	4666	2000	
Sr	88	2	72	491.030	ppb	491.030	1.21	277501	4000	
Zr	90	2	72	784.978	ppb	784.978	6.17	1507	1000	
Nb	93	2	72	0.299	ppb	0.299	41.01	1370	200	
Mo	95	2	115	33.549	ppb	33.549	2.79	25598	2000	
Pd	105	2	115	0.015	ppb	0.015	77.78	23	100	
Ag	107	2	115	31.453	ppb	31.453	1.11	84547	100	
Cd	111	2	115	32.810	ppb	32.810	3.40	11856	2000	
Sn	120	2	115	32.934	ppb	32.934	4.48	33849	2000	
Sb	121	2	115	36.113	ppb	36.113	2.36	35419	1000	
Ba	137	2	115	56.184	ppb	56.184	2.41	19658	5000	
W	182	2	165	27.529	ppb	27.529	1.00	98957	100	
Pt	195	2	165	0.001	ppb	0.001	173.21	3	100	
Tl	205	2	165	32.478	ppb	32.478	1.37	230771	2000	
Pb	208	2	165	32.306	ppb	32.306	0.70	309994	5000	
Th	232	2	165	30.083	ppb	30.083	0.43	367361	2000	
U	238	2	165	32.602	ppb	32.602	1.20	401509	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	542902	1.46	563298	96.38	60	120	
Sc (IS)	45	1	HMI H2	14477209	1.17	13713757	105.57	60	120	
Sc (IS)	45	2	HMI He	660888	1.29	592502	111.54	60	120	
Sc (IS)	45	3	No Gas	49647158	1.41	49282939	100.74	60	120	
Ge Internal Standard	72	1	HMI H2	6302754	1.20	5896972	106.88	60	120	
Ge Internal Standard	72	2	HMI He	892812	1.27	792400	112.67	60	120	
In Internal Standard	115	2	HMI He	3703373	1.32	3330695	111.19	60	120	
Ho-165	165	2	HMI He	16531199	1.84	15553691	106.28	60	120	

Sample Report

Sample Table

Sample Name	280-123188-C-1-C MSD
Data File Name	217SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T23:27:57-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457039 200.8
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	44.768	ppb	44.768	22.35	84376	500000	
Li	7	2	45	15.868	ppb	15.868	115.44	4404	500000	
Li	7	3	45	56.165	ppb	56.165	8.89	6933830	50000	
Be	9	1	6	36.737	ppb	36.737	5.41	7432	2000	
B	11	1	6	840.200	ppb	840.200	7.65	6612	2000	
Na	23	1	45	10067.324	ppb	10067.324	0.56	21047098	2000	>LDR
Na	23	2	45	10219.040	ppb	10219.040	1.56	1661927	400000	
Mg	24	2	45	10943.847	ppb	10943.847	1.02	808816	400000	
Al	27	2	45	1657.107	ppb	1657.107	3.26	32700	400000	
K	39	1	45	4207.990	ppb	4207.990	0.57	15252686	400000	
K	39	2	45	2466.024	ppb	2466.024	1.46	139216	400000	
Ca	40	1	45	192654.670	ppb	192654.670	0.14	608063404	400000	
Ca	44	2	45	149750.546	ppb	149750.546	1.26	468488	400000	
Ti	47	2	45	0.782	ppb	0.782	162.91	20	4000	
V	51	2	72	34.307	ppb	34.307	0.95	31077	2000	
Cr	52	2	72	35.184	ppb	35.184	0.45	37940	5000	
Mn	55	2	72	1005.568	ppb	1005.568	1.11	443758	10000	
Fe	57	2	72	1010.694	ppb	1010.694	2.41	20262	400000	
Co	59	2	72	37.949	ppb	37.949	0.73	71996	2000	
Ni	60	2	72	40.092	ppb	40.092	1.64	20986	5000	
Cu	63	2	72	117.737	ppb	117.737	1.73	173399	5000	
Zn	66	2	72	159.081	ppb	159.081	2.31	35378	5000	
As	75	2	72	35.334	ppb	35.334	1.20	5956	2000	
Se	78	1	72	34.342	ppb	34.342	2.89	5072	2000	
Sr	88	2	72	505.558	ppb	505.558	0.60	289371	4000	
Zr	90	2	72	760.797	ppb	760.797	18.89	1480	1000	
Nb	93	2	72	0.113	ppb	0.113	72.47	1117	200	
Mo	95	2	115	34.784	ppb	34.784	0.34	26927	2000	
Pd	105	2	115	0.023	ppb	0.023	97.58	33	100	
Ag	107	2	115	32.730	ppb	32.730	2.02	89253	100	
Cd	111	2	115	33.221	ppb	33.221	1.67	12176	2000	
Sn	120	2	115	33.766	ppb	33.766	2.00	35212	2000	
Sb	121	2	115	36.379	ppb	36.379	0.35	36195	1000	
Ba	137	2	115	57.504	ppb	57.504	1.53	20416	5000	
W	182	2	165	28.003	ppb	28.003	1.46	101228	100	
Pt	195	2	165	0.005	ppb	0.005	86.60	13	100	
Tl	205	2	165	33.940	ppb	33.940	0.88	242574	2000	
Pb	208	2	165	33.900	ppb	33.900	0.55	327194	5000	
Th	232	2	165	31.564	ppb	31.564	1.55	387682	2000	
U	238	2	165	33.800	ppb	33.800	0.55	418738	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	552477	0.10	563298	98.08	60	120	
Sc (IS)	45	1	HMI H2	14727417	0.39	13713757	107.39	60	120	
Sc (IS)	45	2	HMI He	672236	0.82	592502	113.46	60	120	
Sc (IS)	45	3	No Gas	50989331	0.56	49282939	103.46	60	120	
Ge Internal Standard	72	1	HMI H2	6374923	0.59	5896972	108.11	60	120	
Ge Internal Standard	72	2	HMI He	904266	0.68	792400	114.12	60	120	
In Internal Standard	115	2	HMI He	3757433	1.60	3330695	112.81	60	120	
Ho-165	165	2	HMI He	16627673	0.15	15553691	106.90	60	120	

Sample Report

Sample Table

Sample Name	280-123188-C-2-A
Data File Name	218SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T23:31:51-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457039 200.8
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-4.684	ppb	-4.684	-124.11	71634	500000	
Li	7	2	45	-26.576	ppb	-26.576	-26.73	3714	500000	
Li	7	3	45	11.511	ppb	11.511	14.54	5264776	50000	
Be	9	1	6	0.019	ppb	0.019	404.56	13	2000	
B	11	1	6	112.179	ppb	112.179	24.26	1260	2000	
Na	23	1	45	22774.581	ppb	22774.581	0.51	45983731	2000	>LDR
Na	23	2	45	23163.657	ppb	23163.657	0.17	3626925	400000	
Mg	24	2	45	23638.341	ppb	23638.341	1.42	1686219	400000	
Al	27	2	45	1531.242	ppb	1531.242	2.05	29166	400000	
K	39	1	45	4762.191	ppb	4762.191	1.78	15704029	400000	
K	39	2	45	3085.633	ppb	3085.633	0.84	161819	400000	
Ca	40	1	45	464915.750	ppb	464915.750	1.04	1420338912	400000	
Ca	44	2	45	365787.555	ppb	365787.555	0.56	1104460	400000	
Ti	47	2	45	-0.019	ppb	-0.019	-1483.75	3	4000	
V	51	2	72	-1.519	ppb	-1.519	-13.20	1153	2000	
Cr	52	2	72	0.132	ppb	0.132	53.54	323	5000	
Mn	55	2	72	1580.228	ppb	1580.228	0.54	662795	10000	
Fe	57	2	72	119.418	ppb	119.418	4.20	2344	400000	
Co	59	2	72	1.165	ppb	1.165	12.52	3130	2000	
Ni	60	2	72	1.917	ppb	1.917	25.45	1020	5000	
Cu	63	2	72	32.962	ppb	32.962	2.21	46770	5000	
Zn	66	2	72	9.995	ppb	9.995	10.36	2204	5000	
As	75	2	72	0.230	ppb	0.230	30.21	60	2000	
Se	78	1	72	0.375	ppb	0.375	25.43	69	2000	
Sr	88	2	72	1015.390	ppb	1015.390	1.30	552528	4000	
Zr	90	2	72	57.734	ppb	57.734	42.08	130	1000	
Nb	93	2	72	0.003	ppb	0.003	2683.93	907	200	
Mo	95	2	115	0.060	ppb	0.060	124.22	103	2000	
Pd	105	2	115	0.011	ppb	0.011	89.73	17	100	
Ag	107	2	115	0.014	ppb	0.014	86.14	43	100	
Cd	111	2	115	0.520	ppb	0.520	30.28	190	2000	
Sn	120	2	115	0.140	ppb	0.140	23.33	307	2000	
Sb	121	2	115	0.135	ppb	0.135	16.65	180	1000	
Ba	137	2	115	6.688	ppb	6.688	8.34	2350	5000	
W	182	2	165	0.071	ppb	0.071	13.34	677	100	
Pt	195	2	165	0.011	ppb	0.011	59.45	30	100	
Tl	205	2	165	1.244	ppb	1.244	1.23	8800	2000	
Pb	208	2	165	0.150	ppb	0.150	7.98	1980	5000	
Th	232	2	165	0.372	ppb	0.372	15.39	5065	2000	
U	238	2	165	0.880	ppb	0.880	2.15	10598	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	535647	0.74	563298	95.09	60	120	
Sc (IS)	45	1	HMI H2	14255910	0.82	13713757	103.95	60	120	
Sc (IS)	45	2	HMI He	648773	1.69	592502	109.50	60	120	
Sc (IS)	45	3	No Gas	43719064	0.65	49282939	88.71	60	120	
Ge Internal Standard	72	1	HMI H2	6088886	1.01	5896972	103.25	60	120	
Ge Internal Standard	72	2	HMI He	859598	1.67	792400	108.48	60	120	
In Internal Standard	115	2	HMI He	3614739	2.56	3330695	108.53	60	120	
Ho-165	165	2	HMI He	16095741	1.68	15553691	103.49	60	120	

Sample Report

Sample Table

Sample Name	280-123188-C-3-A
Data File Name	219SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T23:35:47-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457039 200.8
ISTD Ref FileName	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-4.149	ppb	-4.149	-116.36	66481	500000	
Li	7	2	45	-20.550	ppb	-20.550	-27.71	3467	500000	
Li	7	3	45	11.981	ppb	11.981	14.00	5552175	50000	
Be	9	1	6	13.158	ppb	13.158	4.69	2404	2000	
B	11	1	6	103.001	ppb	103.001	6.24	1110	2000	
Na	23	1	45	23948.717	ppb	23948.717	0.66	44800603	2000	>LDR
Na	23	2	45	24400.146	ppb	24400.146	0.81	3495670	400000	
Mg	24	2	45	42006.900	ppb	42006.900	0.84	2741415	400000	
Al	27	2	45	76222.670	ppb	76222.670	1.22	1326658	400000	
K	39	1	45	4564.347	ppb	4564.347	0.99	14240177	400000	
K	39	2	45	3034.691	ppb	3034.691	1.45	146011	400000	
Ca	40	1	45	178758.147	ppb	178758.147	0.91	506040512	400000	
Ca	44	2	45	138863.023	ppb	138863.023	0.59	383663	400000	
Ti	47	2	45	-0.002	ppb	-0.002	-20553.36	3	4000	
V	51	2	72	-0.380	ppb	-0.380	-27.42	1897	2000	
Cr	52	2	72	8.238	ppb	8.238	4.43	7916	5000	
Mn	55	2	72	20885.806	ppb	20885.806	0.20	8073756	10000	
Fe	57	2	72	106829.249	ppb	106829.249	0.79	1869533	400000	
Co	59	2	72	309.034	ppb	309.034	0.81	506748	2000	
Ni	60	2	72	340.124	ppb	340.124	0.63	155514	5000	
Cu	63	2	72	13621.246	ppb	13621.246	0.52	17487827	5000	
Zn	66	2	72	9776.879	ppb	9776.879	1.17	1899938	5000	
As	75	2	72	10.600	ppb	10.600	2.88	1580	2000	
Se	78	1	72	0.342	ppb	0.342	49.10	60	2000	
Sr	88	2	72	853.067	ppb	853.067	0.52	427847	4000	
Zr	90	2	72	382.417	ppb	382.417	4.81	663	1000	
Nb	93	2	72	-0.173	ppb	-0.173	-49.84	610	200	
Mo	95	2	115	0.077	ppb	0.077	79.05	107	2000	
Pd	105	2	115	0.064	ppb	0.064	43.49	77	100	
Ag	107	2	115	0.008	ppb	0.008	57.17	27	100	
Cd	111	2	115	89.284	ppb	89.284	1.53	29255	2000	
Sn	120	2	115	0.383	ppb	0.383	39.94	510	2000	
Sb	121	2	115	0.244	ppb	0.244	23.44	263	1000	
Ba	137	2	115	7.723	ppb	7.723	17.47	2510	5000	
W	182	2	165	0.030	ppb	0.030	54.66	513	100	
Pt	195	2	165	0.004	ppb	0.004	100.72	10	100	
Tl	205	2	165	2.388	ppb	2.388	5.88	16124	2000	
Pb	208	2	165	112.619	ppb	112.619	0.60	1014586	5000	
Th	232	2	165	0.592	ppb	0.592	7.18	7412	2000	
U	238	2	165	11.258	ppb	11.258	0.83	130394	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	497719	0.27	563298	88.36	60	120	
Sc (IS)	45	1	HMI H2	13209650	0.79	13713757	96.32	60	120	
Sc (IS)	45	2	HMI He	593675	1.14	592502	100.20	60	120	
Sc (IS)	45	3	No Gas	46043126	0.50	49282939	93.43	60	120	
Ge Internal Standard	72	1	HMI H2	5669551	1.17	5896972	96.14	60	120	
Ge Internal Standard	72	2	HMI He	792385	0.55	792400	100.00	60	120	
In Internal Standard	115	2	HMI He	3360090	0.57	3330695	100.88	60	120	
Ho-165	165	2	HMI He	15541577	1.42	15553691	99.92	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5688510
Data File Name	220_CCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T23:39:40-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	85.333	ppb	10.001	86982	100	85.3	90	110	>+\-10%
Li	7	2	45	65.398	ppb	33.025	4698	100	65.4	90	110	>+\-10%
Li	7	3	45	85.115	ppb	4.551	7285870	100	85.1	90	110	>+\-10%
Be	9	1	6	50.567	ppb	5.409	9840	50	101.1	90	110	
B	11	1	6	56.628	ppb	44.189	860	50	113.3	90	110	>+\-10%
Na	23	1	45	1071.213	ppb	0.157	2168857	1000	107.1	90	110	
Na	23	2	45	1009.428	ppb	0.826	158642	1000	100.9	90	110	
Mg	24	2	45	966.629	ppb	1.015	66516	1000	96.7	90	110	
Al	27	2	45	1010.431	ppb	3.200	18546	1000	101.0	90	110	
K	39	1	45	851.818	ppb	4.819	8779449	1000	85.2	90	110	>+\-10%
K	39	2	45	1004.533	ppb	2.167	67010	1000	100.5	90	110	
Ca	40	1	45	1076.788	ppb	0.847	3221300	1000	107.7	90	110	
Ca	44	2	45	1051.581	ppb	1.526	3097	1000	105.2	90	110	
Ti	47	2	45	52.847	ppb	6.844	1013	50	105.7	90	110	
V	51	2	72	48.759	ppb	0.742	40304	50	97.5	90	110	
Cr	52	2	72	48.459	ppb	1.449	48769	50	96.9	90	110	
Mn	55	2	72	51.611	ppb	0.897	21406	50	103.2	90	110	
Fe	57	2	72	995.838	ppb	2.482	18659	1000	99.6	90	110	
Co	59	2	72	48.958	ppb	0.958	86500	50	97.9	90	110	
Ni	60	2	72	47.766	ppb	2.663	23353	50	95.5	90	110	
Cu	63	2	72	49.322	ppb	1.621	68379	50	98.6	90	110	
Zn	66	2	72	49.695	ppb	3.174	10391	50	99.4	90	110	
As	75	2	72	49.972	ppb	1.271	7862	50	99.9	90	110	
Se	78	1	72	49.059	ppb	0.847	6847	50	98.1	90	110	
Sr	88	2	72	101.698	ppb	2.474	54429	100	101.7	90	110	
Zr	90	2	72	55.083	ppb	24.622	123	50	110.2	90	110	>+\-10%
Nb	93	2	72	96.943	ppb	2.745	133859	100	96.9	90	110	
Mo	95	2	115	49.047	ppb	2.084	35766	50	98.1	90	110	
Pd	105	2	115	48.380	ppb	0.933	58529	50	96.8	90	110	
Ag	107	2	115	47.311	ppb	2.171	121615	50	94.6	90	110	
Cd	111	2	115	47.520	ppb	1.286	16417	50	95.0	90	110	
Sn	120	2	115	48.319	ppb	1.775	47425	50	96.6	90	110	
Sb	121	2	115	49.461	ppb	0.890	46368	50	98.9	90	110	
Ba	137	2	115	46.762	ppb	4.023	15656	50	93.5	90	110	
W	182	2	165	47.749	ppb	0.730	164429	50	95.5	90	110	
Pt	195	2	165	47.538	ppb	2.559	127224	50	95.1	90	110	
Tl	205	2	165	48.404	ppb	0.584	330078	50	96.8	90	110	
Pb	208	2	165	49.137	ppb	0.342	452348	50	98.3	90	110	
Th	232	2	165	48.440	ppb	0.767	567480	50	96.9	90	110	
U	238	2	165	48.420	ppb	0.876	572482	50	96.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	531763	0.79	563298	94.40	60	120	
Sc (IS)	45	1	HMI H2	13792330	0.10	13713757	100.57	60	120	
Sc (IS)	45	2	HMI He	625038	0.77	592502	105.49	60	120	
Sc (IS)	45	3	No Gas	49872933	0.52	49282939	101.20	60	120	
Ge Internal Standard	72	1	HMI H2	6030355	0.51	5896972	102.26	60	120	
Ge Internal Standard	72	2	HMI He	845123	0.79	792400	106.65	60	120	
In Internal Standard	115	2	HMI He	3541729	1.05	3330695	106.34	60	120	
Ho-165	165	2	HMI He	15868576	0.69	15553691	102.02	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5688508
Data File Name	221_CCB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T23:43:34-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-6.821	ppb	-30.0	5639940	10	
Be	9	1	6	-0.032	ppb	-90.2	3	0.5	
B	11	1	6	15.138	ppb	123.5	583	0.5	>RL
Na	23	1	45	77.433	ppb	0.3	234312	25	>RL
Na	23	2	45	68.459	ppb	3.1	17134	25	>RL
Mg	24	2	45	1.938	ppb	53.0	230	25	
Al	27	2	45	1.875	ppb	33.3	67	15	
K	39	1	45	195.056	ppb	0.9	7810619	50	>RL
K	39	2	45	20.335	ppb	103.9	25196	50	
Ca	40	1	45	6.678	ppb	3.1	59287	50	
Ca	44	2	45	2.533	ppb	405.1	47	25	
Ti	47	2	45	-0.184	ppb	0.0	0	0.5	
V	51	2	72	-0.669	ppb	-22.7	1797	1	
Cr	52	2	72	0.074	ppb	143.1	260	1	
Mn	55	2	72	0.368	ppb	50.5	280	0.5	
Fe	57	2	72	6.365	ppb	40.3	193	25	
Co	59	2	72	0.026	ppb	292.4	1090	0.5	
Ni	60	2	72	0.306	ppb	58.0	220	1	
Cu	63	2	72	0.819	ppb	13.8	1960	1	
Zn	66	2	72	1.404	ppb	33.6	383	5	
As	75	2	72	-0.014	ppb	-513.6	21	1	
Se	78	1	72	0.034	ppb	343.1	21	1	
Sr	88	2	72	0.072	ppb	128.9	63	0.5	
Zr	90	2	72	8.466	ppb	1.3	40	1	>RL
Nb	93	2	72	3.034	ppb	8.4	5048	2	>RL
Mo	95	2	115	-0.037	ppb	-98.0	30	0.5	
Pd	105	2	115	0.049	ppb	75.2	63	1	
Ag	107	2	115	0.020	ppb	37.0	60	1	
Cd	111	2	115	-0.021	ppb	0.0	0	0.5	
Sn	120	2	115	0.180	ppb	13.4	343	1	
Sb	121	2	115	0.060	ppb	36.8	107	0.6	
Ba	137	2	115	-0.063	ppb	-129.3	50	0.5	
W	182	2	165	0.032	ppb	113.6	537	1	
Pt	195	2	165	0.004	ppb	100.4	10	1	
Tl	205	2	165	0.009	ppb	47.5	263	0.1	
Pb	208	2	165	0.173	ppb	5.0	2190	0.5	
Th	232	2	165	0.107	ppb	3.0	1904	1	
U	238	2	165	0.013	ppb	25.8	200	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	545551	0.47	563298	96.85	60	120	
Sc (IS)	45	1	HMI H2	13986334	0.35	13713757	101.99	60	120	
Sc (IS)	45	2	HMI He	630843	0.83	592502	106.47	60	120	
Sc (IS)	45	3	No Gas	49459686	0.52	49282939	100.36	60	120	
Ge Internal Standard	72	1	HMI H2	6069647	0.34	5896972	102.93	60	120	
Ge Internal Standard	72	2	HMI He	844927	0.49	792400	106.63	60	120	
In Internal Standard	115	2	HMI He	3581698	1.59	3330695	107.54	60	120	
Ho-165	165	2	HMI He	16016913	0.71	15553691	102.98	60	120	

Blank Report

Sample Table

Sample Name	rinse-5672981
Data File Name	222WASH.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T23:47:28-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.049	ppb	0	0	0.5
Na	23	2	45	73.498	ppb	3.273458348	17588	25
Mg	24	2	45	1.795	ppb	67.06094825	217	25
Al	27	2	45	1.933	ppb	80.87439398	67	15
K	39	2	45	-6.532	ppb	-293.5517648	23620	50
Ca	44	2	45	7.480	ppb	91.64151229	60	25
V	51	2	72	-0.909	ppb	-6.594710831	1570	1
Cr	52	2	72	-0.017	ppb	-205.1398015	163	1
Mn	55	2	72	1.283	ppb	50.63714292	640	0.5
Fe	57	2	72	9.740	ppb	19.25109813	250	25
Co	59	2	72	0.007	ppb	1770.563155	1030	0.5
Ni	60	2	72	0.036	ppb	375.3532295	87	1
Cu	63	2	72	2.038	ppb	2.162995941	3537	1
Zn	66	2	72	0.890	ppb	62.47893542	270	5
As	75	2	72	0.011	ppb	454.2586259	24	1
Se	78	1	72	0.009	ppb	824.050242	17	1
Nb	93	2	72	1.284	ppb	22.76049969	2580	2
Mo	95	2	115	-0.045	ppb	-17.46880278	23	0.5
Pd	105	2	115	0.000	ppb	-3149.645346	3	1
Ag	107	2	115	0.006	ppb	153.3955426	23	1
Cd	111	2	115	-0.011	ppb	-159.763315	3	0.5
Sn	120	2	115	0.138	ppb	45.50397073	293	1
Sb	121	2	115	-0.017	ppb	-36.429154	33	0.6
Ba	137	2	115	-0.040	ppb	-288.352557	57	0.5
W	182	2	165	0.048	ppb	49.92818758	583	1
Pt	195	2	165	0.002	ppb	86.60559157	7	1
Tl	205	2	165	0.002	ppb	766.5425948	207	0.1
Pb	208	2	165	0.019	ppb	6.489289602	750	0.5
Th	232	2	165	0.024	ppb	28.95681733	917	1
U	238	2	165	0.004	ppb	65.66485234	87	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	543295	0.17	563298	96.45	60	120	
Sc (IS)	45	1	HMI H2	13765002	0.75	13713757	100.37	60	120	
Sc (IS)	45	2	HMI He	619893	0.71	592502	104.62	60	120	
Sc (IS)	45	3	No Gas	48908918	0.21	49282939	99.24	60	120	
Ge Internal Standard	72	1	HMI H2	5938556	0.32	5896972	100.71	60	120	
Ge Internal Standard	72	2	HMI He	823538	0.29	792400	103.93	60	120	
In Internal Standard	115	2	HMI He	3485024	0.63	3330695	104.63	60	120	
Ho-165	165	2	HMI He	15801001	1.15	15553691	101.59	60	120	

Blank Report

Sample Table

Sample Name	rinse-5672981
Data File Name	223WASH.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T23:51:22-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.049	ppb	0	0	0.5
Na	23	2	45	76.721	ppb	1.878127767	17912	25
Mg	24	2	45	1.627	ppb	17.47979187	203	25
Al	27	2	45	1.411	ppb	80.51743905	57	15
K	39	2	45	-7.003	ppb	-125.5547667	23389	50
Ca	44	2	45	-0.462	ppb	-1754.641834	37	25
V	51	2	72	-0.733	ppb	-31.95857838	1700	1
Cr	52	2	72	-0.004	ppb	-1613.619136	177	1
Mn	55	2	72	1.103	ppb	49.87626203	567	0.5
Fe	57	2	72	9.579	ppb	8.250106742	247	25
Co	59	2	72	0.022	ppb	227.5106283	1053	0.5
Ni	60	2	72	0.065	ppb	54.72740855	100	1
Cu	63	2	72	1.945	ppb	6.848099189	3407	1
Zn	66	2	72	0.860	ppb	24.38764029	263	5
As	75	2	72	0.003	ppb	2104.670106	23	1
Se	78	1	72	0.008	ppb	1159.873022	17	1
Nb	93	2	72	0.604	ppb	18.10425933	1670	2
Mo	95	2	115	-0.050	ppb	-48.1553112	20	0.5
Pd	105	2	115	0.019	ppb	65.86541948	27	1
Ag	107	2	115	0.010	ppb	43.95701373	33	1
Cd	111	2	115	-0.011	ppb	-157.5372925	3	0.5
Sn	120	2	115	0.123	ppb	43.97968664	280	1
Sb	121	2	115	-0.024	ppb	-25.81864327	27	0.6
Ba	137	2	115	-0.060	ppb	-86.10835985	50	0.5
W	182	2	165	0.050	ppb	31.17951651	593	1
Pt	195	2	165	0.001	ppb	173.2050808	3	1
Tl	205	2	165	0.003	ppb	297.4464632	220	0.1
Pb	208	2	165	0.014	ppb	95.439225	703	0.5
Th	232	2	165	-0.003	ppb	-227.6430752	600	1
U	238	2	165	0.003	ppb	97.57144727	77	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	543784	0.66	563298	96.54	60	120	
Sc (IS)	45	1	HMI H2	13847460	0.29	13713757	100.97	60	120	
Sc (IS)	45	2	HMI He	614501	0.86	592502	103.71	60	120	
Sc (IS)	45	3	No Gas	48949538	0.56	49282939	99.32	60	120	
Ge Internal Standard	72	1	HMI H2	5956227	1.05	5896972	101.00	60	120	
Ge Internal Standard	72	2	HMI He	822291	0.76	792400	103.77	60	120	
In Internal Standard	115	2	HMI He	3499729	0.38	3330695	105.08	60	120	
Ho-165	165	2	HMI He	15838293	0.97	15553691	101.83	60	120	

Blank Report

Sample Table

Sample Name	rinse-5672981
Data File Name	224WASH.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T23:55:16-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	146CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.049	ppb	0	0	0.5
Na	23	2	45	75.314	ppb	4.932836356	17855	25
Mg	24	2	45	1.995	ppb	58.59614859	230	25
Al	27	2	45	0.107	ppb	1077.11547	33	15
K	39	2	45	3.918	ppb	363.7608846	24054	50
Ca	44	2	45	7.494	ppb	45.70897418	60	25
V	51	2	72	-0.620	ppb	-19.52118954	1794	1
Cr	52	2	72	0.057	ppb	43.8242541	237	1
Mn	55	2	72	1.410	ppb	10.56968317	693	0.5
Fe	57	2	72	10.253	ppb	24.49684225	260	25
Co	59	2	72	0.019	ppb	492.9259048	1053	0.5
Ni	60	2	72	0.043	ppb	85.24196029	90	1
Cu	63	2	72	1.914	ppb	4.527525016	3381	1
Zn	66	2	72	0.393	ppb	58.15102412	170	5
As	75	2	72	0.015	ppb	213.8723808	25	1
Se	78	1	72	0.008	ppb	1201.887862	17	1
Nb	93	2	72	0.280	ppb	50.78647878	1243	2
Mo	95	2	115	-0.046	ppb	-34.46016238	23	0.5
Pd	105	2	115	0.019	ppb	49.2000657	27	1
Ag	107	2	115	0.005	ppb	132.9642175	20	1
Cd	111	2	115	-0.011	ppb	-153.5455491	3	0.5
Sn	120	2	115	0.112	ppb	27.68698305	270	1
Sb	121	2	115	-0.017	ppb	-156.6228959	33	0.6
Ba	137	2	115	-0.081	ppb	-118.2134235	43	0.5
W	182	2	165	0.013	ppb	56.08329147	467	1
Pt	195	2	165	0.001	ppb	173.2050808	3	1
Tl	205	2	165	0.008	ppb	95.95771897	250	0.1
Pb	208	2	165	0.015	ppb	60.04972354	713	0.5
Th	232	2	165	-0.001	ppb	-714.8307626	623	1
U	238	2	165	0.001	ppb	228.7398138	60	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	541064	0.46	563298	96.05	60	120	
Sc (IS)	45	1	HMI H2	13778447	0.44	13713757	100.47	60	120	
Sc (IS)	45	2	HMI He	619732	0.22	592502	104.60	60	120	
Sc (IS)	45	3	No Gas	49448073	0.86	49282939	100.34	60	120	
Ge Internal Standard	72	1	HMI H2	5987169	0.73	5896972	101.53	60	120	
Ge Internal Standard	72	2	HMI He	825825	0.37	792400	104.22	60	120	
In Internal Standard	115	2	HMI He	3509908	1.11	3330695	105.38	60	120	
Ho-165	165	2	HMI He	15887266	0.63	15553691	102.14	60	120	

Calibration Blank Report

Sample Table

Sample Name	icis-5688508
Data File Name	225CALB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-07T23:59:09-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	66856	0.00
Li	7	2	HMI He	3554	0.12
Li	7	3	No Gas	5617308	0.00
Be	9	1	HMI H2	0	#VALUE!
B	11	1	HMI H2	370	6.49
Na	23	1	HMI H2	216189	0.00
Na	23	2	HMI He	15716	0.01
Mg	24	2	HMI He	157	2.35
Al	27	2	HMI He	33	259.81
K	39	2	HMI He	23853	0.02
Ca	44	2	HMI He	50	144.22
Ti	47	2	HMI He	0	#VALUE!
V	51	2	HMI He	1647	0.49
Cr	52	2	HMI He	167	12.64
Mn	55	2	HMI He	160	23.76
Fe	57	2	HMI He	147	21.47
Co	59	2	HMI He	1007	1.19
Ni	60	2	HMI He	107	18.30
Cu	63	2	HMI He	1303	0.74
Zn	66	2	HMI He	150	31.11
As	75	2	HMI He	18	33.78
Se	78	1	HMI H2	13	129.90
Sr	88	2	HMI He	37	42.94
Zr	90	2	HMI He	40	216.51
Nb	93	2	HMI He	763	1.22
Mo	95	2	HMI He	40	0.00
Pd	105	2	HMI He	3	5196.15
Ag	107	2	HMI He	17	749.40
Cd	111	2	HMI He	0	#VALUE!
Sn	120	2	HMI He	133	26.58
Sb	121	2	HMI He	17	549.91
Ba	137	2	HMI He	30	293.97
W	182	2	HMI He	487	2.08
Pt	195	2	HMI He	7	2598.08
Tl	205	2	HMI He	137	21.63
Pb	208	2	HMI He	637	2.29
Th	232	2	HMI He	403	5.91
U	238	2	HMI He	77	42.82

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li-6 Internal Standard	6	1	HMI H2	538871	0.85
Sc (IS)	45	1	HMI H2	13911789	0.48
Sc (IS)	45	2	HMI He	620219	0.51
Sc (IS)	45	3	No Gas	49140068	0.04
Ge Internal Standard	72	1	HMI H2	6023554	0.55
Ge Internal Standard	72	2	HMI He	827657	0.45
In Internal Standard	115	2	HMI He	3520307	0.76
Ho-165	165	2	HMI He	15788522	0.69

Calibration Standard Report

Sample Table

Sample Name	ic-5688509
Data File Name	226CALS.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T00:03:03-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	225CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	107627	0.00
Li	7	2	HMI He	5831	0.12
Li	7	3	No Gas	9040194	0.00
Be	9	1	HMI H2	20007	0.01
B	11	1	HMI H2	1163	0.74
Na	23	1	HMI H2	4100404	0.00
Na	23	2	HMI He	306180	0.00
Mg	24	2	HMI He	133585	0.00
Al	27	2	HMI He	37853	0.01
K	39	1	HMI H2	10926718	0.00
K	39	2	HMI He	108430	0.00
Ca	40	1	HMI H2	6038724	0.00
Ca	44	2	HMI He	6015	0.07
Ti	47	2	HMI He	1907	0.40
V	51	2	HMI He	80396	0.00
Cr	52	2	HMI He	99032	0.00
Mn	55	2	HMI He	40992	0.00
Fe	57	2	HMI He	38325	0.01
Co	59	2	HMI He	173978	0.00
Ni	60	2	HMI He	47222	0.00
Cu	63	2	HMI He	131737	0.00
Zn	66	2	HMI He	19828	0.01
As	75	2	HMI He	15502	0.00
Se	78	1	HMI H2	13928	0.02
Sr	88	2	HMI He	108028	0.00
Zr	90	2	HMI He	193	24.28
Nb	93	2	HMI He	276161	0.00
Mo	95	2	HMI He	70867	0.00
Pd	105	2	HMI He	112678	0.00
Ag	107	2	HMI He	247204	0.00
Cd	111	2	HMI He	33371	0.00
Sn	120	2	HMI He	97097	0.00
Sb	121	2	HMI He	92832	0.00
Ba	137	2	HMI He	33649	0.00
Nd	146	2	HMI He	103163	0.00
Sm	147	2	HMI He	89495	0.00
Sm	150	2	HMI He	85570	0.00
Gd	156	1	HMI H2	321010	0.00
Gd	157	1	HMI H2	246759	0.00
W	182	2	HMI He	334357	0.00
Pt	195	2	HMI He	257477	0.00
Tl	205	2	HMI He	669617	0.00
Pb	208	2	HMI He	909635	0.00
Th	232	2	HMI He	1155679	0.00
U	238	2	HMI He	1160644	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	537782	0.87	538871	99.80	60	120	
Sc (IS)	45	1	HMI H2	13996289	0.27	13911789	100.61	60	120	
Sc (IS)	45	2	HMI He	630689	0.81	620219	101.69	60	120	
Sc (IS)	45	3	No Gas	49784276	0.20	49140068	101.31	60	120	
Ge Internal Standard	72	1	HMI H2	6085483	0.47	6023554	101.03	60	120	
Ge Internal Standard	72	2	HMI He	843889	0.09	827657	101.96	60	120	
In Internal Standard	115	2	HMI He	3531599	0.26	3520307	100.32	60	120	
Ho-165	165	2	HMI He	15904599	0.60	15788522	100.74	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5688510
Data File Name	227_CCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T00:06:55-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	107.869	ppb	6.297	88117	100	107.9	90	110	
Li	7	2	45	89.896	ppb	14.273	4518	100	89.9	90	110	>+\-10%
Li	7	3	45	98.836	ppb	2.671	7374274	100	98.8	90	110	
Be	9	1	6	51.142	ppb	1.619	10194	50	102.3	90	110	
B	11	1	6	48.244	ppb	18.352	750	50	96.5	90	110	
Na	23	1	45	1049.330	ppb	0.398	2231614	1000	104.9	90	110	
Na	23	2	45	1045.058	ppb	1.158	164297	1000	104.5	90	110	
Mg	24	2	45	1071.873	ppb	0.846	70240	1000	107.2	90	110	
Al	27	2	45	1024.208	ppb	4.911	19020	1000	102.4	90	110	
K	39	1	45	1043.201	ppb	5.154	9319841	1000	104.3	90	110	
K	39	2	45	1046.215	ppb	1.988	66936	1000	104.6	90	110	
Ca	40	1	45	1050.709	ppb	0.883	3158872	1000	105.1	90	110	
Ca	44	2	45	1047.355	ppb	12.803	3111	1000	104.7	90	110	
Ti	47	2	45	51.350	ppb	5.851	960	50	102.7	90	110	
V	51	2	72	51.432	ppb	0.514	41891	50	102.9	90	110	
Cr	52	2	72	50.661	ppb	2.894	49926	50	101.3	90	110	
Mn	55	2	72	52.452	ppb	2.238	21440	50	104.9	90	110	
Fe	57	2	72	994.623	ppb	1.108	19010	1000	99.5	90	110	
Co	59	2	72	51.479	ppb	0.785	89474	50	103.0	90	110	
Ni	60	2	72	53.304	ppb	3.693	25056	50	106.6	90	110	
Cu	63	2	72	51.988	ppb	1.238	68673	50	104.0	90	110	
Zn	66	2	72	51.802	ppb	3.022	10277	50	103.6	90	110	
As	75	2	72	51.889	ppb	1.310	8001	50	103.8	90	110	
Se	78	1	72	52.830	ppb	2.509	7307	50	105.7	90	110	
Sr	88	2	72	103.560	ppb	2.363	55593	100	103.6	90	110	
Zr	90	2	72	17.247	ppb	134.573	67	50	34.5	90	110	>+\-10%
Nb	93	2	72	111.486	ppb	0.631	153282	100	111.5	90	110	>+\-10%
Mo	95	2	115	52.500	ppb	2.679	37030	50	105.0	90	110	
Pd	105	2	115	53.356	ppb	1.072	59801	50	106.7	90	110	
Ag	107	2	115	51.578	ppb	1.676	126821	50	103.2	90	110	
Cd	111	2	115	50.840	ppb	1.078	16874	50	101.7	90	110	
Sn	120	2	115	51.234	ppb	1.812	49543	50	102.5	90	110	
Sb	121	2	115	52.904	ppb	0.517	48857	50	105.8	90	110	
Ba	137	2	115	51.236	ppb	1.658	17161	50	102.5	90	110	
W	182	2	165	51.771	ppb	0.844	172884	50	103.5	90	110	
Pt	195	2	165	51.472	ppb	1.278	132178	50	102.9	90	110	
Tl	205	2	165	51.533	ppb	1.459	344228	50	103.1	90	110	
Pb	208	2	165	51.732	ppb	1.868	469639	50	103.5	90	110	
Th	232	2	165	51.156	ppb	0.686	589841	50	102.3	90	110	
U	238	2	165	51.129	ppb	0.586	591903	50	102.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	535765	0.33	538871	99.42	60	120	
Sc (IS)	45	1	HMI H2	13852734	0.52	13911789	99.58	60	120	
Sc (IS)	45	2	HMI He	618139	0.34	620219	99.66	60	120	
Sc (IS)	45	3	No Gas	49976403	1.21	49140068	101.70	60	120	
Ge Internal Standard	72	1	HMI H2	6038318	0.86	6023554	100.25	60	120	
Ge Internal Standard	72	2	HMI He	838410	0.45	827657	101.30	60	120	
In Internal Standard	115	2	HMI He	3512697	0.61	3520307	99.78	60	120	
Ho-165	165	2	HMI He	15863068	0.98	15788522	100.47	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5688508
Data File Name	228_CCB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T00:10:49-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-3.600	ppb	-116.5	5688752	10	
Be	9	1	6	0.000	ppb	#DIV/0!	0	0.5	
B	11	1	6	0.688	ppb	2110.4	377	0.5	>RL
Na	23	1	45	-14.570	ppb	-6.0	186843	25	
Na	23	2	45	-11.595	ppb	-36.6	14050	25	
Mg	24	2	45	0.001	ppb	22219.9	157	25	
Al	27	2	45	0.008	ppb	21573.7	33	15	
K	39	1	45	-653.605	ppb	-4.6	6654207	50	
K	39	2	45	1.255	ppb	1156.4	23887	50	
Ca	40	1	45	-0.908	ppb	-13.6	37281	50	
Ca	44	2	45	4.560	ppb	310.3	63	25	
Ti	47	2	45	0.356	ppb	173.2	7	0.5	
V	51	2	72	0.191	ppb	70.5	1797	1	
Cr	52	2	72	-0.027	ppb	-475.6	140	1	
Mn	55	2	72	-0.043	ppb	-215.2	143	0.5	
Fe	57	2	72	-3.399	ppb	-17.5	83	25	
Co	59	2	72	-0.022	ppb	-436.9	970	0.5	
Ni	60	2	72	-0.130	ppb	-41.7	47	1	
Cu	63	2	72	-0.320	ppb	-24.5	897	1	
Zn	66	2	72	0.448	ppb	128.4	237	5	
As	75	2	72	0.008	ppb	260.6	20	1	
Se	78	1	72	0.120	ppb	74.8	29	1	
Sr	88	2	72	-0.038	ppb	-57.7	17	0.5	
Zr	90	2	72	-9.062	ppb	-151.6	27	1	
Nb	93	2	72	4.164	ppb	3.8	6398	2	>RL
Mo	95	2	115	0.076	ppb	42.7	93	0.5	
Pd	105	2	115	0.021	ppb	107.7	27	1	
Ag	107	2	115	0.004	ppb	249.3	27	1	
Cd	111	2	115	0.020	ppb	86.6	7	0.5	
Sn	120	2	115	0.128	ppb	18.1	257	1	
Sb	121	2	115	0.145	ppb	54.1	150	0.6	
Ba	137	2	115	0.020	ppb	378.2	37	0.5	
W	182	2	165	0.060	ppb	44.5	693	1	
Pt	195	2	165	0.017	ppb	46.7	50	1	
Tl	205	2	165	0.028	ppb	11.6	327	0.1	
Pb	208	2	165	0.006	ppb	196.4	693	0.5	
Th	232	2	165	0.092	ppb	15.0	1473	1	
U	238	2	165	0.010	ppb	20.3	197	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	540380	0.13	538871	100.28	60	120	
Sc (IS)	45	1	HMI H2	13821021	0.44	13911789	99.35	60	120	
Sc (IS)	45	2	HMI He	619756	0.21	620219	99.93	60	120	
Sc (IS)	45	3	No Gas	50298358	0.24	49140068	102.36	60	120	
Ge Internal Standard	72	1	HMI H2	5914662	0.38	6023554	98.19	60	120	
Ge Internal Standard	72	2	HMI He	829107	0.71	827657	100.18	60	120	
In Internal Standard	115	2	HMI He	3509830	0.58	3520307	99.70	60	120	
Ho-165	165	2	HMI He	15929514	0.62	15788522	100.89	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5688512
Data File Name	229LCCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T00:14:42-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	5.313	ppb	72.766	5715184	50	10.6	70	130	>+/-30%
Be	9	1	6	1.058	ppb	22.286	210	1	105.8	70	130	
Na	23	2	45	43.145	ppb	14.863	21526	50	86.3	70	130	
Mg	24	2	45	49.255	ppb	9.378	3334	50	98.5	70	130	
Al	27	2	45	57.911	ppb	28.953	1093	30	193.0	70	130	>+/-30%
K	39	2	45	111.913	ppb	26.802	28038	100	111.9	70	130	
Ca	44	2	45	36.115	ppb	48.472	153	50	72.2	70	130	
V	51	2	72	4.463	ppb	11.424	5061	5	89.3	70	130	
Cr	52	2	72	2.120	ppb	6.653	2207	2	106.0	70	130	
Mn	55	2	72	0.756	ppb	30.120	460	1	75.6	70	130	
Fe	57	2	72	49.014	ppb	12.911	1057	50	98.0	70	130	
Co	59	2	72	1.014	ppb	9.475	2710	1	101.4	70	130	
Ni	60	2	72	1.586	ppb	13.071	833	1.5	105.7	70	130	
Cu	63	2	72	2.144	ppb	8.661	4017	2	107.2	70	130	
Zn	66	2	72	11.168	ppb	15.307	2290	10	111.7	70	130	
As	75	2	72	4.853	ppb	4.960	750	5	97.1	70	130	
Se	78	1	72	5.652	ppb	3.987	776	5	113.0	70	130	
Sr	88	2	72	0.913	ppb	3.762	517	1	91.3	70	130	
Zr	90	2	72	-11.013	ppb	-95.223	23	0.5	-2202.6	70	130	>+/-30%
Nb	93	2	72	2.299	ppb	10.441	3841	2	114.9	70	130	
Mo	95	2	115	2.095	ppb	6.965	1500	2	104.7	70	130	
Pd	105	2	115	0.030	ppb	17.197	37	1	3.0	70	130	>+/-30%
Ag	107	2	115	4.785	ppb	3.861	11659	5	95.7	70	130	
Cd	111	2	115	1.005	ppb	18.366	330	1	100.5	70	130	
Sn	120	2	115	9.881	ppb	5.161	9564	10	98.8	70	130	
Sb	121	2	115	1.959	ppb	12.584	1807	2	98.0	70	130	
Ba	137	2	115	1.099	ppb	30.380	393	1	109.9	70	130	
W	182	2	165	4.876	ppb	5.766	16588	1	487.6	70	130	>+/-30%
Pt	195	2	165	-0.001	ppb	-176.345	3	1	-0.1	70	130	>+/-30%
Tl	205	2	165	0.992	ppb	4.298	6705	1	99.2	70	130	
Pb	208	2	165	1.097	ppb	4.251	10495	1	109.7	70	130	
Th	232	2	165	1.749	ppb	1.081	20387	2	87.4	70	130	
U	238	2	165	1.011	ppb	3.282	11682	1	101.1	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	533756	0.87	538871	99.05	60	120	
Sc (IS)	45	1	HMI H2	13633753	0.26	13911789	98.00	60	120	
Sc (IS)	45	2	HMI He	610404	0.37	620219	98.42	60	120	
Sc (IS)	45	3	No Gas	49227016	0.20	49140068	100.18	60	120	
Ge Internal Standard	72	1	HMI H2	5903520	0.54	6023554	98.01	60	120	
Ge Internal Standard	72	2	HMI He	822183	1.16	827657	99.34	60	120	
In Internal Standard	115	2	HMI He	3476422	0.27	3520307	98.75	60	120	
Ho-165	165	2	HMI He	15731868	0.47	15788522	99.64	60	120	

Blank Report

Sample Table

Sample Name	MB 280-457013/1-A
Data File Name	230_BLK.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T00:18:37-06:00
Sample Type	Blank
Dilution	1
Comment	457013 6020
ISTD Ref File Name	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	1.011	ppb	180.3942794	65128	0.5
Li	7	2	45	-14.900	ppb	-73.81903714	3341	0.5
Li	7	3	45	-7.755	ppb	-16.1049214	5493048	10
Be	9	1	6	0.052	ppb	99.86895885	10	0.5
B	11	1	6	12.062	ppb	32.80605875	443	0.5
Na	23	1	45	-20.851	ppb	-6.687665779	170872	25
Na	23	2	45	-15.107	ppb	-20.40008481	13357	25
Mg	24	2	45	2.673	ppb	56.40001013	327	25
Al	27	2	45	2.218	ppb	51.82848204	73	15
K	39	1	45	-2318.146	ppb	-0.853839969	3968947	50
K	39	2	45	18.170	ppb	123.3039515	24241	50
Ca	40	1	45	9.114	ppb	4.94278639	65453	50
Ca	44	2	45	17.551	ppb	58.44588283	100	25
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5
V	51	2	72	-0.677	ppb	-14.71544028	1113	1
Cr	52	2	72	2.879	ppb	10.77198229	2930	1
Mn	55	2	72	0.273	ppb	20.25353394	267	0.5
Fe	57	2	72	24.891	ppb	15.0207655	607	25
Co	59	2	72	0.006	ppb	1021.172579	1007	0.5
Ni	60	2	72	-0.099	ppb	-66.48042676	60	1
Cu	63	2	72	-0.411	ppb	-12.06310713	770	1
Zn	66	2	72	0.722	ppb	15.92291466	287	5
As	75	2	72	0.006	ppb	367.4153462	19	1
Se	78	1	72	0.034	ppb	227.3524852	17	1
Sr	88	2	72	-0.025	ppb	-195.6736633	23	0.5
Zr	90	2	72	-6.612	ppb	-267.578011	30	1
Nb	93	2	72	2.322	ppb	16.73471349	3861	2
Mo	95	2	115	0.030	ppb	174.8317763	60	0.5
Pd	105	2	115	0.018	ppb	114.4095824	23	1
Ag	107	2	115	0.015	ppb	108.9407117	53	1
Cd	111	2	115	0.010	ppb	173.2050808	3	0.5
Sn	120	2	115	0.114	ppb	26.1700633	240	1
Sb	121	2	115	0.037	ppb	29.1372644	50	0.6
Ba	137	2	115	0.091	ppb	143.7722867	60	0.5
W	182	2	165	0.027	ppb	46.88047244	573	1
Pt	195	2	165	0.001	ppb	294.4760172	10	1
Tl	205	2	165	0.016	ppb	64.27825408	243	0.1
Pb	208	2	165	0.027	ppb	44.81681094	877	0.5
Th	232	2	165	0.245	ppb	11.81116805	3201	1
U	238	2	165	0.004	ppb	22.40290664	127	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	512443	0.20	538871	95.10	60	120	
Sc (IS)	45	1	HMI H2	13510651	0.51	13911789	97.12	60	120	
Sc (IS)	45	2	HMI He	611011	0.73	620219	98.52	60	120	
Sc (IS)	45	3	No Gas	49174941	0.24	49140068	100.07	60	120	
Ge Internal Standard	72	1	HMI H2	5820485	0.54	6023554	96.63	60	120	
Ge Internal Standard	72	2	HMI He	819798	0.59	827657	99.05	60	120	
In Internal Standard	115	2	HMI He	3465835	0.87	3520307	98.45	60	120	
Ho-165	165	2	HMI He	15728596	0.31	15788522	99.62	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-457013/2-A
Data File Name	231_LCS.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T00:22:32-06:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	457013 6020
ISTD Ref File Name	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	79.873	79.873	ppb	7.671	81007	400	20.0	80	120	>+/-20%
Li	7	2	45	76.969	76.969	ppb	23.215	4374	400	19.2	80	120	>+/-20%
Li	7	3	45	68.806	68.806	ppb	0.665	6786879	400	17.2	80	120	>+/-20%
Be	9	1	6	40.103	40.103	ppb	2.209	7666	40	100.3	80	120	
Na	23	2	45	-9.054	-9.054	ppb	-58.628	14364	40	-22.6	80	120	>+/-20%
Mg	24	2	45	5.834	5.834	ppb	40.680	537	40	14.6	80	120	>+/-20%
Al	27	2	45	408.779	408.779	ppb	6.832	7602	40	1021.9	80	120	>+/-20%
K	39	2	45	-4.092	-4.092	ppb	-348.814	23583	40	-10.2	80	120	>+/-20%
Ca	44	2	45	68.578	68.578	ppb	35.024	250	40	171.4	80	120	>+/-20%
V	51	2	72	39.080	39.080	ppb	2.021	31589	40	97.7	80	120	
Cr	52	2	72	40.730	40.730	ppb	0.500	39374	40	101.8	80	120	
Mn	55	2	72	40.483	40.483	ppb	1.901	16253	40	101.2	80	120	
Fe	57	2	72	418.377	418.377	ppb	4.974	7923	40	1045.9	80	120	>+/-20%
Co	59	2	72	40.534	40.534	ppb	0.891	69263	40	101.3	80	120	
Ni	60	2	72	39.949	39.949	ppb	0.876	18432	40	99.9	80	120	
Cu	63	2	72	41.958	41.958	ppb	0.957	54574	40	104.9	80	120	
Zn	66	2	72	42.283	42.283	ppb	1.884	8249	40	105.7	80	120	
As	75	2	72	39.484	39.484	ppb	1.191	5971	40	98.7	80	120	
Se	78	1	72	40.237	40.237	ppb	2.463	5425	40	100.6	80	120	
Nb	93	2	72	1.730	1.730	ppb	11.396	3077	40	4.3	80	120	>+/-20%
Mo	95	2	115	41.500	41.500	ppb	1.185	28957	40	103.7	80	120	
Pd	105	2	115	0.003	0.003	ppb	169.334	7	40	0.0	80	120	>+/-20%
Ag	107	2	115	39.945	39.945	ppb	1.418	97141	40	99.9	80	120	
Cd	111	2	115	40.516	40.516	ppb	4.900	13297	40	101.3	80	120	
Sn	120	2	115	40.646	40.646	ppb	1.103	38905	40	101.6	80	120	
Sb	121	2	115	39.362	39.362	ppb	2.255	35957	40	98.4	80	120	
Ba	137	2	115	40.053	40.053	ppb	5.532	13280	40	100.1	80	120	
W	182	2	165	33.450	33.450	ppb	0.377	111443	40	83.6	80	120	
Pt	195	2	165	0.000	0.000	ppb	18238.446	7	40	0.0	80	120	>+/-20%
Tl	205	2	165	40.193	40.193	ppb	0.736	267488	40	100.5	80	120	
Pb	208	2	165	40.267	40.267	ppb	1.192	364296	40	100.7	80	120	
Th	232	2	165	37.835	37.835	ppb	1.216	434678	40	94.6	80	120	
U	238	2	165	39.830	39.830	ppb	1.450	459334	40	99.6	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	513832	0.62	538871	95.35	60	120	
Sc (IS)	45	1	HMI H2	13597511	0.27	13911789	97.74	60	120	
Sc (IS)	45	2	HMI He	617593	0.47	620219	99.58	60	120	
Sc (IS)	45	3	No Gas	49374728	0.74	49140068	100.48	60	120	
Ge Internal Standard	72	1	HMI H2	5881341	0.78	6023554	97.64	60	120	
Ge Internal Standard	72	2	HMI He	821726	0.30	827657	99.28	60	120	
In Internal Standard	115	2	HMI He	3474220	1.03	3520307	98.69	60	120	
Ho-165	165	2	HMI He	15801820	0.28	15788522	100.08	60	120	

Sample Report

Sample Table

Sample Name	280-123085-D-12-A
Data File Name	232SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T00:26:25-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457013 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	0.994	ppb	0.994	442.80	64847	500000	
Li	7	2	45	-3.230	ppb	-3.230	-1291.73	3481	500000	
Li	7	3	45	-8.721	ppb	-8.721	-36.69	5517721	50000	
Be	9	1	6	0.070	ppb	0.070	86.61	13	2000	
B	11	1	6	27.947	ppb	27.947	63.79	563	2000	
Na	23	1	45	-10.731	ppb	-10.731	-5.95	189030	2000	
Na	23	2	45	-6.795	ppb	-6.795	-47.85	14594	400000	
Mg	24	2	45	6.800	ppb	6.800	3.78	597	400000	
Al	27	2	45	2.742	ppb	2.742	42.13	83	400000	
K	39	1	45	-2407.843	ppb	-2407.843	-0.38	3815923	400000	
K	39	2	45	7.593	ppb	7.593	228.86	23924	400000	
Ca	40	1	45	36.441	ppb	36.441	0.70	143954	400000	
Ca	44	2	45	19.779	ppb	19.779	102.90	107	400000	
Ti	47	2	45	0.541	ppb	0.541	100.45	10	4000	
V	51	2	72	-0.770	ppb	-0.770	-10.77	1047	2000	
Cr	52	2	72	0.392	ppb	0.392	17.34	543	5000	
Mn	55	2	72	0.462	ppb	0.462	51.50	343	10000	
Fe	57	2	72	36.935	ppb	36.935	5.00	833	400000	
Co	59	2	72	0.012	ppb	0.012	1604.88	1020	2000	
Ni	60	2	72	0.023	ppb	0.023	299.48	117	5000	
Cu	63	2	72	-0.133	ppb	-0.133	-32.35	1127	5000	
Zn	66	2	72	2.956	ppb	2.956	21.97	717	5000	
As	75	2	72	-0.003	ppb	-0.003	-2627.39	18	2000	
Se	78	1	72	-0.017	ppb	-0.017	-366.20	11	2000	
Sr	88	2	72	0.235	ppb	0.235	28.75	160	4000	
Zr	90	2	72	47.120	ppb	47.120	64.84	110	1000	
Nb	93	2	72	0.866	ppb	0.866	30.31	1920	200	
Mo	95	2	115	0.034	ppb	0.034	126.46	63	2000	
Pd	105	2	115	0.009	ppb	0.009	151.21	13	100	
Ag	107	2	115	0.002	ppb	0.002	269.05	20	100	
Cd	111	2	115	0.020	ppb	0.020	173.21	7	2000	
Sn	120	2	115	3.931	ppb	3.931	4.81	3867	2000	
Sb	121	2	115	0.513	ppb	0.513	5.74	483	1000	
Ba	137	2	115	0.122	ppb	0.122	64.83	70	5000	
W	182	2	165	0.032	ppb	0.032	91.61	593	100	
Pt	195	2	165	-0.001	ppb	-0.001	-174.08	3	100	
Tl	205	2	165	0.028	ppb	0.028	3.32	327	2000	
Pb	208	2	165	0.098	ppb	0.098	20.55	1530	5000	
Th	232	2	165	0.382	ppb	0.382	8.55	4804	2000	
U	238	2	165	0.006	ppb	0.006	22.69	150	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	512853	0.85	538871	95.17	60	120	
Sc (IS)	45	1	HMI H2	13452804	0.33	13911789	96.70	60	120	
Sc (IS)	45	2	HMI He	613976	0.77	620219	98.99	60	120	
Sc (IS)	45	3	No Gas	49543824	1.57	49140068	100.82	60	120	
Ge Internal Standard	72	1	HMI H2	5834319	0.38	6023554	96.86	60	120	
Ge Internal Standard	72	2	HMI He	822798	0.46	827657	99.41	60	120	
In Internal Standard	115	2	HMI He	3461810	0.65	3520307	98.34	60	120	
Ho-165	165	2	HMI He	15854669	0.60	15788522	100.42	60	120	

Sample Table

Sample Name	280-123087-D-2-B
Data File Name	233SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T00:30:19-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457013 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-10.859	ppb	-10.859	-29.17	54834	500000	
Li	7	2	45	-25.930	ppb	-25.930	-84.16	2967	500000	
Li	7	3	45	-5.805	ppb	-5.805	-36.51	4566264	50000	
Be	9	1	6	0.022	ppb	0.022	173.21	3	2000	
B	11	1	6	284830.718	ppb	284830.718	1.37	1720531	2000	>LDR
Na	23	1	45	OR	ppb	OR	#VALUE!	OR	2000	
Na	23	2	45	3540662.566	ppb	3540662.566	0.72	458384020	400000	>LDR
Mg	24	2	45	116883.398	ppb	116883.398	1.69	6956710	400000	
Al	27	2	45	6.112	ppb	6.112	38.99	133	400000	
K	39	1	45	28792.723	ppb	28792.723	0.72	44840708	400000	
K	39	2	45	21684.332	ppb	21684.332	0.72	835985	400000	
Ca	40	1	45	42330.279	ppb	42330.279	0.53	107015548	400000	
Ca	44	2	45	33819.070	ppb	33819.070	1.87	90033	400000	
Ti	47	2	45	1.762	ppb	1.762	120.26	30	4000	
V	51	2	72	25.828	ppb	25.828	5.27	19073	2000	
Cr	52	2	72	5.265	ppb	5.265	8.17	4658	5000	
Mn	55	2	72	325.188	ppb	325.188	1.49	115219	10000	
Fe	57	2	72	236.794	ppb	236.794	0.57	4047	400000	
Co	59	2	72	0.789	ppb	0.789	14.36	2074	2000	
Ni	60	2	72	31.799	ppb	31.799	0.91	13080	5000	
Cu	63	2	72	3.234	ppb	3.234	1.17	4808	5000	
Zn	66	2	72	3.149	ppb	3.149	17.51	670	5000	
As	75	2	72	118.537	ppb	118.537	1.81	15925	2000	
Se	78	1	72	4.466	ppb	4.466	11.11	527	2000	
Sr	88	2	72	1001.277	ppb	1001.277	1.60	468634	4000	
Zr	90	2	72	3380.407	ppb	3380.407	6.91	4501	1000	
Nb	93	2	72	3.452	ppb	3.452	8.56	4794	200	
Mo	95	2	115	57.988	ppb	57.988	1.32	35225	2000	
Pd	105	2	115	0.059	ppb	0.059	60.86	60	100	
Ag	107	2	115	0.070	ppb	0.070	96.39	163	100	
Cd	111	2	115	0.046	ppb	0.046	173.21	13	2000	
Sn	120	2	115	0.363	ppb	0.363	8.73	417	2000	
Sb	121	2	115	5.480	ppb	5.480	4.46	4374	1000	
Ba	137	2	115	72.797	ppb	72.797	0.58	20997	5000	
W	182	2	165	9.528	ppb	9.528	4.36	27957	100	
Pt	195	2	165	0.009	ppb	0.009	110.55	27	100	
Tl	205	2	165	0.019	ppb	0.019	75.79	227	2000	
Pb	208	2	165	2.543	ppb	2.543	0.39	20557	5000	
Th	232	2	165	0.286	ppb	0.286	10.11	3211	2000	
U	238	2	165	31.612	ppb	31.612	0.58	317577	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	408780	0.86	538871	75.86	60	120	
Sc (IS)	45	1	HMI H2	11794604	0.53	13911789	84.78	60	120	
Sc (IS)	45	2	HMI He	562659	0.17	620219	90.72	60	120	
Sc (IS)	45	3	No Gas	40638684	0.67	49140068	82.70	60	120	
Ge Internal Standard	72	1	HMI H2	5048734	0.33	6023554	83.82	60	120	
Ge Internal Standard	72	2	HMI He	731454	0.65	827657	88.38	60	120	
In Internal Standard	115	2	HMI He	3026199	1.22	3520307	85.96	60	120	
Ho-165	165	2	HMI He	13764608	0.25	15788522	87.18	60	120	

Sample Report

Sample Table

Sample Name	280-123087-D-2-Bsd@5
Data File Name	234SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T00:34:10-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457013 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-18.324	ppb	-18.324	-22.71	59713	500000	
Li	7	2	45	-15.174	ppb	-15.174	-147.97	3277	500000	
Li	7	3	45	-16.961	ppb	-16.961	-33.16	4772002	50000	
Be	9	1	6	0.000	ppb	0.000	#DIV/0!	0	2000	
B	11	1	6	51240.632	ppb	51240.632	0.24	351412	2000	>LDR
Na	23	1	45	692351.104	ppb	692351.104	0.59	1262901581	2000	>LDR
Na	23	2	45	708902.433	ppb	708902.433	0.81	97870912	400000	
Mg	24	2	45	24110.597	ppb	24110.597	0.74	1530394	400000	
Al	27	2	45	2.875	ppb	2.875	108.01	83	400000	
K	39	1	45	5700.695	ppb	5700.695	0.39	15750944	400000	
K	39	2	45	4356.396	ppb	4356.396	0.98	197516	400000	
Ca	40	1	45	8404.228	ppb	8404.228	0.45	23715206	400000	
Ca	44	2	45	6789.229	ppb	6789.229	2.43	19310	400000	
Ti	47	2	45	0.736	ppb	0.736	115.53	13	4000	
V	51	2	72	5.939	ppb	5.939	2.01	6042	2000	
Cr	52	2	72	0.796	ppb	0.796	13.97	910	5000	
Mn	55	2	72	60.954	ppb	60.954	4.29	23820	10000	
Fe	57	2	72	43.401	ppb	43.401	6.69	930	400000	
Co	59	2	72	0.217	ppb	0.217	44.56	1333	2000	
Ni	60	2	72	6.572	ppb	6.572	4.49	3047	5000	
Cu	63	2	72	0.290	ppb	0.290	28.94	1624	5000	
Zn	66	2	72	4.711	ppb	4.711	6.68	1027	5000	
As	75	2	72	22.840	ppb	22.840	1.93	3380	2000	
Se	78	1	72	0.834	ppb	0.834	11.39	121	2000	
Sr	88	2	72	194.323	ppb	194.323	0.91	99799	4000	
Zr	90	2	72	596.398	ppb	596.398	19.08	903	1000	
Nb	93	2	72	0.273	ppb	0.273	31.73	1097	200	
Mo	95	2	115	11.142	ppb	11.142	4.42	7366	2000	
Pd	105	2	115	0.016	ppb	0.016	118.90	20	100	
Ag	107	2	115	0.006	ppb	0.006	299.05	30	100	
Cd	111	2	115	0.011	ppb	0.011	173.21	3	2000	
Sn	120	2	115	0.165	ppb	0.165	46.37	273	2000	
Sb	121	2	115	1.119	ppb	1.119	10.91	980	1000	
Ba	137	2	115	14.870	ppb	14.870	2.62	4671	5000	
W	182	2	165	1.887	ppb	1.887	5.56	6452	100	
Pt	195	2	165	0.001	ppb	0.001	480.42	10	100	
Tl	205	2	165	0.007	ppb	0.007	117.78	173	2000	
Pb	208	2	165	0.539	ppb	0.539	6.29	5267	5000	
Th	232	2	165	0.022	ppb	0.022	60.70	630	2000	
U	238	2	165	6.239	ppb	6.239	1.26	68874	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	463723	0.81	538871	86.05	60	120	
Sc (IS)	45	1	HMI H2	13147986	0.90	13911789	94.51	60	120	
Sc (IS)	45	2	HMI He	599995	1.55	620219	96.74	60	120	
Sc (IS)	45	3	No Gas	43940281	1.01	49140068	89.42	60	120	
Ge Internal Standard	72	1	HMI H2	5701113	1.33	6023554	94.65	60	120	
Ge Internal Standard	72	2	HMI He	802388	0.44	827657	96.95	60	120	
In Internal Standard	115	2	HMI He	3280271	1.02	3520307	93.18	60	120	
Ho-165	165	2	HMI He	15112194	0.83	15788522	95.72	60	120	

Sample Table

Sample Name	280-123087-D-2-C MS
Data File Name	235SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T00:38:05-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457013 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	54.962	ppb	54.962	10.33	66839	500000	
Li	7	2	45	22.084	ppb	22.084	43.52	3367	500000	
Li	7	3	45	44.102	ppb	44.102	6.04	4809259	50000	
Be	9	1	6	43.135	ppb	43.135	2.80	6408	2000	
B	11	1	6	304694.267	ppb	304694.267	1.42	1798521	2000	>LDR
Na	23	1	45	OR	ppb	OR	#VALUE!	OR	2000	
Na	23	2	45	3622542.526	ppb	3622542.526	0.95	458643100	400000	>LDR
Mg	24	2	45	120035.864	ppb	120035.864	0.34	6986934	400000	
Al	27	2	45	400.453	ppb	400.453	1.80	6638	400000	
K	39	1	45	29662.402	ppb	29662.402	0.62	46568684	400000	
K	39	2	45	22157.057	ppb	22157.057	0.63	834917	400000	
Ca	40	1	45	43299.488	ppb	43299.488	0.01	110819912	400000	
Ca	44	2	45	35243.770	ppb	35243.770	2.97	91726	400000	
Ti	47	2	45	0.794	ppb	0.794	86.62	13	4000	
V	51	2	72	68.464	ppb	68.464	2.37	47485	2000	
Cr	52	2	72	44.798	ppb	44.798	1.45	37984	5000	
Mn	55	2	72	373.453	ppb	373.453	1.63	130460	10000	
Fe	57	2	72	563.754	ppb	563.754	5.85	9317	400000	
Co	59	2	72	40.062	ppb	40.062	2.24	60069	2000	
Ni	60	2	72	71.225	ppb	71.225	3.59	28757	5000	
Cu	63	2	72	42.019	ppb	42.019	1.28	47967	5000	
Zn	66	2	72	41.678	ppb	41.678	2.25	7139	5000	
As	75	2	72	163.178	ppb	163.178	0.69	21608	2000	
Se	78	1	72	41.785	ppb	41.785	3.08	4821	2000	
Sr	88	2	72	1065.437	ppb	1065.437	0.59	491594	4000	
Zr	90	2	72	4244.821	ppb	4244.821	6.04	5561	1000	
Nb	93	2	72	1.790	ppb	1.790	9.91	2774	200	
Mo	95	2	115	100.451	ppb	100.451	1.57	59864	2000	
Pd	105	2	115	0.046	ppb	0.046	47.89	47	100	
Ag	107	2	115	36.983	ppb	36.983	2.33	76887	100	
Cd	111	2	115	38.040	ppb	38.040	0.11	10675	2000	
Sn	120	2	115	39.735	ppb	39.735	5.40	32522	2000	
Sb	121	2	115	48.218	ppb	48.218	0.70	37645	1000	
Ba	137	2	115	115.825	ppb	115.825	1.83	32763	5000	
W	182	2	165	42.849	ppb	42.849	0.98	122193	100	
Pt	195	2	165	0.017	ppb	0.017	110.07	43	100	
Tl	205	2	165	37.208	ppb	37.208	1.30	212150	2000	
Pb	208	2	165	39.508	ppb	39.508	1.49	306229	5000	
Th	232	2	165	35.059	ppb	35.059	0.35	345155	2000	
U	238	2	165	70.303	ppb	70.303	0.71	694583	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	399397	0.86	538871	74.12	60	120	
Sc (IS)	45	1	HMI H2	11940368	1.14	13911789	85.83	60	120	
Sc (IS)	45	2	HMI He	550279	1.90	620219	88.72	60	120	
Sc (IS)	45	3	No Gas	37240260	0.95	49140068	75.78	60	120	
Ge Internal Standard	72	1	HMI H2	5032240	1.71	6023554	83.54	60	120	
Ge Internal Standard	72	2	HMI He	721127	1.95	827657	87.13	60	120	
In Internal Standard	115	2	HMI He	2969684	1.12	3520307	84.36	60	120	
Ho-165	165	2	HMI He	13539302	1.78	15788522	85.75	60	120	

Sample Report

Sample Table

Sample Name	280-123087-D-2-D MSD
Data File Name	236SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T00:41:56-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457013 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	65.153	ppb	65.153	3.43	71396	500000	
Li	7	2	45	55.242	ppb	55.242	3.54	3907	500000	
Li	7	3	45	30.090	ppb	30.090	3.58	4490953	50000	
Be	9	1	6	43.326	ppb	43.326	4.30	6865	2000	
B	11	1	6	294100.011	ppb	294100.011	1.68	1851040	2000	>LDR
Na	23	1	45	OR	ppb	OR	#VALUE!	OR	2000	
Na	23	2	45	3514102.857	ppb	3514102.857	1.03	471505740	400000	>LDR
Mg	24	2	45	115774.116	ppb	115774.116	0.78	7141619	400000	
Al	27	2	45	393.275	ppb	393.275	7.79	6905	400000	
K	39	1	45	28994.994	ppb	28994.994	0.06	47528168	400000	
K	39	2	45	21550.533	ppb	21550.533	0.82	861221	400000	
Ca	40	1	45	42258.195	ppb	42258.195	0.56	112565735	400000	
Ca	44	2	45	33679.693	ppb	33679.693	1.50	92920	400000	
Ti	47	2	45	0.938	ppb	0.938	91.49	17	4000	
V	51	2	72	69.896	ppb	69.896	4.03	50803	2000	
Cr	52	2	72	45.405	ppb	45.405	2.79	40363	5000	
Mn	55	2	72	364.889	ppb	364.889	2.33	133591	10000	
Fe	57	2	72	454.238	ppb	454.238	7.28	7899	400000	
Co	59	2	72	40.084	ppb	40.084	0.83	63024	2000	
Ni	60	2	72	72.365	ppb	72.365	1.42	30637	5000	
Cu	63	2	72	43.171	ppb	43.171	1.45	51626	5000	
Zn	66	2	72	42.675	ppb	42.675	4.67	7659	5000	
As	75	2	72	160.121	ppb	160.121	1.38	22228	2000	
Se	78	1	72	44.539	ppb	44.539	3.59	5348	2000	
Sr	88	2	72	1034.215	ppb	1034.215	1.35	500250	4000	
Zr	90	2	72	4271.984	ppb	4271.984	5.22	5872	1000	
Nb	93	2	72	1.032	ppb	1.032	9.74	1970	200	
Mo	95	2	115	100.453	ppb	100.453	0.21	62592	2000	
Pd	105	2	115	0.064	ppb	0.064	88.77	67	100	
Ag	107	2	115	36.687	ppb	36.687	1.14	79750	100	
Cd	111	2	115	38.318	ppb	38.318	1.31	11242	2000	
Sn	120	2	115	39.951	ppb	39.951	2.06	34180	2000	
Sb	121	2	115	48.857	ppb	48.857	1.41	39882	1000	
Ba	137	2	115	113.927	ppb	113.927	1.26	33699	5000	
W	182	2	165	43.018	ppb	43.018	1.68	125970	100	
Pt	195	2	165	0.005	ppb	0.005	52.71	17	100	
Tl	205	2	165	37.351	ppb	37.351	1.03	218694	2000	
Pb	208	2	165	39.566	ppb	39.566	1.19	314925	5000	
Th	232	2	165	34.580	ppb	34.580	0.65	349574	2000	
U	238	2	165	69.018	ppb	69.018	0.44	700244	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	425868	0.69	538871	79.03	60	120	
Sc (IS)	45	1	HMI H2	12426668	1.84	13911789	89.32	60	120	
Sc (IS)	45	2	HMI He	583184	1.17	620219	94.03	60	120	
Sc (IS)	45	3	No Gas	36090965	1.20	49140068	73.45	60	120	
Ge Internal Standard	72	1	HMI H2	5241838	2.23	6023554	87.02	60	120	
Ge Internal Standard	72	2	HMI He	755982	0.77	827657	91.34	60	120	
In Internal Standard	115	2	HMI He	3105065	0.81	3520307	88.20	60	120	
Ho-165	165	2	HMI He	13902864	1.06	15788522	88.06	60	120	

Sample Table

Sample Name	280-123087-D-2-Bpds
Data File Name	237SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T00:45:50-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457013 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-13.591	ppb	-13.591	-58.24	58116	500000	
Li	7	2	45	-15.905	ppb	-15.905	-193.39	3030	500000	
Li	7	3	45	-51.593	ppb	-51.593	-5.24	3302617	50000	
Be	9	1	6	225.107	ppb	225.107	1.56	36900	2000	
B	11	1	6	281615.673	ppb	281615.673	0.68	1833722	2000	>LDR
Na	23	1	45	OR	ppb	OR	#VALUE!	OR	2000	
Na	23	2	45	3448944.245	ppb	3448944.245	0.66	441241967	400000	>LDR
Mg	24	2	45	113310.756	ppb	113310.756	1.01	6664921	400000	
Al	27	2	45	2006.043	ppb	2006.043	2.69	33469	400000	
K	39	1	45	27906.410	ppb	27906.410	0.74	46669003	400000	
K	39	2	45	21373.021	ppb	21373.021	0.48	814551	400000	
Ca	40	1	45	41038.878	ppb	41038.878	0.43	110896608	400000	
Ca	44	2	45	33169.410	ppb	33169.410	0.69	87255	400000	
Ti	47	2	45	6.152	ppb	6.152	12.48	103	4000	
V	51	2	72	242.204	ppb	242.204	1.07	162713	2000	
Cr	52	2	72	211.798	ppb	211.798	0.90	177317	5000	
Mn	55	2	72	528.486	ppb	528.486	1.72	182670	10000	
Fe	57	2	72	2219.024	ppb	2219.024	2.54	35972	400000	
Co	59	2	72	203.582	ppb	203.582	0.80	298785	2000	
Ni	60	2	72	232.450	ppb	232.450	0.69	92742	5000	
Cu	63	2	72	207.593	ppb	207.593	1.10	230189	5000	
Zn	66	2	72	212.028	ppb	212.028	2.57	35428	5000	
As	75	2	72	326.974	ppb	326.974	0.67	42849	2000	
Se	78	1	72	211.408	ppb	211.408	0.73	25602	2000	
Sr	88	2	72	972.227	ppb	972.227	0.39	444170	4000	
Zr	90	2	72	185628.065	ppb	185628.065	0.70	239427	1000	>LDR
Nb	93	2	72	6.242	ppb	6.242	4.69	7929	200	
Mo	95	2	115	276.761	ppb	276.761	0.93	162733	2000	
Pd	105	2	115	0.114	ppb	0.114	39.30	110	100	
Ag	107	2	115	38.474	ppb	38.474	1.59	78936	100	
Cd	111	2	115	201.562	ppb	201.562	1.64	55818	2000	
Sn	120	2	115	207.797	ppb	207.797	1.54	167368	2000	
Sb	121	2	115	228.820	ppb	228.820	1.57	176261	1000	
Ba	137	2	115	277.894	ppb	277.894	1.94	77549	5000	
W	182	2	165	213.993	ppb	213.993	0.90	587348	100	
Pt	195	2	165	0.103	ppb	0.103	14.85	223	100	
Tl	205	2	165	192.188	ppb	192.188	0.21	1057114	2000	
Pb	208	2	165	194.268	ppb	194.268	0.83	1451254	5000	
Th	232	2	165	1.073	ppb	1.073	9.46	10525	2000	
U	238	2	165	259.309	ppb	259.309	1.27	2472434	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	440615	0.06	538871	81.77	60	120	
Sc (IS)	45	1	HMI H2	12606384	0.63	13911789	90.62	60	120	
Sc (IS)	45	2	HMI He	556013	1.42	620219	89.65	60	120	
Sc (IS)	45	3	No Gas	34064594	1.06	49140068	69.32	60	120	
Ge Internal Standard	72	1	HMI H2	5293516	1.53	6023554	87.88	60	120	
Ge Internal Standard	72	2	HMI He	713992	1.56	827657	86.27	60	120	
In Internal Standard	115	2	HMI He	2931448	2.22	3520307	83.27	60	120	
Ho-165	165	2	HMI He	13065428	1.00	15788522	82.75	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5688510
Data File Name	238_CCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T00:49:41-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	108.292	ppb	5.019	90881	100	108.3	90	110	
Li	7	2	45	85.501	ppb	21.310	4588	100	85.5	90	110	>+\-10%
Li	7	3	45	67.787	ppb	2.308	6104192	100	67.8	90	110	>+\-10%
Be	9	1	6	49.421	ppb	4.385	10281	50	98.8	90	110	
B	11	1	6	3262.272	ppb	1.739	27336	50	6524.5	90	110	>+\-10%
Na	23	1	45	5842.134	ppb	5.572	11785628	1000	584.2	90	110	>+\-10%
Na	23	2	45	3797.971	ppb	8.447	570178	1000	379.8	90	110	>+\-10%
Mg	24	2	45	1015.822	ppb	1.108	68315	1000	101.6	90	110	
Al	27	2	45	976.048	ppb	1.366	18599	1000	97.6	90	110	
K	39	1	45	636.093	ppb	10.633	8947163	1000	63.6	90	110	>+\-10%
K	39	2	45	1053.552	ppb	3.625	68992	1000	105.4	90	110	
Ca	40	1	45	1037.310	ppb	0.747	3213698	1000	103.7	90	110	
Ca	44	2	45	985.246	ppb	8.281	3007	1000	98.5	90	110	
Ti	47	2	45	51.595	ppb	4.447	990	50	103.2	90	110	
V	51	2	72	49.491	ppb	1.715	40471	50	99.0	90	110	
Cr	52	2	72	49.949	ppb	3.022	49351	50	99.9	90	110	
Mn	55	2	72	50.642	ppb	2.231	20756	50	101.3	90	110	
Fe	57	2	72	992.086	ppb	2.760	19006	1000	99.2	90	110	
Co	59	2	72	49.354	ppb	1.365	86034	50	98.7	90	110	
Ni	60	2	72	50.380	ppb	2.756	23744	50	100.8	90	110	
Cu	63	2	72	50.521	ppb	0.605	66939	50	101.0	90	110	
Zn	66	2	72	48.742	ppb	7.420	9707	50	97.5	90	110	
As	75	2	72	50.834	ppb	3.664	7857	50	101.7	90	110	
Se	78	1	72	51.585	ppb	2.380	7335	50	103.2	90	110	
Sr	88	2	72	99.518	ppb	0.673	53555	100	99.5	90	110	
Zr	90	2	72	230.318	ppb	30.903	390	50	460.6	90	110	>+\-10%
Nb	93	2	72	93.228	ppb	1.525	128615	100	93.2	90	110	
Mo	95	2	115	49.671	ppb	2.271	34907	50	99.3	90	110	
Pd	105	2	115	51.450	ppb	2.703	57458	50	102.9	90	110	
Ag	107	2	115	48.697	ppb	1.148	119329	50	97.4	90	110	
Cd	111	2	115	49.862	ppb	4.209	16497	50	99.7	90	110	
Sn	120	2	115	48.640	ppb	2.087	46880	50	97.3	90	110	
Sb	121	2	115	49.273	ppb	3.792	45335	50	98.5	90	110	
Ba	137	2	115	46.787	ppb	1.805	15623	50	93.6	90	110	
W	182	2	165	49.373	ppb	0.363	158839	50	98.7	90	110	
Pt	195	2	165	49.047	ppb	0.807	121330	50	98.1	90	110	
Tl	205	2	165	48.522	ppb	0.810	312230	50	97.0	90	110	
Pb	208	2	165	49.117	ppb	0.427	429558	50	98.2	90	110	
Th	232	2	165	47.648	ppb	0.373	529247	50	95.3	90	110	
U	238	2	165	48.201	ppb	0.759	537506	50	96.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	559171	0.73	538871	103.77	60	120	
Sc (IS)	45	1	HMI H2	14272971	0.67	13911789	102.60	60	120	
Sc (IS)	45	2	HMI He	634303	0.61	620219	102.27	60	120	
Sc (IS)	45	3	No Gas	44518918	0.62	49140068	90.60	60	120	
Ge Internal Standard	72	1	HMI H2	6206685	0.08	6023554	103.04	60	120	
Ge Internal Standard	72	2	HMI He	840466	0.80	827657	101.55	60	120	
In Internal Standard	115	2	HMI He	3500771	1.40	3520307	99.45	60	120	
Ho-165	165	2	HMI He	15280145	0.19	15788522	96.78	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5688508
Data File Name	239_CCB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T00:53:31-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-21.017	ppb	-5.8	4827508	10	
Be	9	1	6	0.094	ppb	1.7	20	0.5	
B	11	1	6	1610.895	ppb	5.7	13997	0.5	>RL
Na	23	1	45	1421.338	ppb	3.9	3119884	25	>RL
Na	23	2	45	1146.650	ppb	3.8	181725	25	>RL
Mg	24	2	45	8.036	ppb	23.4	693	25	
Al	27	2	45	2.987	ppb	17.1	90	15	
K	39	1	45	-212.555	ppb	-40.5	7793566	50	
K	39	2	45	62.669	ppb	12.5	26795	50	>RL
Ca	40	1	45	1.772	ppb	28.1	47993	50	
Ca	44	2	45	-5.777	ppb	-147.9	33	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	0.950	ppb	6.4	2414	1	
Cr	52	2	72	0.120	ppb	46.7	287	1	
Mn	55	2	72	0.158	ppb	87.6	227	0.5	
Fe	57	2	72	1.303	ppb	248.1	173	25	
Co	59	2	72	0.067	ppb	199.3	1137	0.5	
Ni	60	2	72	0.047	ppb	119.5	130	1	
Cu	63	2	72	0.227	ppb	8.4	1617	1	
Zn	66	2	72	1.283	ppb	22.4	403	5	
As	75	2	72	0.117	ppb	44.1	37	1	
Se	78	1	72	1.682	ppb	6.7	256	1	>RL
Sr	88	2	72	0.012	ppb	562.7	43	0.5	
Zr	90	2	72	28.186	ppb	49.0	83	1	>RL
Nb	93	2	72	3.046	ppb	8.7	4944	2	>RL
Mo	95	2	115	0.096	ppb	37.1	107	0.5	
Pd	105	2	115	0.075	ppb	38.2	87	1	
Ag	107	2	115	0.019	ppb	24.1	63	1	
Cd	111	2	115	0.020	ppb	173.2	7	0.5	
Sn	120	2	115	0.279	ppb	55.4	400	1	
Sb	121	2	115	0.131	ppb	31.0	137	0.6	
Ba	137	2	115	0.111	ppb	56.5	67	0.5	
W	182	2	165	0.062	ppb	60.3	670	1	
Pt	195	2	165	0.005	ppb	127.5	20	1	
Tl	205	2	165	0.050	ppb	35.2	457	0.1	
Pb	208	2	165	0.187	ppb	7.0	2250	0.5	
Th	232	2	165	0.210	ppb	15.9	2727	1	
U	238	2	165	0.033	ppb	36.5	440	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	571680	1.76	538871	106.09	60	120	
Sc (IS)	45	1	HMI H2	14676004	2.46	13911789	105.49	60	120	
Sc (IS)	45	2	HMI He	628356	0.65	620219	101.31	60	120	
Sc (IS)	45	3	No Gas	45015043	0.14	49140068	91.61	60	120	
Ge Internal Standard	72	1	HMI H2	6290821	1.82	6023554	104.44	60	120	
Ge Internal Standard	72	2	HMI He	839346	0.69	827657	101.41	60	120	
In Internal Standard	115	2	HMI He	3485253	0.51	3520307	99.00	60	120	
Ho-165	165	2	HMI He	15283170	0.88	15788522	96.80	60	120	

Sample Report

Sample Table

Sample Name	280-123087-D-4-B
Data File Name	240SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T00:57:26-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457013 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-1.160	ppb	-1.160	-493.26	65901	500000	
Li	7	2	45	1.393	ppb	1.393	806.20	3501	500000	
Li	7	3	45	-24.784	ppb	-24.784	-7.06	4603693	50000	
Be	9	1	6	0.034	ppb	0.034	86.61	7	2000	
B	11	1	6	6223.999	ppb	6223.999	1.19	48355	2000	
Na	23	1	45	113961.178	ppb	113961.178	0.57	217731863	2000	>LDR
Na	23	2	45	118943.933	ppb	118943.933	0.27	16667306	400000	
Mg	24	2	45	16354.686	ppb	16354.686	0.24	1052754	400000	
Al	27	2	45	8.445	ppb	8.445	43.19	187	400000	
K	39	1	45	593.519	ppb	593.519	7.15	8559999	400000	
K	39	2	45	2279.066	ppb	2279.066	0.18	115957	400000	
Ca	40	1	45	21100.108	ppb	21100.108	1.17	62252282	400000	
Ca	44	2	45	16330.210	ppb	16330.210	0.82	47037	400000	
Ti	47	2	45	0.904	ppb	0.904	125.03	17	4000	
V	51	2	72	5.629	ppb	5.629	3.69	5831	2000	
Cr	52	2	72	0.588	ppb	0.588	10.33	717	5000	
Mn	55	2	72	100.365	ppb	100.365	1.30	39267	10000	
Fe	57	2	72	56.529	ppb	56.529	14.83	1173	400000	
Co	59	2	72	0.127	ppb	0.127	17.38	1190	2000	
Ni	60	2	72	1.156	ppb	1.156	1.97	623	5000	
Cu	63	2	72	0.631	ppb	0.631	19.69	2054	5000	
Zn	66	2	72	2.420	ppb	2.420	21.83	600	5000	
As	75	2	72	2.867	ppb	2.867	17.73	442	2000	
Se	78	1	72	1.612	ppb	1.612	27.26	232	2000	
Sr	88	2	72	230.954	ppb	230.954	0.36	119054	4000	
Zr	90	2	72	149.429	ppb	149.429	25.12	257	1000	
Nb	93	2	72	2.468	ppb	2.468	16.64	3984	200	
Mo	95	2	115	1.914	ppb	1.914	12.14	1300	2000	
Pd	105	2	115	0.016	ppb	0.016	102.43	20	100	
Ag	107	2	115	0.015	ppb	0.015	1.12	50	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.250	ppb	0.250	43.69	350	2000	
Sb	121	2	115	0.252	ppb	0.252	17.39	233	1000	
Ba	137	2	115	28.254	ppb	28.254	2.36	8877	5000	
W	182	2	165	0.300	ppb	0.300	4.72	1383	100	
Pt	195	2	165	0.004	ppb	0.004	55.56	17	100	
Tl	205	2	165	0.024	ppb	0.024	48.33	277	2000	
Pb	208	2	165	0.394	ppb	0.394	8.92	3920	5000	
Th	232	2	165	0.200	ppb	0.200	8.91	2517	2000	
U	238	2	165	0.384	ppb	0.384	3.43	4208	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	521903	0.61	538871	96.85	60	120	
Sc (IS)	45	1	HMI H2	13760313	0.52	13911789	98.91	60	120	
Sc (IS)	45	2	HMI He	608456	0.59	620219	98.10	60	120	
Sc (IS)	45	3	No Gas	43440854	0.19	49140068	88.40	60	120	
Ge Internal Standard	72	1	HMI H2	5935182	0.11	6023554	98.53	60	120	
Ge Internal Standard	72	2	HMI He	805409	0.82	827657	97.31	60	120	
In Internal Standard	115	2	HMI He	3290025	0.77	3520307	93.46	60	120	
Ho-165	165	2	HMI He	14750291	0.61	15788522	93.42	60	120	

Sample Report

Sample Table

Sample Name	280-123209-E-1-A
Data File Name	241SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T01:01:19-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457013 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	31.512	ppb	31.512	1.54	72394	500000	
Li	7	2	45	-2.374	ppb	-2.374	-298.35	3671	500000	
Li	7	3	45	-5.691	ppb	-5.691	-43.09	4618423	50000	
Be	9	1	6	0.090	ppb	0.090	35.11	17	2000	
B	11	1	6	19560.198	ppb	19560.198	1.27	144960	2000	>LDR
Na	23	1	45	172266.025	ppb	172266.025	0.47	329074188	2000	>LDR
Na	23	2	45	179916.540	ppb	179916.540	1.08	26721234	400000	
Mg	24	2	45	209248.647	ppb	209248.647	1.05	14280617	400000	
Al	27	2	45	7.640	ppb	7.640	45.14	183	400000	
K	39	1	45	5406.803	ppb	5406.803	0.72	16031648	400000	
K	39	2	45	6218.778	ppb	6218.778	0.81	292590	400000	
Ca	40	1	45	430186.655	ppb	430186.655	0.24	1268709261	400000	
Ca	44	2	45	333166.510	ppb	333166.510	0.43	1016584	400000	
Ti	47	2	45	0.692	ppb	0.692	116.08	13	4000	
V	51	2	72	-0.327	ppb	-0.327	-29.07	1427	2000	
Cr	52	2	72	1.302	ppb	1.302	12.81	1460	5000	
Mn	55	2	72	1272.920	ppb	1272.920	0.81	521608	10000	
Fe	57	2	72	1372.663	ppb	1372.663	2.54	26445	400000	
Co	59	2	72	2.508	ppb	2.508	7.49	5381	2000	
Ni	60	2	72	5.044	ppb	5.044	3.36	2494	5000	
Cu	63	2	72	3.549	ppb	3.549	21.37	5988	5000	
Zn	66	2	72	4.236	ppb	4.236	2.03	990	5000	
As	75	2	72	0.440	ppb	0.440	23.24	87	2000	
Se	78	1	72	1.076	ppb	1.076	12.70	156	2000	
Sr	88	2	72	1371.931	ppb	1371.931	0.67	743317	4000	
Zr	90	2	72	91.710	ppb	91.710	68.18	180	1000	
Nb	93	2	72	1.032	ppb	1.032	18.44	2210	200	
Mo	95	2	115	0.541	ppb	0.541	13.97	417	2000	
Pd	105	2	115	0.009	ppb	0.009	152.35	13	100	
Ag	107	2	115	0.024	ppb	0.024	97.19	73	100	
Cd	111	2	115	0.020	ppb	0.020	86.65	7	2000	
Sn	120	2	115	0.118	ppb	0.118	95.51	243	2000	
Sb	121	2	115	0.040	ppb	0.040	108.39	53	1000	
Ba	137	2	115	8.759	ppb	8.759	11.10	2937	5000	
W	182	2	165	0.014	ppb	0.014	132.16	527	100	
Pt	195	2	165	-0.003	ppb	-0.003	0.00	0	100	
Tl	205	2	165	0.021	ppb	0.021	15.34	270	2000	
Pb	208	2	165	0.085	ppb	0.085	18.63	1383	5000	
Th	232	2	165	0.120	ppb	0.120	2.52	1757	2000	
U	238	2	165	8.972	ppb	8.972	1.90	101880	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	500364	0.67	538871	92.85	60	120	
Sc (IS)	45	1	HMI H2	13762706	0.86	13911789	98.93	60	120	
Sc (IS)	45	2	HMI He	645204	2.09	620219	104.03	60	120	
Sc (IS)	45	3	No Gas	41090894	0.70	49140068	83.62	60	120	
Ge Internal Standard	72	1	HMI H2	5820885	0.65	6023554	96.64	60	120	
Ge Internal Standard	72	2	HMI He	846761	2.02	827657	102.31	60	120	
In Internal Standard	115	2	HMI He	3483626	2.11	3520307	98.96	60	120	
Ho-165	165	2	HMI He	15554971	2.10	15788522	98.52	60	120	

Sample Report

Sample Table

Sample Name	280-123209-E-2-A
Data File Name	242SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T01:05:14-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457013 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	10.532	ppb	10.532	116.53	71441	500000	
Li	7	2	45	-12.681	ppb	-12.681	-34.42	3424	500000	
Li	7	3	45	-37.107	ppb	-37.107	-9.22	3747957	50000	
Be	9	1	6	0.052	ppb	0.052	173.21	10	2000	
B	11	1	6	11269.317	ppb	11269.317	2.29	87757	2000	>LDR
Na	23	1	45	69400.327	ppb	69400.327	1.09	138973748	2000	>LDR
Na	23	2	45	72891.089	ppb	72891.089	0.91	10443766	400000	
Mg	24	2	45	234564.265	ppb	234564.265	0.81	15427412	400000	
Al	27	2	45	4.665	ppb	4.665	42.63	120	400000	
K	39	1	45	1376.904	ppb	1376.904	1.71	10240026	400000	
K	39	2	45	3058.268	ppb	3058.268	0.17	150856	400000	
Ca	40	1	45	368688.150	ppb	368688.150	0.63	1138734863	400000	
Ca	44	2	45	284841.901	ppb	284841.901	0.96	837691	400000	
Ti	47	2	45	0.365	ppb	0.365	173.21	7	4000	
V	51	2	72	-0.412	ppb	-0.412	-51.52	1317	2000	
Cr	52	2	72	0.300	ppb	0.300	28.90	453	5000	
Mn	55	2	72	3967.504	ppb	3967.504	1.78	1571362	10000	
Fe	57	2	72	1662.379	ppb	1662.379	4.70	30907	400000	
Co	59	2	72	7.678	ppb	7.678	2.87	13874	2000	
Ni	60	2	72	10.459	ppb	10.459	7.46	4888	5000	
Cu	63	2	72	-0.106	ppb	-0.106	-160.94	1157	5000	
Zn	66	2	72	3.500	ppb	3.500	24.39	813	5000	
As	75	2	72	1.667	ppb	1.667	2.66	269	2000	
Se	78	1	72	1.224	ppb	1.224	11.65	185	2000	
Sr	88	2	72	815.647	ppb	815.647	0.22	427327	4000	
Zr	90	2	72	251.473	ppb	251.473	30.63	413	1000	
Nb	93	2	72	0.527	ppb	0.527	19.58	1457	200	
Mo	95	2	115	1.948	ppb	1.948	13.11	1353	2000	
Pd	105	2	115	0.006	ppb	0.006	147.10	10	100	
Ag	107	2	115	0.005	ppb	0.005	278.83	27	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.057	ppb	0.057	101.92	180	2000	
Sb	121	2	115	0.050	ppb	0.050	61.73	60	1000	
Ba	137	2	115	13.454	ppb	13.454	5.03	4334	5000	
W	182	2	165	-0.003	ppb	-0.003	-776.27	450	100	
Pt	195	2	165	0.000	ppb	0.000	1572.40	7	100	
Tl	205	2	165	0.009	ppb	0.009	113.22	187	2000	
Pb	208	2	165	0.022	ppb	0.022	83.43	783	5000	
Th	232	2	165	0.041	ppb	0.041	22.80	820	2000	
U	238	2	165	4.118	ppb	4.118	2.62	44755	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	524876	1.08	538871	97.40	60	120	
Sc (IS)	45	1	HMI H2	14414152	1.46	13911789	103.61	60	120	
Sc (IS)	45	2	HMI He	621860	2.62	620219	100.26	60	120	
Sc (IS)	45	3	No Gas	36807847	0.72	49140068	74.90	60	120	
Ge Internal Standard	72	1	HMI H2	6129984	1.24	6023554	101.77	60	120	
Ge Internal Standard	72	2	HMI He	818720	3.09	827657	98.92	60	120	
In Internal Standard	115	2	HMI He	3364158	2.22	3520307	95.56	60	120	
Ho-165	165	2	HMI He	14861871	2.70	15788522	94.13	60	120	

Sample Report

Sample Table

Sample Name	280-123273-E-1-A
Data File Name	243SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T01:09:10-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457013 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	2.274	ppb	2.274	143.71	75805	500000	
Li	7	2	45	-4.335	ppb	-4.335	-707.68	4064	500000	
Li	7	3	45	-18.418	ppb	-18.418	-22.89	5134318	50000	
Be	9	1	6	0.000	ppb	0.000	#DIV/0!	0	2000	
B	11	1	6	7013.123	ppb	7013.123	1.70	60078	2000	
Na	23	1	45	33849.162	ppb	33849.162	0.69	73799734	2000	>LDR
Na	23	2	45	34987.761	ppb	34987.761	0.27	5806668	400000	
Mg	24	2	45	65865.703	ppb	65865.703	0.25	5009883	400000	
Al	27	2	45	3.156	ppb	3.156	33.45	107	400000	
K	39	1	45	1736.178	ppb	1736.178	2.20	11764058	400000	
K	39	2	45	3302.337	ppb	3302.337	1.11	186143	400000	
Ca	40	1	45	146023.978	ppb	146023.978	0.48	490236939	400000	
Ca	44	2	45	111851.033	ppb	111851.033	1.15	380393	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	-0.536	ppb	-0.536	-38.17	1420	2000	
Cr	52	2	72	0.294	ppb	0.294	32.08	520	5000	
Mn	55	2	72	15.241	ppb	15.241	3.31	7212	10000	
Fe	57	2	72	35.457	ppb	35.457	29.81	933	400000	
Co	59	2	72	0.079	ppb	0.079	103.87	1313	2000	
Ni	60	2	72	1.122	ppb	1.122	20.73	720	5000	
Cu	63	2	72	0.373	ppb	0.373	32.58	2050	5000	
Zn	66	2	72	2.883	ppb	2.883	26.65	813	5000	
As	75	2	72	0.294	ppb	0.294	11.71	73	2000	
Se	78	1	72	0.806	ppb	0.806	21.07	140	2000	
Sr	88	2	72	425.600	ppb	425.600	0.87	259575	4000	
Zr	90	2	72	40.986	ppb	40.986	71.59	117	1000	
Nb	93	2	72	0.134	ppb	0.134	123.64	1087	200	
Mo	95	2	115	2.678	ppb	2.678	10.69	2120	2000	
Pd	105	2	115	0.008	ppb	0.008	57.99	13	100	
Ag	107	2	115	0.002	ppb	0.002	225.37	23	100	
Cd	111	2	115	0.028	ppb	0.028	100.43	10	2000	
Sn	120	2	115	0.153	ppb	0.153	62.71	310	2000	
Sb	121	2	115	0.041	ppb	0.041	25.13	60	1000	
Ba	137	2	115	19.241	ppb	19.241	3.44	7122	5000	
W	182	2	165	0.026	ppb	0.026	37.38	617	100	
Pt	195	2	165	-0.001	ppb	-0.001	-153.22	3	100	
Tl	205	2	165	0.013	ppb	0.013	7.51	237	2000	
Pb	208	2	165	0.011	ppb	0.011	137.60	793	5000	
Th	232	2	165	0.020	ppb	0.020	14.36	673	2000	
U	238	2	165	5.966	ppb	5.966	2.47	73890	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	575944	0.76	538871	106.88	60	120	
Sc (IS)	45	1	HMI H2	15666310	0.93	13911789	112.61	60	120	
Sc (IS)	45	2	HMI He	719052	0.39	620219	115.94	60	120	
Sc (IS)	45	3	No Gas	47492168	0.86	49140068	96.65	60	120	
Ge Internal Standard	72	1	HMI H2	6771564	1.21	6023554	112.42	60	120	
Ge Internal Standard	72	2	HMI He	953064	0.21	827657	115.15	60	120	
In Internal Standard	115	2	HMI He	3869422	1.22	3520307	109.92	60	120	
Ho-165	165	2	HMI He	16956466	0.44	15788522	107.40	60	120	

Sample Report

Sample Table

Sample Name	280-123273-E-2-A
Data File Name	244SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T01:13:02-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457013 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	35.186	ppb	35.186	12.22	82972	500000	
Li	7	2	45	13.726	ppb	13.726	261.71	4154	500000	
Li	7	3	45	30.385	ppb	30.385	27.86	5626618	50000	
Be	9	1	6	0.048	ppb	0.048	99.89	10	2000	
B	11	1	6	24122.664	ppb	24122.664	0.40	201608	2000	>LDR
Na	23	1	45	55633.132	ppb	55633.132	0.53	120754218	2000	>LDR
Na	23	2	45	58063.919	ppb	58063.919	1.41	9311517	400000	
Mg	24	2	45	142179.461	ppb	142179.461	0.42	10462763	400000	
Al	27	2	45	5.864	ppb	5.864	62.61	160	400000	
K	39	1	45	5007.760	ppb	5007.760	1.37	17487946	400000	
K	39	2	45	5915.854	ppb	5915.854	0.10	301452	400000	
Ca	40	1	45	190409.345	ppb	190409.345	0.38	637202204	400000	
Ca	44	2	45	146434.753	ppb	146434.753	0.61	481795	400000	
Ti	47	2	45	0.320	ppb	0.320	173.21	7	4000	
V	51	2	72	-0.521	ppb	-0.521	-40.48	1387	2000	
Cr	52	2	72	0.217	ppb	0.217	35.17	420	5000	
Mn	55	2	72	1084.250	ppb	1084.250	1.06	484032	10000	
Fe	57	2	72	20.602	ppb	20.602	11.02	593	400000	
Co	59	2	72	0.967	ppb	0.967	14.39	2950	2000	
Ni	60	2	72	5.091	ppb	5.091	2.78	2740	5000	
Cu	63	2	72	0.789	ppb	0.789	5.59	2577	5000	
Zn	66	2	72	6.880	ppb	6.880	4.71	1647	5000	
As	75	2	72	0.455	ppb	0.455	25.69	97	2000	
Se	78	1	72	0.899	ppb	0.899	17.59	152	2000	
Sr	88	2	72	1320.047	ppb	1320.047	0.17	779087	4000	
Zr	90	2	72	109.268	ppb	109.268	23.00	227	1000	
Nb	93	2	72	-0.071	ppb	-0.071	-107.01	743	200	
Mo	95	2	115	7.166	ppb	7.166	3.66	5378	2000	
Pd	105	2	115	0.022	ppb	0.022	38.12	30	100	
Ag	107	2	115	0.005	ppb	0.005	79.32	30	100	
Cd	111	2	115	0.066	ppb	0.066	65.19	23	2000	
Sn	120	2	115	0.061	ppb	0.061	39.44	203	2000	
Sb	121	2	115	0.119	ppb	0.119	18.01	133	1000	
Ba	137	2	115	18.611	ppb	18.611	7.93	6609	5000	
W	182	2	165	0.007	ppb	0.007	452.73	533	100	
Pt	195	2	165	0.002	ppb	0.002	180.64	13	100	
Tl	205	2	165	0.017	ppb	0.017	31.26	260	2000	
Pb	208	2	165	0.017	ppb	0.017	47.60	830	5000	
Th	232	2	165	0.014	ppb	0.014	60.87	587	2000	
U	238	2	165	0.901	ppb	0.901	0.39	10952	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	564548	0.17	538871	104.77	60	120	
Sc (IS)	45	1	HMI H2	15616290	0.20	13911789	112.25	60	120	
Sc (IS)	45	2	HMI He	695696	1.02	620219	112.17	60	120	
Sc (IS)	45	3	No Gas	45192018	1.65	49140068	91.97	60	120	
Ge Internal Standard	72	1	HMI H2	6674104	0.17	6023554	110.80	60	120	
Ge Internal Standard	72	2	HMI He	922374	0.15	827657	111.44	60	120	
In Internal Standard	115	2	HMI He	3712823	0.43	3520307	105.47	60	120	
Ho-165	165	2	HMI He	16540617	0.28	15788522	104.76	60	120	

Sample Report

Sample Table

Sample Name	280-123273-E-3-A
Data File Name	245SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T01:16:53-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457013 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	10.108	ppb	10.108	44.13	74233	500000	
Li	7	2	45	-2.461	ppb	-2.461	-343.78	3961	500000	
Li	7	3	45	-24.724	ppb	-24.724	-15.06	4372275	50000	
Be	9	1	6	0.032	ppb	0.032	86.60	7	2000	
B	11	1	6	4592.435	ppb	4592.435	0.96	37822	2000	
Na	23	1	45	17081.905	ppb	17081.905	0.32	35757969	2000	>LDR
Na	23	2	45	17906.510	ppb	17906.510	0.43	2887901	400000	
Mg	24	2	45	92479.878	ppb	92479.878	0.60	6814962	400000	
Al	27	2	45	13.984	ppb	13.984	41.13	330	400000	
K	39	1	45	4287.924	ppb	4287.924	0.44	15572594	400000	
K	39	2	45	5339.399	ppb	5339.399	0.79	275081	400000	
Ca	40	1	45	283433.090	ppb	283433.090	0.59	910578280	400000	
Ca	44	2	45	217353.346	ppb	217353.346	0.91	716136	400000	
Ti	47	2	45	0.158	ppb	0.158	173.21	3	4000	
V	51	2	72	-0.719	ppb	-0.719	-12.33	1223	2000	
Cr	52	2	72	0.325	ppb	0.325	0.42	540	5000	
Mn	55	2	72	514.157	ppb	514.157	0.68	230859	10000	
Fe	57	2	72	141.087	ppb	141.087	3.13	3124	400000	
Co	59	2	72	1.818	ppb	1.818	6.10	4584	2000	
Ni	60	2	72	9.120	ppb	9.120	2.21	4841	5000	
Cu	63	2	72	0.372	ppb	0.372	24.57	1994	5000	
Zn	66	2	72	5.574	ppb	5.574	5.06	1373	5000	
As	75	2	72	0.575	ppb	0.575	27.88	118	2000	
Se	78	1	72	0.777	ppb	0.777	50.61	129	2000	
Sr	88	2	72	1090.480	ppb	1090.480	0.88	647065	4000	
Zr	90	2	72	106.572	ppb	106.572	21.52	223	1000	
Nb	93	2	72	-0.037	ppb	-0.037	-198.98	800	200	
Mo	95	2	115	1.874	ppb	1.874	11.13	1473	2000	
Pd	105	2	115	0.038	ppb	0.038	37.46	50	100	
Ag	107	2	115	0.005	ppb	0.005	83.26	30	100	
Cd	111	2	115	0.046	ppb	0.046	91.49	17	2000	
Sn	120	2	115	0.286	ppb	0.286	15.78	443	2000	
Sb	121	2	115	0.085	ppb	0.085	29.02	103	1000	
Ba	137	2	115	15.633	ppb	15.633	4.65	5698	5000	
W	182	2	165	0.006	ppb	0.006	530.18	533	100	
Pt	195	2	165	0.000	ppb	0.000	-3172.65	7	100	
Tl	205	2	165	0.033	ppb	0.033	10.68	377	2000	
Pb	208	2	165	0.086	ppb	0.086	22.42	1490	5000	
Th	232	2	165	0.010	ppb	0.010	33.05	543	2000	
U	238	2	165	9.677	ppb	9.677	1.19	117926	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	551807	0.27	538871	102.40	60	120	
Sc (IS)	45	1	HMI H2	14992656	0.87	13911789	107.77	60	120	
Sc (IS)	45	2	HMI He	696668	0.92	620219	112.33	60	120	
Sc (IS)	45	3	No Gas	41252363	1.05	49140068	83.95	60	120	
Ge Internal Standard	72	1	HMI H2	6470324	0.72	6023554	107.42	60	120	
Ge Internal Standard	72	2	HMI He	927328	0.28	827657	112.04	60	120	
In Internal Standard	115	2	HMI He	3807084	0.50	3520307	108.15	60	120	
Ho-165	165	2	HMI He	16688005	0.69	15788522	105.70	60	120	

Sample Report

Sample Table

Sample Name	280-123273-E-4-A
Data File Name	246SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T01:20:45-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457013 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	62.973	ppb	62.973	13.11	89711	500000	
Li	7	2	45	68.932	ppb	68.932	23.75	4858	500000	
Li	7	3	45	58.286	ppb	58.286	8.26	6613189	50000	
Be	9	1	6	0.000	ppb	0.000	#DIV/0!	0	2000	
B	11	1	6	22714.365	ppb	22714.365	1.21	188804	2000	>LDR
Na	23	1	45	83630.645	ppb	83630.645	0.68	182384051	2000	>LDR
Na	23	2	45	87835.637	ppb	87835.637	0.29	14161875	400000	
Mg	24	2	45	46860.116	ppb	46860.116	1.49	3469225	400000	
Al	27	2	45	8.850	ppb	8.850	16.81	223	400000	
K	39	1	45	11390.822	ppb	11390.822	0.76	28883431	400000	
K	39	2	45	10998.784	ppb	10998.784	0.65	540692	400000	
Ca	40	1	45	103285.946	ppb	103285.946	0.81	347534888	400000	
Ca	44	2	45	81313.229	ppb	81313.229	1.04	269173	400000	
Ti	47	2	45	0.158	ppb	0.158	173.21	3	4000	
V	51	2	72	-0.277	ppb	-0.277	-71.46	1614	2000	
Cr	52	2	72	0.149	ppb	0.149	17.96	350	5000	
Mn	55	2	72	182.435	ppb	182.435	2.08	82417	10000	
Fe	57	2	72	397.686	ppb	397.686	2.15	8546	400000	
Co	59	2	72	0.023	ppb	0.023	415.65	1177	2000	
Ni	60	2	72	0.096	ppb	0.096	53.42	170	5000	
Cu	63	2	72	-0.554	ppb	-0.554	-8.93	670	5000	
Zn	66	2	72	0.817	ppb	0.817	70.08	347	5000	
As	75	2	72	1.156	ppb	1.156	2.13	218	2000	
Se	78	1	72	0.606	ppb	0.606	32.22	109	2000	
Sr	88	2	72	1202.128	ppb	1202.128	0.14	716689	4000	
Zr	90	2	72	40.480	ppb	40.480	88.14	113	1000	
Nb	93	2	72	-0.245	ppb	-0.245	-14.50	487	200	
Mo	95	2	115	5.856	ppb	5.856	4.73	4534	2000	
Pd	105	2	115	0.016	ppb	0.016	105.44	23	100	
Ag	107	2	115	0.004	ppb	0.004	81.81	30	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.053	ppb	0.053	68.28	200	2000	
Sb	121	2	115	0.022	ppb	0.022	81.93	40	1000	
Ba	137	2	115	24.092	ppb	24.092	0.73	8800	5000	
W	182	2	165	0.024	ppb	0.024	61.03	607	100	
Pt	195	2	165	-0.003	ppb	-0.003	0.00	0	100	
Tl	205	2	165	-0.002	ppb	-0.002	-210.12	130	2000	
Pb	208	2	165	0.013	ppb	0.013	88.20	803	5000	
Th	232	2	165	0.005	ppb	0.005	74.82	487	2000	
U	238	2	165	0.507	ppb	0.507	7.24	6329	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	561441	0.74	538871	104.19	60	120	
Sc (IS)	45	1	HMI H2	15700924	0.30	13911789	112.86	60	120	
Sc (IS)	45	2	HMI He	699875	0.42	620219	112.84	60	120	
Sc (IS)	45	3	No Gas	49385021	1.01	49140068	100.50	60	120	
Ge Internal Standard	72	1	HMI H2	6796802	0.19	6023554	112.84	60	120	
Ge Internal Standard	72	2	HMI He	931728	0.27	827657	112.57	60	120	
In Internal Standard	115	2	HMI He	3822924	1.43	3520307	108.60	60	120	
Ho-165	165	2	HMI He	16882380	0.26	15788522	106.93	60	120	

Sample Report

Sample Table

Sample Name	280-123273-E-5-A
Data File Name	247SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T01:24:38-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457013 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	68.857	ppb	68.857	3.47	85647	500000	
Li	7	2	45	35.288	ppb	35.288	67.03	4251	500000	
Li	7	3	45	20.766	ppb	20.766	12.84	4484049	50000	
Be	9	1	6	0.103	ppb	0.103	86.60	20	2000	
B	11	1	6	22427.052	ppb	22427.052	1.63	174220	2000	>LDR
Na	23	1	45	79445.487	ppb	79445.487	1.07	162998014	2000	>LDR
Na	23	2	45	83025.691	ppb	83025.691	0.14	12812276	400000	
Mg	24	2	45	247828.692	ppb	247828.692	0.18	17558779	400000	
Al	27	2	45	22.405	ppb	22.405	33.78	487	400000	
K	39	1	45	10321.718	ppb	10321.718	1.34	25390615	400000	
K	39	2	45	10025.622	ppb	10025.622	0.46	473977	400000	
Ca	40	1	45	461350.091	ppb	461350.091	1.26	1460190698	400000	
Ca	44	2	45	357790.954	ppb	357790.954	0.47	1133319	400000	
Ti	47	2	45	0.331	ppb	0.331	86.60	7	4000	
V	51	2	72	-0.067	ppb	-0.067	-329.48	1700	2000	
Cr	52	2	72	3.834	ppb	3.834	3.38	4137	5000	
Mn	55	2	72	2577.675	ppb	2577.675	1.05	1099537	10000	
Fe	57	2	72	5080.165	ppb	5080.165	0.58	101446	400000	
Co	59	2	72	2.995	ppb	2.995	8.52	6485	2000	
Ni	60	2	72	31.586	ppb	31.586	3.45	15659	5000	
Cu	63	2	72	0.048	ppb	0.048	105.54	1453	5000	
Zn	66	2	72	4.410	ppb	4.410	13.92	1067	5000	
As	75	2	72	2.720	ppb	2.720	3.40	459	2000	
Se	78	1	72	0.430	ppb	0.430	7.22	76	2000	
Sr	88	2	72	2827.694	ppb	2827.694	1.11	1594946	4000	
Zr	90	2	72	408.697	ppb	408.697	11.89	693	1000	
Nb	93	2	72	-0.106	ppb	-0.106	-48.36	660	200	
Mo	95	2	115	2.638	ppb	2.638	5.67	1940	2000	
Pd	105	2	115	0.029	ppb	0.029	76.28	37	100	
Ag	107	2	115	0.007	ppb	0.007	92.25	33	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.216	ppb	0.216	31.43	350	2000	
Sb	121	2	115	0.113	ppb	0.113	39.27	123	1000	
Ba	137	2	115	15.381	ppb	15.381	0.99	5288	5000	
W	182	2	165	0.032	ppb	0.032	147.86	603	100	
Pt	195	2	165	-0.001	ppb	-0.001	-163.73	3	100	
Tl	205	2	165	0.003	ppb	0.003	128.07	163	2000	
Pb	208	2	165	0.110	ppb	0.110	9.27	1660	5000	
Th	232	2	165	0.020	ppb	0.020	16.24	647	2000	
U	238	2	165	3.093	ppb	3.093	1.74	36472	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	524654	0.19	538871	97.36	60	120	
Sc (IS)	45	1	HMI H2	14769896	0.19	13911789	106.17	60	120	
Sc (IS)	45	2	HMI He	669806	1.12	620219	108.00	60	120	
Sc (IS)	45	3	No Gas	36967275	1.15	49140068	75.23	60	120	
Ge Internal Standard	72	1	HMI H2	6314611	0.63	6023554	104.83	60	120	
Ge Internal Standard	72	2	HMI He	881503	0.62	827657	106.51	60	120	
In Internal Standard	115	2	HMI He	3590797	0.96	3520307	102.00	60	120	
Ho-165	165	2	HMI He	16122363	1.35	15788522	102.11	60	120	

Sample Report

Sample Table

Sample Name	280-123273-E-6-A
Data File Name	248SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T01:28:33-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457013 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	75.383	ppb	75.383	5.34	84235	500000	
Li	7	2	45	52.352	ppb	52.352	16.71	4144	500000	
Li	7	3	45	21.310	ppb	21.310	3.00	4222844	50000	
Be	9	1	6	0.018	ppb	0.018	173.21	3	2000	
B	11	1	6	31259.920	ppb	31259.920	2.43	233632	2000	>LDR
Na	23	1	45	125845.394	ppb	125845.394	0.42	249755076	2000	>LDR
Na	23	2	45	132253.136	ppb	132253.136	0.36	18984322	400000	
Mg	24	2	45	233710.988	ppb	233710.988	0.64	15409924	400000	
Al	27	2	45	6.064	ppb	6.064	14.64	147	400000	
K	39	1	45	10703.735	ppb	10703.735	0.75	25189126	400000	
K	39	2	45	10518.583	ppb	10518.583	0.68	461593	400000	
Ca	40	1	45	476015.109	ppb	476015.109	0.42	1458101045	400000	
Ca	44	2	45	371057.301	ppb	371057.301	0.81	1093807	400000	
Ti	47	2	45	0.177	ppb	0.177	173.21	3	4000	
V	51	2	72	-0.376	ppb	-0.376	-60.91	1353	2000	
Cr	52	2	72	0.342	ppb	0.342	12.37	497	5000	
Mn	55	2	72	2882.277	ppb	2882.277	0.70	1150457	10000	
Fe	57	2	72	5635.109	ppb	5635.109	0.83	105286	400000	
Co	59	2	72	0.851	ppb	0.851	9.46	2440	2000	
Ni	60	2	72	3.754	ppb	3.754	12.51	1837	5000	
Cu	63	2	72	-0.404	ppb	-0.404	-25.57	783	5000	
Zn	66	2	72	3.333	ppb	3.333	18.55	790	5000	
As	75	2	72	2.258	ppb	2.258	17.04	359	2000	
Se	78	1	72	0.542	ppb	0.542	30.08	89	2000	
Sr	88	2	72	3468.066	ppb	3468.066	0.41	1830462	4000	
Zr	90	2	72	441.210	ppb	441.210	12.81	697	1000	
Nb	93	2	72	-0.300	ppb	-0.300	-5.85	357	200	
Mo	95	2	115	3.222	ppb	3.222	6.52	2214	2000	
Pd	105	2	115	0.034	ppb	0.034	71.51	40	100	
Ag	107	2	115	0.016	ppb	0.016	61.33	53	100	
Cd	111	2	115	0.010	ppb	0.010	173.21	3	2000	
Sn	120	2	115	0.193	ppb	0.193	15.99	307	2000	
Sb	121	2	115	0.038	ppb	0.038	77.53	50	1000	
Ba	137	2	115	12.613	ppb	12.613	1.20	4074	5000	
W	182	2	165	0.022	ppb	0.022	151.85	540	100	
Pt	195	2	165	-0.003	ppb	-0.003	0.00	0	100	
Tl	205	2	165	0.020	ppb	0.020	26.07	257	2000	
Pb	208	2	165	0.020	ppb	0.020	51.06	783	5000	
Th	232	2	165	0.009	ppb	0.009	47.71	490	2000	
U	238	2	165	1.732	ppb	1.732	1.12	19309	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	505174	1.77	538871	93.75	60	120	
Sc (IS)	45	1	HMI H2	14294582	0.13	13911789	102.75	60	120	
Sc (IS)	45	2	HMI He	623348	1.12	620219	100.50	60	120	
Sc (IS)	45	3	No Gas	34761541	0.90	49140068	70.74	60	120	
Ge Internal Standard	72	1	HMI H2	6113137	0.74	6023554	101.49	60	120	
Ge Internal Standard	72	2	HMI He	824913	1.42	827657	99.67	60	120	
In Internal Standard	115	2	HMI He	3369005	1.57	3520307	95.70	60	120	
Ho-165	165	2	HMI He	15219053	0.91	15788522	96.39	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5688510
Data File Name	249_CCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T01:32:28-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	94.441	ppb	5.894	96176	100	94.4	90	110	
Li	7	2	45	83.502	ppb	23.672	4851	100	83.5	90	110	>+\-10%
Li	7	3	45	84.322	ppb	3.731	6679787	100	84.3	90	110	>+\-10%
Be	9	1	6	49.266	ppb	2.396	10931	50	98.5	90	110	
B	11	1	6	954.006	ppb	4.504	8816	50	1908.0	90	110	>+\-10%
Na	23	1	45	1348.691	ppb	1.157	3159615	1000	134.9	90	110	>+\-10%
Na	23	2	45	1238.031	ppb	2.597	209098	1000	123.8	90	110	>+\-10%
Mg	24	2	45	1032.198	ppb	1.141	73766	1000	103.2	90	110	
Al	27	2	45	962.154	ppb	3.679	19487	1000	96.2	90	110	
K	39	1	45	668.177	ppb	6.042	9832525	1000	66.8	90	110	>+\-10%
K	39	2	45	1051.855	ppb	2.383	73242	1000	105.2	90	110	
Ca	40	1	45	1231.689	ppb	3.479	4160276	1000	123.2	90	110	>+\-10%
Ca	44	2	45	1045.325	ppb	8.436	3387	1000	104.5	90	110	
Ti	47	2	45	50.666	ppb	8.092	1033	50	101.3	90	110	
V	51	2	72	49.480	ppb	2.620	43596	50	99.0	90	110	
Cr	52	2	72	49.090	ppb	0.319	52255	50	98.2	90	110	
Mn	55	2	72	50.120	ppb	0.870	22131	50	100.2	90	110	
Fe	57	2	72	953.905	ppb	1.948	19694	1000	95.4	90	110	
Co	59	2	72	49.058	ppb	1.261	92132	50	98.1	90	110	
Ni	60	2	72	50.960	ppb	2.703	25881	50	101.9	90	110	
Cu	63	2	72	49.667	ppb	1.201	70914	50	99.3	90	110	
Zn	66	2	72	49.644	ppb	0.780	10644	50	99.3	90	110	
As	75	2	72	50.010	ppb	1.444	8329	50	100.0	90	110	
Se	78	1	72	52.440	ppb	2.007	8178	50	104.9	90	110	
Sr	88	2	72	99.587	ppb	1.315	57735	100	99.6	90	110	
Zr	90	2	72	95.221	ppb	43.485	200	50	190.4	90	110	>+\-10%
Nb	93	2	72	94.731	ppb	0.863	140792	100	94.7	90	110	
Mo	95	2	115	49.729	ppb	1.004	37795	50	99.5	90	110	
Pd	105	2	115	49.754	ppb	0.908	60086	50	99.5	90	110	
Ag	107	2	115	48.788	ppb	0.690	129266	50	97.6	90	110	
Cd	111	2	115	48.105	ppb	0.872	17205	50	96.2	90	110	
Sn	120	2	115	48.105	ppb	1.338	50141	50	96.2	90	110	
Sb	121	2	115	49.279	ppb	0.486	49037	50	98.6	90	110	
Ba	137	2	115	47.737	ppb	1.447	17232	50	95.5	90	110	
W	182	2	165	48.627	ppb	0.450	170056	50	97.3	90	110	
Pt	195	2	165	48.980	ppb	0.821	131703	50	98.0	90	110	
Tl	205	2	165	48.674	ppb	0.745	340447	50	97.3	90	110	
Pb	208	2	165	48.896	ppb	0.896	464805	50	97.8	90	110	
Th	232	2	165	47.683	ppb	0.729	575703	50	95.4	90	110	
U	238	2	165	47.774	ppb	0.163	579112	50	95.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	596488	1.04	538871	110.69	60	120	
Sc (IS)	45	1	HMI H2	15594407	0.71	13911789	112.09	60	120	
Sc (IS)	45	2	HMI He	674011	0.89	620219	108.67	60	120	
Sc (IS)	45	3	No Gas	46820029	1.03	49140068	95.28	60	120	
Ge Internal Standard	72	1	HMI H2	6807387	0.39	6023554	113.01	60	120	
Ge Internal Standard	72	2	HMI He	905456	0.97	827657	109.40	60	120	
In Internal Standard	115	2	HMI He	3785084	1.06	3520307	107.52	60	120	
Ho-165	165	2	HMI He	16610049	1.49	15788522	105.20	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5688508
Data File Name	250_CCB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T01:36:19-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-8.117	ppb	-25.0	5327837	10	
Be	9	1	6	0.079	ppb	69.5	17	0.5	
B	11	1	6	620.455	ppb	4.0	5595	0.5	>RL
Na	23	1	45	266.925	ppb	0.8	779172	25	>RL
Na	23	2	45	240.523	ppb	2.8	52828	25	>RL
Mg	24	2	45	17.837	ppb	8.4	1400	25	
Al	27	2	45	1.259	ppb	105.0	60	15	
K	39	1	45	5.114	ppb	565.1	8237635	50	
K	39	2	45	0.842	ppb	1185.2	25223	50	
Ca	40	1	45	13.770	ppb	33.2	86532	50	
Ca	44	2	45	0.064	ppb	22369.9	53	25	
Ti	47	2	45	0.339	ppb	173.2	7	0.5	
V	51	2	72	1.576	ppb	10.9	3030	1	>RL
Cr	52	2	72	-0.006	ppb	-444.9	170	1	
Mn	55	2	72	0.174	ppb	74.0	243	0.5	
Fe	57	2	72	2.082	ppb	146.5	197	25	
Co	59	2	72	-0.016	ppb	-466.0	1037	0.5	
Ni	60	2	72	0.260	ppb	35.7	240	1	
Cu	63	2	72	0.222	ppb	65.8	1680	1	
Zn	66	2	72	0.756	ppb	31.5	313	5	
As	75	2	72	0.075	ppb	145.5	31	1	
Se	78	1	72	0.383	ppb	11.2	71	1	
Sr	88	2	72	0.038	ppb	47.8	60	0.5	
Zr	90	2	72	-9.935	ppb	-160.8	27	1	
Nb	93	2	72	3.098	ppb	5.1	5235	2	>RL
Mo	95	2	115	0.038	ppb	35.4	70	0.5	
Pd	105	2	115	0.039	ppb	93.4	50	1	
Ag	107	2	115	0.021	ppb	119.7	73	1	
Cd	111	2	115	0.009	ppb	173.2	3	0.5	
Sn	120	2	115	0.186	ppb	36.2	327	1	
Sb	121	2	115	0.092	ppb	69.1	107	0.6	
Ba	137	2	115	0.015	ppb	394.7	37	0.5	
W	182	2	165	0.075	ppb	59.5	760	1	
Pt	195	2	165	0.008	ppb	105.9	27	1	
Tl	205	2	165	0.015	ppb	45.8	247	0.1	
Pb	208	2	165	0.166	ppb	9.2	2210	0.5	
Th	232	2	165	0.186	ppb	8.2	2620	1	
U	238	2	165	0.013	ppb	8.6	237	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	567693	0.39	538871	105.35	60	120	
Sc (IS)	45	1	HMI H2	14823126	0.81	13911789	106.55	60	120	
Sc (IS)	45	2	HMI He	654861	1.49	620219	105.59	60	120	
Sc (IS)	45	3	No Gas	47749841	0.91	49140068	97.17	60	120	
Ge Internal Standard	72	1	HMI H2	6443304	0.60	6023554	106.97	60	120	
Ge Internal Standard	72	2	HMI He	875787	0.58	827657	105.82	60	120	
In Internal Standard	115	2	HMI He	3675318	1.86	3520307	104.40	60	120	
Ho-165	165	2	HMI He	16335925	0.75	15788522	103.47	60	120	

Sample Report

Sample Table

Sample Name	280-123273-E-7-A
Data File Name	251SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T01:40:13-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457013 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	165.787	ppb	165.787	3.08	100354	500000	
Li	7	2	45	162.199	ppb	162.199	8.97	5415	500000	
Li	7	3	45	156.288	ppb	156.288	3.42	7164199	50000	
Be	9	1	6	0.000	ppb	0.000	#DIV/0!	0	2000	
B	11	1	6	40491.416	ppb	40491.416	1.54	297746	2000	>LDR
Na	23	1	45	162879.119	ppb	162879.119	0.55	315275369	2000	>LDR
Na	23	2	45	168289.607	ppb	168289.607	0.09	24455875	400000	
Mg	24	2	45	183146.639	ppb	183146.639	0.47	12227785	400000	
Al	27	2	45	6.489	ppb	6.489	16.77	157	400000	
K	39	1	45	14058.724	ppb	14058.724	0.49	29847977	400000	
K	39	2	45	12814.191	ppb	12814.191	0.40	564106	400000	
Ca	40	1	45	276071.673	ppb	276071.673	0.52	824960281	400000	
Ca	44	2	45	216779.628	ppb	216779.628	0.21	647096	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	-0.159	ppb	-0.159	-107.57	1560	2000	
Cr	52	2	72	0.245	ppb	0.245	35.00	413	5000	
Mn	55	2	72	787.460	ppb	787.460	0.81	322933	10000	
Fe	57	2	72	1194.215	ppb	1194.215	3.14	23036	400000	
Co	59	2	72	5.241	ppb	5.241	2.34	10131	2000	
Ni	60	2	72	5.568	ppb	5.568	18.10	2744	5000	
Cu	63	2	72	-0.360	ppb	-0.360	-32.53	863	5000	
Zn	66	2	72	4.300	ppb	4.300	19.02	1003	5000	
As	75	2	72	4.084	ppb	4.084	6.67	654	2000	
Se	78	1	72	0.509	ppb	0.509	20.05	84	2000	
Sr	88	2	72	3193.977	ppb	3193.977	2.01	1731391	4000	
Zr	90	2	72	345.639	ppb	345.639	10.28	570	1000	
Nb	93	2	72	2.279	ppb	2.279	11.08	3931	200	
Mo	95	2	115	9.086	ppb	9.086	4.40	6435	2000	
Pd	105	2	115	0.042	ppb	0.042	0.50	50	100	
Ag	107	2	115	0.007	ppb	0.007	182.22	33	100	
Cd	111	2	115	0.040	ppb	0.040	43.72	13	2000	
Sn	120	2	115	0.166	ppb	0.166	58.18	293	2000	
Sb	121	2	115	0.047	ppb	0.047	60.49	60	1000	
Ba	137	2	115	14.290	ppb	14.290	4.93	4804	5000	
W	182	2	165	0.023	ppb	0.023	48.77	570	100	
Pt	195	2	165	0.001	ppb	0.001	304.93	10	100	
Tl	205	2	165	0.024	ppb	0.024	17.79	303	2000	
Pb	208	2	165	0.031	ppb	0.031	42.15	923	5000	
Th	232	2	165	0.194	ppb	0.194	13.40	2660	2000	
U	238	2	165	0.773	ppb	0.773	6.04	9087	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	497121	0.55	538871	92.25	60	120	
Sc (IS)	45	1	HMI H2	13944856	0.57	13911789	100.24	60	120	
Sc (IS)	45	2	HMI He	631180	0.40	620219	101.77	60	120	
Sc (IS)	45	3	No Gas	42929414	1.43	49140068	87.36	60	120	
Ge Internal Standard	72	1	HMI H2	6063409	1.34	6023554	100.66	60	120	
Ge Internal Standard	72	2	HMI He	847204	0.35	827657	102.36	60	120	
In Internal Standard	115	2	HMI He	3510008	0.46	3520307	99.71	60	120	
Ho-165	165	2	HMI He	15984359	0.56	15788522	101.24	60	120	

Sample Report

Sample Table

Sample Name	280-123273-E-8-A
Data File Name	252SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T01:44:04-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457013 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	212.369	ppb	212.369	2.01	108519	500000	
Li	7	2	45	190.255	ppb	190.255	4.61	5578	500000	
Li	7	3	45	147.528	ppb	147.528	1.75	5711275	50000	
Be	9	1	6	0.018	ppb	0.018	173.21	3	2000	
B	11	1	6	21857.088	ppb	21857.088	1.64	158106	2000	>LDR
Na	23	1	45	82976.083	ppb	82976.083	0.39	158965994	2000	>LDR
Na	23	2	45	86667.747	ppb	86667.747	0.73	12275719	400000	
Mg	24	2	45	236822.272	ppb	236822.272	1.09	15400991	400000	
Al	27	2	45	26.366	ppb	26.366	21.70	520	400000	
K	39	1	45	18122.752	ppb	18122.752	0.48	35843029	400000	
K	39	2	45	16019.960	ppb	16019.960	0.89	681030	400000	
Ca	40	1	45	541858.934	ppb	541858.934	0.06	1601508829	400000	
Ca	44	2	45	441292.194	ppb	441292.194	0.74	1283342	400000	
Ti	47	2	45	0.367	ppb	0.367	173.21	7	4000	
V	51	2	72	0.203	ppb	0.203	529.64	1762	2000	
Cr	52	2	72	0.295	ppb	0.295	31.23	443	5000	
Mn	55	2	72	1510.520	ppb	1510.520	0.40	593876	10000	
Fe	57	2	72	1134.212	ppb	1134.212	2.27	20989	400000	
Co	59	2	72	9.115	ppb	9.115	4.13	16160	2000	
Ni	60	2	72	14.381	ppb	14.381	8.40	6625	5000	
Cu	63	2	72	0.834	ppb	0.834	10.93	2327	5000	
Zn	66	2	72	16.297	ppb	16.297	1.06	3234	5000	
As	75	2	72	0.747	ppb	0.747	27.23	129	2000	
Se	78	1	72	0.394	ppb	0.394	44.25	67	2000	
Sr	88	2	72	2593.447	ppb	2593.447	5.30	1348829	4000	
Zr	90	2	72	327.066	ppb	327.066	17.85	520	1000	
Nb	93	2	72	1.191	ppb	1.191	8.14	2327	200	
Mo	95	2	115	2.277	ppb	2.277	6.60	1583	2000	
Pd	105	2	115	0.056	ppb	0.056	50.61	63	100	
Ag	107	2	115	0.012	ppb	0.012	137.42	43	100	
Cd	111	2	115	0.084	ppb	0.084	57.11	27	2000	
Sn	120	2	115	0.192	ppb	0.192	34.90	307	2000	
Sb	121	2	115	0.091	ppb	0.091	51.88	97	1000	
Ba	137	2	115	11.496	ppb	11.496	7.03	3731	5000	
W	182	2	165	0.016	ppb	0.016	108.68	527	100	
Pt	195	2	165	-0.003	ppb	-0.003	0.00	0	100	
Tl	205	2	165	0.015	ppb	0.015	39.65	230	2000	
Pb	208	2	165	0.079	ppb	0.079	6.62	1317	5000	
Th	232	2	165	0.078	ppb	0.078	13.72	1267	2000	
U	238	2	165	0.205	ppb	0.205	6.84	2374	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	488536	0.18	538871	90.66	60	120	
Sc (IS)	45	1	HMI H2	13792735	0.55	13911789	99.14	60	120	
Sc (IS)	45	2	HMI He	614880	2.03	620219	99.14	60	120	
Sc (IS)	45	3	No Gas	34837045	1.03	49140068	70.89	60	120	
Ge Internal Standard	72	1	HMI H2	5946138	0.49	6023554	98.71	60	120	
Ge Internal Standard	72	2	HMI He	812443	1.79	827657	98.16	60	120	
In Internal Standard	115	2	HMI He	3381690	1.45	3520307	96.06	60	120	
Ho-165	165	2	HMI He	15368792	2.27	15788522	97.34	60	120	

Sample Report

Sample Table

Sample Name	280-123273-E-9-A
Data File Name	253SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T01:48:00-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457013 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	60.973	ppb	60.973	13.70	80097	500000	
Li	7	2	45	59.230	ppb	59.230	30.08	4384	500000	
Li	7	3	45	17.106	ppb	17.106	32.02	4283818	50000	
Be	9	1	6	0.000	ppb	0.000	#DIV/0!	0	2000	
B	11	1	6	26377.296	ppb	26377.296	1.60	193735	2000	>LDR
Na	23	1	45	105509.784	ppb	105509.784	0.07	206429377	2000	>LDR
Na	23	2	45	109264.875	ppb	109264.875	0.88	16297379	400000	
Mg	24	2	45	180969.095	ppb	180969.095	0.17	12397201	400000	
Al	27	2	45	5.245	ppb	5.245	44.88	137	400000	
K	39	1	45	10239.711	ppb	10239.711	0.36	24090543	400000	
K	39	2	45	9884.409	ppb	9884.409	0.79	452160	400000	
Ca	40	1	45	330632.409	ppb	330632.409	0.16	998258652	400000	
Ca	44	2	45	255940.623	ppb	255940.623	0.37	783885	400000	
Ti	47	2	45	0.681	ppb	0.681	43.48	13	4000	
V	51	2	72	-0.448	ppb	-0.448	-47.80	1357	2000	
Cr	52	2	72	0.276	ppb	0.276	42.01	453	5000	
Mn	55	2	72	1731.296	ppb	1731.296	0.76	722924	10000	
Fe	57	2	72	115.434	ppb	115.434	13.65	2407	400000	
Co	59	2	72	0.437	ppb	0.437	9.96	1824	2000	
Ni	60	2	72	6.109	ppb	6.109	2.83	3054	5000	
Cu	63	2	72	0.023	ppb	0.023	320.15	1390	5000	
Zn	66	2	72	3.048	ppb	3.048	19.88	770	5000	
As	75	2	72	0.284	ppb	0.284	39.95	64	2000	
Se	78	1	72	0.353	ppb	0.353	44.91	63	2000	
Sr	88	2	72	2329.300	ppb	2329.300	0.65	1286024	4000	
Zr	90	2	72	110.130	ppb	110.130	15.29	213	1000	
Nb	93	2	72	0.516	ppb	0.516	20.84	1524	200	
Mo	95	2	115	3.830	ppb	3.830	3.79	2784	2000	
Pd	105	2	115	0.026	ppb	0.026	50.74	33	100	
Ag	107	2	115	0.008	ppb	0.008	76.30	37	100	
Cd	111	2	115	0.039	ppb	0.039	114.18	13	2000	
Sn	120	2	115	0.131	ppb	0.131	33.88	263	2000	
Sb	121	2	115	0.081	ppb	0.081	38.06	93	1000	
Ba	137	2	115	17.698	ppb	17.698	8.02	6048	5000	
W	182	2	165	0.021	ppb	0.021	104.74	563	100	
Pt	195	2	165	0.000	ppb	0.000	-39522.63	7	100	
Tl	205	2	165	0.006	ppb	0.006	91.91	177	2000	
Pb	208	2	165	0.069	ppb	0.069	15.74	1277	5000	
Th	232	2	165	0.028	ppb	0.028	25.04	733	2000	
U	238	2	165	2.867	ppb	2.867	1.46	33485	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	496245	0.82	538871	92.09	60	120	
Sc (IS)	45	1	HMI H2	14089618	0.29	13911789	101.28	60	120	
Sc (IS)	45	2	HMI He	647619	0.29	620219	104.42	60	120	
Sc (IS)	45	3	No Gas	35675883	1.66	49140068	72.60	60	120	
Ge Internal Standard	72	1	HMI H2	6096015	0.13	6023554	101.20	60	120	
Ge Internal Standard	72	2	HMI He	862864	0.51	827657	104.25	60	120	
In Internal Standard	115	2	HMI He	3570860	0.64	3520307	101.44	60	120	
Ho-165	165	2	HMI He	15969659	0.11	15788522	101.15	60	120	

Sample Report

Sample Table

Sample Name	280-123273-E-10-A
Data File Name	254SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T01:51:53-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457013 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	57.222	ppb	57.222	2.33	79748	500000	
Li	7	2	45	56.029	ppb	56.029	71.36	4431	500000	
Li	7	3	45	41.031	ppb	41.031	5.72	5531773	50000	
Be	9	1	6	0.036	ppb	0.036	173.21	7	2000	
B	11	1	6	23969.130	ppb	23969.130	0.70	176949	2000	>LDR
Na	23	1	45	76619.021	ppb	76619.021	0.39	150741454	2000	>LDR
Na	23	2	45	78789.840	ppb	78789.840	0.94	11974093	400000	
Mg	24	2	45	137127.546	ppb	137127.546	0.67	9568025	400000	
Al	27	2	45	55.749	ppb	55.749	13.45	1137	400000	
K	39	1	45	8485.768	ppb	8485.768	0.48	21414293	400000	
K	39	2	45	8522.231	ppb	8522.231	0.39	400576	400000	
Ca	40	1	45	230166.412	ppb	230166.412	0.28	698539190	400000	
Ca	44	2	45	178623.670	ppb	178623.670	0.74	557301	400000	
Ti	47	2	45	3.667	ppb	3.667	55.84	73	4000	
V	51	2	72	-0.258	ppb	-0.258	-46.86	1544	2000	
Cr	52	2	72	0.318	ppb	0.318	18.53	507	5000	
Mn	55	2	72	2038.969	ppb	2038.969	0.74	871088	10000	
Fe	57	2	72	1672.367	ppb	1672.367	1.58	33550	400000	
Co	59	2	72	2.542	ppb	2.542	7.00	5675	2000	
Ni	60	2	72	3.233	ppb	3.233	8.43	1707	5000	
Cu	63	2	72	0.230	ppb	0.230	36.51	1704	5000	
Zn	66	2	72	5.393	ppb	5.393	0.26	1270	5000	
As	75	2	72	0.549	ppb	0.549	4.48	108	2000	
Se	78	1	72	0.409	ppb	0.409	40.08	72	2000	
Sr	88	2	72	1623.516	ppb	1623.516	0.76	917127	4000	
Zr	90	2	72	284.468	ppb	284.468	24.34	497	1000	
Nb	93	2	72	0.150	ppb	0.150	35.45	1030	200	
Mo	95	2	115	2.744	ppb	2.744	6.73	2044	2000	
Pd	105	2	115	0.011	ppb	0.011	157.43	17	100	
Ag	107	2	115	0.004	ppb	0.004	262.15	27	100	
Cd	111	2	115	0.019	ppb	0.019	173.21	7	2000	
Sn	120	2	115	0.152	ppb	0.152	29.59	290	2000	
Sb	121	2	115	0.090	ppb	0.090	18.26	103	1000	
Ba	137	2	115	27.088	ppb	27.088	6.97	9410	5000	
W	182	2	165	0.054	ppb	0.054	24.87	690	100	
Pt	195	2	165	-0.003	ppb	-0.003	0.00	0	100	
Tl	205	2	165	0.011	ppb	0.011	121.39	220	2000	
Pb	208	2	165	0.368	ppb	0.368	2.42	4097	5000	
Th	232	2	165	0.044	ppb	0.044	29.28	940	2000	
U	238	2	165	3.504	ppb	3.504	1.43	41879	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	498663	0.63	538871	92.54	60	120	
Sc (IS)	45	1	HMI H2	14162568	0.17	13911789	101.80	60	120	
Sc (IS)	45	2	HMI He	659652	1.36	620219	106.36	60	120	
Sc (IS)	45	3	No Gas	43178989	0.33	49140068	87.87	60	120	
Ge Internal Standard	72	1	HMI H2	6214886	0.99	6023554	103.18	60	120	
Ge Internal Standard	72	2	HMI He	882867	0.78	827657	106.67	60	120	
In Internal Standard	115	2	HMI He	3636862	0.59	3520307	103.31	60	120	
Ho-165	165	2	HMI He	16347204	0.39	15788522	103.54	60	120	

Sample Table

Sample Name	280-123273-E-11-A
Data File Name	255SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T01:55:46-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457013 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	51.035	ppb	51.035	15.70	80076	500000	
Li	7	2	45	54.726	ppb	54.726	21.61	4361	500000	
Li	7	3	45	24.263	ppb	24.263	18.06	4705549	50000	
Be	9	1	6	0.018	ppb	0.018	173.21	3	2000	
B	11	1	6	19412.152	ppb	19412.152	1.57	144286	2000	>LDR
Na	23	1	45	43615.571	ppb	43615.571	0.20	87652432	2000	>LDR
Na	23	2	45	45165.104	ppb	45165.104	1.25	6784811	400000	
Mg	24	2	45	270318.720	ppb	270318.720	1.03	18623630	400000	
Al	27	2	45	13.780	ppb	13.780	26.27	303	400000	
K	39	1	45	11514.679	ppb	11514.679	0.49	26785520	400000	
K	39	2	45	10947.478	ppb	10947.478	1.23	500939	400000	
Ca	40	1	45	320120.396	ppb	320120.396	0.14	991292812	400000	
Ca	44	2	45	249231.862	ppb	249231.862	0.68	767754	400000	
Ti	47	2	45	0.521	ppb	0.521	173.21	10	4000	
V	51	2	72	-0.337	ppb	-0.337	-56.06	1467	2000	
Cr	52	2	72	0.310	ppb	0.310	24.60	493	5000	
Mn	55	2	72	2371.526	ppb	2371.526	0.37	1004339	10000	
Fe	57	2	72	4068.990	ppb	4068.990	0.52	80711	400000	
Co	59	2	72	3.121	ppb	3.121	5.72	6665	2000	
Ni	60	2	72	4.963	ppb	4.963	6.01	2537	5000	
Cu	63	2	72	-0.332	ppb	-0.332	-28.13	930	5000	
Zn	66	2	72	1.083	ppb	1.083	10.51	380	5000	
As	75	2	72	3.547	ppb	3.547	3.87	589	2000	
Se	78	1	72	0.349	ppb	0.349	17.06	64	2000	
Sr	88	2	72	2305.600	ppb	2305.600	0.27	1291188	4000	
Zr	90	2	72	378.925	ppb	378.925	19.51	640	1000	
Nb	93	2	72	0.035	ppb	0.035	73.79	857	200	
Mo	95	2	115	1.587	ppb	1.587	10.48	1180	2000	
Pd	105	2	115	0.064	ppb	0.064	16.50	77	100	
Ag	107	2	115	0.004	ppb	0.004	253.73	27	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.123	ppb	0.123	75.12	257	2000	
Sb	121	2	115	0.017	ppb	0.017	197.94	33	1000	
Ba	137	2	115	13.680	ppb	13.680	2.46	4694	5000	
W	182	2	165	-0.008	ppb	-0.008	-140.19	473	100	
Pt	195	2	165	-0.001	ppb	-0.001	-174.27	3	100	
Tl	205	2	165	0.025	ppb	0.025	30.52	313	2000	
Pb	208	2	165	0.028	ppb	0.028	66.76	917	5000	
Th	232	2	165	0.025	ppb	0.025	11.97	707	2000	
U	238	2	165	5.614	ppb	5.614	0.80	66576	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	501882	1.08	538871	93.14	60	120	
Sc (IS)	45	1	HMI H2	14450696	0.51	13911789	103.87	60	120	
Sc (IS)	45	2	HMI He	651434	2.73	620219	105.03	60	120	
Sc (IS)	45	3	No Gas	38422863	0.78	49140068	78.19	60	120	
Ge Internal Standard	72	1	HMI H2	6282324	1.17	6023554	104.30	60	120	
Ge Internal Standard	72	2	HMI He	875220	1.84	827657	105.75	60	120	
In Internal Standard	115	2	HMI He	3581761	1.09	3520307	101.75	60	120	
Ho-165	165	2	HMI He	16233461	2.10	15788522	102.82	60	120	

Sample Report

Sample Table

Sample Name	280-123273-E-12-A
Data File Name	256SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T01:59:40-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457013 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	60.804	ppb	60.804	5.64	77643	500000	
Li	7	2	45	60.909	ppb	60.909	34.03	4251	500000	
Li	7	3	45	8.017	ppb	8.017	36.13	3692479	50000	
Be	9	1	6	0.037	ppb	0.037	86.61	7	2000	
B	11	1	6	20447.708	ppb	20447.708	0.70	144516	2000	>LDR
Na	23	1	45	54829.921	ppb	54829.921	0.21	104129438	2000	>LDR
Na	23	2	45	56916.921	ppb	56916.921	1.21	8204428	400000	
Mg	24	2	45	252177.236	ppb	252177.236	0.46	16678793	400000	
Al	27	2	45	5.659	ppb	5.659	76.28	140	400000	
K	39	1	45	9138.196	ppb	9138.196	1.37	21664015	400000	
K	39	2	45	9082.338	ppb	9082.338	0.68	403081	400000	
Ca	40	1	45	414847.164	ppb	414847.164	0.19	1214608142	400000	
Ca	44	2	45	321155.496	ppb	321155.496	0.46	949651	400000	
Ti	47	2	45	0.701	ppb	0.701	173.21	13	4000	
V	51	2	72	-0.444	ppb	-0.444	-46.56	1317	2000	
Cr	52	2	72	0.340	ppb	0.340	6.40	500	5000	
Mn	55	2	72	2435.560	ppb	2435.560	0.42	983557	10000	
Fe	57	2	72	2432.640	ppb	2432.640	1.15	46060	400000	
Co	59	2	72	3.292	ppb	3.292	11.70	6648	2000	
Ni	60	2	72	6.787	ppb	6.787	13.55	3274	5000	
Cu	63	2	72	-0.402	ppb	-0.402	-17.81	797	5000	
Zn	66	2	72	2.210	ppb	2.210	30.58	580	5000	
As	75	2	72	1.766	ppb	1.766	10.54	289	2000	
Se	78	1	72	0.267	ppb	0.267	22.92	49	2000	
Sr	88	2	72	2687.220	ppb	2687.220	2.53	1434595	4000	
Zr	90	2	72	687.262	ppb	687.262	13.97	1077	1000	
Nb	93	2	72	-0.046	ppb	-0.046	-78.63	707	200	
Mo	95	2	115	2.000	ppb	2.000	3.75	1430	2000	
Pd	105	2	115	0.048	ppb	0.048	21.03	57	100	
Ag	107	2	115	0.000	ppb	0.000	5933.86	17	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.086	ppb	0.086	6.06	213	2000	
Sb	121	2	115	0.018	ppb	0.018	90.00	33	1000	
Ba	137	2	115	18.051	ppb	18.051	4.35	5988	5000	
W	182	2	165	-0.001	ppb	-0.001	-1724.40	483	100	
Pt	195	2	165	-0.003	ppb	-0.003	0.00	0	100	
Tl	205	2	165	0.003	ppb	0.003	234.04	153	2000	
Pb	208	2	165	0.002	ppb	0.002	367.45	653	5000	
Th	232	2	165	0.008	ppb	0.008	137.31	493	2000	
U	238	2	165	2.809	ppb	2.809	2.47	32412	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	477262	1.01	538871	88.57	60	120	
Sc (IS)	45	1	HMI H2	13663236	0.55	13911789	98.21	60	120	
Sc (IS)	45	2	HMI He	625242	0.92	620219	100.81	60	120	
Sc (IS)	45	3	No Gas	31557442	0.61	49140068	64.22	60	120	
Ge Internal Standard	72	1	HMI H2	5924097	0.14	6023554	98.35	60	120	
Ge Internal Standard	72	2	HMI He	834520	1.57	827657	100.83	60	120	
In Internal Standard	115	2	HMI He	3466921	0.99	3520307	98.48	60	120	
Ho-165	165	2	HMI He	15783266	2.28	15788522	99.97	60	120	

Sample Report

Sample Table

Sample Name	280-123273-E-13-A
Data File Name	257SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T02:03:35-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457013 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-3.921	ppb	-3.921	-92.59	63709	500000	
Li	7	2	45	-24.433	ppb	-24.433	-127.88	3224	500000	
Li	7	3	45	-22.697	ppb	-22.697	-10.25	4115931	50000	
Be	9	1	6	0.000	ppb	0.000	#DIV/0!	0	2000	
B	11	1	6	7102.462	ppb	7102.462	1.03	49937	2000	
Na	23	1	45	27025.174	ppb	27025.174	0.37	50495138	2000	>LDR
Na	23	2	45	28470.360	ppb	28470.360	1.29	3997012	400000	
Mg	24	2	45	194682.341	ppb	194682.341	1.20	12516892	400000	
Al	27	2	45	8.266	ppb	8.266	6.18	183	400000	
K	39	1	45	1393.526	ppb	1393.526	1.42	9554982	400000	
K	39	2	45	2958.235	ppb	2958.235	1.53	143385	400000	
Ca	40	1	45	234109.195	ppb	234109.195	0.74	672963870	400000	
Ca	44	2	45	180017.172	ppb	180017.172	0.61	517526	400000	
Ti	47	2	45	0.180	ppb	0.180	173.21	3	4000	
V	51	2	72	-0.278	ppb	-0.278	-66.03	1423	2000	
Cr	52	2	72	0.281	ppb	0.281	29.51	437	5000	
Mn	55	2	72	54.467	ppb	54.467	2.14	21837	10000	
Fe	57	2	72	14.914	ppb	14.914	23.71	423	400000	
Co	59	2	72	0.653	ppb	0.653	16.17	2100	2000	
Ni	60	2	72	2.430	ppb	2.430	16.51	1223	5000	
Cu	63	2	72	1.274	ppb	1.274	16.41	2914	5000	
Zn	66	2	72	3.774	ppb	3.774	10.70	873	5000	
As	75	2	72	0.209	ppb	0.209	35.93	50	2000	
Se	78	1	72	0.262	ppb	0.262	34.01	48	2000	
Sr	88	2	72	520.627	ppb	520.627	0.53	274041	4000	
Zr	90	2	72	283.264	ppb	283.264	18.11	460	1000	
Nb	93	2	72	-0.128	ppb	-0.128	-52.39	587	200	
Mo	95	2	115	3.148	ppb	3.148	2.95	2214	2000	
Pd	105	2	115	0.012	ppb	0.012	155.57	17	100	
Ag	107	2	115	0.003	ppb	0.003	161.09	23	100	
Cd	111	2	115	0.010	ppb	0.010	173.21	3	2000	
Sn	120	2	115	0.097	ppb	0.097	66.12	223	2000	
Sb	121	2	115	0.269	ppb	0.269	5.32	260	1000	
Ba	137	2	115	13.168	ppb	13.168	6.60	4344	5000	
W	182	2	165	0.040	ppb	0.040	32.55	613	100	
Pt	195	2	165	0.001	ppb	0.001	287.27	10	100	
Tl	205	2	165	0.008	ppb	0.008	65.92	187	2000	
Pb	208	2	165	0.024	ppb	0.024	79.61	840	5000	
Th	232	2	165	-0.005	ppb	-0.005	-70.45	347	2000	
U	238	2	165	2.263	ppb	2.263	4.08	25914	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	472773	0.78	538871	87.73	60	120	
Sc (IS)	45	1	HMI H2	13414214	0.19	13911789	96.42	60	120	
Sc (IS)	45	2	HMI He	607858	1.26	620219	98.01	60	120	
Sc (IS)	45	3	No Gas	38584510	0.94	49140068	78.52	60	120	
Ge Internal Standard	72	1	HMI H2	5850927	0.27	6023554	97.13	60	120	
Ge Internal Standard	72	2	HMI He	822556	1.34	827657	99.38	60	120	
In Internal Standard	115	2	HMI He	3443424	1.46	3520307	97.82	60	120	
Ho-165	165	2	HMI He	15641193	1.29	15788522	99.07	60	120	

Sample Report

Sample Table

Sample Name	280-123273-E-14-A
Data File Name	258SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T02:07:27-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457013 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	23.177	ppb	23.177	31.83	71004	500000	
Li	7	2	45	20.489	ppb	20.489	130.45	3827	500000	
Li	7	3	45	17.880	ppb	17.880	10.67	4997931	50000	
Be	9	1	6	0.056	ppb	0.056	173.21	10	2000	
B	11	1	6	52595.823	ppb	52595.823	2.02	372889	2000	>LDR
Na	23	1	45	164024.291	ppb	164024.291	0.49	314496849	2000	>LDR
Na	23	2	45	169809.197	ppb	169809.197	1.10	24577300	400000	
Mg	24	2	45	91328.508	ppb	91328.508	1.13	6073150	400000	
Al	27	2	45	8.833	ppb	8.833	38.23	200	400000	
K	39	1	45	4756.443	ppb	4756.443	1.32	15077244	400000	
K	39	2	45	5573.926	ppb	5573.926	0.83	258053	400000	
Ca	40	1	45	99307.805	ppb	99307.805	0.38	293983836	400000	
Ca	44	2	45	77694.311	ppb	77694.311	1.20	231040	400000	
Ti	47	2	45	0.526	ppb	0.526	0.55	10	4000	
V	51	2	72	-0.333	ppb	-0.333	-89.67	1427	2000	
Cr	52	2	72	0.461	ppb	0.461	42.15	630	5000	
Mn	55	2	72	831.536	ppb	831.536	1.04	341940	10000	
Fe	57	2	72	123.149	ppb	123.149	5.56	2517	400000	
Co	59	2	72	0.980	ppb	0.980	2.72	2740	2000	
Ni	60	2	72	3.410	ppb	3.410	4.89	1727	5000	
Cu	63	2	72	0.291	ppb	0.291	38.13	1720	5000	
Zn	66	2	72	2.639	ppb	2.639	11.95	677	5000	
As	75	2	72	0.798	ppb	0.798	8.11	143	2000	
Se	78	1	72	0.241	ppb	0.241	82.01	47	2000	
Sr	88	2	72	1121.652	ppb	1121.652	0.99	609739	4000	
Zr	90	2	72	175.312	ppb	175.312	29.86	310	1000	
Nb	93	2	72	-0.289	ppb	-0.289	-8.31	383	200	
Mo	95	2	115	4.259	ppb	4.259	8.60	3047	2000	
Pd	105	2	115	0.009	ppb	0.009	115.17	13	100	
Ag	107	2	115	0.003	ppb	0.003	84.58	23	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.134	ppb	0.134	29.51	263	2000	
Sb	121	2	115	0.011	ppb	0.011	253.58	27	1000	
Ba	137	2	115	55.533	ppb	55.533	1.66	18640	5000	
W	182	2	165	0.137	ppb	0.137	17.18	953	100	
Pt	195	2	165	0.000	ppb	0.000	-12505.10	7	100	
Tl	205	2	165	0.004	ppb	0.004	147.79	167	2000	
Pb	208	2	165	0.030	ppb	0.030	57.02	920	5000	
Th	232	2	165	0.002	ppb	0.002	489.61	430	2000	
U	238	2	165	0.708	ppb	0.708	4.92	8343	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	479444	0.88	538871	88.97	60	120	
Sc (IS)	45	1	HMI H2	13813469	0.71	13911789	99.29	60	120	
Sc (IS)	45	2	HMI He	628664	0.54	620219	101.36	60	120	
Sc (IS)	45	3	No Gas	41536359	0.58	49140068	84.53	60	120	
Ge Internal Standard	72	1	HMI H2	6052729	0.59	6023554	100.48	60	120	
Ge Internal Standard	72	2	HMI He	849545	0.27	827657	102.64	60	120	
In Internal Standard	115	2	HMI He	3520327	0.28	3520307	100.00	60	120	
Ho-165	165	2	HMI He	16002180	0.73	15788522	101.35	60	120	

Sample Report

Sample Table

Sample Name	280-123273-E-15-A
Data File Name	259SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T02:11:22-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457013 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	79.477	ppb	79.477	2.20	77899	500000	
Li	7	2	45	60.545	ppb	60.545	30.88	3947	500000	
Li	7	3	45	18.345	ppb	18.345	29.01	3253542	50000	
Be	9	1	6	0.099	ppb	0.099	173.21	17	2000	
B	11	1	6	32783.410	ppb	32783.410	1.03	219904	2000	>LDR
Na	23	1	45	79460.486	ppb	79460.486	0.44	144465021	2000	>LDR
Na	23	2	45	82870.210	ppb	82870.210	0.65	11104169	400000	
Mg	24	2	45	243910.727	ppb	243910.727	0.80	15005566	400000	
Al	27	2	45	2.412	ppb	2.412	34.71	73	400000	
K	39	1	45	12155.932	ppb	12155.932	0.85	25206303	400000	
K	39	2	45	11423.697	ppb	11423.697	1.17	465791	400000	
Ca	40	1	45	505163.775	ppb	505163.775	0.77	1416772512	400000	
Ca	44	2	45	396735.514	ppb	396735.514	0.88	1091093	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	-0.552	ppb	-0.552	-17.13	1157	2000	
Cr	52	2	72	0.205	ppb	0.205	72.23	343	5000	
Mn	55	2	72	3130.680	ppb	3130.680	0.68	1187983	10000	
Fe	57	2	72	221.084	ppb	221.084	4.83	4064	400000	
Co	59	2	72	9.144	ppb	9.144	3.01	15642	2000	
Ni	60	2	72	15.603	ppb	15.603	2.03	6929	5000	
Cu	63	2	72	-0.123	ppb	-0.123	-69.91	1083	5000	
Zn	66	2	72	2.203	ppb	2.203	20.09	547	5000	
As	75	2	72	0.416	ppb	0.416	13.96	77	2000	
Se	78	1	72	0.296	ppb	0.296	6.25	51	2000	
Sr	88	2	72	4285.653	ppb	4285.653	0.17	2150248	4000	
Zr	90	2	72	126.282	ppb	126.282	22.55	217	1000	
Nb	93	2	72	-0.302	ppb	-0.302	-16.97	337	200	
Mo	95	2	115	1.640	ppb	1.640	2.76	1123	2000	
Pd	105	2	115	0.058	ppb	0.058	99.61	63	100	
Ag	107	2	115	-0.002	ppb	-0.002	-176.16	10	100	
Cd	111	2	115	0.022	ppb	0.022	173.21	7	2000	
Sn	120	2	115	0.093	ppb	0.093	28.97	210	2000	
Sb	121	2	115	0.040	ppb	0.040	126.02	50	1000	
Ba	137	2	115	12.650	ppb	12.650	4.64	4004	5000	
W	182	2	165	0.043	ppb	0.043	53.37	597	100	
Pt	195	2	165	-0.003	ppb	-0.003	0.00	0	100	
Tl	205	2	165	0.024	ppb	0.024	19.62	283	2000	
Pb	208	2	165	-0.001	ppb	-0.001	-1116.51	597	5000	
Th	232	2	165	0.004	ppb	0.004	52.38	423	2000	
U	238	2	165	1.740	ppb	1.740	5.73	19038	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	453332	0.10	538871	84.13	60	120	
Sc (IS)	45	1	HMI H2	13088382	0.53	13911789	94.08	60	120	
Sc (IS)	45	2	HMI He	581533	3.29	620219	93.76	60	120	
Sc (IS)	45	3	No Gas	27005650	0.58	49140068	54.96	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	5646605	0.37	6023554	93.74	60	120	
Ge Internal Standard	72	2	HMI He	784121	3.21	827657	94.74	60	120	
In Internal Standard	115	2	HMI He	3299304	2.73	3520307	93.72	60	120	
Ho-165	165	2	HMI He	14947590	3.93	15788522	94.67	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5688510
Data File Name	260_CCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T02:15:18-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	85.697	ppb	4.960	82590	100	85.7	90	110	>+\-10%
Li	7	2	45	77.380	ppb	62.918	4231	100	77.4	90	110	>+\-10%
Li	7	3	45	83.905	ppb	4.721	5934773	100	83.9	90	110	>+\-10%
Be	9	1	6	49.813	ppb	4.019	9323	50	99.6	90	110	
B	11	1	6	1100.208	ppb	0.841	8523	50	2200.4	90	110	>+\-10%
Na	23	1	45	1230.254	ppb	2.227	2545341	1000	123.0	90	110	>+\-10%
Na	23	2	45	1159.125	ppb	1.713	174402	1000	115.9	90	110	>+\-10%
Mg	24	2	45	1079.890	ppb	1.095	68378	1000	108.0	90	110	
Al	27	2	45	1024.483	ppb	4.515	18375	1000	102.4	90	110	
K	39	1	45	971.838	ppb	4.377	9087336	1000	97.2	90	110	
K	39	2	45	1040.133	ppb	3.691	64442	1000	104.0	90	110	
Ca	40	1	45	1288.751	ppb	2.246	3814699	1000	128.9	90	110	>+\-10%
Ca	44	2	45	939.883	ppb	10.693	2704	1000	94.0	90	110	
Ti	47	2	45	43.196	ppb	8.608	780	50	86.4	90	110	>+\-10%
V	51	2	72	50.874	ppb	1.236	40207	50	101.7	90	110	
Cr	52	2	72	50.539	ppb	1.137	48314	50	101.1	90	110	
Mn	55	2	72	51.859	ppb	1.421	20562	50	103.7	90	110	
Fe	57	2	72	987.523	ppb	1.813	18309	1000	98.8	90	110	
Co	59	2	72	50.379	ppb	0.351	84952	50	100.8	90	110	
Ni	60	2	72	51.531	ppb	2.873	23503	50	103.1	90	110	
Cu	63	2	72	50.474	ppb	3.796	64716	50	100.9	90	110	
Zn	66	2	72	49.998	ppb	0.758	9627	50	100.0	90	110	
As	75	2	72	50.846	ppb	2.255	7605	50	101.7	90	110	
Se	78	1	72	53.033	ppb	1.485	7327	50	106.1	90	110	
Sr	88	2	72	103.460	ppb	0.347	53870	100	103.5	90	110	
Zr	90	2	72	88.966	ppb	55.487	170	50	177.9	90	110	>+\-10%
Nb	93	2	72	98.659	ppb	2.088	131670	100	98.7	90	110	
Mo	95	2	115	51.804	ppb	1.539	36057	50	103.6	90	110	
Pd	105	2	115	51.545	ppb	1.062	57013	50	103.1	90	110	
Ag	107	2	115	50.193	ppb	0.396	121800	50	100.4	90	110	
Cd	111	2	115	51.045	ppb	3.869	16717	50	102.1	90	110	
Sn	120	2	115	50.063	ppb	1.572	47783	50	100.1	90	110	
Sb	121	2	115	51.225	ppb	1.948	46683	50	102.5	90	110	
Ba	137	2	115	49.435	ppb	1.681	16344	50	98.9	90	110	
W	182	2	165	50.464	ppb	1.535	165146	50	100.9	90	110	
Pt	195	2	165	50.090	ppb	0.667	126060	50	100.2	90	110	
Tl	205	2	165	50.595	ppb	0.325	331228	50	101.2	90	110	
Pb	208	2	165	50.801	ppb	0.690	451994	50	101.6	90	110	
Th	232	2	165	49.747	ppb	0.885	562125	50	99.5	90	110	
U	238	2	165	50.234	ppb	0.804	569913	50	100.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	503013	0.68	538871	93.35	60	120	
Sc (IS)	45	1	HMI H2	13670229	0.19	13911789	98.26	60	120	
Sc (IS)	45	2	HMI He	597255	1.00	620219	96.30	60	120	
Sc (IS)	45	3	No Gas	41636189	0.46	49140068	84.73	60	120	
Ge Internal Standard	72	1	HMI H2	6030588	0.78	6023554	100.12	60	120	
Ge Internal Standard	72	2	HMI He	813216	0.73	827657	98.26	60	120	
In Internal Standard	115	2	HMI He	3466496	0.87	3520307	98.47	60	120	
Ho-165	165	2	HMI He	15546320	1.61	15788522	98.47	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5688508
Data File Name	261_CCB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T02:19:12-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-12.987	ppb	-13.3	4545550	10	
Be	9	1	6	0.018	ppb	173.2	3	0.5	
B	11	1	6	651.637	ppb	10.8	5004	0.5	>RL
Na	23	1	45	135.481	ppb	0.7	452254	25	>RL
Na	23	2	45	120.698	ppb	7.4	31361	25	>RL
Mg	24	2	45	31.665	ppb	4.2	2127	25	>RL
Al	27	2	45	-0.100	ppb	-1118.8	30	15	
K	39	1	45	-658.823	ppb	-2.8	6334185	50	
K	39	2	45	-1.501	ppb	-1019.2	22642	50	
Ca	40	1	45	13.113	ppb	4.6	75099	50	
Ca	44	2	45	4.500	ppb	213.5	60	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	1.258	ppb	16.0	2537	1	>RL
Cr	52	2	72	0.023	ppb	127.8	183	1	
Mn	55	2	72	0.090	ppb	31.7	190	0.5	
Fe	57	2	72	-2.138	ppb	-79.9	103	25	
Co	59	2	72	0.094	ppb	91.9	1130	0.5	
Ni	60	2	72	-0.134	ppb	-54.3	43	1	
Cu	63	2	72	-0.384	ppb	-8.9	787	1	
Zn	66	2	72	-0.065	ppb	-258.4	133	5	
As	75	2	72	0.013	ppb	645.2	20	1	
Se	78	1	72	0.267	ppb	20.1	48	1	
Sr	88	2	72	0.015	ppb	145.9	43	0.5	
Zr	90	2	72	-1.572	ppb	-1407.4	37	1	
Nb	93	2	72	2.839	ppb	5.6	4454	2	>RL
Mo	95	2	115	0.030	ppb	93.5	60	0.5	
Pd	105	2	115	0.012	ppb	156.3	17	1	
Ag	107	2	115	0.015	ppb	31.9	53	1	
Cd	111	2	115	0.020	ppb	173.2	7	0.5	
Sn	120	2	115	0.069	ppb	74.0	197	1	
Sb	121	2	115	0.093	ppb	59.7	100	0.6	
Ba	137	2	115	-0.029	ppb	-4.8	20	0.5	
W	182	2	165	0.057	ppb	50.2	663	1	
Pt	195	2	165	-0.001	ppb	-181.9	3	1	
Tl	205	2	165	0.022	ppb	40.8	277	0.1	
Pb	208	2	165	0.008	ppb	144.2	700	0.5	
Th	232	2	165	0.104	ppb	14.2	1574	1	
U	238	2	165	0.013	ppb	15.6	223	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	485131	0.05	538871	90.03	60	120	
Sc (IS)	45	1	HMI H2	13172435	0.75	13911789	94.69	60	120	
Sc (IS)	45	2	HMI He	590366	1.14	620219	95.19	60	120	
Sc (IS)	45	3	No Gas	41343959	0.29	49140068	84.13	60	120	
Ge Internal Standard	72	1	HMI H2	5770042	0.36	6023554	95.79	60	120	
Ge Internal Standard	72	2	HMI He	801918	0.58	827657	96.89	60	120	
In Internal Standard	115	2	HMI He	3446976	2.24	3520307	97.92	60	120	
Ho-165	165	2	HMI He	15526994	0.40	15788522	98.34	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5688512
Data File Name	262LCCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T02:23:08-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-1.751	ppb	-61.443	4667105	50	-3.5	70	130	>+/-30%
Be	9	1	6	1.036	ppb	20.120	183	1	103.6	70	130	
Na	23	2	45	166.832	ppb	4.449	37084	50	333.7	70	130	>+/-30%
Mg	24	2	45	80.623	ppb	5.015	5111	50	161.2	70	130	>+/-30%
Al	27	2	45	49.610	ppb	7.759	897	30	165.4	70	130	>+/-30%
K	39	2	45	99.155	ppb	32.297	26238	100	99.2	70	130	
Ca	44	2	45	64.155	ppb	40.597	223	50	128.3	70	130	
V	51	2	72	5.466	ppb	6.667	5528	5	109.3	70	130	
Cr	52	2	72	2.076	ppb	5.749	2054	2	103.8	70	130	
Mn	55	2	72	1.004	ppb	12.434	530	1	100.4	70	130	
Fe	57	2	72	50.569	ppb	12.669	1030	50	101.1	70	130	
Co	59	2	72	0.868	ppb	13.148	2337	1	86.8	70	130	
Ni	60	2	72	1.255	ppb	29.563	647	1.5	83.6	70	130	
Cu	63	2	72	2.176	ppb	3.744	3851	2	108.8	70	130	
Zn	66	2	72	11.356	ppb	10.931	2207	10	113.6	70	130	
As	75	2	72	5.284	ppb	1.870	773	5	105.7	70	130	
Se	78	1	72	4.876	ppb	14.342	636	5	97.5	70	130	
Sr	88	2	72	1.053	ppb	39.612	560	1	105.3	70	130	
Zr	90	2	72	-0.801	ppb	-1004.102	37	0.5	-160.3	70	130	>+/-30%
Nb	93	2	72	1.300	ppb	10.162	2374	2	65.0	70	130	>+/-30%
Mo	95	2	115	2.017	ppb	10.357	1403	2	100.8	70	130	
Pd	105	2	115	0.025	ppb	111.548	30	1	2.5	70	130	>+/-30%
Ag	107	2	115	5.031	ppb	2.373	11899	5	100.6	70	130	
Cd	111	2	115	1.130	ppb	14.460	360	1	113.0	70	130	
Sn	120	2	115	9.509	ppb	4.646	8937	10	95.1	70	130	
Sb	121	2	115	1.998	ppb	14.537	1787	2	99.9	70	130	
Ba	137	2	115	0.907	ppb	6.549	320	1	90.7	70	130	
W	182	2	165	4.725	ppb	4.544	15626	1	472.5	70	130	>+/-30%
Pt	195	2	165	0.000	ppb	2404.859	7	1	0.0	70	130	>+/-30%
Tl	205	2	165	1.002	ppb	4.940	6575	1	100.2	70	130	
Pb	208	2	165	1.038	ppb	0.384	9679	1	103.8	70	130	
Th	232	2	165	1.735	ppb	5.188	19646	2	86.8	70	130	
U	238	2	165	0.973	ppb	4.417	10915	1	97.3	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	475370	0.64	538871	88.22	60	120	
Sc (IS)	45	1	HMI H2	12793601	0.22	13911789	91.96	60	120	
Sc (IS)	45	2	HMI He	582009	0.72	620219	93.84	60	120	
Sc (IS)	45	3	No Gas	41040414	1.60	49140068	83.52	60	120	
Ge Internal Standard	72	1	HMI H2	5598711	1.14	6023554	92.95	60	120	
Ge Internal Standard	72	2	HMI He	779879	0.54	827657	94.23	60	120	
In Internal Standard	115	2	HMI He	3374570	0.58	3520307	95.86	60	120	
Ho-165	165	2	HMI He	15277779	0.62	15788522	96.77	60	120	

Blank Report

Sample Table

Sample Name	MB 280-457054/1-A
Data File Name	263_BLK.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T02:27:02-06:00
Sample Type	Blank
Dilution	1
Comment	457054 soil 6020a dod5
ISTD Ref File Name	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-18.553	ppb	-23.06486672	56250	0.5
Li	7	2	45	-28.683	ppb	-74.44052706	2984	0.5
Li	7	3	45	-13.834	ppb	-7.720326681	4421051	10
Be	9	1	6	0.000	ppb	#DIV/0!	0	0.5
B	11	1	6	884.641	ppb	5.524540054	6115	0.5
Na	23	1	45	191.791	ppb	1.481820516	522360	25
Na	23	2	45	177.850	ppb	2.003117634	37842	25
Mg	24	2	45	32.373	ppb	5.006176994	2100	25
Al	27	2	45	7.752	ppb	12.0373981	163	15
K	39	1	45	-2240.511	ppb	-2.372968401	3749442	50
K	39	2	45	2.959	ppb	1119.332738	22078	50
Ca	40	1	45	48.414	ppb	1.537252173	164425	50
Ca	44	2	45	23.692	ppb	31.03698395	110	25
Ti	47	2	45	0.578	ppb	100.1761978	10	0.5
V	51	2	72	-0.055	ppb	-501.7289535	1490	1
Cr	52	2	72	0.691	ppb	21.18671036	777	1
Mn	55	2	72	0.738	ppb	18.28054203	423	0.5
Fe	57	2	72	17.084	ppb	5.023969768	433	25
Co	59	2	72	0.014	ppb	63.48799616	957	0.5
Ni	60	2	72	0.445	ppb	57.98868416	290	1
Cu	63	2	72	1.136	ppb	8.910452212	2560	1
Zn	66	2	72	2.345	ppb	34.19641265	560	5
As	75	2	72	0.083	ppb	92.16226443	29	1
Se	78	1	72	0.184	ppb	27.35186894	35	1
Sr	88	2	72	0.242	ppb	25.43106509	153	0.5
Zr	90	2	72	62.026	ppb	53.64415762	123	1
Nb	93	2	72	2.103	ppb	12.37028022	3347	2
Mo	95	2	115	0.268	ppb	3.801489856	217	0.5
Pd	105	2	115	0.019	ppb	28.0293791	23	1
Ag	107	2	115	0.012	ppb	40.73850952	43	1
Cd	111	2	115	0.032	ppb	173.2050808	10	0.5
Sn	120	2	115	0.416	ppb	41.79835382	507	1
Sb	121	2	115	0.035	ppb	104.1381965	47	0.6
Ba	137	2	115	0.456	ppb	19.05538195	173	0.5
W	182	2	165	0.105	ppb	9.587333553	797	1
Pt	195	2	165	-0.001	ppb	-193.9878925	3	1
Tl	205	2	165	0.016	ppb	53.40276381	233	0.1
Pb	208	2	165	0.064	ppb	32.87509137	1163	0.5
Th	232	2	165	0.279	ppb	7.522601595	3444	1
U	238	2	165	0.033	ppb	19.8356327	440	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	444575	0.85	538871	82.50	60	120	
Sc (IS)	45	1	HMI H2	12394985	0.66	13911789	89.10	60	120	
Sc (IS)	45	2	HMI He	571126	0.45	620219	92.08	60	120	
Sc (IS)	45	3	No Gas	40316877	0.57	49140068	82.04	60	120	
Ge Internal Standard	72	1	HMI H2	5394174	1.25	6023554	89.55	60	120	
Ge Internal Standard	72	2	HMI He	768696	0.27	827657	92.88	60	120	
In Internal Standard	115	2	HMI He	3330140	0.82	3520307	94.60	60	120	
Ho-165	165	2	HMI He	15079684	0.16	15788522	95.51	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-457054/2-A
Data File Name	264LCS.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T02:30:56-06:00
Sample Type	LCS-s
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	457054 soil 6020a dod5
ISTD Ref File Name	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	6	207.673	207.673	ppb	0.679	33713	200	103.8	80	120	
Na	23	2	45	141.995	141.995	ppb	3.879	32720	200	71.0	80	120	NewName Main CR1 Failed
Mg	24	2	45	20.297	20.297	ppb	14.563	1353	200000	0.0	80	120	NewName Main CR1 Failed
Al	27	2	45	1982.018	1982.018	ppb	2.581	33556	200000	1.0	80	120	NewName Main CR1 Failed
K	39	2	45	-9.639	-9.639	ppb	-354.353	21333	200000	0.0	80	120	NewName Main CR1 Failed
Ca	44	2	45	480.331	480.331	ppb	13.870	1327	200000	0.2	80	120	NewName Main CR1 Failed
V	51	2	72	197.963	197.963	ppb	0.304	142852	200	99.0	80	120	
Cr	52	2	72	201.606	201.606	ppb	0.736	180917	200	100.8	80	120	
(Cr)	53	2	72	212.851	212.851	ppb	3.162	22675	200	106.4	80	120	
Mn	55	2	72	201.410	201.410	ppb	2.335	74732	200	100.7	80	120	
Fe	57	2	72	1945.182	1945.182	ppb	1.323	33810	200000	1.0	80	120	NewName Main CR1 Failed
Co	59	2	72	200.071	200.071	ppb	0.064	314758	200	100.0	80	120	
Ni	60	2	72	203.042	203.042	ppb	1.408	86857	200	101.5	80	120	
Cu	63	2	72	201.017	201.017	ppb	1.791	238943	200	100.5	80	120	
Zn	66	2	72	198.489	198.489	ppb	3.381	35558	200	99.2	80	120	
As	75	2	72	194.668	194.668	ppb	1.629	27353	200	97.3	80	120	
Se	78	1	72	193.333	193.333	ppb	2.422	23662	200	96.7	80	120	
(Se)	82	1	72	183.200	183.200	ppb	4.001	10384	200	91.6	80	120	
Nb	93	2	72	1.485	1.485	ppb	16.293	2560	400	0.4	80	120	NewName Main CR1 Failed
Mo	95	2	115	201.239	201.239	ppb	0.164	134162	200	100.6	80	120	
Pd	105	2	115	0.010	0.010	ppb	226.275	13	200	0.0	80	120	NewName Main CR1 Failed
Ag	107	2	115	195.772	195.772	ppb	0.936	455371	200	97.9	80	120	
Cd	111	2	115	192.939	192.939	ppb	1.839	60589	200	96.5	80	120	
(Cd)	114	2	115	198.113	198.113	ppb	2.038	156351	200	99.1	80	120	
Sn	120	2	115	197.282	197.282	ppb	1.234	180130	200	98.6	80	120	
Sb	121	2	115	209.896	209.896	ppb	0.939	183339	200	104.9	80	110	
Ba	137	2	115	199.210	199.210	ppb	1.675	63045	200	99.6	80	120	
W	182	2	165	165.558	165.558	ppb	1.156	525719	200	82.8	80	120	
Pt	195	2	165	0.000	0.000	ppb	1576.616	7	200	0.0	80	120	NewName Main CR1 Failed
Tl	205	2	165	198.360	198.360	ppb	0.457	1262109	200	99.2	80	120	
(Pb)	206	2	165	195.867	195.867	ppb	0.369	418978	200	97.9	80	120	
(Pb)	207	2	165	205.568	205.568	ppb	0.994	379854	200	102.8	80	120	
Pb	208	2	165	199.898	199.898	ppb	0.867	1727310	200	99.9	80	120	
Th	232	2	165	217.576	217.576	ppb	0.363	2389085	200	108.8	80	120	
U	238	2	165	228.070	228.070	ppb	0.929	2515258	200	114.0	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	436356	0.38	538871	80.98	60	120	
Sc (IS)	45	1	HMI H2	12266419	0.75	13911789	88.17	60	120	
Sc (IS)	45	2	HMI He	564026	0.43	620219	90.94	60	120	
Sc (IS)	45	3	No Gas	40061204	0.60	49140068	81.52	60	120	
Ge Internal Standard	72	1	HMI H2	5349516	0.44	6023554	88.81	60	120	
Ge Internal Standard	72	2	HMI He	765364	0.31	827657	92.47	60	120	
In Internal Standard	115	2	HMI He	3323227	0.36	3520307	94.40	60	120	
Ho-165	165	2	HMI He	15114214	1.01	15788522	95.73	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCSD 280-457054/3-A
Data File Name	265LCS.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T02:34:50-06:00
Sample Type	LCS-s
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	457054 soil 6020a dod5
ISTD Ref File Name	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	6	199.921	199.921	ppb	3.734	32186	200	100.0	80	120	
Na	23	2	45	146.470	146.470	ppb	1.802	33138	200	73.2	80	120	NewName Main CR1 Failed
Mg	24	2	45	19.061	19.061	ppb	17.343	1273	200000	0.0	80	120	NewName Main CR1 Failed
Al	27	2	45	1922.144	1922.144	ppb	1.260	32386	200000	1.0	80	120	NewName Main CR1 Failed
K	39	2	45	-1.040	-1.040	ppb	-1102.088	21547	200000	0.0	80	120	NewName Main CR1 Failed
Ca	44	2	45	433.463	433.463	ppb	17.896	1197	200000	0.2	80	120	NewName Main CR1 Failed
V	51	2	72	191.414	191.414	ppb	1.452	137078	200	95.7	80	120	
Cr	52	2	72	195.202	195.202	ppb	1.542	173795	200	97.6	80	120	
(Cr)	53	2	72	213.951	213.951	ppb	1.681	22609	200	107.0	80	120	
Mn	55	2	72	197.119	197.119	ppb	1.761	72558	200	98.6	80	120	
Fe	57	2	72	1928.555	1928.555	ppb	1.151	33256	200000	1.0	80	120	NewName Main CR1 Failed
Co	59	2	72	195.694	195.694	ppb	0.084	305461	200	97.8	80	120	
Ni	60	2	72	198.360	198.360	ppb	0.531	84184	200	99.2	80	120	
Cu	63	2	72	199.263	199.263	ppb	0.718	235003	200	99.6	80	120	
Zn	66	2	72	193.633	193.633	ppb	1.960	34419	200	96.8	80	120	
As	75	2	72	190.532	190.532	ppb	0.444	26562	200	95.3	80	120	
Se	78	1	72	193.623	193.623	ppb	2.586	23403	200	96.8	80	120	
(Se)	82	1	72	168.479	168.479	ppb	2.555	9450	200	84.2	80	120	
Nb	93	2	72	0.659	0.659	ppb	29.545	1517	400	0.2	80	120	NewName Main CR1 Failed
Mo	95	2	115	196.040	196.040	ppb	1.102	129849	200	98.0	80	120	
Pd	105	2	115	0.013	0.013	ppb	43.210	17	200	0.0	80	120	NewName Main CR1 Failed
Ag	107	2	115	190.847	190.847	ppb	1.528	441010	200	95.4	80	120	
Cd	111	2	115	191.287	191.287	ppb	1.000	59681	200	95.6	80	120	
(Cd)	114	2	115	195.995	195.995	ppb	0.646	153678	200	98.0	80	120	
Sn	120	2	115	191.902	191.902	ppb	0.902	174077	200	96.0	80	120	
Sb	121	2	115	205.207	205.207	ppb	1.084	178068	200	102.6	80	110	
Ba	137	2	115	192.989	192.989	ppb	0.877	60685	200	96.5	80	120	
W	182	2	165	160.701	160.701	ppb	0.331	509928	200	80.4	80	120	
Pt	195	2	165	0.001	0.001	ppb	274.298	10	200	0.0	80	120	NewName Main CR1 Failed
Tl	205	2	165	193.432	193.432	ppb	0.119	1229831	200	96.7	80	120	
(Pb)	206	2	165	190.849	190.849	ppb	0.700	407923	200	95.4	80	120	
(Pb)	207	2	165	200.469	200.469	ppb	1.105	370147	200	100.2	80	120	
Pb	208	2	165	194.963	194.963	ppb	0.183	1683414	200	97.5	80	120	
Th	232	2	165	213.827	213.827	ppb	0.543	2346131	200	106.9	80	120	
U	238	2	165	223.846	223.846	ppb	0.916	2466949	200	111.9	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	432669	0.87	538871	80.29	60	120	
Sc (IS)	45	1	HMI H2	12220694	0.31	13911789	87.84	60	120	
Sc (IS)	45	2	HMI He	561330	1.12	620219	90.51	60	120	
Sc (IS)	45	3	No Gas	39863426	0.27	49140068	81.12	60	120	
Ge Internal Standard	72	1	HMI H2	5283561	0.66	6023554	87.71	60	120	
Ge Internal Standard	72	2	HMI He	759321	0.60	827657	91.74	60	120	
In Internal Standard	115	2	HMI He	3301636	1.00	3520307	93.79	60	120	
Ho-165	165	2	HMI He	15102425	0.67	15788522	95.65	60	120	

Sample Report

Sample Table

Sample Name	280-123110-A-2-E
Data File Name	266SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T02:38:43-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457054 soil 6020a dod5
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-17.546	ppb	-17.546	-22.72	48462	500000	
Li	7	2	45	-23.599	ppb	-23.599	-106.40	2640	500000	
Li	7	3	45	-27.276	ppb	-27.276	-3.29	3514368	50000	
Be	9	1	6	0.170	ppb	0.170	89.18	23	2000	
B	11	1	6	759.268	ppb	759.268	7.77	4411	2000	
Na	23	1	45	OR	ppb	OR	#VALUE!	OR	2000	
Na	23	2	45	3459865.800	ppb	3459865.800	0.18	395589381	400000	>LDR
Mg	24	2	45	1073.719	ppb	1073.719	1.20	56562	400000	
Al	27	2	45	8.725	ppb	8.725	3.79	157	400000	
K	39	1	45	-1258.195	ppb	-1258.195	-3.40	4398735	400000	
K	39	2	45	823.057	ppb	823.057	4.57	46408	400000	
Ca	40	1	45	390.688	ppb	390.688	0.38	921836	400000	
Ca	44	2	45	391.350	ppb	391.350	23.60	960	400000	
Ti	47	2	45	1.102	ppb	1.102	173.21	17	4000	
V	51	2	72	-0.048	ppb	-0.048	-729.59	1283	2000	
Cr	52	2	72	1.049	ppb	1.049	17.53	943	5000	
Mn	55	2	72	1.834	ppb	1.834	35.07	713	10000	
Fe	57	2	72	158.331	ppb	158.331	7.13	2480	400000	
Co	59	2	72	0.045	ppb	0.045	276.40	863	2000	
Ni	60	2	72	0.430	ppb	0.430	13.08	243	5000	
Cu	63	2	72	2.257	ppb	2.257	5.50	3341	5000	
Zn	66	2	72	3.122	ppb	3.122	9.42	600	5000	
As	75	2	72	0.662	ppb	0.662	10.25	95	2000	
Se	78	1	72	1.190	ppb	1.190	16.52	136	2000	
Sr	88	2	72	28.697	ppb	28.697	5.77	12146	4000	
Zr	90	2	72	182.985	ppb	182.985	37.64	250	1000	
Nb	93	2	72	0.258	ppb	0.258	55.07	887	200	
Mo	95	2	115	1.460	ppb	1.460	9.49	860	2000	
Pd	105	2	115	0.004	ppb	0.004	143.76	7	100	
Ag	107	2	115	0.125	ppb	0.125	28.75	260	100	
Cd	111	2	115	0.100	ppb	0.100	94.48	27	2000	
Sn	120	2	115	0.819	ppb	0.819	6.49	743	2000	
Sb	121	2	115	0.332	ppb	0.332	38.41	260	1000	
Ba	137	2	115	0.566	ppb	0.566	16.28	177	5000	
W	182	2	165	0.302	ppb	0.302	11.21	1230	100	
Pt	195	2	165	0.001	ppb	0.001	490.53	7	100	
Tl	205	2	165	0.141	ppb	0.141	10.33	890	2000	
Pb	208	2	165	0.194	ppb	0.194	9.54	1977	5000	
Th	232	2	165	1.017	ppb	1.017	14.37	9988	2000	
U	238	2	165	0.168	ppb	0.168	15.96	1667	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	370430	0.37	538871	68.74	60	120	
Sc (IS)	45	1	HMI H2	10643894	0.86	13911789	76.51	60	120	
Sc (IS)	45	2	HMI He	496914	0.62	620219	80.12	60	120	
Sc (IS)	45	3	No Gas	33425800	1.31	49140068	68.02	60	120	
Ge Internal Standard	72	1	HMI H2	4621560	0.37	6023554	76.72	60	120	
Ge Internal Standard	72	2	HMI He	659889	0.10	827657	79.73	60	120	
In Internal Standard	115	2	HMI He	2827180	0.46	3520307	80.31	60	120	
Ho-165	165	2	HMI He	13057761	0.60	15788522	82.70	60	120	

Sample Report

Sample Table

Sample Name	280-123110-A-2-Esd@5
Data File Name	267SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T02:42:34-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457054 soil 6020a dod5
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-22.964	ppb	-22.964	-16.37	49549	500000	
Li	7	2	45	-28.113	ppb	-28.113	-118.15	2584	500000	
Li	7	3	45	-26.801	ppb	-26.801	-9.86	3827535	50000	
Be	9	1	6	0.023	ppb	0.023	173.21	3	2000	
B	11	1	6	433.093	ppb	433.093	9.82	2784	2000	
Na	23	1	45	666636.215	ppb	666636.215	0.53	1024089078	2000	>LDR
Na	23	2	45	692336.824	ppb	692336.824	0.28	78655160	400000	
Mg	24	2	45	232.304	ppb	232.304	3.86	12252	400000	
Al	27	2	45	2.015	ppb	2.015	138.02	57	400000	
K	39	1	45	-456.679	ppb	-456.679	-7.34	5577076	400000	
K	39	2	45	175.261	ppb	175.261	15.58	24768	400000	
Ca	40	1	45	80.333	ppb	80.333	2.26	222637	400000	
Ca	44	2	45	63.417	ppb	63.417	89.34	187	400000	
Ti	47	2	45	0.453	ppb	0.453	173.21	7	4000	
V	51	2	72	-0.350	ppb	-0.350	-36.05	1110	2000	
Cr	52	2	72	0.152	ppb	0.152	60.37	253	5000	
Mn	55	2	72	0.198	ppb	0.198	18.87	193	10000	
Fe	57	2	72	31.453	ppb	31.453	9.75	593	400000	
Co	59	2	72	-0.033	ppb	-0.033	-259.55	767	2000	
Ni	60	2	72	0.012	ppb	0.012	725.34	90	5000	
Cu	63	2	72	0.691	ppb	0.691	23.98	1764	5000	
Zn	66	2	72	0.765	ppb	0.765	87.79	240	5000	
As	75	2	72	0.147	ppb	0.147	19.56	33	2000	
Se	78	1	72	0.554	ppb	0.554	36.68	72	2000	
Sr	88	2	72	4.947	ppb	4.947	9.90	2144	4000	
Zr	90	2	72	11.658	ppb	11.658	198.64	47	1000	
Nb	93	2	72	-0.339	ppb	-0.339	-21.54	247	200	
Mo	95	2	115	0.213	ppb	0.213	40.00	157	2000	
Pd	105	2	115	0.004	ppb	0.004	289.94	7	100	
Ag	107	2	115	0.048	ppb	0.048	47.59	110	100	
Cd	111	2	115	0.012	ppb	0.012	173.21	3	2000	
Sn	120	2	115	0.286	ppb	0.286	35.77	337	2000	
Sb	121	2	115	0.069	ppb	0.069	55.67	67	1000	
Ba	137	2	115	0.043	ppb	0.043	46.09	37	5000	
W	182	2	165	0.021	ppb	0.021	137.70	473	100	
Pt	195	2	165	0.000	ppb	0.000	548.50	7	100	
Tl	205	2	165	0.028	ppb	0.028	67.51	277	2000	
Pb	208	2	165	0.062	ppb	0.062	18.67	1013	5000	
Th	232	2	165	0.107	ppb	0.107	23.51	1383	2000	
U	238	2	165	0.027	ppb	0.027	21.76	333	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	393064	0.98	538871	72.94	60	120	
Sc (IS)	45	1	HMI H2	11072783	0.43	13911789	79.59	60	120	
Sc (IS)	45	2	HMI He	493694	1.33	620219	79.60	60	120	
Sc (IS)	45	3	No Gas	36348411	0.82	49140068	73.97	60	120	
Ge Internal Standard	72	1	HMI H2	4839307	0.76	6023554	80.34	60	120	
Ge Internal Standard	72	2	HMI He	667709	1.63	827657	80.67	60	120	
In Internal Standard	115	2	HMI He	2886600	1.65	3520307	82.00	60	120	
Ho-165	165	2	HMI He	13416164	0.70	15788522	84.97	60	120	

Sample Report

Sample Table

Sample Name	280-123110-A-2-F MS
Data File Name	268SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T02:46:27-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457054 soil 6020a dod5
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	318.990	ppb	318.990	1.93	98846	500000	
Li	7	2	45	294.173	ppb	294.173	4.87	5381	500000	
Li	7	3	45	288.047	ppb	288.047	1.00	6189484	50000	
Be	9	1	6	201.202	ppb	201.202	0.82	26481	2000	
B	11	1	6	4883.401	ppb	4883.401	4.10	25773	2000	
Na	23	1	45	3020844.331	ppb	3020844.331	0.10	4404090814	2000	>LDR
Na	23	2	45	3146739.789	ppb	3146739.789	0.69	357526101	400000	>LDR
Mg	24	2	45	1012.649	ppb	1012.649	1.99	53019	400000	
Al	27	2	45	1931.382	ppb	1931.382	2.45	28625	400000	
K	39	1	45	-1292.047	ppb	-1292.047	-1.21	4303545	400000	
K	39	2	45	777.484	ppb	777.484	2.13	44615	400000	
Ca	40	1	45	347.629	ppb	347.629	0.45	813274	400000	
Ca	44	2	45	716.785	ppb	716.785	4.33	1714	400000	
Ti	47	2	45	1.115	ppb	1.115	34.54	17	4000	
V	51	2	72	195.771	ppb	195.771	1.83	122306	2000	
Cr	52	2	72	193.242	ppb	193.242	0.09	150128	5000	
Mn	55	2	72	194.064	ppb	194.064	0.49	62338	10000	
Fe	57	2	72	2187.627	ppb	2187.627	2.21	32902	400000	
Co	59	2	72	188.268	ppb	188.268	0.84	256451	2000	
Ni	60	2	72	189.627	ppb	189.627	0.35	70227	5000	
Cu	63	2	72	189.035	ppb	189.035	0.65	194589	5000	
Zn	66	2	72	185.573	ppb	185.573	1.46	28786	5000	
As	75	2	72	200.149	ppb	200.149	0.66	24347	2000	
Se	78	1	72	209.844	ppb	209.844	1.71	21714	2000	
Sr	88	2	72	232.030	ppb	232.030	1.91	98395	4000	
Zr	90	2	72	6555.746	ppb	6555.746	8.51	7879	1000	>LDR
Nb	93	2	72	0.221	ppb	0.221	30.38	850	200	
Mo	95	2	115	201.454	ppb	201.454	2.92	114416	2000	
Pd	105	2	115	0.027	ppb	0.027	47.65	27	100	
Ag	107	2	115	176.584	ppb	176.584	0.26	349918	100	
Cd	111	2	115	186.219	ppb	186.219	2.51	49813	2000	
Sn	120	2	115	194.387	ppb	194.387	0.84	151201	2000	
Sb	121	2	115	208.668	ppb	208.668	0.81	155272	1000	
Ba	137	2	115	194.172	ppb	194.172	1.22	52350	5000	
W	182	2	165	162.144	ppb	162.144	0.18	441725	100	
Pt	195	2	165	-0.003	ppb	-0.003	0.00	0	100	
Tl	205	2	165	182.917	ppb	182.917	0.44	998472	2000	
Pb	208	2	165	183.832	ppb	183.832	0.55	1362768	5000	
Th	232	2	165	211.653	ppb	211.653	1.75	1993581	2000	
U	238	2	165	219.451	ppb	219.451	0.10	2076335	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	353784	0.45	538871	65.65	60	120	
Sc (IS)	45	1	HMI H2	10509749	0.77	13911789	75.55	60	120	
Sc (IS)	45	2	HMI He	493794	0.18	620219	79.62	60	120	
Sc (IS)	45	3	No Gas	29305793	1.06	49140068	59.64	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4522565	0.69	6023554	75.08	60	120	
Ge Internal Standard	72	2	HMI He	662566	0.26	827657	80.05	60	120	
In Internal Standard	115	2	HMI He	2831047	0.38	3520307	80.42	60	120	
Ho-165	165	2	HMI He	12966021	0.89	15788522	82.12	60	120	

Sample Report

Sample Table

Sample Name	280-123110-A-2-G MSD
Data File Name	269SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T02:50:23-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457054 soil 6020a dod5
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	332.807	ppb	332.807	4.34	102122	500000	
Li	7	2	45	308.935	ppb	308.935	8.40	5425	500000	
Li	7	3	45	253.150	ppb	253.150	0.38	5375767	50000	
Be	9	1	6	204.575	ppb	204.575	2.69	27570	2000	
B	11	1	6	4978.541	ppb	4978.541	1.45	26892	2000	
Na	23	1	45	OR	ppb	OR	#VALUE!	OR	2000	>LDR
Na	23	2	45	3209548.806	ppb	3209548.806	1.01	359092088	400000	>LDR
Mg	24	2	45	977.072	ppb	977.072	0.60	50380	400000	
Al	27	2	45	1937.493	ppb	1937.493	3.58	28271	400000	
K	39	1	45	-1344.203	ppb	-1344.203	-5.53	4290860	400000	
K	39	2	45	805.637	ppb	805.637	2.96	44853	400000	
Ca	40	1	45	339.541	ppb	339.541	0.89	804419	400000	
Ca	44	2	45	844.155	ppb	844.155	8.35	1980	400000	
Ti	47	2	45	0.914	ppb	0.914	173.21	13	4000	
V	51	2	72	199.410	ppb	199.410	2.31	121684	2000	
Cr	52	2	72	197.717	ppb	197.717	0.76	150060	5000	
Mn	55	2	72	194.978	ppb	194.978	1.33	61190	10000	
Fe	57	2	72	2009.633	ppb	2009.633	3.58	29534	400000	
Co	59	2	72	190.908	ppb	190.908	0.38	254046	2000	
Ni	60	2	72	190.162	ppb	190.162	1.68	68804	5000	
Cu	63	2	72	193.981	ppb	193.981	0.64	195053	5000	
Zn	66	2	72	198.401	ppb	198.401	3.52	30062	5000	
As	75	2	72	204.050	ppb	204.050	2.30	24248	2000	
Se	78	1	72	214.814	ppb	214.814	0.31	22484	2000	
Sr	88	2	72	232.491	ppb	232.491	0.33	96315	4000	
Zr	90	2	72	6377.728	ppb	6377.728	4.72	7489	1000	>LDR
Nb	93	2	72	-0.003	ppb	-0.003	-1341.59	593	200	
Mo	95	2	115	205.338	ppb	205.338	0.29	112631	2000	
Pd	105	2	115	0.012	ppb	0.012	107.33	13	100	
Ag	107	2	115	181.211	ppb	181.211	0.31	346815	100	
Cd	111	2	115	190.327	ppb	190.327	1.13	49170	2000	
Sn	120	2	115	194.955	ppb	194.955	1.84	146445	2000	
Sb	121	2	115	212.042	ppb	212.042	1.41	152377	1000	
Ba	137	2	115	199.822	ppb	199.822	1.98	52039	5000	
W	182	2	165	164.742	ppb	164.742	0.69	432572	100	
Pt	195	2	165	-0.001	ppb	-0.001	-305.43	3	100	
Tl	205	2	165	186.400	ppb	186.400	0.36	980729	2000	
Pb	208	2	165	186.848	ppb	186.848	0.40	1335102	5000	
Th	232	2	165	216.174	ppb	216.174	1.67	1962758	2000	
U	238	2	165	220.526	ppb	220.526	1.23	2010935	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	362188	0.92	538871	67.21	60	120	
Sc (IS)	45	1	HMI H2	10634206	2.09	13911789	76.44	60	120	
Sc (IS)	45	2	HMI He	486264	1.09	620219	78.40	60	120	
Sc (IS)	45	3	No Gas	26950825	0.23	49140068	54.84	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4574958	2.08	6023554	75.95	60	120	
Ge Internal Standard	72	2	HMI He	647284	0.68	827657	78.21	60	120	
In Internal Standard	115	2	HMI He	2734267	0.94	3520307	77.67	60	120	
Ho-165	165	2	HMI He	12498009	1.52	15788522	79.16	60	120	

Sample Report

Sample Table

Sample Name	280-123110-A-2-E pds
Data File Name	270SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T02:54:17-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457054 soil 6020a dod5
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-29.092	ppb	-29.092	-22.65	46720	500000	
Li	7	2	45	-28.038	ppb	-28.038	-63.16	2640	500000	
Li	7	3	45	-72.071	ppb	-72.071	-3.31	2288936	50000	
Be	9	1	6	207.859	ppb	207.859	1.44	28839	2000	
B	11	1	6	613.301	ppb	613.301	7.54	3637	2000	
Na	23	1	45	OR	ppb	OR	#VALUE!	OR	2000	>LDR
Na	23	2	45	3351961.920	ppb	3351961.920	0.99	388714741	400000	>LDR
Mg	24	2	45	1046.856	ppb	1046.856	1.10	55936	400000	
Al	27	2	45	1882.216	ppb	1882.216	1.04	28475	400000	
K	39	1	45	-1340.121	ppb	-1340.121	-5.10	4303166	400000	
K	39	2	45	866.910	ppb	866.910	2.36	48538	400000	
Ca	40	1	45	380.495	ppb	380.495	0.51	899261	400000	
Ca	44	2	45	362.645	ppb	362.645	12.31	907	400000	
Ti	47	2	45	3.928	ppb	3.928	27.99	60	4000	
V	51	2	72	207.681	ppb	207.681	2.06	130743	2000	
Cr	52	2	72	205.038	ppb	205.038	0.61	160558	5000	
Mn	55	2	72	221.017	ppb	221.017	9.98	71724	10000	
Fe	57	2	72	2034.041	ppb	2034.041	3.07	30867	400000	
Co	59	2	72	199.514	ppb	199.514	1.21	273925	2000	
Ni	60	2	72	200.738	ppb	200.738	1.12	74930	5000	
Cu	63	2	72	204.219	ppb	204.219	2.10	211866	5000	
Zn	66	2	72	212.333	ppb	212.333	0.30	33179	5000	
As	75	2	72	214.660	ppb	214.660	1.43	26317	2000	
Se	78	1	72	222.878	ppb	222.878	1.97	23295	2000	
Sr	88	2	72	26.895	ppb	26.895	4.01	11512	4000	
Zr	90	2	72	177609.752	ppb	177609.752	2.10	214357	1000	>LDR
Nb	93	2	72	3.481	ppb	3.481	12.22	4421	200	
Mo	95	2	115	209.543	ppb	209.543	0.40	117665	2000	
Pd	105	2	115	0.056	ppb	0.056	26.42	53	100	
Ag	107	2	115	40.097	ppb	40.097	0.90	78573	100	
Cd	111	2	115	201.480	ppb	201.480	0.86	53275	2000	
Sn	120	2	115	198.787	ppb	198.787	1.90	152934	2000	
Sb	121	2	115	217.731	ppb	217.731	0.47	160157	1000	
Ba	137	2	115	207.629	ppb	207.629	1.22	55349	5000	
W	182	2	165	198.289	ppb	198.289	2.12	529622	100	
Pt	195	2	165	0.075	ppb	0.075	7.10	160	100	
Tl	205	2	165	195.660	ppb	195.660	0.99	1047173	2000	
Pb	208	2	165	193.758	ppb	193.758	1.15	1408326	5000	
Th	232	2	165	1.434	ppb	1.434	8.98	13551	2000	
U	238	2	165	227.486	ppb	227.486	1.75	2110554	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	372906	1.14	538871	69.20	60	120	
Sc (IS)	45	1	HMI H2	10652302	1.91	13911789	76.57	60	120	
Sc (IS)	45	2	HMI He	503927	2.78	620219	81.25	60	120	
Sc (IS)	45	3	No Gas	25412532	0.63	49140068	51.71	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4567976	1.29	6023554	75.84	60	120	
Ge Internal Standard	72	2	HMI He	667834	3.87	827657	80.69	60	120	
In Internal Standard	115	2	HMI He	2798887	3.44	3520307	79.51	60	120	
Ho-165	165	2	HMI He	12711281	2.48	15788522	80.51	60	120	

Sample Report

Sample Table

Sample Name	280-123110-A-3-B
Data File Name	271SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T02:58:11-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	457054 soil 6020a dod5
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-19.188	ppb	-19.188	-24.16	47647	500000	
Li	7	2	45	-48.371	ppb	-48.371	-4.11	2447	500000	
Li	7	3	45	-72.491	ppb	-72.491	-1.34	2267104	50000	
Be	9	1	6	0.144	ppb	0.144	5.06	20	2000	
B	11	1	6	526.932	ppb	526.932	11.24	3150	2000	
Na	23	1	45	OR	ppb	OR	#VALUE!	OR	2000	
Na	23	2	45	3684868.796	ppb	3684868.796	1.43	425092514	400000	>LDR
Mg	24	2	45	1134.754	ppb	1134.754	2.50	60303	400000	
Al	27	2	45	6.409	ppb	6.409	21.00	123	400000	
K	39	1	45	-1276.209	ppb	-1276.209	-4.08	4325836	400000	
K	39	2	45	963.026	ppb	963.026	3.65	51501	400000	
Ca	40	1	45	323.153	ppb	323.153	2.40	758484	400000	
Ca	44	2	45	331.379	ppb	331.379	25.74	830	400000	
Ti	47	2	45	0.892	ppb	0.892	173.21	13	4000	
V	51	2	72	-0.402	ppb	-0.402	-29.62	1070	2000	
Cr	52	2	72	1.103	ppb	1.103	10.01	990	5000	
Mn	55	2	72	1.715	ppb	1.715	22.32	680	10000	
Fe	57	2	72	221.296	ppb	221.296	11.73	3431	400000	
Co	59	2	72	-0.051	ppb	-0.051	-82.41	737	2000	
Ni	60	2	72	0.352	ppb	0.352	54.25	217	5000	
Cu	63	2	72	3.080	ppb	3.080	5.36	4201	5000	
Zn	66	2	72	6.046	ppb	6.046	9.73	1053	5000	
As	75	2	72	0.847	ppb	0.847	6.37	118	2000	
Se	78	1	72	2.163	ppb	2.163	17.13	235	2000	
Sr	88	2	72	25.603	ppb	25.603	4.69	10881	4000	
Zr	90	2	72	299.178	ppb	299.178	37.34	390	1000	
Nb	93	2	72	-0.399	ppb	-0.399	-3.12	180	200	
Mo	95	2	115	1.046	ppb	1.046	12.70	613	2000	
Pd	105	2	115	0.005	ppb	0.005	281.65	7	100	
Ag	107	2	115	0.062	ppb	0.062	86.13	133	100	
Cd	111	2	115	0.087	ppb	0.087	105.84	23	2000	
Sn	120	2	115	0.727	ppb	0.727	5.22	660	2000	
Sb	121	2	115	0.329	ppb	0.329	37.70	253	1000	
Ba	137	2	115	0.526	ppb	0.526	38.82	163	5000	
W	182	2	165	0.182	ppb	0.182	28.00	870	100	
Pt	195	2	165	-0.003	ppb	-0.003	0.00	0	100	
Tl	205	2	165	0.076	ppb	0.076	13.01	513	2000	
Pb	208	2	165	0.098	ppb	0.098	12.48	1210	5000	
Th	232	2	165	0.073	ppb	0.073	16.10	987	2000	
U	238	2	165	0.166	ppb	0.166	7.06	1584	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	373140	5.10	538871	69.24	60	120	
Sc (IS)	45	1	HMI H2	10524454	6.20	13911789	75.65	60	120	
Sc (IS)	45	2	HMI He	501511	2.91	620219	80.86	60	120	
Sc (IS)	45	3	No Gas	25210835	1.06	49140068	51.30	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4511442	5.89	6023554	74.90	60	120	
Ge Internal Standard	72	2	HMI He	662874	2.17	827657	80.09	60	120	
In Internal Standard	115	2	HMI He	2780996	3.32	3520307	79.00	60	120	
Ho-165	165	2	HMI He	12599819	2.33	15788522	79.80	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5688510
Data File Name	272_CCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T03:02:06-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	90.979	ppb	9.085	86247	100	91.0	90	110	
Li	7	2	45	88.447	ppb	16.226	4588	100	88.4	90	110	>+\-10%
Li	7	3	45	68.555	ppb	2.844	6046716	100	68.6	90	110	>+\-10%
Be	9	1	6	51.443	ppb	0.989	10044	50	102.9	90	110	
B	11	1	6	327.521	ppb	3.864	2900	50	655.0	90	110	>+\-10%
Na	23	1	45	7201.587	ppb	3.921	14305954	1000	720.2	90	110	>+\-10%
Na	23	2	45	4849.894	ppb	7.923	719130	1000	485.0	90	110	>+\-10%
Mg	24	2	45	1030.270	ppb	1.675	68813	1000	103.0	90	110	
Al	27	2	45	993.547	ppb	2.816	18799	1000	99.4	90	110	
K	39	1	45	726.407	ppb	2.589	8982165	1000	72.6	90	110	>+\-10%
K	39	2	45	1094.821	ppb	3.251	70255	1000	109.5	90	110	
Ca	40	1	45	1026.361	ppb	0.246	3141603	1000	102.6	90	110	
Ca	44	2	45	1035.880	ppb	8.367	3137	1000	103.6	90	110	
Ti	47	2	45	49.347	ppb	10.469	940	50	98.7	90	110	
V	51	2	72	48.832	ppb	1.510	40481	50	97.7	90	110	
Cr	52	2	72	50.741	ppb	1.842	50786	50	101.5	90	110	
Mn	55	2	72	50.508	ppb	1.623	20973	50	101.0	90	110	
Fe	57	2	72	1013.315	ppb	1.770	19667	1000	101.3	90	110	
Co	59	2	72	49.746	ppb	0.549	87849	50	99.5	90	110	
Ni	60	2	72	50.494	ppb	3.643	24114	50	101.0	90	110	
Cu	63	2	72	52.634	ppb	0.953	70599	50	105.3	90	110	
Zn	66	2	72	52.656	ppb	0.901	10608	50	105.3	90	110	
As	75	2	72	52.940	ppb	1.411	8290	50	105.9	90	110	
Se	78	1	72	53.503	ppb	3.734	7591	50	107.0	90	110	
Sr	88	2	72	103.456	ppb	0.421	56403	100	103.5	90	110	
Zr	90	2	72	94.527	ppb	37.654	187	50	189.1	90	110	>+\-10%
Nb	93	2	72	97.399	ppb	1.228	136106	100	97.4	90	110	
Mo	95	2	115	50.752	ppb	2.091	36542	50	101.5	90	110	
Pd	105	2	115	52.699	ppb	2.399	60297	50	105.4	90	110	
Ag	107	2	115	51.016	ppb	0.662	128075	50	102.0	90	110	
Cd	111	2	115	50.435	ppb	1.398	17091	50	100.9	90	110	
Sn	120	2	115	51.336	ppb	2.654	50690	50	102.7	90	110	
Sb	121	2	115	52.149	ppb	0.178	49167	50	104.3	90	110	
Ba	137	2	115	49.464	ppb	1.346	16918	50	98.9	90	110	
W	182	2	165	49.888	ppb	1.123	168946	50	99.8	90	110	
Pt	195	2	165	50.274	ppb	1.517	130912	50	100.5	90	110	
Tl	205	2	165	50.230	ppb	0.305	340254	50	100.5	90	110	
Pb	208	2	165	50.706	ppb	0.297	466815	50	101.4	90	110	
Th	232	2	165	49.675	ppb	0.442	580820	50	99.3	90	110	
U	238	2	165	49.944	ppb	0.229	586297	50	99.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	524818	0.77	538871	97.39	60	120	
Sc (IS)	45	1	HMI H2	14099113	0.67	13911789	101.35	60	120	
Sc (IS)	45	2	HMI He	629923	0.67	620219	101.56	60	120	
Sc (IS)	45	3	No Gas	44016023	1.12	49140068	89.57	60	120	
Ge Internal Standard	72	1	HMI H2	6193565	0.40	6023554	102.82	60	120	
Ge Internal Standard	72	2	HMI He	851502	0.21	827657	102.88	60	120	
In Internal Standard	115	2	HMI He	3586247	0.79	3520307	101.87	60	120	
Ho-165	165	2	HMI He	16085698	0.87	15788522	101.88	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5688508
Data File Name	273_CCB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T03:05:56-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-20.617	ppb	-7.1	4857582	10	
Be	9	1	6	0.000	ppb	#DIV/0!	0	0.5	
B	11	1	6	221.200	ppb	17.4	2117	0.5	>RL
Na	23	1	45	1913.618	ppb	0.6	3990929	25	>RL
Na	23	2	45	1600.481	ppb	1.1	243422	25	>RL
Mg	24	2	45	15.072	ppb	12.0	1143	25	
Al	27	2	45	0.184	ppb	441.9	37	15	
K	39	1	45	-797.051	ppb	-1.6	6608653	50	
K	39	2	45	17.733	ppb	28.4	24518	50	
Ca	40	1	45	0.561	ppb	50.0	42783	50	
Ca	44	2	45	-5.594	ppb	-96.4	33	25	
Ti	47	2	45	0.175	ppb	173.2	3	0.5	
V	51	2	72	-0.582	ppb	-28.6	1220	1	
Cr	52	2	72	0.047	ppb	190.5	217	1	
Mn	55	2	72	0.148	ppb	40.0	223	0.5	
Fe	57	2	72	-3.812	ppb	-49.0	77	25	
Co	59	2	72	-0.026	ppb	-232.0	980	0.5	
Ni	60	2	72	-0.132	ppb	-46.3	47	1	
Cu	63	2	72	0.127	ppb	48.6	1493	1	
Zn	66	2	72	0.243	ppb	245.9	200	5	
As	75	2	72	0.112	ppb	63.3	36	1	
Se	78	1	72	1.015	ppb	24.3	159	1	>RL
Sr	88	2	72	0.024	ppb	159.7	50	0.5	
Zr	90	2	72	3.852	ppb	100.6	47	1	>RL
Nb	93	2	72	2.920	ppb	4.7	4793	2	>RL
Mo	95	2	115	0.004	ppb	883.2	43	0.5	
Pd	105	2	115	0.017	ppb	104.4	23	1	
Ag	107	2	115	0.028	ppb	78.6	87	1	
Cd	111	2	115	0.010	ppb	173.2	3	0.5	
Sn	120	2	115	0.129	ppb	49.7	263	1	
Sb	121	2	115	0.102	ppb	42.9	113	0.6	
Ba	137	2	115	0.047	ppb	129.7	47	0.5	
W	182	2	165	0.064	ppb	48.3	703	1	
Pt	195	2	165	0.004	ppb	208.4	17	1	
Tl	205	2	165	0.032	ppb	24.1	350	0.1	
Pb	208	2	165	0.012	ppb	188.4	747	0.5	
Th	232	2	165	0.126	ppb	8.9	1857	1	
U	238	2	165	0.018	ppb	34.7	283	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	535361	0.29	538871	99.35	60	120	
Sc (IS)	45	1	HMI H2	14203209	0.41	13911789	102.09	60	120	
Sc (IS)	45	2	HMI He	618411	1.60	620219	99.71	60	120	
Sc (IS)	45	3	No Gas	45238698	0.48	49140068	92.06	60	120	
Ge Internal Standard	72	1	HMI H2	6240106	0.21	6023554	103.60	60	120	
Ge Internal Standard	72	2	HMI He	842972	0.75	827657	101.85	60	120	
In Internal Standard	115	2	HMI He	3582605	0.48	3520307	101.77	60	120	
Ho-165	165	2	HMI He	15909952	0.39	15788522	100.77	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5688512
Data File Name	274LCCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T03:09:50-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-6.761	ppb	-38.545	5049387	50	-13.5	70	130	>+/-30%
Be	9	1	6	1.261	ppb	57.041	247	1	126.1	70	130	
Na	23	2	45	1253.545	ppb	1.367	192364	50	2507.1	70	130	>+/-30%
Mg	24	2	45	64.084	ppb	8.209	4311	50	128.2	70	130	
Al	27	2	45	50.247	ppb	12.737	957	30	167.5	70	130	>+/-30%
K	39	2	45	141.093	ppb	17.585	29354	100	141.1	70	130	>+/-30%
Ca	44	2	45	19.759	ppb	26.499	107	50	39.5	70	130	>+/-30%
V	51	2	72	4.838	ppb	4.373	5391	5	96.8	70	130	
Cr	52	2	72	2.093	ppb	4.122	2200	2	104.7	70	130	
Mn	55	2	72	1.163	ppb	14.591	627	1	116.3	70	130	
Fe	57	2	72	47.646	ppb	15.690	1040	50	95.3	70	130	
Co	59	2	72	1.051	ppb	16.903	2794	1	105.1	70	130	
Ni	60	2	72	1.520	ppb	14.895	810	1.5	101.3	70	130	
Cu	63	2	72	2.551	ppb	4.232	4574	2	127.5	70	130	
Zn	66	2	72	10.342	ppb	9.497	2150	10	103.4	70	130	
As	75	2	72	5.172	ppb	3.790	805	5	103.4	70	130	
Se	78	1	72	6.028	ppb	5.897	857	5	120.6	70	130	
Sr	88	2	72	1.037	ppb	8.437	587	1	103.7	70	130	
Zr	90	2	72	6.535	ppb	174.366	50	0.5	1307.1	70	130	>+/-30%
Nb	93	2	72	1.387	ppb	2.690	2640	2	69.3	70	130	>+/-30%
Mo	95	2	115	2.084	ppb	6.952	1503	2	104.2	70	130	
Pd	105	2	115	0.009	ppb	115.248	13	1	0.9	70	130	>+/-30%
Ag	107	2	115	4.907	ppb	1.730	12049	5	98.1	70	130	
Cd	111	2	115	1.067	ppb	16.648	353	1	106.7	70	130	
Sn	120	2	115	9.794	ppb	5.875	9550	10	97.9	70	130	
Sb	121	2	115	2.058	ppb	4.253	1910	2	102.9	70	130	
Ba	137	2	115	0.989	ppb	6.383	360	1	98.9	70	130	
W	182	2	165	4.689	ppb	1.729	15830	1	468.9	70	130	>+/-30%
Pt	195	2	165	0.003	ppb	170.216	13	1	0.3	70	130	>+/-30%
Tl	205	2	165	0.972	ppb	6.933	6515	1	97.2	70	130	
Pb	208	2	165	1.077	ppb	2.983	10225	1	107.7	70	130	
Th	232	2	165	1.668	ppb	3.425	19292	2	83.4	70	130	
U	238	2	165	0.961	ppb	1.457	11012	1	96.1	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	525414	0.32	538871	97.50	60	120	
Sc (IS)	45	1	HMI H2	13933448	0.51	13911789	100.16	60	120	
Sc (IS)	45	2	HMI He	613091	0.10	620219	98.85	60	120	
Sc (IS)	45	3	No Gas	45068494	0.41	49140068	91.71	60	120	
Ge Internal Standard	72	1	HMI H2	6122054	0.45	6023554	101.64	60	120	
Ge Internal Standard	72	2	HMI He	829079	0.66	827657	100.17	60	120	
In Internal Standard	115	2	HMI He	3502806	1.48	3520307	99.50	60	120	
Ho-165	165	2	HMI He	15595020	0.82	15788522	98.77	60	120	

Blank Report

Sample Table

Sample Name	MB 280-456960/1-A
Data File Name	275_BLK.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T03:13:43-06:00
Sample Type	Blank
Dilution	1
Comment	456960 6020
ISTD Ref File Name	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-11.900	ppb	-54.72410893	63123	0.5
Li	7	2	45	-29.815	ppb	-69.15503677	3154	0.5
Li	7	3	45	-19.850	ppb	-5.977689513	4963182	10
Be	9	1	6	0.053	ppb	100.1049137	10	0.5
B	11	1	6	246.027	ppb	12.5783902	2190	0.5
Na	23	1	45	1108.736	ppb	1.420217383	2306576	25
Na	23	2	45	944.775	ppb	0.997213657	147055	25
Mg	24	2	45	13.374	ppb	12.4860735	1010	25
Al	27	2	45	3.720	ppb	68.09405123	100	15
K	39	1	45	-2446.493	ppb	-1.633149538	3804239	50
K	39	2	45	23.948	ppb	47.4529291	24271	50
Ca	40	1	45	11.596	ppb	7.442645789	73236	50
Ca	44	2	45	5.058	ppb	142.2533734	63	25
Ti	47	2	45	0.547	ppb	99.93440019	10	0.5
V	51	2	72	-0.576	ppb	-68.38080813	1183	1
Cr	52	2	72	0.178	ppb	23.50692208	333	1
Mn	55	2	72	0.988	ppb	16.96604386	547	0.5
Fe	57	2	72	13.507	ppb	27.83203058	393	25
Co	59	2	72	0.010	ppb	265.4661805	1007	0.5
Ni	60	2	72	-0.084	ppb	-84.66657095	67	1
Cu	63	2	72	0.265	ppb	46.15917149	1617	1
Zn	66	2	72	0.978	ppb	54.62694643	333	5
As	75	2	72	0.146	ppb	58.99625483	40	1
Se	78	1	72	0.883	ppb	4.595921431	133	1
Sr	88	2	72	1.620	ppb	11.82782835	880	0.5
Zr	90	2	72	13.951	ppb	83.0727593	60	1
Nb	93	2	72	1.106	ppb	8.848396091	2220	2
Mo	95	2	115	0.030	ppb	0.758967399	60	0.5
Pd	105	2	115	0.012	ppb	113.8186991	17	1
Ag	107	2	115	0.017	ppb	125.0381123	57	1
Cd	111	2	115	0.030	ppb	173.2050808	10	0.5
Sn	120	2	115	0.442	ppb	51.93731695	553	1
Sb	121	2	115	0.037	ppb	107.501408	50	0.6
Ba	137	2	115	0.263	ppb	37.19320657	117	0.5
W	182	2	165	0.025	ppb	64.25574202	563	1
Pt	195	2	165	0.000	ppb	4270.273111	7	1
Tl	205	2	165	0.005	ppb	256.3404261	170	0.1
Pb	208	2	165	0.051	ppb	31.36321762	1090	0.5
Th	232	2	165	0.249	ppb	9.58664295	3227	1
U	238	2	165	0.005	ppb	24.48807549	137	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	506775	0.20	538871	94.04	60	120	
Sc (IS)	45	1	HMI H2	13622845	1.43	13911789	97.92	60	120	
Sc (IS)	45	2	HMI He	605877	0.40	620219	97.69	60	120	
Sc (IS)	45	3	No Gas	46111729	0.58	49140068	93.84	60	120	
Ge Internal Standard	72	1	HMI H2	5950747	0.67	6023554	98.79	60	120	
Ge Internal Standard	72	2	HMI He	814439	0.42	827657	98.40	60	120	
In Internal Standard	115	2	HMI He	3472005	0.26	3520307	98.63	60	120	
Ho-165	165	2	HMI He	15630999	0.57	15788522	99.00	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-456960/2-A
Data File Name	276_LCS.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T03:17:35-06:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	456960 6020
ISTD Ref File Name	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	63.307	63.307	ppb	3.106	78317	400	15.8	80	120	>+/-20%
Li	7	2	45	82.297	82.297	ppb	18.455	4297	400	20.6	80	120	>+/-20%
Li	7	3	45	57.905	57.905	ppb	0.971	6136887	400	14.5	80	120	>+/-20%
Be	9	1	6	39.607	39.607	ppb	0.708	7546	40	99.0	80	120	
Na	23	2	45	904.306	904.306	ppb	1.244	139780	40	2260.8	80	120	>+/-20%
Mg	24	2	45	8.612	8.612	ppb	20.415	697	40	21.5	80	120	>+/-20%
Al	27	2	45	395.730	395.730	ppb	5.440	7139	40	989.3	80	120	>+/-20%
K	39	2	45	23.432	23.432	ppb	189.666	23974	40	58.6	80	120	>+/-20%
Ca	44	2	45	98.370	98.370	ppb	18.519	327	40	245.9	80	120	>+/-20%
V	51	2	72	37.666	37.666	ppb	3.803	30182	40	94.2	80	120	
Cr	52	2	72	39.944	39.944	ppb	1.971	38207	40	99.9	80	120	
Mn	55	2	72	40.969	40.969	ppb	2.458	16273	40	102.4	80	120	
Fe	57	2	72	387.440	387.440	ppb	2.103	7269	40	968.6	80	120	>+/-20%
Co	59	2	72	39.793	39.793	ppb	2.451	67293	40	99.5	80	120	
Ni	60	2	72	39.454	39.454	ppb	2.853	18015	40	98.6	80	120	
Cu	63	2	72	40.753	40.753	ppb	2.286	52479	40	101.9	80	120	
Zn	66	2	72	39.419	39.419	ppb	2.025	7619	40	98.5	80	120	
As	75	2	72	38.037	38.037	ppb	4.593	5691	40	95.1	80	120	
Se	78	1	72	40.903	40.903	ppb	0.590	5576	40	102.3	80	120	
Nb	93	2	72	0.633	0.633	ppb	13.417	1590	40	1.6	80	120	>+/-20%
Mo	95	2	115	38.886	38.886	ppb	1.855	26980	40	97.2	80	120	
Pd	105	2	115	0.018	0.018	ppb	103.454	23	40	0.0	80	120	>+/-20%
Ag	107	2	115	39.375	39.375	ppb	0.449	95225	40	98.4	80	120	
Cd	111	2	115	38.641	38.641	ppb	6.754	12616	40	96.6	80	120	
Sn	120	2	115	38.221	38.221	ppb	1.723	36386	40	95.6	80	120	
Sb	121	2	115	38.173	38.173	ppb	1.229	34674	40	95.4	80	120	
Ba	137	2	115	38.203	38.203	ppb	2.447	12593	40	95.5	80	120	
W	182	2	165	32.724	32.724	ppb	1.478	106823	40	81.8	80	120	
Pt	195	2	165	0.000	0.000	ppb	4056.916	7	40	0.0	80	120	>+/-20%
Tl	205	2	165	38.613	38.613	ppb	0.833	251763	40	96.5	80	120	
Pb	208	2	165	38.819	38.819	ppb	0.602	344113	40	97.0	80	120	
Th	232	2	165	36.130	36.130	ppb	1.107	406677	40	90.3	80	120	
U	238	2	165	37.870	37.870	ppb	1.417	427867	40	94.7	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	512120	1.13	538871	95.04	60	120	
Sc (IS)	45	1	HMI H2	13695052	0.57	13911789	98.44	60	120	
Sc (IS)	45	2	HMI He	598878	0.44	620219	96.56	60	120	
Sc (IS)	45	3	No Gas	45869463	0.25	49140068	93.34	60	120	
Ge Internal Standard	72	1	HMI H2	5947148	0.08	6023554	98.73	60	120	
Ge Internal Standard	72	2	HMI He	813059	0.69	827657	98.24	60	120	
In Internal Standard	115	2	HMI He	3454621	0.46	3520307	98.13	60	120	
Ho-165	165	2	HMI He	15481759	1.06	15788522	98.06	60	120	

Sample Report

Sample Table

Sample Name	280-123292-A-15-B
Data File Name	277SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T03:21:30-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456960 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	8.776	ppb	8.776	41.14	66280	500000	
Li	7	2	45	-1.429	ppb	-1.429	-2313.39	3347	500000	
Li	7	3	45	-3.205	ppb	-3.205	-18.84	5102716	50000	
Be	9	1	6	0.037	ppb	0.037	173.21	7	2000	
B	11	1	6	41254.008	ppb	41254.008	0.79	293805	2000	>LDR
Na	23	1	45	274629.709	ppb	274629.709	0.81	512079926	2000	>LDR
Na	23	2	45	288215.049	ppb	288215.049	0.70	38941704	400000	
Mg	24	2	45	7535.215	ppb	7535.215	0.10	468042	400000	
Al	27	2	45	7.303	ppb	7.303	8.24	160	400000	
K	39	1	45	4633.978	ppb	4633.978	1.73	14480819	400000	
K	39	2	45	5400.044	ppb	5400.044	0.29	234158	400000	
Ca	40	1	45	17869.616	ppb	17869.616	0.72	51489814	400000	
Ca	44	2	45	16743.510	ppb	16743.510	2.69	46522	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	-0.403	ppb	-0.403	-21.75	1280	2000	
Cr	52	2	72	0.194	ppb	0.194	35.57	340	5000	
Mn	55	2	72	10.499	ppb	10.499	4.78	4181	10000	
Fe	57	2	72	60.385	ppb	60.385	4.77	1223	400000	
Co	59	2	72	0.348	ppb	0.348	8.23	1530	2000	
Ni	60	2	72	0.425	ppb	0.425	44.13	290	5000	
Cu	63	2	72	0.839	ppb	0.839	13.58	2277	5000	
Zn	66	2	72	1.151	ppb	1.151	20.70	357	5000	
As	75	2	72	0.414	ppb	0.414	16.59	78	2000	
Se	78	1	72	0.945	ppb	0.945	25.81	140	2000	
Sr	88	2	72	1497.690	ppb	1497.690	0.47	759872	4000	
Zr	90	2	72	138.375	ppb	138.375	20.02	237	1000	
Nb	93	2	72	0.617	ppb	0.617	49.37	1530	200	
Mo	95	2	115	1.572	ppb	1.572	10.73	1083	2000	
Pd	105	2	115	0.035	ppb	0.035	28.28	40	100	
Ag	107	2	115	0.016	ppb	0.016	80.06	53	100	
Cd	111	2	115	0.043	ppb	0.043	86.61	13	2000	
Sn	120	2	115	0.337	ppb	0.337	18.65	433	2000	
Sb	121	2	115	0.551	ppb	0.551	7.31	497	1000	
Ba	137	2	115	41.316	ppb	41.316	2.34	13090	5000	
W	182	2	165	0.065	ppb	0.065	22.66	673	100	
Pt	195	2	165	0.003	ppb	0.003	218.30	13	100	
Tl	205	2	165	0.022	ppb	0.022	18.74	270	2000	
Pb	208	2	165	0.329	ppb	0.329	5.03	3450	5000	
Th	232	2	165	0.521	ppb	0.521	8.17	6102	2000	
U	238	2	165	0.148	ppb	0.148	8.34	1700	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	481455	0.15	538871	89.35	60	120	
Sc (IS)	45	1	HMI H2	13437291	0.76	13911789	96.59	60	120	
Sc (IS)	45	2	HMI He	587028	0.75	620219	94.65	60	120	
Sc (IS)	45	3	No Gas	45063461	0.31	49140068	91.70	60	120	
Ge Internal Standard	72	1	HMI H2	5874493	0.18	6023554	97.53	60	120	
Ge Internal Standard	72	2	HMI He	792943	0.73	827657	95.81	60	120	
In Internal Standard	115	2	HMI He	3320502	1.35	3520307	94.32	60	120	
Ho-165	165	2	HMI He	15110937	0.20	15788522	95.71	60	120	

Sample Report

Sample Table

Sample Name	280-123292-A-15-Bsd@5
Data File Name	278SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T03:25:22-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456960 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	1.506	ppb	1.506	526.41	69561	500000	
Li	7	2	45	-3.504	ppb	-3.504	-76.52	3541	500000	
Li	7	3	45	-6.175	ppb	-6.175	-66.20	5225345	50000	
Be	9	1	6	0.016	ppb	0.016	173.21	3	2000	
B	11	1	6	8440.913	ppb	8440.913	0.77	68082	2000	
Na	23	1	45	56803.207	ppb	56803.207	0.20	113760205	2000	>LDR
Na	23	2	45	59930.473	ppb	59930.473	0.29	8629710	400000	
Mg	24	2	45	1557.559	ppb	1557.559	1.24	103072	400000	
Al	27	2	45	6.757	ppb	6.757	14.29	160	400000	
K	39	1	45	678.626	ppb	678.626	1.48	9102197	400000	
K	39	2	45	1123.398	ppb	1123.398	2.16	70871	400000	
Ca	40	1	45	3675.594	ppb	3675.594	0.98	11390611	400000	
Ca	44	2	45	3532.970	ppb	3532.970	2.00	10488	400000	
Ti	47	2	45	0.351	ppb	0.351	173.21	7	4000	
V	51	2	72	0.335	ppb	0.335	76.55	1964	2000	
Cr	52	2	72	0.028	ppb	0.028	187.29	200	5000	
Mn	55	2	72	2.138	ppb	2.138	18.69	1047	10000	
Fe	57	2	72	17.047	ppb	17.047	21.95	480	400000	
Co	59	2	72	0.073	ppb	0.073	162.89	1167	2000	
Ni	60	2	72	0.203	ppb	0.203	56.97	207	5000	
Cu	63	2	72	0.595	ppb	0.595	17.97	2127	5000	
Zn	66	2	72	2.759	ppb	2.759	18.70	703	5000	
As	75	2	72	0.226	ppb	0.226	9.58	54	2000	
Se	78	1	72	0.758	ppb	0.758	29.21	124	2000	
Sr	88	2	72	298.543	ppb	298.543	0.82	162998	4000	
Zr	90	2	72	12.093	ppb	12.093	50.56	60	1000	
Nb	93	2	72	-0.050	ppb	-0.050	-61.38	717	200	
Mo	95	2	115	0.349	ppb	0.349	16.78	290	2000	
Pd	105	2	115	0.006	ppb	0.006	150.48	10	100	
Ag	107	2	115	0.016	ppb	0.016	52.10	57	100	
Cd	111	2	115	0.010	ppb	0.010	173.21	3	2000	
Sn	120	2	115	0.240	ppb	0.240	5.68	370	2000	
Sb	121	2	115	0.156	ppb	0.156	37.08	163	1000	
Ba	137	2	115	8.383	ppb	8.383	3.82	2874	5000	
W	182	2	165	0.027	ppb	0.027	58.77	583	100	
Pt	195	2	165	-0.001	ppb	-0.001	-174.90	3	100	
Tl	205	2	165	0.022	ppb	0.022	25.66	283	2000	
Pb	208	2	165	0.060	ppb	0.060	44.16	1193	5000	
Th	232	2	165	0.044	ppb	0.044	5.41	917	2000	
U	238	2	165	0.047	ppb	0.047	11.39	627	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	542883	0.20	538871	100.74	60	120	
Sc (IS)	45	1	HMI H2	14409299	0.12	13911789	103.58	60	120	
Sc (IS)	45	2	HMI He	624692	0.82	620219	100.72	60	120	
Sc (IS)	45	3	No Gas	46555749	0.35	49140068	94.74	60	120	
Ge Internal Standard	72	1	HMI H2	6346849	0.68	6023554	105.37	60	120	
Ge Internal Standard	72	2	HMI He	853115	0.97	827657	103.08	60	120	
In Internal Standard	115	2	HMI He	3563740	0.91	3520307	101.23	60	120	
Ho-165	165	2	HMI He	15976505	1.38	15788522	101.19	60	120	

Sample Table

Sample Name	280-123292-A-15-C MS
Data File Name	279SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T03:29:12-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456960 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	77.096	ppb	77.096	3.57	80804	500000	
Li	7	2	45	61.952	ppb	61.952	66.93	4147	500000	
Li	7	3	45	73.208	ppb	73.208	2.53	6217919	50000	
Be	9	1	6	40.230	ppb	40.230	2.09	7419	2000	
B	11	1	6	42276.376	ppb	42276.376	0.56	309983	2000	>LDR
Na	23	1	45	280892.218	ppb	280892.218	0.07	532267285	2000	>LDR
Na	23	2	45	292491.373	ppb	292491.373	0.18	40958037	400000	
Mg	24	2	45	7737.273	ppb	7737.273	0.60	498070	400000	
Al	27	2	45	384.398	ppb	384.398	1.42	7045	400000	
K	39	1	45	4799.372	ppb	4799.372	0.66	14970799	400000	
K	39	2	45	5546.850	ppb	5546.850	1.32	248629	400000	
Ca	40	1	45	18280.741	ppb	18280.741	0.49	53529541	400000	
Ca	44	2	45	17204.368	ppb	17204.368	2.23	49544	400000	
Ti	47	2	45	0.724	ppb	0.724	43.03	13	4000	
V	51	2	72	38.168	ppb	38.168	2.66	30951	2000	
Cr	52	2	72	38.345	ppb	38.345	0.79	37148	5000	
Mn	55	2	72	49.439	ppb	49.439	5.39	19854	10000	
Fe	57	2	72	425.361	ppb	425.361	4.01	8066	400000	
Co	59	2	72	38.492	ppb	38.492	0.47	65948	2000	
Ni	60	2	72	38.212	ppb	38.212	2.02	17668	5000	
Cu	63	2	72	39.492	ppb	39.492	0.66	51539	5000	
Zn	66	2	72	38.497	ppb	38.497	5.66	7539	5000	
As	75	2	72	40.037	ppb	40.037	1.28	6066	2000	
Se	78	1	72	39.472	ppb	39.472	2.98	5360	2000	
Sr	88	2	72	1573.097	ppb	1573.097	0.03	828677	4000	
Zr	90	2	72	1098.652	ppb	1098.652	4.96	1674	1000	
Nb	93	2	72	0.102	ppb	0.102	27.23	897	200	
Mo	95	2	115	42.001	ppb	42.001	1.33	29007	2000	
Pd	105	2	115	0.049	ppb	0.049	38.24	57	100	
Ag	107	2	115	37.429	ppb	37.429	0.31	90111	100	
Cd	111	2	115	38.178	ppb	38.178	2.03	12406	2000	
Sn	120	2	115	38.493	ppb	38.493	3.35	36476	2000	
Sb	121	2	115	42.035	ppb	42.035	2.78	38010	1000	
Ba	137	2	115	78.563	ppb	78.563	0.95	25748	5000	
W	182	2	165	32.457	ppb	32.457	0.97	107233	100	
Pt	195	2	165	-0.001	ppb	-0.001	-179.57	3	100	
Tl	205	2	165	37.212	ppb	37.212	0.31	245555	2000	
Pb	208	2	165	37.723	ppb	37.723	0.34	338428	5000	
Th	232	2	165	36.320	ppb	36.320	0.93	413759	2000	
U	238	2	165	38.190	ppb	38.190	0.73	436684	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	495694	0.35	538871	91.99	60	120	
Sc (IS)	45	1	HMI H2	13655194	0.32	13911789	98.16	60	120	
Sc (IS)	45	2	HMI He	608381	0.24	620219	98.09	60	120	
Sc (IS)	45	3	No Gas	44753394	0.66	49140068	91.07	60	120	
Ge Internal Standard	72	1	HMI H2	5923340	0.22	6023554	98.34	60	120	
Ge Internal Standard	72	2	HMI He	823274	0.45	827657	99.47	60	120	
In Internal Standard	115	2	HMI He	3439109	0.64	3520307	97.69	60	120	
Ho-165	165	2	HMI He	15667681	0.25	15788522	99.23	60	120	

Sample Report

Sample Table

Sample Name	280-123292-A-15-D MSD
Data File Name	280SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T03:33:03-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456960 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	77.357	ppb	77.357	9.76	85382	500000	
Li	7	2	45	91.672	ppb	91.672	2.77	4481	500000	
Li	7	3	45	69.261	ppb	69.261	6.69	6151301	50000	
Be	9	1	6	41.406	ppb	41.406	7.86	7909	2000	
B	11	1	6	42316.181	ppb	42316.181	6.86	321420	2000	>LDR
Na	23	1	45	268256.755	ppb	268256.755	8.29	535643685	2000	>LDR
Na	23	2	45	305979.211	ppb	305979.211	6.47	42919649	400000	
Mg	24	2	45	8112.822	ppb	8112.822	7.77	522947	400000	
Al	27	2	45	415.862	ppb	415.862	10.23	7626	400000	
K	39	1	45	4494.492	ppb	4494.492	13.27	15290452	400000	
K	39	2	45	5818.149	ppb	5818.149	6.87	260111	400000	
Ca	40	1	45	17476.553	ppb	17476.553	8.82	53916636	400000	
Ca	44	2	45	18395.133	ppb	18395.133	7.38	53051	400000	
Ti	47	2	45	0.176	ppb	0.176	173.21	3	4000	
V	51	2	72	40.162	ppb	40.162	7.85	32628	2000	
Cr	52	2	72	41.430	ppb	41.430	8.59	40290	5000	
Mn	55	2	72	49.039	ppb	49.039	7.16	19781	10000	
Fe	57	2	72	455.439	ppb	455.439	8.59	8663	400000	
Co	59	2	72	40.291	ppb	40.291	6.26	69307	2000	
Ni	60	2	72	40.438	ppb	40.438	6.94	18780	5000	
Cu	63	2	72	42.275	ppb	42.275	6.00	55341	5000	
Zn	66	2	72	40.180	ppb	40.180	3.91	7903	5000	
As	75	2	72	41.579	ppb	41.579	7.44	6327	2000	
Se	78	1	72	38.888	ppb	38.888	5.24	5576	2000	
Sr	88	2	72	1650.314	ppb	1650.314	6.68	873326	4000	
Zr	90	2	72	1340.795	ppb	1340.795	9.85	2044	1000	
Nb	93	2	72	-0.008	ppb	-0.008	-283.15	753	200	
Mo	95	2	115	45.372	ppb	45.372	8.01	31135	2000	
Pd	105	2	115	0.043	ppb	0.043	46.20	50	100	
Ag	107	2	115	39.194	ppb	39.194	4.56	93832	100	
Cd	111	2	115	40.843	ppb	40.843	4.89	13200	2000	
Sn	120	2	115	40.729	ppb	40.729	7.78	38344	2000	
Sb	121	2	115	44.286	ppb	44.286	5.72	39812	1000	
Ba	137	2	115	86.749	ppb	86.749	9.33	28240	5000	
W	182	2	165	34.368	ppb	34.368	6.98	112955	100	
Pt	195	2	165	0.001	ppb	0.001	283.06	10	100	
Tl	205	2	165	38.982	ppb	38.982	6.87	255948	2000	
Pb	208	2	165	39.425	ppb	39.425	7.49	351849	5000	
Th	232	2	165	38.658	ppb	38.658	7.91	438062	2000	
U	238	2	165	40.375	ppb	40.375	7.29	459319	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	514568	4.55	538871	95.49	60	120	
Sc (IS)	45	1	HMI H2	14428263	4.95	13911789	103.71	60	120	
Sc (IS)	45	2	HMI He	610523	4.17	620219	98.44	60	120	
Sc (IS)	45	3	No Gas	44700691	0.25	49140068	90.97	60	120	
Ge Internal Standard	72	1	HMI H2	6263719	4.26	6023554	103.99	60	120	
Ge Internal Standard	72	2	HMI He	828243	3.27	827657	100.07	60	120	
In Internal Standard	115	2	HMI He	3423398	3.47	3520307	97.25	60	120	
Ho-165	165	2	HMI He	15615984	3.69	15788522	98.91	60	120	

Sample Report

Sample Table

Sample Name	280-123292-A-15-B pds
Data File Name	281SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T03:36:54-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456960 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	1.033	ppb	1.033	627.48	67057	500000	
Li	7	2	45	1.216	ppb	1.216	1378.93	3467	500000	
Li	7	3	45	-3.146	ppb	-3.146	-94.38	4985519	50000	
Be	9	1	6	220.844	ppb	220.844	0.46	40512	2000	
B	11	1	6	42364.639	ppb	42364.639	2.77	308937	2000	>LDR
Na	23	1	45	272544.314	ppb	272544.314	0.96	526054365	2000	>LDR
Na	23	2	45	288470.393	ppb	288470.393	0.23	40036928	400000	
Mg	24	2	45	7620.485	ppb	7620.485	0.88	486196	400000	
Al	27	2	45	1978.560	ppb	1978.560	2.50	35811	400000	
K	39	1	45	4614.659	ppb	4614.659	0.81	14959639	400000	
K	39	2	45	5474.900	ppb	5474.900	1.02	243530	400000	
Ca	40	1	45	17974.710	ppb	17974.710	0.46	53612789	400000	
Ca	44	2	45	16898.916	ppb	16898.916	1.53	48237	400000	
Ti	47	2	45	5.300	ppb	5.300	60.68	97	4000	
V	51	2	72	205.559	ppb	205.559	1.01	158102	2000	
Cr	52	2	72	205.824	ppb	205.824	1.41	196921	5000	
Mn	55	2	72	213.468	ppb	213.468	4.50	84424	10000	
Fe	57	2	72	2013.302	ppb	2013.302	2.87	37313	400000	
Co	59	2	72	203.162	ppb	203.162	0.17	340776	2000	
Ni	60	2	72	204.066	ppb	204.066	0.95	93071	5000	
Cu	63	2	72	208.219	ppb	208.219	0.23	263863	5000	
Zn	66	2	72	215.584	ppb	215.584	2.06	41160	5000	
As	75	2	72	203.959	ppb	203.959	1.03	30556	2000	
Se	78	1	72	206.529	ppb	206.529	3.05	28515	2000	
Sr	88	2	72	1501.247	ppb	1501.247	0.84	783870	4000	
Zr	90	2	72	178227.411	ppb	178227.411	1.15	262748	1000	>LDR
Nb	93	2	72	2.577	ppb	2.577	7.36	4184	200	
Mo	95	2	115	218.818	ppb	218.818	1.22	147547	2000	
Pd	105	2	115	0.109	ppb	0.109	59.99	120	100	
Ag	107	2	115	39.488	ppb	39.488	2.65	92903	100	
Cd	111	2	115	208.386	ppb	208.386	3.65	66173	2000	
Sn	120	2	115	209.387	ppb	209.387	1.40	193348	2000	
Sb	121	2	115	222.650	ppb	222.650	1.46	196684	1000	
Ba	137	2	115	247.125	ppb	247.125	0.28	79097	5000	
W	182	2	165	206.798	ppb	206.798	0.57	668156	100	
Pt	195	2	165	0.094	ppb	0.094	18.52	240	100	
Tl	205	2	165	199.205	ppb	199.205	0.52	1289845	2000	
Pb	208	2	165	200.252	ppb	200.252	0.90	1760906	5000	
Th	232	2	165	0.966	ppb	0.966	4.05	11182	2000	
U	238	2	165	232.691	ppb	232.691	0.58	2611552	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	493087	1.03	538871	91.50	60	120	
Sc (IS)	45	1	HMI H2	13909279	0.46	13911789	99.98	60	120	
Sc (IS)	45	2	HMI He	602988	0.43	620219	97.22	60	120	
Sc (IS)	45	3	No Gas	44022299	0.70	49140068	89.59	60	120	
Ge Internal Standard	72	1	HMI H2	6035683	0.87	6023554	100.20	60	120	
Ge Internal Standard	72	2	HMI He	816064	0.84	827657	98.60	60	120	
In Internal Standard	115	2	HMI He	3361172	0.69	3520307	95.48	60	120	
Ho-165	165	2	HMI He	15380548	0.16	15788522	97.42	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5688510
Data File Name	282_CCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T03:40:45-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	89.200	ppb	10.910	87594	100	89.2	90	110	>+\-10%
Li	7	2	45	74.780	ppb	6.471	4498	100	74.8	90	110	>+\-10%
Li	7	3	45	78.325	ppb	5.151	6499793	100	78.3	90	110	>+\-10%
Be	9	1	6	47.054	ppb	6.440	9617	50	94.1	90	110	
B	11	1	6	912.093	ppb	4.535	7782	50	1824.2	90	110	>+\-10%
Na	23	1	45	1447.178	ppb	1.936	3110037	1000	144.7	90	110	>+\-10%
Na	23	2	45	1286.675	ppb	1.341	205226	1000	128.7	90	110	>+\-10%
Mg	24	2	45	979.030	ppb	0.767	66292	1000	97.9	90	110	
Al	27	2	45	963.508	ppb	2.467	18485	1000	96.4	90	110	
K	39	1	45	483.599	ppb	3.665	8768463	1000	48.4	90	110	>+\-10%
K	39	2	45	1017.187	ppb	3.363	67917	1000	101.7	90	110	
Ca	40	1	45	1006.987	ppb	0.239	3144746	1000	100.7	90	110	
Ca	44	2	45	978.868	ppb	2.550	3007	1000	97.9	90	110	
Ti	47	2	45	45.742	ppb	3.127	883	50	91.5	90	110	
V	51	2	72	48.470	ppb	1.399	40791	50	96.9	90	110	
Cr	52	2	72	48.490	ppb	1.276	49264	50	97.0	90	110	
Mn	55	2	72	47.621	ppb	1.237	20078	50	95.2	90	110	
Fe	57	2	72	966.093	ppb	1.944	19036	1000	96.6	90	110	
Co	59	2	72	48.101	ppb	1.772	86246	50	96.2	90	110	
Ni	60	2	72	48.659	ppb	1.433	23587	50	97.3	90	110	
Cu	63	2	72	48.863	ppb	2.250	66614	50	97.7	90	110	
Zn	66	2	72	50.456	ppb	8.419	10324	50	100.9	90	110	
As	75	2	72	48.970	ppb	0.992	7784	50	97.9	90	110	
Se	78	1	72	48.737	ppb	2.591	7010	50	97.5	90	110	
Sr	88	2	72	98.227	ppb	1.255	54352	100	98.2	90	110	
Zr	90	2	72	252.884	ppb	13.633	437	50	505.8	90	110	>+\-10%
Nb	93	2	72	92.519	ppb	1.466	131255	100	92.5	90	110	
Mo	95	2	115	48.631	ppb	0.897	35402	50	97.3	90	110	
Pd	105	2	115	49.998	ppb	1.479	57840	50	100.0	90	110	
Ag	107	2	115	48.375	ppb	1.537	122761	50	96.7	90	110	
Cd	111	2	115	47.265	ppb	2.681	16193	50	94.5	90	110	
Sn	120	2	115	48.472	ppb	1.696	48388	50	96.9	90	110	
Sb	121	2	115	49.206	ppb	0.358	46900	50	98.4	90	110	
Ba	137	2	115	47.741	ppb	4.002	16504	50	95.5	90	110	
W	182	2	165	48.025	ppb	1.003	162959	50	96.0	90	110	
Pt	195	2	165	48.010	ppb	1.465	125245	50	96.0	90	110	
Tl	205	2	165	47.973	ppb	0.891	325563	50	95.9	90	110	
Pb	208	2	165	48.070	ppb	1.167	443378	50	96.1	90	110	
Th	232	2	165	46.934	ppb	1.104	549803	50	93.9	90	110	
U	238	2	165	47.216	ppb	0.653	555290	50	94.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	549480	0.53	538871	101.97	60	120	
Sc (IS)	45	1	HMI H2	14381352	1.28	13911789	103.38	60	120	
Sc (IS)	45	2	HMI He	638602	0.82	620219	102.96	60	120	
Sc (IS)	45	3	No Gas	46210726	0.55	49140068	94.04	60	120	
Ge Internal Standard	72	1	HMI H2	6277782	1.24	6023554	104.22	60	120	
Ge Internal Standard	72	2	HMI He	864185	0.30	827657	104.41	60	120	
In Internal Standard	115	2	HMI He	3625410	0.67	3520307	102.99	60	120	
Ho-165	165	2	HMI He	16116069	1.29	15788522	102.07	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5688508
Data File Name	283_CCB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T03:44:36-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-13.699	ppb	-27.7	5241663	10	
Be	9	1	6	0.164	ppb	75.5	33	0.5	
B	11	1	6	455.203	ppb	9.4	4047	0.5	>RL
Na	23	1	45	302.682	ppb	0.2	828778	25	>RL
Na	23	2	45	267.017	ppb	2.8	55287	25	>RL
Mg	24	2	45	11.412	ppb	13.3	930	25	
Al	27	2	45	5.895	ppb	23.4	147	15	
K	39	1	45	-137.702	ppb	-40.9	7774336	50	
K	39	2	45	12.659	ppb	176.4	25042	50	
Ca	40	1	45	2.364	ppb	8.8	48963	50	
Ca	44	2	45	1.749	ppb	576.6	57	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	1.165	ppb	11.4	2617	1	>RL
Cr	52	2	72	0.079	ppb	57.9	250	1	
Mn	55	2	72	0.061	ppb	273.4	190	0.5	
Fe	57	2	72	4.802	ppb	104.1	243	25	
Co	59	2	72	-0.003	ppb	-1727.8	1030	0.5	
Ni	60	2	72	0.233	ppb	73.4	220	1	
Cu	63	2	72	0.616	ppb	42.3	2150	1	
Zn	66	2	72	0.870	ppb	34.6	327	5	
As	75	2	72	0.110	ppb	117.1	36	1	
Se	78	1	72	0.623	ppb	35.7	103	1	
Sr	88	2	72	-0.020	ppb	-192.9	27	0.5	
Zr	90	2	72	5.674	ppb	603.3	50	1	>RL
Nb	93	2	72	2.913	ppb	1.4	4826	2	>RL
Mo	95	2	115	0.050	ppb	113.1	77	0.5	
Pd	105	2	115	0.076	ppb	41.6	90	1	
Ag	107	2	115	0.021	ppb	33.1	70	1	
Cd	111	2	115	0.059	ppb	86.6	20	0.5	
Sn	120	2	115	0.329	ppb	17.8	460	1	
Sb	121	2	115	0.145	ppb	41.5	153	0.6	
Ba	137	2	115	0.057	ppb	90.3	50	0.5	
W	182	2	165	0.076	ppb	26.9	750	1	
Pt	195	2	165	0.006	ppb	34.7	23	1	
Tl	205	2	165	0.030	ppb	13.8	343	0.1	
Pb	208	2	165	0.181	ppb	16.1	2310	0.5	
Th	232	2	165	0.230	ppb	13.3	3091	1	
U	238	2	165	0.021	ppb	12.5	327	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	545958	0.76	538871	101.32	60	120	
Sc (IS)	45	1	HMI H2	14406944	0.39	13911789	103.56	60	120	
Sc (IS)	45	2	HMI He	637207	0.83	620219	102.74	60	120	
Sc (IS)	45	3	No Gas	47780033	0.39	49140068	97.23	60	120	
Ge Internal Standard	72	1	HMI H2	6227748	0.80	6023554	103.39	60	120	
Ge Internal Standard	72	2	HMI He	850487	0.66	827657	102.76	60	120	
In Internal Standard	115	2	HMI He	3583640	0.49	3520307	101.80	60	120	
Ho-165	165	2	HMI He	16055012	0.70	15788522	101.69	60	120	

Sample Report

Sample Table

Sample Name	280-123292-A-16-B
Data File Name	284SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T03:48:29-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456960 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	5.427	ppb	5.427	155.00	68171	500000	
Li	7	2	45	-20.550	ppb	-20.550	-120.79	3321	500000	
Li	7	3	45	-6.491	ppb	-6.491	-60.93	5120424	50000	
Be	9	1	6	0.072	ppb	0.072	173.21	13	2000	
B	11	1	6	41848.683	ppb	41848.683	2.04	306414	2000	>LDR
Na	23	1	45	276809.459	ppb	276809.459	0.68	536116459	2000	>LDR
Na	23	2	45	287925.002	ppb	287925.002	0.24	41001544	400000	
Mg	24	2	45	7595.945	ppb	7595.945	0.54	497254	400000	
Al	27	2	45	6.301	ppb	6.301	30.07	150	400000	
K	39	1	45	4737.081	ppb	4737.081	0.91	15203539	400000	
K	39	2	45	5403.666	ppb	5403.666	0.60	246930	400000	
Ca	40	1	45	18534.180	ppb	18534.180	0.31	55470368	400000	
Ca	44	2	45	17259.381	ppb	17259.381	1.24	50545	400000	
Ti	47	2	45	0.536	ppb	0.536	100.06	10	4000	
V	51	2	72	-0.043	ppb	-0.043	-387.22	1617	2000	
Cr	52	2	72	0.155	ppb	0.155	67.43	317	5000	
Mn	55	2	72	11.428	ppb	11.428	4.73	4744	10000	
Fe	57	2	72	518.257	ppb	518.257	2.19	9864	400000	
Co	59	2	72	0.277	ppb	0.277	30.28	1480	2000	
Ni	60	2	72	0.454	ppb	0.454	35.57	317	5000	
Cu	63	2	72	0.615	ppb	0.615	13.86	2094	5000	
Zn	66	2	72	2.500	ppb	2.500	19.76	633	5000	
As	75	2	72	0.949	ppb	0.949	15.05	163	2000	
Se	78	1	72	0.852	ppb	0.852	25.03	132	2000	
Sr	88	2	72	1516.114	ppb	1516.114	1.10	804158	4000	
Zr	90	2	72	48.834	ppb	48.834	30.62	113	1000	
Nb	93	2	72	3.239	ppb	3.239	6.20	5145	200	
Mo	95	2	115	1.879	ppb	1.879	4.56	1343	2000	
Pd	105	2	115	0.051	ppb	0.051	46.95	60	100	
Ag	107	2	115	0.025	ppb	0.025	42.55	77	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.212	ppb	0.212	29.89	333	2000	
Sb	121	2	115	0.154	ppb	0.154	34.66	157	1000	
Ba	137	2	115	43.176	ppb	43.176	0.89	14258	5000	
W	182	2	165	0.046	ppb	0.046	48.12	640	100	
Pt	195	2	165	-0.003	ppb	-0.003	0.00	0	100	
Tl	205	2	165	0.020	ppb	0.020	38.79	267	2000	
Pb	208	2	165	0.249	ppb	0.249	4.59	2884	5000	
Th	232	2	165	0.208	ppb	0.208	9.06	2797	2000	
U	238	2	165	0.158	ppb	0.158	5.55	1897	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	495015	0.36	538871	91.86	60	120	
Sc (IS)	45	1	HMI H2	13957029	0.54	13911789	100.33	60	120	
Sc (IS)	45	2	HMI He	618682	0.44	620219	99.75	60	120	
Sc (IS)	45	3	No Gas	45665533	0.32	49140068	92.93	60	120	
Ge Internal Standard	72	1	HMI H2	6078296	0.49	6023554	100.91	60	120	
Ge Internal Standard	72	2	HMI He	828974	0.56	827657	100.16	60	120	
In Internal Standard	115	2	HMI He	3461853	0.79	3520307	98.34	60	120	
Ho-165	165	2	HMI He	15803137	0.46	15788522	100.09	60	120	

Sample Report

Sample Table

Sample Name	280-123292-A-17-B
Data File Name	285SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T03:52:20-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456960 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	6.964	ppb	6.964	103.37	67753	500000	
Li	7	2	45	-8.648	ppb	-8.648	-290.37	3391	500000	
Li	7	3	45	0.745	ppb	0.745	172.79	5160662	50000	
Be	9	1	6	0.091	ppb	0.091	124.48	17	2000	
B	11	1	6	46752.769	ppb	46752.769	1.46	338301	2000	>LDR
Na	23	1	45	239726.305	ppb	239726.305	1.07	459395900	2000	>LDR
Na	23	2	45	253225.301	ppb	253225.301	0.68	35432747	400000	
Mg	24	2	45	20275.707	ppb	20275.707	0.75	1303916	400000	
Al	27	2	45	6.810	ppb	6.810	44.65	157	400000	
K	39	1	45	7232.519	ppb	7232.519	0.85	18928080	400000	
K	39	2	45	7539.615	ppb	7539.615	1.02	329284	400000	
Ca	40	1	45	44362.177	ppb	44362.177	0.72	131304868	400000	
Ca	44	2	45	41467.164	ppb	41467.164	1.24	119251	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	0.094	ppb	0.094	154.81	1710	2000	
Cr	52	2	72	0.243	ppb	0.243	22.46	400	5000	
Mn	55	2	72	9.661	ppb	9.661	5.10	4007	10000	
Fe	57	2	72	35.120	ppb	35.120	3.84	800	400000	
Co	59	2	72	0.130	ppb	0.130	32.69	1220	2000	
Ni	60	2	72	1.075	ppb	1.075	16.02	600	5000	
Cu	63	2	72	0.634	ppb	0.634	20.93	2104	5000	
Zn	66	2	72	13.551	ppb	13.551	3.14	2750	5000	
As	75	2	72	0.550	ppb	0.550	10.80	101	2000	
Se	78	1	72	0.786	ppb	0.786	7.38	121	2000	
Sr	88	2	72	3781.845	ppb	3781.845	0.12	1992281	4000	
Zr	90	2	72	51.620	ppb	51.620	45.48	117	1000	
Nb	93	2	72	0.919	ppb	0.919	17.62	1994	200	
Mo	95	2	115	1.335	ppb	1.335	16.00	950	2000	
Pd	105	2	115	0.046	ppb	0.046	45.72	53	100	
Ag	107	2	115	0.014	ppb	0.014	58.48	50	100	
Cd	111	2	115	0.031	ppb	0.031	99.84	10	2000	
Sn	120	2	115	0.219	ppb	0.219	34.02	333	2000	
Sb	121	2	115	0.135	ppb	0.135	26.95	137	1000	
Ba	137	2	115	25.177	ppb	25.177	4.23	8183	5000	
W	182	2	165	0.081	ppb	0.081	44.43	740	100	
Pt	195	2	165	0.004	ppb	0.004	204.15	17	100	
Tl	205	2	165	0.022	ppb	0.022	93.77	280	2000	
Pb	208	2	165	0.059	ppb	0.059	37.94	1143	5000	
Th	232	2	165	0.084	ppb	0.084	4.40	1337	2000	
U	238	2	165	0.577	ppb	0.577	5.16	6592	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	489262	0.69	538871	90.79	60	120	
Sc (IS)	45	1	HMI H2	13808961	0.36	13911789	99.26	60	120	
Sc (IS)	45	2	HMI He	607897	0.46	620219	98.01	60	120	
Sc (IS)	45	3	No Gas	45047381	0.92	49140068	91.67	60	120	
Ge Internal Standard	72	1	HMI H2	6011903	0.39	6023554	99.81	60	120	
Ge Internal Standard	72	2	HMI He	823326	0.19	827657	99.48	60	120	
In Internal Standard	115	2	HMI He	3402436	0.29	3520307	96.65	60	120	
Ho-165	165	2	HMI He	15480024	0.45	15788522	98.05	60	120	

Sample Report

Sample Table

Sample Name	280-123292-A-18-B
Data File Name	286SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T03:56:11-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456960 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	37.287	ppb	37.287	17.09	74005	500000	
Li	7	2	45	11.454	ppb	11.454	209.47	3637	500000	
Li	7	3	45	22.719	ppb	22.719	8.77	5065596	50000	
Be	9	1	6	0.036	ppb	0.036	86.61	7	2000	
B	11	1	6	11223.425	ppb	11223.425	0.55	82356	2000	>LDR
Na	23	1	45	103182.900	ppb	103182.900	0.44	198449404	2000	>LDR
Na	23	2	45	109503.240	ppb	109503.240	0.15	15465841	400000	
Mg	24	2	45	55247.295	ppb	55247.295	1.26	3583803	400000	
Al	27	2	45	2.922	ppb	2.922	42.57	87	400000	
K	39	1	45	11389.559	ppb	11389.559	0.91	25476814	400000	
K	39	2	45	10857.296	ppb	10857.296	1.20	467956	400000	
Ca	40	1	45	232397.629	ppb	232397.629	0.43	689748390	400000	
Ca	44	2	45	199281.361	ppb	199281.361	0.99	577936	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	-0.111	ppb	-0.111	-89.59	1557	2000	
Cr	52	2	72	0.180	ppb	0.180	25.41	340	5000	
Mn	55	2	72	28.778	ppb	28.778	8.64	11649	10000	
Fe	57	2	72	688.140	ppb	688.140	4.38	12990	400000	
Co	59	2	72	0.244	ppb	0.244	12.11	1417	2000	
Ni	60	2	72	0.623	ppb	0.623	38.98	393	5000	
Cu	63	2	72	0.439	ppb	0.439	62.49	1860	5000	
Zn	66	2	72	11.073	ppb	11.073	5.39	2280	5000	
As	75	2	72	0.695	ppb	0.695	2.85	124	2000	
Se	78	1	72	0.751	ppb	0.751	7.70	117	2000	
Sr	88	2	72	10746.470	ppb	10746.470	0.37	5674202	4000	
Zr	90	2	72	31.296	ppb	31.296	74.74	87	1000	
Nb	93	2	72	0.284	ppb	0.284	16.91	1143	200	
Mo	95	2	115	5.266	ppb	5.266	4.71	3711	2000	
Pd	105	2	115	0.153	ppb	0.153	6.72	173	100	
Ag	107	2	115	0.011	ppb	0.011	182.65	43	100	
Cd	111	2	115	0.031	ppb	0.031	99.91	10	2000	
Sn	120	2	115	0.547	ppb	0.547	23.56	653	2000	
Sb	121	2	115	0.153	ppb	0.153	17.81	157	1000	
Ba	137	2	115	25.397	ppb	25.397	3.73	8433	5000	
W	182	2	165	0.062	ppb	0.062	38.72	683	100	
Pt	195	2	165	0.003	ppb	0.003	169.94	13	100	
Tl	205	2	165	0.005	ppb	0.005	143.51	170	2000	
Pb	208	2	165	0.005	ppb	0.005	232.58	670	5000	
Th	232	2	165	0.049	ppb	0.049	37.71	950	2000	
U	238	2	165	0.142	ppb	0.142	6.05	1690	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	494566	0.93	538871	91.78	60	120	
Sc (IS)	45	1	HMI H2	13850215	0.40	13911789	99.56	60	120	
Sc (IS)	45	2	HMI He	613229	0.43	620219	98.87	60	120	
Sc (IS)	45	3	No Gas	41535581	0.85	49140068	84.52	60	120	
Ge Internal Standard	72	1	HMI H2	6048812	0.70	6023554	100.42	60	120	
Ge Internal Standard	72	2	HMI He	825226	0.31	827657	99.71	60	120	
In Internal Standard	115	2	HMI He	3475889	0.43	3520307	98.74	60	120	
Ho-165	165	2	HMI He	15563874	0.47	15788522	98.58	60	120	

Sample Report

Sample Table

Sample Name	280-123292-A-19-B
Data File Name	287SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T04:00:02-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456960 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-2.541	ppb	-2.541	-72.93	70362	500000	
Li	7	2	45	2.837	ppb	2.837	320.94	3801	500000	
Li	7	3	45	-9.857	ppb	-9.857	-17.12	4944947	50000	
Be	9	1	6	0.035	ppb	0.035	86.61	7	2000	
B	11	1	6	42523.160	ppb	42523.160	0.20	325509	2000	>LDR
Na	23	1	45	147520.174	ppb	147520.174	0.12	302126442	2000	>LDR
Na	23	2	45	154042.210	ppb	154042.210	1.43	23327340	400000	
Mg	24	2	45	22752.418	ppb	22752.418	0.99	1583089	400000	
Al	27	2	45	16.988	ppb	16.988	24.46	370	400000	
K	39	1	45	6423.174	ppb	6423.174	0.76	18875964	400000	
K	39	2	45	6923.569	ppb	6923.569	1.37	329227	400000	
Ca	40	1	45	56465.459	ppb	56465.459	0.47	178547431	400000	
Ca	44	2	45	51805.997	ppb	51805.997	0.64	161193	400000	
Ti	47	2	45	0.667	ppb	0.667	113.92	13	4000	
V	51	2	72	0.317	ppb	0.317	19.88	2027	2000	
Cr	52	2	72	0.216	ppb	0.216	26.45	403	5000	
Mn	55	2	72	24.870	ppb	24.870	3.09	10841	10000	
Fe	57	2	72	128.967	ppb	128.967	7.54	2744	400000	
Co	59	2	72	0.162	ppb	0.162	30.13	1373	2000	
Ni	60	2	72	0.954	ppb	0.954	18.93	587	5000	
Cu	63	2	72	2.964	ppb	2.964	10.60	5458	5000	
Zn	66	2	72	7.269	ppb	7.269	14.28	1664	5000	
As	75	2	72	0.663	ppb	0.663	30.59	127	2000	
Se	78	1	72	0.734	ppb	0.734	4.07	123	2000	
Sr	88	2	72	4267.932	ppb	4267.932	2.60	2421422	4000	
Zr	90	2	72	834.915	ppb	834.915	7.23	1380	1000	
Nb	93	2	72	0.084	ppb	0.084	72.48	940	200	
Mo	95	2	115	2.497	ppb	2.497	7.27	1884	2000	
Pd	105	2	115	0.060	ppb	0.060	54.62	73	100	
Ag	107	2	115	-0.002	ppb	-0.002	-375.20	13	100	
Cd	111	2	115	0.019	ppb	0.019	173.21	7	2000	
Sn	120	2	115	0.192	ppb	0.192	11.18	333	2000	
Sb	121	2	115	0.086	ppb	0.086	33.38	100	1000	
Ba	137	2	115	39.477	ppb	39.477	2.23	13848	5000	
W	182	2	165	0.021	ppb	0.021	31.32	583	100	
Pt	195	2	165	-0.003	ppb	-0.003	0.00	0	100	
Tl	205	2	165	0.017	ppb	0.017	45.83	260	2000	
Pb	208	2	165	0.208	ppb	0.208	10.57	2627	5000	
Th	232	2	165	0.031	ppb	0.031	11.08	793	2000	
U	238	2	165	0.437	ppb	0.437	0.69	5345	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	517510	0.69	538871	96.04	60	120	
Sc (IS)	45	1	HMI H2	14753279	0.34	13911789	106.05	60	120	
Sc (IS)	45	2	HMI He	657751	0.88	620219	106.05	60	120	
Sc (IS)	45	3	No Gas	44551544	1.07	49140068	90.66	60	120	
Ge Internal Standard	72	1	HMI H2	6454603	0.76	6023554	107.16	60	120	
Ge Internal Standard	72	2	HMI He	886694	0.21	827657	107.13	60	120	
In Internal Standard	115	2	HMI He	3676031	1.00	3520307	104.42	60	120	
Ho-165	165	2	HMI He	16523362	0.43	15788522	104.65	60	120	

Sample Report

Sample Table

Sample Name	280-123292-A-20-B
Data File Name	288SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T04:03:53-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456960 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-0.722	ppb	-0.722	-775.85	71433	500000	
Li	7	2	45	16.829	ppb	16.829	134.59	3951	500000	
Li	7	3	45	-6.083	ppb	-6.083	-55.73	4947426	50000	
Be	9	1	6	0.034	ppb	0.034	86.61	7	2000	
B	11	1	6	41273.729	ppb	41273.729	2.19	316312	2000	>LDR
Na	23	1	45	139264.761	ppb	139264.761	0.30	287976409	2000	>LDR
Na	23	2	45	146658.537	ppb	146658.537	0.39	22145563	400000	
Mg	24	2	45	21968.659	ppb	21968.659	0.25	1524092	400000	
Al	27	2	45	8.719	ppb	8.719	11.78	207	400000	
K	39	1	45	6228.475	ppb	6228.475	1.89	18730376	400000	
K	39	2	45	6796.738	ppb	6796.738	0.96	322718	400000	
Ca	40	1	45	53679.029	ppb	53679.029	0.36	171373117	400000	
Ca	44	2	45	49512.753	ppb	49512.753	0.26	153603	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	0.473	ppb	0.473	39.47	2150	2000	
Cr	52	2	72	0.391	ppb	0.391	25.16	583	5000	
Mn	55	2	72	2.530	ppb	2.530	11.03	1253	10000	
Fe	57	2	72	25.139	ppb	25.139	17.09	660	400000	
Co	59	2	72	0.063	ppb	0.063	176.90	1190	2000	
Ni	60	2	72	0.768	ppb	0.768	14.97	493	5000	
Cu	63	2	72	-0.178	ppb	-0.178	-33.61	1150	5000	
Zn	66	2	72	4.070	ppb	4.070	13.39	1000	5000	
As	75	2	72	0.380	ppb	0.380	26.75	81	2000	
Se	78	1	72	1.183	ppb	1.183	5.59	189	2000	
Sr	88	2	72	4210.301	ppb	4210.301	0.32	2382052	4000	
Zr	90	2	72	56.408	ppb	56.408	81.60	133	1000	
Nb	93	2	72	-0.112	ppb	-0.112	-69.92	653	200	
Mo	95	2	115	2.393	ppb	2.393	1.68	1810	2000	
Pd	105	2	115	0.085	ppb	0.085	5.02	103	100	
Ag	107	2	115	0.005	ppb	0.005	283.25	30	100	
Cd	111	2	115	0.019	ppb	0.019	173.21	7	2000	
Sn	120	2	115	0.122	ppb	0.122	24.02	263	2000	
Sb	121	2	115	0.116	ppb	0.116	36.06	130	1000	
Ba	137	2	115	56.498	ppb	56.498	0.24	19845	5000	
W	182	2	165	0.022	ppb	0.022	65.55	583	100	
Pt	195	2	165	0.001	ppb	0.001	319.20	10	100	
Tl	205	2	165	0.008	ppb	0.008	41.08	197	2000	
Pb	208	2	165	0.007	ppb	0.007	193.61	727	5000	
Th	232	2	165	0.020	ppb	0.020	17.94	663	2000	
U	238	2	165	0.548	ppb	0.548	8.37	6669	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	518147	1.23	538871	96.15	60	120	
Sc (IS)	45	1	HMI H2	14895346	0.54	13911789	107.07	60	120	
Sc (IS)	45	2	HMI He	655792	0.28	620219	105.74	60	120	
Sc (IS)	45	3	No Gas	44068426	0.19	49140068	89.68	60	120	
Ge Internal Standard	72	1	HMI H2	6471058	0.58	6023554	107.43	60	120	
Ge Internal Standard	72	2	HMI He	884238	0.88	827657	106.84	60	120	
In Internal Standard	115	2	HMI He	3684105	0.79	3520307	104.65	60	120	
Ho-165	165	2	HMI He	16480396	1.02	15788522	104.38	60	120	

Sample Table

Sample Name	280-123292-A-21-D
Data File Name	289SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T04:07:45-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456960 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-18.989	ppb	-18.989	-7.38	65664	500000	
Li	7	2	45	-26.581	ppb	-26.581	-51.74	3371	500000	
Li	7	3	45	-32.660	ppb	-32.660	-8.48	4645473	50000	
Be	9	1	6	0.000	ppb	0.000	#DIV/0!	0	2000	
B	11	1	6	1364.594	ppb	1364.594	6.98	10748	2000	
Na	23	1	45	27613.451	ppb	27613.451	0.52	55722494	2000	>LDR
Na	23	2	45	29306.365	ppb	29306.365	0.90	4335832	400000	
Mg	24	2	45	5219.280	ppb	5219.280	0.78	353836	400000	
Al	27	2	45	107.672	ppb	107.672	6.99	2104	400000	
K	39	1	45	-1274.065	ppb	-1274.065	-1.68	5962162	400000	
K	39	2	45	884.964	ppb	884.964	4.11	62487	400000	
Ca	40	1	45	310736.939	ppb	310736.939	0.65	964770679	400000	
Ca	44	2	45	239642.879	ppb	239642.879	1.20	726019	400000	
Ti	47	2	45	0.860	ppb	0.860	34.75	17	4000	
V	51	2	72	-0.277	ppb	-0.277	-71.06	1487	2000	
Cr	52	2	72	0.335	ppb	0.335	12.83	510	5000	
Mn	55	2	72	2626.943	ppb	2626.943	0.50	1091253	10000	
Fe	57	2	72	190.282	ppb	190.282	8.77	3847	400000	
Co	59	2	72	1.730	ppb	1.730	8.99	4087	2000	
Ni	60	2	72	6.365	ppb	6.365	7.95	3161	5000	
Cu	63	2	72	0.033	ppb	0.033	235.24	1397	5000	
Zn	66	2	72	2.355	ppb	2.355	21.68	627	5000	
As	75	2	72	0.656	ppb	0.656	12.12	122	2000	
Se	78	1	72	0.452	ppb	0.452	19.59	79	2000	
Sr	88	2	72	1593.629	ppb	1593.629	0.30	875392	4000	
Zr	90	2	72	82.839	ppb	82.839	20.73	170	1000	
Nb	93	2	72	-0.317	ppb	-0.317	-38.31	347	200	
Mo	95	2	115	0.172	ppb	0.172	43.88	167	2000	
Pd	105	2	115	0.003	ppb	0.003	354.62	7	100	
Ag	107	2	115	0.009	ppb	0.009	87.31	40	100	
Cd	111	2	115	0.049	ppb	0.049	34.65	17	2000	
Sn	120	2	115	0.146	ppb	0.146	50.10	283	2000	
Sb	121	2	115	0.020	ppb	0.020	60.09	37	1000	
Ba	137	2	115	40.706	ppb	40.706	3.68	14095	5000	
W	182	2	165	0.018	ppb	0.018	183.00	560	100	
Pt	195	2	165	0.003	ppb	0.003	351.16	13	100	
Tl	205	2	165	0.027	ppb	0.027	58.25	327	2000	
Pb	208	2	165	0.152	ppb	0.152	10.31	2060	5000	
Th	232	2	165	0.036	ppb	0.036	1.63	837	2000	
U	238	2	165	1.119	ppb	1.119	2.08	13307	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	515594	0.56	538871	95.68	60	120	
Sc (IS)	45	1	HMI H2	14489041	0.51	13911789	104.15	60	120	
Sc (IS)	45	2	HMI He	640638	0.75	620219	103.29	60	120	
Sc (IS)	45	3	No Gas	44960823	0.68	49140068	91.50	60	120	
Ge Internal Standard	72	1	HMI H2	6271625	0.24	6023554	104.12	60	120	
Ge Internal Standard	72	2	HMI He	858491	0.67	827657	103.73	60	120	
In Internal Standard	115	2	HMI He	3629124	0.34	3520307	103.09	60	120	
Ho-165	165	2	HMI He	16208745	0.70	15788522	102.66	60	120	

Sample Report

Sample Table

Sample Name	280-123292-A-22-B
Data File Name	290SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T04:11:39-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456960 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-7.194	ppb	-7.194	-112.28	66796	500000	
Li	7	2	45	-20.762	ppb	-20.762	-114.29	3321	500000	
Li	7	3	45	-1.875	ppb	-1.875	-93.84	4835386	50000	
Be	9	1	6	0.018	ppb	0.018	173.21	3	2000	
B	11	1	6	38632.145	ppb	38632.145	1.21	280870	2000	>LDR
Na	23	1	45	172105.331	ppb	172105.331	0.61	339381208	2000	>LDR
Na	23	2	45	184267.740	ppb	184267.740	0.80	26263720	400000	
Mg	24	2	45	19290.879	ppb	19290.879	0.53	1263521	400000	
Al	27	2	45	5.763	ppb	5.763	94.87	140	400000	
K	39	1	45	6366.123	ppb	6366.123	0.97	18085431	400000	
K	39	2	45	7006.585	ppb	7006.585	1.11	313331	400000	
Ca	40	1	45	44758.508	ppb	44758.508	0.57	136295135	400000	
Ca	44	2	45	41369.181	ppb	41369.181	0.81	121168	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	0.804	ppb	0.804	11.09	2277	2000	
Cr	52	2	72	0.205	ppb	0.205	24.24	367	5000	
Mn	55	2	72	10.513	ppb	10.513	3.54	4388	10000	
Fe	57	2	72	27.991	ppb	27.991	15.97	673	400000	
Co	59	2	72	0.270	ppb	0.270	10.59	1470	2000	
Ni	60	2	72	3.743	ppb	3.743	5.47	1844	5000	
Cu	63	2	72	0.243	ppb	0.243	118.01	1620	5000	
Zn	66	2	72	3.661	ppb	3.661	14.32	860	5000	
As	75	2	72	0.424	ppb	0.424	22.09	83	2000	
Se	78	1	72	0.640	ppb	0.640	7.63	104	2000	
Sr	88	2	72	3731.860	ppb	3731.860	1.56	1984080	4000	
Zr	90	2	72	62.021	ppb	62.021	32.66	133	1000	
Nb	93	2	72	-0.292	ppb	-0.292	-17.61	370	200	
Mo	95	2	115	5.229	ppb	5.229	0.82	3691	2000	
Pd	105	2	115	0.051	ppb	0.051	52.42	60	100	
Ag	107	2	115	0.008	ppb	0.008	151.22	37	100	
Cd	111	2	115	0.061	ppb	0.061	0.57	20	2000	
Sn	120	2	115	0.134	ppb	0.134	61.98	260	2000	
Sb	121	2	115	0.157	ppb	0.157	17.87	160	1000	
Ba	137	2	115	55.288	ppb	55.288	5.72	18353	5000	
W	182	2	165	0.005	ppb	0.005	803.89	500	100	
Pt	195	2	165	0.001	ppb	0.001	292.85	10	100	
Tl	205	2	165	0.006	ppb	0.006	120.14	173	2000	
Pb	208	2	165	0.032	ppb	0.032	41.74	920	5000	
Th	232	2	165	0.009	ppb	0.009	134.66	507	2000	
U	238	2	165	0.524	ppb	0.524	3.49	6085	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	491488	0.79	538871	91.21	60	120	
Sc (IS)	45	1	HMI H2	14206682	0.53	13911789	102.12	60	120	
Sc (IS)	45	2	HMI He	619128	0.93	620219	99.82	60	120	
Sc (IS)	45	3	No Gas	42535451	1.23	49140068	86.56	60	120	
Ge Internal Standard	72	1	HMI H2	6171224	0.16	6023554	102.45	60	120	
Ge Internal Standard	72	2	HMI He	830948	0.31	827657	100.40	60	120	
In Internal Standard	115	2	HMI He	3481546	0.57	3520307	98.90	60	120	
Ho-165	165	2	HMI He	15718425	0.40	15788522	99.56	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5688510
Data File Name	291_CCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T04:15:32-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	83.430	ppb	2.060	84453	100	83.4	90	110	>+\-10%
Li	7	2	45	60.103	ppb	24.984	4211	100	60.1	90	110	>+\-10%
Li	7	3	45	72.847	ppb	1.469	6155129	100	72.8	90	110	>+\-10%
Be	9	1	6	48.494	ppb	3.881	9487	50	97.0	90	110	
B	11	1	6	914.608	ppb	2.890	7466	50	1829.2	90	110	>+\-10%
Na	23	1	45	1246.714	ppb	1.006	2649012	1000	124.7	90	110	>+\-10%
Na	23	2	45	1145.951	ppb	1.115	179359	1000	114.6	90	110	>+\-10%
Mg	24	2	45	987.816	ppb	2.363	64999	1000	98.8	90	110	
Al	27	2	45	942.039	ppb	2.461	17564	1000	94.2	90	110	
K	39	1	45	539.204	ppb	8.935	8657357	1000	53.9	90	110	>+\-10%
K	39	2	45	1044.106	ppb	3.464	67115	1000	104.4	90	110	
Ca	40	1	45	1033.344	ppb	0.172	3152736	1000	103.3	90	110	
Ca	44	2	45	953.046	ppb	9.775	2847	1000	95.3	90	110	
Ti	47	2	45	49.705	ppb	7.034	933	50	99.4	90	110	
V	51	2	72	48.285	ppb	0.971	39595	50	96.6	90	110	
Cr	52	2	72	48.574	ppb	2.200	48077	50	97.1	90	110	
Mn	55	2	72	48.513	ppb	1.764	19924	50	97.0	90	110	
Fe	57	2	72	964.871	ppb	2.860	18523	1000	96.5	90	110	
Co	59	2	72	48.782	ppb	1.326	85200	50	97.6	90	110	
Ni	60	2	72	48.980	ppb	2.501	23129	50	98.0	90	110	
Cu	63	2	72	48.755	ppb	1.102	64759	50	97.5	90	110	
Zn	66	2	72	48.809	ppb	3.505	9734	50	97.6	90	110	
As	75	2	72	49.866	ppb	1.977	7722	50	99.7	90	110	
Se	78	1	72	48.875	ppb	5.451	6975	50	97.8	90	110	
Sr	88	2	72	100.245	ppb	2.432	54037	100	100.2	90	110	
Zr	90	2	72	65.219	ppb	26.250	140	50	130.4	90	110	>+\-10%
Nb	93	2	72	92.755	ppb	2.013	128200	100	92.8	90	110	
Mo	95	2	115	49.599	ppb	2.800	35218	50	99.2	90	110	
Pd	105	2	115	50.851	ppb	1.126	57385	50	101.7	90	110	
Ag	107	2	115	48.845	ppb	1.394	120922	50	97.7	90	110	
Cd	111	2	115	47.584	ppb	2.793	15903	50	95.2	90	110	
Sn	120	2	115	48.488	ppb	1.935	47214	50	97.0	90	110	
Sb	121	2	115	49.736	ppb	1.784	46248	50	99.5	90	110	
Ba	137	2	115	47.230	ppb	1.059	15930	50	94.5	90	110	
W	182	2	165	48.129	ppb	1.333	160745	50	96.3	90	110	
Pt	195	2	165	48.387	ppb	0.805	124253	50	96.8	90	110	
Tl	205	2	165	48.388	ppb	0.545	323215	50	96.8	90	110	
Pb	208	2	165	48.896	ppb	0.945	443920	50	97.8	90	110	
Th	232	2	165	47.545	ppb	0.522	548216	50	95.1	90	110	
U	238	2	165	48.065	ppb	1.278	556376	50	96.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	525747	0.67	538871	97.56	60	120	
Sc (IS)	45	1	HMI H2	14054819	0.10	13911789	101.03	60	120	
Sc (IS)	45	2	HMI He	620637	0.82	620219	100.07	60	120	
Sc (IS)	45	3	No Gas	44339664	1.06	49140068	90.23	60	120	
Ge Internal Standard	72	1	HMI H2	6229688	0.62	6023554	103.42	60	120	
Ge Internal Standard	72	2	HMI He	841930	0.34	827657	101.72	60	120	
In Internal Standard	115	2	HMI He	3536626	0.50	3520307	100.46	60	120	
Ho-165	165	2	HMI He	15861767	0.56	15788522	100.46	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5688508
Data File Name	292_CCB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T04:19:27-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-17.174	ppb	-12.2	4831340	10	
Be	9	1	6	0.051	ppb	100.2	10	0.5	
B	11	1	6	550.748	ppb	7.1	4631	0.5	>RL
Na	23	1	45	151.763	ppb	0.9	514805	25	>RL
Na	23	2	45	144.200	ppb	3.3	36179	25	>RL
Mg	24	2	45	9.032	ppb	18.9	747	25	
Al	27	2	45	3.786	ppb	8.6	103	15	
K	39	1	45	-96.796	ppb	-42.3	7656659	50	
K	39	2	45	25.011	ppb	35.6	24812	50	
Ca	40	1	45	7.204	ppb	7.3	62396	50	
Ca	44	2	45	-11.325	ppb	-17.6	17	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	0.994	ppb	10.3	2444	1	
Cr	52	2	72	0.056	ppb	29.9	223	1	
Mn	55	2	72	-0.120	ppb	-101.6	113	0.5	
Fe	57	2	72	1.657	ppb	222.9	180	25	
Co	59	2	72	-0.058	ppb	-56.8	920	0.5	
Ni	60	2	72	0.154	ppb	27.5	180	1	
Cu	63	2	72	0.317	ppb	44.4	1730	1	
Zn	66	2	72	0.603	ppb	88.3	270	5	
As	75	2	72	-0.014	ppb	-192.0	16	1	
Se	78	1	72	0.599	ppb	38.9	97	1	
Sr	88	2	72	0.186	ppb	50.0	137	0.5	
Zr	90	2	72	17.205	ppb	123.0	67	1	>RL
Nb	93	2	72	2.988	ppb	8.3	4858	2	>RL
Mo	95	2	115	0.085	ppb	31.1	100	0.5	
Pd	105	2	115	0.024	ppb	75.1	30	1	
Ag	107	2	115	0.004	ppb	56.9	27	1	
Cd	111	2	115	0.010	ppb	173.2	3	0.5	
Sn	120	2	115	0.221	ppb	27.0	347	1	
Sb	121	2	115	0.115	ppb	3.7	123	0.6	
Ba	137	2	115	-0.050	ppb	-34.6	13	0.5	
W	182	2	165	0.031	ppb	81.5	597	1	
Pt	195	2	165	0.006	ppb	92.0	23	1	
Tl	205	2	165	0.010	ppb	75.7	207	0.1	
Pb	208	2	165	0.178	ppb	12.1	2274	0.5	
Th	232	2	165	0.222	ppb	9.7	2994	1	
U	238	2	165	0.010	ppb	24.8	193	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	524693	0.75	538871	97.37	60	120	
Sc (IS)	45	1	HMI H2	14068969	0.94	13911789	101.13	60	120	
Sc (IS)	45	2	HMI He	618299	0.39	620219	99.69	60	120	
Sc (IS)	45	3	No Gas	44513079	0.57	49140068	90.58	60	120	
Ge Internal Standard	72	1	HMI H2	6122077	0.30	6023554	101.64	60	120	
Ge Internal Standard	72	2	HMI He	837802	0.55	827657	101.23	60	120	
In Internal Standard	115	2	HMI He	3520872	1.60	3520307	100.02	60	120	
Ho-165	165	2	HMI He	16006067	0.14	15788522	101.38	60	120	

Sample Report

Sample Table

Sample Name	280-123292-A-23-B
Data File Name	293SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T04:23:20-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456960 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-2.907	ppb	-2.907	-58.27	65647	500000	
Li	7	2	45	3.168	ppb	3.168	478.52	3537	500000	
Li	7	3	45	-2.049	ppb	-2.049	-110.24	4784741	50000	
Be	9	1	6	0.074	ppb	0.074	86.61	13	2000	
B	11	1	6	40668.330	ppb	40668.330	1.48	288782	2000	>LDR
Na	23	1	45	164502.566	ppb	164502.566	0.29	314651229	2000	>LDR
Na	23	2	45	172687.635	ppb	172687.635	1.13	24305837	400000	
Mg	24	2	45	15929.485	ppb	15929.485	0.93	1030272	400000	
Al	27	2	45	9.871	ppb	9.871	43.16	213	400000	
K	39	1	45	5588.803	ppb	5588.803	1.92	16333620	400000	
K	39	2	45	6168.903	ppb	6168.903	1.29	275227	400000	
Ca	40	1	45	40290.700	ppb	40290.700	0.68	119005658	400000	
Ca	44	2	45	37130.165	ppb	37130.165	2.06	107388	400000	
Ti	47	2	45	0.179	ppb	0.179	173.21	3	4000	
V	51	2	72	0.635	ppb	0.635	43.41	2130	2000	
Cr	52	2	72	0.187	ppb	0.187	16.01	347	5000	
Mn	55	2	72	6.274	ppb	6.274	3.63	2664	10000	
Fe	57	2	72	38.249	ppb	38.249	21.99	860	400000	
Co	59	2	72	0.114	ppb	0.114	10.83	1197	2000	
Ni	60	2	72	0.377	ppb	0.377	34.97	280	5000	
Cu	63	2	72	0.194	ppb	0.194	71.17	1547	5000	
Zn	66	2	72	1.232	ppb	1.232	46.48	387	5000	
As	75	2	72	0.497	ppb	0.497	9.88	93	2000	
Se	78	1	72	0.905	ppb	0.905	35.63	137	2000	
Sr	88	2	72	3292.897	ppb	3292.897	0.40	1738236	4000	
Zr	90	2	72	13.463	ppb	13.463	179.76	60	1000	
Nb	93	2	72	2.711	ppb	2.711	4.79	4411	200	
Mo	95	2	115	1.548	ppb	1.548	13.27	1117	2000	
Pd	105	2	115	0.057	ppb	0.057	17.29	67	100	
Ag	107	2	115	0.003	ppb	0.003	164.64	23	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.142	ppb	0.142	31.79	267	2000	
Sb	121	2	115	0.103	ppb	0.103	32.59	110	1000	
Ba	137	2	115	48.175	ppb	48.175	1.41	15937	5000	
W	182	2	165	0.015	ppb	0.015	131.64	537	100	
Pt	195	2	165	0.000	ppb	0.000	-190365.44	7	100	
Tl	205	2	165	0.007	ppb	0.007	129.98	187	2000	
Pb	208	2	165	0.035	ppb	0.035	39.76	957	5000	
Th	232	2	165	0.246	ppb	0.246	8.33	3224	2000	
U	238	2	165	0.530	ppb	0.530	4.69	6182	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	480076	0.90	538871	89.09	60	120	
Sc (IS)	45	1	HMI H2	13779969	0.66	13911789	99.05	60	120	
Sc (IS)	45	2	HMI He	611386	0.96	620219	98.58	60	120	
Sc (IS)	45	3	No Gas	42111670	1.11	49140068	85.70	60	120	
Ge Internal Standard	72	1	HMI H2	6010816	1.10	6023554	99.79	60	120	
Ge Internal Standard	72	2	HMI He	825003	0.03	827657	99.68	60	120	
In Internal Standard	115	2	HMI He	3468611	0.86	3520307	98.53	60	120	
Ho-165	165	2	HMI He	15797174	0.68	15788522	100.05	60	120	

Sample Report

Sample Table

Sample Name	280-123292-A-24-B
Data File Name	294SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T04:27:11-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456960 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-16.420	ppb	-16.420	-16.43	64492	500000	
Li	7	2	45	-18.667	ppb	-18.667	-79.20	3371	500000	
Li	7	3	45	-17.903	ppb	-17.903	-12.54	4739237	50000	
Be	9	1	6	0.000	ppb	0.000	#DIV/0!	0	2000	
B	11	1	6	859.418	ppb	859.418	1.23	6882	2000	
Na	23	1	45	195.591	ppb	195.591	4.78	602262	2000	
Na	23	2	45	146.489	ppb	146.489	4.69	36847	400000	
Mg	24	2	45	10.846	ppb	10.846	10.33	873	400000	
Al	27	2	45	3.199	ppb	3.199	58.46	93	400000	
K	39	1	45	-2478.735	ppb	-2478.735	-0.92	3890926	400000	
K	39	2	45	-4.556	ppb	-4.556	-542.52	23810	400000	
Ca	40	1	45	37.810	ppb	37.810	5.75	155164	400000	
Ca	44	2	45	17.961	ppb	17.961	77.84	103	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	-0.014	ppb	-0.014	-888.84	1650	2000	
Cr	52	2	72	0.152	ppb	0.152	39.41	317	5000	
Mn	55	2	72	0.087	ppb	0.087	118.18	197	10000	
Fe	57	2	72	3.637	ppb	3.637	68.77	217	400000	
Co	59	2	72	0.034	ppb	0.034	84.36	1073	2000	
Ni	60	2	72	1.343	ppb	1.343	20.64	733	5000	
Cu	63	2	72	0.275	ppb	0.275	16.90	1670	5000	
Zn	66	2	72	2.134	ppb	2.134	31.37	567	5000	
As	75	2	72	0.008	ppb	0.008	448.60	20	2000	
Se	78	1	72	0.377	ppb	0.377	30.80	67	2000	
Sr	88	2	72	0.736	ppb	0.736	2.58	430	4000	
Zr	90	2	72	1.941	ppb	1.941	394.98	43	1000	
Nb	93	2	72	0.492	ppb	0.492	23.26	1440	200	
Mo	95	2	115	0.019	ppb	0.019	171.08	53	2000	
Pd	105	2	115	0.018	ppb	0.018	103.89	23	100	
Ag	107	2	115	0.000	ppb	0.000	-32877.94	17	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.116	ppb	0.116	31.31	247	2000	
Sb	121	2	115	0.003	ppb	0.003	6.82	20	1000	
Ba	137	2	115	0.168	ppb	0.168	56.06	87	5000	
W	182	2	165	0.004	ppb	0.004	581.88	510	100	
Pt	195	2	165	0.001	ppb	0.001	312.28	10	100	
Tl	205	2	165	0.005	ppb	0.005	21.53	173	2000	
Pb	208	2	165	0.170	ppb	0.170	11.98	2220	5000	
Th	232	2	165	0.037	ppb	0.037	41.00	847	2000	
U	238	2	165	-0.002	ppb	-0.002	-55.22	60	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	514154	0.59	538871	95.41	60	120	
Sc (IS)	45	1	HMI H2	14115339	0.60	13911789	101.46	60	120	
Sc (IS)	45	2	HMI He	624143	0.65	620219	100.63	60	120	
Sc (IS)	45	3	No Gas	43765504	0.62	49140068	89.06	60	120	
Ge Internal Standard	72	1	HMI H2	6153840	0.58	6023554	102.16	60	120	
Ge Internal Standard	72	2	HMI He	834635	0.05	827657	100.84	60	120	
In Internal Standard	115	2	HMI He	3524733	1.10	3520307	100.13	60	120	
Ho-165	165	2	HMI He	16142486	0.84	15788522	102.24	60	120	

Sample Report

Sample Table

Sample Name	280-123292-A-25-B
Data File Name	295SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T04:31:05-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456960 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	4.644	ppb	4.644	46.35	67231	500000	
Li	7	2	45	3.255	ppb	3.255	124.61	3521	500000	
Li	7	3	45	1.267	ppb	1.267	253.55	4913369	50000	
Be	9	1	6	0.112	ppb	0.112	86.61	20	2000	
B	11	1	6	34490.233	ppb	34490.233	0.12	245183	2000	>LDR
Na	23	1	45	135469.506	ppb	135469.506	0.28	259477516	2000	>LDR
Na	23	2	45	142218.255	ppb	142218.255	0.71	19923275	400000	
Mg	24	2	45	15309.308	ppb	15309.308	0.43	985370	400000	
Al	27	2	45	9.721	ppb	9.721	9.44	210	400000	
K	39	1	45	5766.518	ppb	5766.518	0.71	16630750	400000	
K	39	2	45	6370.999	ppb	6370.999	0.12	282104	400000	
Ca	40	1	45	41689.441	ppb	41689.441	0.26	123290698	400000	
Ca	44	2	45	37581.380	ppb	37581.380	1.17	108173	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	0.750	ppb	0.750	34.13	2217	2000	
Cr	52	2	72	0.239	ppb	0.239	5.11	397	5000	
Mn	55	2	72	1.447	ppb	1.447	14.91	737	10000	
Fe	57	2	72	15.213	ppb	15.213	20.62	430	400000	
Co	59	2	72	0.089	ppb	0.089	48.16	1153	2000	
Ni	60	2	72	0.450	ppb	0.450	32.11	313	5000	
Cu	63	2	72	-0.083	ppb	-0.083	-69.75	1193	5000	
Zn	66	2	72	2.397	ppb	2.397	10.22	610	5000	
As	75	2	72	0.199	ppb	0.199	34.89	48	2000	
Se	78	1	72	0.617	ppb	0.617	21.40	99	2000	
Sr	88	2	72	3137.237	ppb	3137.237	0.86	1654765	4000	
Zr	90	2	72	71.672	ppb	71.672	54.71	147	1000	
Nb	93	2	72	0.667	ppb	0.667	23.87	1657	200	
Mo	95	2	115	1.587	ppb	1.587	8.75	1143	2000	
Pd	105	2	115	0.075	ppb	0.075	23.40	87	100	
Ag	107	2	115	0.007	ppb	0.007	65.29	33	100	
Cd	111	2	115	0.041	ppb	0.041	41.98	13	2000	
Sn	120	2	115	0.089	ppb	0.089	34.32	217	2000	
Sb	121	2	115	0.150	ppb	0.150	36.89	153	1000	
Ba	137	2	115	63.338	ppb	63.338	1.14	20927	5000	
W	182	2	165	0.016	ppb	0.016	121.79	540	100	
Pt	195	2	165	0.000	ppb	0.000	72469.20	7	100	
Tl	205	2	165	0.008	ppb	0.008	113.75	193	2000	
Pb	208	2	165	0.015	ppb	0.015	74.92	770	5000	
Th	232	2	165	0.073	ppb	0.073	1.51	1247	2000	
U	238	2	165	0.446	ppb	0.446	4.61	5225	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	480468	0.69	538871	89.16	60	120	
Sc (IS)	45	1	HMI H2	13796925	0.74	13911789	99.17	60	120	
Sc (IS)	45	2	HMI He	608391	0.41	620219	98.09	60	120	
Sc (IS)	45	3	No Gas	42825391	1.18	49140068	87.15	60	120	
Ge Internal Standard	72	1	HMI H2	6040196	1.01	6023554	100.28	60	120	
Ge Internal Standard	72	2	HMI He	824344	0.61	827657	99.60	60	120	
In Internal Standard	115	2	HMI He	3465678	1.98	3520307	98.45	60	120	
Ho-165	165	2	HMI He	15810123	0.31	15788522	100.14	60	120	

Sample Report

Sample Table

Sample Name	280-123292-A-26-B
Data File Name	296SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T04:34:55-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456960 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-4.944	ppb	-4.944	-69.82	65279	500000	
Li	7	2	45	-15.173	ppb	-15.173	-142.96	3301	500000	
Li	7	3	45	-2.780	ppb	-2.780	-85.77	4812301	50000	
Be	9	1	6	0.000	ppb	0.000	#DIV/0!	0	2000	
B	11	1	6	41733.349	ppb	41733.349	0.62	296196	2000	>LDR
Na	23	1	45	163313.595	ppb	163313.595	0.25	312547835	2000	>LDR
Na	23	2	45	173072.179	ppb	173072.179	0.88	24078557	400000	
Mg	24	2	45	15337.964	ppb	15337.964	1.02	980555	400000	
Al	27	2	45	2.074	ppb	2.074	26.40	70	400000	
K	39	1	45	5676.518	ppb	5676.518	0.72	16479247	400000	
K	39	2	45	6339.854	ppb	6339.854	1.47	278938	400000	
Ca	40	1	45	37598.207	ppb	37598.207	0.41	111117765	400000	
Ca	44	2	45	34796.276	ppb	34796.276	0.80	99483	400000	
Ti	47	2	45	0.182	ppb	0.182	173.21	3	4000	
V	51	2	72	0.351	ppb	0.351	112.60	1900	2000	
Cr	52	2	72	0.117	ppb	0.117	105.57	277	5000	
Mn	55	2	72	2.155	ppb	2.155	4.60	1013	10000	
Fe	57	2	72	55.534	ppb	55.534	31.87	1177	400000	
Co	59	2	72	0.178	ppb	0.178	55.69	1297	2000	
Ni	60	2	72	0.775	ppb	0.775	28.17	460	5000	
Cu	63	2	72	-0.225	ppb	-0.225	-27.00	1007	5000	
Zn	66	2	72	1.822	ppb	1.822	32.05	497	5000	
As	75	2	72	0.939	ppb	0.939	7.95	159	2000	
Se	78	1	72	0.608	ppb	0.608	17.11	97	2000	
Sr	88	2	72	3071.641	ppb	3071.641	1.49	1611640	4000	
Zr	90	2	72	7.120	ppb	7.120	498.06	50	1000	
Nb	93	2	72	0.275	ppb	0.275	63.33	1123	200	
Mo	95	2	115	3.404	ppb	3.404	1.38	2390	2000	
Pd	105	2	115	0.034	ppb	0.034	28.24	40	100	
Ag	107	2	115	0.004	ppb	0.004	222.62	27	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	1.064	ppb	1.064	5.50	1137	2000	
Sb	121	2	115	0.045	ppb	0.045	103.73	57	1000	
Ba	137	2	115	39.356	ppb	39.356	1.71	12933	5000	
W	182	2	165	0.080	ppb	0.080	50.51	753	100	
Pt	195	2	165	-0.003	ppb	-0.003	0.00	0	100	
Tl	205	2	165	0.007	ppb	0.007	81.12	187	2000	
Pb	208	2	165	0.021	ppb	0.021	41.83	830	5000	
Th	232	2	165	0.035	ppb	0.035	15.82	800	2000	
U	238	2	165	0.233	ppb	0.233	4.64	2760	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	479814	0.75	538871	89.04	60	120	
Sc (IS)	45	1	HMI H2	13787340	0.50	13911789	99.11	60	120	
Sc (IS)	45	2	HMI He	604293	0.40	620219	97.43	60	120	
Sc (IS)	45	3	No Gas	42446474	0.78	49140068	86.38	60	120	
Ge Internal Standard	72	1	HMI H2	6038223	0.49	6023554	100.24	60	120	
Ge Internal Standard	72	2	HMI He	819985	0.70	827657	99.07	60	120	
In Internal Standard	115	2	HMI He	3444161	0.99	3520307	97.84	60	120	
Ho-165	165	2	HMI He	15794539	0.27	15788522	100.04	60	120	

Sample Table

Sample Name	280-123292-A-27-B
Data File Name	297SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T04:38:48-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456960 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-26.313	ppb	-26.313	-20.09	60720	500000	
Li	7	2	45	-35.472	ppb	-35.472	-74.67	3117	500000	
Li	7	3	45	-22.529	ppb	-22.529	-19.34	4510007	50000	
Be	9	1	6	0.019	ppb	0.019	173.21	3	2000	
B	11	1	6	1573.799	ppb	1573.799	4.39	11151	2000	
Na	23	1	45	156229.752	ppb	156229.752	0.80	297493549	2000	>LDR
Na	23	2	45	162905.716	ppb	162905.716	0.70	22899575	400000	
Mg	24	2	45	6784.781	ppb	6784.781	1.00	438317	400000	
Al	27	2	45	34.797	ppb	34.797	12.47	670	400000	
K	39	1	45	-1613.931	ppb	-1613.931	-1.21	5119185	400000	
K	39	2	45	268.307	ppb	268.307	5.82	34418	400000	
Ca	40	1	45	340872.597	ppb	340872.597	0.28	1002030065	400000	
Ca	44	2	45	263493.716	ppb	263493.716	1.15	760794	400000	
Ti	47	2	45	0.543	ppb	0.543	99.80	10	4000	
V	51	2	72	0.077	ppb	0.077	126.39	1674	2000	
Cr	52	2	72	0.256	ppb	0.256	35.15	407	5000	
Mn	55	2	72	145.722	ppb	145.722	0.48	57371	10000	
Fe	57	2	72	174.534	ppb	174.534	6.36	3347	400000	
Co	59	2	72	3.677	ppb	3.677	3.01	7102	2000	
Ni	60	2	72	1.095	ppb	1.095	25.01	600	5000	
Cu	63	2	72	-0.116	ppb	-0.116	-21.84	1133	5000	
Zn	66	2	72	1.935	ppb	1.935	10.26	513	5000	
As	75	2	72	4.001	ppb	4.001	2.49	614	2000	
Se	78	1	72	0.602	ppb	0.602	24.52	95	2000	
Sr	88	2	72	3324.286	ppb	3324.286	0.55	1726070	4000	
Zr	90	2	72	52.823	ppb	52.823	15.75	117	1000	
Nb	93	2	72	-0.107	ppb	-0.107	-65.00	607	200	
Mo	95	2	115	0.288	ppb	0.288	40.47	240	2000	
Pd	105	2	115	0.048	ppb	0.048	21.39	57	100	
Ag	107	2	115	-0.004	ppb	-0.004	-119.20	7	100	
Cd	111	2	115	0.051	ppb	0.051	34.79	17	2000	
Sn	120	2	115	0.104	ppb	0.104	47.63	230	2000	
Sb	121	2	115	0.073	ppb	0.073	60.34	83	1000	
Ba	137	2	115	146.116	ppb	146.116	2.12	48249	5000	
W	182	2	165	-0.007	ppb	-0.007	-461.17	463	100	
Pt	195	2	165	-0.003	ppb	-0.003	0.00	0	100	
Tl	205	2	165	0.012	ppb	0.012	28.39	220	2000	
Pb	208	2	165	0.048	ppb	0.048	5.13	1073	5000	
Th	232	2	165	0.024	ppb	0.024	30.01	677	2000	
U	238	2	165	2.329	ppb	2.329	3.35	26926	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	465891	0.79	538871	86.46	60	120	
Sc (IS)	45	1	HMI H2	13718069	0.43	13911789	98.61	60	120	
Sc (IS)	45	2	HMI He	610551	0.61	620219	98.44	60	120	
Sc (IS)	45	3	No Gas	42255258	0.50	49140068	85.99	60	120	
Ge Internal Standard	72	1	HMI H2	5926080	0.38	6023554	98.38	60	120	
Ge Internal Standard	72	2	HMI He	811500	0.60	827657	98.05	60	120	
In Internal Standard	115	2	HMI He	3466925	0.49	3520307	98.48	60	120	
Ho-165	165	2	HMI He	15799995	1.29	15788522	100.07	60	120	

Sample Table

Sample Name	280-123292-A-28-B
Data File Name	298SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T04:42:40-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456960 6020
ISTD Ref FileName	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-6.898	ppb	-6.898	-19.69	64017	500000	
Li	7	2	45	-5.819	ppb	-5.819	-227.86	3381	500000	
Li	7	3	45	-7.696	ppb	-7.696	-39.50	4588703	50000	
Be	9	1	6	0.058	ppb	0.058	99.47	10	2000	
B	11	1	6	41494.354	ppb	41494.354	1.45	285484	2000	>LDR
Na	23	1	45	162036.768	ppb	162036.768	0.33	305940422	2000	>LDR
Na	23	2	45	170087.155	ppb	170087.155	1.06	23522675	400000	
Mg	24	2	45	14810.527	ppb	14810.527	1.73	941141	400000	
Al	27	2	45	91.654	ppb	91.654	3.41	1684	400000	
K	39	1	45	5404.029	ppb	5404.029	1.00	15840054	400000	
K	39	2	45	5964.289	ppb	5964.289	0.80	262240	400000	
Ca	40	1	45	41455.531	ppb	41455.531	0.21	120868385	400000	
Ca	44	2	45	37420.947	ppb	37420.947	1.62	106344	400000	
Ti	47	2	45	0.732	ppb	0.732	113.61	13	4000	
V	51	2	72	0.285	ppb	0.285	80.76	1830	2000	
Cr	52	2	72	0.442	ppb	0.442	38.36	583	5000	
Mn	55	2	72	13.609	ppb	13.609	5.03	5498	10000	
Fe	57	2	72	478.274	ppb	478.274	1.16	8920	400000	
Co	59	2	72	0.186	ppb	0.186	38.80	1297	2000	
Ni	60	2	72	0.432	ppb	0.432	25.58	300	5000	
Cu	63	2	72	-0.230	ppb	-0.230	-9.70	990	5000	
Zn	66	2	72	3.436	ppb	3.436	32.61	797	5000	
As	75	2	72	0.898	ppb	0.898	22.15	152	2000	
Se	78	1	72	0.433	ppb	0.433	11.65	72	2000	
Sr	88	2	72	3112.336	ppb	3112.336	1.26	1615486	4000	
Zr	90	2	72	159.724	ppb	159.724	16.11	273	1000	
Nb	93	2	72	-0.049	ppb	-0.049	-128.11	683	200	
Mo	95	2	115	1.145	ppb	1.145	21.26	827	2000	
Pd	105	2	115	0.040	ppb	0.040	106.85	47	100	
Ag	107	2	115	0.004	ppb	0.004	218.57	27	100	
Cd	111	2	115	0.021	ppb	0.021	86.60	7	2000	
Sn	120	2	115	0.160	ppb	0.160	82.66	280	2000	
Sb	121	2	115	0.100	ppb	0.100	39.53	107	1000	
Ba	137	2	115	48.206	ppb	48.206	0.87	15776	5000	
W	182	2	165	0.064	ppb	0.064	42.33	700	100	
Pt	195	2	165	-0.001	ppb	-0.001	-175.15	3	100	
Tl	205	2	165	0.015	ppb	0.015	63.36	237	2000	
Pb	208	2	165	0.091	ppb	0.091	7.78	1463	5000	
Th	232	2	165	0.093	ppb	0.093	5.36	1474	2000	
U	238	2	165	0.476	ppb	0.476	3.85	5585	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	465096	0.85	538871	86.31	60	120	
Sc (IS)	45	1	HMI H2	13602131	0.31	13911789	97.77	60	120	
Sc (IS)	45	2	HMI He	600744	1.42	620219	96.86	60	120	
Sc (IS)	45	3	No Gas	41071814	0.08	49140068	83.58	60	120	
Ge Internal Standard	72	1	HMI H2	5941001	0.29	6023554	98.63	60	120	
Ge Internal Standard	72	2	HMI He	811240	0.23	827657	98.02	60	120	
In Internal Standard	115	2	HMI He	3431642	0.62	3520307	97.48	60	120	
Ho-165	165	2	HMI He	15853866	0.94	15788522	100.41	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5688510
Data File Name	299_CCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T04:46:32-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	86.853	ppb	6.981	81856	100	86.9	90	110	>+\-10%
Li	7	2	45	77.097	ppb	27.637	4237	100	77.1	90	110	>+\-10%
Li	7	3	45	79.347	ppb	3.317	5840950	100	79.3	90	110	>+\-10%
Be	9	1	6	49.620	ppb	1.228	9177	50	99.2	90	110	
B	11	1	6	952.291	ppb	2.145	7335	50	1904.6	90	110	>+\-10%
Na	23	1	45	1225.226	ppb	0.760	2506312	1000	122.5	90	110	>+\-10%
Na	23	2	45	1127.706	ppb	2.839	170349	1000	112.8	90	110	>+\-10%
Mg	24	2	45	1004.721	ppb	0.309	63721	1000	100.5	90	110	
Al	27	2	45	982.844	ppb	2.240	17661	1000	98.3	90	110	
K	39	1	45	607.382	ppb	3.421	8426572	1000	60.7	90	110	>+\-10%
K	39	2	45	1042.324	ppb	3.105	64616	1000	104.2	90	110	
Ca	40	1	45	1028.142	ppb	1.171	3015768	1000	102.8	90	110	
Ca	44	2	45	902.272	ppb	14.532	2600	1000	90.2	90	110	
Ti	47	2	45	49.919	ppb	6.897	903	50	99.8	90	110	
V	51	2	72	48.199	ppb	1.839	38281	50	96.4	90	110	
Cr	52	2	72	48.711	ppb	3.607	46706	50	97.4	90	110	
Mn	55	2	72	49.375	ppb	3.829	19641	50	98.7	90	110	
Fe	57	2	72	970.015	ppb	1.591	18035	1000	97.0	90	110	
Co	59	2	72	48.776	ppb	0.881	82508	50	97.6	90	110	
Ni	60	2	72	49.094	ppb	4.664	22455	50	98.2	90	110	
Cu	63	2	72	49.376	ppb	1.478	63500	50	98.8	90	110	
Zn	66	2	72	50.129	ppb	3.169	9677	50	100.3	90	110	
As	75	2	72	50.856	ppb	2.561	7626	50	101.7	90	110	
Se	78	1	72	50.673	ppb	2.967	6891	50	101.3	90	110	
Sr	88	2	72	101.402	ppb	1.804	52943	100	101.4	90	110	
Zr	90	2	72	47.706	ppb	78.307	110	50	95.4	90	110	
Nb	93	2	72	95.034	ppb	1.822	127205	100	95.0	90	110	
Mo	95	2	115	50.002	ppb	1.535	34620	50	100.0	90	110	
Pd	105	2	115	51.647	ppb	2.193	56826	50	103.3	90	110	
Ag	107	2	115	49.119	ppb	1.631	118573	50	98.2	90	110	
Cd	111	2	115	49.851	ppb	4.725	16240	50	99.7	90	110	
Sn	120	2	115	48.228	ppb	2.310	45789	50	96.5	90	110	
Sb	121	2	115	48.927	ppb	0.878	44358	50	97.9	90	110	
Ba	137	2	115	48.056	ppb	2.490	15803	50	96.1	90	110	
W	182	2	165	48.731	ppb	0.852	162378	50	97.5	90	110	
Pt	195	2	165	48.458	ppb	0.916	124160	50	96.9	90	110	
Tl	205	2	165	48.506	ppb	0.489	323285	50	97.0	90	110	
Pb	208	2	165	48.823	ppb	0.977	442229	50	97.6	90	110	
Th	232	2	165	47.468	ppb	0.555	546088	50	94.9	90	110	
U	238	2	165	48.079	ppb	0.127	555311	50	96.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	497084	0.57	538871	92.25	60	120	
Sc (IS)	45	1	HMI H2	13511682	0.38	13911789	97.12	60	120	
Sc (IS)	45	2	HMI He	598151	0.62	620219	96.44	60	120	
Sc (IS)	45	3	No Gas	41425640	1.07	49140068	84.30	60	120	
Ge Internal Standard	72	1	HMI H2	5935182	0.31	6023554	98.53	60	120	
Ge Internal Standard	72	2	HMI He	815452	0.70	827657	98.53	60	120	
In Internal Standard	115	2	HMI He	3448691	1.27	3520307	97.97	60	120	
Ho-165	165	2	HMI He	15826644	1.15	15788522	100.24	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5688508
Data File Name	300_CCB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T04:50:27-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-12.888	ppb	-49.9	4542652	10	
Be	9	1	6	0.055	ppb	100.4	10	0.5	
B	11	1	6	536.299	ppb	7.9	4221	0.5	>RL
Na	23	1	45	120.680	ppb	0.3	427208	25	>RL
Na	23	2	45	113.740	ppb	1.6	30088	25	>RL
Mg	24	2	45	6.406	ppb	18.5	543	25	
Al	27	2	45	2.396	ppb	72.5	73	15	
K	39	1	45	-63.295	ppb	-57.4	7252748	50	
K	39	2	45	-0.511	ppb	-5102.6	22448	50	
Ca	40	1	45	5.876	ppb	4.4	54941	50	
Ca	44	2	45	9.522	ppb	158.3	73	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	1.167	ppb	6.8	2440	1	>RL
Cr	52	2	72	0.043	ppb	86.4	200	1	
Mn	55	2	72	-0.027	ppb	-588.6	143	0.5	
Fe	57	2	72	1.801	ppb	291.4	173	25	
Co	59	2	72	0.053	ppb	144.8	1050	0.5	
Ni	60	2	72	0.116	ppb	60.7	153	1	
Cu	63	2	72	0.161	ppb	57.3	1447	1	
Zn	66	2	72	1.081	ppb	37.8	343	5	
As	75	2	72	0.041	ppb	117.3	24	1	
Se	78	1	72	0.337	ppb	34.5	57	1	
Sr	88	2	72	0.187	ppb	28.6	130	0.5	
Zr	90	2	72	15.180	ppb	94.7	60	1	>RL
Nb	93	2	72	3.030	ppb	8.9	4648	2	>RL
Mo	95	2	115	0.016	ppb	93.1	50	0.5	
Pd	105	2	115	0.030	ppb	45.9	37	1	
Ag	107	2	115	0.004	ppb	364.0	27	1	
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5	
Sn	120	2	115	0.242	ppb	13.9	360	1	
Sb	121	2	115	0.066	ppb	68.6	77	0.6	
Ba	137	2	115	0.032	ppb	189.4	40	0.5	
W	182	2	165	0.068	ppb	41.2	700	1	
Pt	195	2	165	0.001	ppb	286.7	10	1	
Tl	205	2	165	0.027	ppb	12.3	310	0.1	
Pb	208	2	165	0.156	ppb	2.2	2014	0.5	
Th	232	2	165	0.220	ppb	7.2	2887	1	
U	238	2	165	0.014	ppb	37.8	233	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	490312	0.64	538871	90.99	60	120	
Sc (IS)	45	1	HMI H2	13234451	0.35	13911789	95.13	60	120	
Sc (IS)	45	2	HMI He	584158	0.18	620219	94.19	60	120	
Sc (IS)	45	3	No Gas	41311856	1.19	49140068	84.07	60	120	
Ge Internal Standard	72	1	HMI H2	5782027	0.69	6023554	95.99	60	120	
Ge Internal Standard	72	2	HMI He	792666	1.11	827657	95.77	60	120	
In Internal Standard	115	2	HMI He	3447461	0.74	3520307	97.93	60	120	
Ho-165	165	2	HMI He	15546507	0.67	15788522	98.47	60	120	

Blank Report

Sample Table

Sample Name	rinse-5672981
Data File Name	301WASH.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T04:54:19-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	0.000	ppb	#DIV/0!	0	0.5
Na	23	2	45	100.296	ppb	4.378016581	27934	25
Mg	24	2	45	7.382	ppb	22.10783133	597	25
Al	27	2	45	0.334	ppb	266.7513831	37	15
K	39	2	45	15.708	ppb	104.8567541	22795	50
Ca	44	2	45	3.695	ppb	298.5907772	57	25
V	51	2	72	1.676	ppb	15.75607108	2780	1
Cr	52	2	72	0.032	ppb	142.5958215	187	1
Mn	55	2	72	0.823	ppb	25.85282037	463	0.5
Fe	57	2	72	4.017	ppb	64.20255356	210	25
Co	59	2	72	-0.028	ppb	-369.498815	907	0.5
Ni	60	2	72	-0.048	ppb	-214.4982848	80	1
Cu	63	2	72	1.312	ppb	17.52872563	2820	1
Zn	66	2	72	0.064	ppb	514.358894	153	5
As	75	2	72	0.039	ppb	206.6346678	23	1
Se	78	1	72	0.444	ppb	28.82098299	72	1
Nb	93	2	72	1.486	ppb	3.089340019	2620	2
Mo	95	2	115	-0.013	ppb	-417.7425241	30	0.5
Pd	105	2	115	0.019	ppb	103.137149	23	1
Ag	107	2	115	0.007	ppb	65.85598057	33	1
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5
Sn	120	2	115	0.137	ppb	28.87140237	257	1
Sb	121	2	115	0.053	ppb	123.8657626	63	0.6
Ba	137	2	115	0.055	ppb	182.6143653	47	0.5
W	182	2	165	0.014	ppb	180.9196011	520	1
Pt	195	2	165	0.003	ppb	332.9624669	13	1
Tl	205	2	165	0.002	ppb	148.0993491	143	0.1
Pb	208	2	165	0.021	ppb	79.36679627	807	0.5
Th	232	2	165	0.085	ppb	7.577776847	1343	1
U	238	2	165	0.000	ppb	885.7820564	80	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	489831	0.54	538871	90.90	60	120	
Sc (IS)	45	1	HMI H2	13236058	0.33	13911789	95.14	60	120	
Sc (IS)	45	2	HMI He	577039	0.75	620219	93.04	60	120	
Sc (IS)	45	3	No Gas	41216725	0.85	49140068	83.88	60	120	
Ge Internal Standard	72	1	HMI H2	5820581	0.53	6023554	96.63	60	120	
Ge Internal Standard	72	2	HMI He	782870	1.01	827657	94.59	60	120	
In Internal Standard	115	2	HMI He	3395444	0.55	3520307	96.45	60	120	
Ho-165	165	2	HMI He	15386351	0.72	15788522	97.45	60	120	

Blank Report

Sample Table

Sample Name	rinse-5672981
Data File Name	302WASH.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T04:58:11-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	0.037	ppb	86.60262064	7	0.5
Na	23	2	45	99.747	ppb	8.35450214	27246	25
Mg	24	2	45	6.489	ppb	12.23251455	530	25
Al	27	2	45	-0.799	ppb	-87.09103332	17	15
K	39	2	45	0.497	ppb	4377.056323	21727	50
Ca	44	2	45	11.757	ppb	75.49491544	77	25
V	51	2	72	1.556	ppb	6.794113771	2650	1
Cr	52	2	72	-0.017	ppb	-60.96016238	140	1
Mn	55	2	72	0.934	ppb	21.44679546	497	0.5
Fe	57	2	72	3.056	ppb	64.86005347	190	25
Co	59	2	72	0.002	ppb	377.2300444	940	0.5
Ni	60	2	72	-0.099	ppb	-83.39428067	57	1
Cu	63	2	72	1.179	ppb	4.551633848	2617	1
Zn	66	2	72	0.263	ppb	83.57441295	187	5
As	75	2	72	0.088	ppb	99.4065297	29	1
Se	78	1	72	0.331	ppb	27.61171764	56	1
Nb	93	2	72	0.767	ppb	10.91436963	1674	2
Mo	95	2	115	0.004	ppb	1467.982368	40	0.5
Pd	105	2	115	0.007	ppb	144.7561479	10	1
Ag	107	2	115	0.011	ppb	82.71784594	40	1
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5
Sn	120	2	115	0.123	ppb	72.71349809	237	1
Sb	121	2	115	0.028	ppb	108.7390024	40	0.6
Ba	137	2	115	-0.047	ppb	-37.82777533	13	0.5
W	182	2	165	-0.005	ppb	-489.9986298	453	1
Pt	195	2	165	0.001	ppb	278.0406244	10	1
Tl	205	2	165	0.017	ppb	9.283161857	240	0.1
Pb	208	2	165	0.010	ppb	125.8206888	700	0.5
Th	232	2	165	0.033	ppb	16.39655259	757	1
U	238	2	165	-0.001	ppb	-130.0504749	60	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	479514	0.29	538871	88.98	60	120	
Sc (IS)	45	1	HMI H2	12957356	0.25	13911789	93.14	60	120	
Sc (IS)	45	2	HMI He	564300	1.09	620219	90.98	60	120	
Sc (IS)	45	3	No Gas	40030314	1.11	49140068	81.46	60	120	
Ge Internal Standard	72	1	HMI H2	5723039	0.07	6023554	95.01	60	120	
Ge Internal Standard	72	2	HMI He	770183	0.93	827657	93.06	60	120	
In Internal Standard	115	2	HMI He	3291330	0.99	3520307	93.50	60	120	
Ho-165	165	2	HMI He	15211141	0.75	15788522	96.34	60	120	

Blank Report

Sample Table

Sample Name	rinse-5672981
Data File Name	303WASH.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T05:02:04-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	225CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	0.038	ppb	173.2050808	7	0.5
Na	23	2	45	100.194	ppb	4.137768416	27066	25
Mg	24	2	45	6.344	ppb	8.375328722	517	25
Al	27	2	45	1.601	ppb	184.3711163	57	15
K	39	2	45	-17.941	ppb	-26.20993754	20842	50
Ca	44	2	45	0.572	ppb	2649.066122	47	25
V	51	2	72	1.755	ppb	21.9519272	2770	1
Cr	52	2	72	0.056	ppb	76.95349287	203	1
Mn	55	2	72	0.891	ppb	18.08343162	477	0.5
Fe	57	2	72	4.900	ppb	31.77616973	220	25
Co	59	2	72	0.028	ppb	171.3854973	973	0.5
Ni	60	2	72	-0.043	ppb	-161.9130061	80	1
Cu	63	2	72	1.538	ppb	13.24044832	3017	1
Zn	66	2	72	0.178	ppb	169.7050972	170	5
As	75	2	72	-0.027	ppb	-106.8549288	13	1
Se	78	1	72	0.351	ppb	28.64611973	57	1
Nb	93	2	72	0.179	ppb	97.65053565	927	2
Mo	95	2	115	-0.006	ppb	-491.0801365	33	0.5
Pd	105	2	115	0.000	ppb	2666.942029	3	1
Ag	107	2	115	0.000	ppb	1381.244608	17	1
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5
Sn	120	2	115	0.123	ppb	36.79974375	237	1
Sb	121	2	115	-0.003	ppb	-242.7547818	13	0.6
Ba	137	2	115	0.016	ppb	112.0980876	33	0.5
W	182	2	165	0.011	ppb	282.5524976	507	1
Pt	195	2	165	-0.001	ppb	-184.7563647	3	1
Tl	205	2	165	0.012	ppb	37.00326877	213	0.1
Pb	208	2	165	0.010	ppb	89.04972597	703	0.5
Th	232	2	165	0.028	ppb	12.68135741	707	1
U	238	2	165	-0.002	ppb	-117.13285	47	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	471570	0.58	538871	87.51	60	120	
Sc (IS)	45	1	HMI H2	12745184	0.83	13911789	91.61	60	120	
Sc (IS)	45	2	HMI He	559354	0.57	620219	90.19	60	120	
Sc (IS)	45	3	No Gas	40551260	0.35	49140068	82.52	60	120	
Ge Internal Standard	72	1	HMI H2	5598906	0.25	6023554	92.95	60	120	
Ge Internal Standard	72	2	HMI He	763605	0.40	827657	92.26	60	120	
In Internal Standard	115	2	HMI He	3304149	0.36	3520307	93.86	60	120	
Ho-165	165	2	HMI He	15325028	0.79	15788522	97.06	60	120	

Calibration Blank Report

Sample Table

Sample Name	icis-5688508
Data File Name	304CALB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T05:05:57-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	57685	0.00
Li	7	2	HMI He	3084	0.33
Li	7	3	No Gas	4530265	0.00
Be	9	1	HMI H2	7	1299.04
B	11	1	HMI H2	2464	0.29
Na	23	1	HMI H2	365850	0.00
Na	23	2	HMI He	25783	0.01
Mg	24	2	HMI He	450	2.15
Al	27	2	HMI He	30	222.22
K	39	2	HMI He	20582	0.01
Ca	44	2	HMI He	30	111.11
Ti	47	2	HMI He	0	#VALUE!
V	51	2	HMI He	2417	0.13
Cr	52	2	HMI He	193	20.08
Mn	55	2	HMI He	70	113.62
Fe	57	2	HMI He	107	5.08
Co	59	2	HMI He	890	1.28
Ni	60	2	HMI He	90	32.67
Cu	63	2	HMI He	653	0.49
Zn	66	2	HMI He	100	43.59
As	75	2	HMI He	18	108.98
Se	78	1	HMI H2	56	58.45
Sr	88	2	HMI He	43	81.35
Zr	90	2	HMI He	23	106.04
Nb	93	2	HMI He	917	0.48
Mo	95	2	HMI He	20	0.00
Pd	105	2	HMI He	23	382.35
Ag	107	2	HMI He	30	293.97
Cd	111	2	HMI He	0	#VALUE!
Sn	120	2	HMI He	130	5.92
Sb	121	2	HMI He	47	26.51
Ba	137	2	HMI He	17	549.91
W	182	2	HMI He	553	2.49
Pt	195	2	HMI He	0	#VALUE!
Tl	205	2	HMI He	183	18.18
Pb	208	2	HMI He	617	2.65
Th	232	2	HMI He	700	3.08
U	238	2	HMI He	47	115.56

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li-6 Internal Standard	6	1	HMI H2	459341	0.64
Sc (IS)	45	1	HMI H2	12606259	0.68
Sc (IS)	45	2	HMI He	551341	0.87
Sc (IS)	45	3	No Gas	40353426	0.53
Ge Internal Standard	72	1	HMI H2	5557713	1.14
Ge Internal Standard	72	2	HMI He	752535	0.49
In Internal Standard	115	2	HMI He	3288822	0.93
Ho-165	165	2	HMI He	15288251	0.56

Calibration Standard Report

Sample Table

Sample Name	ic-5688509
Data File Name	305CALS.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T05:09:48-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	304CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	89684	0.00
Li	7	2	HMI He	4701	0.16
Li	7	3	No Gas	7048428	0.00
Be	9	1	HMI H2	16753	0.00
B	11	1	HMI H2	2750	0.28
Na	23	1	HMI H2	3719436	0.00
Na	23	2	HMI He	275761	0.00
Mg	24	2	HMI He	116662	0.00
Al	27	2	HMI He	32473	0.00
K	39	1	HMI H2	9748982	0.00
K	39	2	HMI He	93631	0.00
Ca	40	1	HMI H2	5344281	0.00
Ca	44	2	HMI He	4918	0.14
Ti	47	2	HMI He	1677	0.35
V	51	2	HMI He	69968	0.00
Cr	52	2	HMI He	86006	0.00
Mn	55	2	HMI He	35484	0.01
Fe	57	2	HMI He	33045	0.01
Co	59	2	HMI He	150092	0.00
Ni	60	2	HMI He	41223	0.01
Cu	63	2	HMI He	117261	0.00
Zn	66	2	HMI He	17672	0.01
As	75	2	HMI He	13946	0.00
Se	78	1	HMI H2	12894	0.02
Sr	88	2	HMI He	97063	0.00
Zr	90	2	HMI He	117	21.21
Nb	93	2	HMI He	252207	0.00
Mo	95	2	HMI He	65536	0.00
Pd	105	2	HMI He	106679	0.00
Ag	107	2	HMI He	223172	0.00
Cd	111	2	HMI He	30250	0.00
Sn	120	2	HMI He	87792	0.00
Sb	121	2	HMI He	85724	0.00
Ba	137	2	HMI He	30154	0.01
Nd	146	2	HMI He	96563	0.00
Sm	147	2	HMI He	83088	0.00
Sm	150	2	HMI He	79357	0.00
Gd	156	1	HMI H2	293060	0.00
Gd	157	1	HMI H2	224658	0.00
W	182	2	HMI He	318370	0.00
Pt	195	2	HMI He	243425	0.00
Tl	205	2	HMI He	637142	0.00
Pb	208	2	HMI He	862604	0.00
Th	232	2	HMI He	1099111	0.00
U	238	2	HMI He	1095797	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	449292	0.73	459341	97.81	60	120	
Sc (IS)	45	1	HMI H2	12586457	0.32	12606259	99.84	60	120	
Sc (IS)	45	2	HMI He	555876	0.92	551341	100.82	60	120	
Sc (IS)	45	3	No Gas	40196065	1.48	40353426	99.61	60	120	
Ge Internal Standard	72	1	HMI H2	5572296	0.36	5557713	100.26	60	120	
Ge Internal Standard	72	2	HMI He	768527	0.66	752535	102.13	60	120	
In Internal Standard	115	2	HMI He	3324776	0.16	3288822	101.09	60	120	
Ho-165	165	2	HMI He	15324809	0.63	15288251	100.24	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5688510
Data File Name	306_CCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T05:13:41-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	98.732	ppb	5.889	72642	100	98.7	90	110	
Li	7	2	45	103.879	ppb	23.500	3894	100	103.9	90	110	
Li	7	3	45	101.514	ppb	3.142	5726328	100	101.5	90	110	
Be	9	1	6	49.398	ppb	2.082	8216	50	98.8	90	110	
B	11	1	6	51.435	ppb	127.256	2564	50	102.9	90	110	
Na	23	1	45	1012.224	ppb	1.281	2040546	1000	101.2	90	110	
Na	23	2	45	981.959	ppb	1.095	147123	1000	98.2	90	110	
Mg	24	2	45	1004.011	ppb	3.646	58182	1000	100.4	90	110	
Al	27	2	45	1003.129	ppb	2.447	16136	1000	100.3	90	110	
K	39	1	45	21.933	ppb	70.275	7869824	1000	2.2	90	110	>+\-10%
K	39	2	45	1019.318	ppb	3.194	57306	1000	101.9	90	110	
Ca	40	1	45	1007.625	ppb	1.457	2680956	1000	100.8	90	110	
Ca	44	2	45	1010.994	ppb	6.383	2474	1000	101.1	90	110	
Ti	47	2	45	47.620	ppb	7.077	790	50	95.2	90	110	
V	51	2	72	50.984	ppb	2.255	36360	50	102.0	90	110	
Cr	52	2	72	51.165	ppb	4.067	43473	50	102.3	90	110	
Mn	55	2	72	51.529	ppb	2.780	18059	50	103.1	90	110	
Fe	57	2	72	1015.965	ppb	4.405	16600	1000	101.6	90	110	
Co	59	2	72	51.673	ppb	3.369	76884	50	103.3	90	110	
Ni	60	2	72	51.960	ppb	2.458	21160	50	103.9	90	110	
Cu	63	2	72	50.986	ppb	3.414	59252	50	102.0	90	110	
Zn	66	2	72	51.011	ppb	7.836	8940	50	102.0	90	110	
As	75	2	72	51.411	ppb	3.315	7076	50	102.8	90	110	
Se	78	1	72	48.998	ppb	1.576	6281	50	98.0	90	110	
Sr	88	2	72	101.405	ppb	5.563	48521	100	101.4	90	110	
Zr	90	2	72	94.458	ppb	18.258	110	50	188.9	90	110	>+\-10%
Nb	93	2	72	108.439	ppb	2.719	135228	100	108.4	90	110	
Mo	95	2	115	50.835	ppb	2.799	32892	50	101.7	90	110	
Pd	105	2	115	50.801	ppb	5.392	53479	50	101.6	90	110	
Ag	107	2	115	51.263	ppb	2.857	112948	50	102.5	90	110	
Cd	111	2	115	50.952	ppb	2.863	15212	50	101.9	90	110	
Sn	120	2	115	51.249	ppb	1.546	44482	50	102.5	90	110	
Sb	121	2	115	50.798	ppb	4.308	42994	50	101.6	90	110	
Ba	137	2	115	49.578	ppb	6.195	14759	50	99.2	90	110	
W	182	2	165	50.242	ppb	3.928	158115	50	100.5	90	110	
Pt	195	2	165	49.799	ppb	4.205	119615	50	99.6	90	110	
Tl	205	2	165	50.148	ppb	2.857	315428	50	100.3	90	110	
Pb	208	2	165	50.707	ppb	3.530	431967	50	101.4	90	110	
Th	232	2	165	50.712	ppb	3.368	550407	50	101.4	90	110	
U	238	2	165	50.748	ppb	2.969	548867	50	101.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	445799	0.66	459341	97.05	60	120	
Sc (IS)	45	1	HMI H2	12450485	0.36	12606259	98.76	60	120	
Sc (IS)	45	2	HMI He	550294	1.35	551341	99.81	60	120	
Sc (IS)	45	3	No Gas	39685229	0.25	40353426	98.34	60	120	
Ge Internal Standard	72	1	HMI H2	5515862	0.83	5557713	99.25	60	120	
Ge Internal Standard	72	2	HMI He	757851	1.85	752535	100.71	60	120	
In Internal Standard	115	2	HMI He	3283005	2.40	3288822	99.82	60	120	
Ho-165	165	2	HMI He	15130465	2.21	15288251	98.97	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5688508
Data File Name	307_CCB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T05:17:36-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-1.581	ppb	-425.7	4446230	10	
Be	9	1	6	0.060	ppb	56.5	17	0.5	
B	11	1	6	-32.630	ppb	-158.0	2304	0.5	
Na	23	1	45	3.228	ppb	93.1	366331	25	
Na	23	2	45	12.664	ppb	44.6	27423	25	
Mg	24	2	45	0.202	ppb	1014.0	463	25	
Al	27	2	45	2.268	ppb	57.4	67	15	
K	39	1	45	85.681	ppb	62.1	7919239	50	>RL
K	39	2	45	-11.561	ppb	-356.7	20215	50	
Ca	40	1	45	2.013	ppb	13.7	40540	50	
Ca	44	2	45	-5.491	ppb	-156.5	17	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	0.456	ppb	76.8	2704	1	
Cr	52	2	72	0.001	ppb	4826.4	193	1	
Mn	55	2	72	0.194	ppb	51.7	137	0.5	
Fe	57	2	72	0.446	ppb	420.6	113	25	
Co	59	2	72	-0.001	ppb	-13580.3	883	0.5	
Ni	60	2	72	-0.057	ppb	-26.1	67	1	
Cu	63	2	72	0.773	ppb	13.7	1527	1	
Zn	66	2	72	0.392	ppb	109.0	167	5	
As	75	2	72	0.078	ppb	84.9	28	1	
Se	78	1	72	0.124	ppb	14.5	71	1	
Sr	88	2	72	-0.035	ppb	-69.4	27	0.5	
Zr	90	2	72	14.794	ppb	239.8	37	1	>RL
Nb	93	2	72	4.948	ppb	6.8	6965	2	>RL
Mo	95	2	115	0.073	ppb	121.7	67	0.5	
Pd	105	2	115	0.039	ppb	93.5	63	1	
Ag	107	2	115	0.006	ppb	221.9	43	1	
Cd	111	2	115	0.034	ppb	100.5	10	0.5	
Sn	120	2	115	0.267	ppb	3.7	357	1	
Sb	121	2	115	0.085	ppb	9.5	117	0.6	
Ba	137	2	115	-0.022	ppb	-157.4	10	0.5	
W	182	2	165	0.068	ppb	16.1	763	1	
Pt	195	2	165	0.006	ppb	86.6	13	1	
Tl	205	2	165	0.011	ppb	68.6	253	0.1	
Pb	208	2	165	0.006	ppb	136.7	663	0.5	
Th	232	2	165	0.266	ppb	12.5	3591	1	
U	238	2	165	0.018	ppb	34.3	237	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	450368	0.39	459341	98.05	60	120	
Sc (IS)	45	1	HMI H2	12438407	0.42	12606259	98.67	60	120	
Sc (IS)	45	2	HMI He	552832	0.23	551341	100.27	60	120	
Sc (IS)	45	3	No Gas	39789405	1.74	40353426	98.60	60	120	
Ge Internal Standard	72	1	HMI H2	5462383	0.42	5557713	98.28	60	120	
Ge Internal Standard	72	2	HMI He	748415	0.53	752535	99.45	60	120	
In Internal Standard	115	2	HMI He	3244531	0.84	3288822	98.65	60	120	
Ho-165	165	2	HMI He	15189674	0.67	15288251	99.36	60	120	

Blank Report

Sample Table

Sample Name	MB 280-456959/1-A
Data File Name	308_BLK.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T05:21:31-06:00
Sample Type	Blank
Dilution	1
Comment	456959 6020
ISTD Ref File Name	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	16.055	ppb	15.25157828	59354	0.5
Li	7	2	45	44.456	ppb	70.36565661	3294	0.5
Li	7	3	45	18.589	ppb	15.38951273	4612196	10
Be	9	1	6	-0.020	ppb	-160.4911278	3	0.5
B	11	1	6	38.542	ppb	213.470405	2697	0.5
Na	23	1	45	133.920	ppb	1.585629746	581879	25
Na	23	2	45	135.517	ppb	3.975473485	40840	25
Mg	24	2	45	4.706	ppb	65.77077088	693	25
Al	27	2	45	4.849	ppb	87.58298255	103	15
K	39	1	45	30326.009	ppb	0.192691966	34949874	50
K	39	2	45	-5.578	ppb	-184.996286	19554	50
Ca	40	1	45	24.853	ppb	2.464272553	100271	50
Ca	44	2	45	23.524	ppb	65.24383953	83	25
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5
V	51	2	72	5.853	ppb	4.458691087	5845	1
Cr	52	2	72	0.115	ppb	114.3791958	270	1
Mn	55	2	72	1.379	ppb	12.10099117	510	0.5
Fe	57	2	72	75.442	ppb	8.528323778	1230	25
Co	59	2	72	0.012	ppb	556.1340353	843	0.5
Ni	60	2	72	0.106	ppb	151.7521892	123	1
Cu	63	2	72	1.064	ppb	11.00368702	1737	1
Zn	66	2	72	1.460	ppb	15.4328905	327	5
As	75	2	72	0.407	ppb	18.63226032	68	1
Se	78	1	72	0.158	ppb	126.9828035	73	1
Sr	88	2	72	0.037	ppb	215.0688739	57	0.5
Zr	90	2	72	21.756	ppb	56.15867507	40	1
Nb	93	2	72	3.841	ppb	6.9919987	5245	2
Mo	95	2	115	0.044	ppb	92.02752795	47	0.5
Pd	105	2	115	0.063	ppb	10.10842783	87	1
Ag	107	2	115	0.021	ppb	69.29120621	73	1
Cd	111	2	115	0.047	ppb	115.223517	13	0.5
Sn	120	2	115	0.870	ppb	14.1208497	850	1
Sb	121	2	115	0.240	ppb	23.75182778	240	0.6
Ba	137	2	115	0.107	ppb	150.8377822	47	0.5
W	182	2	165	0.004	ppb	608.5462177	550	1
Pt	195	2	165	0.006	ppb	42.82992376	13	1
Tl	205	2	165	0.068	ppb	10.16965688	597	0.1
Pb	208	2	165	0.069	ppb	20.44535187	1173	0.5
Th	232	2	165	0.207	ppb	14.62469264	2884	1
U	238	2	165	0.010	ppb	18.20339685	150	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	477253	1.01	459341	103.90	60	120	
Sc (IS)	45	1	HMI H2	12415965	0.44	12606259	98.49	60	120	
Sc (IS)	45	2	HMI He	529015	1.10	551341	95.95	60	120	
Sc (IS)	45	3	No Gas	39042099	0.63	40353426	96.75	60	120	
Ge Internal Standard	72	1	HMI H2	5343931	0.48	5557713	96.15	60	120	
Ge Internal Standard	72	2	HMI He	699679	0.78	752535	92.98	60	120	
In Internal Standard	115	2	HMI He	3159739	0.92	3288822	96.08	60	120	
Ho-165	165	2	HMI He	14865143	0.72	15288251	97.23	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-456959/2-A
Data File Name	309_LCS.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T05:25:26-06:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	456959 6020
ISTD Ref File Name	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	109.299	109.299	ppb	10.704	70563	400	27.3	80	120	>+/-20%
Li	7	2	45	116.480	116.480	ppb	13.464	3721	400	29.1	80	120	>+/-20%
Li	7	3	45	101.709	101.709	ppb	1.447	5504575	400	25.4	80	120	>+/-20%
Be	9	1	6	40.895	40.895	ppb	1.132	6795	40	102.2	80	120	
Na	23	2	45	108.850	108.850	ppb	4.295	36503	40	272.1	80	120	>+/-20%
Mg	24	2	45	3.391	3.391	ppb	41.343	600	40	8.5	80	120	>+/-20%
Al	27	2	45	423.711	423.711	ppb	2.160	6365	40	1059.3	80	120	>+/-20%
K	39	2	45	-5.599	-5.599	ppb	-334.782	18943	40	-14.0	80	120	>+/-20%
Ca	44	2	45	104.562	104.562	ppb	13.024	263	40	261.4	80	120	>+/-20%
V	51	2	72	49.821	49.821	ppb	2.142	32059	40	124.6	80	120	>+/-20%
Cr	52	2	72	44.407	44.407	ppb	2.086	34021	40	111.0	80	120	
Mn	55	2	72	44.042	44.042	ppb	4.287	13917	40	110.1	80	120	
Fe	57	2	72	453.922	453.922	ppb	4.071	6739	40	1134.8	80	120	>+/-20%
Co	59	2	72	44.528	44.528	ppb	2.527	59814	40	111.3	80	120	
Ni	60	2	72	44.541	44.541	ppb	3.006	16353	40	111.4	80	120	
Cu	63	2	72	44.590	44.590	ppb	0.171	46770	40	111.5	80	120	
Zn	66	2	72	46.363	46.363	ppb	1.506	7326	40	115.9	80	120	
As	75	2	72	41.271	41.271	ppb	1.175	5122	40	103.2	80	120	
Se	78	1	72	42.046	42.046	ppb	0.866	4958	40	105.1	80	120	
Nb	93	2	72	2.182	2.182	ppb	12.751	3267	40	5.5	80	120	>+/-20%
Mo	95	2	115	41.364	41.364	ppb	2.322	24976	40	103.4	80	120	
Pd	105	2	115	0.042	0.042	ppb	60.240	63	40	0.1	80	120	>+/-20%
Ag	107	2	115	42.709	42.709	ppb	1.511	87803	40	106.8	80	120	
Cd	111	2	115	42.987	42.987	ppb	2.526	11976	40	107.5	80	120	
Sn	120	2	115	41.890	41.890	ppb	1.215	33942	40	104.7	80	120	
Sb	121	2	115	43.815	43.815	ppb	1.790	34617	40	109.5	80	120	
Ba	137	2	115	43.243	43.243	ppb	5.146	12016	40	108.1	80	120	
W	182	2	165	34.559	34.559	ppb	0.329	106131	40	86.4	80	120	
Pt	195	2	165	0.009	0.009	ppb	50.314	20	40	0.0	80	120	>+/-20%
Tl	205	2	165	40.328	40.328	ppb	1.363	247125	40	100.8	80	120	
Pb	208	2	165	40.917	40.917	ppb	0.254	339678	40	102.3	80	120	
Th	232	2	165	39.675	39.675	ppb	0.600	419655	40	99.2	80	120	
U	238	2	165	41.604	41.604	ppb	0.865	438319	40	104.0	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	445342	0.61	459341	96.95	60	120	
Sc (IS)	45	1	HMI H2	11820548	0.47	12606259	93.77	60	120	
Sc (IS)	45	2	HMI He	512548	0.74	551341	92.96	60	120	
Sc (IS)	45	3	No Gas	38132765	0.48	40353426	94.50	60	120	
Ge Internal Standard	72	1	HMI H2	5066009	0.83	5557713	91.15	60	120	
Ge Internal Standard	72	2	HMI He	682635	0.71	752535	90.71	60	120	
In Internal Standard	115	2	HMI He	3062353	0.83	3288822	93.11	60	120	
Ho-165	165	2	HMI He	14733584	0.84	15288251	96.37	60	120	

Sample Report

Sample Table

Sample Name	280-123295-C-1-B
Data File Name	310SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T05:29:19-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456959 6020
ISTD Ref FileName	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	54.927	ppb	54.927	11.33	62350	500000	
Li	7	2	45	-3.594	ppb	-3.594	-568.60	2817	500000	
Li	7	3	45	62.739	ppb	62.739	5.52	4769154	50000	
Be	9	1	6	0.067	ppb	0.067	109.63	17	2000	
B	11	1	6	84809.831	ppb	84809.831	1.15	275039	2000	>LDR
Na	23	1	45	214383.099	ppb	214383.099	1.22	337890582	2000	>LDR
Na	23	2	45	225446.119	ppb	225446.119	1.45	25769632	400000	
Mg	24	2	45	51709.840	ppb	51709.840	1.33	2747820	400000	
Al	27	2	45	5.568	ppb	5.568	67.82	110	400000	
K	39	1	45	50221.849	ppb	50221.849	0.72	50199521	400000	
K	39	2	45	9339.252	ppb	9339.252	0.68	330229	400000	
Ca	40	1	45	159713.217	ppb	159713.217	0.61	398048061	400000	
Ca	44	2	45	148169.033	ppb	148169.033	1.58	330997	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	5.717	ppb	5.717	12.40	5758	2000	
Cr	52	2	72	1.643	ppb	1.643	2.12	1463	5000	
Mn	55	2	72	4.180	ppb	4.180	5.56	1413	10000	
Fe	57	2	72	45.822	ppb	45.822	15.62	787	400000	
Co	59	2	72	0.085	ppb	0.085	118.72	943	2000	
Ni	60	2	72	1.805	ppb	1.805	10.84	760	5000	
Cu	63	2	72	0.753	ppb	0.753	39.06	1407	5000	
Zn	66	2	72	1.379	ppb	1.379	28.78	313	5000	
As	75	2	72	0.639	ppb	0.639	26.18	97	2000	
Se	78	1	72	0.458	ppb	0.458	49.93	108	2000	
Sr	88	2	72	8892.871	ppb	8892.871	0.96	3928010	4000	
Zr	90	2	72	124.003	ppb	124.003	34.69	127	1000	
Nb	93	2	72	1.610	ppb	1.610	24.22	2694	200	
Mo	95	2	115	6.607	ppb	6.607	6.68	3947	2000	
Pd	105	2	115	0.133	ppb	0.133	47.72	150	100	
Ag	107	2	115	0.072	ppb	0.072	4.49	173	100	
Cd	111	2	115	0.037	ppb	0.037	100.04	10	2000	
Sn	120	2	115	0.710	ppb	0.710	13.12	683	2000	
Sb	121	2	115	0.343	ppb	0.343	20.09	310	1000	
Ba	137	2	115	24.027	ppb	24.027	6.05	6585	5000	
W	182	2	165	0.075	ppb	0.075	48.29	753	100	
Pt	195	2	165	0.022	ppb	0.022	19.28	50	100	
Tl	205	2	165	0.040	ppb	0.040	29.83	417	2000	
Pb	208	2	165	0.023	ppb	0.023	81.15	777	5000	
Th	232	2	165	0.394	ppb	0.394	8.85	4785	2000	
U	238	2	165	0.369	ppb	0.369	8.94	3897	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	423682	1.14	459341	92.24	60	120	
Sc (IS)	45	1	HMI H2	11817251	0.57	12606259	93.74	60	120	
Sc (IS)	45	2	HMI He	508364	1.47	551341	92.21	60	120	
Sc (IS)	45	3	No Gas	36114834	0.71	40353426	89.50	60	120	
Ge Internal Standard	72	1	HMI H2	5225640	0.47	5557713	94.03	60	120	
Ge Internal Standard	72	2	HMI He	699789	1.10	752535	92.99	60	120	
In Internal Standard	115	2	HMI He	3016743	0.68	3288822	91.73	60	120	
Ho-165	165	2	HMI He	14586537	1.54	15288251	95.41	60	120	

Sample Report

Sample Table

Sample Name	280-123295-C-1-Bsd@5
Data File Name	311SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T05:33:13-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456959 6020
ISTD Ref FileName	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	4.757	ppb	4.757	41.08	57300	500000	
Li	7	2	45	-0.874	ppb	-0.874	-1182.57	3040	500000	
Li	7	3	45	6.551	ppb	6.551	56.46	4314008	50000	
Be	9	1	6	0.002	ppb	0.002	1955.20	7	2000	
B	11	1	6	16630.937	ppb	16630.937	1.09	57819	2000	>LDR
Na	23	1	45	42025.788	ppb	42025.788	0.47	69560764	2000	>LDR
Na	23	2	45	43335.041	ppb	43335.041	0.61	5329054	400000	
Mg	24	2	45	9361.181	ppb	9361.181	1.54	533462	400000	
Al	27	2	45	0.651	ppb	0.651	334.96	40	400000	
K	39	1	45	9354.524	ppb	9354.524	1.32	16119229	400000	
K	39	2	45	1802.062	ppb	1802.062	0.45	84691	400000	
Ca	40	1	45	30613.506	ppb	30613.506	0.52	79820195	400000	
Ca	44	2	45	28020.019	ppb	28020.019	1.63	67107	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	2.227	ppb	2.227	8.13	3864	2000	
Cr	52	2	72	0.197	ppb	0.197	12.79	357	5000	
Mn	55	2	72	0.891	ppb	0.891	26.65	377	10000	
Fe	57	2	72	9.196	ppb	9.196	27.51	253	400000	
Co	59	2	72	0.075	ppb	0.075	53.00	993	2000	
Ni	60	2	72	0.276	ppb	0.276	17.57	200	5000	
Cu	63	2	72	0.586	ppb	0.586	22.29	1313	5000	
Zn	66	2	72	1.154	ppb	1.154	2.79	297	5000	
As	75	2	72	0.189	ppb	0.189	55.66	43	2000	
Se	78	1	72	-0.061	ppb	-0.061	-325.66	48	2000	
Sr	88	2	72	1565.013	ppb	1565.013	0.73	738681	4000	
Zr	90	2	72	33.278	ppb	33.278	191.25	53	1000	
Nb	93	2	72	0.179	ppb	0.179	40.71	1130	200	
Mo	95	2	115	1.457	ppb	1.457	4.15	953	2000	
Pd	105	2	115	0.046	ppb	0.046	114.91	70	100	
Ag	107	2	115	0.000	ppb	0.000	160.81	30	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.162	ppb	0.162	37.78	267	2000	
Sb	121	2	115	0.032	ppb	0.032	82.67	73	1000	
Ba	137	2	115	4.686	ppb	4.686	7.40	1397	5000	
W	182	2	165	-0.036	ppb	-0.036	-60.37	440	100	
Pt	195	2	165	0.003	ppb	0.003	86.61	7	100	
Tl	205	2	165	0.002	ppb	0.002	147.39	197	2000	
Pb	208	2	165	0.057	ppb	0.057	16.58	1103	5000	
Th	232	2	165	0.006	ppb	0.006	79.44	763	2000	
U	238	2	165	0.061	ppb	0.061	13.21	710	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	439295	0.21	459341	95.64	60	120	
Sc (IS)	45	1	HMI H2	12358325	0.15	12606259	98.03	60	120	
Sc (IS)	45	2	HMI He	544742	0.06	551341	98.80	60	120	
Sc (IS)	45	3	No Gas	37731094	0.38	40353426	93.50	60	120	
Ge Internal Standard	72	1	HMI H2	5525717	0.55	5557713	99.42	60	120	
Ge Internal Standard	72	2	HMI He	747710	0.36	752535	99.36	60	120	
In Internal Standard	115	2	HMI He	3250207	1.78	3288822	98.83	60	120	
Ho-165	165	2	HMI He	15290349	1.06	15288251	100.01	60	120	

Sample Report

Sample Table

Sample Name	280-123295-C-1-C MS
Data File Name	312SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T05:37:06-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456959 6020
ISTD Ref FileName	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	136.893	ppb	136.893	7.45	75466	500000	
Li	7	2	45	143.757	ppb	143.757	25.90	3757	500000	
Li	7	3	45	113.876	ppb	113.876	2.16	4461167	50000	
Be	9	1	6	42.544	ppb	42.544	2.03	6819	2000	
B	11	1	6	85874.914	ppb	85874.914	0.82	282363	2000	>LDR
Na	23	1	45	212651.909	ppb	212651.909	0.77	338653182	2000	>LDR
Na	23	2	45	224147.806	ppb	224147.806	0.42	24774191	400000	
Mg	24	2	45	51655.249	ppb	51655.249	0.96	2654254	400000	
Al	27	2	45	401.884	ppb	401.884	6.36	5788	400000	
K	39	1	45	47886.081	ppb	47886.081	1.30	48711238	400000	
K	39	2	45	9342.869	ppb	9342.869	1.01	319414	400000	
Ca	40	1	45	157114.577	ppb	157114.577	1.04	395635367	400000	
Ca	44	2	45	145329.368	ppb	145329.368	0.40	313934	400000	
Ti	47	2	45	0.894	ppb	0.894	114.80	13	4000	
V	51	2	72	48.487	ppb	48.487	1.54	30697	2000	
Cr	52	2	72	41.490	ppb	41.490	1.63	31224	5000	
Mn	55	2	72	45.235	ppb	45.235	1.96	14034	10000	
Fe	57	2	72	483.030	ppb	483.030	2.91	7032	400000	
Co	59	2	72	41.633	ppb	41.633	2.84	54938	2000	
Ni	60	2	72	42.455	ppb	42.455	5.12	15302	5000	
Cu	63	2	72	41.805	ppb	41.805	1.29	43098	5000	
Zn	66	2	72	40.818	ppb	40.818	1.25	6345	5000	
As	75	2	72	41.207	ppb	41.207	2.13	5020	2000	
Se	78	1	72	39.994	ppb	39.994	4.01	4881	2000	
Sr	88	2	72	8870.453	ppb	8870.453	0.99	3752732	4000	
Zr	90	2	72	2007.447	ppb	2007.447	7.26	1647	1000	
Nb	93	2	72	0.763	ppb	0.763	35.39	1650	200	
Mo	95	2	115	48.755	ppb	48.755	5.14	27468	2000	
Pd	105	2	115	0.083	ppb	0.083	39.13	97	100	
Ag	107	2	115	41.122	ppb	41.122	0.51	78894	100	
Cd	111	2	115	41.759	ppb	41.759	2.11	10855	2000	
Sn	120	2	115	42.148	ppb	42.148	4.57	31884	2000	
Sb	121	2	115	44.693	ppb	44.693	0.88	32947	1000	
Ba	137	2	115	65.397	ppb	65.397	2.17	16958	5000	
W	182	2	165	34.933	ppb	34.933	3.14	99884	100	
Pt	195	2	165	0.005	ppb	0.005	173.21	10	100	
Tl	205	2	165	38.735	ppb	38.735	0.74	221130	2000	
Pb	208	2	165	39.218	ppb	39.218	0.44	303324	5000	
Th	232	2	165	38.999	ppb	38.999	1.09	384244	2000	
U	238	2	165	41.544	ppb	41.544	0.78	407712	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	429575	0.27	459341	93.52	60	120	
Sc (IS)	45	1	HMI H2	11940389	1.02	12606259	94.72	60	120	
Sc (IS)	45	2	HMI He	491486	1.41	551341	89.14	60	120	
Sc (IS)	45	3	No Gas	30103207	0.58	40353426	74.60	60	120	
Ge Internal Standard	72	1	HMI H2	5239899	0.57	5557713	94.28	60	120	
Ge Internal Standard	72	2	HMI He	670329	2.75	752535	89.08	60	120	
In Internal Standard	115	2	HMI He	2857496	1.84	3288822	86.89	60	120	
Ho-165	165	2	HMI He	13726220	2.76	15288251	89.78	60	120	

Sample Report

Sample Table

Sample Name	280-123295-C-1-D MSD
Data File Name	313SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T05:40:56-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456959 6020
ISTD Ref FileName	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	154.613	ppb	154.613	3.20	71584	500000	
Li	7	2	45	153.154	ppb	153.154	37.36	3621	500000	
Li	7	3	45	107.245	ppb	107.245	3.74	3581541	50000	
Be	9	1	6	40.875	ppb	40.875	5.45	6058	2000	
B	11	1	6	84533.535	ppb	84533.535	2.28	257040	2000	>LDR
Na	23	1	45	214283.721	ppb	214283.721	0.44	312470515	2000	>LDR
Na	23	2	45	221557.539	ppb	221557.539	0.54	23202789	400000	
Mg	24	2	45	50924.587	ppb	50924.587	1.72	2478874	400000	
Al	27	2	45	384.426	ppb	384.426	4.20	5251	400000	
K	39	1	45	47956.811	ppb	47956.811	0.20	44661223	400000	
K	39	2	45	9183.305	ppb	9183.305	1.50	297776	400000	
Ca	40	1	45	156898.753	ppb	156898.753	0.52	361776968	400000	
Ca	44	2	45	141319.924	ppb	141319.924	1.41	289259	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	47.809	ppb	47.809	2.45	28305	2000	
Cr	52	2	72	41.064	ppb	41.064	0.91	28883	5000	
Mn	55	2	72	46.984	ppb	46.984	3.20	13627	10000	
Fe	57	2	72	456.960	ppb	456.960	3.05	6222	400000	
Co	59	2	72	39.853	ppb	39.853	0.46	49208	2000	
Ni	60	2	72	43.053	ppb	43.053	2.90	14515	5000	
Cu	63	2	72	40.599	ppb	40.599	0.31	39127	5000	
Zn	66	2	72	58.496	ppb	58.496	3.57	8460	5000	
As	75	2	72	40.733	ppb	40.733	1.77	4641	2000	
Se	78	1	72	37.335	ppb	37.335	3.07	4175	2000	
Sr	88	2	72	8807.716	ppb	8807.716	0.19	3483110	4000	
Zr	90	2	72	1806.032	ppb	1806.032	13.85	1383	1000	
Nb	93	2	72	0.465	ppb	0.465	22.15	1237	200	
Mo	95	2	115	47.173	ppb	47.173	2.55	25177	2000	
Pd	105	2	115	0.135	ppb	0.135	42.70	137	100	
Ag	107	2	115	39.306	ppb	39.306	2.50	71432	100	
Cd	111	2	115	39.735	ppb	39.735	0.74	9787	2000	
Sn	120	2	115	40.652	ppb	40.652	0.98	29125	2000	
Sb	121	2	115	43.025	ppb	43.025	2.12	30054	1000	
Ba	137	2	115	63.018	ppb	63.018	3.86	15476	5000	
W	182	2	165	33.646	ppb	33.646	0.27	91270	100	
Pt	195	2	165	0.000	ppb	0.000	#DIV/0!	0	100	
Tl	205	2	165	37.774	ppb	37.774	0.80	204460	2000	
Pb	208	2	165	38.114	ppb	38.114	1.83	279454	5000	
Th	232	2	165	38.051	ppb	38.051	0.77	355496	2000	
U	238	2	165	39.895	ppb	39.895	0.22	371222	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	397186	0.37	459341	86.47	60	120	
Sc (IS)	45	1	HMI H2	10933277	1.34	12606259	86.73	60	120	
Sc (IS)	45	2	HMI He	465688	2.99	551341	84.46	60	120	
Sc (IS)	45	3	No Gas	24514640	0.37	40353426	60.75	60	120	
Ge Internal Standard	72	1	HMI H2	4797366	0.97	5557713	86.32	60	120	
Ge Internal Standard	72	2	HMI He	626459	3.57	752535	83.25	60	120	
In Internal Standard	115	2	HMI He	2706827	3.31	3288822	82.30	60	120	
Ho-165	165	2	HMI He	13012461	3.58	15288251	85.11	60	120	

Sample Table

Sample Name	280-123295-C-1-B pds
Data File Name	314SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T05:44:46-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456959 6020
ISTD Ref FileName	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	63.632	ppb	63.632	13.40	59180	500000	
Li	7	2	45	38.931	ppb	38.931	94.01	2957	500000	
Li	7	3	45	22.977	ppb	22.977	20.41	3038732	50000	
Be	9	1	6	221.996	ppb	221.996	2.90	33254	2000	
B	11	1	6	82831.719	ppb	82831.719	2.00	254809	2000	>LDR
Na	23	1	45	213773.994	ppb	213773.994	0.28	313259895	2000	>LDR
Na	23	2	45	220453.046	ppb	220453.046	1.18	23842964	400000	
Mg	24	2	45	50922.257	ppb	50922.257	0.72	2560217	400000	
Al	27	2	45	2052.312	ppb	2052.312	2.37	28832	400000	
K	39	1	45	49081.292	ppb	49081.292	0.19	45768923	400000	
K	39	2	45	9235.322	ppb	9235.322	0.53	309138	400000	
Ca	40	1	45	157229.793	ppb	157229.793	0.21	364325741	400000	
Ca	44	2	45	143489.711	ppb	143489.711	0.88	303299	400000	
Ti	47	2	45	3.900	ppb	3.900	81.24	57	4000	
V	51	2	72	229.442	ppb	229.442	0.89	132644	2000	
Cr	52	2	72	220.959	ppb	220.959	0.36	160028	5000	
Mn	55	2	72	225.589	ppb	225.589	1.54	67403	10000	
Fe	57	2	72	2231.701	ppb	2231.701	2.59	31078	400000	
Co	59	2	72	219.539	ppb	219.539	0.84	276871	2000	
Ni	60	2	72	221.344	ppb	221.344	1.50	76844	5000	
Cu	63	2	72	214.280	ppb	214.280	0.20	211196	5000	
Zn	66	2	72	223.101	ppb	223.101	1.73	33129	5000	
As	75	2	72	215.752	ppb	215.752	0.78	25349	2000	
Se	78	1	72	207.331	ppb	207.331	2.32	23123	2000	
Sr	88	2	72	8735.782	ppb	8735.782	0.71	3572762	4000	
Zr	90	2	72	277956.570	ppb	277956.570	1.39	217360	1000	>LDR
Nb	93	2	72	6.272	ppb	6.272	4.24	7432	200	
Mo	95	2	115	231.003	ppb	231.003	1.63	126691	2000	
Pd	105	2	115	0.195	ppb	0.195	18.07	193	100	
Ag	107	2	115	47.766	ppb	47.766	1.44	89237	100	
Cd	111	2	115	218.164	ppb	218.164	0.95	55233	2000	
Sn	120	2	115	218.161	ppb	218.161	1.62	160177	2000	
Sb	121	2	115	234.140	ppb	234.140	0.32	167936	1000	
Ba	137	2	115	247.450	ppb	247.450	0.33	62431	5000	
W	182	2	165	218.406	ppb	218.406	0.40	596248	100	
Pt	195	2	165	0.134	ppb	0.134	27.17	280	100	
Tl	205	2	165	209.475	ppb	209.475	0.27	1145364	2000	
Pb	208	2	165	208.577	ppb	208.577	0.57	1543657	5000	
Th	232	2	165	1.065	ppb	1.065	7.26	10645	2000	
U	238	2	165	253.735	ppb	253.735	0.18	2386355	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	401765	0.30	459341	87.47	60	120	
Sc (IS)	45	1	HMI H2	10986564	0.72	12606259	87.15	60	120	
Sc (IS)	45	2	HMI He	480927	0.57	551341	87.23	60	120	
Sc (IS)	45	3	No Gas	25424975	0.27	40353426	63.01	60	120	
Ge Internal Standard	72	1	HMI H2	4830915	0.41	5557713	86.92	60	120	
Ge Internal Standard	72	2	HMI He	647943	1.35	752535	86.10	60	120	
In Internal Standard	115	2	HMI He	2782728	0.59	3288822	84.61	60	120	
Ho-165	165	2	HMI He	13153474	1.62	15288251	86.04	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5688510
Data File Name	315_CCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T05:48:38-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	107.576	ppb	12.781	63428	100	107.6	90	110	
Li	7	2	45	89.613	ppb	9.403	3254	100	89.6	90	110	>+\-10%
Li	7	3	45	88.086	ppb	8.449	4182022	100	88.1	90	110	>+\-10%
Be	9	1	6	48.476	ppb	10.843	7082	50	97.0	90	110	
B	11	1	6	1554.641	ppb	7.912	6728	50	3109.3	90	110	>+\-10%
Na	23	1	45	1132.834	ppb	1.167	1919478	1000	113.3	90	110	>+\-10%
Na	23	2	45	1017.512	ppb	3.399	130281	1000	101.8	90	110	
Mg	24	2	45	977.350	ppb	4.209	48708	1000	97.7	90	110	
Al	27	2	45	989.971	ppb	4.422	13690	1000	99.0	90	110	
K	39	1	45	729.038	ppb	19.060	7284901	1000	72.9	90	110	>+\-10%
K	39	2	45	1010.205	ppb	4.106	49006	1000	101.0	90	110	
Ca	40	1	45	1050.172	ppb	2.246	2392304	1000	105.0	90	110	
Ca	44	2	45	974.752	ppb	6.496	2054	1000	97.5	90	110	
Ti	47	2	45	43.439	ppb	26.558	620	50	86.9	90	110	>+\-10%
V	51	2	72	49.732	ppb	0.511	30476	50	99.5	90	110	
Cr	52	2	72	49.171	ppb	0.103	35852	50	98.3	90	110	
Mn	55	2	72	50.583	ppb	5.025	15209	50	101.2	90	110	
Fe	57	2	72	960.341	ppb	3.691	13467	1000	96.0	90	110	
Co	59	2	72	49.139	ppb	2.154	62763	50	98.3	90	110	
Ni	60	2	72	49.894	ppb	5.428	17435	50	99.8	90	110	
Cu	63	2	72	48.699	ppb	0.844	48582	50	97.4	90	110	
Zn	66	2	72	48.943	ppb	2.518	7359	50	97.9	90	110	
As	75	2	72	48.466	ppb	1.233	5724	50	96.9	90	110	
Se	78	1	72	46.777	ppb	2.184	5141	50	93.6	90	110	
Sr	88	2	72	100.314	ppb	1.919	41191	100	100.3	90	110	
Zr	90	2	72	339.829	ppb	15.212	287	50	679.7	90	110	>+\-10%
Nb	93	2	72	93.194	ppb	2.032	99807	100	93.2	90	110	
Mo	95	2	115	47.926	ppb	3.086	26967	50	95.9	90	110	
Pd	105	2	115	48.544	ppb	0.786	44462	50	97.1	90	110	
Ag	107	2	115	48.689	ppb	1.048	93277	50	97.4	90	110	
Cd	111	2	115	48.840	ppb	4.519	12683	50	97.7	90	110	
Sn	120	2	115	49.265	ppb	1.418	37181	50	98.5	90	110	
Sb	121	2	115	49.276	ppb	0.895	36278	50	98.6	90	110	
Ba	137	2	115	49.325	ppb	3.174	12773	50	98.7	90	110	
W	182	2	165	48.360	ppb	0.856	135296	50	96.7	90	110	
Pt	195	2	165	48.809	ppb	1.025	104209	50	97.6	90	110	
Tl	205	2	165	48.556	ppb	0.530	271437	50	97.1	90	110	
Pb	208	2	165	48.833	ppb	0.673	369740	50	97.7	90	110	
Th	232	2	165	48.097	ppb	0.281	463986	50	96.2	90	110	
U	238	2	165	49.028	ppb	1.173	471254	50	98.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	391835	1.18	459341	85.30	60	120	
Sc (IS)	45	1	HMI H2	10665864	0.40	12606259	84.61	60	120	
Sc (IS)	45	2	HMI He	473186	1.49	551341	85.82	60	120	
Sc (IS)	45	3	No Gas	29858055	0.47	40353426	73.99	60	120	
Ge Internal Standard	72	1	HMI H2	4726573	0.14	5557713	85.05	60	120	
Ge Internal Standard	72	2	HMI He	649949	0.58	752535	86.37	60	120	
In Internal Standard	115	2	HMI He	2853818	0.68	3288822	86.77	60	120	
Ho-165	165	2	HMI He	13441346	0.85	15288251	87.92	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5688508
Data File Name	316_CCB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T05:52:32-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-7.906	ppb	-25.6	3340826	10	
Be	9	1	6	0.099	ppb	69.2	20	0.5	
B	11	1	6	497.689	ppb	7.2	3554	0.5	>RL
Na	23	1	45	23.339	ppb	8.5	340626	25	
Na	23	2	45	21.741	ppb	43.3	24291	25	
Mg	24	2	45	-0.483	ppb	-533.8	360	25	
Al	27	2	45	2.742	ppb	66.1	63	15	
K	39	1	45	616.007	ppb	10.5	7154125	50	>RL
K	39	2	45	34.160	ppb	64.4	18613	50	
Ca	40	1	45	5.519	ppb	15.0	42386	50	
Ca	44	2	45	10.210	ppb	72.2	47	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	1.228	ppb	21.5	2770	1	>RL
Cr	52	2	72	0.043	ppb	107.5	197	1	
Mn	55	2	72	0.088	ppb	246.5	87	0.5	
Fe	57	2	72	7.837	ppb	27.0	200	25	
Co	59	2	72	-0.034	ppb	-140.3	720	0.5	
Ni	60	2	72	-0.021	ppb	-132.1	70	1	
Cu	63	2	72	1.089	ppb	9.5	1627	1	>RL
Zn	66	2	72	0.276	ppb	163.0	127	5	
As	75	2	72	0.049	ppb	51.0	21	1	
Se	78	1	72	-0.202	ppb	-106.3	25	1	
Sr	88	2	72	0.212	ppb	52.6	123	0.5	
Zr	90	2	72	42.944	ppb	92.2	53	1	>RL
Nb	93	2	72	3.002	ppb	4.2	3954	2	>RL
Mo	95	2	115	0.140	ppb	40.8	97	0.5	
Pd	105	2	115	0.010	ppb	378.9	30	1	
Ag	107	2	115	0.004	ppb	357.3	33	1	
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5	
Sn	120	2	115	0.245	ppb	66.1	300	1	
Sb	121	2	115	0.066	ppb	18.9	90	0.6	
Ba	137	2	115	0.046	ppb	94.4	27	0.5	
W	182	2	165	0.008	ppb	636.2	507	1	
Pt	195	2	165	0.008	ppb	69.4	17	1	
Tl	205	2	165	0.037	ppb	28.1	363	0.1	
Pb	208	2	165	0.014	ppb	72.5	640	0.5	
Th	232	2	165	0.275	ppb	13.6	3244	1	
U	238	2	165	0.022	ppb	18.5	247	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	388821	0.48	459341	84.65	60	120	
Sc (IS)	45	1	HMI H2	10600830	0.68	12606259	84.09	60	120	
Sc (IS)	45	2	HMI He	470395	0.50	551341	85.32	60	120	
Sc (IS)	45	3	No Gas	30434266	0.14	40353426	75.42	60	120	
Ge Internal Standard	72	1	HMI H2	4673814	0.19	5557713	84.10	60	120	
Ge Internal Standard	72	2	HMI He	645596	0.64	752535	85.79	60	120	
In Internal Standard	115	2	HMI He	2872786	0.92	3288822	87.35	60	120	
Ho-165	165	2	HMI He	13337619	0.57	15288251	87.24	60	120	

Sample Report

Sample Table

Sample Name	280-123295-C-2-B
Data File Name	317SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T05:56:26-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456959 6020
ISTD Ref FileName	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	63.010	ppb	63.010	18.15	56714	500000	
Li	7	2	45	62.970	ppb	62.970	39.82	2924	500000	
Li	7	3	45	33.335	ppb	33.335	9.94	3425023	50000	
Be	9	1	6	0.053	ppb	0.053	76.02	13	2000	
B	11	1	6	86941.134	ppb	86941.134	0.97	258796	2000	>LDR
Na	23	1	45	238155.282	ppb	238155.282	0.55	334903415	2000	>LDR
Na	23	2	45	252491.738	ppb	252491.738	0.51	25552909	400000	
Mg	24	2	45	42178.312	ppb	42178.312	0.92	1984819	400000	
Al	27	2	45	9.029	ppb	9.029	42.46	143	400000	
K	39	1	45	47556.996	ppb	47556.996	0.85	42768411	400000	
K	39	2	45	9530.548	ppb	9530.548	0.91	298014	400000	
Ca	40	1	45	104408.534	ppb	104408.534	0.58	232198743	400000	
Ca	44	2	45	99154.014	ppb	99154.014	1.11	196133	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	6.569	ppb	6.569	7.36	5475	2000	
Cr	52	2	72	0.202	ppb	0.202	35.11	293	5000	
Mn	55	2	72	5.118	ppb	5.118	18.42	1493	10000	
Fe	57	2	72	344.524	ppb	344.524	1.87	4584	400000	
Co	59	2	72	0.919	ppb	0.919	7.80	1807	2000	
Ni	60	2	72	1.947	ppb	1.947	19.95	707	5000	
Cu	63	2	72	0.773	ppb	0.773	2.09	1243	5000	
Zn	66	2	72	3.623	ppb	3.623	14.55	587	5000	
As	75	2	72	0.990	ppb	0.990	19.59	124	2000	
Se	78	1	72	0.310	ppb	0.310	10.13	80	2000	
Sr	88	2	72	7244.279	ppb	7244.279	1.25	2785987	4000	
Zr	90	2	72	152.077	ppb	152.077	47.24	130	1000	
Nb	93	2	72	2.635	ppb	2.635	10.11	3364	200	
Mo	95	2	115	2.825	ppb	2.825	10.08	1497	2000	
Pd	105	2	115	0.107	ppb	0.107	11.71	110	100	
Ag	107	2	115	0.014	ppb	0.014	66.51	50	100	
Cd	111	2	115	0.028	ppb	0.028	173.21	7	2000	
Sn	120	2	115	0.967	ppb	0.967	9.26	783	2000	
Sb	121	2	115	0.383	ppb	0.383	1.07	300	1000	
Ba	137	2	115	21.592	ppb	21.592	2.41	5221	5000	
W	182	2	165	0.104	ppb	0.104	69.54	727	100	
Pt	195	2	165	0.007	ppb	0.007	113.79	13	100	
Tl	205	2	165	0.017	ppb	0.017	73.68	240	2000	
Pb	208	2	165	0.135	ppb	0.135	5.71	1463	5000	
Th	232	2	165	0.205	ppb	0.205	14.71	2424	2000	
U	238	2	165	0.267	ppb	0.267	4.50	2440	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	388946	0.54	459341	84.67	60	120	
Sc (IS)	45	1	HMI H2	10544505	0.60	12606259	83.64	60	120	
Sc (IS)	45	2	HMI He	450089	1.22	551341	81.64	60	120	
Sc (IS)	45	3	No Gas	27896437	0.92	40353426	69.13	60	120	
Ge Internal Standard	72	1	HMI H2	4639126	0.80	5557713	83.47	60	120	
Ge Internal Standard	72	2	HMI He	609339	2.09	752535	80.97	60	120	
In Internal Standard	115	2	HMI He	2660907	0.94	3288822	80.91	60	120	
Ho-165	165	2	HMI He	12573266	2.14	15288251	82.24	60	120	

Sample Report

Sample Table

Sample Name	280-123295-C-3-B
Data File Name	318SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T06:00:18-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456959 6020
ISTD Ref FileName	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	56.249	ppb	56.249	7.49	54078	500000	
Li	7	2	45	44.547	ppb	44.547	22.97	2854	500000	
Li	7	3	45	22.097	ppb	22.097	42.34	3143282	50000	
Be	9	1	6	0.009	ppb	0.009	902.81	7	2000	
B	11	1	6	80406.599	ppb	80406.599	2.75	230903	2000	>LDR
Na	23	1	45	224936.650	ppb	224936.650	0.47	306512115	2000	>LDR
Na	23	2	45	228282.242	ppb	228282.242	1.44	23505532	400000	
Mg	24	2	45	33132.813	ppb	33132.813	1.63	1586221	400000	
Al	27	2	45	42.528	ppb	42.528	2.67	593	400000	
K	39	1	45	47086.474	ppb	47086.474	0.61	41094743	400000	
K	39	2	45	7876.088	ppb	7876.088	0.38	253544	400000	
Ca	40	1	45	99787.986	ppb	99787.986	0.57	215036037	400000	
Ca	44	2	45	88988.739	ppb	88988.739	0.98	179108	400000	
Ti	47	2	45	3.600	ppb	3.600	87.09	50	4000	
V	51	2	72	5.959	ppb	5.959	8.85	5238	2000	
Cr	52	2	72	0.357	ppb	0.357	14.20	407	5000	
Mn	55	2	72	9.954	ppb	9.954	7.47	2904	10000	
Fe	57	2	72	136.304	ppb	136.304	3.61	1900	400000	
Co	59	2	72	0.150	ppb	0.150	38.84	913	2000	
Ni	60	2	72	1.153	ppb	1.153	28.31	457	5000	
Cu	63	2	72	1.515	ppb	1.515	18.05	1964	5000	
Zn	66	2	72	2.993	ppb	2.993	11.65	507	5000	
As	75	2	72	0.715	ppb	0.715	42.94	95	2000	
Se	78	1	72	0.152	ppb	0.152	102.90	61	2000	
Sr	88	2	72	5967.660	ppb	5967.660	1.34	2336801	4000	
Zr	90	2	72	237.388	ppb	237.388	80.11	197	1000	
Nb	93	2	72	1.001	ppb	1.001	19.68	1770	200	
Mo	95	2	115	1.623	ppb	1.623	17.19	883	2000	
Pd	105	2	115	0.101	ppb	0.101	46.54	107	100	
Ag	107	2	115	0.001	ppb	0.001	1397.06	27	100	
Cd	111	2	115	0.081	ppb	0.081	50.22	20	2000	
Sn	120	2	115	0.639	ppb	0.639	22.92	563	2000	
Sb	121	2	115	0.211	ppb	0.211	54.99	187	1000	
Ba	137	2	115	20.998	ppb	20.998	0.82	5175	5000	
W	182	2	165	0.845	ppb	0.845	2.58	2707	100	
Pt	195	2	165	0.003	ppb	0.003	86.65	7	100	
Tl	205	2	165	0.011	ppb	0.011	53.96	213	2000	
Pb	208	2	165	0.081	ppb	0.081	5.99	1100	5000	
Th	232	2	165	0.071	ppb	0.071	13.70	1240	2000	
U	238	2	165	0.213	ppb	0.213	8.14	1987	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	375027	0.87	459341	81.64	60	120	
Sc (IS)	45	1	HMI H2	10216933	0.14	12606259	81.05	60	120	
Sc (IS)	45	2	HMI He	457935	1.04	551341	83.06	60	120	
Sc (IS)	45	3	No Gas	26367831	1.61	40353426	65.34	60	120	
Ge Internal Standard	72	1	HMI H2	4515450	0.29	5557713	81.25	60	120	
Ge Internal Standard	72	2	HMI He	620325	0.66	752535	82.43	60	120	
In Internal Standard	115	2	HMI He	2711528	0.93	3288822	82.45	60	120	
Ho-165	165	2	HMI He	12794670	1.96	15288251	83.69	60	120	

Sample Report

Sample Table

Sample Name	280-123295-C-4-B
Data File Name	319SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T06:04:10-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456959 6020
ISTD Ref FileName	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	76.464	ppb	76.464	2.97	59803	500000	
Li	7	2	45	103.212	ppb	103.212	3.88	3294	500000	
Li	7	3	45	24.013	ppb	24.013	5.69	2716939	50000	
Be	9	1	6	0.006	ppb	0.006	1226.78	7	2000	
B	11	1	6	45621.799	ppb	45621.799	2.60	136935	2000	>LDR
Na	23	1	45	201946.676	ppb	201946.676	0.67	290209196	2000	>LDR
Na	23	2	45	209882.451	ppb	209882.451	0.88	21986671	400000	
Mg	24	2	45	53425.633	ppb	53425.633	0.99	2601652	400000	
Al	27	2	45	18.224	ppb	18.224	10.41	273	400000	
K	39	1	45	49737.301	ppb	49737.301	0.92	45391401	400000	
K	39	2	45	9154.959	ppb	9154.959	0.96	297008	400000	
Ca	40	1	45	211208.344	ppb	211208.344	0.74	479901700	400000	
Ca	44	2	45	188845.384	ppb	188845.384	0.44	386631	400000	
Ti	47	2	45	0.917	ppb	0.917	173.21	13	4000	
V	51	2	72	5.111	ppb	5.111	12.06	4861	2000	
Cr	52	2	72	0.168	ppb	0.168	7.79	280	5000	
Mn	55	2	72	1.837	ppb	1.837	8.96	593	10000	
Fe	57	2	72	33.713	ppb	33.713	19.15	543	400000	
Co	59	2	72	0.106	ppb	0.106	49.35	873	2000	
Ni	60	2	72	1.775	ppb	1.775	26.89	670	5000	
Cu	63	2	72	0.417	ppb	0.417	17.04	943	5000	
Zn	66	2	72	2.973	ppb	2.973	11.96	510	5000	
As	75	2	72	1.857	ppb	1.857	7.41	227	2000	
Se	78	1	72	0.197	ppb	0.197	91.60	69	2000	
Sr	88	2	72	9701.792	ppb	9701.792	0.50	3856636	4000	
Zr	90	2	72	221.598	ppb	221.598	81.41	190	1000	
Nb	93	2	72	0.070	ppb	0.070	274.26	833	200	
Mo	95	2	115	5.303	ppb	5.303	9.96	2874	2000	
Pd	105	2	115	0.117	ppb	0.117	36.62	120	100	
Ag	107	2	115	-0.005	ppb	-0.005	-60.25	17	100	
Cd	111	2	115	0.054	ppb	0.054	111.74	13	2000	
Sn	120	2	115	0.512	ppb	0.512	20.65	473	2000	
Sb	121	2	115	0.336	ppb	0.336	22.15	273	1000	
Ba	137	2	115	24.313	ppb	24.313	2.10	6018	5000	
W	182	2	165	0.055	ppb	0.055	10.83	617	100	
Pt	195	2	165	0.005	ppb	0.005	100.65	10	100	
Tl	205	2	165	0.011	ppb	0.011	57.19	217	2000	
Pb	208	2	165	0.057	ppb	0.057	21.44	940	5000	
Th	232	2	165	0.011	ppb	0.011	100.13	693	2000	
U	238	2	165	0.234	ppb	0.234	4.80	2207	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	389419	1.23	459341	84.78	60	120	
Sc (IS)	45	1	HMI H2	10773909	0.63	12606259	85.46	60	120	
Sc (IS)	45	2	HMI He	465800	4.01	551341	84.48	60	120	
Sc (IS)	45	3	No Gas	22670825	0.54	40353426	56.18	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4730967	0.76	5557713	85.12	60	120	
Ge Internal Standard	72	2	HMI He	629789	5.08	752535	83.69	60	120	
In Internal Standard	115	2	HMI He	2723524	5.88	3288822	82.81	60	120	
Ho-165	165	2	HMI He	12966347	4.30	15288251	84.81	60	120	

Sample Report

Sample Table

Sample Name	280-123295-C-5-B
Data File Name	320SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T06:08:03-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456959 6020
ISTD Ref FileName	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	61.181	ppb	61.181	13.17	54239	500000	
Li	7	2	45	62.431	ppb	62.431	17.12	2900	500000	
Li	7	3	45	11.043	ppb	11.043	12.12	2732453	50000	
Be	9	1	6	-0.015	ppb	-0.015	-289.03	3	2000	
B	11	1	6	93533.848	ppb	93533.848	1.67	264925	2000	>LDR
Na	23	1	45	262921.907	ppb	262921.907	0.32	355066368	2000	>LDR
Na	23	2	45	273193.863	ppb	273193.863	0.23	27474210	400000	
Mg	24	2	45	42637.188	ppb	42637.188	0.52	1993606	400000	
Al	27	2	45	366.018	ppb	366.018	6.55	4798	400000	
K	39	1	45	49941.641	ppb	49941.641	0.73	42815574	400000	
K	39	2	45	9897.951	ppb	9897.951	0.33	306943	400000	
Ca	40	1	45	127674.171	ppb	127674.171	0.35	272695289	400000	
Ca	44	2	45	116382.900	ppb	116382.900	1.07	228822	400000	
Ti	47	2	45	8.703	ppb	8.703	42.97	117	4000	
V	51	2	72	5.423	ppb	5.423	4.30	4834	2000	
Cr	52	2	72	1.076	ppb	1.076	10.16	883	5000	
Mn	55	2	72	28.638	ppb	28.638	5.77	8049	10000	
Fe	57	2	72	767.619	ppb	767.619	2.69	10057	400000	
Co	59	2	72	2.232	ppb	2.232	5.27	3341	2000	
Ni	60	2	72	1.582	ppb	1.582	30.96	587	5000	
Cu	63	2	72	1.009	ppb	1.009	9.13	1453	5000	
Zn	66	2	72	4.040	ppb	4.040	9.25	640	5000	
As	75	2	72	1.976	ppb	1.976	8.11	231	2000	
Se	78	1	72	0.106	ppb	0.106	95.16	56	2000	
Sr	88	2	72	7098.138	ppb	7098.138	1.46	2715866	4000	
Zr	90	2	72	990.938	ppb	990.938	4.57	743	1000	
Nb	93	2	72	0.057	ppb	0.057	268.03	797	200	
Mo	95	2	115	3.705	ppb	3.705	9.69	1944	2000	
Pd	105	2	115	0.069	ppb	0.069	44.00	77	100	
Ag	107	2	115	-0.012	ppb	-0.012	-27.15	3	100	
Cd	111	2	115	0.055	ppb	0.055	42.64	13	2000	
Sn	120	2	115	0.770	ppb	0.770	12.62	640	2000	
Sb	121	2	115	0.174	ppb	0.174	72.87	157	1000	
Ba	137	2	115	21.703	ppb	21.703	2.31	5211	5000	
W	182	2	165	2.229	ppb	2.229	2.28	6262	100	
Pt	195	2	165	0.003	ppb	0.003	86.61	7	100	
Tl	205	2	165	0.003	ppb	0.003	850.45	167	2000	
Pb	208	2	165	0.441	ppb	0.441	4.32	3624	5000	
Th	232	2	165	0.238	ppb	0.238	14.90	2717	2000	
U	238	2	165	0.231	ppb	0.231	13.77	2107	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	370314	0.66	459341	80.62	60	120	
Sc (IS)	45	1	HMI H2	10126840	0.42	12606259	80.33	60	120	
Sc (IS)	45	2	HMI He	447277	2.25	551341	81.13	60	120	
Sc (IS)	45	3	No Gas	23605898	1.10	40353426	58.50	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4468600	0.47	5557713	80.40	60	120	
Ge Internal Standard	72	2	HMI He	606047	1.52	752535	80.53	60	120	
In Internal Standard	115	2	HMI He	2642250	2.38	3288822	80.34	60	120	
Ho-165	165	2	HMI He	12564744	1.52	15288251	82.19	60	120	

Sample Report

Sample Table

Sample Name	280-123295-C-6-B
Data File Name	321SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T06:11:56-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456959 6020
ISTD Ref FileName	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	76.760	ppb	76.760	6.01	59037	500000	
Li	7	2	45	71.636	ppb	71.636	58.55	3084	500000	
Li	7	3	45	11.524	ppb	11.524	32.57	2570680	50000	
Be	9	1	6	-0.039	ppb	-0.039	0.00	0	2000	
B	11	1	6	64368.869	ppb	64368.869	1.67	190067	2000	>LDR
Na	23	1	45	244350.529	ppb	244350.529	0.35	346404915	2000	>LDR
Na	23	2	45	249807.119	ppb	249807.119	0.32	26145039	400000	
Mg	24	2	45	37756.024	ppb	37756.024	1.68	1836965	400000	
Al	27	2	45	87.469	ppb	87.469	1.91	1213	400000	
K	39	1	45	47954.808	ppb	47954.808	0.97	43424581	400000	
K	39	2	45	8064.646	ppb	8064.646	0.85	263452	400000	
Ca	40	1	45	137624.472	ppb	137624.472	0.66	308570335	400000	
Ca	44	2	45	122317.264	ppb	122317.264	0.52	250222	400000	
Ti	47	2	45	0.935	ppb	0.935	113.40	13	4000	
V	51	2	72	4.059	ppb	4.059	14.64	4251	2000	
Cr	52	2	72	0.541	ppb	0.541	6.34	540	5000	
Mn	55	2	72	10.796	ppb	10.796	6.82	3174	10000	
Fe	57	2	72	181.399	ppb	181.399	7.28	2527	400000	
Co	59	2	72	0.565	ppb	0.565	26.47	1430	2000	
Ni	60	2	72	2.758	ppb	2.758	23.42	1000	5000	
Cu	63	2	72	0.787	ppb	0.787	14.54	1293	5000	
Zn	66	2	72	3.229	ppb	3.229	11.82	547	5000	
As	75	2	72	1.895	ppb	1.895	14.09	229	2000	
Se	78	1	72	0.372	ppb	0.372	29.80	88	2000	
Sr	88	2	72	6288.117	ppb	6288.117	1.20	2487102	4000	
Zr	90	2	72	285.500	ppb	285.500	50.97	237	1000	
Nb	93	2	72	-0.283	ppb	-0.283	-15.35	473	200	
Mo	95	2	115	4.547	ppb	4.547	7.25	2447	2000	
Pd	105	2	115	0.112	ppb	0.112	29.19	117	100	
Ag	107	2	115	-0.006	ppb	-0.006	-134.63	13	100	
Cd	111	2	115	0.095	ppb	0.095	65.91	23	2000	
Sn	120	2	115	0.415	ppb	0.415	12.23	403	2000	
Sb	121	2	115	0.433	ppb	0.433	20.24	340	1000	
Ba	137	2	115	30.373	ppb	30.373	2.24	7479	5000	
W	182	2	165	0.111	ppb	0.111	29.18	763	100	
Pt	195	2	165	0.000	ppb	0.000	#DIV/0!	0	100	
Tl	205	2	165	-0.006	ppb	-0.006	-112.70	120	2000	
Pb	208	2	165	0.252	ppb	0.252	11.36	2344	5000	
Th	232	2	165	0.070	ppb	0.070	29.74	1237	2000	
U	238	2	165	0.451	ppb	0.451	1.85	4188	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	384668	2.15	459341	83.74	60	120	
Sc (IS)	45	1	HMI H2	10630479	2.25	12606259	84.33	60	120	
Sc (IS)	45	2	HMI He	465478	2.12	551341	84.43	60	120	
Sc (IS)	45	3	No Gas	22180494	1.14	40353426	54.97	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4704099	2.80	5557713	84.64	60	120	
Ge Internal Standard	72	2	HMI He	626697	2.27	752535	83.28	60	120	
In Internal Standard	115	2	HMI He	2711130	1.76	3288822	82.43	60	120	
Ho-165	165	2	HMI He	12873108	2.14	15288251	84.20	60	120	

Sample Report

Sample Table

Sample Name	280-123295-C-7-B
Data File Name	322SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T06:15:49-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456959 6020
ISTD Ref FileName	304CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	8.542	ppb	8.542	78.01	51670	500000	
Li	7	2	45	20.804	ppb	20.804	48.65	2910	500000	
Li	7	3	45	-6.412	ppb	-6.412	-65.29	3445611	50000	
Be	9	1	6	0.005	ppb	0.005	1554.51	7	2000	
B	11	1	6	1424.327	ppb	1424.327	11.28	6682	2000	
Na	23	1	45	210.349	ppb	210.349	7.99	629241	2000	
Na	23	2	45	133.929	ppb	133.929	10.41	37959	400000	
Mg	24	2	45	10.335	ppb	10.335	12.70	937	400000	
Al	27	2	45	3.249	ppb	3.249	109.71	73	400000	
K	39	1	45	31515.318	ppb	31515.318	0.62	31995706	400000	
K	39	2	45	19.106	ppb	19.106	121.55	19056	400000	
Ca	40	1	45	88.824	ppb	88.824	6.15	237826	400000	
Ca	44	2	45	52.328	ppb	52.328	40.61	140	400000	
Ti	47	2	45	1.114	ppb	1.114	33.52	17	4000	
V	51	2	72	4.056	ppb	4.056	14.47	4408	2000	
Cr	52	2	72	0.058	ppb	0.058	120.33	210	5000	
Mn	55	2	72	0.886	ppb	0.886	3.66	327	10000	
Fe	57	2	72	13.222	ppb	13.222	22.93	277	400000	
Co	59	2	72	0.066	ppb	0.066	95.06	853	2000	
Ni	60	2	72	3.430	ppb	3.430	3.07	1273	5000	
Cu	63	2	72	2.066	ppb	2.066	10.77	2607	5000	
Zn	66	2	72	9.047	ppb	9.047	6.15	1433	5000	
As	75	2	72	0.258	ppb	0.258	44.21	46	2000	
Se	78	1	72	-0.156	ppb	-0.156	-69.97	31	2000	
Sr	88	2	72	2.139	ppb	2.139	0.70	917	4000	
Zr	90	2	72	63.545	ppb	63.545	72.32	70	1000	
Nb	93	2	72	-0.376	ppb	-0.376	-23.22	393	200	
Mo	95	2	115	0.050	ppb	0.050	88.80	47	2000	
Pd	105	2	115	0.003	ppb	0.003	815.71	23	100	
Ag	107	2	115	0.008	ppb	0.008	95.75	43	100	
Cd	111	2	115	0.051	ppb	0.051	173.21	13	2000	
Sn	120	2	115	0.360	ppb	0.360	41.20	397	2000	
Sb	121	2	115	0.073	ppb	0.073	75.62	97	1000	
Ba	137	2	115	0.607	ppb	0.607	10.65	177	5000	
W	182	2	165	-0.060	ppb	-0.060	-31.77	327	100	
Pt	195	2	165	0.008	ppb	0.008	91.62	17	100	
Tl	205	2	165	-0.004	ppb	-0.004	-95.42	143	2000	
Pb	208	2	165	0.272	ppb	0.272	8.33	2667	5000	
Th	232	2	165	-0.021	ppb	-0.021	-24.67	423	2000	
U	238	2	165	0.001	ppb	0.001	332.47	50	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	412960	0.96	459341	89.90	60	120	
Sc (IS)	45	1	HMI H2	11030518	1.11	12606259	87.50	60	120	
Sc (IS)	45	2	HMI He	494138	1.54	551341	89.62	60	120	
Sc (IS)	45	3	No Gas	31256500	1.03	40353426	77.46	60	120	
Ge Internal Standard	72	1	HMI H2	4728480	1.02	5557713	85.08	60	120	
Ge Internal Standard	72	2	HMI He	651085	1.30	752535	86.52	60	120	
In Internal Standard	115	2	HMI He	2942590	1.29	3288822	89.47	60	120	
Ho-165	165	2	HMI He	13814341	1.45	15288251	90.36	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5688510
Data File Name	323_CCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T06:19:41-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	108.629	ppb	12.565	67301	100	108.6	90	110	
Li	7	2	45	76.223	ppb	16.542	3384	100	76.2	90	110	>+\-10%
Li	7	3	45	90.863	ppb	8.297	4632503	100	90.9	90	110	
Be	9	1	6	49.300	ppb	5.733	7446	50	98.6	90	110	
B	11	1	6	649.491	ppb	4.286	4167	50	1299.0	90	110	>+\-10%
Na	23	1	45	1035.642	ppb	0.763	1885806	1000	103.6	90	110	
Na	23	2	45	983.545	ppb	1.352	135531	1000	98.4	90	110	
Mg	24	2	45	977.821	ppb	1.706	52156	1000	97.8	90	110	
Al	27	2	45	995.715	ppb	1.018	14738	1000	99.6	90	110	
K	39	1	45	1266.242	ppb	3.152	8149152	1000	126.6	90	110	>+\-10%
K	39	2	45	1032.086	ppb	3.085	53150	1000	103.2	90	110	
Ca	40	1	45	1012.009	ppb	0.135	2441823	1000	101.2	90	110	
Ca	44	2	45	923.932	ppb	9.058	2084	1000	92.4	90	110	
Ti	47	2	45	41.035	ppb	16.620	627	50	82.1	90	110	>+\-10%
V	51	2	72	49.140	ppb	5.064	32407	50	98.3	90	110	
Cr	52	2	72	48.891	ppb	0.735	38338	50	97.8	90	110	
Mn	55	2	72	49.790	ppb	4.810	16100	50	99.6	90	110	
Fe	57	2	72	990.743	ppb	4.826	14942	1000	99.1	90	110	
Co	59	2	72	49.740	ppb	0.933	68314	50	99.5	90	110	
Ni	60	2	72	47.601	ppb	4.336	17888	50	95.2	90	110	
Cu	63	2	72	49.511	ppb	1.169	53111	50	99.0	90	110	
Zn	66	2	72	51.084	ppb	1.368	8256	50	102.2	90	110	
As	75	2	72	48.810	ppb	2.389	6200	50	97.6	90	110	
Se	78	1	72	48.762	ppb	3.534	5669	50	97.5	90	110	
Sr	88	2	72	102.482	ppb	2.305	45263	100	102.5	90	110	
Zr	90	2	72	116.632	ppb	10.891	120	50	233.3	90	110	>+\-10%
Nb	93	2	72	92.590	ppb	1.997	106663	100	92.6	90	110	
Mo	95	2	115	48.220	ppb	2.681	28784	50	96.4	90	110	
Pd	105	2	115	48.685	ppb	1.823	47300	50	97.4	90	110	
Ag	107	2	115	49.192	ppb	1.215	99974	50	98.4	90	110	
Cd	111	2	115	51.060	ppb	5.017	14064	50	102.1	90	110	
Sn	120	2	115	49.511	ppb	1.641	39637	50	99.0	90	110	
Sb	121	2	115	49.462	ppb	0.940	38628	50	98.9	90	110	
Ba	137	2	115	50.409	ppb	3.071	13848	50	100.8	90	110	
W	182	2	165	48.388	ppb	1.365	142601	50	96.8	90	110	
Pt	195	2	165	48.555	ppb	0.480	109199	50	97.1	90	110	
Tl	205	2	165	48.708	ppb	0.813	286832	50	97.4	90	110	
Pb	208	2	165	49.542	ppb	0.203	395117	50	99.1	90	110	
Th	232	2	165	48.624	ppb	0.128	494092	50	97.2	90	110	
U	238	2	165	49.355	ppb	1.231	499708	50	98.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	404898	0.44	459341	88.15	60	120	
Sc (IS)	45	1	HMI H2	11291394	0.33	12606259	89.57	60	120	
Sc (IS)	45	2	HMI He	506238	0.49	551341	91.82	60	120	
Sc (IS)	45	3	No Gas	32874501	1.12	40353426	81.47	60	120	
Ge Internal Standard	72	1	HMI H2	5001755	0.27	5557713	90.00	60	120	
Ge Internal Standard	72	2	HMI He	699001	0.74	752535	92.89	60	120	
In Internal Standard	115	2	HMI He	3027275	0.14	3288822	92.05	60	120	
Ho-165	165	2	HMI He	14158616	1.00	15288251	92.61	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5688508
Data File Name	324_CCB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T06:23:32-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-7.690	ppb	-54.8	3649353	10	
Be	9	1	6	0.006	ppb	1289.6	7	0.5	
B	11	1	6	441.038	ppb	11.6	3444	0.5	>RL
Na	23	1	45	9.694	ppb	20.5	333655	25	
Na	23	2	45	3.338	ppb	183.2	23733	25	
Mg	24	2	45	-1.882	ppb	-122.6	310	25	
Al	27	2	45	3.614	ppb	56.2	80	15	
K	39	1	45	949.848	ppb	5.8	7692989	50	>RL
K	39	2	45	33.041	ppb	76.0	19727	50	
Ca	40	1	45	3.232	ppb	10.4	38702	50	
Ca	44	2	45	13.452	ppb	20.2	57	25	
Ti	47	2	45	0.220	ppb	173.2	3	0.5	
V	51	2	72	0.053	ppb	614.7	2230	1	
Cr	52	2	72	-0.043	ppb	-107.8	143	1	
Mn	55	2	72	0.146	ppb	44.1	110	0.5	
Fe	57	2	72	9.051	ppb	59.7	230	25	
Co	59	2	72	-0.055	ppb	-41.0	737	0.5	
Ni	60	2	72	-0.060	ppb	-235.5	60	1	
Cu	63	2	72	1.042	ppb	9.1	1677	1	>RL
Zn	66	2	72	0.590	ppb	59.2	183	5	
As	75	2	72	0.071	ppb	102.2	25	1	
Se	78	1	72	-0.164	ppb	-88.3	31	1	
Sr	88	2	72	0.094	ppb	131.0	80	0.5	
Zr	90	2	72	26.731	ppb	94.0	43	1	>RL
Nb	93	2	72	3.035	ppb	11.7	4231	2	>RL
Mo	95	2	115	0.048	ppb	42.3	47	0.5	
Pd	105	2	115	0.009	ppb	200.8	30	1	
Ag	107	2	115	0.003	ppb	262.8	33	1	
Cd	111	2	115	0.049	ppb	42.9	13	0.5	
Sn	120	2	115	0.198	ppb	14.8	277	1	
Sb	121	2	115	0.065	ppb	81.9	93	0.6	
Ba	137	2	115	0.029	ppb	143.9	23	0.5	
W	182	2	165	-0.017	ppb	-184.1	457	1	
Pt	195	2	165	0.005	ppb	100.6	10	1	
Tl	205	2	165	0.013	ppb	61.7	243	0.1	
Pb	208	2	165	0.000	ppb	1616.1	563	0.5	
Th	232	2	165	0.322	ppb	15.5	3862	1	
U	238	2	165	0.013	ppb	10.3	177	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	395436	0.57	459341	86.09	60	120	
Sc (IS)	45	1	HMI H2	11006959	0.59	12606259	87.31	60	120	
Sc (IS)	45	2	HMI He	499590	0.61	551341	90.61	60	120	
Sc (IS)	45	3	No Gas	33226075	0.77	40353426	82.34	60	120	
Ge Internal Standard	72	1	HMI H2	4859322	0.51	5557713	87.43	60	120	
Ge Internal Standard	72	2	HMI He	684591	0.34	752535	90.97	60	120	
In Internal Standard	115	2	HMI He	3017619	0.85	3288822	91.75	60	120	
Ho-165	165	2	HMI He	13954803	1.04	15288251	91.28	60	120	

Sample Report

Sample Table

Sample Name	280-123208-E-1-D
Data File Name	325SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T06:27:28-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456959 6020
ISTD Ref FileName	304CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	11.708	ppb	11.708	80.02	52793	500000	
Li	7	2	45	-13.467	ppb	-13.467	-167.60	2764	500000	
Li	7	3	45	13.355	ppb	13.355	20.59	3955967	50000	
Be	9	1	6	0.266	ppb	0.266	62.37	47	2000	
B	11	1	6	3754.895	ppb	3754.895	6.07	13947	2000	
Na	23	1	45	6159.079	ppb	6159.079	1.09	9493538	2000	
Na	23	2	45	6076.963	ppb	6076.963	0.21	722358	400000	
Mg	24	2	45	40579.035	ppb	40579.035	1.20	2170214	400000	
Al	27	2	45	3992.638	ppb	3992.638	1.31	59634	400000	
K	39	1	45	44691.729	ppb	44691.729	1.25	43012809	400000	
K	39	2	45	7640.948	ppb	7640.948	0.60	275348	400000	
Ca	40	1	45	100430.360	ppb	100430.360	0.63	236672836	400000	
Ca	44	2	45	81093.146	ppb	81093.146	0.83	182335	400000	
Ti	47	2	45	40.379	ppb	40.379	6.70	623	4000	
V	51	2	72	12.087	ppb	12.087	8.73	9674	2000	
Cr	52	2	72	19.272	ppb	19.272	2.29	15235	5000	
Mn	55	2	72	293.777	ppb	293.777	1.40	94768	10000	
Fe	57	2	72	8296.500	ppb	8296.500	0.77	124492	400000	
Co	59	2	72	3.919	ppb	3.919	7.96	6148	2000	
Ni	60	2	72	15.246	ppb	15.246	8.87	5791	5000	
Cu	63	2	72	17.983	ppb	17.983	0.95	19694	5000	
Zn	66	2	72	22.099	ppb	22.099	3.83	3627	5000	
As	75	2	72	6.917	ppb	6.917	5.19	894	2000	
Se	78	1	72	0.811	ppb	0.811	28.48	144	2000	
Sr	88	2	72	244.744	ppb	244.744	1.20	108124	4000	
Zr	90	2	72	2200.201	ppb	2200.201	23.52	1880	1000	
Nb	93	2	72	3.073	ppb	3.073	6.10	4368	200	
Mo	95	2	115	3.935	ppb	3.935	5.79	2324	2000	
Pd	105	2	115	0.009	ppb	0.009	194.25	30	100	
Ag	107	2	115	0.077	ppb	0.077	23.33	180	100	
Cd	111	2	115	0.172	ppb	0.172	80.95	47	2000	
Sn	120	2	115	0.981	ppb	0.981	14.62	887	2000	
Sb	121	2	115	0.745	ppb	0.745	14.78	613	1000	
Ba	137	2	115	124.290	ppb	124.290	1.66	33512	5000	
W	182	2	165	0.153	ppb	0.153	11.75	970	100	
Pt	195	2	165	0.004	ppb	0.004	100.02	10	100	
Tl	205	2	165	0.069	ppb	0.069	26.13	580	2000	
Pb	208	2	165	5.978	ppb	5.978	0.15	48597	5000	
Th	232	2	165	1.603	ppb	1.603	1.63	17059	2000	
U	238	2	165	1.709	ppb	1.709	2.78	17499	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	411853	0.66	459341	89.66	60	120	
Sc (IS)	45	1	HMI H2	11173234	0.29	12606259	88.63	60	120	
Sc (IS)	45	2	HMI He	511564	0.76	551341	92.79	60	120	
Sc (IS)	45	3	No Gas	33962845	0.09	40353426	84.16	60	120	
Ge Internal Standard	72	1	HMI H2	4999115	0.75	5557713	89.95	60	120	
Ge Internal Standard	72	2	HMI He	699632	0.25	752535	92.97	60	120	
In Internal Standard	115	2	HMI He	2973342	0.52	3288822	90.41	60	120	
Ho-165	165	2	HMI He	14281882	0.39	15288251	93.42	60	120	

Sample Table

Sample Name	280-123208-E-2-B
Data File Name	326SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T06:31:20-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456959 6020
ISTD Ref FileName	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	24.424	ppb	24.424	38.95	55226	500000	
Li	7	2	45	39.448	ppb	39.448	87.30	3017	500000	
Li	7	3	45	20.350	ppb	20.350	2.89	3568325	50000	
Be	9	1	6	0.048	ppb	0.048	207.29	13	2000	
B	11	1	6	13487.888	ppb	13487.888	1.57	44052	2000	>LDR
Na	23	1	45	52440.508	ppb	52440.508	0.65	79284135	2000	>LDR
Na	23	2	45	54109.875	ppb	54109.875	0.68	5969439	400000	
Mg	24	2	45	189874.664	ppb	189874.664	0.88	9709097	400000	
Al	27	2	45	426.467	ppb	426.467	9.52	6108	400000	
K	39	1	45	42081.708	ppb	42081.708	0.85	41377399	400000	
K	39	2	45	4884.807	ppb	4884.807	2.10	174957	400000	
Ca	40	1	45	293421.939	ppb	293421.939	0.05	699264390	400000	
Ca	44	2	45	237439.314	ppb	237439.314	0.80	510447	400000	
Ti	47	2	45	9.980	ppb	9.980	36.41	147	4000	
V	51	2	72	5.793	ppb	5.793	9.68	5475	2000	
Cr	52	2	72	3.381	ppb	3.381	4.26	2660	5000	
Mn	55	2	72	2412.954	ppb	2412.954	1.26	733420	10000	
Fe	57	2	72	6587.191	ppb	6587.191	0.94	93205	400000	
Co	59	2	72	0.403	ppb	0.403	25.73	1297	2000	
Ni	60	2	72	2.726	ppb	2.726	11.26	1040	5000	
Cu	63	2	72	2.806	ppb	2.806	1.24	3381	5000	
Zn	66	2	72	5.265	ppb	5.265	20.83	883	5000	
As	75	2	72	0.544	ppb	0.544	16.82	80	2000	
Se	78	1	72	0.003	ppb	0.003	3764.46	51	2000	
Sr	88	2	72	891.027	ppb	891.027	0.51	370990	4000	
Zr	90	2	72	1304.718	ppb	1304.718	11.91	1060	1000	
Nb	93	2	72	0.776	ppb	0.776	6.29	1640	200	
Mo	95	2	115	0.151	ppb	0.151	46.99	100	2000	
Pd	105	2	115	0.041	ppb	0.041	122.55	57	100	
Ag	107	2	115	0.022	ppb	0.022	95.86	67	100	
Cd	111	2	115	0.039	ppb	0.039	100.41	10	2000	
Sn	120	2	115	0.555	ppb	0.555	27.13	517	2000	
Sb	121	2	115	0.094	ppb	0.094	24.27	107	1000	
Ba	137	2	115	206.517	ppb	206.517	2.39	52200	5000	
W	182	2	165	0.015	ppb	0.015	303.12	533	100	
Pt	195	2	165	0.006	ppb	0.006	41.44	13	100	
Tl	205	2	165	0.004	ppb	0.004	242.22	183	2000	
Pb	208	2	165	0.672	ppb	0.672	7.15	5684	5000	
Th	232	2	165	0.224	ppb	0.224	3.80	2800	2000	
U	238	2	165	0.705	ppb	0.705	1.36	6889	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	408845	1.06	459341	89.01	60	120	
Sc (IS)	45	1	HMI H2	11299965	0.47	12606259	89.64	60	120	
Sc (IS)	45	2	HMI He	489218	2.79	551341	88.73	60	120	
Sc (IS)	45	3	No Gas	30065170	0.08	40353426	74.50	60	120	
Ge Internal Standard	72	1	HMI H2	4973367	0.99	5557713	89.49	60	120	
Ge Internal Standard	72	2	HMI He	659519	1.77	752535	87.64	60	120	
In Internal Standard	115	2	HMI He	2787112	2.31	3288822	84.74	60	120	
Ho-165	165	2	HMI He	13580362	2.23	15288251	88.83	60	120	

Sample Report

Sample Table

Sample Name	280-123208-E-3-B
Data File Name	327SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T06:35:14-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456959 6020
ISTD Ref FileName	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	20.321	ppb	20.321	43.41	55028	500000	
Li	7	2	45	45.621	ppb	45.621	62.39	3017	500000	
Li	7	3	45	-19.455	ppb	-19.455	-12.29	2670755	50000	
Be	9	1	6	0.135	ppb	0.135	73.21	27	2000	
B	11	1	6	6454.593	ppb	6454.593	6.85	22237	2000	
Na	23	1	45	35592.289	ppb	35592.289	0.73	54307789	2000	>LDR
Na	23	2	45	37072.876	ppb	37072.876	0.87	4045053	400000	
Mg	24	2	45	192289.465	ppb	192289.465	0.46	9707002	400000	
Al	27	2	45	465.282	ppb	465.282	4.36	6585	400000	
K	39	1	45	38267.461	ppb	38267.461	0.50	38550589	400000	
K	39	2	45	3383.513	ppb	3383.513	1.03	125155	400000	
Ca	40	1	45	278348.914	ppb	278348.914	0.33	668154790	400000	
Ca	44	2	45	224069.344	ppb	224069.344	1.78	475610	400000	
Ti	47	2	45	7.089	ppb	7.089	10.37	103	4000	
V	51	2	72	5.990	ppb	5.990	7.49	5485	2000	
Cr	52	2	72	2.529	ppb	2.529	8.40	1994	5000	
Mn	55	2	72	1468.050	ppb	1468.050	0.34	438078	10000	
Fe	57	2	72	1499.657	ppb	1499.657	4.23	20896	400000	
Co	59	2	72	2.681	ppb	2.681	7.57	4137	2000	
Ni	60	2	72	7.518	ppb	7.518	18.80	2687	5000	
Cu	63	2	72	1.847	ppb	1.847	3.02	2377	5000	
Zn	66	2	72	6.057	ppb	6.057	12.24	983	5000	
As	75	2	72	1.048	ppb	1.048	31.86	138	2000	
Se	78	1	72	0.123	ppb	0.123	285.99	64	2000	
Sr	88	2	72	695.107	ppb	695.107	0.94	284131	4000	
Zr	90	2	72	734.369	ppb	734.369	12.83	593	1000	
Nb	93	2	72	0.231	ppb	0.231	62.19	1033	200	
Mo	95	2	115	1.148	ppb	1.148	9.85	640	2000	
Pd	105	2	115	0.027	ppb	0.027	103.83	43	100	
Ag	107	2	115	0.012	ppb	0.012	50.50	47	100	
Cd	111	2	115	0.040	ppb	0.040	2.04	10	2000	
Sn	120	2	115	0.396	ppb	0.396	15.02	397	2000	
Sb	121	2	115	0.156	ppb	0.156	39.60	150	1000	
Ba	137	2	115	16.686	ppb	16.686	10.15	4191	5000	
W	182	2	165	-0.034	ppb	-0.034	-93.89	383	100	
Pt	195	2	165	0.002	ppb	0.002	173.21	3	100	
Tl	205	2	165	0.014	ppb	0.014	20.96	237	2000	
Pb	208	2	165	1.002	ppb	1.002	1.20	7961	5000	
Th	232	2	165	0.534	ppb	0.534	2.50	5652	2000	
U	238	2	165	3.315	ppb	3.315	4.16	31276	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	409133	0.99	459341	89.07	60	120	
Sc (IS)	45	1	HMI H2	11381972	0.40	12606259	90.29	60	120	
Sc (IS)	45	2	HMI He	482924	0.87	551341	87.59	60	120	
Sc (IS)	45	3	No Gas	25166197	0.68	40353426	62.36	60	120	
Ge Internal Standard	72	1	HMI H2	4954710	0.41	5557713	89.15	60	120	
Ge Internal Standard	72	2	HMI He	647524	1.31	752535	86.05	60	120	
In Internal Standard	115	2	HMI He	2758310	2.02	3288822	83.87	60	120	
Ho-165	165	2	HMI He	13181777	2.01	15288251	86.22	60	120	

Sample Report

Sample Table

Sample Name	280-123208-E-4-B
Data File Name	328SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T06:39:06-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456959 6020
ISTD Ref FileName	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	18.998	ppb	18.998	20.20	52101	500000	
Li	7	2	45	18.519	ppb	18.519	231.62	2807	500000	
Li	7	3	45	-19.672	ppb	-19.672	-23.43	2566462	50000	
Be	9	1	6	0.276	ppb	0.276	28.99	47	2000	
B	11	1	6	4940.503	ppb	4940.503	3.16	17070	2000	
Na	23	1	45	18649.788	ppb	18649.788	0.11	27186496	2000	>LDR
Na	23	2	45	19938.857	ppb	19938.857	0.38	2168690	400000	
Mg	24	2	45	120418.039	ppb	120418.039	1.24	6031006	400000	
Al	27	2	45	1831.674	ppb	1831.674	2.60	25637	400000	
K	39	1	45	36640.466	ppb	36640.466	0.60	35359461	400000	
K	39	2	45	2803.682	ppb	2803.682	3.02	105951	400000	
Ca	40	1	45	270633.497	ppb	270633.497	0.26	617221777	400000	
Ca	44	2	45	218805.759	ppb	218805.759	0.58	460738	400000	
Ti	47	2	45	28.829	ppb	28.829	22.81	417	4000	
V	51	2	72	6.504	ppb	6.504	11.19	5835	2000	
Cr	52	2	72	23.061	ppb	23.061	3.84	17004	5000	
Mn	55	2	72	3517.786	ppb	3517.786	0.31	1059821	10000	
Fe	57	2	72	10758.361	ppb	10758.361	1.10	150833	400000	
Co	59	2	72	4.530	ppb	4.530	1.50	6522	2000	
Ni	60	2	72	17.367	ppb	17.367	4.53	6155	5000	
Cu	63	2	72	12.827	ppb	12.827	4.93	13290	5000	
Zn	66	2	72	20.875	ppb	20.875	7.79	3207	5000	
As	75	2	72	8.057	ppb	8.057	5.06	970	2000	
Se	78	1	72	0.072	ppb	0.072	80.26	56	2000	
Sr	88	2	72	546.651	ppb	546.651	0.28	225645	4000	
Zr	90	2	72	1609.438	ppb	1609.438	6.42	1290	1000	
Nb	93	2	72	0.306	ppb	0.306	143.86	1124	200	
Mo	95	2	115	4.387	ppb	4.387	2.67	2394	2000	
Pd	105	2	115	0.020	ppb	0.020	122.26	37	100	
Ag	107	2	115	0.033	ppb	0.033	39.12	87	100	
Cd	111	2	115	0.145	ppb	0.145	81.67	37	2000	
Sn	120	2	115	0.496	ppb	0.496	37.28	467	2000	
Sb	121	2	115	0.232	ppb	0.232	15.45	203	1000	
Ba	137	2	115	88.645	ppb	88.645	3.60	22109	5000	
W	182	2	165	-0.006	ppb	-0.006	-992.77	463	100	
Pt	195	2	165	0.005	ppb	0.005	173.21	10	100	
Tl	205	2	165	0.031	ppb	0.031	33.68	327	2000	
Pb	208	2	165	6.449	ppb	6.449	1.66	48547	5000	
Th	232	2	165	1.178	ppb	1.178	3.11	11783	2000	
U	238	2	165	1.491	ppb	1.491	1.67	14152	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	398188	1.11	459341	86.69	60	120	
Sc (IS)	45	1	HMI H2	10814090	0.58	12606259	85.78	60	120	
Sc (IS)	45	2	HMI He	479124	0.00	551341	86.90	60	120	
Sc (IS)	45	3	No Gas	24199367	0.95	40353426	59.97	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4767080	1.34	5557713	85.77	60	120	
Ge Internal Standard	72	2	HMI He	653812	0.18	752535	86.88	60	120	
In Internal Standard	115	2	HMI He	2750502	1.87	3288822	83.63	60	120	
Ho-165	165	2	HMI He	13236136	0.53	15288251	86.58	60	120	

Sample Report

Sample Table

Sample Name	280-123208-E-5-B
Data File Name	329SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T06:42:58-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456959 6020
ISTD Ref FileName	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	77.876	ppb	77.876	9.82	59227	500000	
Li	7	2	45	55.566	ppb	55.566	31.64	2930	500000	
Li	7	3	45	10.106	ppb	10.106	17.73	2075626	50000	
Be	9	1	6	0.493	ppb	0.493	34.89	77	2000	
B	11	1	6	37603.532	ppb	37603.532	1.29	112217	2000	>LDR
Na	23	1	45	86471.114	ppb	86471.114	0.45	122855412	2000	>LDR
Na	23	2	45	89834.310	ppb	89834.310	0.18	9281163	400000	
Mg	24	2	45	269926.076	ppb	269926.076	0.51	12944282	400000	
Al	27	2	45	4634.073	ppb	4634.073	0.81	62067	400000	
K	39	1	45	46312.241	ppb	46312.241	0.84	42188254	400000	
K	39	2	45	9090.469	ppb	9090.469	0.72	290544	400000	
Ca	40	1	45	362115.796	ppb	362115.796	0.24	812281108	400000	
Ca	44	2	45	298444.914	ppb	298444.914	0.13	601756	400000	
Ti	47	2	45	69.812	ppb	69.812	14.46	967	4000	
V	51	2	72	17.738	ppb	17.738	1.91	11639	2000	
Cr	52	2	72	15.756	ppb	15.756	5.61	11061	5000	
Mn	55	2	72	2026.424	ppb	2026.424	0.81	578425	10000	
Fe	57	2	72	11486.683	ppb	11486.683	1.06	152555	400000	
Co	59	2	72	6.212	ppb	6.212	3.59	8199	2000	
Ni	60	2	72	18.523	ppb	18.523	12.62	6208	5000	
Cu	63	2	72	17.582	ppb	17.582	3.73	17057	5000	
Zn	66	2	72	23.306	ppb	23.306	5.65	3384	5000	
As	75	2	72	4.999	ppb	4.999	11.06	575	2000	
Se	78	1	72	0.541	ppb	0.541	27.44	105	2000	
Sr	88	2	72	2058.419	ppb	2058.419	0.22	804860	4000	
Zr	90	2	72	4816.077	ppb	4816.077	3.45	3621	1000	
Nb	93	2	72	0.266	ppb	0.266	32.97	1023	200	
Mo	95	2	115	5.115	ppb	5.115	4.96	2634	2000	
Pd	105	2	115	0.058	ppb	0.058	52.41	67	100	
Ag	107	2	115	0.027	ppb	0.027	1.41	70	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.492	ppb	0.492	38.22	440	2000	
Sb	121	2	115	0.264	ppb	0.264	6.00	213	1000	
Ba	137	2	115	45.203	ppb	45.203	2.35	10651	5000	
W	182	2	165	0.002	ppb	0.002	778.41	460	100	
Pt	195	2	165	0.003	ppb	0.003	173.21	7	100	
Tl	205	2	165	0.067	ppb	0.067	11.60	500	2000	
Pb	208	2	165	5.865	ppb	5.865	0.93	41888	5000	
Th	232	2	165	3.451	ppb	3.451	1.85	31603	2000	
U	238	2	165	4.846	ppb	4.846	1.02	43508	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	385821	0.64	459341	83.99	60	120	
Sc (IS)	45	1	HMI H2	10636485	1.04	12606259	84.37	60	120	
Sc (IS)	45	2	HMI He	458788	0.96	551341	83.21	60	120	
Sc (IS)	45	3	No Gas	17977928	0.30	40353426	44.55	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4670268	1.13	5557713	84.03	60	120	
Ge Internal Standard	72	2	HMI He	619414	1.26	752535	82.31	60	120	
In Internal Standard	115	2	HMI He	2596570	0.95	3288822	78.95	60	120	
Ho-165	165	2	HMI He	12545605	1.40	15288251	82.06	60	120	

Sample Report

Sample Table

Sample Name	280-123208-E-6-B
Data File Name	330SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T06:46:49-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456959 6020
ISTD Ref FileName	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	11.920	ppb	11.920	54.92	51298	500000	
Li	7	2	45	-20.370	ppb	-20.370	-183.45	2564	500000	
Li	7	3	45	-38.017	ppb	-38.017	-5.96	2233121	50000	
Be	9	1	6	-0.039	ppb	-0.039	0.00	0	2000	
B	11	1	6	12546.672	ppb	12546.672	1.27	39670	2000	>LDR
Na	23	1	45	26367.411	ppb	26367.411	0.77	38434639	2000	>LDR
Na	23	2	45	27516.460	ppb	27516.460	0.72	3011817	400000	
Mg	24	2	45	76930.439	ppb	76930.439	0.75	3888448	400000	
Al	27	2	45	45.407	ppb	45.407	18.06	667	400000	
K	39	1	45	33644.735	ppb	33644.735	0.79	33136376	400000	
K	39	2	45	2700.520	ppb	2700.520	0.96	103649	400000	
Ca	40	1	45	111211.689	ppb	111211.689	0.30	254504210	400000	
Ca	44	2	45	91242.133	ppb	91242.133	1.12	193897	400000	
Ti	47	2	45	0.919	ppb	0.919	114.78	13	4000	
V	51	2	72	2.658	ppb	2.658	4.26	3677	2000	
Cr	52	2	72	0.688	ppb	0.688	17.56	680	5000	
Mn	55	2	72	1020.401	ppb	1020.401	1.01	311765	10000	
Fe	57	2	72	827.945	ppb	827.945	3.96	11855	400000	
Co	59	2	72	0.375	ppb	0.375	15.11	1267	2000	
Ni	60	2	72	2.811	ppb	2.811	1.86	1077	5000	
Cu	63	2	72	0.478	ppb	0.478	28.02	1057	5000	
Zn	66	2	72	11.108	ppb	11.108	16.35	1770	5000	
As	75	2	72	0.534	ppb	0.534	8.91	80	2000	
Se	78	1	72	-0.051	ppb	-0.051	-42.51	43	2000	
Sr	88	2	72	491.548	ppb	491.548	1.85	205730	4000	
Zr	90	2	72	548.752	ppb	548.752	13.25	460	1000	
Nb	93	2	72	-0.314	ppb	-0.314	-10.35	467	200	
Mo	95	2	115	0.483	ppb	0.483	10.25	283	2000	
Pd	105	2	115	0.004	ppb	0.004	439.85	23	100	
Ag	107	2	115	-0.003	ppb	-0.003	-175.78	20	100	
Cd	111	2	115	0.039	ppb	0.039	100.18	10	2000	
Sn	120	2	115	0.464	ppb	0.464	13.38	453	2000	
Sb	121	2	115	0.125	ppb	0.125	40.70	130	1000	
Ba	137	2	115	189.956	ppb	189.956	0.75	48192	5000	
W	182	2	165	-0.027	ppb	-0.027	-37.35	410	100	
Pt	195	2	165	0.003	ppb	0.003	86.63	7	100	
Tl	205	2	165	0.005	ppb	0.005	24.53	187	2000	
Pb	208	2	165	0.243	ppb	0.243	10.02	2364	5000	
Th	232	2	165	0.025	ppb	0.025	47.76	850	2000	
U	238	2	165	1.219	ppb	1.219	2.31	11703	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	394300	0.63	459341	85.84	60	120	
Sc (IS)	45	1	HMI H2	10850359	0.45	12606259	86.07	60	120	
Sc (IS)	45	2	HMI He	483522	0.69	551341	87.70	60	120	
Sc (IS)	45	3	No Gas	22269589	0.94	40353426	55.19	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4781082	0.30	5557713	86.03	60	120	
Ge Internal Standard	72	2	HMI He	662999	0.99	752535	88.10	60	120	
In Internal Standard	115	2	HMI He	2797961	0.81	3288822	85.07	60	120	
Ho-165	165	2	HMI He	13379691	1.36	15288251	87.52	60	120	

Sample Report

Sample Table

Sample Name	280-123208-E-7-B
Data File Name	331SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T06:50:42-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456959 6020
ISTD Ref FileName	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	19.720	ppb	19.720	48.23	52693	500000	
Li	7	2	45	9.601	ppb	9.601	632.63	2804	500000	
Li	7	3	45	-36.657	ppb	-36.657	-15.77	2059590	50000	
Be	9	1	6	0.120	ppb	0.120	142.47	23	2000	
B	11	1	6	5431.344	ppb	5431.344	3.92	18445	2000	
Na	23	1	45	26424.417	ppb	26424.417	0.63	38749829	2000	>LDR
Na	23	2	45	27268.298	ppb	27268.298	0.77	3017714	400000	
Mg	24	2	45	134828.569	ppb	134828.569	0.39	6889280	400000	
Al	27	2	45	1079.217	ppb	1079.217	2.63	15426	400000	
K	39	1	45	35725.138	ppb	35725.138	0.25	34972562	400000	
K	39	2	45	2876.149	ppb	2876.149	1.28	110424	400000	
Ca	40	1	45	324414.688	ppb	324414.688	0.57	746836069	400000	
Ca	44	2	45	263768.076	ppb	263768.076	1.23	566626	400000	
Ti	47	2	45	16.707	ppb	16.707	15.14	247	4000	
V	51	2	72	5.121	ppb	5.121	1.85	5114	2000	
Cr	52	2	72	5.707	ppb	5.707	5.53	4398	5000	
Mn	55	2	72	5219.314	ppb	5219.314	1.41	1595209	10000	
Fe	57	2	72	21125.650	ppb	21125.650	0.90	300422	400000	
Co	59	2	72	1.191	ppb	1.191	16.85	2317	2000	
Ni	60	2	72	4.407	ppb	4.407	4.61	1644	5000	
Cu	63	2	72	1.932	ppb	1.932	5.52	2520	5000	
Zn	66	2	72	7.201	ppb	7.201	0.82	1180	5000	
As	75	2	72	5.187	ppb	5.187	8.05	639	2000	
Se	78	1	72	0.224	ppb	0.224	83.61	73	2000	
Sr	88	2	72	503.719	ppb	503.719	0.95	210952	4000	
Zr	90	2	72	1336.429	ppb	1336.429	11.98	1090	1000	
Nb	93	2	72	-0.333	ppb	-0.333	-38.19	447	200	
Mo	95	2	115	2.073	ppb	2.073	5.38	1163	2000	
Pd	105	2	115	0.000	ppb	0.000	41947.52	20	100	
Ag	107	2	115	0.008	ppb	0.008	247.34	40	100	
Cd	111	2	115	0.013	ppb	0.013	173.21	3	2000	
Sn	120	2	115	0.328	ppb	0.328	26.39	353	2000	
Sb	121	2	115	0.120	ppb	0.120	14.07	127	1000	
Ba	137	2	115	40.719	ppb	40.719	1.26	10378	5000	
W	182	2	165	-0.039	ppb	-0.039	-56.23	377	100	
Pt	195	2	165	0.000	ppb	0.000	#DIV/0!	0	100	
Tl	205	2	165	0.013	ppb	0.013	78.04	233	2000	
Pb	208	2	165	2.558	ppb	2.558	3.90	19854	5000	
Th	232	2	165	0.468	ppb	0.468	5.30	5111	2000	
U	238	2	165	1.726	ppb	1.726	3.90	16611	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	395870	0.94	459341	86.18	60	120	
Sc (IS)	45	1	HMI H2	10915925	0.48	12606259	86.59	60	120	
Sc (IS)	45	2	HMI He	488830	1.28	551341	88.66	60	120	
Sc (IS)	45	3	No Gas	20451702	0.37	40353426	50.68	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4811524	0.31	5557713	86.57	60	120	
Ge Internal Standard	72	2	HMI He	663338	0.77	752535	88.15	60	120	
In Internal Standard	115	2	HMI He	2807925	1.51	3288822	85.38	60	120	
Ho-165	165	2	HMI He	13422433	1.15	15288251	87.80	60	120	

Sample Report

Sample Table

Sample Name	280-123208-E-8-B
Data File Name	332SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T06:54:35-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456959 6020
ISTD Ref FileName	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	174.830	ppb	174.830	4.63	65055	500000	
Li	7	2	45	135.845	ppb	135.845	33.75	3297	500000	
Li	7	3	45	83.979	ppb	83.979	9.32	1801588	50000	
Be	9	1	6	0.187	ppb	0.187	145.50	30	2000	
B	11	1	6	14571.050	ppb	14571.050	1.97	40910	2000	>LDR
Na	23	1	45	13787.362	ppb	13787.362	0.44	17841176	2000	>LDR
Na	23	2	45	14618.714	ppb	14618.714	0.80	1456035	400000	
Mg	24	2	45	378738.110	ppb	378738.110	0.20	17302838	400000	
Al	27	2	45	2322.581	ppb	2322.581	1.86	29641	400000	
K	39	1	45	49501.587	ppb	49501.587	0.66	40119804	400000	
K	39	2	45	11052.455	ppb	11052.455	0.65	333011	400000	
Ca	40	1	45	474508.136	ppb	474508.136	0.22	956672492	400000	
Ca	44	2	45	390576.045	ppb	390576.045	0.75	750193	400000	
Ti	47	2	45	35.663	ppb	35.663	4.47	470	4000	
V	51	2	72	12.964	ppb	12.964	3.28	8486	2000	
Cr	52	2	72	4.570	ppb	4.570	11.35	3114	5000	
Mn	55	2	72	3677.685	ppb	3677.685	0.89	985322	10000	
Fe	57	2	72	12163.314	ppb	12163.314	0.91	151620	400000	
Co	59	2	72	8.614	ppb	8.614	3.18	10411	2000	
Ni	60	2	72	21.001	ppb	21.001	2.96	6602	5000	
Cu	63	2	72	15.388	ppb	15.388	0.98	14078	5000	
Zn	66	2	72	23.533	ppb	23.533	7.12	3204	5000	
As	75	2	72	7.688	ppb	7.688	8.54	823	2000	
Se	78	1	72	4.206	ppb	4.206	12.58	445	2000	
Sr	88	2	72	1139.548	ppb	1139.548	0.20	418239	4000	
Zr	90	2	72	2505.835	ppb	2505.835	4.26	1777	1000	
Nb	93	2	72	-0.181	ppb	-0.181	-18.34	537	200	
Mo	95	2	115	3.060	ppb	3.060	2.96	1524	2000	
Pd	105	2	115	-0.001	ppb	-0.001	-1828.77	17	100	
Ag	107	2	115	0.048	ppb	0.048	45.49	103	100	
Cd	111	2	115	0.290	ppb	0.290	83.43	67	2000	
Sn	120	2	115	0.407	ppb	0.407	22.81	367	2000	
Sb	121	2	115	0.558	ppb	0.558	28.23	397	1000	
Ba	137	2	115	37.199	ppb	37.199	1.82	8446	5000	
W	182	2	165	0.029	ppb	0.029	163.66	490	100	
Pt	195	2	165	0.005	ppb	0.005	100.94	10	100	
Tl	205	2	165	0.088	ppb	0.088	7.31	563	2000	
Pb	208	2	165	3.011	ppb	3.011	1.37	20214	5000	
Th	232	2	165	0.827	ppb	0.827	3.42	7442	2000	
U	238	2	165	20.822	ppb	20.822	0.37	173582	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	352764	1.83	459341	76.80	60	120	
Sc (IS)	45	1	HMI H2	9560274	2.27	12606259	75.84	60	120	
Sc (IS)	45	2	HMI He	437053	2.28	551341	79.27	60	120	
Sc (IS)	45	3	No Gas	12983146	1.18	40353426	32.17	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4163224	2.56	5557713	74.91	60	120	
Ge Internal Standard	72	2	HMI He	581378	1.79	752535	77.26	60	120	
In Internal Standard	115	2	HMI He	2500614	2.14	3288822	76.03	60	120	
Ho-165	165	2	HMI He	11656659	2.80	15288251	76.25	60	120	

Sample Report

Sample Table

Sample Name	280-123208-E-9-B
Data File Name	333SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T06:58:28-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456959 6020
ISTD Ref FileName	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	82.840	ppb	82.840	5.02	60141	500000	
Li	7	2	45	55.303	ppb	55.303	93.89	2890	500000	
Li	7	3	45	4.911	ppb	4.911	102.20	1986369	50000	
Be	9	1	6	-0.016	ppb	-0.016	-258.18	3	2000	
B	11	1	6	65954.973	ppb	65954.973	2.48	194869	2000	>LDR
Na	23	1	45	137169.269	ppb	137169.269	0.10	195470224	2000	>LDR
Na	23	2	45	141161.475	ppb	141161.475	1.03	14424973	400000	
Mg	24	2	45	179794.914	ppb	179794.914	0.76	8534303	400000	
Al	27	2	45	16.781	ppb	16.781	11.39	247	400000	
K	39	1	45	51264.581	ppb	51264.581	1.20	46164139	400000	
K	39	2	45	8947.182	ppb	8947.182	1.01	283295	400000	
Ca	40	1	45	245711.846	ppb	245711.846	0.58	553349178	400000	
Ca	44	2	45	205020.639	ppb	205020.639	1.55	409134	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	4.682	ppb	4.682	15.12	4508	2000	
Cr	52	2	72	0.360	ppb	0.360	31.10	407	5000	
Mn	55	2	72	1441.672	ppb	1441.672	0.62	408826	10000	
Fe	57	2	72	7155.074	ppb	7155.074	1.59	94440	400000	
Co	59	2	72	0.839	ppb	0.839	4.04	1730	2000	
Ni	60	2	72	1.366	ppb	1.366	25.71	527	5000	
Cu	63	2	72	1.056	ppb	1.056	12.45	1517	5000	
Zn	66	2	72	4.901	ppb	4.901	13.77	770	5000	
As	75	2	72	2.417	ppb	2.417	4.90	284	2000	
Se	78	1	72	-0.056	ppb	-0.056	-331.78	41	2000	
Sr	88	2	72	2186.397	ppb	2186.397	0.59	849058	4000	
Zr	90	2	72	433.720	ppb	433.720	12.69	340	1000	
Nb	93	2	72	-0.477	ppb	-0.477	-1.52	270	200	
Mo	95	2	115	0.804	ppb	0.804	11.03	427	2000	
Pd	105	2	115	0.026	ppb	0.026	82.18	40	100	
Ag	107	2	115	0.000	ppb	0.000	-22570.74	23	100	
Cd	111	2	115	0.029	ppb	0.029	173.21	7	2000	
Sn	120	2	115	0.337	ppb	0.337	18.44	333	2000	
Sb	121	2	115	0.102	ppb	0.102	117.84	103	1000	
Ba	137	2	115	22.094	ppb	22.094	7.11	5191	5000	
W	182	2	165	-0.006	ppb	-0.006	-563.93	427	100	
Pt	195	2	165	0.000	ppb	0.000	#DIV/0!	0	100	
Tl	205	2	165	-0.006	ppb	-0.006	-177.77	117	2000	
Pb	208	2	165	0.136	ppb	0.136	15.34	1430	5000	
Th	232	2	165	-0.007	ppb	-0.007	-183.50	503	2000	
U	238	2	165	0.232	ppb	0.232	6.75	2074	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	385028	0.46	459341	83.82	60	120	
Sc (IS)	45	1	HMI H2	10677984	0.95	12606259	84.70	60	120	
Sc (IS)	45	2	HMI He	454196	4.48	551341	82.38	60	120	
Sc (IS)	45	3	No Gas	17451829	0.86	40353426	43.25	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4690222	0.66	5557713	84.39	60	120	
Ge Internal Standard	72	2	HMI He	615252	4.27	752535	81.76	60	120	
In Internal Standard	115	2	HMI He	2589468	3.20	3288822	78.74	60	120	
Ho-165	165	2	HMI He	12282289	4.19	15288251	80.34	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5688510
Data File Name	334_CCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T07:02:21-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	104.436	ppb	5.152	62664	100	104.4	90	110	
Li	7	2	45	100.629	ppb	38.102	3190	100	100.6	90	110	
Li	7	3	45	40.015	ppb	7.664	2627148	100	40.0	90	110	>+\-10%
Be	9	1	6	48.660	ppb	4.067	7062	50	97.3	90	110	
B	11	1	6	868.677	ppb	4.784	4651	50	1737.4	90	110	>+\-10%
Na	23	1	45	1030.598	ppb	1.835	1764522	1000	103.1	90	110	
Na	23	2	45	943.504	ppb	1.321	117336	1000	94.4	90	110	
Mg	24	2	45	992.865	ppb	1.865	47430	1000	99.3	90	110	
Al	27	2	45	987.183	ppb	3.742	13090	1000	98.7	90	110	
K	39	1	45	1566.660	ppb	8.877	7886252	1000	156.7	90	110	>+\-10%
K	39	2	45	1069.599	ppb	5.642	48732	1000	107.0	90	110	
Ca	40	1	45	1117.724	ppb	1.657	2530744	1000	111.8	90	110	>+\-10%
Ca	44	2	45	1041.234	ppb	5.134	2100	1000	104.1	90	110	
Ti	47	2	45	54.115	ppb	8.815	740	50	108.2	90	110	
V	51	2	72	50.190	ppb	2.313	29748	50	100.4	90	110	
Cr	52	2	72	49.761	ppb	2.765	35113	50	99.5	90	110	
Mn	55	2	72	51.911	ppb	2.022	15108	50	103.8	90	110	
Fe	57	2	72	994.086	ppb	4.505	13487	1000	99.4	90	110	
Co	59	2	72	50.443	ppb	1.274	62345	50	100.9	90	110	
Ni	60	2	72	49.308	ppb	3.687	16674	50	98.6	90	110	
Cu	63	2	72	50.238	ppb	2.655	48499	50	100.5	90	110	
Zn	66	2	72	51.191	ppb	0.778	7446	50	102.4	90	110	
As	75	2	72	50.009	ppb	0.876	5716	50	100.0	90	110	
Se	78	1	72	48.789	ppb	1.749	5390	50	97.6	90	110	
Sr	88	2	72	100.503	ppb	2.957	39944	100	100.5	90	110	
Zr	90	2	72	309.420	ppb	50.872	253	50	618.8	90	110	>+\-10%
Nb	93	2	72	94.002	ppb	2.224	97430	100	94.0	90	110	
Mo	95	2	115	48.741	ppb	4.047	26332	50	97.5	90	110	
Pd	105	2	115	49.799	ppb	1.913	43786	50	99.6	90	110	
Ag	107	2	115	49.342	ppb	0.867	90751	50	98.7	90	110	
Cd	111	2	115	48.145	ppb	0.504	12002	50	96.3	90	110	
Sn	120	2	115	48.529	ppb	1.806	35162	50	97.1	90	110	
Sb	121	2	115	49.025	ppb	1.363	34657	50	98.0	90	110	
Ba	137	2	115	49.676	ppb	5.128	12346	50	99.4	90	110	
W	182	2	165	48.516	ppb	1.717	127297	50	97.0	90	110	
Pt	195	2	165	48.026	ppb	1.591	96183	50	96.1	90	110	
Tl	205	2	165	49.096	ppb	0.223	257449	50	98.2	90	110	
Pb	208	2	165	49.204	ppb	0.971	349458	50	98.4	90	110	
Th	232	2	165	48.319	ppb	1.019	437190	50	96.6	90	110	
U	238	2	165	49.203	ppb	0.233	443601	50	98.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	388865	1.68	459341	84.66	60	120	
Sc (IS)	45	1	HMI H2	10607570	1.58	12606259	84.15	60	120	
Sc (IS)	45	2	HMI He	453496	0.71	551341	82.25	60	120	
Sc (IS)	45	3	No Gas	21035029	0.56	40353426	52.13	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4753804	1.89	5557713	85.54	60	120	
Ge Internal Standard	72	2	HMI He	629047	1.80	752535	83.59	60	120	
In Internal Standard	115	2	HMI He	2739892	1.65	3288822	83.31	60	120	
Ho-165	165	2	HMI He	12608357	1.99	15288251	82.47	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5688508
Data File Name	335_CCB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T07:06:15-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-37.816	ppb	-5.2	2205575	10	
Be	9	1	6	-0.014	ppb	-315.1	3	0.5	
B	11	1	6	255.485	ppb	45.8	2624	0.5	>RL
Na	23	1	45	-29.014	ppb	-5.4	243661	25	
Na	23	2	45	-32.463	ppb	-3.0	17347	25	
Mg	24	2	45	4.521	ppb	40.0	567	25	
Al	27	2	45	0.211	ppb	766.8	27	15	
K	39	1	45	1128.276	ppb	2.7	6894279	50	>RL
K	39	2	45	91.846	ppb	15.8	19053	50	>RL
Ca	40	1	45	9.102	ppb	4.9	46050	50	
Ca	44	2	45	10.069	ppb	29.7	43	25	
Ti	47	2	45	0.754	ppb	100.1	10	0.5	>RL
V	51	2	72	1.076	ppb	23.1	2530	1	>RL
Cr	52	2	72	0.039	ppb	270.1	183	1	
Mn	55	2	72	0.273	ppb	42.0	133	0.5	
Fe	57	2	72	1.562	ppb	74.0	107	25	
Co	59	2	72	0.054	ppb	143.8	783	0.5	
Ni	60	2	72	-0.019	ppb	-613.6	67	1	
Cu	63	2	72	1.200	ppb	9.5	1637	1	>RL
Zn	66	2	72	0.616	ppb	77.3	167	5	
As	75	2	72	0.149	ppb	56.3	31	1	
Se	78	1	72	-0.117	ppb	-118.5	32	1	
Sr	88	2	72	0.021	ppb	252.3	43	0.5	
Zr	90	2	72	-12.034	ppb	-196.3	10	1	
Nb	93	2	72	2.907	ppb	9.1	3634	2	>RL
Mo	95	2	115	0.051	ppb	55.7	43	0.5	
Pd	105	2	115	0.024	ppb	82.2	40	1	
Ag	107	2	115	-0.004	ppb	-196.0	17	1	
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5	
Sn	120	2	115	0.166	ppb	13.2	223	1	
Sb	121	2	115	0.017	ppb	85.0	50	0.6	
Ba	137	2	115	0.108	ppb	164.7	40	0.5	
W	182	2	165	0.001	ppb	2537.4	447	1	
Pt	195	2	165	0.010	ppb	100.0	20	1	
Tl	205	2	165	0.010	ppb	165.7	200	0.1	
Pb	208	2	165	-0.002	ppb	-881.3	483	0.5	
Th	232	2	165	0.212	ppb	3.0	2424	1	
U	238	2	165	0.012	ppb	35.6	143	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	359205	0.89	459341	78.20	60	120	
Sc (IS)	45	1	HMI H2	9685904	0.25	12606259	76.83	60	120	
Sc (IS)	45	2	HMI He	439545	0.24	551341	79.72	60	120	
Sc (IS)	45	3	No Gas	21982376	0.49	40353426	54.47	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4331924	0.38	5557713	77.94	60	120	
Ge Internal Standard	72	2	HMI He	608661	0.20	752535	80.88	60	120	
In Internal Standard	115	2	HMI He	2680466	0.52	3288822	81.50	60	120	
Ho-165	165	2	HMI He	12275603	0.28	15288251	80.29	60	120	

Blank Report

Sample Table

Sample Name	MB 280-456958/1-A
Data File Name	336_BLK.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T07:10:09-06:00
Sample Type	Blank
Dilution	1
Comment	456958 6020
ISTD Ref File Name	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-0.229	ppb	-942.5450017	43791	0.5
Li	7	2	45	-35.788	ppb	-77.128668	2227	0.5
Li	7	3	45	-34.365	ppb	-8.854969017	2303866	10
Be	9	1	6	-0.013	ppb	-343.1178077	3	0.5
B	11	1	6	221.033	ppb	34.2273684	2447	0.5
Na	23	1	45	-68.856	ppb	-3.598117724	190068	25
Na	23	2	45	-65.240	ppb	-3.12894499	14064	25
Mg	24	2	45	3.540	ppb	33.36677708	520	25
Al	27	2	45	3.344	ppb	53.58682322	67	15
K	39	1	45	-3553.712	ppb	-0.662598772	3586608	50
K	39	2	45	64.958	ppb	18.94703568	18219	50
Ca	40	1	45	18.028	ppb	1.968723545	63554	50
Ca	44	2	45	8.432	ppb	107.7466807	40	25
Ti	47	2	45	0.755	ppb	99.99563089	10	0.5
V	51	2	72	-0.365	ppb	-67.46468581	1747	1
Cr	52	2	72	0.076	ppb	194.8369821	207	1
Mn	55	2	72	0.683	ppb	39.14702444	247	0.5
Fe	57	2	72	12.695	ppb	21.48446868	250	25
Co	59	2	72	0.062	ppb	79.34414657	787	0.5
Ni	60	2	72	-0.079	ppb	-90.09522735	47	1
Cu	63	2	72	0.540	ppb	18.14943018	1020	1
Zn	66	2	72	0.987	ppb	14.81994521	217	5
As	75	2	72	0.109	ppb	93.1670139	26	1
Se	78	1	72	-0.248	ppb	-34.71371729	19	1
Sr	88	2	72	0.057	ppb	173.8175942	57	0.5
Zr	90	2	72	20.045	ppb	158.2270049	33	1
Nb	93	2	72	1.421	ppb	23.78657178	2140	2
Mo	95	2	115	0.013	ppb	295.89649	23	0.5
Pd	105	2	115	-0.018	ppb	-37.03133521	3	1
Ag	107	2	115	0.003	ppb	478.864861	30	1
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5
Sn	120	2	115	0.209	ppb	64.53780902	253	1
Sb	121	2	115	-0.031	ppb	-72.18175303	17	0.6
Ba	137	2	115	0.232	ppb	61.23261173	70	0.5
W	182	2	165	-0.002	ppb	-1672.896909	443	1
Pt	195	2	165	0.009	ppb	91.70960571	17	1
Tl	205	2	165	0.015	ppb	41.03962783	227	0.1
Pb	208	2	165	0.024	ppb	57.75883485	663	0.5
Th	232	2	165	0.096	ppb	38.56792696	1420	1
U	238	2	165	0.004	ppb	81.51698667	77	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	347566	0.44	459341	75.67	60	120	
Sc (IS)	45	1	HMI H2	9576160	0.28	12606259	75.96	60	120	
Sc (IS)	45	2	HMI He	438107	0.34	551341	79.46	60	120	
Sc (IS)	45	3	No Gas	22713597	1.18	40353426	56.29	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4266493	0.83	5557713	76.77	60	120	
Ge Internal Standard	72	2	HMI He	604328	0.30	752535	80.31	60	120	
In Internal Standard	115	2	HMI He	2675849	0.57	3288822	81.36	60	120	
Ho-165	165	2	HMI He	12371359	1.04	15288251	80.92	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-456958/2-A
Data File Name	337_LCS.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T07:14:01-06:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	456958 6020
ISTD Ref File Name	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	82.814	82.814	ppb	11.259	53342	400	20.7	80	120	>+/-20%
Li	7	2	45	64.825	64.825	ppb	24.529	2827	400	16.2	80	120	>+/-20%
Li	7	3	45	39.357	39.357	ppb	7.614	2805463	400	9.8	80	120	>+/-20%
Be	9	1	6	43.617	43.617	ppb	2.730	5568	40	109.0	80	120	
Na	23	2	45	-75.987	-75.987	ppb	-4.700	12873	40	-190.0	80	120	>+/-20%
Mg	24	2	45	2.118	2.118	ppb	23.940	450	40	5.3	80	120	>+/-20%
Al	27	2	45	409.046	409.046	ppb	8.302	5198	40	1022.6	80	120	>+/-20%
K	39	2	45	61.097	61.097	ppb	12.319	17925	40	152.7	80	120	>+/-20%
Ca	44	2	45	102.823	102.823	ppb	39.545	220	40	257.1	80	120	>+/-20%
V	51	2	72	40.679	40.679	ppb	2.791	23246	40	101.7	80	120	
Cr	52	2	72	40.529	40.529	ppb	2.243	27166	40	101.3	80	120	
Mn	55	2	72	42.945	42.945	ppb	1.299	11869	40	107.4	80	120	
Fe	57	2	72	379.918	379.918	ppb	3.484	4944	40	949.8	80	120	>+/-20%
Co	59	2	72	41.066	41.066	ppb	1.372	48292	40	102.7	80	120	
Ni	60	2	72	40.211	40.211	ppb	0.973	12920	40	100.5	80	120	
Cu	63	2	72	41.628	41.628	ppb	0.808	38218	40	104.1	80	120	
Zn	66	2	72	39.591	39.591	ppb	4.343	5481	40	99.0	80	120	
As	75	2	72	38.384	38.384	ppb	1.537	4167	40	96.0	80	120	
Se	78	1	72	37.715	37.715	ppb	3.680	3734	40	94.3	80	120	
Nb	93	2	72	0.690	0.690	ppb	29.493	1400	40	1.7	80	120	>+/-20%
Mo	95	2	115	40.179	40.179	ppb	2.267	21003	40	100.4	80	120	
Pd	105	2	115	0.001	0.001	ppb	1702.867	20	40	0.0	80	120	>+/-20%
Ag	107	2	115	39.491	39.491	ppb	2.326	70283	40	98.7	80	120	
Cd	111	2	115	40.596	40.596	ppb	4.020	9791	40	101.5	80	120	
Sn	120	2	115	38.852	38.852	ppb	2.111	27258	40	97.1	80	120	
Sb	121	2	115	39.491	39.491	ppb	0.548	27014	40	98.7	80	120	
Ba	137	2	115	40.120	40.120	ppb	4.403	9654	40	100.3	80	120	
W	182	2	165	33.281	33.281	ppb	1.920	84670	40	83.2	80	120	
Pt	195	2	165	0.002	0.002	ppb	173.205	3	40	0.0	80	120	>+/-20%
Tl	205	2	165	39.439	39.439	ppb	0.412	200169	40	98.6	80	120	
Pb	208	2	165	40.270	40.270	ppb	0.373	276892	40	100.7	80	120	
Th	232	2	165	38.185	38.185	ppb	1.979	334490	40	95.5	80	120	
U	238	2	165	40.108	40.108	ppb	1.388	349987	40	100.3	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	342175	0.89	459341	74.49	60	120	
Sc (IS)	45	1	HMI H2	9472494	0.45	12606259	75.14	60	120	
Sc (IS)	45	2	HMI He	433633	1.08	551341	78.65	60	120	
Sc (IS)	45	3	No Gas	22501559	1.01	40353426	55.76	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4248522	0.42	5557713	76.44	60	120	
Ge Internal Standard	72	2	HMI He	596992	0.89	752535	79.33	60	120	
In Internal Standard	115	2	HMI He	2650815	0.22	3288822	80.60	60	120	
Ho-165	165	2	HMI He	12202257	0.78	15288251	79.81	60	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	icsa-5681712
Data File Name	338ICSA.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T07:18:00-06:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-36.772	ppb	-4.7	2270852	1	
Be	9	1	6	0.074	ppb	174.9	13	1	
B	11	1	6	234.752	ppb	6.6	2264	1	>RL or LOD
Na	23	1	45	94572.959	ppb	0.3	113788012	100000	
K	39	1	45	192072.022	ppb	0.7	130323425	100000	>RL or LOD
Ca	40	1	45	95140.980	ppb	0.2	180786977	100000	
Ti	47	2	45	1912.216	ppb	1.1	23827	1	>RL or LOD
V	51	2	72	-0.396	ppb	-66.0	1617	1	
Cr	52	2	72	1.584	ppb	8.1	1143	1	>RL or LOD
Mn	55	2	72	0.694	ppb	25.5	233	0.95	
Co	59	2	72	0.254	ppb	47.4	947	0.2	>RL or LOD
Ni	60	2	72	0.129	ppb	89.4	107	1	
Cu	63	2	72	1.089	ppb	6.7	1423	1	>RL or LOD
Zn	66	2	72	0.786	ppb	53.3	177	1	
As	75	2	72	0.043	ppb	78.3	18	1	
Se	78	1	72	0.302	ppb	74.2	68	1	
Sr	88	2	72	1.957	ppb	16.7	730	1	>RL or LOD
Zr	90	2	72	712.811	ppb	14.2	503	1	>RL or LOD
Nb	93	2	72	5.042	ppb	5.2	5341	1	>RL or LOD
Mo	95	2	115	2010.631	ppb	0.9	967114	2000	>RL or LOD
Pd	105	2	115	-0.001	ppb	-2130.3	17	1	
Ag	107	2	115	0.035	ppb	35.9	80	1	
Cd	111	2	115	0.315	ppb	13.3	70	1	
Sn	120	2	115	0.291	ppb	41.6	283	1	
Sb	121	2	115	0.687	ppb	9.2	467	1	
Ba	137	2	115	0.607	ppb	19.0	147	0.95	
W	182	2	165	0.384	ppb	17.6	1400	1	
Pt	195	2	165	0.029	ppb	26.7	57	1	
Tl	205	2	165	0.018	ppb	23.5	237	1	
Pb	208	2	165	0.269	ppb	3.0	2317	1	
Th	232	2	165	0.375	ppb	5.1	3804	1	
U	238	2	165	0.026	ppb	25.0	263	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	316830	0.43	459341	68.97	60	120	
Sc (IS)	45	1	HMI H2	9009237	0.39	12606259	71.47	60	120	
Sc (IS)	45	2	HMI He	413024	0.32	551341	74.91	60	120	
Sc (IS)	45	3	No Gas	22558585	0.58	40353426	55.90	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	3978969	1.46	5557713	71.59	60	120	
Ge Internal Standard	72	2	HMI He	564641	0.51	752535	75.03	60	120	
In Internal Standard	115	2	HMI He	2441059	1.06	3288822	74.22	60	120	
Ho-165	165	2	HMI He	12094585	1.07	15288251	79.11	60	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	icsab-5681713
Data File Name	339ICSB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T07:21:52-06:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	181.371	ppb	6.110	62671	100	181.4	80	120	>+\-20%
Li	7	2	45	180.067	ppb	41.239	3434	100	180.1	80	120	>+\-20%
Li	7	3	45	142.944	ppb	5.958	3503066	100	142.9	80	120	>+\-20%
Be	9	1	6	100.899	ppb	2.282	11929	100	100.9	80	120	
B	11	1	6	183.166	ppb	32.798	2140	100	183.2	80	120	>+\-20%
Na	23	1	45	96352.668	ppb	0.434	117087645	100	96352.7	80	120	>+\-20%
K	39	1	45	196258.276	ppb	0.230	134379548	100	196258.3	80	120	>+\-20%
Ca	40	1	45	97331.644	ppb	0.493	186805617	100	97331.6	80	120	>+\-20%
V	51	2	72	100.905	ppb	1.733	52900	100	100.9	80	120	
Cr	52	2	72	97.370	ppb	0.898	62776	100	97.4	80	120	
Mn	55	2	72	101.525	ppb	1.960	26999	100	101.5	80	120	
Co	59	2	72	95.702	ppb	2.611	107696	100	95.7	80	120	
Ni	60	2	72	95.700	ppb	2.178	29571	100	95.7	80	120	
Cu	63	2	72	93.018	ppb	0.985	81788	100	93.0	80	120	
Zn	66	2	72	96.943	ppb	0.606	12843	100	96.9	80	120	
As	75	2	72	100.332	ppb	1.467	10488	100	100.3	80	120	
Se	78	1	72	93.233	ppb	2.897	8661	100	93.2	80	120	
Sr	88	2	72	206.143	ppb	0.626	74991	100	206.1	80	120	>+\-20%
Zr	90	2	72	348.436	ppb	29.873	260	100	348.4	80	120	>+\-20%
Nb	93	2	72	222.935	ppb	0.050	210642	100	222.9	80	120	
Mo	95	2	115	2130.429	ppb	1.048	1040093	100	2130.4	80	120	
Pd	105	2	115	92.716	ppb	0.554	73706	100	92.7	80	120	
Ag	107	2	115	97.845	ppb	0.463	162730	100	97.8	80	120	
Cd	111	2	115	103.900	ppb	2.662	23420	100	103.9	80	120	
Sn	120	2	115	103.192	ppb	1.083	67507	100	103.2	80	120	
Sb	121	2	115	110.791	ppb	1.284	70776	100	110.8	80	120	
Ba	137	2	115	107.069	ppb	3.210	24062	100	107.1	80	120	
W	182	2	165	96.605	ppb	0.596	243775	100	96.6	80	120	
Pt	195	2	165	90.849	ppb	0.387	175275	100	90.8	80	120	
Tl	205	2	165	94.452	ppb	0.700	476964	100	94.5	80	120	
Pb	208	2	165	94.803	ppb	0.258	648151	100	94.8	80	120	
Th	232	2	165	100.220	ppb	0.149	873018	100	100.2	80	120	
U	238	2	165	96.600	ppb	0.884	838907	100	96.6	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	317099	1.39	459341	69.03	60	120	
Sc (IS)	45	1	HMI H2	9099807	0.88	12606259	72.18	60	120	
Sc (IS)	45	2	HMI He	420582	1.37	551341	76.28	60	120	
Sc (IS)	45	3	No Gas	22261546	0.88	40353426	55.17	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4013933	0.44	5557713	72.22	60	120	
Ge Internal Standard	72	2	HMI He	576041	0.42	752535	76.55	60	120	
In Internal Standard	115	2	HMI He	2477630	0.82	3288822	75.33	60	120	
Ho-165	165	2	HMI He	12145511	0.56	15288251	79.44	60	120	

Sample Table

Sample Name	rinse
Data File Name	340SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T07:25:45-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	304CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	15.915	ppb	15.915	7.67	62160	500000	
Li	7	2	45	19.358	ppb	19.358	20.45	3661	500000	
Li	7	3	45	-10.658	ppb	-10.658	-29.99	4009562	50000	
Be	9	1	6	0.146	ppb	0.146	63.59	33	2000	
B	11	1	6	-114.530	ppb	-114.530	-54.53	2194	2000	
Na	23	1	45	-78.124	ppb	-78.124	-16.40	242238	2000	
Na	23	2	45	-120.289	ppb	-120.289	-10.76	12282	400000	
Mg	24	2	45	4.912	ppb	4.912	170.82	823	400000	
Al	27	2	45	11.157	ppb	11.157	76.04	237	400000	
K	39	1	45	-3508.273	ppb	-3508.273	-13.30	4899450	400000	
K	39	2	45	-221.742	ppb	-221.742	-17.60	14158	400000	
Ca	40	1	45	40.345	ppb	40.345	57.71	148985	400000	
Ca	44	2	45	5.183	ppb	5.183	402.75	50	400000	
Ti	47	2	45	0.193	ppb	0.193	173.21	3	4000	
V	51	2	72	-1.939	ppb	-1.939	-7.47	1317	2000	
Cr	52	2	72	-0.181	ppb	-0.181	-18.73	50	5000	
Mn	55	2	72	0.097	ppb	0.097	255.77	117	10000	
Fe	57	2	72	15.181	ppb	15.181	43.18	403	400000	
Co	59	2	72	0.023	ppb	0.023	411.79	1067	2000	
Ni	60	2	72	-0.109	ppb	-0.109	-8.71	53	5000	
Cu	63	2	72	-0.130	ppb	-0.130	-98.90	580	5000	
Zn	66	2	72	-0.271	ppb	-0.271	-57.76	63	5000	
As	75	2	72	-0.034	ppb	-0.034	-90.86	15	2000	
Se	78	1	72	0.010	ppb	0.010	763.51	60	2000	
Sr	88	2	72	0.019	ppb	0.019	279.24	60	4000	
Zr	90	2	72	20.181	ppb	20.181	165.40	47	1000	
Nb	93	2	72	-0.458	ppb	-0.458	-14.24	410	200	
Mo	95	2	115	0.944	ppb	0.944	76.07	713	2000	
Pd	105	2	115	0.044	ppb	0.044	115.34	80	100	
Ag	107	2	115	-0.002	ppb	-0.002	-454.32	30	100	
Cd	111	2	115	0.039	ppb	0.039	87.08	13	2000	
Sn	120	2	115	0.071	ppb	0.071	56.73	220	2000	
Sb	121	2	115	-0.015	ppb	-0.015	-343.36	37	1000	
Ba	137	2	115	0.035	ppb	0.035	268.97	30	5000	
W	182	2	165	-0.031	ppb	-0.031	-126.45	540	100	
Pt	195	2	165	0.008	ppb	0.008	72.50	23	100	
Tl	205	2	165	0.013	ppb	0.013	191.02	320	2000	
Pb	208	2	165	0.001	ppb	0.001	461.18	753	5000	
Th	232	2	165	-0.017	ppb	-0.017	-90.41	610	2000	
U	238	2	165	0.018	ppb	0.018	82.42	283	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	488508	4.73	459341	106.35	60	120	
Sc (IS)	45	1	HMI H2	13006228	5.37	12606259	103.17	60	120	
Sc (IS)	45	2	HMI He	623818	7.32	551341	113.15	60	120	
Sc (IS)	45	3	No Gas	36820256	2.34	40353426	91.24	60	120	
Ge Internal Standard	72	1	HMI H2	5813442	4.69	5557713	104.60	60	120	
Ge Internal Standard	72	2	HMI He	874402	7.42	752535	116.19	60	120	
In Internal Standard	115	2	HMI He	3798376	6.50	3288822	115.49	60	120	
Ho-165	165	2	HMI He	18384722	7.10	15288251	120.25	60	120	IS Failed

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5688510
Data File Name	341_CCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T07:29:39-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	106.693	ppb	3.188	59402	100	106.7	90	110	
Li	7	2	45	49.131	ppb	66.256	2897	100	49.1	90	110	>+\-10%
Li	7	3	45	62.313	ppb	6.472	3137518	100	62.3	90	110	>+\-10%
Be	9	1	6	43.906	ppb	7.522	5998	50	87.8	90	110	>+\-10%
B	11	1	6	94.396	ppb	74.301	2227	50	188.8	90	110	>+\-10%
Na	23	1	45	953.725	ppb	1.193	1562156	1000	95.4	90	110	
Na	23	2	45	886.947	ppb	0.862	113214	1000	88.7	90	110	>+\-10%
Mg	24	2	45	970.954	ppb	2.558	47076	1000	97.1	90	110	
Al	27	2	45	953.188	ppb	4.054	12826	1000	95.3	90	110	
K	39	1	45	172.401	ppb	43.017	6433782	1000	17.2	90	110	>+\-10%
K	39	2	45	1067.548	ppb	2.580	49384	1000	106.8	90	110	
Ca	40	1	45	1012.769	ppb	1.187	2165638	1000	101.3	90	110	
Ca	44	2	45	1082.327	ppb	7.019	2214	1000	108.2	90	110	
Ti	47	2	45	48.524	ppb	15.335	673	50	97.0	90	110	
V	51	2	72	50.452	ppb	3.923	30359	50	100.9	90	110	
Cr	52	2	72	49.209	ppb	1.272	35264	50	98.4	90	110	
Mn	55	2	72	50.630	ppb	6.772	14958	50	101.3	90	110	
Fe	57	2	72	1022.365	ppb	3.831	14087	1000	102.2	90	110	
Co	59	2	72	49.210	ppb	1.189	61772	50	98.4	90	110	
Ni	60	2	72	49.116	ppb	2.607	16867	50	98.2	90	110	
Cu	63	2	72	50.033	ppb	3.851	49047	50	100.1	90	110	
Zn	66	2	72	48.954	ppb	6.690	7236	50	97.9	90	110	
As	75	2	72	49.283	ppb	1.811	5721	50	98.6	90	110	
Se	78	1	72	46.751	ppb	2.773	4880	50	93.5	90	110	
Sr	88	2	72	98.469	ppb	0.692	39743	100	98.5	90	110	
Zr	90	2	72	177.466	ppb	14.631	157	50	354.9	90	110	>+\-10%
Nb	93	2	72	93.475	ppb	1.595	98400	100	93.5	90	110	
Mo	95	2	115	48.040	ppb	3.401	26389	50	96.1	90	110	
Pd	105	2	115	48.844	ppb	2.391	43659	50	97.7	90	110	
Ag	107	2	115	49.112	ppb	1.211	91839	50	98.2	90	110	
Cd	111	2	115	49.851	ppb	5.116	12630	50	99.7	90	110	
Sn	120	2	115	49.478	ppb	2.351	36445	50	99.0	90	110	
Sb	121	2	115	48.682	ppb	1.555	34988	50	97.4	90	110	
Ba	137	2	115	49.636	ppb	1.683	12550	50	99.3	90	110	
W	182	2	165	47.878	ppb	0.865	127467	50	95.8	90	110	
Pt	195	2	165	48.145	ppb	1.003	97814	50	96.3	90	110	
Tl	205	2	165	48.390	ppb	1.198	257411	50	96.8	90	110	
Pb	208	2	165	48.814	ppb	1.159	351708	50	97.6	90	110	
Th	232	2	165	48.392	ppb	0.392	444227	50	96.8	90	110	
U	238	2	165	49.025	ppb	1.211	448398	50	98.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	366172	0.80	459341	79.72	60	120	
Sc (IS)	45	1	HMI H2	10007159	0.48	12606259	79.38	60	120	
Sc (IS)	45	2	HMI He	460174	0.38	551341	83.46	60	120	
Sc (IS)	45	3	No Gas	23782776	0.20	40353426	58.94	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4488725	0.31	5557713	80.77	60	120	
Ge Internal Standard	72	2	HMI He	638792	0.58	752535	84.89	60	120	
In Internal Standard	115	2	HMI He	2785868	1.67	3288822	84.71	60	120	
Ho-165	165	2	HMI He	12790618	0.72	15288251	83.66	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5688508
Data File Name	342_CCB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T07:33:34-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-24.449	ppb	-6.3	2542260	10	
Be	9	1	6	0.010	ppb	851.9	7	0.5	
B	11	1	6	-25.425	ppb	-342.7	1890	0.5	
Na	23	1	45	-76.027	ppb	-3.6	187651	25	
Na	23	2	45	-75.250	ppb	-6.0	13574	25	
Mg	24	2	45	0.043	ppb	2233.6	373	25	
Al	27	2	45	3.407	ppb	37.8	70	15	
K	39	1	45	-263.127	ppb	-25.9	6074725	50	
K	39	2	45	49.085	ppb	30.1	18436	50	
Ca	40	1	45	2.798	ppb	14.7	34027	50	
Ca	44	2	45	12.632	ppb	118.2	50	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	0.848	ppb	12.9	2480	1	
Cr	52	2	72	-0.068	ppb	-63.9	113	1	
Mn	55	2	72	0.121	ppb	141.5	93	0.5	
Fe	57	2	72	5.049	ppb	37.4	157	25	
Co	59	2	72	0.081	ppb	101.8	840	0.5	
Ni	60	2	72	-0.084	ppb	-40.6	47	1	
Cu	63	2	72	0.760	ppb	6.2	1267	1	
Zn	66	2	72	0.256	ppb	27.2	120	5	
As	75	2	72	0.055	ppb	127.0	21	1	
Se	78	1	72	0.017	ppb	700.3	47	1	
Sr	88	2	72	0.052	ppb	74.3	57	0.5	
Zr	90	2	72	18.386	ppb	166.1	33	1	>RL
Nb	93	2	72	2.579	ppb	12.0	3407	2	>RL
Mo	95	2	115	0.246	ppb	33.8	153	0.5	
Pd	105	2	115	0.022	ppb	97.3	40	1	
Ag	107	2	115	0.001	ppb	1928.8	27	1	
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5	
Sn	120	2	115	0.242	ppb	16.9	290	1	
Sb	121	2	115	0.074	ppb	70.5	93	0.6	
Ba	137	2	115	0.101	ppb	101.9	40	0.5	
W	182	2	165	-0.007	ppb	-914.1	443	1	
Pt	195	2	165	0.005	ppb	99.4	10	1	
Tl	205	2	165	0.010	ppb	137.4	207	0.1	
Pb	208	2	165	0.009	ppb	72.1	577	0.5	
Th	232	2	165	0.181	ppb	13.9	2240	1	
U	238	2	165	0.018	ppb	11.2	200	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	365811	0.48	459341	79.64	60	120	
Sc (IS)	45	1	HMI H2	9933804	1.12	12606259	78.80	60	120	
Sc (IS)	45	2	HMI He	454673	0.31	551341	82.47	60	120	
Sc (IS)	45	3	No Gas	24316380	1.06	40353426	60.26	60	120	
Ge Internal Standard	72	1	HMI H2	4452059	0.80	5557713	80.11	60	120	
Ge Internal Standard	72	2	HMI He	626906	0.11	752535	83.31	60	120	
In Internal Standard	115	2	HMI He	2802862	1.47	3288822	85.22	60	120	
Ho-165	165	2	HMI He	12754269	1.15	15288251	83.43	60	120	

Sample Report

Sample Table

Sample Name	280-123263-R-1-A
Data File Name	343SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T07:37:29-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456958 6020
ISTD Ref FileName	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	32.397	ppb	32.397	11.07	45881	500000	
Li	7	2	45	-5.737	ppb	-5.737	-449.68	2390	500000	
Li	7	3	45	-4.607	ppb	-4.607	-37.64	2434100	50000	
Be	9	1	6	0.101	ppb	0.101	240.11	17	2000	
B	11	1	6	14110.596	ppb	14110.596	3.43	36004	2000	>LDR
Na	23	1	45	45278.736	ppb	45278.736	0.29	55749174	2000	>LDR
Na	23	2	45	46166.926	ppb	46166.926	0.66	4517128	400000	
Mg	24	2	45	166084.155	ppb	166084.155	1.30	7527109	400000	
Al	27	2	45	1531.441	ppb	1531.441	2.06	19401	400000	
K	39	1	45	3834.961	ppb	3834.961	1.61	8338804	400000	
K	39	2	45	4042.831	ppb	4042.831	0.89	131096	400000	
Ca	40	1	45	385567.446	ppb	385567.446	0.23	747805456	400000	
Ca	44	2	45	312719.418	ppb	312719.418	1.40	595855	400000	
Ti	47	2	45	28.564	ppb	28.564	12.80	373	4000	
V	51	2	72	1.839	ppb	1.839	36.77	2884	2000	
Cr	52	2	72	5.013	ppb	5.013	5.91	3494	5000	
Mn	55	2	72	2614.896	ppb	2614.896	0.45	719419	10000	
Fe	57	2	72	6913.591	ppb	6913.591	0.85	88549	400000	
Co	59	2	72	19.847	ppb	19.847	1.63	23707	2000	
Ni	60	2	72	21.551	ppb	21.551	5.45	6959	5000	
Cu	63	2	72	3.825	ppb	3.825	8.91	3981	5000	
Zn	66	2	72	33.497	ppb	33.497	6.94	4651	5000	
As	75	2	72	11.427	ppb	11.427	6.15	1250	2000	
Se	78	1	72	0.001	ppb	0.001	24825.34	41	2000	
Sr	88	2	72	1011.722	ppb	1011.722	0.97	381341	4000	
Zr	90	2	72	1718.336	ppb	1718.336	4.16	1257	1000	
Nb	93	2	72	1.834	ppb	1.834	15.45	2520	200	
Mo	95	2	115	2.749	ppb	2.749	11.83	1417	2000	
Pd	105	2	115	-0.002	ppb	-0.002	-710.02	17	100	
Ag	107	2	115	0.029	ppb	0.029	168.67	73	100	
Cd	111	2	115	0.085	ppb	0.085	86.72	20	2000	
Sn	120	2	115	0.476	ppb	0.476	29.91	427	2000	
Sb	121	2	115	0.180	ppb	0.180	32.26	157	1000	
Ba	137	2	115	41.713	ppb	41.713	2.72	9797	5000	
W	182	2	165	0.013	ppb	0.013	143.86	480	100	
Pt	195	2	165	0.008	ppb	0.008	124.27	17	100	
Tl	205	2	165	0.056	ppb	0.056	38.14	437	2000	
Pb	208	2	165	2.090	ppb	2.090	3.92	14998	5000	
Th	232	2	165	0.622	ppb	0.622	7.76	6062	2000	
U	238	2	165	1.507	ppb	1.507	3.82	13341	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	320148	1.10	459341	69.70	60	120	
Sc (IS)	45	1	HMI H2	9196419	0.50	12606259	72.95	60	120	
Sc (IS)	45	2	HMI He	433551	0.76	551341	78.64	60	120	
Sc (IS)	45	3	No Gas	21965634	0.75	40353426	54.43	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4084668	0.67	5557713	73.50	60	120	
Ge Internal Standard	72	2	HMI He	597068	1.63	752535	79.34	60	120	
In Internal Standard	115	2	HMI He	2587667	0.69	3288822	78.68	60	120	
Ho-165	165	2	HMI He	12338671	1.13	15288251	80.71	60	120	

Sample Report

Sample Table

Sample Name	280-123263-R-1-Asd@5
Data File Name	344SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T07:41:20-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456958 6020
ISTD Ref FileName	304CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-0.490	ppb	-0.490	-2783.83	44878	500000	
Li	7	2	45	-7.573	ppb	-7.573	-93.27	2480	500000	
Li	7	3	45	-26.962	ppb	-26.962	-16.58	2361869	50000	
Be	9	1	6	-0.013	ppb	-0.013	-329.62	3	2000	
B	11	1	6	2999.501	ppb	2999.501	0.89	9870	2000	
Na	23	1	45	9410.574	ppb	9410.574	0.38	12598198	2000	
Na	23	2	45	9209.690	ppb	9209.690	0.70	956740	400000	
Mg	24	2	45	35319.861	ppb	35319.861	1.21	1669683	400000	
Al	27	2	45	319.467	ppb	319.467	5.35	4241	400000	
K	39	1	45	-292.271	ppb	-292.271	-10.34	5984888	400000	
K	39	2	45	892.748	ppb	892.748	2.06	43342	400000	
Ca	40	1	45	78799.141	ppb	78799.141	0.86	163211498	400000	
Ca	44	2	45	63180.711	ppb	63180.711	0.79	125573	400000	
Ti	47	2	45	6.843	ppb	6.843	22.41	93	4000	
V	51	2	72	0.133	ppb	0.133	144.06	2087	2000	
Cr	52	2	72	0.960	ppb	0.960	20.47	833	5000	
Mn	55	2	72	530.417	ppb	530.417	1.07	153299	10000	
Fe	57	2	72	1392.695	ppb	1392.695	2.00	18803	400000	
Co	59	2	72	4.242	ppb	4.242	9.33	5905	2000	
Ni	60	2	72	4.188	ppb	4.188	10.44	1480	5000	
Cu	63	2	72	1.050	ppb	1.050	17.81	1543	5000	
Zn	66	2	72	7.978	ppb	7.978	12.40	1227	5000	
As	75	2	72	1.958	ppb	1.958	9.07	237	2000	
Se	78	1	72	-0.082	ppb	-0.082	-212.23	36	2000	
Sr	88	2	72	203.949	ppb	203.949	1.48	80756	4000	
Zr	90	2	72	384.058	ppb	384.058	27.56	310	1000	
Nb	93	2	72	0.429	ppb	0.429	51.10	1203	200	
Mo	95	2	115	0.657	ppb	0.657	32.08	367	2000	
Pd	105	2	115	0.012	ppb	0.012	158.85	30	100	
Ag	107	2	115	-0.001	ppb	-0.001	-839.42	23	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.163	ppb	0.163	13.94	223	2000	
Sb	121	2	115	0.055	ppb	0.055	142.94	77	1000	
Ba	137	2	115	8.392	ppb	8.392	3.24	2070	5000	
W	182	2	165	0.003	ppb	0.003	512.19	467	100	
Pt	195	2	165	0.002	ppb	0.002	173.21	3	100	
Tl	205	2	165	-0.001	ppb	-0.001	-834.48	147	2000	
Pb	208	2	165	0.480	ppb	0.480	7.55	3920	5000	
Th	232	2	165	0.111	ppb	0.111	6.74	1587	2000	
U	238	2	165	0.309	ppb	0.309	3.41	2830	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	350839	0.21	459341	76.38	60	120	
Sc (IS)	45	1	HMI H2	9820037	0.39	12606259	77.90	60	120	
Sc (IS)	45	2	HMI He	452189	0.84	551341	82.02	60	120	
Sc (IS)	45	3	No Gas	22762078	0.38	40353426	56.41	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4388534	0.28	5557713	78.96	60	120	
Ge Internal Standard	72	2	HMI He	627017	0.32	752535	83.32	60	120	
In Internal Standard	115	2	HMI He	2703788	0.58	3288822	82.21	60	120	
Ho-165	165	2	HMI He	12642378	0.46	15288251	82.69	60	120	

Sample Report

Sample Table

Sample Name	280-123263-R-1-B MS
Data File Name	345SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T07:45:13-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456958 6020
ISTD Ref FileName	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	105.186	ppb	105.186	9.11	54828	500000	
Li	7	2	45	62.545	ppb	62.545	62.01	2750	500000	
Li	7	3	45	43.818	ppb	43.818	23.50	2244764	50000	
Be	9	1	6	41.648	ppb	41.648	2.90	4964	2000	
B	11	1	6	16492.406	ppb	16492.406	0.87	41709	2000	>LDR
Na	23	1	45	45492.401	ppb	45492.401	0.38	56437254	2000	>LDR
Na	23	2	45	46344.679	ppb	46344.679	0.75	4433005	400000	
Mg	24	2	45	166102.120	ppb	166102.120	0.99	7359180	400000	
Al	27	2	45	1944.214	ppb	1944.214	1.73	24072	400000	
K	39	1	45	3696.177	ppb	3696.177	3.61	8309312	400000	
K	39	2	45	4163.494	ppb	4163.494	0.33	131515	400000	
Ca	40	1	45	387728.816	ppb	387728.816	0.33	757708229	400000	
Ca	44	2	45	315680.328	ppb	315680.328	0.25	588039	400000	
Ti	47	2	45	31.807	ppb	31.807	11.70	407	4000	
V	51	2	72	44.259	ppb	44.259	2.33	24822	2000	
Cr	52	2	72	45.400	ppb	45.400	2.29	30052	5000	
Mn	55	2	72	2660.547	ppb	2660.547	1.33	723106	10000	
Fe	57	2	72	7141.929	ppb	7141.929	2.05	90364	400000	
Co	59	2	72	57.149	ppb	57.149	0.38	66131	2000	
Ni	60	2	72	59.895	ppb	59.895	2.10	18976	5000	
Cu	63	2	72	41.441	ppb	41.441	2.91	37600	5000	
Zn	66	2	72	70.023	ppb	70.023	7.08	9520	5000	
As	75	2	72	52.552	ppb	52.552	2.74	5632	2000	
Se	78	1	72	37.857	ppb	37.857	2.15	3657	2000	
Sr	88	2	72	1041.347	ppb	1041.347	1.19	387746	4000	
Zr	90	2	72	3277.305	ppb	3277.305	7.69	2350	1000	
Nb	93	2	72	0.482	ppb	0.482	15.83	1183	200	
Mo	95	2	115	43.979	ppb	43.979	1.92	22245	2000	
Pd	105	2	115	-0.010	ppb	-0.010	-0.79	10	100	
Ag	107	2	115	38.390	ppb	38.390	0.39	66119	100	
Cd	111	2	115	40.052	ppb	40.052	4.55	9347	2000	
Sn	120	2	115	32.382	ppb	32.382	1.76	22002	2000	
Sb	121	2	115	40.116	ppb	40.116	2.89	26553	1000	
Ba	137	2	115	81.270	ppb	81.270	0.70	18910	5000	
W	182	2	165	32.555	ppb	32.555	0.27	82454	100	
Pt	195	2	165	0.003	ppb	0.003	173.21	7	100	
Tl	205	2	165	38.383	ppb	38.383	0.51	193932	2000	
Pb	208	2	165	41.016	ppb	41.016	0.47	280726	5000	
Th	232	2	165	39.112	ppb	39.112	0.69	341075	2000	
U	238	2	165	41.992	ppb	41.992	1.17	364766	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	319429	1.12	459341	69.54	60	120	
Sc (IS)	45	1	HMI H2	9266327	0.47	12606259	73.51	60	120	
Sc (IS)	45	2	HMI He	423856	0.27	551341	76.88	60	120	
Sc (IS)	45	3	No Gas	17805017	1.16	40353426	44.12	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4144357	0.75	5557713	74.57	60	120	
Ge Internal Standard	72	2	HMI He	589860	0.91	752535	78.38	60	120	
In Internal Standard	115	2	HMI He	2565254	0.65	3288822	78.00	60	120	
Ho-165	165	2	HMI He	12147086	0.69	15288251	79.45	60	120	

Sample Report

Sample Table

Sample Name	280-123263-R-1-C MSD
Data File Name	346SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T07:49:04-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456958 6020
ISTD Ref FileName	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	108.305	ppb	108.305	1.43	53272	500000	
Li	7	2	45	93.052	ppb	93.052	27.74	2964	500000	
Li	7	3	45	36.747	ppb	36.747	11.34	1994724	50000	
Be	9	1	6	43.488	ppb	43.488	1.20	5014	2000	
B	11	1	6	15974.415	ppb	15974.415	0.96	39135	2000	>LDR
Na	23	1	45	45782.845	ppb	45782.845	0.30	54816756	2000	>LDR
Na	23	2	45	46526.244	ppb	46526.244	0.84	4494036	400000	
Mg	24	2	45	165524.430	ppb	165524.430	0.98	7405915	400000	
Al	27	2	45	2057.694	ppb	2057.694	4.57	25717	400000	
K	39	1	45	3589.539	ppb	3589.539	1.31	7951290	400000	
K	39	2	45	4068.948	ppb	4068.948	0.44	130151	400000	
Ca	40	1	45	388512.926	ppb	388512.926	0.49	732810816	400000	
Ca	44	2	45	314616.405	ppb	314616.405	0.69	591812	400000	
Ti	47	2	45	37.708	ppb	37.708	36.19	487	4000	
V	51	2	72	43.745	ppb	43.745	0.83	24478	2000	
Cr	52	2	72	46.289	ppb	46.289	2.34	30550	5000	
Mn	55	2	72	2671.531	ppb	2671.531	0.53	723873	10000	
Fe	57	2	72	7206.009	ppb	7206.009	1.23	90880	400000	
Co	59	2	72	58.544	ppb	58.544	2.65	67511	2000	
Ni	60	2	72	61.661	ppb	61.661	2.16	19474	5000	
Cu	63	2	72	41.235	ppb	41.235	1.90	37299	5000	
Zn	66	2	72	72.367	ppb	72.367	3.17	9804	5000	
As	75	2	72	52.454	ppb	52.454	2.90	5603	2000	
Se	78	1	72	37.275	ppb	37.275	8.45	3483	2000	
Sr	88	2	72	1060.159	ppb	1060.159	0.72	393557	4000	
Zr	90	2	72	3478.195	ppb	3478.195	7.94	2487	1000	
Nb	93	2	72	0.539	ppb	0.539	22.64	1234	200	
Mo	95	2	115	43.380	ppb	43.380	1.26	21948	2000	
Pd	105	2	115	-0.018	ppb	-0.018	-38.05	3	100	
Ag	107	2	115	37.482	ppb	37.482	0.42	64555	100	
Cd	111	2	115	39.752	ppb	39.752	4.65	9283	2000	
Sn	120	2	115	32.154	ppb	32.154	0.67	21848	2000	
Sb	121	2	115	42.256	ppb	42.256	3.05	27969	1000	
Ba	137	2	115	81.528	ppb	81.528	3.73	18964	5000	
W	182	2	165	32.717	ppb	32.717	1.13	82122	100	
Pt	195	2	165	0.005	ppb	0.005	100.82	10	100	
Tl	205	2	165	38.548	ppb	38.548	0.46	193074	2000	
Pb	208	2	165	40.647	ppb	40.647	0.93	275783	5000	
Th	232	2	165	39.248	ppb	39.248	1.07	339227	2000	
U	238	2	165	42.226	ppb	42.226	0.91	363518	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	309044	0.54	459341	67.28	60	120	
Sc (IS)	45	1	HMI H2	8943546	0.76	12606259	70.95	60	120	
Sc (IS)	45	2	HMI He	428009	1.06	551341	77.63	60	120	
Sc (IS)	45	3	No Gas	16105691	0.96	40353426	39.91	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4010626	0.65	5557713	72.16	60	120	
Ge Internal Standard	72	2	HMI He	588005	1.50	752535	78.14	60	120	
In Internal Standard	115	2	HMI He	2565352	1.81	3288822	78.00	60	120	
Ho-165	165	2	HMI He	12040756	2.39	15288251	78.76	60	120	

Sample Table

Sample Name	280-123263-R-1-A pds
Data File Name	347SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T07:52:54-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456958 6020
ISTD Ref FileName	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	37.469	ppb	37.469	21.10	43955	500000	
Li	7	2	45	-19.506	ppb	-19.506	-153.28	2200	500000	
Li	7	3	45	-30.542	ppb	-30.542	-5.84	1445022	50000	
Be	9	1	6	210.780	ppb	210.780	0.41	23947	2000	
B	11	1	6	13988.862	ppb	13988.862	3.16	33996	2000	>LDR
Na	23	1	45	44691.380	ppb	44691.380	0.33	52042911	2000	>LDR
Na	23	2	45	45737.704	ppb	45737.704	0.86	4272447	400000	
Mg	24	2	45	161660.524	ppb	161660.524	0.69	6994053	400000	
Al	27	2	45	3678.988	ppb	3678.988	1.69	44459	400000	
K	39	1	45	3367.160	ppb	3367.160	2.03	7593405	400000	
K	39	2	45	4135.385	ppb	4135.385	0.92	127656	400000	
Ca	40	1	45	377949.598	ppb	377949.598	0.80	693227910	400000	
Ca	44	2	45	309026.488	ppb	309026.488	0.27	562104	400000	
Ti	47	2	45	36.293	ppb	36.293	19.47	453	4000	
V	51	2	72	214.432	ppb	214.432	1.27	109331	2000	
Cr	52	2	72	210.856	ppb	210.856	0.94	134542	5000	
Mn	55	2	72	2771.086	ppb	2771.086	1.01	728894	10000	
Fe	57	2	72	8672.189	ppb	8672.189	0.46	106169	400000	
Co	59	2	72	216.703	ppb	216.703	0.38	240802	2000	
Ni	60	2	72	218.016	ppb	218.016	1.88	66667	5000	
Cu	63	2	72	196.235	ppb	196.235	2.04	170414	5000	
Zn	66	2	72	230.460	ppb	230.460	2.88	30146	5000	
As	75	2	72	220.538	ppb	220.538	0.89	22828	2000	
Se	78	1	72	194.148	ppb	194.148	1.09	17567	2000	
Sr	88	2	72	997.932	ppb	997.932	1.08	359598	4000	
Zr	90	2	72	270669.761	ppb	270669.761	0.42	186497	1000	>LDR
Nb	93	2	72	2.953	ppb	2.953	7.20	3451	200	
Mo	95	2	115	214.809	ppb	214.809	1.32	102573	2000	
Pd	105	2	115	0.107	ppb	0.107	22.31	100	100	
Ag	107	2	115	40.699	ppb	40.699	1.59	66203	100	
Cd	111	2	115	206.551	ppb	206.551	1.16	45532	2000	
Sn	120	2	115	216.941	ppb	216.941	1.02	138679	2000	
Sb	121	2	115	231.747	ppb	231.747	1.45	144724	1000	
Ba	137	2	115	260.335	ppb	260.335	1.40	57186	5000	
W	182	2	165	208.406	ppb	208.406	0.66	503736	100	
Pt	195	2	165	0.112	ppb	0.112	21.20	207	100	
Tl	205	2	165	200.689	ppb	200.689	0.36	971559	2000	
Pb	208	2	165	200.436	ppb	200.436	0.82	1313299	5000	
Th	232	2	165	1.348	ppb	1.348	7.85	11788	2000	
U	238	2	165	243.944	ppb	243.944	1.52	2031320	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	304723	0.20	459341	66.34	60	120	
Sc (IS)	45	1	HMI H2	8697357	0.65	12606259	68.99	60	120	
Sc (IS)	45	2	HMI He	413886	0.50	551341	75.07	60	120	
Sc (IS)	45	3	No Gas	14079856	0.19	40353426	34.89	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	3918618	0.79	5557713	70.51	60	120	
Ge Internal Standard	72	2	HMI He	570844	1.12	752535	75.86	60	120	
In Internal Standard	115	2	HMI He	2423035	1.07	3288822	73.67	60	120	
Ho-165	165	2	HMI He	11645352	1.27	15288251	76.17	60	120	

Sample Report

Sample Table

Sample Name	280-123277-E-1-A
Data File Name	348SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T07:56:46-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456958 6020
ISTD Ref FileName	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	34.804	ppb	34.804	15.40	46219	500000	
Li	7	2	45	14.719	ppb	14.719	269.97	2464	500000	
Li	7	3	45	-27.610	ppb	-27.610	-13.06	1729315	50000	
Be	9	1	6	0.795	ppb	0.795	76.99	97	2000	
B	11	1	6	18226.821	ppb	18226.821	1.62	44758	2000	>LDR
Na	23	1	45	163845.525	ppb	163845.525	0.75	201282390	2000	>LDR
Na	23	2	45	166316.855	ppb	166316.855	1.21	15891581	400000	
Mg	24	2	45	16606.888	ppb	16606.888	1.06	737667	400000	
Al	27	2	45	12642.497	ppb	12642.497	1.07	156737	400000	
K	39	1	45	7879.594	ppb	7879.594	0.27	11031583	400000	
K	39	2	45	6346.538	ppb	6346.538	0.80	192594	400000	
Ca	40	1	45	35197.081	ppb	35197.081	0.87	68370824	400000	
Ca	44	2	45	28374.320	ppb	28374.320	2.30	52983	400000	
Ti	47	2	45	157.699	ppb	157.699	11.08	2020	4000	
V	51	2	72	22.175	ppb	22.175	1.11	13350	2000	
Cr	52	2	72	36.872	ppb	36.872	28.79	24374	5000	
Mn	55	2	72	482.707	ppb	482.707	0.82	130933	10000	
Fe	57	2	72	19414.660	ppb	19414.660	0.83	244920	400000	
Co	59	2	72	10.188	ppb	10.188	4.65	12332	2000	
Ni	60	2	72	26.685	ppb	26.685	3.78	8473	5000	
Cu	63	2	72	19.753	ppb	19.753	1.94	18145	5000	
Zn	66	2	72	44.479	ppb	44.479	1.82	6062	5000	
As	75	2	72	8.551	ppb	8.551	5.28	926	2000	
Se	78	1	72	0.629	ppb	0.629	11.61	101	2000	
Sr	88	2	72	246.716	ppb	246.716	1.17	91675	4000	
Zr	90	2	72	5818.183	ppb	5818.183	7.05	4151	1000	>LDR
Nb	93	2	72	0.201	ppb	0.201	68.76	910	200	
Mo	95	2	115	2.758	ppb	2.758	3.88	1413	2000	
Pd	105	2	115	0.002	ppb	0.002	559.67	20	100	
Ag	107	2	115	0.067	ppb	0.067	16.18	140	100	
Cd	111	2	115	0.301	ppb	0.301	93.76	70	2000	
Sn	120	2	115	0.426	ppb	0.426	19.60	390	2000	
Sb	121	2	115	0.498	ppb	0.498	22.94	367	1000	
Ba	137	2	115	205.801	ppb	205.801	0.22	48011	5000	
W	182	2	165	0.055	ppb	0.055	5.48	580	100	
Pt	195	2	165	0.000	ppb	0.000	#DIV/0!	0	100	
Tl	205	2	165	0.310	ppb	0.310	11.68	1717	2000	
Pb	208	2	165	36.350	ppb	36.350	0.31	249592	5000	
Th	232	2	165	5.163	ppb	5.163	0.62	45644	2000	
U	238	2	165	1.693	ppb	1.693	2.45	14792	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	311398	0.24	459341	67.79	60	120	
Sc (IS)	45	1	HMI H2	9207659	0.14	12606259	73.04	60	120	
Sc (IS)	45	2	HMI He	424805	1.45	551341	77.05	60	120	
Sc (IS)	45	3	No Gas	16701485	1.81	40353426	41.39	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4125767	0.80	5557713	74.23	60	120	
Ge Internal Standard	72	2	HMI He	588438	0.64	752535	78.19	60	120	
In Internal Standard	115	2	HMI He	2572955	1.02	3288822	78.23	60	120	
Ho-165	165	2	HMI He	12183488	1.31	15288251	79.69	60	120	

Sample Report

Sample Table

Sample Name	280-123277-E-2-A
Data File Name	349SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T08:00:37-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456958 6020
ISTD Ref FileName	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	95.349	ppb	95.349	7.21	51830	500000	
Li	7	2	45	54.281	ppb	54.281	44.04	2364	500000	
Li	7	3	45	14.157	ppb	14.157	66.63	1238423	50000	
Be	9	1	6	0.109	ppb	0.109	45.62	17	2000	
B	11	1	6	49593.839	ppb	49593.839	1.98	115274	2000	>LDR
Na	23	1	45	286879.384	ppb	286879.384	0.73	342318222	2000	>LDR
Na	23	2	45	293043.818	ppb	293043.818	0.45	24471750	400000	
Mg	24	2	45	171774.970	ppb	171774.970	0.50	6668077	400000	
Al	27	2	45	60.154	ppb	60.154	7.65	673	400000	
K	39	1	45	23912.254	ppb	23912.254	0.67	21055911	400000	
K	39	2	45	14474.352	ppb	14474.352	0.85	366223	400000	
Ca	40	1	45	498023.976	ppb	498023.976	0.46	939905666	400000	
Ca	44	2	45	406722.075	ppb	406722.075	0.63	663887	400000	
Ti	47	2	45	1.514	ppb	1.514	173.21	17	4000	
V	51	2	72	-1.080	ppb	-1.080	-16.57	1157	2000	
Cr	52	2	72	1.226	ppb	1.226	5.58	833	5000	
Mn	55	2	72	3429.763	ppb	3429.763	1.32	809271	10000	
Fe	57	2	72	22461.320	ppb	22461.320	0.51	246590	400000	
Co	59	2	72	1.576	ppb	1.576	12.38	2177	2000	
Ni	60	2	72	43.777	ppb	43.777	3.34	12069	5000	
Cu	63	2	72	0.647	ppb	0.647	21.69	950	5000	
Zn	66	2	72	27.713	ppb	27.713	4.99	3317	5000	
As	75	2	72	3.265	ppb	3.265	13.30	316	2000	
Se	78	1	72	0.259	ppb	0.259	32.26	64	2000	
Sr	88	2	72	1843.296	ppb	1843.296	0.77	595917	4000	
Zr	90	2	72	573.474	ppb	573.474	3.34	370	1000	
Nb	93	2	72	-0.666	ppb	-0.666	-5.89	67	200	
Mo	95	2	115	8.769	ppb	8.769	6.65	3881	2000	
Pd	105	2	115	0.005	ppb	0.005	524.55	20	100	
Ag	107	2	115	0.006	ppb	0.006	108.71	30	100	
Cd	111	2	115	0.031	ppb	0.031	173.21	7	2000	
Sn	120	2	115	0.128	ppb	0.128	49.12	163	2000	
Sb	121	2	115	0.207	ppb	0.207	42.06	150	1000	
Ba	137	2	115	23.162	ppb	23.162	2.82	4714	5000	
W	182	2	165	0.020	ppb	0.020	91.62	423	100	
Pt	195	2	165	0.000	ppb	0.000	#DIV/0!	0	100	
Tl	205	2	165	0.152	ppb	0.152	10.19	790	2000	
Pb	208	2	165	0.546	ppb	0.546	8.55	3637	5000	
Th	232	2	165	0.042	ppb	0.042	12.26	790	2000	
U	238	2	165	18.193	ppb	18.193	0.96	136172	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	301881	1.44	459341	65.72	60	120	
Sc (IS)	45	1	HMI H2	8949297	1.79	12606259	70.99	60	120	
Sc (IS)	45	2	HMI He	371407	4.10	551341	67.36	60	120	
Sc (IS)	45	3	No Gas	10607707	1.40	40353426	26.29	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	3989343	1.11	5557713	71.78	60	120	
Ge Internal Standard	72	2	HMI He	512091	4.50	752535	68.05	60	120	
In Internal Standard	115	2	HMI He	2241654	3.92	3288822	68.16	60	120	
Ho-165	165	2	HMI He	10468966	4.68	15288251	68.48	60	120	

Sample Report

Sample Table

Sample Name	280-123277-E-3-A
Data File Name	350SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T08:04:31-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456958 6020
ISTD Ref FileName	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	32.070	ppb	32.070	21.44	41371	500000	
Li	7	2	45	-20.142	ppb	-20.142	-94.99	2137	500000	
Li	7	3	45	-62.179	ppb	-62.179	-7.15	1175822	50000	
Be	9	1	6	0.052	ppb	0.052	174.04	10	2000	
B	11	1	6	21870.500	ppb	21870.500	2.76	50332	2000	>LDR
Na	23	1	45	77362.818	ppb	77362.818	0.08	85794235	2000	>LDR
Na	23	2	45	77167.661	ppb	77167.661	1.07	7007199	400000	
Mg	24	2	45	195180.255	ppb	195180.255	1.05	8223609	400000	
Al	27	2	45	1519.895	ppb	1519.895	3.01	17893	400000	
K	39	1	45	16307.347	ppb	16307.347	0.55	14981866	400000	
K	39	2	45	10505.454	ppb	10505.454	1.69	292619	400000	
Ca	40	1	45	325871.964	ppb	325871.964	0.49	570385405	400000	
Ca	44	2	45	259307.078	ppb	259307.078	1.47	459321	400000	
Ti	47	2	45	25.165	ppb	25.165	8.79	307	4000	
V	51	2	72	2.179	ppb	2.179	8.11	2850	2000	
Cr	52	2	72	2.806	ppb	2.806	15.16	1890	5000	
Mn	55	2	72	5232.679	ppb	5232.679	5.44	1341557	10000	
Fe	57	2	72	8161.912	ppb	8161.912	1.23	97288	400000	
Co	59	2	72	18.779	ppb	18.779	2.59	20916	2000	
Ni	60	2	72	9.495	ppb	9.495	12.90	2884	5000	
Cu	63	2	72	6.457	ppb	6.457	4.22	5921	5000	
Zn	66	2	72	11.044	ppb	11.044	8.54	1477	5000	
As	75	2	72	1.768	ppb	1.768	8.57	191	2000	
Se	78	1	72	0.489	ppb	0.489	49.35	80	2000	
Sr	88	2	72	937.127	ppb	937.127	1.24	328811	4000	
Zr	90	2	72	1702.443	ppb	1702.443	8.05	1157	1000	
Nb	93	2	72	-0.390	ppb	-0.390	-42.21	327	200	
Mo	95	2	115	0.957	ppb	0.957	6.57	473	2000	
Pd	105	2	115	0.013	ppb	0.013	222.05	27	100	
Ag	107	2	115	0.005	ppb	0.005	258.71	30	100	
Cd	111	2	115	0.585	ppb	0.585	29.82	130	2000	
Sn	120	2	115	0.709	ppb	0.709	15.74	550	2000	
Sb	121	2	115	0.137	ppb	0.137	44.26	120	1000	
Ba	137	2	115	135.793	ppb	135.793	2.41	29980	5000	
W	182	2	165	0.366	ppb	0.366	30.04	1264	100	
Pt	195	2	165	0.000	ppb	0.000	#DIV/0!	0	100	
Tl	205	2	165	0.040	ppb	0.040	23.05	320	2000	
Pb	208	2	165	3.332	ppb	3.332	0.74	21480	5000	
Th	232	2	165	0.397	ppb	0.397	2.10	3704	2000	
U	238	2	165	1.997	ppb	1.997	4.56	16044	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	293672	0.36	459341	63.93	60	120	
Sc (IS)	45	1	HMI H2	8299623	0.49	12606259	65.84	60	120	
Sc (IS)	45	2	HMI He	403175	3.52	551341	73.13	60	120	
Sc (IS)	45	3	No Gas	12690291	0.64	40353426	31.45	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	3747134	0.36	5557713	67.42	60	120	
Ge Internal Standard	72	2	HMI He	555806	3.59	752535	73.86	60	120	
In Internal Standard	115	2	HMI He	2434587	3.14	3288822	74.03	60	120	
Ho-165	165	2	HMI He	11220815	3.47	15288251	73.40	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5688510
Data File Name	351_CCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T08:08:23-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	111.177	ppb	3.851	57069	100	111.2	90	110	>+\-10%
Li	7	2	45	67.572	ppb	80.110	2894	100	67.6	90	110	>+\-10%
Li	7	3	45	27.576	ppb	8.774	2436924	100	27.6	90	110	>+\-10%
Be	9	1	6	44.482	ppb	3.324	5825	50	89.0	90	110	>+\-10%
B	11	1	6	447.158	ppb	21.930	3074	50	894.3	90	110	>+\-10%
Na	23	1	45	1012.514	ppb	2.009	1560863	1000	101.3	90	110	
Na	23	2	45	920.552	ppb	1.276	111770	1000	92.1	90	110	
Mg	24	2	45	986.855	ppb	2.190	45818	1000	98.7	90	110	
Al	27	2	45	981.099	ppb	4.254	12639	1000	98.1	90	110	
K	39	1	45	-221.607	ppb	-36.473	5851852	1000	-22.2	90	110	>+\-10%
K	39	2	45	1080.166	ppb	3.639	47655	1000	108.0	90	110	
Ca	40	1	45	1118.644	ppb	1.407	2273101	1000	111.9	90	110	>+\-10%
Ca	44	2	45	1025.649	ppb	13.853	2010	1000	102.6	90	110	
Ti	47	2	45	51.653	ppb	11.130	687	50	103.3	90	110	
V	51	2	72	49.935	ppb	3.065	29227	50	99.9	90	110	
Cr	52	2	72	47.335	ppb	3.576	32972	50	94.7	90	110	
Mn	55	2	72	49.456	ppb	1.433	14204	50	98.9	90	110	
Fe	57	2	72	932.672	ppb	1.522	12496	1000	93.3	90	110	
Co	59	2	72	48.386	ppb	1.746	59037	50	96.8	90	110	
Ni	60	2	72	47.409	ppb	0.591	15826	50	94.8	90	110	
Cu	63	2	72	47.658	ppb	1.280	45426	50	95.3	90	110	
Zn	66	2	72	50.252	ppb	5.388	7212	50	100.5	90	110	
As	75	2	72	48.735	ppb	2.597	5498	50	97.5	90	110	
Se	78	1	72	46.603	ppb	1.574	4680	50	93.2	90	110	
Sr	88	2	72	99.971	ppb	1.641	39208	100	100.0	90	110	
Zr	90	2	72	232.205	ppb	10.934	193	50	464.4	90	110	>+\-10%
Nb	93	2	72	92.591	ppb	2.024	94721	100	92.6	90	110	
Mo	95	2	115	47.242	ppb	2.164	25334	50	94.5	90	110	
Pd	105	2	115	47.518	ppb	3.202	41479	50	95.0	90	110	
Ag	107	2	115	47.601	ppb	1.316	86924	50	95.2	90	110	
Cd	111	2	115	47.621	ppb	3.759	11792	50	95.2	90	110	
Sn	120	2	115	48.150	ppb	2.323	34647	50	96.3	90	110	
Sb	121	2	115	48.305	ppb	1.096	33902	50	96.6	90	110	
Ba	137	2	115	48.246	ppb	5.207	11902	50	96.5	90	110	
W	182	2	165	47.288	ppb	1.172	121705	50	94.6	90	110	
Pt	195	2	165	47.254	ppb	0.964	92809	50	94.5	90	110	
Tl	205	2	165	48.319	ppb	1.925	248465	50	96.6	90	110	
Pb	208	2	165	48.550	ppb	0.598	338172	50	97.1	90	110	
Th	232	2	165	47.974	ppb	1.348	425718	50	95.9	90	110	
U	238	2	165	48.179	ppb	0.959	425966	50	96.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	350929	0.71	459341	76.40	60	120	
Sc (IS)	45	1	HMI H2	9521950	0.97	12606259	75.53	60	120	
Sc (IS)	45	2	HMI He	440737	1.19	551341	79.94	60	120	
Sc (IS)	45	3	No Gas	20146390	1.04	40353426	49.92	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4317523	1.63	5557713	77.69	60	120	
Ge Internal Standard	72	2	HMI He	620821	1.08	752535	82.50	60	120	
In Internal Standard	115	2	HMI He	2720394	2.18	3288822	82.72	60	120	
Ho-165	165	2	HMI He	12365417	1.47	15288251	80.88	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5688508
Data File Name	352_CCB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T08:12:16-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-42.552	ppb	-18.7	2233409	10	
Be	9	1	6	0.060	ppb	285.4	13	0.5	
B	11	1	6	50.664	ppb	68.4	2070	0.5	>RL
Na	23	1	45	-57.957	ppb	-4.4	214635	25	
Na	23	2	45	-64.071	ppb	-12.3	14701	25	
Mg	24	2	45	9.610	ppb	39.8	827	25	
Al	27	2	45	1.659	ppb	54.2	47	15	
K	39	1	45	-464.639	ppb	-19.4	6016274	50	
K	39	2	45	50.033	ppb	59.1	18446	50	>RL
Ca	40	1	45	12.053	ppb	4.9	54178	50	
Ca	44	2	45	4.346	ppb	68.6	33	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	0.146	ppb	374.8	2094	1	
Cr	52	2	72	-0.045	ppb	-87.3	130	1	
Mn	55	2	72	0.270	ppb	97.8	137	0.5	
Fe	57	2	72	4.046	ppb	25.9	143	25	
Co	59	2	72	-0.007	ppb	-827.5	733	0.5	
Ni	60	2	72	-0.115	ppb	-74.0	37	1	
Cu	63	2	72	0.565	ppb	44.5	1083	1	
Zn	66	2	72	0.301	ppb	132.6	127	5	
As	75	2	72	0.072	ppb	134.6	23	1	
Se	78	1	72	-0.004	ppb	-3786.2	45	1	
Sr	88	2	72	0.094	ppb	68.7	73	0.5	
Zr	90	2	72	93.400	ppb	29.3	90	1	>RL
Nb	93	2	72	2.378	ppb	14.2	3200	2	>RL
Mo	95	2	115	0.054	ppb	72.2	47	0.5	
Pd	105	2	115	0.000	ppb	9033.3	20	1	
Ag	107	2	115	-0.012	ppb	-26.5	3	1	
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5	
Sn	120	2	115	0.139	ppb	20.8	213	1	
Sb	121	2	115	0.088	ppb	32.9	103	0.6	
Ba	137	2	115	0.076	ppb	32.5	33	0.5	
W	182	2	165	0.017	ppb	195.7	507	1	
Pt	195	2	165	0.007	ppb	113.6	13	1	
Tl	205	2	165	0.037	ppb	29.2	350	0.1	
Pb	208	2	165	0.004	ppb	248.1	540	0.5	
Th	232	2	165	0.161	ppb	14.7	2054	1	
U	238	2	165	0.017	ppb	23.2	197	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	360288	1.02	459341	78.44	60	120	
Sc (IS)	45	1	HMI H2	10076920	0.16	12606259	79.94	60	120	
Sc (IS)	45	2	HMI He	454199	1.14	551341	82.38	60	120	
Sc (IS)	45	3	No Gas	22594545	0.93	40353426	55.99	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4537586	0.59	5557713	81.64	60	120	
Ge Internal Standard	72	2	HMI He	627107	0.83	752535	83.33	60	120	
In Internal Standard	115	2	HMI He	2795234	1.29	3288822	84.99	60	120	
Ho-165	165	2	HMI He	12746603	1.33	15288251	83.38	60	120	

Sample Report

Sample Table

Sample Name	280-123277-E-4-A
Data File Name	353SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T08:16:09-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456958 6020
ISTD Ref FileName	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	33.578	ppb	33.578	26.88	46225	500000	
Li	7	2	45	-0.403	ppb	-0.403	-18001.62	2390	500000	
Li	7	3	45	-23.146	ppb	-23.146	-7.21	1618493	50000	
Be	9	1	6	0.018	ppb	0.018	271.93	7	2000	
B	11	1	6	45350.297	ppb	45350.297	0.42	109175	2000	>LDR
Na	23	1	45	87682.798	ppb	87682.798	0.38	108192312	2000	>LDR
Na	23	2	45	88524.590	ppb	88524.590	1.33	8520200	400000	
Mg	24	2	45	207886.999	ppb	207886.999	1.46	9287204	400000	
Al	27	2	45	575.018	ppb	575.018	3.58	7196	400000	
K	39	1	45	9055.242	ppb	9055.242	1.17	11849625	400000	
K	39	2	45	6862.116	ppb	6862.116	1.64	208224	400000	
Ca	40	1	45	369095.092	ppb	369095.092	1.10	719013296	400000	
Ca	44	2	45	300978.749	ppb	300978.749	1.07	565360	400000	
Ti	47	2	45	15.546	ppb	15.546	12.59	200	4000	
V	51	2	72	-0.068	ppb	-0.068	-125.37	1860	2000	
Cr	52	2	72	1.084	ppb	1.084	6.03	867	5000	
Mn	55	2	72	3353.610	ppb	3353.610	0.71	912177	10000	
Fe	57	2	72	2911.862	ppb	2911.862	1.08	36928	400000	
Co	59	2	72	5.284	ppb	5.284	3.78	6752	2000	
Ni	60	2	72	7.219	ppb	7.219	4.87	2350	5000	
Cu	63	2	72	0.909	ppb	0.909	21.01	1327	5000	
Zn	66	2	72	5.938	ppb	5.938	10.61	880	5000	
As	75	2	72	1.590	ppb	1.590	18.20	184	2000	
Se	78	1	72	0.014	ppb	0.014	1259.91	43	2000	
Sr	88	2	72	2227.971	ppb	2227.971	0.63	830202	4000	
Zr	90	2	72	1152.233	ppb	1152.233	46.20	837	1000	
Nb	93	2	72	2.008	ppb	2.008	13.94	2654	200	
Mo	95	2	115	1.158	ppb	1.158	13.71	600	2000	
Pd	105	2	115	0.019	ppb	0.019	103.79	33	100	
Ag	107	2	115	-0.010	ppb	-0.010	-35.33	7	100	
Cd	111	2	115	0.099	ppb	0.099	88.33	23	2000	
Sn	120	2	115	0.248	ppb	0.248	26.25	270	2000	
Sb	121	2	115	0.000	ppb	0.000	-17118.17	37	1000	
Ba	137	2	115	26.584	ppb	26.584	4.07	6198	5000	
W	182	2	165	-0.016	ppb	-0.016	-319.71	397	100	
Pt	195	2	165	0.000	ppb	0.000	#DIV/0!	0	100	
Tl	205	2	165	0.022	ppb	0.022	93.15	257	2000	
Pb	208	2	165	1.039	ppb	1.039	1.97	7515	5000	
Th	232	2	165	0.370	ppb	0.370	5.72	3737	2000	
U	238	2	165	0.965	ppb	0.965	3.45	8330	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	312241	1.15	459341	67.98	60	120	
Sc (IS)	45	1	HMI H2	9237777	1.14	12606259	73.28	60	120	
Sc (IS)	45	2	HMI He	427512	3.22	551341	77.54	60	120	
Sc (IS)	45	3	No Gas	15419962	0.93	40353426	38.21	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4109812	1.41	5557713	73.95	60	120	
Ge Internal Standard	72	2	HMI He	590337	2.12	752535	78.45	60	120	
In Internal Standard	115	2	HMI He	2565864	3.08	3288822	78.02	60	120	
Ho-165	165	2	HMI He	12026806	3.44	15288251	78.67	60	120	

Sample Report

Sample Table

Sample Name	280-123277-E-5-A
Data File Name	354SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T08:20:03-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456958 6020
ISTD Ref FileName	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	24.219	ppb	24.219	26.03	44457	500000	
Li	7	2	45	14.363	ppb	14.363	382.09	2540	500000	
Li	7	3	45	-35.011	ppb	-35.011	-16.74	1517079	50000	
Be	9	1	6	0.274	ppb	0.274	17.91	37	2000	
B	11	1	6	14943.567	ppb	14943.567	3.92	37301	2000	>LDR
Na	23	1	45	43691.351	ppb	43691.351	0.76	53249133	2000	>LDR
Na	23	2	45	44288.571	ppb	44288.571	0.23	4385348	400000	
Mg	24	2	45	163352.634	ppb	163352.634	1.12	7489632	400000	
Al	27	2	45	1291.509	ppb	1291.509	3.94	16550	400000	
K	39	1	45	3330.055	ppb	3330.055	5.26	7921573	400000	
K	39	2	45	4050.842	ppb	4050.842	2.07	132848	400000	
Ca	40	1	45	378430.838	ppb	378430.838	0.65	726383029	400000	
Ca	44	2	45	310782.518	ppb	310782.518	0.72	599139	400000	
Ti	47	2	45	23.698	ppb	23.698	8.82	313	4000	
V	51	2	72	0.945	ppb	0.945	24.69	2460	2000	
Cr	52	2	72	3.873	ppb	3.873	0.94	2790	5000	
Mn	55	2	72	2532.198	ppb	2532.198	0.20	710598	10000	
Fe	57	2	72	7070.354	ppb	7070.354	0.88	92360	400000	
Co	59	2	72	18.377	ppb	18.377	5.92	22435	2000	
Ni	60	2	72	19.457	ppb	19.457	4.10	6415	5000	
Cu	63	2	72	2.610	ppb	2.610	4.63	2940	5000	
Zn	66	2	72	28.218	ppb	28.218	4.72	4011	5000	
As	75	2	72	11.515	ppb	11.515	4.81	1285	2000	
Se	78	1	72	-0.057	ppb	-0.057	-394.32	36	2000	
Sr	88	2	72	1001.349	ppb	1001.349	1.09	384986	4000	
Zr	90	2	72	1539.290	ppb	1539.290	2.66	1150	1000	
Nb	93	2	72	0.687	ppb	0.687	26.36	1427	200	
Mo	95	2	115	3.032	ppb	3.032	8.34	1594	2000	
Pd	105	2	115	-0.010	ppb	-0.010	-198.95	10	100	
Ag	107	2	115	0.011	ppb	0.011	76.25	43	100	
Cd	111	2	115	0.069	ppb	0.069	123.80	17	2000	
Sn	120	2	115	0.237	ppb	0.237	15.56	270	2000	
Sb	121	2	115	0.097	ppb	0.097	61.67	103	1000	
Ba	137	2	115	36.506	ppb	36.506	3.06	8757	5000	
W	182	2	165	0.026	ppb	0.026	196.18	513	100	
Pt	195	2	165	0.000	ppb	0.000	#DIV/0!	0	100	
Tl	205	2	165	0.044	ppb	0.044	25.39	373	2000	
Pb	208	2	165	1.604	ppb	1.604	5.65	11606	5000	
Th	232	2	165	0.433	ppb	0.433	1.91	4384	2000	
U	238	2	165	1.446	ppb	1.446	4.27	12764	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	313987	0.48	459341	68.36	60	120	
Sc (IS)	45	1	HMI H2	9101616	0.36	12606259	72.20	60	120	
Sc (IS)	45	2	HMI He	438672	1.62	551341	79.56	60	120	
Sc (IS)	45	3	No Gas	14988076	0.59	40353426	37.14	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4093242	0.49	5557713	73.65	60	120	
Ge Internal Standard	72	2	HMI He	608980	1.15	752535	80.92	60	120	
In Internal Standard	115	2	HMI He	2642787	1.59	3288822	80.36	60	120	
Ho-165	165	2	HMI He	12314372	0.42	15288251	80.55	60	120	

Sample Report

Sample Table

Sample Name	280-123331-E-1-A
Data File Name	355SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T08:23:56-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456958 6020
ISTD Ref FileName	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	20.978	ppb	20.978	12.26	45867	500000	
Li	7	2	45	12.156	ppb	12.156	140.61	2364	500000	
Li	7	3	45	-35.766	ppb	-35.766	-22.23	1100536	50000	
Be	9	1	6	0.156	ppb	0.156	80.98	23	2000	
B	11	1	6	25074.247	ppb	25074.247	2.77	62675	2000	>LDR
Na	23	1	45	48496.975	ppb	48496.975	0.32	61470196	2000	>LDR
Na	23	2	45	49579.916	ppb	49579.916	0.14	4582818	400000	
Mg	24	2	45	200490.152	ppb	200490.152	0.40	8585988	400000	
Al	27	2	45	1993.274	ppb	1993.274	5.15	23852	400000	
K	39	1	45	6877.080	ppb	6877.080	1.26	10662285	400000	
K	39	2	45	5938.799	ppb	5938.799	0.71	174804	400000	
Ca	40	1	45	484208.212	ppb	484208.212	0.41	967063052	400000	
Ca	44	2	45	397883.331	ppb	397883.331	0.61	716380	400000	
Ti	47	2	45	51.359	ppb	51.359	31.34	633	4000	
V	51	2	72	2.350	ppb	2.350	17.74	3000	2000	
Cr	52	2	72	3.143	ppb	3.143	0.71	2144	5000	
Mn	55	2	72	3341.401	ppb	3341.401	0.69	876315	10000	
Fe	57	2	72	18383.856	ppb	18383.856	1.65	224274	400000	
Co	59	2	72	14.304	ppb	14.304	0.72	16477	2000	
Ni	60	2	72	13.000	ppb	13.000	5.48	4031	5000	
Cu	63	2	72	1.958	ppb	1.958	10.04	2184	5000	
Zn	66	2	72	11.919	ppb	11.919	6.87	1627	5000	
As	75	2	72	13.711	ppb	13.711	5.60	1428	2000	
Se	78	1	72	0.148	ppb	0.148	157.54	57	2000	
Sr	88	2	72	1173.515	ppb	1173.515	0.32	421646	4000	
Zr	90	2	72	3894.343	ppb	3894.343	22.08	2692	1000	
Nb	93	2	72	0.305	ppb	0.305	106.64	973	200	
Mo	95	2	115	1.823	ppb	1.823	6.19	907	2000	
Pd	105	2	115	0.016	ppb	0.016	2.69	30	100	
Ag	107	2	115	0.000	ppb	0.000	4215.32	23	100	
Cd	111	2	115	0.044	ppb	0.044	99.62	10	2000	
Sn	120	2	115	0.155	ppb	0.155	77.22	200	2000	
Sb	121	2	115	0.023	ppb	0.023	204.51	50	1000	
Ba	137	2	115	27.387	ppb	27.387	8.47	6175	5000	
W	182	2	165	0.029	ppb	0.029	114.03	483	100	
Pt	195	2	165	0.009	ppb	0.009	35.46	17	100	
Tl	205	2	165	0.037	ppb	0.037	11.70	310	2000	
Pb	208	2	165	1.535	ppb	1.535	2.35	10305	5000	
Th	232	2	165	0.705	ppb	0.705	7.17	6282	2000	
U	238	2	165	3.474	ppb	3.474	0.50	28369	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	320276	0.89	459341	69.73	60	120	
Sc (IS)	45	1	HMI H2	9470182	0.14	12606259	75.12	60	120	
Sc (IS)	45	2	HMI He	409708	1.96	551341	74.31	60	120	
Sc (IS)	45	3	No Gas	10901074	1.64	40353426	27.01	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4247183	0.40	5557713	76.42	60	120	
Ge Internal Standard	72	2	HMI He	569167	2.12	752535	75.63	60	120	
In Internal Standard	115	2	HMI He	2482905	1.11	3288822	75.50	60	120	
Ho-165	165	2	HMI He	11407315	1.81	15288251	74.61	60	120	

Sample Table

Sample Name	280-123331-E-2-A
Data File Name	356SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T08:27:47-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456958 6020
ISTD Ref FileName	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	6.351	ppb	6.351	108.53	44901	500000	
Li	7	2	45	-17.664	ppb	-17.664	-98.48	2277	500000	
Li	7	3	45	-77.883	ppb	-77.883	-31.84	973201	50000	
Be	9	1	6	0.015	ppb	0.015	621.90	7	2000	
B	11	1	6	13818.218	ppb	13818.218	2.16	36475	2000	>LDR
Na	23	1	45	27037.774	ppb	27037.774	0.28	35013801	2000	>LDR
Na	23	2	45	27819.344	ppb	27819.344	0.41	2683751	400000	
Mg	24	2	45	130851.722	ppb	130851.722	0.19	5829850	400000	
Al	27	2	45	104.721	ppb	104.721	13.46	1327	400000	
K	39	1	45	2475.661	ppb	2475.661	4.22	7798386	400000	
K	39	2	45	3625.829	ppb	3625.829	1.27	117221	400000	
Ca	40	1	45	342531.080	ppb	342531.080	0.67	696485856	400000	
Ca	44	2	45	277218.863	ppb	277218.863	0.62	519247	400000	
Ti	47	2	45	7.866	ppb	7.866	122.22	100	4000	
V	51	2	72	-1.268	ppb	-1.268	-30.98	1240	2000	
Cr	52	2	72	0.420	ppb	0.420	2.24	430	5000	
Mn	55	2	72	5108.558	ppb	5108.558	0.73	1393006	10000	
Fe	57	2	72	9402.228	ppb	9402.228	2.12	119322	400000	
Co	59	2	72	19.666	ppb	19.666	3.24	23286	2000	
Ni	60	2	72	19.416	ppb	19.416	5.08	6222	5000	
Cu	63	2	72	6.658	ppb	6.658	0.97	6492	5000	
Zn	66	2	72	27.777	ppb	27.777	3.51	3837	5000	
As	75	2	72	18.549	ppb	18.549	2.02	2003	2000	
Se	78	1	72	-0.021	ppb	-0.021	-1162.01	41	2000	
Sr	88	2	72	756.347	ppb	756.347	0.54	282589	4000	
Zr	90	2	72	818.725	ppb	818.725	5.24	603	1000	
Nb	93	2	72	-0.136	ppb	-0.136	-37.97	590	200	
Mo	95	2	115	4.339	ppb	4.339	2.93	2210	2000	
Pd	105	2	115	-0.018	ppb	-0.018	-38.86	3	100	
Ag	107	2	115	0.447	ppb	0.447	20.32	793	100	
Cd	111	2	115	0.043	ppb	0.043	99.75	10	2000	
Sn	120	2	115	0.387	ppb	0.387	18.85	363	2000	
Sb	121	2	115	0.066	ppb	0.066	121.75	80	1000	
Ba	137	2	115	28.519	ppb	28.519	8.72	6649	5000	
W	182	2	165	-0.001	ppb	-0.001	-7106.46	427	100	
Pt	195	2	165	0.005	ppb	0.005	173.21	10	100	
Tl	205	2	165	0.013	ppb	0.013	19.83	203	2000	
Pb	208	2	165	0.698	ppb	0.698	10.61	5114	5000	
Th	232	2	165	0.014	ppb	0.014	113.92	660	2000	
U	238	2	165	8.597	ppb	8.597	1.47	72634	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	330779	0.33	459341	72.01	60	120	
Sc (IS)	45	1	HMI H2	9641464	0.92	12606259	76.48	60	120	
Sc (IS)	45	2	HMI He	426221	1.45	551341	77.31	60	120	
Sc (IS)	45	3	No Gas	11095937	0.29	40353426	27.50	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4301139	1.45	5557713	77.39	60	120	
Ge Internal Standard	72	2	HMI He	591808	1.26	752535	78.64	60	120	
In Internal Standard	115	2	HMI He	2566545	0.85	3288822	78.04	60	120	
Ho-165	165	2	HMI He	11808983	0.84	15288251	77.24	60	120	

Sample Report

Sample Table

Sample Name	280-123331-E-3-A
Data File Name	357SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T08:31:39-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456958 6020
ISTD Ref FileName	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-0.552	ppb	-0.552	-573.70	43083	500000	
Li	7	2	45	-45.836	ppb	-45.836	-124.35	2144	500000	
Li	7	3	45	-62.926	ppb	-62.926	-1.40	1134952	50000	
Be	9	1	6	0.154	ppb	0.154	134.92	23	2000	
B	11	1	6	26254.532	ppb	26254.532	1.75	66561	2000	>LDR
Na	23	1	45	53435.502	ppb	53435.502	0.49	67405969	2000	>LDR
Na	23	2	45	54221.190	ppb	54221.190	1.03	5302653	400000	
Mg	24	2	45	134627.235	ppb	134627.235	0.89	6102297	400000	
Al	27	2	45	729.024	ppb	729.024	8.98	9254	400000	
K	39	1	45	3270.715	ppb	3270.715	2.44	8166205	400000	
K	39	2	45	4071.682	ppb	4071.682	2.02	131943	400000	
Ca	40	1	45	257764.959	ppb	257764.959	0.51	512570752	400000	
Ca	44	2	45	210476.584	ppb	210476.584	0.72	401109	400000	
Ti	47	2	45	17.326	ppb	17.326	28.78	227	4000	
V	51	2	72	-0.681	ppb	-0.681	-52.29	1580	2000	
Cr	52	2	72	1.802	ppb	1.802	11.58	1370	5000	
Mn	55	2	72	5021.259	ppb	5021.259	1.60	1398092	10000	
Fe	57	2	72	2941.775	ppb	2941.775	0.88	38178	400000	
Co	59	2	72	3.639	ppb	3.639	8.91	4981	2000	
Ni	60	2	72	6.543	ppb	6.543	14.60	2190	5000	
Cu	63	2	72	1.566	ppb	1.566	19.23	1960	5000	
Zn	66	2	72	10.229	ppb	10.229	6.97	1493	5000	
As	75	2	72	3.150	ppb	3.150	10.10	359	2000	
Se	78	1	72	0.214	ppb	0.214	145.29	64	2000	
Sr	88	2	72	1046.298	ppb	1046.298	1.10	399029	4000	
Zr	90	2	72	1007.918	ppb	1007.918	7.70	753	1000	
Nb	93	2	72	-0.256	ppb	-0.256	-24.37	483	200	
Mo	95	2	115	1.143	ppb	1.143	4.70	603	2000	
Pd	105	2	115	0.014	ppb	0.014	83.48	30	100	
Ag	107	2	115	-0.008	ppb	-0.008	-70.36	10	100	
Cd	111	2	115	0.056	ppb	0.056	86.63	13	2000	
Sn	120	2	115	0.267	ppb	0.267	22.22	287	2000	
Sb	121	2	115	0.009	ppb	0.009	330.64	43	1000	
Ba	137	2	115	34.316	ppb	34.316	3.60	8129	5000	
W	182	2	165	-0.032	ppb	-0.032	-7.01	357	100	
Pt	195	2	165	0.000	ppb	0.000	#DIV/0!	0	100	
Tl	205	2	165	0.023	ppb	0.023	74.59	263	2000	
Pb	208	2	165	0.666	ppb	0.666	3.07	5001	5000	
Th	232	2	165	0.283	ppb	0.283	13.17	2991	2000	
U	238	2	165	0.995	ppb	0.995	0.31	8617	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	325181	0.50	459341	70.79	60	120	
Sc (IS)	45	1	HMI H2	9429047	0.96	12606259	74.80	60	120	
Sc (IS)	45	2	HMI He	433601	1.05	551341	78.64	60	120	
Sc (IS)	45	3	No Gas	12281106	0.80	40353426	30.43	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4269415	0.74	5557713	76.82	60	120	
Ge Internal Standard	72	2	HMI He	604180	1.63	752535	80.29	60	120	
In Internal Standard	115	2	HMI He	2609570	1.79	3288822	79.35	60	120	
Ho-165	165	2	HMI He	12061972	2.50	15288251	78.90	60	120	

Sample Report

Sample Table

Sample Name	280-123331-E-4-A
Data File Name	358SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T08:35:31-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456958 6020
ISTD Ref FileName	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	15.431	ppb	15.431	49.42	41251	500000	
Li	7	2	45	-0.827	ppb	-0.827	-4187.10	2190	500000	
Li	7	3	45	-44.304	ppb	-44.304	-9.10	1220360	50000	
Be	9	1	6	0.049	ppb	0.049	310.19	10	2000	
B	11	1	6	18081.810	ppb	18081.810	2.82	43083	2000	>LDR
Na	23	1	45	42702.338	ppb	42702.338	0.83	49429394	2000	>LDR
Na	23	2	45	43639.754	ppb	43639.754	1.39	3864573	400000	
Mg	24	2	45	125052.437	ppb	125052.437	0.89	5128160	400000	
Al	27	2	45	419.730	ppb	419.730	7.91	4828	400000	
K	39	1	45	5328.372	ppb	5328.372	1.09	8767288	400000	
K	39	2	45	5173.250	ppb	5173.250	1.28	147694	400000	
Ca	40	1	45	270482.815	ppb	270482.815	0.63	493063233	400000	
Ca	44	2	45	219002.086	ppb	219002.086	1.18	377585	400000	
Ti	47	2	45	8.452	ppb	8.452	10.40	100	4000	
V	51	2	72	-0.935	ppb	-0.935	-36.68	1293	2000	
Cr	52	2	72	2.379	ppb	2.379	33.88	1575	5000	
Mn	55	2	72	1398.596	ppb	1398.596	0.51	348791	10000	
Fe	57	2	72	8788.447	ppb	8788.447	1.64	102003	400000	
Co	59	2	72	3.146	ppb	3.146	14.00	3944	2000	
Ni	60	2	72	9.608	ppb	9.608	3.32	2847	5000	
Cu	63	2	72	1.713	ppb	1.713	17.05	1877	5000	
Zn	66	2	72	9.828	ppb	9.828	24.26	1287	5000	
As	75	2	72	6.154	ppb	6.154	5.88	616	2000	
Se	78	1	72	0.053	ppb	0.053	83.61	44	2000	
Sr	88	2	72	822.880	ppb	822.880	0.42	281116	4000	
Zr	90	2	72	775.926	ppb	775.926	10.40	523	1000	
Nb	93	2	72	-0.384	ppb	-0.384	-9.92	320	200	
Mo	95	2	115	7.440	ppb	7.440	4.33	3514	2000	
Pd	105	2	115	-0.013	ppb	-0.013	-111.82	7	100	
Ag	107	2	115	-0.007	ppb	-0.007	-85.93	10	100	
Cd	111	2	115	0.031	ppb	0.031	86.61	7	2000	
Sn	120	2	115	0.120	ppb	0.120	91.79	170	2000	
Sb	121	2	115	0.107	ppb	0.107	83.73	100	1000	
Ba	137	2	115	19.438	ppb	19.438	2.52	4218	5000	
W	182	2	165	-0.010	ppb	-0.010	-523.01	377	100	
Pt	195	2	165	0.000	ppb	0.000	#DIV/0!	0	100	
Tl	205	2	165	0.001	ppb	0.001	1052.24	137	2000	
Pb	208	2	165	1.242	ppb	1.242	1.71	8151	5000	
Th	232	2	165	0.184	ppb	0.184	4.86	1964	2000	
U	238	2	165	1.843	ppb	1.843	2.99	14569	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	302102	0.91	459341	65.77	60	120	
Sc (IS)	45	1	HMI H2	8643766	1.03	12606259	68.57	60	120	
Sc (IS)	45	2	HMI He	392311	0.47	551341	71.16	60	120	
Sc (IS)	45	3	No Gas	12417508	1.39	40353426	30.77	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	3892050	0.12	5557713	70.03	60	120	
Ge Internal Standard	72	2	HMI He	541152	0.52	752535	71.91	60	120	
In Internal Standard	115	2	HMI He	2386503	0.77	3288822	72.56	60	120	
Ho-165	165	2	HMI He	11033479	0.76	15288251	72.17	60	120	

Sample Table

Sample Name	280-123331-E-5-A
Data File Name	359SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T08:39:23-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456958 6020
ISTD Ref FileName	304CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	1.877	ppb	1.877	163.64	42274	500000	
Li	7	2	45	-25.134	ppb	-25.134	-59.25	2204	500000	
Li	7	3	45	-53.335	ppb	-53.335	-5.83	1368475	50000	
Be	9	1	6	1.112	ppb	1.112	45.45	137	2000	
B	11	1	6	4796.649	ppb	4796.649	2.01	13253	2000	
Na	23	1	45	7872.879	ppb	7872.879	1.25	9907352	2000	
Na	23	2	45	7609.313	ppb	7609.313	1.11	739465	400000	
Mg	24	2	45	62758.073	ppb	62758.073	1.01	2762224	400000	
Al	27	2	45	9759.325	ppb	9759.325	0.90	119928	400000	
K	39	1	45	10523.823	ppb	10523.823	3.10	12760267	400000	
K	39	2	45	7719.474	ppb	7719.474	0.66	228786	400000	
Ca	40	1	45	125576.969	ppb	125576.969	1.44	243395383	400000	
Ca	44	2	45	100596.840	ppb	100596.840	0.48	186152	400000	
Ti	47	2	45	117.066	ppb	117.066	1.96	1487	4000	
V	51	2	72	19.635	ppb	19.635	3.80	11989	2000	
Cr	52	2	72	22.012	ppb	22.012	4.17	14561	5000	
Mn	55	2	72	736.262	ppb	736.262	2.07	198895	10000	
Fe	57	2	72	14681.051	ppb	14681.051	0.59	184494	400000	
Co	59	2	72	11.120	ppb	11.120	2.60	13344	2000	
Ni	60	2	72	30.999	ppb	30.999	1.80	9794	5000	
Cu	63	2	72	71.635	ppb	71.635	1.64	64207	5000	
Zn	66	2	72	149.797	ppb	149.797	0.93	20151	5000	
As	75	2	72	10.475	ppb	10.475	5.14	1127	2000	
Se	78	1	72	0.331	ppb	0.331	96.25	73	2000	
Sr	88	2	72	314.222	ppb	314.222	1.01	116289	4000	
Zr	90	2	72	2669.400	ppb	2669.400	2.85	1907	1000	
Nb	93	2	72	0.260	ppb	0.260	28.90	963	200	
Mo	95	2	115	1.763	ppb	1.763	5.74	903	2000	
Pd	105	2	115	-0.014	ppb	-0.014	-102.20	7	100	
Ag	107	2	115	1.453	ppb	1.453	1.50	2514	100	
Cd	111	2	115	0.646	ppb	0.646	12.56	150	2000	
Sn	120	2	115	0.404	ppb	0.404	17.14	373	2000	
Sb	121	2	115	0.482	ppb	0.482	14.24	353	1000	
Ba	137	2	115	166.577	ppb	166.577	2.83	38572	5000	
W	182	2	165	0.041	ppb	0.041	71.67	540	100	
Pt	195	2	165	0.005	ppb	0.005	100.28	10	100	
Tl	205	2	165	0.128	ppb	0.128	6.43	787	2000	
Pb	208	2	165	31.510	ppb	31.510	0.62	214308	5000	
Th	232	2	165	2.285	ppb	2.285	2.67	20313	2000	
U	238	2	165	3.569	ppb	3.569	0.58	30821	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	317287	1.56	459341	69.07	60	120	
Sc (IS)	45	1	HMI H2	9190810	1.19	12606259	72.91	60	120	
Sc (IS)	45	2	HMI He	421018	0.41	551341	76.36	60	120	
Sc (IS)	45	3	No Gas	14339142	0.46	40353426	35.53	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4142351	0.52	5557713	74.53	60	120	
Ge Internal Standard	72	2	HMI He	586158	0.99	752535	77.89	60	120	
In Internal Standard	115	2	HMI He	2554071	1.12	3288822	77.66	60	120	
Ho-165	165	2	HMI He	12064970	1.43	15288251	78.92	60	120	

Sample Report

Sample Table

Sample Name	280-123331-E-6-A
Data File Name	360SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T08:43:31-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456958 6020
ISTD Ref FileName	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	69.645	ppb	69.645	12.34	47596	500000	
Li	7	2	45	0.901	ppb	0.901	5144.51	2167	500000	
Li	7	3	45	-8.499	ppb	-8.499	-67.54	1167399	50000	
Be	9	1	6	0.021	ppb	0.021	245.17	7	2000	
B	11	1	6	52275.156	ppb	52275.156	2.19	119422	2000	>LDR
Na	23	1	45	146405.472	ppb	146405.472	0.68	170189877	2000	>LDR
Na	23	2	45	147105.105	ppb	147105.105	0.94	12809076	400000	
Mg	24	2	45	206384.330	ppb	206384.330	0.69	8348903	400000	
Al	27	2	45	267.144	ppb	267.144	6.59	3040	400000	
K	39	1	45	14372.470	ppb	14372.470	1.49	14510993	400000	
K	39	2	45	9514.313	ppb	9514.313	0.50	255850	400000	
Ca	40	1	45	346326.422	ppb	346326.422	1.02	636258257	400000	
Ca	44	2	45	281897.297	ppb	281897.297	0.40	479462	400000	
Ti	47	2	45	4.015	ppb	4.015	34.41	47	4000	
V	51	2	72	-1.145	ppb	-1.145	-15.76	1177	2000	
Cr	52	2	72	0.886	ppb	0.886	24.62	667	5000	
Mn	55	2	72	3705.659	ppb	3705.659	0.80	911528	10000	
Fe	57	2	72	7611.559	ppb	7611.559	1.96	87152	400000	
Co	59	2	72	4.363	ppb	4.363	5.84	5151	2000	
Ni	60	2	72	8.645	ppb	8.645	10.64	2534	5000	
Cu	63	2	72	2.046	ppb	2.046	8.20	2120	5000	
Zn	66	2	72	4.037	ppb	4.037	8.72	563	5000	
As	75	2	72	3.915	ppb	3.915	6.67	392	2000	
Se	78	1	72	0.119	ppb	0.119	181.60	51	2000	
Sr	88	2	72	1941.164	ppb	1941.164	0.52	654114	4000	
Zr	90	2	72	1142.851	ppb	1142.851	7.55	753	1000	
Nb	93	2	72	-0.542	ppb	-0.542	-17.43	177	200	
Mo	95	2	115	2.679	ppb	2.679	11.58	1247	2000	
Pd	105	2	115	0.022	ppb	0.022	85.98	33	100	
Ag	107	2	115	-0.001	ppb	-0.001	-2322.33	20	100	
Cd	111	2	115	0.015	ppb	0.015	173.21	3	2000	
Sn	120	2	115	0.172	ppb	0.172	61.40	200	2000	
Sb	121	2	115	-0.027	ppb	-0.027	-70.91	17	1000	
Ba	137	2	115	16.227	ppb	16.227	8.10	3454	5000	
W	182	2	165	0.006	ppb	0.006	240.57	403	100	
Pt	195	2	165	0.002	ppb	0.002	173.21	3	100	
Tl	205	2	165	0.014	ppb	0.014	90.94	190	2000	
Pb	208	2	165	0.877	ppb	0.877	5.38	5751	5000	
Th	232	2	165	0.091	ppb	0.091	3.19	1197	2000	
U	238	2	165	5.828	ppb	5.828	0.33	44993	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	296922	0.43	459341	64.64	60	120	
Sc (IS)	45	1	HMI H2	8711275	0.35	12606259	69.10	60	120	
Sc (IS)	45	2	HMI He	387004	1.99	551341	70.19	60	120	
Sc (IS)	45	3	No Gas	10653003	0.20	40353426	26.40	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	3946625	0.31	5557713	71.01	60	120	
Ge Internal Standard	72	2	HMI He	533778	1.61	752535	70.93	60	120	
In Internal Standard	115	2	HMI He	2339444	3.30	3288822	71.13	60	120	
Ho-165	165	2	HMI He	10789334	3.31	15288251	70.57	60	120	

Sample Report

Sample Table

Sample Name	280-123331-E-7-A
Data File Name	361SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T08:47:24-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456958 6020
ISTD Ref FileName	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	5.901	ppb	5.901	63.83	44794	500000	
Li	7	2	45	19.526	ppb	19.526	274.58	2297	500000	
Li	7	3	45	-92.346	ppb	-92.346	-1.84	737513	50000	
Be	9	1	6	0.072	ppb	0.072	133.30	13	2000	
B	11	1	6	11361.228	ppb	11361.228	3.32	29350	2000	>LDR
Na	23	1	45	33454.860	ppb	33454.860	0.54	43210316	2000	>LDR
Na	23	2	45	34931.587	ppb	34931.587	0.56	3091473	400000	
Mg	24	2	45	351782.047	ppb	351782.047	1.10	14398882	400000	
Al	27	2	45	1012.675	ppb	1012.675	2.43	11592	400000	
K	39	1	45	5383.875	ppb	5383.875	1.65	9807224	400000	
K	39	2	45	5322.884	ppb	5322.884	0.63	151261	400000	
Ca	40	1	45	476413.405	ppb	476413.405	0.46	967640119	400000	
Ca	44	2	45	393758.731	ppb	393758.731	0.93	677678	400000	
Ti	47	2	45	22.538	ppb	22.538	7.62	267	4000	
V	51	2	72	1.285	ppb	1.285	34.69	2371	2000	
Cr	52	2	72	2.023	ppb	2.023	7.63	1370	5000	
Mn	55	2	72	6330.950	ppb	6330.950	1.76	1591512	10000	
Fe	57	2	72	8728.232	ppb	8728.232	1.27	102057	400000	
Co	59	2	72	8.672	ppb	8.672	2.42	9831	2000	
Ni	60	2	72	13.401	ppb	13.401	0.49	3976	5000	
Cu	63	2	72	2.038	ppb	2.038	8.47	2164	5000	
Zn	66	2	72	9.034	ppb	9.034	10.76	1200	5000	
As	75	2	72	2.866	ppb	2.866	14.70	295	2000	
Se	78	1	72	0.059	ppb	0.059	287.15	49	2000	
Sr	88	2	72	1022.647	ppb	1022.647	2.16	351978	4000	
Zr	90	2	72	1432.562	ppb	1432.562	8.89	960	1000	
Nb	93	2	72	-0.417	ppb	-0.417	-41.33	297	200	
Mo	95	2	115	0.680	ppb	0.680	30.88	333	2000	
Pd	105	2	115	-0.014	ppb	-0.014	-105.95	7	100	
Ag	107	2	115	-0.009	ppb	-0.009	-39.45	7	100	
Cd	111	2	115	0.047	ppb	0.047	98.96	10	2000	
Sn	120	2	115	0.073	ppb	0.073	29.23	140	2000	
Sb	121	2	115	0.070	ppb	0.070	94.40	77	1000	
Ba	137	2	115	20.143	ppb	20.143	3.64	4364	5000	
W	182	2	165	-0.013	ppb	-0.013	-319.43	357	100	
Pt	195	2	165	0.006	ppb	0.006	100.31	10	100	
Tl	205	2	165	0.017	ppb	0.017	59.69	203	2000	
Pb	208	2	165	0.998	ppb	0.998	2.15	6438	5000	
Th	232	2	165	0.356	ppb	0.356	6.75	3214	2000	
U	238	2	165	17.633	ppb	17.633	0.96	134902	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	320332	0.94	459341	69.74	60	120	
Sc (IS)	45	1	HMI H2	9631092	0.72	12606259	76.40	60	120	
Sc (IS)	45	2	HMI He	391600	4.71	551341	71.03	60	120	
Sc (IS)	45	3	No Gas	8871309	1.21	40353426	21.98	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	4311337	0.35	5557713	77.57	60	120	
Ge Internal Standard	72	2	HMI He	545321	4.45	752535	72.46	60	120	
In Internal Standard	115	2	HMI He	2381966	3.78	3288822	72.43	60	120	
Ho-165	165	2	HMI He	10695205	3.19	15288251	69.96	60	120	

Sample Table

Sample Name	280-123331-E-8-A
Data File Name	362SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T08:51:18-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456958 6020
ISTD Ref FileName	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	4.982	ppb	4.982	46.50	38116	500000	
Li	7	2	45	-34.977	ppb	-34.977	-45.97	1917	500000	
Li	7	3	45	-46.295	ppb	-46.295	-5.95	1176927	50000	
Be	9	1	6	0.121	ppb	0.121	165.05	17	2000	
B	11	1	6	12788.037	ppb	12788.037	4.29	28688	2000	>LDR
Na	23	1	45	28034.766	ppb	28034.766	0.84	30927729	2000	>LDR
Na	23	2	45	29291.439	ppb	29291.439	2.28	2493718	400000	
Mg	24	2	45	219680.959	ppb	219680.959	0.79	8640332	400000	
Al	27	2	45	5333.785	ppb	5333.785	1.25	58587	400000	
K	39	1	45	1940.103	ppb	1940.103	3.29	6328295	400000	
K	39	2	45	3462.255	ppb	3462.255	0.53	99458	400000	
Ca	40	1	45	536145.554	ppb	536145.554	0.94	928933826	400000	
Ca	44	2	45	442321.978	ppb	442321.978	1.75	731432	400000	
Ti	47	2	45	83.140	ppb	83.140	10.59	943	4000	
V	51	2	72	8.162	ppb	8.162	6.70	5498	2000	
Cr	52	2	72	9.055	ppb	9.055	7.07	5491	5000	
Mn	55	2	72	6943.307	ppb	6943.307	1.09	1694456	10000	
Fe	57	2	72	61938.632	ppb	61938.632	1.08	703050	400000	
Co	59	2	72	11.293	ppb	11.293	1.30	12236	2000	
Ni	60	2	72	15.272	ppb	15.272	6.46	4391	5000	
Cu	63	2	72	10.294	ppb	10.294	3.45	8730	5000	
Zn	66	2	72	32.244	ppb	32.244	2.58	3974	5000	
As	75	2	72	31.504	ppb	31.504	1.50	3036	2000	
Se	78	1	72	0.495	ppb	0.495	26.04	80	2000	
Sr	88	2	72	950.294	ppb	950.294	1.45	317700	4000	
Zr	90	2	72	5256.295	ppb	5256.295	10.99	3378	1000	>LDR
Nb	93	2	72	0.179	ppb	0.179	185.04	800	200	
Mo	95	2	115	3.811	ppb	3.811	8.96	1750	2000	
Pd	105	2	115	-0.013	ppb	-0.013	-60.00	7	100	
Ag	107	2	115	0.014	ppb	0.014	114.64	43	100	
Cd	111	2	115	0.094	ppb	0.094	99.55	20	2000	
Sn	120	2	115	0.249	ppb	0.249	36.43	243	2000	
Sb	121	2	115	0.303	ppb	0.303	7.47	213	1000	
Ba	137	2	115	57.667	ppb	57.667	2.56	12093	5000	
W	182	2	165	0.459	ppb	0.459	172.45	1435	100	
Pt	195	2	165	0.000	ppb	0.000	#DIV/0!	0	100	
Tl	205	2	165	0.086	ppb	0.086	9.81	523	2000	
Pb	208	2	165	8.818	ppb	8.818	2.61	54577	5000	
Th	232	2	165	1.671	ppb	1.671	2.78	13571	2000	
U	238	2	165	3.544	ppb	3.544	3.11	27691	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	280040	0.16	459341	60.97	60	120	
Sc (IS)	45	1	HMI H2	8215948	0.69	12606259	65.17	60	120	
Sc (IS)	45	2	HMI He	376286	0.80	551341	68.25	60	120	
Sc (IS)	45	3	No Gas	12051594	0.61	40353426	29.87	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	3723793	0.56	5557713	67.00	60	120	
Ge Internal Standard	72	2	HMI He	529606	0.64	752535	70.38	60	120	
In Internal Standard	115	2	HMI He	2311618	1.23	3288822	70.29	60	120	
Ho-165	165	2	HMI He	10914501	0.51	15288251	71.39	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5688510
Data File Name	363_CCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T08:55:11-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	105.898	ppb	4.515	51382	100	105.9	90	110	
Li	7	2	45	52.113	ppb	119.504	2540	100	52.1	90	110	>+\-10%
Li	7	3	45	31.394	ppb	12.886	2262145	100	31.4	90	110	>+\-10%
Be	9	1	6	47.864	ppb	6.666	5545	50	95.7	90	110	
B	11	1	6	241.096	ppb	57.296	2234	50	482.2	90	110	>+\-10%
Na	23	1	45	999.184	ppb	2.392	1405937	1000	99.9	90	110	
Na	23	2	45	927.388	ppb	1.907	102207	1000	92.7	90	110	
Mg	24	2	45	1045.022	ppb	0.386	44090	1000	104.5	90	110	
Al	27	2	45	1028.630	ppb	2.037	12049	1000	102.9	90	110	
K	39	1	45	-6.141	ppb	-1025.505	5463602	1000	-0.6	90	110	>+\-10%
K	39	2	45	1130.216	ppb	2.366	44639	1000	113.0	90	110	>+\-10%
Ca	40	1	45	1266.253	ppb	2.795	2339663	1000	126.6	90	110	>+\-10%
Ca	44	2	45	1042.199	ppb	7.624	1857	1000	104.2	90	110	
Ti	47	2	45	54.879	ppb	8.455	663	50	109.8	90	110	
V	51	2	72	48.616	ppb	1.050	25984	50	97.2	90	110	
Cr	52	2	72	49.357	ppb	1.699	31338	50	98.7	90	110	
Mn	55	2	72	52.414	ppb	2.410	13720	50	104.8	90	110	
Fe	57	2	72	1018.154	ppb	1.230	12429	1000	101.8	90	110	
Co	59	2	72	49.434	ppb	0.674	54978	50	98.9	90	110	
Ni	60	2	72	49.723	ppb	1.038	15129	50	99.4	90	110	
Cu	63	2	72	49.800	ppb	2.472	43249	50	99.6	90	110	
Zn	66	2	72	53.719	ppb	2.013	7025	50	107.4	90	110	
As	75	2	72	50.925	ppb	3.416	5236	50	101.8	90	110	
Se	78	1	72	48.373	ppb	2.143	4457	50	96.7	90	110	
Sr	88	2	72	104.850	ppb	2.012	37491	100	104.9	90	110	
Zr	90	2	72	359.900	ppb	24.969	263	50	719.8	90	110	>+\-10%
Nb	93	2	72	98.751	ppb	0.360	92058	100	98.8	90	110	
Mo	95	2	115	48.421	ppb	2.984	24058	50	96.8	90	110	
Pd	105	2	115	48.425	ppb	0.672	39172	50	96.9	90	110	
Ag	107	2	115	49.418	ppb	1.099	83608	50	98.8	90	110	
Cd	111	2	115	50.760	ppb	2.205	11639	50	101.5	90	110	
Sn	120	2	115	50.100	ppb	2.517	33388	50	100.2	90	110	
Sb	121	2	115	50.757	ppb	3.854	32990	50	101.5	90	110	
Ba	137	2	115	50.549	ppb	0.983	11562	50	101.1	90	110	
W	182	2	165	49.737	ppb	1.254	118698	50	99.5	90	110	
Pt	195	2	165	48.544	ppb	1.854	88420	50	97.1	90	110	
Tl	205	2	165	50.051	ppb	1.440	238687	50	100.1	90	110	
Pb	208	2	165	50.882	ppb	0.955	328655	50	101.8	90	110	
Th	232	2	165	49.689	ppb	1.844	408910	50	99.4	90	110	
U	238	2	165	50.353	ppb	0.616	412891	50	100.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	310452	0.55	459341	67.59	60	120	
Sc (IS)	45	1	HMI H2	8671512	1.25	12606259	68.79	60	120	
Sc (IS)	45	2	HMI He	400637	0.27	551341	72.67	60	120	
Sc (IS)	45	3	No Gas	18516118	0.15	40353426	45.88	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	3963895	0.86	5557713	71.32	60	120	
Ge Internal Standard	72	2	HMI He	565963	0.39	752535	75.21	60	120	
In Internal Standard	115	2	HMI He	2520384	1.40	3288822	76.63	60	120	
Ho-165	165	2	HMI He	11467439	0.58	15288251	75.01	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5688508
Data File Name	364_CCB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T08:59:03-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-45.791	ppb	-10.9	1866183	10	
Be	9	1	6	0.046	ppb	184.1	10	0.5	
B	11	1	6	61.431	ppb	189.0	1834	0.5	>RL
Na	23	1	45	-77.300	ppb	-0.7	163709	25	
Na	23	2	45	-78.649	ppb	-6.2	11805	25	
Mg	24	2	45	32.907	ppb	8.7	1727	25	>RL
Al	27	2	45	1.507	ppb	148.5	40	15	
K	39	1	45	-370.930	ppb	-11.9	5279579	50	
K	39	2	45	69.978	ppb	34.1	17014	50	>RL
Ca	40	1	45	20.712	ppb	5.3	62976	50	
Ca	44	2	45	19.318	ppb	120.8	57	25	
Ti	47	2	45	0.268	ppb	173.2	3	0.5	
V	51	2	72	-1.463	ppb	-9.6	1093	1	
Cr	52	2	72	-0.120	ppb	-22.5	70	1	
Mn	55	2	72	0.421	ppb	35.0	163	0.5	
Fe	57	2	72	8.754	ppb	40.1	187	25	
Co	59	2	72	-0.038	ppb	-189.2	630	0.5	
Ni	60	2	72	0.260	ppb	63.3	147	1	
Cu	63	2	72	0.859	ppb	31.1	1233	1	
Zn	66	2	72	0.137	ppb	305.9	93	5	
As	75	2	72	0.067	ppb	170.3	20	1	
Se	78	1	72	-0.015	ppb	-1310.3	39	1	
Sr	88	2	72	0.057	ppb	111.5	53	0.5	
Zr	90	2	72	52.077	ppb	42.0	53	1	>RL
Nb	93	2	72	2.446	ppb	7.2	2960	2	>RL
Mo	95	2	115	0.042	ppb	98.3	37	0.5	
Pd	105	2	115	0.023	ppb	81.5	37	1	
Ag	107	2	115	-0.004	ppb	-172.0	17	1	
Cd	111	2	115	0.014	ppb	173.2	3	0.5	
Sn	120	2	115	0.104	ppb	153.7	170	1	
Sb	121	2	115	0.103	ppb	48.9	103	0.6	
Ba	137	2	115	0.117	ppb	1.1	40	0.5	
W	182	2	165	-0.007	ppb	-528.1	403	1	
Pt	195	2	165	0.000	ppb	#DIV/0!	0	1	
Tl	205	2	165	0.014	ppb	57.9	207	0.1	
Pb	208	2	165	0.056	ppb	32.8	833	0.5	
Th	232	2	165	0.147	ppb	17.9	1750	1	
U	238	2	165	0.013	ppb	67.8	143	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	314850	0.90	459341	68.54	60	120	
Sc (IS)	45	1	HMI H2	8744002	0.33	12606259	69.36	60	120	
Sc (IS)	45	2	HMI He	405935	1.32	551341	73.63	60	120	
Sc (IS)	45	3	No Gas	19077862	0.88	40353426	47.28	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	3968818	0.21	5557713	71.41	60	120	
Ge Internal Standard	72	2	HMI He	567684	1.35	752535	75.44	60	120	
In Internal Standard	115	2	HMI He	2546367	0.73	3288822	77.42	60	120	
Ho-165	165	2	HMI He	11605475	0.86	15288251	75.91	60	120	

Blank Report

Sample Table

Sample Name	rinse-5672981
Data File Name	365WASH.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T09:02:59-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	0.048	ppb	312.5918565	10	0.5
Na	23	2	45	-97.137	ppb	-8.577831291	10004	25
Mg	24	2	45	41.809	ppb	10.18409015	2080	25
Al	27	2	45	-0.155	ppb	-556.4626478	20	15
K	39	2	45	75.633	ppb	11.88291415	16964	50
Ca	44	2	45	21.823	ppb	145.7197753	60	25
V	51	2	72	-1.348	ppb	-21.58302119	1140	1
Cr	52	2	72	0.083	ppb	10.28977136	197	1
Mn	55	2	72	1.212	ppb	47.33092165	367	0.5
Fe	57	2	72	4.184	ppb	53.46266658	130	25
Co	59	2	72	-0.056	ppb	-27.08637195	603	0.5
Ni	60	2	72	0.231	ppb	58.47214887	137	1
Cu	63	2	72	1.636	ppb	9.663248157	1884	1
Zn	66	2	72	0.819	ppb	15.95236415	180	5
As	75	2	72	-0.027	ppb	-177.9077512	10	1
Se	78	1	72	-0.085	ppb	-224.3289887	32	1
Nb	93	2	72	0.902	ppb	13.99990844	1513	2
Mo	95	2	115	0.003	ppb	429.8828348	17	0.5
Pd	105	2	115	0.007	ppb	109.3285574	23	1
Ag	107	2	115	-0.002	ppb	-310.309088	20	1
Cd	111	2	115	0.029	ppb	173.2050808	7	0.5
Sn	120	2	115	0.226	ppb	36.90388218	250	1
Sb	121	2	115	-0.003	ppb	-1953.287895	33	0.6
Ba	137	2	115	0.105	ppb	64.07749704	37	0.5
W	182	2	165	-0.044	ppb	-44.67673922	313	1
Pt	195	2	165	0.002	ppb	173.2050808	3	1
Tl	205	2	165	0.000	ppb	8035.406125	140	0.1
Pb	208	2	165	0.039	ppb	56.76322508	720	0.5
Th	232	2	165	0.006	ppb	217.4139248	583	1
U	238	2	165	0.007	ppb	55.81282627	90	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	308573	0.53	459341	67.18	60	120	
Sc (IS)	45	1	HMI H2	8675681	0.98	12606259	68.82	60	120	
Sc (IS)	45	2	HMI He	401190	0.75	551341	72.77	60	120	
Sc (IS)	45	3	No Gas	19553609	0.69	40353426	48.46	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	3926805	1.19	5557713	70.66	60	120	
Ge Internal Standard	72	2	HMI He	562060	0.60	752535	74.69	60	120	
In Internal Standard	115	2	HMI He	2518659	2.00	3288822	76.58	60	120	
Ho-165	165	2	HMI He	11592001	0.65	15288251	75.82	60	120	

Blank Report

Sample Table

Sample Name	rinse-5672981
Data File Name	366WASH.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T09:06:52-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	0.019	ppb	529.1086632	7	0.5
Na	23	2	45	-94.062	ppb	-2.290035757	10197	25
Mg	24	2	45	32.910	ppb	3.457691762	1694	25
Al	27	2	45	3.876	ppb	13.16676758	67	15
K	39	2	45	91.870	ppb	15.94169985	17251	50
Ca	44	2	45	8.597	ppb	76.25395707	37	25
V	51	2	72	-1.476	ppb	-18.62516029	1067	1
Cr	52	2	72	-0.032	ppb	-198.5207562	123	1
Mn	55	2	72	1.550	ppb	32.54197622	450	0.5
Fe	57	2	72	7.349	ppb	28.43376157	167	25
Co	59	2	72	-0.011	ppb	-79.02492648	647	0.5
Ni	60	2	72	0.268	ppb	43.16253801	147	1
Cu	63	2	72	1.342	ppb	18.17467466	1617	1
Zn	66	2	72	0.412	ppb	151.5635245	127	5
As	75	2	72	0.013	ppb	228.5368294	14	1
Se	78	1	72	-0.186	ppb	-48.61698638	23	1
Nb	93	2	72	0.218	ppb	61.51532276	877	2
Mo	95	2	115	0.016	ppb	145.7967561	23	0.5
Pd	105	2	115	0.002	ppb	6.056064328	20	1
Ag	107	2	115	-0.008	ppb	-133.4761301	10	1
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5
Sn	120	2	115	0.204	ppb	8.335681159	237	1
Sb	121	2	115	0.011	ppb	540.7881249	43	0.6
Ba	137	2	115	0.089	ppb	197.1994778	33	0.5
W	182	2	165	-0.001	ppb	-927.5875481	417	1
Pt	195	2	165	0.002	ppb	173.2050808	3	1
Tl	205	2	165	-0.004	ppb	-49.50660547	120	0.1
Pb	208	2	165	0.032	ppb	45.28313247	677	0.5
Th	232	2	165	-0.016	ppb	-59.2017695	397	1
U	238	2	165	0.003	ppb	88.20516279	63	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	307851	0.50	459341	67.02	60	120	
Sc (IS)	45	1	HMI H2	8617641	0.65	12606259	68.36	60	120	
Sc (IS)	45	2	HMI He	397893	0.80	551341	72.17	60	120	
Sc (IS)	45	3	No Gas	19429286	0.60	40353426	48.15	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	3895276	0.87	5557713	70.09	60	120	
Ge Internal Standard	72	2	HMI He	556886	0.55	752535	74.00	60	120	
In Internal Standard	115	2	HMI He	2533721	0.61	3288822	77.04	60	120	
Ho-165	165	2	HMI He	11557648	0.83	15288251	75.60	60	120	

Blank Report

Sample Table

Sample Name	rinse-5672981
Data File Name	367WASH.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T09:10:43-06:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	304CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.039	ppb	0	0	0.5
Na	23	2	45	-100.193	ppb	-3.426997711	9627	25
Mg	24	2	45	48.830	ppb	10.8171792	2350	25
Al	27	2	45	1.876	ppb	132.9552739	43	15
K	39	2	45	62.478	ppb	33.03925525	16447	50
Ca	44	2	45	12.472	ppb	95.4748273	43	25
V	51	2	72	-1.490	ppb	-2.448448575	1063	1
Cr	52	2	72	0.042	ppb	100.6750265	170	1
Mn	55	2	72	1.559	ppb	16.4096561	453	0.5
Fe	57	2	72	4.790	ppb	81.38579484	137	25
Co	59	2	72	-0.022	ppb	-25.11461943	637	0.5
Ni	60	2	72	0.300	ppb	22.59712101	157	1
Cu	63	2	72	1.347	ppb	9.639313204	1627	1
Zn	66	2	72	0.149	ppb	107.7811196	93	5
As	75	2	72	-0.013	ppb	-3.350885318	12	1
Se	78	1	72	-0.067	ppb	-190.9720135	33	1
Nb	93	2	72	-0.004	ppb	-1959.762168	677	2
Mo	95	2	115	0.064	ppb	99.16617143	47	0.5
Pd	105	2	115	-0.014	ppb	-102.8729472	7	1
Ag	107	2	115	-0.004	ppb	-342.1323182	17	1
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5
Sn	120	2	115	0.191	ppb	21.20695182	227	1
Sb	121	2	115	-0.035	ppb	-67.95398891	13	0.6
Ba	137	2	115	-0.027	ppb	-93.0522145	7	0.5
W	182	2	165	-0.041	ppb	-74.06924684	323	1
Pt	195	2	165	0.002	ppb	173.2050808	3	1
Tl	205	2	165	-0.001	ppb	-756.2312268	133	0.1
Pb	208	2	165	0.040	ppb	24.68995067	733	0.5
Th	232	2	165	-0.025	ppb	-59.49682384	323	1
U	238	2	165	0.001	ppb	379.9226929	40	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	308626	0.84	459341	67.19	60	120	
Sc (IS)	45	1	HMI H2	8613691	0.64	12606259	68.33	60	120	
Sc (IS)	45	2	HMI He	396996	0.46	551341	72.01	60	120	
Sc (IS)	45	3	No Gas	19488391	0.20	40353426	48.29	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	3903320	0.88	5557713	70.23	60	120	
Ge Internal Standard	72	2	HMI He	558749	0.38	752535	74.25	60	120	
In Internal Standard	115	2	HMI He	2520902	1.46	3288822	76.65	60	120	
Ho-165	165	2	HMI He	11637119	0.46	15288251	76.12	60	120	

Calibration Blank Report

Sample Table

Sample Name	icis-5688508
Data File Name	368CALB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T09:14:35-06:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	39389	0.00
Li	7	2	HMI He	1810	0.55
Li	7	3	No Gas	1967803	0.00
Be	9	1	HMI H2	3	5196.15
B	11	1	HMI H2	1290	1.10
Na	23	1	HMI H2	133146	0.00
Na	23	2	HMI He	9777	0.07
Mg	24	2	HMI He	1797	0.35
Al	27	2	HMI He	70	73.58
K	39	2	HMI He	17544	0.01
Ca	44	2	HMI He	30	293.97
Ti	47	2	HMI He	0	#VALUE!
V	51	2	HMI He	1020	0.42
Cr	52	2	HMI He	103	14.31
Mn	55	2	HMI He	127	23.60
Fe	57	2	HMI He	77	59.75
Co	59	2	HMI He	653	2.31
Ni	60	2	HMI He	143	2.81
Cu	63	2	HMI He	443	1.18
Zn	66	2	HMI He	123	29.64
As	75	2	HMI He	13	132.83
Se	78	1	HMI H2	20	346.41
Sr	88	2	HMI He	33	137.48
Zr	90	2	HMI He	40	62.50
Nb	93	2	HMI He	583	2.00
Mo	95	2	HMI He	23	382.35
Pd	105	2	HMI He	20	0.00
Ag	107	2	HMI He	0	#VALUE!
Cd	111	2	HMI He	7	2598.08
Sn	120	2	HMI He	143	18.43
Sb	121	2	HMI He	30	192.45
Ba	137	2	HMI He	43	30.75
W	182	2	HMI He	280	8.36
Pt	195	2	HMI He	7	1299.04
Tl	205	2	HMI He	160	15.62
Pb	208	2	HMI He	710	1.69
Th	232	2	HMI He	297	6.56
U	238	2	HMI He	40	108.25

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li-6 Internal Standard	6	1	HMI H2	305251	0.59
Sc (IS)	45	1	HMI H2	8640598	0.61
Sc (IS)	45	2	HMI He	397552	1.10
Sc (IS)	45	3	No Gas	19899433	0.23
Ge Internal Standard	72	1	HMI H2	3917545	0.58
Ge Internal Standard	72	2	HMI He	559258	0.15
In Internal Standard	115	2	HMI He	2552221	0.67
Ho-165	165	2	HMI He	11644132	0.88

Calibration Standard Report

Sample Table

Sample Name	ic-5688509
Data File Name	369CALS.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T09:18:28-06:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	368CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	60937	0.00
Li	7	2	HMI He	3351	0.07
Li	7	3	No Gas	3078212	0.00
Be	9	1	HMI H2	11665	0.01
B	11	1	HMI H2	1687	0.49
Na	23	1	HMI H2	2530711	0.00
Na	23	2	HMI He	187558	0.00
Mg	24	2	HMI He	84369	0.00
Al	27	2	HMI He	23186	0.01
K	39	1	HMI H2	6874193	0.00
K	39	2	HMI He	70743	0.00
Ca	40	1	HMI H2	3773985	0.00
Ca	44	2	HMI He	3607	0.21
Ti	47	2	HMI He	1337	0.48
V	51	2	HMI He	50589	0.00
Cr	52	2	HMI He	62676	0.00
Mn	55	2	HMI He	27500	0.01
Fe	57	2	HMI He	24104	0.02
Co	59	2	HMI He	110806	0.00
Ni	60	2	HMI He	30570	0.01
Cu	63	2	HMI He	84990	0.00
Zn	66	2	HMI He	12943	0.00
As	75	2	HMI He	10507	0.03
Se	78	1	HMI H2	8748	0.02
Sr	88	2	HMI He	74824	0.00
Zr	90	2	HMI He	153	6.50
Nb	93	2	HMI He	190416	0.00
Mo	95	2	HMI He	48280	0.00
Pd	105	2	HMI He	80560	0.00
Ag	107	2	HMI He	167626	0.00
Cd	111	2	HMI He	23233	0.01
Sn	120	2	HMI He	67511	0.00
Sb	121	2	HMI He	66657	0.00
Ba	137	2	HMI He	23965	0.01
Nd	146	2	HMI He	74881	0.00
Sm	147	2	HMI He	65303	0.00
Sm	150	2	HMI He	63063	0.00
Gd	156	1	HMI H2	193122	0.00
Gd	157	1	HMI H2	148366	0.00
W	182	2	HMI He	239987	0.00
Pt	195	2	HMI He	183765	0.00
Tl	205	2	HMI He	492099	0.00
Pb	208	2	HMI He	670707	0.00
Th	232	2	HMI He	854356	0.00
U	238	2	HMI He	858675	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	301494	0.76	305251	98.77	60	120	
Sc (IS)	45	1	HMI H2	8654404	0.46	8640598	100.16	60	120	
Sc (IS)	45	2	HMI He	401185	0.46	397552	100.91	60	120	
Sc (IS)	45	3	No Gas	19888129	0.83	19899433	99.94	60	120	
Ge Internal Standard	72	1	HMI H2	3950309	0.52	3917545	100.84	60	120	
Ge Internal Standard	72	2	HMI He	568730	0.27	559258	101.69	60	120	
In Internal Standard	115	2	HMI He	2529345	0.77	2552221	99.10	60	120	
Ho-165	165	2	HMI He	11827565	1.08	11644132	101.58	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5688510
Data File Name	370_CCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T09:22:20-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	368CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	108.017	ppb	2.651	51051	100	108.0	90	110	
Li	7	2	45	110.565	ppb	27.424	2707	100	110.6	90	110	>+\-10%
Li	7	3	45	100.491	ppb	2.396	2514180	100	100.5	90	110	
Be	9	1	6	47.831	ppb	4.684	5678	50	95.7	90	110	
B	11	1	6	45.464	ppb	70.395	1487	50	90.9	90	110	
Na	23	1	45	1038.538	ppb	0.423	1378112	1000	103.9	90	110	
Na	23	2	45	998.740	ppb	1.444	99961	1000	99.9	90	110	
Mg	24	2	45	1019.948	ppb	1.613	44518	1000	102.0	90	110	
Al	27	2	45	1049.660	ppb	2.225	12369	1000	105.0	90	110	
K	39	1	45	137.787	ppb	40.491	5706799	1000	13.8	90	110	>+\-10%
K	39	2	45	970.705	ppb	3.733	44044	1000	97.1	90	110	
Ca	40	1	45	1067.428	ppb	1.805	2032682	1000	106.7	90	110	
Ca	44	2	45	1042.867	ppb	12.879	1920	1000	104.3	90	110	
Ti	47	2	45	39.106	ppb	2.981	530	50	78.2	90	110	>+\-10%
V	51	2	72	51.175	ppb	1.905	26325	50	102.3	90	110	
Cr	52	2	72	50.148	ppb	3.672	31395	50	100.3	90	110	
Mn	55	2	72	48.994	ppb	1.687	13503	50	98.0	90	110	
Fe	57	2	72	1036.262	ppb	5.368	12493	1000	103.6	90	110	
Co	59	2	72	50.185	ppb	1.431	55791	50	100.4	90	110	
Ni	60	2	72	51.022	ppb	2.158	15629	50	102.0	90	110	
Cu	63	2	72	50.927	ppb	0.663	43389	50	101.9	90	110	
Zn	66	2	72	52.832	ppb	3.249	6879	50	105.7	90	110	
As	75	2	72	50.420	ppb	1.693	5290	50	100.8	90	110	
Se	78	1	72	48.859	ppb	3.626	4293	50	97.7	90	110	
Sr	88	2	72	101.306	ppb	1.368	37815	100	101.3	90	110	
Zr	90	2	72	64.727	ppb	31.502	113	50	129.5	90	110	>+\-10%
Nb	93	2	72	107.209	ppb	0.864	102071	100	107.2	90	110	
Mo	95	2	115	51.604	ppb	1.326	25237	50	103.2	90	110	
Pd	105	2	115	48.798	ppb	2.450	39811	50	97.6	90	110	
Ag	107	2	115	49.486	ppb	0.637	83994	50	99.0	90	110	
Cd	111	2	115	48.468	ppb	5.283	11405	50	96.9	90	110	
Sn	120	2	115	50.156	ppb	3.227	34347	50	100.3	90	110	
Sb	121	2	115	48.943	ppb	3.157	33057	50	97.9	90	110	
Ba	137	2	115	47.451	ppb	0.379	11539	50	94.9	90	110	
W	182	2	165	50.780	ppb	1.595	121561	50	101.6	90	110	
Pt	195	2	165	49.511	ppb	0.850	90664	50	99.0	90	110	
Tl	205	2	165	49.810	ppb	1.885	244294	50	99.6	90	110	
Pb	208	2	165	50.128	ppb	0.979	335377	50	100.3	90	110	
Th	232	2	165	49.850	ppb	0.969	424507	50	99.7	90	110	
U	238	2	165	49.892	ppb	0.141	426906	50	99.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	306680	0.38	305251	100.47	60	120	
Sc (IS)	45	1	HMI H2	8653472	0.58	8640598	100.15	60	120	
Sc (IS)	45	2	HMI He	406724	0.96	397552	102.31	60	120	
Sc (IS)	45	3	No Gas	19801686	0.19	19899433	99.51	60	120	
Ge Internal Standard	72	1	HMI H2	3957728	0.51	3917545	101.03	60	120	
Ge Internal Standard	72	2	HMI He	567225	0.70	559258	101.42	60	120	
In Internal Standard	115	2	HMI He	2561184	1.62	2552221	100.35	60	120	
Ho-165	165	2	HMI He	11785214	1.16	11644132	101.21	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5688508
Data File Name	371_CCB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T09:26:13-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	368CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	3.235	ppb	92.9	1971157	10	
Be	9	1	6	-0.028	ppb	0.0	0	0.5	
B	11	1	6	-20.989	ppb	-74.8	1183	0.5	
Na	23	1	45	7.879	ppb	17.3	142088	25	
Na	23	2	45	4.619	ppb	132.9	10324	25	
Mg	24	2	45	-2.153	ppb	-156.6	1734	25	
Al	27	2	45	-2.694	ppb	-84.4	40	15	
K	39	1	45	-516.902	ppb	-9.5	5270735	50	
K	39	2	45	-25.268	ppb	-111.2	17117	50	
Ca	40	1	45	-0.255	ppb	-165.8	39661	50	
Ca	44	2	45	-3.842	ppb	-83.1	23	25	
Ti	47	2	45	0.497	ppb	86.6	7	0.5	
V	51	2	72	0.603	ppb	38.6	1313	1	
Cr	52	2	72	0.060	ppb	205.0	140	1	
Mn	55	2	72	0.249	ppb	68.6	193	0.5	
Fe	57	2	72	5.353	ppb	77.4	140	25	
Co	59	2	72	-0.024	ppb	-206.5	627	0.5	
Ni	60	2	72	0.112	ppb	142.0	177	1	
Cu	63	2	72	0.517	ppb	27.1	873	1	
Zn	66	2	72	0.134	ppb	164.8	140	5	
As	75	2	72	-0.013	ppb	-525.3	12	1	
Se	78	1	72	0.080	ppb	90.8	27	1	
Sr	88	2	72	0.027	ppb	384.8	43	0.5	
Zr	90	2	72	-24.124	ppb	-43.0	13	1	
Nb	93	2	72	4.249	ppb	6.7	4544	2	>RL
Mo	95	2	115	0.049	ppb	48.1	47	0.5	
Pd	105	2	115	0.046	ppb	31.3	57	1	
Ag	107	2	115	0.006	ppb	100.2	10	1	
Cd	111	2	115	-0.029	ppb	0.0	0	0.5	
Sn	120	2	115	0.180	ppb	33.3	263	1	
Sb	121	2	115	0.075	ppb	110.8	80	0.6	
Ba	137	2	115	-0.026	ppb	-248.1	37	0.5	
W	182	2	165	0.124	ppb	30.2	573	1	
Pt	195	2	165	0.007	ppb	130.1	20	1	
Tl	205	2	165	0.030	ppb	20.5	307	0.1	
Pb	208	2	165	0.004	ppb	355.7	740	0.5	
Th	232	2	165	0.272	ppb	6.8	2590	1	
U	238	2	165	0.021	ppb	14.1	220	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	300494	0.83	305251	98.44	60	120	
Sc (IS)	45	1	HMI H2	8611159	0.75	8640598	99.66	60	120	
Sc (IS)	45	2	HMI He	403178	0.22	397552	101.42	60	120	
Sc (IS)	45	3	No Gas	19752173	0.40	19899433	99.26	60	120	
Ge Internal Standard	72	1	HMI H2	3877996	0.49	3917545	98.99	60	120	
Ge Internal Standard	72	2	HMI He	558819	1.13	559258	99.92	60	120	
In Internal Standard	115	2	HMI He	2527187	0.53	2552221	99.02	60	120	
Ho-165	165	2	HMI He	11684138	0.82	11644132	100.34	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5688512
Data File Name	372LCCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T09:30:08-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	368CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	15.096	ppb	32.272	2061553	50	30.2	70	130	>+/-30%
Be	9	1	6	0.741	ppb	41.902	90	1	74.1	70	130	
Na	23	2	45	45.954	ppb	8.474	14007	50	91.9	70	130	
Mg	24	2	45	50.811	ppb	11.742	3927	50	101.6	70	130	
Al	27	2	45	46.997	ppb	13.894	617	30	156.7	70	130	>+/-30%
K	39	2	45	79.007	ppb	33.328	19884	100	79.0	70	130	
Ca	44	2	45	44.386	ppb	24.202	110	50	88.8	70	130	
V	51	2	72	5.171	ppb	6.660	3571	5	103.4	70	130	
Cr	52	2	72	2.030	ppb	11.520	1363	2	101.5	70	130	
Mn	55	2	72	1.136	ppb	17.598	437	1	113.6	70	130	
Fe	57	2	72	52.818	ppb	4.764	707	50	105.6	70	130	
Co	59	2	72	0.980	ppb	9.101	1730	1	98.0	70	130	
Ni	60	2	72	1.630	ppb	8.164	637	1.5	108.6	70	130	
Cu	63	2	72	2.333	ppb	7.488	2404	2	116.7	70	130	
Zn	66	2	72	10.768	ppb	5.387	1493	10	107.7	70	130	
As	75	2	72	5.229	ppb	3.851	558	5	104.6	70	130	
Se	78	1	72	5.636	ppb	15.019	511	5	112.7	70	130	
Sr	88	2	72	1.042	ppb	12.998	420	1	104.2	70	130	
Zr	90	2	72	-15.199	ppb	-35.313	23	0.5	-3039.9	70	130	>+/-30%
Nb	93	2	72	1.528	ppb	4.464	2027	2	76.4	70	130	
Mo	95	2	115	2.271	ppb	4.451	1120	2	113.5	70	130	
Pd	105	2	115	0.016	ppb	168.446	33	1	1.6	70	130	>+/-30%
Ag	107	2	115	4.959	ppb	3.258	8326	5	99.2	70	130	
Cd	111	2	115	0.859	ppb	21.392	207	1	85.9	70	130	
Sn	120	2	115	9.559	ppb	3.321	6592	10	95.6	70	130	
Sb	121	2	115	2.070	ppb	11.826	1410	2	103.5	70	130	
Ba	137	2	115	1.200	ppb	30.874	330	1	120.0	70	130	
W	182	2	165	5.166	ppb	6.017	12583	1	516.6	70	130	>+/-30%
Pt	195	2	165	0.002	ppb	305.589	10	1	0.2	70	130	>+/-30%
Tl	205	2	165	0.958	ppb	3.411	4844	1	95.8	70	130	
Pb	208	2	165	1.090	ppb	3.164	7975	1	109.0	70	130	
Th	232	2	165	1.726	ppb	1.860	14949	2	86.3	70	130	
U	238	2	165	0.991	ppb	2.553	8500	1	99.1	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	303088	0.70	305251	99.29	60	120	
Sc (IS)	45	1	HMI H2	8713790	0.33	8640598	100.85	60	120	
Sc (IS)	45	2	HMI He	402908	0.65	397552	101.35	60	120	
Sc (IS)	45	3	No Gas	19994691	0.47	19899433	100.48	60	120	
Ge Internal Standard	72	1	HMI H2	3942188	0.74	3917545	100.63	60	120	
Ge Internal Standard	72	2	HMI He	564259	0.85	559258	100.89	60	120	
In Internal Standard	115	2	HMI He	2532350	1.92	2552221	99.22	60	120	
Ho-165	165	2	HMI He	11753474	1.02	11644132	100.94	60	120	

Blank Report

Sample Table

Sample Name	MB 280-456592/1-A
Data File Name	373_BLK.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T09:34:02-06:00
Sample Type	Blank
Dilution	1
Comment	456592 6020A DOD
ISTD Ref File Name	368CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-19.662	ppb	-41.52703233	36084	0.5
Li	7	2	45	17.457	ppb	273.2781238	1914	0.5
Li	7	3	45	0.673	ppb	699.6560028	1954074	10
Be	9	1	6	0.062	ppb	144.9036695	10	0.5
B	11	1	6	71.982	ppb	31.26387113	1500	0.5
Na	23	1	45	-6.296	ppb	-14.86101902	121572	25
Na	23	2	45	-9.838	ppb	-49.41792158	8780	25
Mg	24	2	45	-7.648	ppb	-22.74626906	1463	25
Al	27	2	45	0.655	ppb	311.9756972	77	15
K	39	1	45	-4487.998	ppb	-1.546025167	2714449	50
K	39	2	45	-28.836	ppb	-56.8283161	16547	50
Ca	40	1	45	12.942	ppb	3.602191032	62320	50
Ca	44	2	45	25.229	ppb	131.7859927	73	25
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5
V	51	2	72	-0.600	ppb	-28.03677308	720	1
Cr	52	2	72	0.275	ppb	23.37377087	270	1
Mn	55	2	72	0.155	ppb	142.4409382	167	0.5
Fe	57	2	72	18.876	ppb	20.2818145	297	25
Co	59	2	72	0.047	ppb	249.5829667	697	0.5
Ni	60	2	72	0.050	ppb	721.9977673	157	1
Cu	63	2	72	0.532	ppb	35.4363974	877	1
Zn	66	2	72	2.842	ppb	26.22823019	477	5
As	75	2	72	0.059	ppb	82.38086253	19	1
Se	78	1	72	0.007	ppb	651.8142128	20	1
Sr	88	2	72	0.037	ppb	277.1829611	47	0.5
Zr	90	2	72	27.751	ppb	98.83956682	70	1
Nb	93	2	72	2.392	ppb	13.55137323	2787	2
Mo	95	2	115	0.022	ppb	144.0231751	33	0.5
Pd	105	2	115	-0.008	ppb	-241.527771	13	1
Ag	107	2	115	0.012	ppb	132.3276022	20	1
Cd	111	2	115	0.000	ppb	17969.66603	7	0.5
Sn	120	2	115	0.105	ppb	136.7538048	210	1
Sb	121	2	115	0.016	ppb	188.3464115	40	0.6
Ba	137	2	115	0.287	ppb	59.65556	110	0.5
W	182	2	165	0.064	ppb	47.6079613	427	1
Pt	195	2	165	-0.002	ppb	-181.6721695	3	1
Tl	205	2	165	0.021	ppb	76.68073765	257	0.1
Pb	208	2	165	0.164	ppb	6.583123957	1770	0.5
Th	232	2	165	0.341	ppb	10.14083153	3127	1
U	238	2	165	0.008	ppb	40.63698319	103	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	287819	0.72	305251	94.29	60	120	
Sc (IS)	45	1	HMI H2	8362627	0.66	8640598	96.78	60	120	
Sc (IS)	45	2	HMI He	391908	0.39	397552	98.58	60	120	
Sc (IS)	45	3	No Gas	19721698	0.71	19899433	99.11	60	120	
Ge Internal Standard	72	1	HMI H2	3793160	0.17	3917545	96.82	60	120	
Ge Internal Standard	72	2	HMI He	553604	0.30	559258	98.99	60	120	
In Internal Standard	115	2	HMI He	2495346	0.58	2552221	97.77	60	120	
Ho-165	165	2	HMI He	11520111	0.75	11644132	98.93	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-456592/2-A
Data File Name	374_LCS.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T09:37:56-06:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	456592 6020A DOD
ISTD Ref File Name	368CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	71.480	71.480	ppb	19.240	46081	400	17.9	80	120	>+/-20%
Li	7	2	45	100.681	100.681	ppb	19.034	2530	400	25.2	80	120	>+/-20%
Li	7	3	45	76.273	76.273	ppb	2.451	2374962	400	19.1	80	120	>+/-20%
Be	9	1	6	38.937	38.937	ppb	2.475	4358	40	97.3	80	120	
Na	23	2	45	-14.522	-14.522	ppb	-33.758	8363	40	-36.3	80	120	>+/-20%
Mg	24	2	45	-16.793	-16.793	ppb	-15.575	1093	40	-42.0	80	120	>+/-20%
Al	27	2	45	414.376	414.376	ppb	6.019	4741	40	1035.9	80	120	>+/-20%
K	39	2	45	9.813	9.813	ppb	82.450	17531	40	24.5	80	120	>+/-20%
Ca	44	2	45	101.917	101.917	ppb	38.963	207	40	254.8	80	120	>+/-20%
V	51	2	72	41.518	41.518	ppb	1.589	21019	40	103.8	80	120	
Cr	52	2	72	41.850	41.850	ppb	3.341	25573	40	104.6	80	120	
Mn	55	2	72	41.015	41.015	ppb	5.208	11048	40	102.5	80	120	
Fe	57	2	72	459.559	459.559	ppb	4.777	5445	40	1148.9	80	120	>+/-20%
Co	59	2	72	41.774	41.774	ppb	1.044	45395	40	104.4	80	120	
Ni	60	2	72	42.505	42.505	ppb	3.149	12723	40	106.3	80	120	
Cu	63	2	72	42.830	42.830	ppb	1.450	35655	40	107.1	80	120	
Zn	66	2	72	41.822	41.822	ppb	6.145	5338	40	104.6	80	120	
As	75	2	72	39.073	39.073	ppb	4.190	4001	40	97.7	80	120	
Se	78	1	72	37.934	37.934	ppb	1.686	3235	40	94.8	80	120	
Nb	93	2	72	1.802	1.802	ppb	22.362	2240	40	4.5	80	120	>+/-20%
Mo	95	2	115	41.599	41.599	ppb	0.942	20025	40	104.0	80	120	
Pd	105	2	115	-0.025	-0.025	ppb	0.000	0	40	-0.1	80	120	>+/-20%
Ag	107	2	115	40.201	40.201	ppb	1.815	67147	40	100.5	80	120	
Cd	111	2	115	39.572	39.572	ppb	4.580	9160	40	98.9	80	120	
Sn	120	2	115	39.957	39.957	ppb	1.110	26957	40	99.9	80	120	
Sb	121	2	115	38.419	38.419	ppb	0.732	25531	40	96.0	80	120	
Ba	137	2	115	39.963	39.963	ppb	1.787	9567	40	99.9	80	120	
W	182	2	165	34.597	34.597	ppb	1.736	81182	40	86.5	80	120	
Pt	195	2	165	0.006	0.006	ppb	152.118	17	40	0.0	80	120	>+/-20%
Tl	205	2	165	40.746	40.746	ppb	1.564	195710	40	101.9	80	120	
Pb	208	2	165	40.900	40.900	ppb	0.658	268066	40	102.3	80	120	
Th	232	2	165	38.875	38.875	ppb	0.995	324206	40	97.2	80	120	
U	238	2	165	41.215	41.215	ppb	0.196	345314	40	103.0	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	289103	0.33	305251	94.71	60	120	
Sc (IS)	45	1	HMI H2	8460560	0.57	8640598	97.92	60	120	
Sc (IS)	45	2	HMI He	391511	1.16	397552	98.48	60	120	
Sc (IS)	45	3	No Gas	19758045	0.28	19899433	99.29	60	120	
Ge Internal Standard	72	1	HMI H2	3836422	0.22	3917545	97.93	60	120	
Ge Internal Standard	72	2	HMI He	553181	0.90	559258	98.91	60	120	
In Internal Standard	115	2	HMI He	2520042	1.47	2552221	98.74	60	120	
Ho-165	165	2	HMI He	11539720	1.32	11644132	99.10	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCSD 280-456592/3-A
Data File Name	375_LCS.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T09:46:31-06:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	456592 6020A DOD
ISTD Ref File Name	368CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	66.167	66.167	ppb	4.107	45677	400	16.5	80	120	>+/-20%
Li	7	2	45	68.692	68.692	ppb	23.442	2327	400	17.2	80	120	>+/-20%
Li	7	3	45	74.400	74.400	ppb	7.082	2357419	400	18.6	80	120	>+/-20%
Be	9	1	6	35.991	35.991	ppb	2.455	4034	40	90.0	80	120	
Na	23	2	45	-14.006	-14.006	ppb	-14.436	8530	40	-35.0	80	120	>+/-20%
Mg	24	2	45	-20.719	-20.719	ppb	-27.596	950	40	-51.8	80	120	>+/-20%
Al	27	2	45	374.364	374.364	ppb	5.663	4354	40	935.9	80	120	>+/-20%
K	39	2	45	-56.898	-56.898	ppb	-5.580	16029	40	-142.2	80	120	>+/-20%
Ca	44	2	45	111.265	111.265	ppb	6.377	227	40	278.2	80	120	>+/-20%
V	51	2	72	40.210	40.210	ppb	2.993	20445	40	100.5	80	120	
Cr	52	2	72	41.631	41.631	ppb	3.097	25510	40	104.1	80	120	
Mn	55	2	72	40.185	40.185	ppb	0.738	10855	40	100.5	80	120	
Fe	57	2	72	431.757	431.757	ppb	4.066	5134	40	1079.4	80	120	>+/-20%
Co	59	2	72	39.942	39.942	ppb	2.034	43557	40	99.9	80	120	
Ni	60	2	72	38.989	38.989	ppb	4.779	11712	40	97.5	80	120	
Cu	63	2	72	40.409	40.409	ppb	3.073	33760	40	101.0	80	120	
Zn	66	2	72	39.957	39.957	ppb	1.377	5118	40	99.9	80	120	
As	75	2	72	37.659	37.659	ppb	1.893	3867	40	94.1	80	120	
Se	78	1	72	37.797	37.797	ppb	6.397	3251	40	94.5	80	120	
Nb	93	2	72	0.520	0.520	ppb	21.313	1060	40	1.3	80	120	>+/-20%
Mo	95	2	115	38.684	38.684	ppb	1.941	18606	40	96.7	80	120	
Pd	105	2	115	-0.016	-0.016	ppb	-43.966	7	40	0.0	80	120	>+/-20%
Ag	107	2	115	39.224	39.224	ppb	1.364	65457	40	98.1	80	120	
Cd	111	2	115	39.696	39.696	ppb	6.075	9187	40	99.2	80	120	
Sn	120	2	115	39.647	39.647	ppb	1.085	26730	40	99.1	80	120	
Sb	121	2	115	38.384	38.384	ppb	1.288	25488	40	96.0	80	120	
Ba	137	2	115	38.632	38.632	ppb	1.239	9244	40	96.6	80	120	
W	182	2	165	33.251	33.251	ppb	0.914	78249	40	83.1	80	120	
Pt	195	2	165	-0.004	-0.004	ppb	0.000	0	40	0.0	80	120	>+/-20%
Tl	205	2	165	39.956	39.956	ppb	0.765	192452	40	99.9	80	120	
Pb	208	2	165	40.074	40.074	ppb	0.458	263356	40	100.2	80	120	
Th	232	2	165	37.957	37.957	ppb	0.388	317421	40	94.9	80	120	
U	238	2	165	39.519	39.519	ppb	1.034	331993	40	98.8	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	289596	1.13	305251	94.87	60	120	
Sc (IS)	45	1	HMI H2	8489767	1.31	8640598	98.25	60	120	
Sc (IS)	45	2	HMI He	397108	0.90	397552	99.89	60	120	
Sc (IS)	45	3	No Gas	19697658	0.34	19899433	98.99	60	120	
Ge Internal Standard	72	1	HMI H2	3870553	1.10	3917545	98.80	60	120	
Ge Internal Standard	72	2	HMI He	554724	0.22	559258	99.19	60	120	
In Internal Standard	115	2	HMI He	2517991	0.59	2552221	98.66	60	120	
Ho-165	165	2	HMI He	11570175	0.45	11644132	99.36	60	120	

Sample Report

Sample Table

Sample Name	280-122692-A-3-G
Data File Name	376SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T09:50:25-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456592 6020A DOD
ISTD Ref FileName	368CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-3.496	ppb	-3.496	-89.31	37862	500000	
Li	7	2	45	21.020	ppb	21.020	34.34	1940	500000	
Li	7	3	45	12.387	ppb	12.387	24.05	2018066	50000	
Be	9	1	6	0.215	ppb	0.215	49.21	27	2000	
B	11	1	6	976.715	ppb	976.715	6.00	4988	2000	
Na	23	1	45	21765.661	ppb	21765.661	0.18	25409350	2000	>LDR
Na	23	2	45	23970.267	ppb	23970.267	1.37	2089336	400000	
Mg	24	2	45	13126.985	ppb	13126.985	0.69	530880	400000	
Al	27	2	45	4.787	ppb	4.787	41.49	123	400000	
K	39	1	45	-1036.541	ppb	-1036.541	-9.57	4817115	400000	
K	39	2	45	1766.360	ppb	1766.360	1.17	63036	400000	
Ca	40	1	45	30426.086	ppb	30426.086	0.78	55073458	400000	
Ca	44	2	45	24920.209	ppb	24920.209	1.91	43549	400000	
Ti	47	2	45	0.254	ppb	0.254	173.21	3	4000	
V	51	2	72	0.208	ppb	0.208	132.27	1107	2000	
Cr	52	2	72	0.293	ppb	0.293	21.93	280	5000	
Mn	55	2	72	119.332	ppb	119.332	1.66	31822	10000	
Fe	57	2	72	560.702	ppb	560.702	2.96	6612	400000	
Co	59	2	72	0.360	ppb	0.360	22.05	1030	2000	
Ni	60	2	72	0.209	ppb	0.209	39.91	203	5000	
Cu	63	2	72	0.105	ppb	0.105	66.97	523	5000	
Zn	66	2	72	6.388	ppb	6.388	23.53	917	5000	
As	75	2	72	0.881	ppb	0.881	15.00	103	2000	
Se	78	1	72	0.459	ppb	0.459	35.38	59	2000	
Sr	88	2	72	179.388	ppb	179.388	0.21	65129	4000	
Zr	90	2	72	55.399	ppb	55.399	59.91	100	1000	
Nb	93	2	72	0.302	ppb	0.302	47.09	853	200	
Mo	95	2	115	0.862	ppb	0.862	26.12	430	2000	
Pd	105	2	115	-0.016	ppb	-0.016	-89.59	7	100	
Ag	107	2	115	0.022	ppb	0.022	42.20	37	100	
Cd	111	2	115	-0.029	ppb	-0.029	0.00	0	2000	
Sn	120	2	115	0.233	ppb	0.233	59.33	293	2000	
Sb	121	2	115	0.517	ppb	0.517	27.01	367	1000	
Ba	137	2	115	30.649	ppb	30.649	1.54	7226	5000	
W	182	2	165	0.290	ppb	0.290	25.55	960	100	
Pt	195	2	165	-0.004	ppb	-0.004	0.00	0	100	
Tl	205	2	165	0.055	ppb	0.055	19.02	427	2000	
Pb	208	2	165	0.014	ppb	0.014	86.22	800	5000	
Th	232	2	165	0.454	ppb	0.454	9.45	4104	2000	
U	238	2	165	0.017	ppb	0.017	37.03	183	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	283580	1.10	305251	92.90	60	120	
Sc (IS)	45	1	HMI H2	8385787	0.82	8640598	97.05	60	120	
Sc (IS)	45	2	HMI He	391764	0.61	397552	98.54	60	120	
Sc (IS)	45	3	No Gas	19716811	0.49	19899433	99.08	60	120	
Ge Internal Standard	72	1	HMI H2	3841406	0.52	3917545	98.06	60	120	
Ge Internal Standard	72	2	HMI He	551902	0.38	559258	98.68	60	120	
In Internal Standard	115	2	HMI He	2477708	0.69	2552221	97.08	60	120	
Ho-165	165	2	HMI He	11602954	1.12	11644132	99.65	60	120	

Sample Report

Sample Table

Sample Name	280-122692-A-3-H MS
Data File Name	377SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T09:54:16-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456592 6020A DOD
ISTD Ref FileName	368CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	73.642	ppb	73.642	22.70	46362	500000	
Li	7	2	45	110.041	ppb	110.041	23.77	2620	500000	
Li	7	3	45	87.614	ppb	87.614	4.91	2435800	50000	
Be	9	1	6	42.586	ppb	42.586	3.53	4691	2000	
B	11	1	6	1864.915	ppb	1864.915	4.69	8466	2000	
Na	23	1	45	22138.025	ppb	22138.025	0.94	26103817	2000	>LDR
Na	23	2	45	24299.064	ppb	24299.064	0.59	2131764	400000	
Mg	24	2	45	13328.071	ppb	13328.071	0.63	542509	400000	
Al	27	2	45	417.430	ppb	417.430	3.46	4811	400000	
K	39	1	45	-1029.225	ppb	-1029.225	-8.14	4870716	400000	
K	39	2	45	1826.988	ppb	1826.988	1.23	65027	400000	
Ca	40	1	45	31085.641	ppb	31085.641	0.63	56838796	400000	
Ca	44	2	45	26055.754	ppb	26055.754	1.69	45829	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	41.610	ppb	41.610	3.96	21196	2000	
Cr	52	2	72	41.716	ppb	41.716	2.03	25653	5000	
Mn	55	2	72	158.619	ppb	158.619	1.59	42627	10000	
Fe	57	2	72	989.565	ppb	989.565	1.52	11712	400000	
Co	59	2	72	39.837	ppb	39.837	1.16	43600	2000	
Ni	60	2	72	38.539	ppb	38.539	5.40	11622	5000	
Cu	63	2	72	41.090	ppb	41.090	2.04	34445	5000	
Zn	66	2	72	42.124	ppb	42.124	2.86	5408	5000	
As	75	2	72	39.413	ppb	39.413	0.64	4061	2000	
Se	78	1	72	37.858	ppb	37.858	0.58	3235	2000	
Sr	88	2	72	224.211	ppb	224.211	1.05	82104	4000	
Zr	90	2	72	1991.609	ppb	1991.609	4.47	2237	1000	
Nb	93	2	72	0.261	ppb	0.261	47.09	823	200	
Mo	95	2	115	40.970	ppb	40.970	4.37	19674	2000	
Pd	105	2	115	-0.008	ppb	-0.008	-241.84	13	100	
Ag	107	2	115	39.136	ppb	39.136	0.99	65215	100	
Cd	111	2	115	40.059	ppb	40.059	5.74	9253	2000	
Sn	120	2	115	40.579	ppb	40.579	1.92	27314	2000	
Sb	121	2	115	40.138	ppb	40.138	1.20	26613	1000	
Ba	137	2	115	70.040	ppb	70.040	0.45	16701	5000	
W	182	2	165	34.763	ppb	34.763	1.89	82410	100	
Pt	195	2	165	-0.004	ppb	-0.004	0.00	0	100	
Tl	205	2	165	39.757	ppb	39.757	2.81	192923	2000	
Pb	208	2	165	39.661	ppb	39.661	2.99	262606	5000	
Th	232	2	165	38.583	ppb	38.583	1.56	325090	2000	
U	238	2	165	40.477	ppb	40.477	1.03	342604	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	284631	0.78	305251	93.24	60	120	
Sc (IS)	45	1	HMI H2	8470644	0.35	8640598	98.03	60	120	
Sc (IS)	45	2	HMI He	394325	0.62	397552	99.19	60	120	
Sc (IS)	45	3	No Gas	19744983	0.93	19899433	99.22	60	120	
Ge Internal Standard	72	1	HMI H2	3844180	1.20	3917545	98.13	60	120	
Ge Internal Standard	72	2	HMI He	556713	0.37	559258	99.54	60	120	
In Internal Standard	115	2	HMI He	2514380	0.70	2552221	98.52	60	120	
Ho-165	165	2	HMI He	11658024	0.69	11644132	100.12	60	120	

Sample Report

Sample Table

Sample Name	280-122692-A-3-I MSD
Data File Name	378SMPL.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T09:58:05-06:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	456592 6020A DOD
ISTD Ref FileName	368CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	90.603	ppb	90.603	6.63	47626	500000	
Li	7	2	45	83.366	ppb	83.366	60.79	2417	500000	
Li	7	3	45	96.389	ppb	96.389	2.20	2457466	50000	
Be	9	1	6	40.836	ppb	40.836	4.11	4461	2000	
B	11	1	6	2090.593	ppb	2090.593	6.67	9267	2000	
Na	23	1	45	23617.258	ppb	23617.258	1.07	27541246	2000	>LDR
Na	23	2	45	25668.144	ppb	25668.144	0.50	2248940	400000	
Mg	24	2	45	14074.534	ppb	14074.534	1.07	572189	400000	
Al	27	2	45	446.638	ppb	446.638	1.22	5138	400000	
K	39	1	45	-818.356	ppb	-818.356	-5.39	4946693	400000	
K	39	2	45	1950.589	ppb	1950.589	1.83	68176	400000	
Ca	40	1	45	33235.109	ppb	33235.109	1.34	60114946	400000	
Ca	44	2	45	27332.434	ppb	27332.434	2.98	48016	400000	
Ti	47	2	45	0.253	ppb	0.253	173.21	3	4000	
V	51	2	72	42.130	ppb	42.130	2.32	21407	2000	
Cr	52	2	72	41.865	ppb	41.865	1.18	25694	5000	
Mn	55	2	72	170.933	ppb	170.933	1.14	45837	10000	
Fe	57	2	72	1020.985	ppb	1020.985	4.11	12056	400000	
Co	59	2	72	40.146	ppb	40.146	1.94	43844	2000	
Ni	60	2	72	41.181	ppb	41.181	5.57	12379	5000	
Cu	63	2	72	40.932	ppb	40.932	1.25	34245	5000	
Zn	66	2	72	42.108	ppb	42.108	5.00	5395	5000	
As	75	2	72	41.242	ppb	41.242	3.41	4242	2000	
Se	78	1	72	38.702	ppb	38.702	4.07	3296	2000	
Sr	88	2	72	236.974	ppb	236.974	0.35	86606	4000	
Zr	90	2	72	1302.288	ppb	1302.288	13.43	1474	1000	
Nb	93	2	72	0.037	ppb	0.037	456.44	613	200	
Mo	95	2	115	42.300	ppb	42.300	2.06	20292	2000	
Pd	105	2	115	-0.008	ppb	-0.008	-183.61	13	100	
Ag	107	2	115	39.582	ppb	39.582	2.35	65889	100	
Cd	111	2	115	38.032	ppb	38.032	5.62	8780	2000	
Sn	120	2	115	41.552	ppb	41.552	1.82	27936	2000	
Sb	121	2	115	40.803	ppb	40.803	1.11	27024	1000	
Ba	137	2	115	71.923	ppb	71.923	3.42	17131	5000	
W	182	2	165	35.118	ppb	35.118	0.57	83074	100	
Pt	195	2	165	-0.002	ppb	-0.002	-180.01	3	100	
Tl	205	2	165	40.503	ppb	40.503	0.13	196145	2000	
Pb	208	2	165	40.493	ppb	40.493	0.76	267549	5000	
Th	232	2	165	39.590	ppb	39.590	0.67	332845	2000	
U	238	2	165	41.017	ppb	41.017	0.41	346436	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	282200	0.28	305251	92.45	60	120	
Sc (IS)	45	1	HMI H2	8380366	0.59	8640598	96.99	60	120	
Sc (IS)	45	2	HMI He	393901	0.21	397552	99.08	60	120	
Sc (IS)	45	3	No Gas	19531654	0.67	19899433	98.15	60	120	
Ge Internal Standard	72	1	HMI H2	3832995	0.87	3917545	97.84	60	120	
Ge Internal Standard	72	2	HMI He	555636	0.85	559258	99.35	60	120	
In Internal Standard	115	2	HMI He	2511626	0.55	2552221	98.41	60	120	
Ho-165	165	2	HMI He	11633109	1.30	11644132	99.91	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5688510
Data File Name	379_CCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T10:01:57-06:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	368CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	98.522	ppb	4.262	51870	100	98.5	90	110	
Li	7	2	45	116.515	ppb	36.326	2834	100	116.5	90	110	>+\-10%
Li	7	3	45	94.882	ppb	11.063	2571010	100	94.9	90	110	
Be	9	1	6	50.019	ppb	5.155	6078	50	100.0	90	110	
B	11	1	6	22.368	ppb	77.537	1423	50	44.7	90	110	>+\-10%
Na	23	1	45	1033.087	ppb	0.253	1421933	1000	103.3	90	110	
Na	23	2	45	1000.462	ppb	1.591	103093	1000	100.0	90	110	
Mg	24	2	45	993.069	ppb	0.780	44685	1000	99.3	90	110	
Al	27	2	45	1025.187	ppb	3.812	12442	1000	102.5	90	110	
K	39	1	45	-246.563	ppb	-16.936	5666739	1000	-24.7	90	110	>+\-10%
K	39	2	45	957.098	ppb	5.843	44983	1000	95.7	90	110	
Ca	40	1	45	1049.606	ppb	0.523	2072923	1000	105.0	90	110	
Ca	44	2	45	965.571	ppb	8.419	1834	1000	96.6	90	110	
Ti	47	2	45	47.798	ppb	18.817	667	50	95.6	90	110	
V	51	2	72	51.252	ppb	4.243	27280	50	102.5	90	110	
Cr	52	2	72	49.364	ppb	0.965	31990	50	98.7	90	110	
Mn	55	2	72	48.725	ppb	2.700	13897	50	97.4	90	110	
Fe	57	2	72	1015.571	ppb	3.879	12669	1000	101.6	90	110	
Co	59	2	72	49.005	ppb	1.514	56387	50	98.0	90	110	
Ni	60	2	72	49.734	ppb	2.638	15769	50	99.5	90	110	
Cu	63	2	72	50.364	ppb	2.565	44412	50	100.7	90	110	
Zn	66	2	72	51.772	ppb	0.256	6979	50	103.5	90	110	
As	75	2	72	48.594	ppb	2.442	5277	50	97.2	90	110	
Se	78	1	72	49.779	ppb	2.724	4503	50	99.6	90	110	
Sr	88	2	72	98.300	ppb	0.909	37972	100	98.3	90	110	
Zr	90	2	72	290.686	ppb	5.544	380	50	581.4	90	110	>+\-10%
Nb	93	2	72	96.751	ppb	1.377	95383	100	96.8	90	110	
Mo	95	2	115	50.348	ppb	3.529	25384	50	100.7	90	110	
Pd	105	2	115	48.364	ppb	0.045	40676	50	96.7	90	110	
Ag	107	2	115	49.705	ppb	0.328	86956	50	99.4	90	110	
Cd	111	2	115	49.192	ppb	3.195	11932	50	98.4	90	110	
Sn	120	2	115	49.963	ppb	0.956	35276	50	99.9	90	110	
Sb	121	2	115	49.737	ppb	1.108	34614	50	99.5	90	110	
Ba	137	2	115	47.498	ppb	4.229	11906	50	95.0	90	110	
W	182	2	165	49.789	ppb	1.721	123807	50	99.6	90	110	
Pt	195	2	165	49.135	ppb	0.397	93474	50	98.3	90	110	
Tl	205	2	165	49.180	ppb	0.581	250604	50	98.4	90	110	
Pb	208	2	165	49.484	ppb	1.721	343866	50	99.0	90	110	
Th	232	2	165	49.525	ppb	0.892	438117	50	99.1	90	110	
U	238	2	165	49.198	ppb	1.316	437261	50	98.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	313909	1.18	305251	102.84	60	120	
Sc (IS)	45	1	HMI H2	8971214	0.43	8640598	103.83	60	120	
Sc (IS)	45	2	HMI He	418818	0.47	397552	105.35	60	120	
Sc (IS)	45	3	No Gas	20503618	0.78	19899433	103.04	60	120	
Ge Internal Standard	72	1	HMI H2	4075404	0.89	3917545	104.03	60	120	
Ge Internal Standard	72	2	HMI He	586990	0.93	559258	104.96	60	120	
In Internal Standard	115	2	HMI He	2639754	0.36	2552221	103.43	60	120	
Ho-165	165	2	HMI He	12243076	1.80	11644132	105.14	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5688508
Data File Name	380_CCB.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T10:05:51-06:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	368CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	5.516	ppb	27.0	2048906	10	
Be	9	1	6	0.084	ppb	152.9	13	0.5	
B	11	1	6	-40.508	ppb	-70.0	1130	0.5	
Na	23	1	45	4.262	ppb	11.4	141240	25	
Na	23	2	45	3.116	ppb	200.3	10414	25	
Mg	24	2	45	-13.523	ppb	-32.3	1290	25	
Al	27	2	45	0.891	ppb	335.6	83	15	
K	39	1	45	-570.304	ppb	-4.5	5369017	50	
K	39	2	45	-36.236	ppb	-52.3	17197	50	
Ca	40	1	45	-2.640	ppb	-6.7	36115	50	
Ca	44	2	45	-2.311	ppb	-543.8	27	25	
Ti	47	2	45	0.482	ppb	173.2	7	0.5	
V	51	2	72	1.118	ppb	26.8	1610	1	>RL
Cr	52	2	72	0.101	ppb	78.7	170	1	
Mn	55	2	72	-0.121	ppb	-148.6	97	0.5	
Fe	57	2	72	6.935	ppb	43.3	163	25	
Co	59	2	72	0.076	ppb	47.4	757	0.5	
Ni	60	2	72	-0.100	ppb	-36.8	117	1	
Cu	63	2	72	0.565	ppb	34.1	940	1	
Zn	66	2	72	-0.028	ppb	-856.3	123	5	
As	75	2	72	0.002	ppb	1922.7	14	1	
Se	78	1	72	0.220	ppb	71.4	40	1	
Sr	88	2	72	-0.020	ppb	-202.3	27	0.5	
Zr	90	2	72	-6.820	ppb	-323.0	33	1	
Nb	93	2	72	2.908	ppb	10.2	3391	2	>RL
Mo	95	2	115	0.025	ppb	237.6	37	0.5	
Pd	105	2	115	0.028	ppb	68.1	43	1	
Ag	107	2	115	0.019	ppb	17.9	33	1	
Cd	111	2	115	-0.029	ppb	0.0	0	0.5	
Sn	120	2	115	0.202	ppb	55.4	287	1	
Sb	121	2	115	0.281	ppb	32.7	223	0.6	
Ba	137	2	115	0.037	ppb	337.6	53	0.5	
W	182	2	165	0.062	ppb	28.1	443	1	
Pt	195	2	165	0.007	ppb	132.9	20	1	
Tl	205	2	165	0.008	ppb	46.5	207	0.1	
Pb	208	2	165	0.012	ppb	81.6	817	0.5	
Th	232	2	165	0.325	ppb	13.6	3141	1	
U	238	2	165	0.010	ppb	12.0	130	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	307694	0.41	305251	100.80	60	120	
Sc (IS)	45	1	HMI H2	8827286	0.38	8640598	102.16	60	120	
Sc (IS)	45	2	HMI He	412077	0.65	397552	103.65	60	120	
Sc (IS)	45	3	No Gas	20401013	0.43	19899433	102.52	60	120	
Ge Internal Standard	72	1	HMI H2	4012418	0.36	3917545	102.42	60	120	
Ge Internal Standard	72	2	HMI He	575065	0.98	559258	102.83	60	120	
In Internal Standard	115	2	HMI He	2605364	1.16	2552221	102.08	60	120	
Ho-165	165	2	HMI He	12076276	1.05	11644132	103.71	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5688512
Data File Name	381LCCV.d
Data Path Name	D:\MassHunter Data\LI05
Acq Date Time	2019-05-08T10:09:45-06:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	368CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	12.418	ppb	31.200	2090521	50	24.8	70	130	>+/-30%
Be	9	1	6	0.950	ppb	48.517	117	1	95.0	70	130	
Na	23	2	45	39.763	ppb	23.418	13887	50	79.5	70	130	
Mg	24	2	45	44.153	ppb	7.595	3771	50	88.3	70	130	
Al	27	2	45	49.507	ppb	4.894	667	30	165.0	70	130	>+/-30%
K	39	2	45	64.149	ppb	6.692	20121	100	64.1	70	130	>+/-30%
Ca	44	2	45	45.984	ppb	73.566	117	50	92.0	70	130	
V	51	2	72	6.148	ppb	10.026	4151	5	123.0	70	130	
Cr	52	2	72	1.934	ppb	21.026	1337	2	96.7	70	130	
Mn	55	2	72	0.884	ppb	16.994	377	1	88.4	70	130	
Fe	57	2	72	56.300	ppb	13.070	767	50	112.6	70	130	
Co	59	2	72	1.130	ppb	3.672	1940	1	113.0	70	130	
Ni	60	2	72	1.806	ppb	26.735	707	1.5	120.4	70	130	
Cu	63	2	72	2.361	ppb	5.308	2487	2	118.1	70	130	
Zn	66	2	72	10.690	ppb	7.366	1520	10	106.9	70	130	
As	75	2	72	4.856	ppb	6.807	531	5	97.1	70	130	
Se	78	1	72	5.506	ppb	4.063	511	5	110.1	70	130	
Sr	88	2	72	1.260	ppb	16.982	513	1	126.0	70	130	
Zr	90	2	72	7.548	ppb	529.398	50	0.5	1509.5	70	130	>+/-30%
Nb	93	2	72	0.795	ppb	16.844	1370	2	39.8	70	130	>+/-30%
Mo	95	2	115	1.931	ppb	17.859	997	2	96.5	70	130	
Pd	105	2	115	0.023	ppb	89.695	40	1	2.3	70	130	>+/-30%
Ag	107	2	115	4.994	ppb	0.677	8737	5	99.9	70	130	
Cd	111	2	115	0.851	ppb	30.915	213	1	85.1	70	130	
Sn	120	2	115	9.282	ppb	3.993	6675	10	92.8	70	130	
Sb	121	2	115	1.825	ppb	7.775	1300	2	91.2	70	130	
Ba	137	2	115	0.822	ppb	9.302	250	1	82.2	70	130	
W	182	2	165	5.063	ppb	3.106	12707	1	506.3	70	130	>+/-30%
Pt	195	2	165	0.000	ppb	-2268.908	7	1	0.0	70	130	>+/-30%
Tl	205	2	165	0.986	ppb	5.159	5131	1	98.6	70	130	
Pb	208	2	165	1.076	ppb	2.833	8115	1	107.6	70	130	
Th	232	2	165	1.775	ppb	0.410	15814	2	88.7	70	130	
U	238	2	165	1.009	ppb	1.278	8904	1	100.9	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	308359	1.20	305251	101.02	60	120	
Sc (IS)	45	1	HMI H2	8874941	1.13	8640598	102.71	60	120	
Sc (IS)	45	2	HMI He	415997	0.59	397552	104.64	60	120	
Sc (IS)	45	3	No Gas	20423798	0.29	19899433	102.64	60	120	
Ge Internal Standard	72	1	HMI H2	4029216	0.84	3917545	102.85	60	120	
Ge Internal Standard	72	2	HMI He	578049	0.20	559258	103.36	60	120	
In Internal Standard	115	2	HMI He	2639616	0.90	2552221	103.42	60	120	
Ho-165	165	2	HMI He	12098707	0.86	11644132	103.90	60	120	

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job Number: 280-123009-1

SDG No.:

Project: Cornhusker (CHAAP)

Client Sample ID	Lab Sample ID
SP-S2	280-123011-1
SP-E1	280-123011-2
SP-S22	280-123011-4

Comments:

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: SP-S2 Lab Sample ID: 280-123011-1

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG ID.:

Matrix: Water Date Sampled: 04/24/2019 08:40

Reporting Basis: WET Date Received: 04/25/2019 08:40

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
pH adj. to 25 deg C	7.9	0.1	0.1	0.1	SU		HF	1	9040C
Total Suspended Solids	1.6	4.0	2.8	1.1	mg/L	J		1	SM 2540D

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: SP-E1 Lab Sample ID: 280-123011-2

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG ID.:

Matrix: Water Date Sampled: 04/24/2019 08:51

Reporting Basis: WET Date Received: 04/25/2019 08:40

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
pH adj. to 25 deg C	7.3	0.1	0.1	0.1	SU		HF	1	9040C

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: SP-S22 Lab Sample ID: 280-123011-4

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG ID.:

Matrix: Water Date Sampled: 04/24/2019 08:43

Reporting Basis: WET Date Received: 04/25/2019 08:40

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
pH adj. to 25 deg C	7.9	0.1	0.1	0.1	SU		HF	1	9040C
Total Suspended Solids	2.8	4.0	2.8	1.1	mg/L	U		1	SM 2540D

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Analyst: SGB Batch Start Date: 05/03/2019

Reporting Units: SU Analytical Batch No.: 457145

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	ICV	16:12	pH adj. to 25 deg C	7.0	7.00	100	97-102		pH 7.0 Buffer 00257
16	CCV	17:15	pH adj. to 25 deg C	7.0	7.00	100	97-102		pH 7.0 Buffer 00255
28	CCV	18:06	pH adj. to 25 deg C	7.0	7.00	100	97-102		pH 7.0 Buffer 00255

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Analyst: SGB Batch Start Date: 05/06/2019

Reporting Units: SU Analytical Batch No.: 457275

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	ICV	13:18	pH adj. to 25 deg C	7.0	7.00	100	97-102		pH 7.0 Buffer 00257
16	CCV	14:17	pH adj. to 25 deg C	7.0	7.00	100	97-102		pH 7.0 Buffer 00255

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	LOQ	Dil
Batch ID: 456087 Date: 04/26/2019 11:03							
SM 2540D	MB 280-456087/1	Total Suspended Solids	2.8	U	mg/L	4.0	1

FORM III-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 457145	Date: 05/03/2019 16:22										
						LCS Source: pH 7.0 Buffer_00255					
9040C	LCS 280-457145/4	pH adj. to 25 deg C	7.0		SU	7.00	100	99-101			
Batch ID: 457275	Date: 05/06/2019 13:28										
						LCS Source: pH 7.0 Buffer_00255					
9040C	LCS 280-457275/4	pH adj. to 25 deg C	7.0		SU	7.00	100	99-101			
Batch ID: 456087	Date: 04/26/2019 11:03										
						LCS Source: TSS Daily STD_00717					
SM 2540D	LCS 280-456087/2	Total Suspended Solids	86.4		mg/L	100	86	79-114	9	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

7A-IN
LAB CONTROL SAMPLE DUPLICATE
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 456087	Date: 04/26/2019 11:03										
						LCSD Source: TSS Daily STD_00717					
SM 2540D	LCSD 280-456087/3	Total Suspended Solids	94.8		mg/L	100	95	79-114	9	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job Number: 280-123009-1

SDG Number:

Matrix: Water Instrument ID: WC-AT3

Method: 9040C LOQ Date: 11/01/2009 00:00

Analyte	Wavelength/ Mass	LOQ (SU)	
pH adj. to 25 deg C		0.1	

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job Number: 280-123009-1

SDG Number:

Matrix: Water Instrument ID: WC-AT3

Method: 9040C XRL Date: 11/01/2009 00:00

Analyte	Wavelength/ Mass	XRL (SU)	
pH adj. to 25 deg C		0.1	

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job Number: 280-123009-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2540D DL Date: 04/01/2011 10:35

Analyte	Wavelength/ Mass	LOQ (mg/L)	DL (mg/L)
Total Suspended Solids		4	1.1

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job Number: 280-123009-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2540D XMDL Date: 04/01/2011 10:35

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Suspended Solids		4	1.1

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Instrument ID: WC-AT3 Analysis Method: 9040C

Start Date: 05/03/2019 16:12 End Date: 05/03/2019 20:54

Lab Sample Id	D/F	Type	Time	Analytes																								
				pH																								
ICV 280-457145/1	1		16:12	X																								
ZZZZZZ			16:15																									
ZZZZZZ			16:19																									
LCS 280-457145/4	1	T	16:22	X																								
RINSE 280-457145/5			16:30																									
ZZZZZZ			16:33																									
ZZZZZZ			16:37																									
ZZZZZZ			16:42																									
ZZZZZZ			16:47																									
ZZZZZZ			16:52																									
ZZZZZZ			16:56																									
ZZZZZZ			17:00																									
ZZZZZZ			17:04																									
ZZZZZZ			17:08																									
ZZZZZZ			17:12																									
CCV 280-457145/16	1		17:15	X																								
RINSE 280-457145/17			17:22																									
ZZZZZZ			17:26																									
ZZZZZZ			17:29																									
ZZZZZZ			17:33																									
ZZZZZZ			17:37																									
ZZZZZZ			17:41																									
ZZZZZZ			17:45																									
ZZZZZZ			17:50																									
ZZZZZZ			17:54																									
280-123011-1	1	T	17:58	X																								
280-123011-2	1	T	18:03	X																								
CCV 280-457145/28	1		18:06	X																								
ZZZZZZ			18:09																									
RINSE 280-457145/30			18:16																									
ZZZZZZ			18:21																									
ZZZZZZ			18:25																									
ZZZZZZ			18:29																									
ZZZZZZ			18:34																									
ZZZZZZ			18:38																									
ZZZZZZ			18:42																									
ZZZZZZ			18:46																									
ZZZZZZ			18:50																									
ZZZZZZ			18:54																									
ZZZZZZ			18:58																									
CCV 280-457145/41			19:01																									
RINSE 280-457145/42			19:07																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Instrument ID: WC-AT3 Analysis Method: 9040C

Start Date: 05/03/2019 16:12 End Date: 05/03/2019 20:54

Lab Sample Id	D/F	Type	Time	Analytes																								
				pH																								
ZZZZZZ			19:11																									
ZZZZZZ			19:17																									
ZZZZZZ			19:20																									
ZZZZZZ			19:24																									
ZZZZZZ			19:29																									
ZZZZZZ			19:33																									
ZZZZZZ			19:38																									
ZZZZZZ			19:43																									
ZZZZZZ			19:48																									
ZZZZZZ			19:55																									
CCV 280-457145/53			19:58																									
ZZZZZZ			20:01																									
RINSE 280-457145/55			20:08																									
ZZZZZZ			20:13																									
ZZZZZZ			20:18																									
ZZZZZZ			20:24																									
ZZZZZZ			20:29																									
ZZZZZZ			20:35																									
ZZZZZZ			20:40																									
ZZZZZZ			20:45																									
ZZZZZZ			20:51																									
CCV 280-457145/64			20:54																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Instrument ID: WC-AT3 Analysis Method: 9040C

Start Date: 05/06/2019 13:18 End Date: 05/06/2019 17:00

Lab Sample Id	D/F	Type	Time	Analytes																								
				pH																								
ICV 280-457275/1	1		13:18	X																								
ZZZZZZ			13:22																									
ZZZZZZ			13:25																									
LCS 280-457275/4	1	T	13:28	X																								
ZZZZZZ			13:36																									
ZZZZZZ			13:40																									
ZZZZZZ			13:44																									
ZZZZZZ			13:48																									
ZZZZZZ			13:52																									
280-123011-4	1	T	13:56	X																								
ZZZZZZ			14:00																									
ZZZZZZ			14:04																									
ZZZZZZ			14:08																									
ZZZZZZ			14:11																									
ZZZZZZ			14:14																									
CCV 280-457275/16	1		14:17	X																								
RINSE 280-457275/17			14:24																									
ZZZZZZ			14:28																									
ZZZZZZ			14:31																									
ZZZZZZ			14:35																									
ZZZZZZ			14:39																									
ZZZZZZ			14:43																									
ZZZZZZ			14:47																									
ZZZZZZ			14:53																									
ZZZZZZ			14:58																									
ZZZZZZ			15:02																									
ZZZZZZ			15:06																									
CCV 280-457275/28			15:09																									
ZZZZZZ			15:11																									
RINSE 280-457275/30			15:18																									
ZZZZZZ			15:22																									
ZZZZZZ			15:26																									
ZZZZZZ			15:31																									
ZZZZZZ			15:35																									
ZZZZZZ			15:41																									
ZZZZZZ			15:44																									
ZZZZZZ			15:49																									
ZZZZZZ			15:55																									
ZZZZZZ			16:00																									
ZZZZZZ			16:03																									
CCV 280-457275/41			16:06																									
RINSE 280-457275/42			16:12																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Instrument ID: WC-AT3 Analysis Method: 9040C

Start Date: 05/06/2019 13:18 End Date: 05/06/2019 17:00

Lab Sample Id	D/F	Type	Time	Analytes																								
				pH																								
ZZZZZZ			16:18																									
ZZZZZZ			16:24																									
ZZZZZZ			16:28																									
ZZZZZZ			16:33																									
ZZZZZZ			16:38																									
ZZZZZZ			16:42																									
ZZZZZZ			16:46																									
ZZZZZZ			16:50																									
ZZZZZZ			16:53																									
ZZZZZZ			16:57																									
CCV 280-457275/53			17:00																									

Prep Types:
T = Total/NA

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: SM 2540D

Start Date: 04/26/2019 11:03 End Date: 04/26/2019 11:03

Lab Sample Id	D/F	Type	Time	Analytes																								
				TSS																								
MB 280-456087/1	1	T	11:03	X																								
LCS 280-456087/2	1	T	11:03	X																								
LCSD 280-456087/3	1	T	11:03	X																								
ZZZZZZ			11:03																									
ZZZZZZ			11:03																									
ZZZZZZ			11:03																									
ZZZZZZ			11:03																									
280-123011-1	1	T	11:03	X																								
280-123011-4	1	T	11:03	X																								
ZZZZZZ			11:03																									

Prep Types:
T = Total/NA

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Batch Number: 457145 Batch Start Date: 05/03/19 16:12 Batch Analyst: Barker, Scott G

Batch Method: 9040C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	pH 7.0 Buffer 00255	pH 7.0 Buffer 00257				
ICV 280-457145/1		9040C			30 mL				
LCS 280-457145/4		9040C		30 mL					
CCV 280-457145/16		9040C		30 mL					
CCV 280-457145/28		9040C		30 mL					

Batch Notes	
pH Buffer 1 ID	pH 2.0 buffer_00079
pH Buffer 2 ID	pH 4.0 buffer_00175
pH Buffer 3 ID	pH 7.0 buffer_00255
pH Buffer 4 ID	pH 10 buffer_00142
pH Buffer 5 ID	pH 12 buiffer_00147
pH Buffer 6 ID	pH 7.0 buffer_00257
Calibration Date and Time	See attached
pH Meter Calibration Slope	See attached
Probe ID	PCE 86 pH 1105 sep14
Sufficient volume for sample dup	yes
Thermometer ID	AT3

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Batch Number: 457275 Batch Start Date: 05/06/19 13:18 Batch Analyst: Barker, Scott G

Batch Method: 9040C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	pH 7.0 Buffer 00255	pH 7.0 Buffer 00257				
ICV 280-457275/1		9040C			30 mL				
LCS 280-457275/4		9040C		30 mL					
CCV 280-457275/16		9040C		30 mL					

Batch Notes	
pH Buffer 1 ID	pH 2.0 buffer_00079
pH Buffer 2 ID	pH 4.0 buffer_00178
pH Buffer 3 ID	pH 7.0 buffer_00255
pH Buffer 4 ID	pH 10 buffer_00142
pH Buffer 5 ID	pH 12 buffer_00147
pH Buffer 6 ID	pH 7.0 buffer_00257
Calibration Date and Time	See attached
pH Meter Calibration Slope	See attached
Probe ID	PCE 86 pH 1105 sep14
Sufficient volume for sample dup	Yes
Thermometer ID	AT3

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Batch Number: 456087 Batch Start Date: 04/26/19 11:03 Batch Analyst: Setjoadi, Mayori J

Batch Method: SM 2540D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	CrucibleID	TareWeight	InitialAmount	Weight1	Weight2	Weight3
MB 280-456087/1		SM 2540D		A0121031 0.1118g	0.1118 g	250 mL	0.1119 g	0.1120 g	0 g
LCS 280-456087/2		SM 2540D		A0121032 0.1127g	0.1127 g	250 mL	0.1344 g	0.1343 g	0 g
LCSD 280-456087/3		SM 2540D		A0121058 0.1100g	0.1100 g	250 mL	0.1339 g	0.1337 g	0 g
280-123011-D-1	SP-S2	SM 2540D	T	D0431149 0.1043	0.1043 g	250 mL	0.1048 g	0.1047 g	0 g
280-123011-D-4	SP-S22	SM 2540D	T	D0431174 0.1047	0.1047 g	250 mL	0.1051 g	0.1048 g	0 g

Lab Sample ID	Client Sample ID	Method Chain	Basis	WeightOne%Diff	Residue	Residue2	FinalAmount	ResDishWt	DishWeight
MB 280-456087/1		SM 2540D		PASS <0.5mg	0.0001 g	0.0002 g	250 mL	0.112 g	0.1118 g
LCS 280-456087/2		SM 2540D		PASS <0.5mg	0.0217 g	0.0216 g	250 mL	0.1343 g	0.1127 g
LCSD 280-456087/3		SM 2540D		PASS <0.5mg	0.0239 g	0.0237 g	250 mL	0.1337 g	0.11 g
280-123011-D-1	SP-S2	SM 2540D	T	PASS <0.5mg	0.0005 g	0.0004 g	250 mL	0.1047 g	0.1043 g
280-123011-D-4	SP-S22	SM 2540D	T	PASS <0.5mg	0.0004 g	0.0001 g	250 mL	0.1048 g	0.1047 g

Lab Sample ID	Client Sample ID	Method Chain	Basis	TSS Daily STD 00717					
MB 280-456087/1		SM 2540D							
LCS 280-456087/2		SM 2540D		250 mL					
LCSD 280-456087/3		SM 2540D		250 mL					
280-123011-D-1	SP-S2	SM 2540D	T						
280-123011-D-4	SP-S22	SM 2540D	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 280-123009-1

SDG No.:

Batch Number: 456087 Batch Start Date: 04/26/19 11:03 Batch Analyst: Setjoadi, Mayori J

Batch Method: SM 2540D Batch End Date:

Batch Notes	
Balance ID	24350570
Date/Time - In - CW (WT2)	05/03/2019 15:47
Date/Time - Out - CW (WT2)	05/04/2019 10:30
Temperature - Start - CW (WT2) - Correct	104 Celsius
Temperature - End - CW (WT2) - Correct	105 Celsius
Temperature - Start-CW(WT2) -Uncorrected	104 Celsius
Temperature - End-CW(WT2) -Uncorrected	104 Celsius
Temperature - Start - Corrected	104 Celsius
Temperature - End - Corrected	103 Celsius
Date/Time - In	04/26/2019 13:13
Date/Time - Out	05/03/2019 14:50
Filter ID	16837441
Nominal Amount Used	250 mL
Oven ID	E
Perform Calculation (0=No, 1=Yes)	1
Thermometer ID	1354
Temperature - Start - Uncorrected	103 Celsius
Temperature - End - Uncorrected	102 Celsius

Basis	Basis Description
T	Total/NA

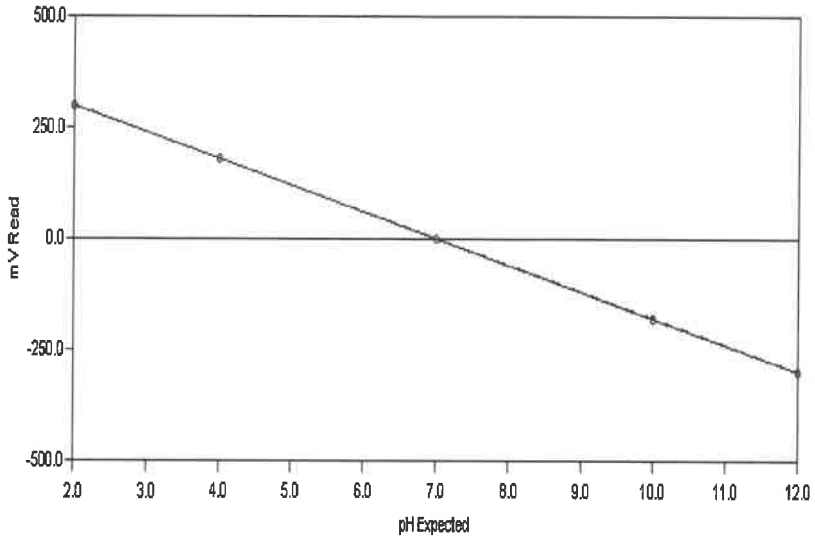
The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

MANTECH INC.

Calibration Report

Report Date: 5/3/2019 : 4:08 PM

Calibration Record # 443



Calibration Settings

Calibration ID	PH	Date	5/3/2019
Channel	1	Time	10:55 AM
Probe Type	pH	Temperature	295.50 K 22.35 C
Probe ID	PH ELECTRODE	Analysis Type	Single Line Fit

Calibration Results

Slope	-59.717	CorrCoeff	1.0000
Intercept	-0.976	Equation: Y = (-59.717) X + (-0.976)	

Calibration Validity **True** Operator

	Result	Minimum	Maximum
Slope	-59.717	-65.00	-54.00
Intercept	-0.976	-100.00	100.00
Correlation Coefficient	1.0000	0.99	1.00

Note: "True" means the calibration was within the specified ranges
"False" means the calibration was NOT within the specified ranges

Calibration Data	Standard	Reading
	2.00	297.36
	4.00	178.34
	7.00	-0.73
	10.00	-180.17
	12.00	-299.68

Test America
Water Analysis Report

Analyst: SAB

Run Number 1862 **Order Number** 20190503-6

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	pH2	pH3	Acid	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	(mL) @ 8.3	(mL) @ 4.5	(mL) @ 4.2	Conc (N)
icv	5/3/2019	4:12 PM	22.10	-1.00	7.00	6.99	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
b_2	5/3/2019	4:15 PM	21.86	-1.00	2.02	2.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
b_12	5/3/2019	4:19 PM	21.54	-1.00	12.02	12.05	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
lcs	5/3/2019	4:22 PM	21.22	-1.00	7.02	6.99	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
mb	5/3/2019	4:30 PM	21.44	-1.00	6.87	6.56	6.31	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-122598-I-1	5/3/2019	4:33 PM	19.73	-1.00	5.96	5.92	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-122598-I-1	5/3/2019	4:37 PM	19.02	-1.00	5.74	5.69	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-122598-G-2	5/3/2019	4:42 PM	19.68	-1.00	6.05	6.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-122650-B-1	5/3/2019	4:47 PM	19.43	-1.00	6.26	6.20	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-122598-H-5	5/3/2019	4:52 PM	19.92	-1.00	6.06	6.01	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-122731-E-4	5/3/2019	4:56 PM	19.71	-1.00	8.04	8.05	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-122731-E-2	5/3/2019	5:00 PM	19.21	-1.00	8.03	8.04	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-122731-D-1	5/3/2019	5:04 PM	18.61	-1.00	8.30	8.31	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-122731-D-3	5/3/2019	5:08 PM	18.78	-1.00	7.77	7.74	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-122725-A-2	5/3/2019	5:12 PM	19.26	-1.00	7.43	7.37	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
ccv	5/3/2019	5:15 PM	19.59	-1.00	7.02	7.01	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
rinse	5/3/2019	5:22 PM	20.81	-1.00	6.79	6.53	6.21	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-122734-E-1	5/3/2019	5:26 PM	20.40	-1.00	8.02	8.07	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-122802-F-1	5/3/2019	5:29 PM	19.68	-1.00	7.66	7.67	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-122802-G-2	5/3/2019	5:33 PM	19.13	-1.00	8.42	8.43	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-122847-D-3	5/3/2019	5:37 PM	18.97	-1.00	7.63	7.60	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-122847-D-2	5/3/2019	5:41 PM	19.35	-1.00	6.67	6.62	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-122847-E-1	5/3/2019	5:45 PM	19.72	-1.00	7.36	7.31	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-122929-F-4	5/3/2019	5:50 PM	20.54	-1.00	7.33	7.28	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-122957-A-2	5/3/2019	5:54 PM	20.00	-1.00	8.19	8.20	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123011-D-1	5/3/2019	5:58 PM	20.55	-1.00	7.86	7.81	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123011-D-2	5/3/2019	6:03 PM	20.02	-1.00	7.31	7.28	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00

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Run Number 1862 **Order Number** 20190503-6

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	pH2	pH3	Acid	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	(mL) @ 8.3	(mL) @ 4.5	(mL) @ 4.2	Conc (N)
ccv	5/3/2019	6:06 PM	19.10	-1.00	7.02	7.02	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
lcs	5/3/2019	6:09 PM	19.11	-1.00	7.02	7.01	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
rinse	5/3/2019	6:16 PM	20.47	-1.00	6.79	6.53	6.22	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123068-A-2	5/3/2019	6:21 PM	20.84	-1.00	7.90	7.88	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
du	5/3/2019	6:25 PM	20.91	-1.00	7.95	7.90	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123068-A-3	5/3/2019	6:29 PM	20.37	-1.00	7.71	7.68	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123068-A-1	5/3/2019	6:34 PM	20.23	-1.00	7.66	7.62	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123068-A-4	5/3/2019	6:38 PM	19.68	-1.00	8.15	8.18	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123068-A-5	5/3/2019	6:42 PM	20.08	-1.00	7.68	7.63	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123068-A-6	5/3/2019	6:46 PM	19.97	-1.00	7.94	7.97	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123068-A-7	5/3/2019	6:50 PM	20.51	-1.00	8.05	8.05	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123075-G-2	5/3/2019	6:54 PM	21.03	-1.00	7.69	7.67	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123076-G-2	5/3/2019	6:58 PM	20.22	-1.00	4.04	4.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
ccv	5/3/2019	7:01 PM	19.43	-1.00	7.02	7.01	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
rinse	5/3/2019	7:07 PM	20.31	-1.00	6.73	6.38	6.14	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123077-G-2	5/3/2019	7:11 PM	20.15	-1.00	7.38	7.38	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123094-D-1	5/3/2019	7:17 PM	21.01	-1.00	7.41	7.35	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123094-D-6	5/3/2019	7:20 PM	21.25	-1.00	7.72	7.72	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123094-D-8	5/3/2019	7:24 PM	21.61	-1.00	7.84	7.84	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123094-D-7	5/3/2019	7:29 PM	21.40	-1.00	7.33	7.27	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123094-D-2	5/3/2019	7:33 PM	20.70	-1.00	7.76	7.75	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123094-D-3	5/3/2019	7:38 PM	21.05	-1.00	7.41	7.36	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123094-D-5	5/3/2019	7:43 PM	20.92	-1.00	7.57	7.54	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123094-D-4	5/3/2019	7:48 PM	21.21	-1.00	7.63	7.58	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123184-B-3	5/3/2019	7:55 PM	21.74	-1.00	5.45	5.32	5.22	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
ccv	5/3/2019	7:58 PM	21.53	-1.00	7.02	7.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
lcs	5/3/2019	8:01 PM	20.96	-1.00	7.01	7.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
rinse	5/3/2019	8:08 PM	21.44	-1.00	6.78	6.57	6.25	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123184-B-4	5/3/2019	8:13 PM	21.70	-1.00	6.28	6.26	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
du	5/3/2019	8:18 PM	21.80	-1.00	6.32	6.28	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00

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Run Number 1862 **Order Number** 20190503-6

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	pH2	pH3	Acid	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	(mL) @ 8.3	(mL) @ 4.5	(mL) @ 4.2	Conc (N)
280-123184-B-2	5/3/2019	8:24 PM	22.11	-1.00	5.38	5.33	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123184-B-1	5/3/2019	8:29 PM	22.34	-1.00	7.18	7.13	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123194-B-3	5/3/2019	8:35 PM	22.75	-1.00	6.51	6.48	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123194-B-4	5/3/2019	8:40 PM	22.54	-1.00	7.14	7.10	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123194-B-2	5/3/2019	8:45 PM	22.37	-1.00	5.68	5.63	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123194-B-1	5/3/2019	8:51 PM	22.34	-1.00	5.63	5.61	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
ccv	5/3/2019	8:54 PM	21.87	-1.00	7.00	6.99	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00

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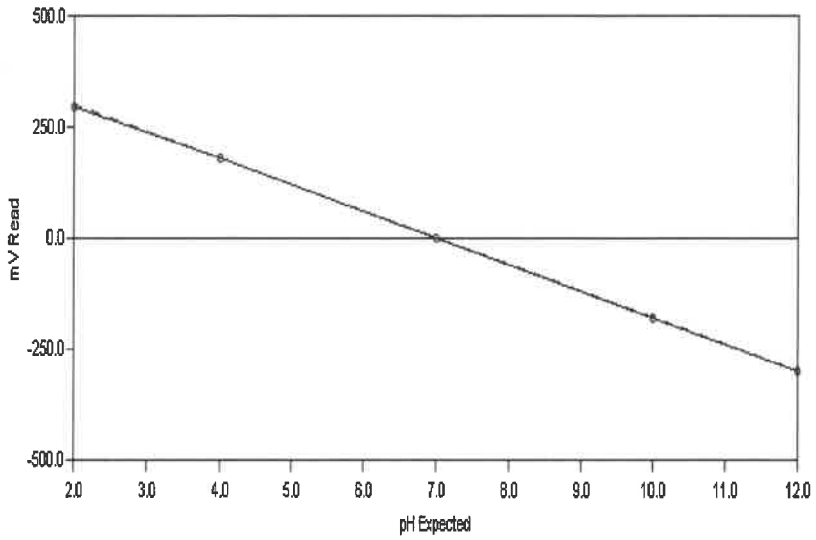
MANTECH INC.

Calibration Report

Report Date: 5/6/2019 : 12:42 PM

Calibration Record # 444



Calibration Settings

Calibration ID	PH	Date	5/6/2019
Channel	1	Time	11:00 AM
Probe Type	pH	Temperature	295.55 K 22.40 C
Probe ID	PH ELECTRODE	Analysis Type	Single Line Fit

Calibration Results

Slope	-59.688	CorrCoeff	1.0000
Intercept	-0.974	Equation: Y = (-59.688) X + (-0.974)	

Calibration Validity **True** Operator

	Result	Minimum	Maximum
Slope	-59.688	-65.00	-54.00
Intercept	-0.974	-100.00	100.00
Correlation Coefficient	1.0000	0.99	1.00

Note: "True" means the calibration was within the specified ranges
"False" means the calibration was NOT within the specified ranges

Calibration Data	Standard	Reading
	2.00	296.63
	4.00	178.83
	7.00	-0.24
	10.00	-180.66
	12.00	-299.43

Report Date: 5/6/2019 : 5:02 PM

Test America
Water Analysis Report

Analyst: SAB

Run Number 1865 **Order Number** 20190506-3

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	pH2	pH3	Acid	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	(mL) @ 8.3	(mL) @ 4.5	(mL) @ 4.2	Conc (N)
icv	5/6/2019	1:18 PM	22.66	-1.00	6.99	6.99	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
b_2	5/6/2019	1:22 PM	22.48	-1.00	2.02	2.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
b_12	5/6/2019	1:25 PM	22.39	-1.00	11.98	12.01	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
lcs	5/6/2019	1:28 PM	21.89	-1.00	7.02	7.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
mb	5/6/2019	1:36 PM	22.19	-1.00	6.76	6.54	6.22	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-122925-K-1	5/6/2019	1:40 PM	21.22	-1.00	7.43	7.43	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
du 280-122925-K-1	5/6/2019	1:44 PM	20.60	-1.00	7.50	7.47	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-122925-K-2	5/6/2019	1:48 PM	20.18	-1.00	7.51	7.48	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-122925-K-3	5/6/2019	1:52 PM	20.36	-1.00	7.51	7.56	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123011-D-4	5/6/2019	1:56 PM	20.94	-1.00	7.86	7.85	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123020-Q-1	5/6/2019	2:00 PM	20.85	-1.00	8.16	8.19	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123020-Q-2	5/6/2019	2:04 PM	20.38	-1.00	8.31	8.32	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123041-B-1	5/6/2019	2:08 PM	19.94	-1.00	8.22	8.23	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123099-A-1	5/6/2019	2:11 PM	19.43	-1.00	7.01	7.02	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123099-B-1	5/6/2019	2:14 PM	19.84	-1.00	7.02	7.09	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
ccv	5/6/2019	2:17 PM	20.60	-1.00	7.02	7.01	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
rinse	5/6/2019	2:24 PM	21.63	-1.00	6.79	6.59	6.33	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123135-B-1	5/6/2019	2:28 PM	21.28	-1.00	7.54	7.55	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123131-H-1	5/6/2019	2:31 PM	20.60	-1.00	7.43	7.45	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123151-A-1	5/6/2019	2:35 PM	20.19	-1.00	8.62	8.65	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123137-B-1	5/6/2019	2:39 PM	20.27	-1.00	8.28	8.29	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123175-T-2	5/6/2019	2:43 PM	20.41	-1.00	7.41	7.40	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123175-T-1	5/6/2019	2:47 PM	20.60	-1.00	7.39	7.39	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123175-L-3	5/6/2019	2:53 PM	21.25	-1.00	6.36	6.19	6.20	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123184-B-3	5/6/2019	2:58 PM	21.40	-1.00	5.29	5.20	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123213-G-1	5/6/2019	3:02 PM	20.45	-1.00	8.12	8.13	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123258-G-2	5/6/2019	3:06 PM	20.34	-1.00	4.55	4.54	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00

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Run Number 1865 **Order Number** 20190506-3

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	pH2	pH3	Acid	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	(mL) @ 8.3	(mL) @ 4.5	(mL) @ 4.2	Conc (N)
ccv	5/6/2019	3:09 PM	20.07	-1.00	7.02	7.01	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
lcs	5/6/2019	3:11 PM	20.20	-1.00	7.02	7.01	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
rinse	5/6/2019	3:18 PM	21.40	-1.00	6.81	6.50	6.26	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123267-F-3	5/6/2019	3:22 PM	21.77	-1.00	7.76	7.76	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
du	5/6/2019	3:26 PM	21.85	-1.00	7.83	7.81	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123267-F-8	5/6/2019	3:31 PM	21.58	-1.00	7.16	7.12	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123267-F-5	5/6/2019	3:35 PM	20.85	-1.00	4.82	4.80	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123267-F-1	5/6/2019	3:41 PM	21.40	-1.00	7.19	7.15	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123267-F-4	5/6/2019	3:44 PM	21.01	-1.00	8.50	8.50	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123267-F-7	5/6/2019	3:49 PM	21.60	-1.00	7.62	7.56	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123267-F-10	5/6/2019	3:55 PM	22.05	-1.00	7.18	7.14	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123267-F-2	5/6/2019	4:00 PM	22.13	-1.00	7.49	7.41	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123267-H-9	5/6/2019	4:03 PM	21.24	-1.00	6.99	6.99	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
ccv	5/6/2019	4:06 PM	21.01	-1.00	7.02	7.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
rinse	5/6/2019	4:12 PM	21.54	-1.00	6.75	6.49	6.31	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123267-F-6	5/6/2019	4:18 PM	21.90	-1.00	7.16	7.13	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123289-H-2	5/6/2019	4:24 PM	21.92	-1.00	7.36	7.26	7.32	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123289-H-3	5/6/2019	4:28 PM	22.14	-1.00	7.90	7.90	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123377-F-1	5/6/2019	4:33 PM	22.70	-1.00	7.63	7.60	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123377-F-2	5/6/2019	4:38 PM	22.54	-1.00	7.13	7.09	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123375-A-1	5/6/2019	4:42 PM	22.17	-1.00	7.89	7.89	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123342-A-2	5/6/2019	4:46 PM	22.07	-1.00	7.97	7.96	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123319-A-1	5/6/2019	4:50 PM	22.08	-1.00	8.43	8.47	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123399-E-2	5/6/2019	4:53 PM	22.14	-1.00	7.44	7.41	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
280-123399-E-3	5/6/2019	4:57 PM	22.29	-1.00	8.48	8.48	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
ccv	5/6/2019	5:00 PM	22.66	-1.00	7.01	6.99	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Denver Laboratory

Performance Test (PT) Preparation Form

Preparation

Job #: 122533 Sample # 1

Method: TSS

Sample Name (*from vial or PT instructions*): WP Solids

Standard Lot #(s) or Vial #(s) (If Applicable): 8189 - 09

Analyst Review of PT Instructions by (Initials): MJS (Date): 4/26/19

PT Sample Type: _____ Ampoule ✓ Whole volume

Volume or Weight of PT Sample Used : 250 (Units): mL

Prepared Volume of diluted PT Sample (If reagent blank spiked from ampoule):

N/A (Units): N/A

2nd Analyst Witness/Review of PT Instructions by (Initials): RS (Date): 4/26/19
(This 2nd level review is to be done at the time of PT preparation)

Include a copy of the PT instructions with this form, and include both in the batch folder.

Subcontract Data

Shipping and Receiving Documents

Brice Engineering
3800 Centerpoint Drive, Suite 417
Anchorage, Alaska 99503 907.275.2899

CHAIN OF CUSTODY RECORD

Project Name	**LTO CHAAP**	Project No. **1430057.0001.001**	
Project Location	**Grand Island, NE**	Dept. :	Task :
Sampler(s)	**Gary Carson**	Project Manager	**Scott Mann**

Sample Date	Time	Type Comp.	Type Grab	Sample Identification	Matrix	Containers No.	Containers Type	Analytical Parameters: Explosives	Remarks
4/24/2019	8:40		X	SP-S2	Water	2	1 liter Amber	X	4°
4/24/2019	8:45		X	SP-S6	Water	2	1 liter Amber	X	4°
4/24/2019	8:48		X	SP-S8	Water	2	1 liter Amber	X	4°
4/24/2019	8:51		X	SP-E1	Water	2	1 liter Amber	X	4°
4/24/2019	8:43		X	SP-S22	Water	2	1 liter Amber	X	4°

280-123009 Chain of Custody

Signatures	Date	Time	Shipping Details	Special Instructions
Relinquished by: Gary Carson	4/24/2019	15:30	Method of Shipment **Fed-X**	
Received by:	4/25/19	840	Airbill No.	
Relinquished by:			Lab Address	
Received by:			**TestAmerica Denver** **4955 Yarrow St.** **Arvada, CO 8002**	

Cooler Temp. _____ C pH [ ] Yes [ ] No Comments : Custody Seal Intact [ ] Yes [ ] No 3

No. 43578

White copy - Laboratory Yellow copy - Laboratory Pink copy - Customer

Brice Engineering
3800 Centerpoint Drive, Suite 417
Anchorage, Alaska 99503 907.275.2899

CHAIN OF CUSTODY RECORD

Project Name	**LTO CHAAP**	Project No. **1430057.0001.001**	
Project Location	**Grand Island, NE**	Dept. :	Task :
Sampler(s)	**Gary Carson**	Project Manager	**Scott Mann**

Sample Date	Sample Time	Type Comp.	Type Grab	Sample Identification	Matrix	Containers No.	Containers Type	VOC	pH/TSS	pH only		Selenium						Remarks
4/24/2019	8:40		X	SP-S2	Water	3	40 ml	X										**HCl** **4°**
4/24/2019	8:40		X	SP-S2	Water	1	250 ml		X									**4°**
4/24/2019	8:51		X	SP-E1	Water	3	40 ml	X										**HCl** **4°**
4/24/2019	8:51		X	SP-E1	Water	1	250 ml			X								**4°**
4/24/2019	8:51		X	SP-E1	Water	1	250 ml					X						**HNO_3** **4°**
4/24/2019	8:51		X	SP-E11	Water	1	250 ml					X						**HNO_3** **4°**
4/24/2019	8:43		X	SP-S22	Water	3	40 ml	X										**HCl** **4°**
4/24/2019	8:43		X	SP-S22	Water	1	250 ml		X									**4°**
4/24/2019	8:40		--	**TB-1048**	--	2	40 ml	X										**HCl** **4°**

Signatures	Date	Time	Shipping Details	Special Instructions
Relinquished by: Gary Carson	4/24/2019	15:30	Method of Shipment **Fed-X**	
Received by:	4/25.19	840	Airbill No.	
Relinquished by:			Lab Address **TestAmerica Denver 4955 Yarrow St. Arvada, CO 8002**	
Received by:				

280-123011 Chain of Custody

Cooler Temp. _____ C pH [ ] Yes [ ] No Comments :

Custody Seal Intact [ ] Yes [ ] No

No. 43577

05/30/2019

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Login Sample Receipt Checklist

Client: Brice Environmental Services, Corp

Job Number: 280-123009-1

Login Number: 123009
List Number: 1
Creator: Zimmerman, Steven M

List Source: Eurofins TestAmerica, Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Brice Environmental Services, Corp

Job Number: 280-123009-1

Login Number: 123009
List Number: 2
Creator: Rosas, Jaime

List Source: Eurofins TestAmerica, Sacramento
List Creation: 04/27/19 03:18 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	Seal present with no number.
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.0c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Brice Environmental Services, Corp

Job Number: 280-123009-1

Login Number: 123011
List Number: 1
Creator: Sutek, Nick

List Source: Eurofins TestAmerica, Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	